Tekla EPM 2021

User guide

April 2021

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1 Tekla EPM 2021

Welcome to Tekla EPM 2021!

See the links below to find out about the new features and improvements in this version:

- Tekla EPM 2021 release notes (page 19)
- Tekla EPM Go 2021 release notes (page 22)
- Tekla EPM 2021 fixlist

See also

Update Tekla EPM (page 26)

1.1 Tekla EPM 2021 release notes

Tekla EPM 2021 introduces several improvements, including user interface updates and new production control integrations.

Production Control: DSTV+ export added for cut lists

You can now export cut lists from Tekla EPM as DSTV+ files. The DSTV+ export is a simple nesting solution export that communicates to machinery which parts should be cut out of a given bar. You can export DSTV+ files directly to the relevant machine.

The new DSTV+ integration simplifies working with machinery. First, Tekla EPM mults or nests the parts. After that, you can simply export the cutting pattern as a DSTV+ file and send it to the relevant machine. The machine will then cut the parts according to the cutting pattern in the DSTV+ file.

The DSTV+ integration is especially helpful for users who are working on a shop floor that already uses software that is compatible with DSTV+ files.

These users will no longer need to download individual CNC files and organize them to match a cut list in Tekla EPM.

To enable the DSTV+ integration:

1. In the **Maintenance** menu, select **Integrations** --> **DSTV+**.
2. Select the **Enable DSTV+ Export** check box.
3. In the **Local Directory Designation** list, select the suitable option.
4. Click **Save**.

See also

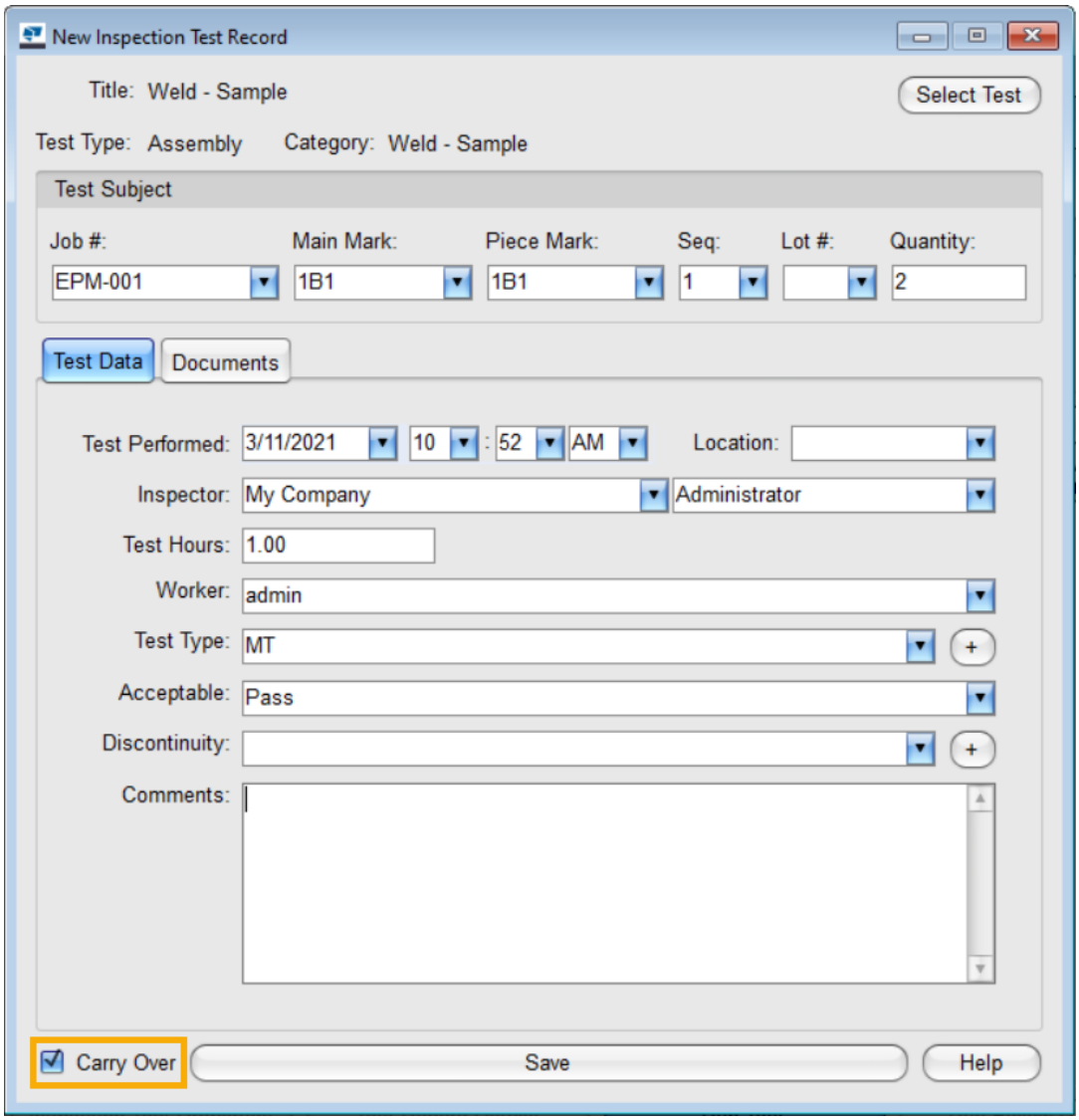
Manage cut lists (page 709)

Manage job-specific cut lists (page 741)

Production Control: Copying the properties of the latest inspection test record for another record

When you add inspection test records, you can now save time by saving the properties of the current record for the next records. To do so, select the **Carry Over** check box in the lower-left corner of the **New Inspection Test**

Record dialog box. The properties remain in the original fields when you save the current record.

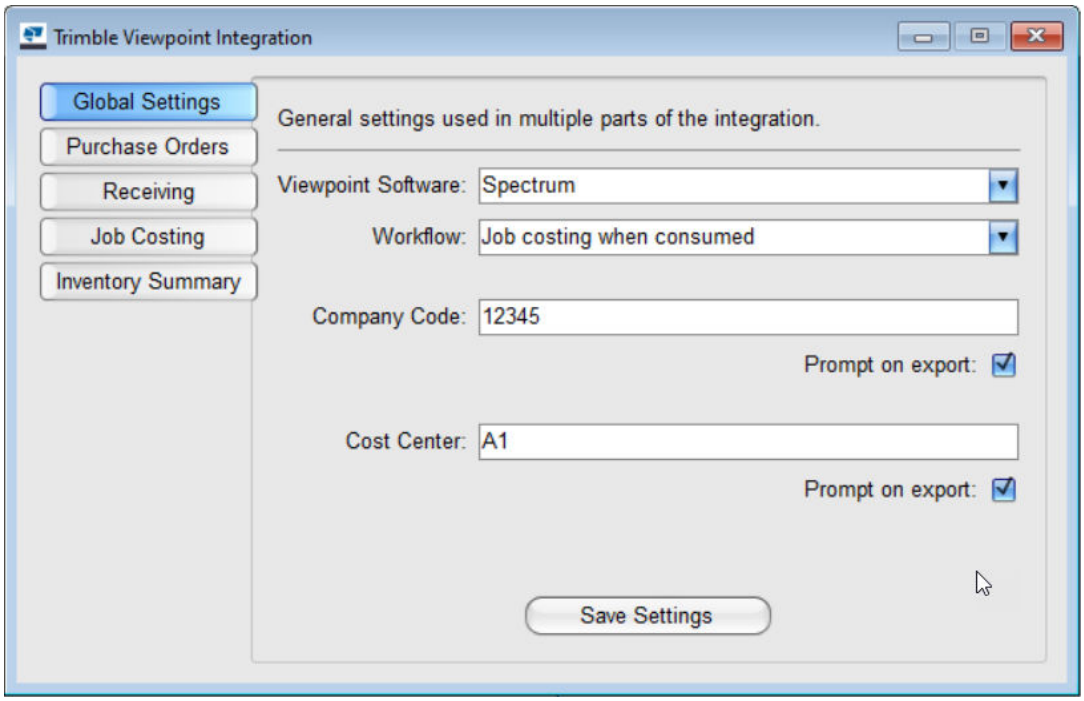


Note that if you close the **New Inspection Test Record** dialog box, the properties of the latest inspection test record will no longer be available for future records.

Integrations: Trimble ViewPoint integration enabled

The Trimble Viewpoint integration is now automatically enabled in the default (**North America**) and **Australia** environments. The Trimble Viewpoint integration allows you to manage your purchase orders more efficiently.

To set up the Trimble Viewpoint integration, in the **Maintenance** menu, select **Integrations** --> **Trimble Viewpoint**.

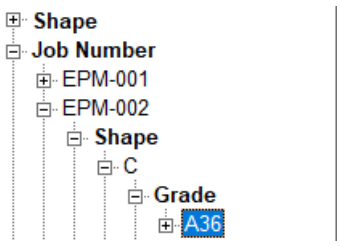


For detailed instructions, see Manage purchase orders with Trimble Viewpoint (page 92).

User interface improvements

The Tekla EPM interface has been improved in several ways:

- Several dialog boxes have been redesigned to improve your productivity and user experience.
- Filtering options have been improved for several dialog boxes. For example, the navigation trees added on the left side of dialog boxes allow you to quickly select which types of items you want to see in the display area.



- A new interface language, French, is now available for Tekla EPM.

1.2 Tekla EPM Go 2021 release notes

Tekla EPM Go 2021 introduces both new features and some improvements. The new production dashboard view allows you to quickly view the status of your workshop operations. In addition, you can now update the information in Tekla EPM Go simply by making changes in Trimble Connect for Browser, and copy the properties of the latest inspection test record for new records.

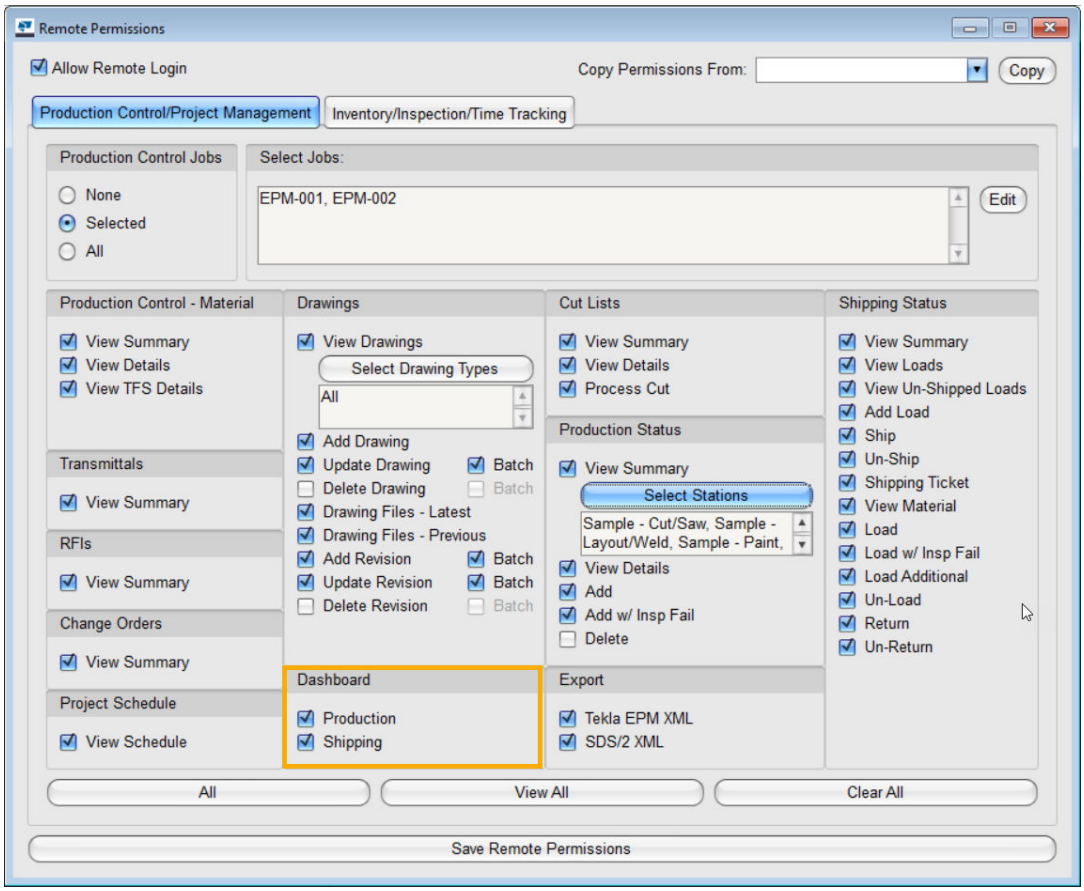
New production dashboard page

Tekla EPM Go now has a high-level dashboard to quickly view the current status of your shop floor production.

You can:

- switch between different types of charts
- select which data sets are shown in the charts
- select further details to see in the charts
- adjust the time frame and time units
- filter the chart data

Administrators can switch on the dashboards individually for each user in the **Administration** dialog box:



Using a Trimble Connect model to update Tekla EPM Go

When you have opened Trimble Connect for Browser from Tekla EPM Go, you can now use the Trimble Connect model to update information in Tekla EPM Go.

For example, you can change the production statuses of items in the Trimble Connect model. The status changes are automatically updated to the Tekla EPM database and shown in Tekla EPM Go.

Copying the properties of the latest inspection test record

When you add multiple inspection test records in one session, you can now use the properties of the latest added record. Do one of the following:

- For job-specific inspection test records, tap **Restore last**.

  Note that the **Restore last** option only works for tests with the same test category in the same job. The **Restore last** option is not available if you have left the job or added records to other test categories after adding the record.

- For general inspection test records, tap **Copy from previous test**.

2 Update Tekla EPM

Administrators can either update Tekla EPM automatically for all users in their company, or update Tekla EPM manually for each workstation in the company.

For more information, see the following links:

Update Tekla EPM automatically (page 26)

Update Tekla EPM manually (page 28)

2.1 Update Tekla EPM automatically

Each time Tekla EPM is started on any client workstation, Tekla EPM looks for automatic updates in the **Update** default folder, set in the **Default Directories** dialog box. Administrators need to download the available updates to the **Update** folder and install the update. Once the update has been installed on the server computer and any database structure changes have been run, all users can update Tekla EPM automatically by simply clicking **OK**.

NOTE To enable automatic updates:

- All workstations must have the same version of Tekla EPM as the server computer to connect and share the same data. Otherwise, errors will occur.

  If these types of errors occur, contact the Tekla EPM support.
- All computers need to have the same path in the **Update** field in the **Default Directories** dialog box. Otherwise, the automatic update will not succeed.

Before you begin updating Tekla EPM, ensure that all users have closed Tekla EPM, and that the Tekla EPM Remote Monitor has been stopped on the server computer.

1. Verify where the **Update** default directory points to:

a. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.

b. On the **File** menu, select **Default Directories**.

c. In the **Default Directories** dialog box, check the file path in the **Update** field.

   This is the location where you need to save the update.

   If the **Update** field is empty, click **...**, browse to find the desired folder, select the folder, and click **OK**.

d. Click **OK** to close the **Default Directories** dialog box.

2. Download the desired update from downloads.tekla.com to the correct folder.
3. Close Tekla EPM.
4. Go to the location where you downloaded the update, and double-click the update.
5. In the **Tekla EPM License Agreement** wizard, review the license agreement.
6. Select **Accept**.
7. At the bottom-right corner, click **Next >**.
8. Select **Update** as the install type, and ensure that **Update Existing Program Files** is selected.
9. At the bottom-right corner, click **Next >**.
10. In the **Destination Folder** field, check the location where the update will be installed.
11. To install the update, click **Install**.
12. If Tekla EPM asks you to close Tekla EPM and stop the remote server, click **Yes** to both.
13. When the update has been installed, click **Close** to close the installation window.
14. Sign in to Tekla EPM.

    Note that sometimes when you log in to Tekla EPM after an update, you may get the following messages:

    a. A message saying that the current database needs to be updated.

       Click **OK**.

    b. A message confirming that the database should be updated.

       Click **Yes**.

c. A message asking you to allow creating a backup copy of the current database.

   Click **OK**, create a backup, and save it to the desired location.

15. Open a client workstation and log in to Tekla EPM.

    A message appears, advising you to update Tekla EPM.

16. Click **OK**.

    The program update starts immediately.

The Tekla EPM Remote Server automatically starts on the server computer after Tekla EPM has been updated.

See also

Set the default folders for saving files (page 69)

Update Tekla EPM manually (page 28)

2.2 Update Tekla EPM manually

If the **Update** folder has not been defined in the **Default Directories** dialog box, users need to update Tekla EPM on each client workstation manually.

Before you update any client workstation, note that:

- The server computer needs to be already updated and the Tekla EPM Remote Server needs to be stopped. While the server computer is updating, Tekla EPM has to be closed on all client workstations.
- Signing in to Tekla EPM on the server computer needs to be done, so that any necessary database structure changes are run.
- To connect and share information, all workstations in your company need to have the same version of Tekla EPM as the server computer.

1. Download the desired update from downloads.tekla.com.
2. Close Tekla EPM.
3. Go to the location where you downloaded the update, and double-click the update.
4. In the **Tekla EPM License Agreement** wizard, review the license agreement.
5. Select **Accept**.
6. At the bottom-right corner, click **Next >**.
7. Select **Update** as the install type, and ensure that **Update Existing Program Files** is selected.
8. At the bottom-right corner, click **Next >**.

9. In the **Destination Folder** field, check the location where the update will be installed.
10. To install the update, click **Install**.
11. If Tekla EPM asks you to close Tekla EPM and stop the remote server, click **Yes** to both.
12. When the update has been installed, click **Close** to close the installation window.
13. Sign in to Tekla EPM.

    Note that sometimes when you log in to Tekla EPM after an update, you may get the following messages:

    a. A message saying that the current database needs to be updated.

       Click **OK**.

    b. A message confirming that the database should be updated.

       Click **Yes**.

    c. A message asking you to allow creating a backup copy of the current database.

       Click **OK**, create a backup, and save it to the desired location.

Tekla EPM will continue to update any information that needs to be updated.

You can now start working in the updated version of Tekla EPM.

3 Configure Tekla EPM

As an administrator, you need to define your company information, automatic backup settings, and administration settings, add the necessary users, and otherwise set up Tekla EPM, so that other users can start working in Tekla EPM.

After setting up Tekla EPM, administrators can:

- Download and install updates, so that the updates are installed automatically for other Tekla EPM users in your company.
- Create backup copies of the Tekla EPM database to restore the database if it is compromised.
- Optimize and compress the information in the Tekla EPM database.
- Clear extra logs from particular actions performed by Tekla EPM users in the company.
- Export labor information from a Tekla EPM database, and import the labor information to another Tekla EPM database.
- Recover deleted combining, estimating, and production controls jobs, and recover import backup files.
- Find and repair program errors in Tekla EPM.

NOTE These instructions contain actions that can only be performed by Tekla EPM users with administrative rights. If you do not have administrative rights, contact your administrator for help.

For more information, see the following links:

Install Tekla EPM (page 31)

License Tekla EPM (page 35)

Manage users and workstations (page 40)

Adjust settings and company information (page 62)

Update Tekla EPM (page 26)

Set up and work with integrated software (page 71)

Export labor information (page 432)
Manage the Tekla EPM database (page 98)
Repair program errors (page 106)

3.1 Install Tekla EPM

To install a new version of Tekla EPM or a Tekla EPM service pack, see the following requirements and instructions. The instructions for installing Tekla EPM vary depending on the computer onto which you are installing Tekla EPM: different instructions apply to the server computer and the client workstations.

The content installed with Tekla EPM

The following items are included in the full installation of Tekla EPM:

- Tekla EPM is the actual application.
- The MySQL database contains the information used by Tekla EPM. You can have multiple sets of data within the database.

  Note that the MySQL database is usually only installed on the server computer.
- Crystal Report viewer opens the report template files and uses an ODBC connection to populate information in reports.
- Tekla EPM Remote Server allows performing functions remotely. For example, the Tekla EPM Remote Server allows running automated events and using the Tekla EPM Go mobile application if you have purchased the application.

Tekla EPM connects to the Tekla EPM database, and the connection can be selected by machine and by port.

Normally, the Tekla EPM database is installed on the server computer, and the connection information is the IP address or the computer name of the computer running the server installation. However, the server machine is connected to the local host.

The information that you need to install Tekla EPM

To install Tekla EPM, you need:

- The installer for the correct version or service pack of Tekla EPM

  The installers and program updates are available in https://download.tekla.com/tekla-powerfab/tekla-epm.

- The server name or IP address

  The server name or IP address is needed to set the connection to the server when you first log in to a client workstation. We recommend that you write down your server name and IP address for the future.

- Suitable locations for the default folders in Tekla EPM

  The default folders are the folders where Tekla EPM saves information by default.

  We recommend that each Tekla EPM user on each workstation sets the same folders on the Tekla EPM server as default folders, so that sharing information is easy. For more information on the default folders, see Set the default folders for saving files (page 69).

  For example, you can use the following locations:

Backup	`C:\Users\Public\Documents\Tekla\Tekla EPM\Backup`
Export	`C:\Users\Public\Documents\Tekla\Tekla EPM\Export`
Import	`C:\Users\Public\Documents\Tekla\Tekla EPM\Export`
Log	`C:\Users\Public\Documents\Tekla\Tekla EPM\Log`
Document Index	`\\Server\SharedFolder`
Drawing	`\\Server\SharedFolder`
Update	`\\Server\SharedFolder`
Custom Report	`\\Server\SharedFolder`

Install Tekla EPM

1. Go to https://download.tekla.com/tekla-powerfab/tekla-epm.
2. Download the installer for the desired Tekla EPM version or service pack.
3. Double-click the installer to run the installation.
4. On the first page of the installation wizard, review the license agreement and accept it.
5. On the second page, select the installation type:
   - Select the **Server** option to install Tekla EPM on the server computer.
   - Select the **Client** option to install Tekla EPM on a client workstation.

- Select the **Update** option if you have a version of Fabsuite or Tekla EPM installed on your computer and want to update the existing program files.

If you select the **Server** option, the MySQL database is installed. If you select the **Client** option, the MySQL is not installed. If you select the **Update** option, only updates to existing program files are automatically installed.

6. On the third page, select the folder where you want to install Tekla EPM.

   We recommend installing Tekla EPM to the default folder (`C:\Program Files (x86)\Tekla\Tekla EPM`) shown in the installation wizard.

7. Click **Install**.

Tekla EPM is installed.

Connect to the MySQL database

The following instructions only apply to client workstations, not the server computer.

1. Open Tekla EPM on the client workstation.
2. To connect to the database of your company, in the **Connection Settings** dialog box, type the IP address or name of your server.

   You do not need to change the port number from the default value 3306.

3. Click **OK**.
4. Sign in to Tekla EPM.

   The default Tekla EPM sign-in information is:

   - username: `admin`
   - password: `fab`

   When you have logged in, Tekla EPM may ask you to update the OBDC connection for the report viewer.

5. Click **Yes**.
6. Set the default folders for saving Tekla EPM information.

   For detailed instructions, see Set the default folders for saving files (page 69).

After setting the default folders on the first client machine, you can configure the other client workstations by copying the settings file of the first client workstation in the `C:\Users\Public\Documents\Tekla\Tekla EPM\Settings` folder to the same location on the other client workstations.

Set up the Tekla EPM Remote Server

The Tekla EPM Remote Server allows you to perform Tekla EPM actions remotely. In practice, the Tekla EPM Remote Server enables running automated events and using the Tekla EPM Go mobile application.

Install the Tekla EPM Remote Server

The Tekla EPM Remote Server is installed when you install Tekla EPM. You can also install the Tekla EPM Remote Server separately, if necessary.

The Tekla EPM Remote Server is typically installed on the Tekla EPM server computer. To use Tekla EPM Go, a TCP port needs to be forwarded to the computer on which you install the Tekla EPM Remote Server.

To install the install the Tekla EPM Remote Server, do the following:

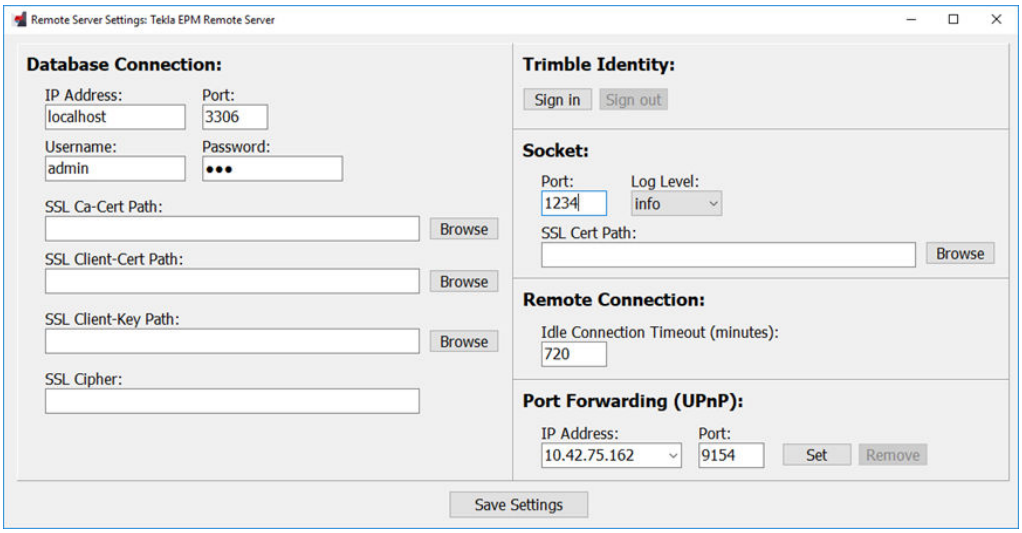
1. Go to `C:\Users\Public\Documents\Tekla\Tekla EPM\Backup`.
2. Double-click the `TeklaEPMRemoteServerSetup.exe` file to install the Tekla EPM Remote Server.
3. Use the default options for the installation.

The **Tekla EPM Remote Monitor** window opens automatically after the installation is finished. The **Tekla EPM Remote Monitor** window is the user interface where you can manage the settings of the Tekla EPM Remote Server.

Next, define the remote server settings.

Start the Tekla EPM Remote Server

1. In the **Tekla EPM Remote Monitor** window, click **Settings** to see the IP address and port for the database connection.



You do not need to type a username or password.

2. In the upper-right section of the window, click **Sign in** and sign in with a Trimble Identity that has access to all the Trimble Connect projects of your company.

   The Trimble Identity with which you sign in needs to have a Tekla EPM Go license. If you do not sign in with a Trimble Identity, the Tekla EPM Remote Server will fail to start because it does not have the necessary license information.

   Note that if the Trimble Identity cannot access all Trimble Connect projects, the status information of Trimble Connect projects cannot be synced.
3. If a TCP port other than the default port (9154) has been set up for forwarding, in the **Socket** section, enter the port number in the **Port** field.
4. Save the settings.
5. In the **Tekla EPM Remote Monitor** window, click **Start Service**.

If the settings have been defined successfully, the Tekla EPM Remote Server starts running.

You can always check if the Tekla EPM Remote Server is running in the **Tekla EPM Remote Monitor** window.

3.2 License Tekla EPM

All users need a valid Tekla license and a reliable internet connection to use Tekla EPM.

The Tekla licenses used for Tekla EPM are user-specific and are not tied to particular workstations. The licenses of each Tekla EPM user are tied to the user's Trimble Identity. For this reason, users always need to sign in to Tekla EPM with their Trimble Identity. Since the licenses are managed online, you need to have a reliable internet connection to use Tekla EPM.

To obtain a Tekla license, contact your organization's administrator.

The Tekla licenses and user accounts are assigned and managed in the Tekla Online Admin Tool.

In companies that are moving from using Fabsuite to using Tekla EPM, administrators need to migrate the company licensing from Fabsuite licensing to Tekla licensing.

See also

Migrate to Tekla licensing (page 35)

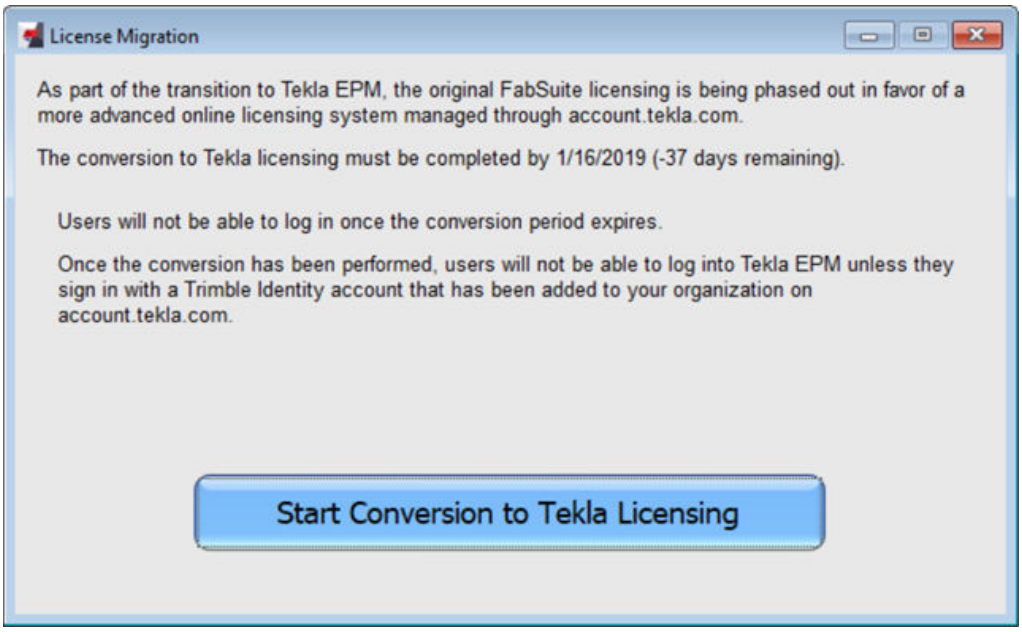
Manage Trimble Identities and Tekla Online licenses (page 36)

Migrate to Tekla licensing

When moving on to using Tekla EPM, administrators need to migrate their company from Fabsuite licensing to Tekla licensing.

Note that once you have migrated to Tekla licensing, the users in your company will not be able to log in to Tekla EPM without a Trimble Identity. For more information, see Trimble Identity for Tekla Online Services.

1. Sign in to Tekla EPM.
2. In the **License Migration** dialog box, click **Start Conversion to Tekla Licensing**.



3. Click **Convert to Tekla Licensing Now**.

   When the license conversion is completed, Tekla EPM asks you to restart Tekla EPM.
4. Click **OK** to close the message.
5. Go to https://account.tekla.com and add users to your organization.
6. Close and restart Tekla EPM to use Tekla licensing.

Manage Trimble Identities and Tekla Online licenses

As an administrator, you manage your organization's user accounts and ensure that your users have access to Tekla Online.

The tool you use to manage these account settings for Tekla products is called the Tekla Online Admin Tool.

Organization administrator responsibilities

Tekla Online administrators manage the access of the organization's users to Tekla Online services and licenses. One or more people in your organization can be administrators. The first user is invited to your organization group by a Trimble representative and given administrator rights and that person is then responsible for adding other users and administrators as necessary.

As an administrator, you are responsible for:

- Inviting employees to your organization group to allow them access to the following services:
  - Tekla Online licenses, which are licenses connected to a Trimble Identity login. Tekla services and features that use Tekla Online licenses include Tekla Model Sharing, Tekla EPM, Trimble Connect, Tekla Structures Partner configuration, and Tekla Structures elearning courses.
  - Tekla discussion forum.
  - Part of the content in Tekla User Assistance and Tekla Warehouse.
- Removing people from your organization group when they no longer belong to your organization.

Add users to your organization group

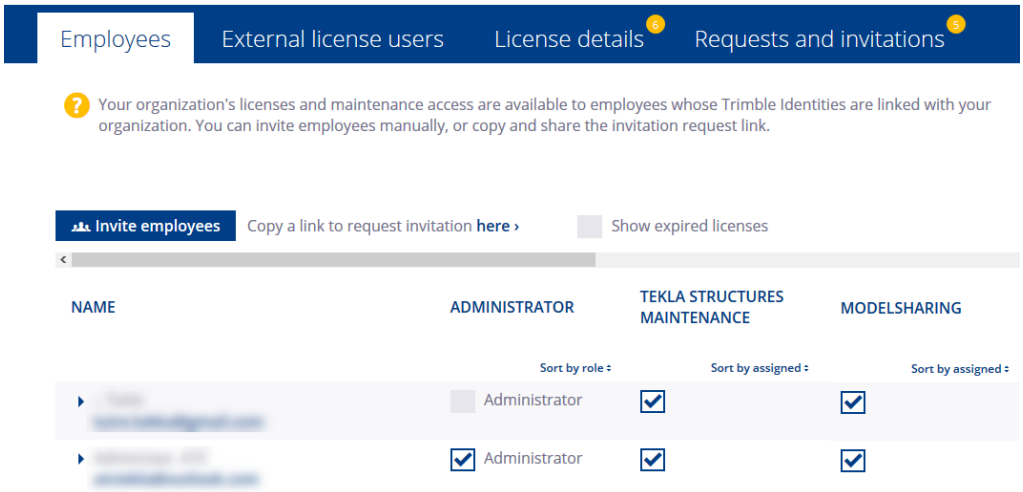
User action is required, so if your users are not familiar with Trimble Identities and the account creation process, we recommend that you inform them before you send any invitations.

Users can only be **employees** in one organization group at a time. If a user is already an employee in some other organization group, joining your organization group removes the user from the other organization group. You can add the user as an **external license user** to just give the user access to a license. Adding a user as an external license user does not change the user's employee or external license user status with any other organizations.

There are alternative methods for adding the users:

- You can invite users by adding their email addresses yourself. The users need to click a link on a confirmation email.
- You can make a link available to your users, who can use it to request employee membership in your organization. The users must make the request and you must approve the requests.
- On the user account page, users can search for and request to join organizations as employees. The organizations that users can see are limited based on their email address. The users must be instructed to do this and you must approve the request.

1. *Administrator*: Log in to the Tekla Online Admin Tool and switch to the **Employees** or **External license users** tab.



2. *Administrator*: Invite users to join or make a membership request link available to them:

   a. At the top of the table, click **Invite employees** or **Invite users** to enter the e-mail addresses and send the invitations.

      - You can enter several addresses at the same time, for example: `user1@example.com,user2@example.com`
      - It is not necessary for the users to have a Trimble Identity; new accounts are created based on your invitations if necessary.
      - Trimble's system sends an e-mail to the invited users. Each user must click on the e-mail link to accept the invitation within one week (if the invitation expires, a new invitation must be sent). If a new account is created for a user, the user must fill in the mandatory profile information before proceeding.

   b. To add users as employees, you can alternatively **Copy a link to request invitation**.

      - The link can be used by multiple people and it does not expire. You can for example email the link to multiple users or place it on your intranet.
      - By following this link, users can only request to join your organization. You must approve the requests on the **Requests and Invitations** tab in the Tekla Online Admin Tool.

   After an invited user has confirmed the invitation or an administrator has approved a user's request to join the organization:

   - If you added the user as an employee, the organization's maintenance status is extended to the user for access to additional content and services.

- The user account appears on the user list and can now be given administrator privileges (employee users) or assigned a Tekla Online license (all users).

Resend an expired invitation

If the invited user does not accept the invitation within a week, the invitation link stops working. To be able to join the organization, the user must receive a new link.

1. Log in to the Tekla Online Admin Tool and switch to the **Requests and invitations** tab. Invitation statuses are:
   - **New**: invitation is valid; the user has taken no action yet.
   - **Rejected**: the user rejected the invitation.
   - **Expired**: the user did not accept the invitation within one week.
   - When the user accepts the invitation, it is removed from this list.
2. Find the expired invitation for the user and click **Resend**. A new invitation e-mail is sent to the user with a new link that is valid for one week.

   NOTE The previously expired link still does not work. The user must click the new link.

Remove users from your organization

1. Log in to the Tekla Online Admin Tool and switch to the **Employees** tab.
2. Click the user account you want to remove.

   Additional information and options are shown on the user's row.
3. Click **Remove from organization** to remove the user from your organization group.

   The user is taken off your list, can no longer use your Tekla Online licenses and is no longer covered by your organization's maintenance.

Assign user rights or licenses

If your organization has a maintenance agreement, all users in your organization group have access to content and services which require maintenance. As an administrator, you can additionally assign other users administrator rights or give users access to your organization's Tekla Online licenses.

1. Add the users to the **Employees** or **External license users** group as explained above.

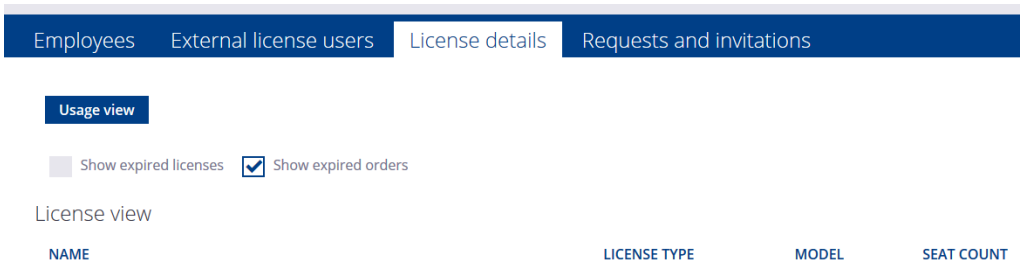
2. Activate administrator status (employees only) or license for the user in the Tekla Online Admin Tool by selecting the checkbox on the user's row. Administrator rights allow a user to manage other users in the Tekla admin tool.

NOTE You are responsible for following the terms governing the use of each license, for example, geographic restrictions may apply and you must take this into account when assigning licenses to users.

Check Tekla Online license usage and expiry date

Tekla Online licenses are purchased and managed separately from Tekla Structures licenses.

1. Log in to the Tekla Online Admin Tool and switch to the **License details** tab.



2. Check the license details. There are two views you can cycle through by using the button above the license information table.
   - By default, you are in the **License view**. You can click each license to see details, such as the subscription period for your subscription licenses.
   - Click the **Usage view** button to switch the view and see a summary of license counts, number of assigned licenses, and the current usage.
     - Licenses are used by the specific named users that you select on the other tabs.
     - License expiration warnings are also displayed to users in Tekla Structures when the expiration date is nearing for licensed features such as Tekla Model Sharing.

Related information

See also

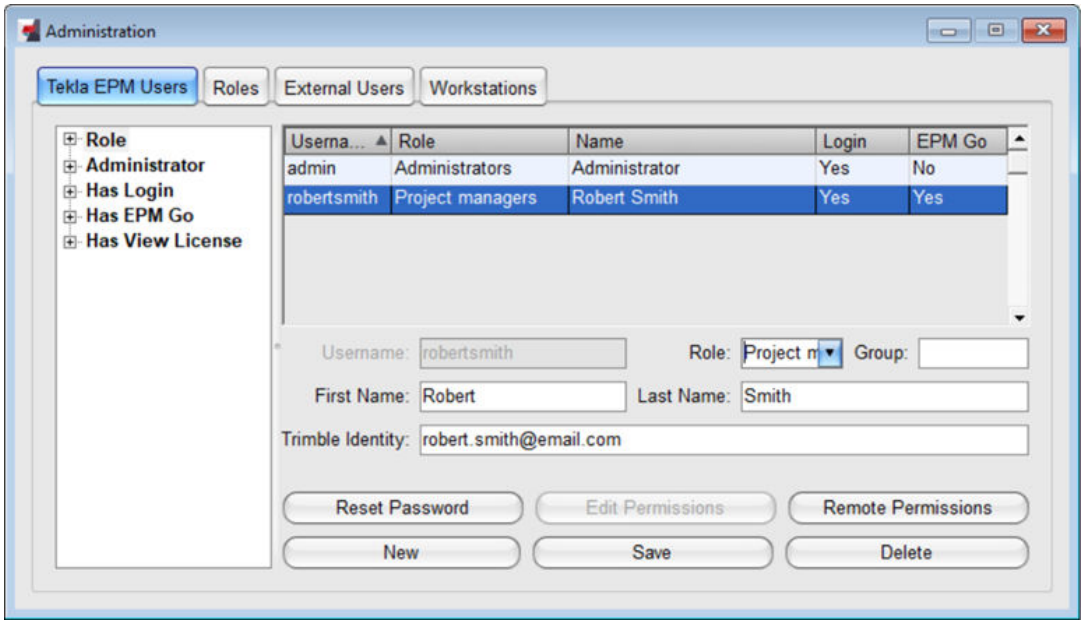
Frequently asked questions: Trimble Identity for Tekla online services

3.3 Manage users and workstations

In the **Administration** dialog box, administrators can add and delete Tekla EPM users in their company, modify the users' permissions, and add, modify, or delete workstations.

To access the **Administration** dialog box, do the following:

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.



For more information, see the following links:

Add, modify, and delete Tekla EPM users (page 41)

Manage user permissions (page 44)

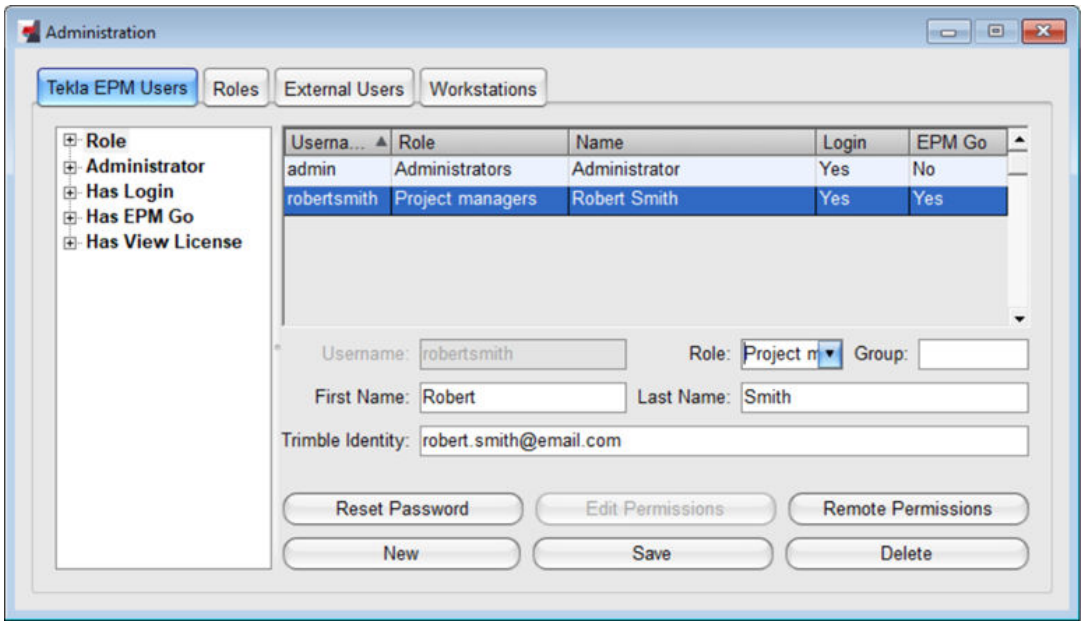
Manage remote user permissions (page 47)

Add, modify, and delete Tekla EPM users

On the **Tekla EPM Users** tab of the **Administration** dialog box, administrators can add new users, modify the properties of the existing users, and delete any unnecessary users. The users' passwords can also be reset.

To manage Tekla EPM users, do the following:

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.



Add a user

1. On the **Tekla EPM Users** tab of the **Administration** dialog box, click **New**.
2. Define the user properties.

   The properties marked with an asterisk (*) are mandatory information.

Option	Description
Username *	The username with which the user logs in to Tekla EPM. Type the username in the **Username** field. Note that the user name cannot be changed after the user has been added.
Role	The user role assigned to the user. A role determines which permissions the users with that role have in Tekla EPM. For more information, see Add, modify, and delete user roles. You can also modify the permissions individually for users. For more information, see Manage user permissions (page 44). Click the arrow on the right side of **Role** list and select a role in the list.

Option	Description
Group	The group which the user belongs to. For example, you can define groups for estimators and project managers. Note that groups do not allow you to automatically assign permissions to the user. Type the user group in the **Group** field.
First Name, **Last Name**	The first and last name of the user. Type the appropriate names in the **First Name** and **Last Name** fields.
Trimble Identity	The email address that has been registered as the user's Trimble Identity. The Trimble Identity is a user account that allows the user to access various Tekla Online services and other Trimble products. For more information, see Trimble Identity for Tekla Online services. Type the appropriate email address in the **Trimble Identity** field.

3. Click **Add**.

The user is added to Tekla EPM.

When the users log in to Tekla EPM for the first time, they need to leave the **Password** field blank. Then, they need to set the new password in the **Change Password** dialog box.

Note that if you have not assigned roles to new users, they have no access to any information in Tekla EPM. You need to modify users' permissions to give them access to the necessary information and modules. For more information, see Manage user permissions (page 44).

Reset a user's password

If necessary, you can reset a user's password, so that they can create a new one the next time they log in to Tekla EPM.

Note that if the user remembers their current password, they can change the password by themselves at any time.

1. On the **Tekla EPM Users** tab of the **Administration** dialog box, select the user whose password needs to be reset.
2. Click **Reset Password**.

3. To confirm resetting the password, click **Yes** in the confirmation dialog box.

When the user logs in after the password has been reset, they need to leave the **Password** field blank. Then, they need to set the new password in the **Change Password** dialog box.

Modify a user

1. On the **Tekla EPM Users** tab of the **Administration** dialog box, select the user that you want to modify.
2. Modify the user's role, group, first and last name, and Trimble Identity according to your needs.
3. Click **Save**.

Delete a user

1. On the **Tekla EPM Users** tab of the **Administration** dialog box, select the user that you want to delete.
2. Click **Delete**.
3. To permanently delete the user, click **Yes** in the confirmation dialog box.

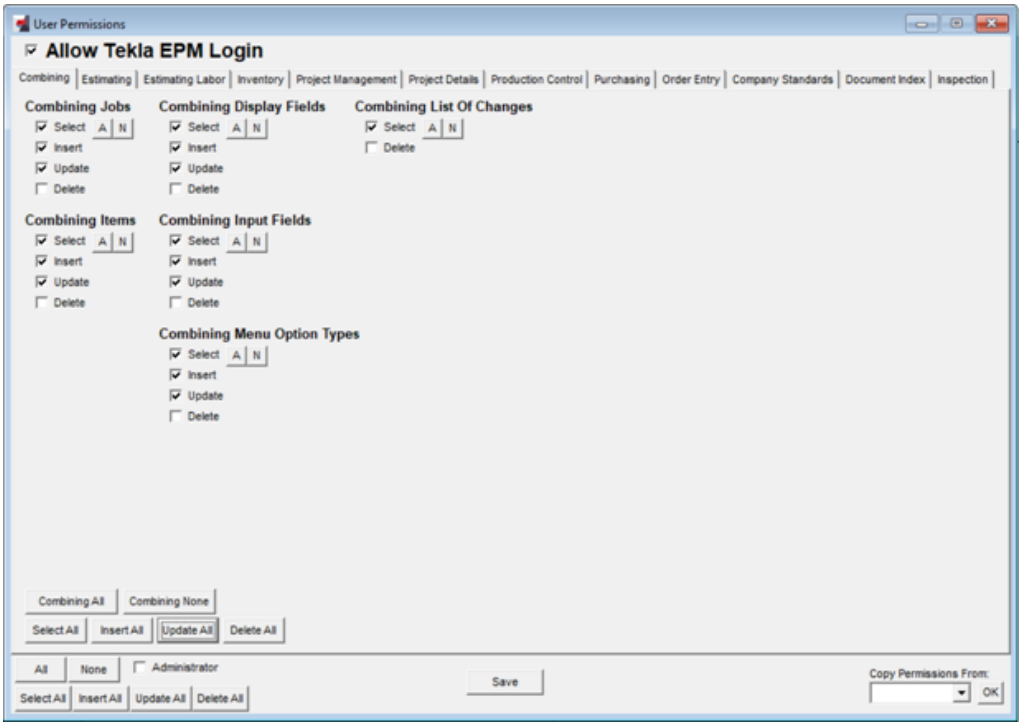
Manage user permissions

When administrators create a new Tekla EPM user, the user does not have any permissions in the Tekla EPM. This means that they cannot access, view, or modify any information in any module in Tekla EPM. Administrators can manage the user permissions in their company either separately for each user, or by creating user roles and assigning them to users. To modify the permissions of an individual user, do the following:

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. On the **Tekla EPM Users** tab of the **Administration** dialog box, select the user whose permissions you want to modify.
4. Click **Edit Permissions**.

   Note that if the user has been assigned a role, their permissions cannot be modified individually, so the **Edit Permissions** button is inactive.
5. At the top of the **User Permissions** dialog box, select the **Allow Tekla EPM Login** check box.

When logging in to Tekla EPM has been allowed for the user, you can modify the other permissions.



The **User Permissions** dialog box has multiple tabs that represent the different modules and features of Tekla EPM. This way, the user permissions can be set separately for each module.

The tabs are divided into sections that represent different parts of the module or feature. This allows you to give the user permissions to only perform particular actions related to the module.

All sections contain check boxes that determine what the user can do in that part of the module. The available check boxes are:

- **Select**: When selected, allows the user to select and filter information, such as material items.
- **Insert**: When selected, allows the user to add new information.
- **Update**: When selected, allows the user to modify existing information.
- **Delete**: When selected, allows the user to delete information.

For example, to allow the user to select items and add items in a combining job, select the **Select** and **Insert** check boxes in the **Combining Items** section of the **Combining** tab. If only the **Select** and **Insert** check boxes were selected, the user could not modify or delete combining items, so the **Edit** and **Delete** buttons would not be available.

6. To modify the user permissions, do any of the following:

To	Do this
Select the permissions one by one	a. Click a tab at the top of the **User Permissions** dialog box to open it. b. Select check boxes next to the permissions that you want to give to the user. You can also click the **A** (all) and **N** (none) buttons to select or clear all check boxes in a section. This way, you can quickly give the user all or no permissions to that part of the module or feature. c. Repeat steps a to b on all necessary tabs.
Select multiple permissions at once	• Do one of the following: • To allow the user to perform an action anywhere in the selected module, click the desired button at the bottom of the current tab. • To allow the user to perform an action anywhere in Tekla EPM, click the desired button at the bottom of the dialog box. For example, when the **Update All** check box is selected at the bottom of a tab, the user can modify information in all parts of the module. However, if the **Update All** check box is selected at the bottom of the **User Permissions** dialog box, the user can modify information in all modules of Tekla EPM.
Copy the permissions of another Tekla EPM user	a. At the lower-right corner of the dialog box, click the arrow on the right side of the **Copy Permissions From** list. b. Select the desired user in the list. c. Click **OK**.
Give all possible permissions	• At the lower-left corner of the dialog box, select the **Administrator** check box.

7. Click **Save** to save the permissions.
8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

View the user permission report (page 47)

View the user permission report

Administrators can view a report that shows the permission settings of the Tekla EPM users in their company. Administrators can select between two commands: **View User Permissions Report - All** and **View User Permissions Report - Selected**. The **View User Permissions Report - All** displays the permissions of all Tekla EPM users, whereas the **View User Permissions Report - Selected** allows the administrators to select which users' permissions they want to view.

To manage Tekla EPM user permissions, see Manage user permissions (page 44).

View the permissions of all users

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Click the **Administration** ribbon tab.
4. On the menu, select **View User Permissions Report - All**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

You can also export the report and save it in another file format.

View the permissions of a selected user

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. In the **Administration** dialog box, select the user whose permissions you want to view.
4. Click the **Administration** ribbon tab.
5. On the menu, select **View User Permissions Report - Selected**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

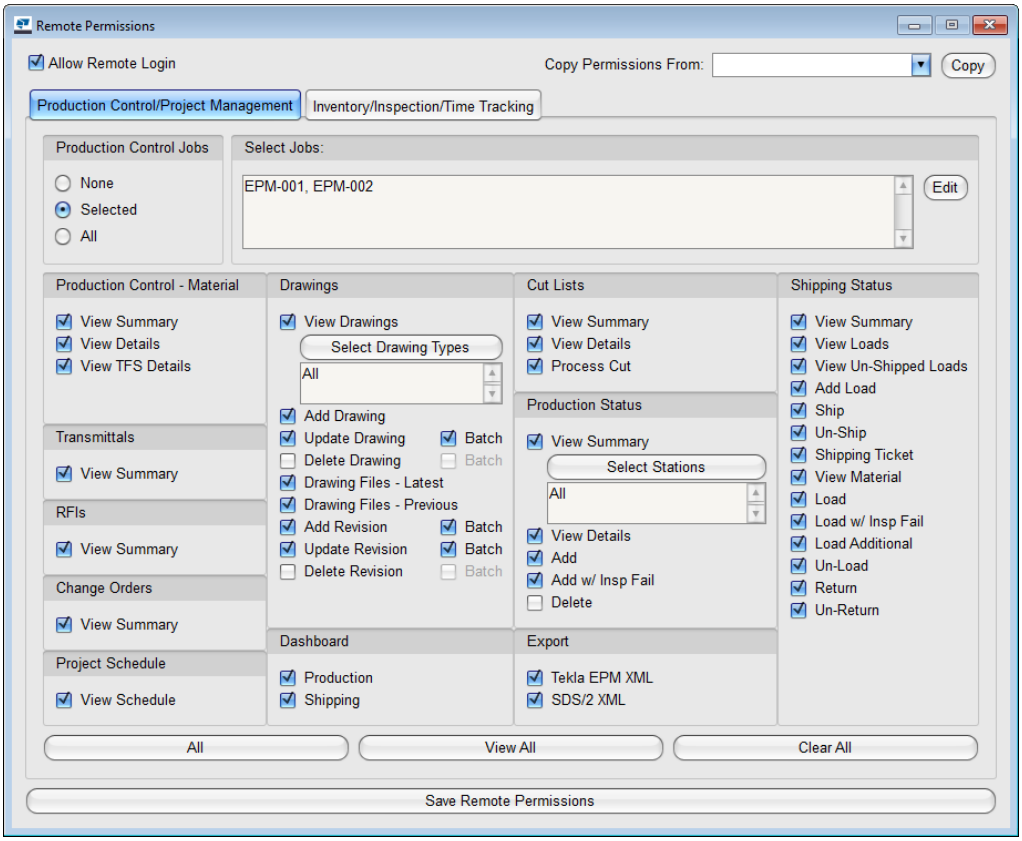
You can also export the report and save it in another file format.

Manage remote user permissions

Administrators can allow remotely using Tekla EPM Go for any internal or external Tekla EPM users to access particular information. The users that have been assigned remote permissions can access Tekla EPM Go through a remote

link when they are out of the office, and modify the information in Tekla EPM Go according to the permissions they have been given.

1. On either the **Tekla EPM Users** tab or the **External Users** tab, select the user whose remote permissions you want to modify.
2. Click **Remote Permissions**.



3. At the top of the **Remote Permissions** dialog box, select the **Allow Remote Login** check box.

   When you have allowed logging in to Tekla EPM Go, you can modify the other remote permissions.

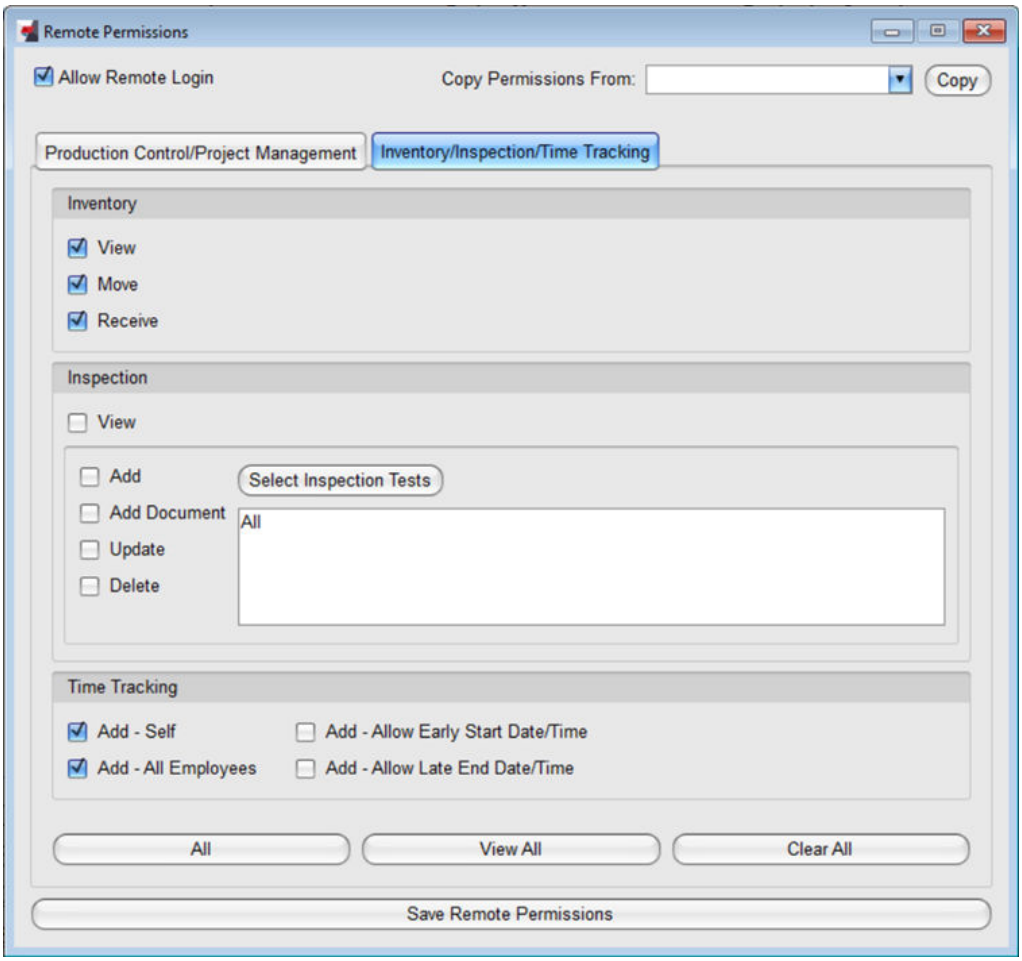
   Note that the **Remote Permissions** has two tabs: **Production Control/ Project Management** and **Inventory/Inspection/Time Tracking**. You need to modify the information on both tabs separately.

   - On the **Production Control/Project Management** tab, you can select which production jobs the user can access remotely, and what information they can view or modify.
   - On the **Inventory/Inspection/Time Tracking** tab, you can select what the user can do in the inventory, which inspection test they can view or modify, and what kind of time tracking records they can add. Users can be allowed to only add records for themselves or for all employees, and records that have a late start or end time.

4. On the **Production Control/Project Management** tab, select which production control jobs the user can access. The options are:
   - **None**: the user cannot access the information of any production control job remotely.
   - **Selected**: allows you to select the control jobs that the user can access remotely.

     To select the jobs, click **Edit** in the **Select Jobs** section of the **Production Control/Project Management** tab.

     You can also create job groups in **Production Control** to allow the users to only access jobs in particular job groups. For example, you could create a job group called `Active`, and allow the users to access all jobs in the `Active` job group. You could also create a job group called `Inactive` and store all jobs that you do not want users to access in Tekla EPM Go in the `Inactive` job group.
   - **All**: the user can access the information of all production control jobs remotely.
5. On the **Inventory/Inspection/Time Tracking** tab, select which inspection tests the user can access remotely:
   a. Click **Select Inspection Tests**.
   b. Click the arrow buttons to move the items tests that the user needs to access remotely to the **Included** list.
   c. Click **OK**.



6. To modify the user permissions further, do any of the following:

To	Do this
Select the permissions one by one	a. Click a tab at the top of the **Remote Permissions** dialog box to open it. b. Select check boxes next to the permissions that you want to give to the user. Repeat steps a to b on both tabs of the **Remote Permissions** dialog box. c. To only allow access to particular drawing types, stations, or inspection tests: 1. Click the **Select Drawing Types**, **Select Stations**, or **Select Inspection Tests** button. 2. Use the arrow buttons to move the accessible items to the **Included** list. 3. Click **OK**.

To	Do this
Copy the remote permissions of another user	a. In the upper-right corner of the dialog box, click the arrow on the right side of the **Copy Permissions From** list. b. Select the desired user in the list. c. Click **Copy**.

Select or remove multiple permissions at once	• Do one of the following:
	  • To allow the user to view, but not modify, all information listed on the current tab, click **View All** at the bottom of the dialog box.
	  • To remove all permissions that the user has on the current tab, click **Clear All**.
	Select or remove the permissions on both tabs of the **Remote Permissions** dialog box.

Give all remote permissions on the current tab	• In the lower-left corner of the dialog box, click **All**. Note that to give all available remote permissions, you need to click **All** on both tabs of the **Remote Permissions** dialog box.

7. Click **Save Remote Permissions**.

The user can now view and modify the information according to the remote permissions you gave them.

See also

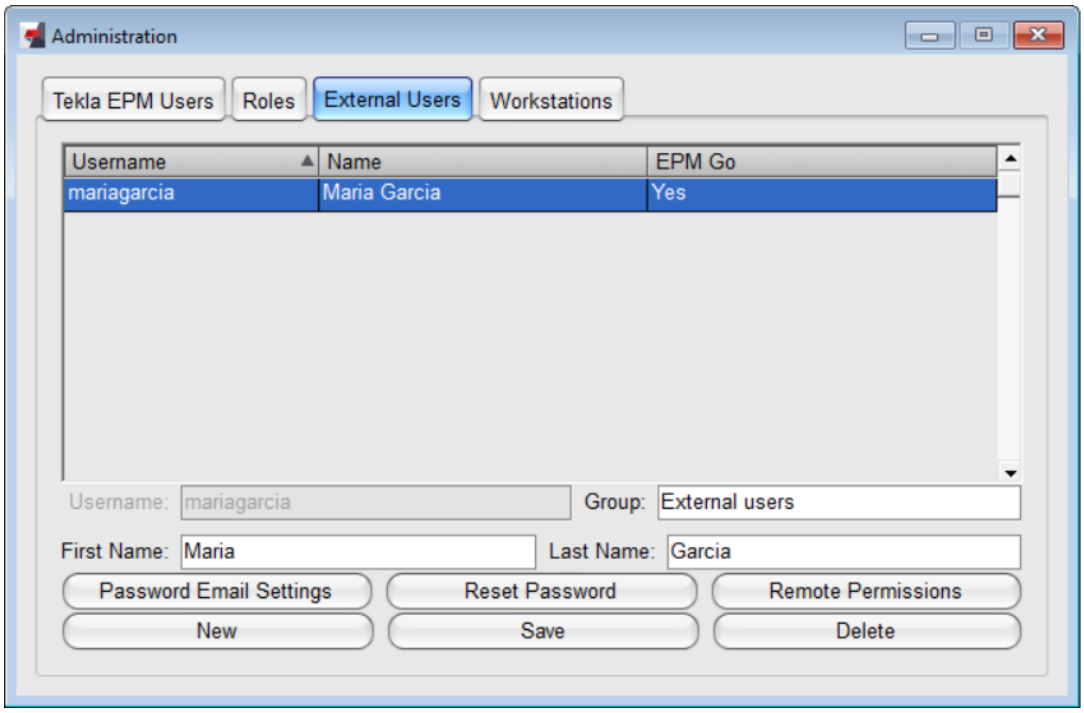
Add, modify, and delete external users (page 51)

Add, modify, and delete external users

Any users who work remotely in your company should be added to Tekla EPM as external users. Administrators can add, modify, and delete external users on the **External Users** tab of the **Administration** dialog box. The passwords of the external users can also be reset.

To manage external Tekla EPM users, do the following:

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. In the **Administration** dialog box, open the **External Users** tab.



Add an external user

1. On the **External Users** tab of the **Administration** dialog box, click **New**.
2. Define the user properties.

   The properties marked with an asterisk (*) are mandatory information.

Option	Description
Username *	The username with which the external user logs in to Tekla EPM. Type the username in the **Username** field. Note that the username cannot be changed after the external user has been added.
Group	The group to which the external user belongs. For example, you can define groups for estimators and project managers. Note that groups do not allow you to automatically assign permissions to the user. Type the user group in the **Group** field.
First Name, **Last Name**	The first and last name of the external user. Type the appropriate names in the **First Name** and **Last Name** fields.

3. Click **Add**.

4. Do any of the following:

To	Do this
Generate and send an email with the external user's user name and password	a. In the confirmation dialog box, click **Yes**. Microsoft Outlook opens and generates a new email containing the username and password. b. Add the recipient. c. If necessary, modify the default email content. d. Send the email.
Continue without generating and sending an email	a. In the confirmation dialog box, click **No**. A message appears, displaying the password that the user needs to log in to Tekla EPM. b. Highlight and copy the password to send it to the external user. c. Click **OK** to close the message. d. Send the password to the external user in the desired communication channel.

The external user is added to Tekla EPM.

Note that initially, the external user has no access to any information in Tekla EPM. You need to modify the user permissions to give them access to the necessary information and modules. For more information, see Manage remote user permissions (page 47).

Reset the password of an external user

1. On the **External Users** of the **Administration** dialog box, select the external user whose password you want to reset.
2. Click **Reset Password**.
3. To confirm resetting the password, click **Yes** in the first confirmation dialog box.
4. Do any of the following:

To	Do this
Generate and send an email that contains the username and new password of the external user	a. In the second confirmation dialog box, click **Yes**. Microsoft Outlook opens and generates a new email containing the username and new password. b. Add the recipient. c. If necessary, modify the email content.

To	Do this
	d. Send the email.
Continue without generating and sending an email	a. In the second confirmation dialog box, click **No**. A message appears, displaying the password that the user needs to log in to Tekla EPM. b. Highlight and copy the password to send it to the external user. c. Click **OK** to close the message. d. Send the password to the external user in the desired communication channel.

Modify the information of an external user

1. On the **External Users** tab of the **Administration** dialog box, select the external user whose information you want to modify.
2. Modify the group, first name, and last name according to your needs.
3. To modify the user permissions, click **Remote Permissions**.

   For more information, see Manage remote user permissions (page 47).
4. Click **Save** to save the changes.

Delete an external user

1. On the **External Users** of the **Administration** dialog box, select the external user that you want to delete.
2. Click **Delete**.
3. To permanently delete the external user, click **Yes** in the confirmation dialog box.

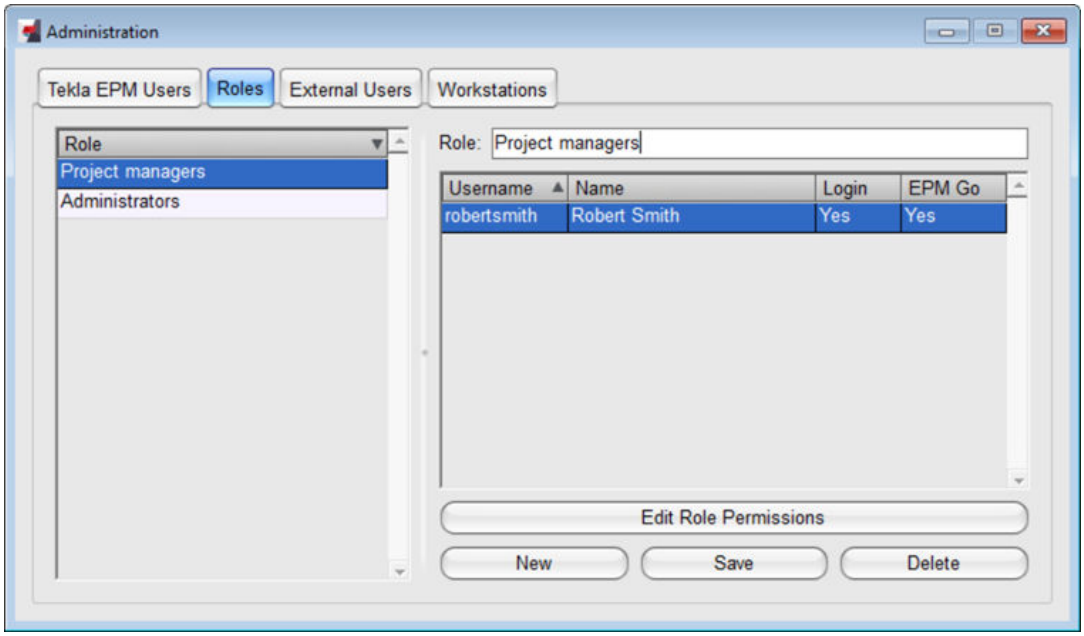
Add, modify, and delete user roles

User roles allow the administrator to quickly assign the same permissions to multiple users. On the **Roles** tab of the **Administration** dialog box, you can add user roles, manage the permissions of the roles, and delete any unnecessary roles. After you have added the necessary user roles and modified the permissions according to your needs, you need to assign the roles to the desired users on the **Tekla EPM Users** tab.

To manage user roles, do the following:

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.

3. Open the **Roles** tab.

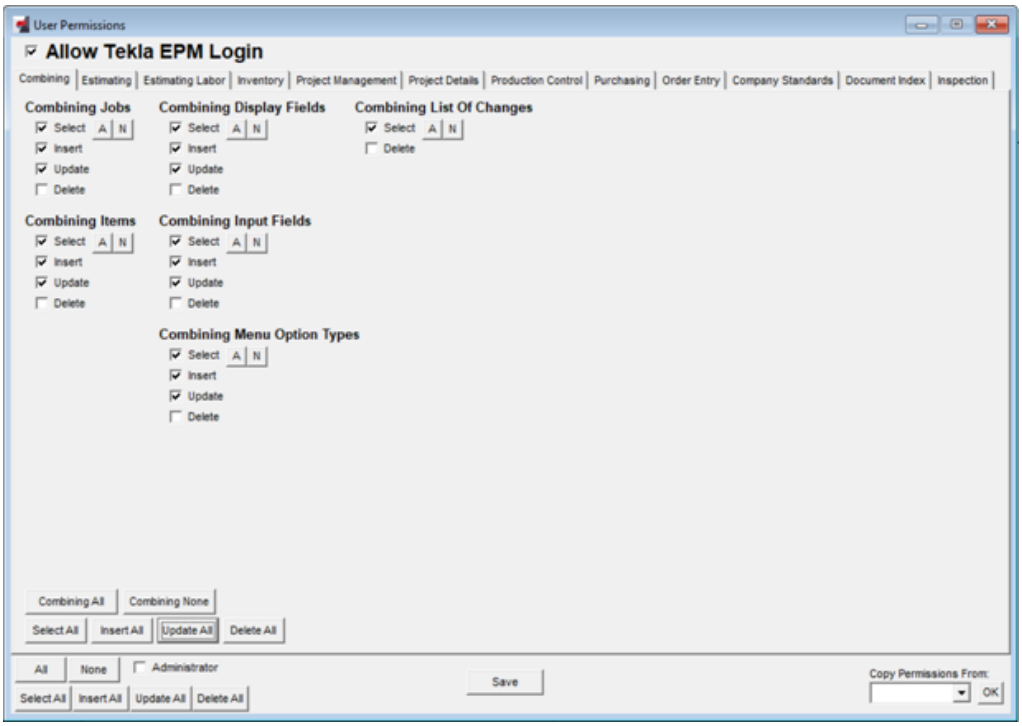


Add a user role

1. On the **Roles** tab of the **Administration** dialog box, click **New**.
2. In the **Role** field, type a name for the user role.

   For example, `Project managers`.
3. Click **Save** to create the role.
4. To manage the permissions of the new user role, click **Edit Role Permissions**.

The **User Permissions** dialog box opens.



The **User Permissions** dialog box has multiple tabs that represent the different modules and features of Tekla EPM. This way, the user permissions can be set separately for each module.

The tabs are divided into sections that represent different parts of the module or feature. This allows you to give the user group permissions to only perform particular actions related to the module.

All sections contain check boxes that determine what the user group can do in that part of the module. The available check boxes are:

- **Select**: When selected, allows the user group to select and filter information, such as material items.
- **Insert**: When selected, allows the user group to add new information.
- **Update**: When selected, allows the user group to modify existing information.
- **Delete**: When selected, allows the user group to delete information.

For example, to allow the user group to select items and add items in a combining job, select the **Select** and **Insert** check boxes in the **Combining Items** section of the **Combining** tab. If only the **Select** and **Insert** check boxes were selected, the user group could not modify or delete combining items, so the **Edit** and **Delete** buttons would not be available.

5. According to your needs, do any of the following:

To	Do this
Select the permissions one by one	a. Click a tab at the top of the **User Permissions** dialog box to open it. b. Select check boxes next to the permissions that you want to give to the user role. You can also click the **A** (all) and **N** (none) buttons to select or clear all check boxes in a section. This way, you can quickly give the user role all or no permissions to that part of the module or feature. c. Repeat steps a to b on all necessary tabs.

Select multiple permissions at once	• Do one of the following:
	  • To allow the user role to perform an action anywhere in the selected module, click the desired button at the bottom of the current tab.
	  • To allow the user role to perform an action anywhere in Tekla EPM, click the desired button at the bottom of the dialog box.
	For example, when the **Update All** check box is selected at the bottom of a tab, the user role can modify information in all parts of the module.
	However, if the **Update All** check box is selected at the bottom of the **User Permissions** dialog box, the user role can modify information in all modules of Tekla EPM.

Copy the permissions of a Tekla EPM user	a. In the lower-right corner of the dialog box, click the arrow on the right side of the **Copy Permissions From** list. b. Select the desired user in the list. c. Click **OK**.
Give all possible permissions	• In the lower-left corner of the dialog box, select the **Administrator** check box.

6. Click **Save** to save the permissions.
7. To close the **User Permissions** dialog box, click the **Close** button (**X**) in the upper-right corner.
8. In the **Administration** dialog box, click **Save** to update the permissions.

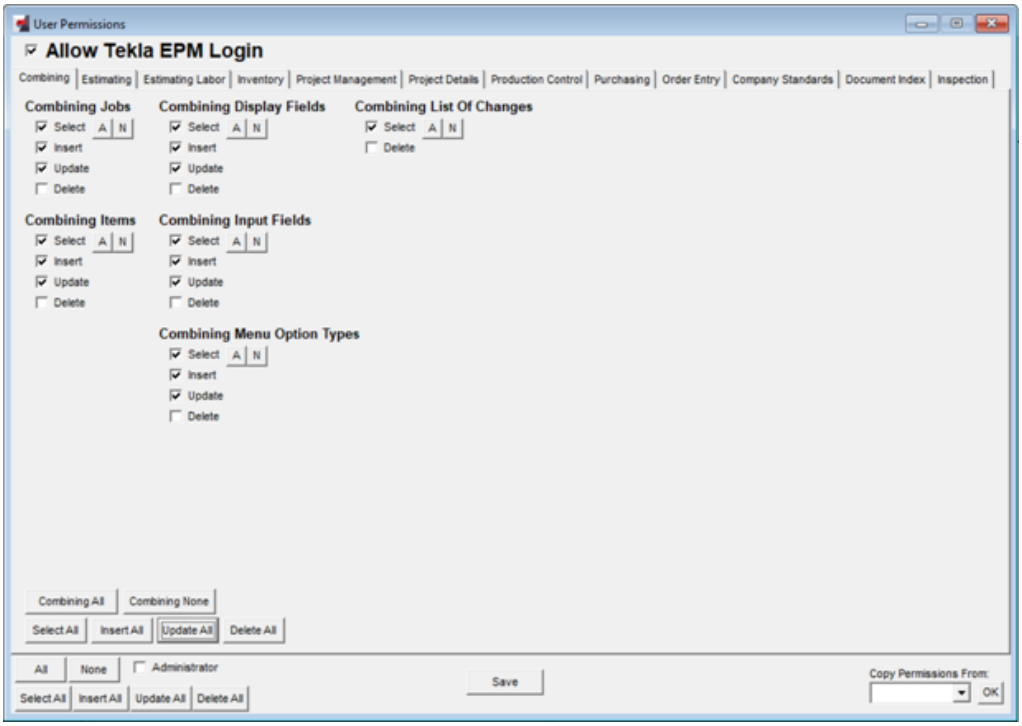
Assign a user role to a user

1. Open the **Tekla EPM Users** tab of the **Administration** dialog box.
2. Select the user for whom you want to assign a user role.
3. Click the arrow on the right side of the **Role** list and select the user role in the list.
4. Click **Save**.

Modify a user role

1. On the **Roles** tab of the **Administration** dialog box, select the role that you want to modify in the left-hand pane.
2. In the **Role** field, modify the name of the user role.
3. To manage the permissions of the user role, click **Edit Role Permissions**.

   The **User Permissions** dialog box opens.



   The **User Permissions** dialog box has multiple tabs that represent the different modules and features of Tekla EPM. This way, the user permissions can be set separately for each module.

   The tabs are divided into sections that represent different parts of the module or feature. This allows you to give the user group permissions to only perform particular actions related to the module.

   All sections contain check boxes that determine what the user group can do in that part of the module. The available check boxes are:

- **Select**: When selected, allows the user group to select and filter information, such as material items.
- **Insert**: When selected, allows the user group to add new information.
- **Update**: When selected, allows the user group to modify existing information.
- **Delete**: When selected, allows the user group to delete information.

For example, to allow the user group to select items and add items in a combining job, select the **Select** and **Insert** check boxes in the **Combining Items** section of the **Combining** tab. If only the **Select** and **Insert** check boxes were selected, the user group could not modify or delete combining items, so the **Edit** and **Delete** buttons would not be available.

4. In the **User Permissions** dialog box, do any of the following:

To	Do this
Select the permissions one by one	a. Click a tab at the top of the **User Permissions** dialog box to open it. b. Select check boxes next to the permissions that you want to give to the user role. You can also click the **A** (all) and **N** (none) buttons to select or clear all check boxes in a section. This way, you can quickly give the user role all or no permissions to that part of the module or feature. c. Repeat steps a to b on all necessary tabs.
Select multiple permissions at once	• Do one of the following: • To allow the user role to perform an action anywhere in the selected module, click the desired button at the bottom of the current tab. • To allow the user role to perform an action anywhere in Tekla EPM, click the desired button at the bottom of the dialog box. For example, when the **Update All** check box is selected at the bottom of a tab, the user role can modify information in all parts of the module. However, if the **Update All** check box is selected at the bottom of the **User Permissions** dialog box, the user role can modify information in all modules of Tekla EPM.

To	Do this
Copy the permissions of a Tekla EPM user	a. In the lower-right corner of the dialog box, click the arrow on the right side of the **Copy Permissions From** list. b. Select the desired user in the list. c. Click **OK**.
Give all possible permissions	• In the lower-left corner of the dialog box, select the **Administrator** check box.

5. Click **Save** to save the permissions.

   The changed permissions are immediately applied to all users that have been assigned the role.

6. To close the **User Permissions** dialog box, click the **Close** button (**X**) in the upper-right corner.
7. In the **Administration** dialog box, click **Save** to update the permissions.

Delete a user role

Note that deleting a user role is permanent and cannot be undone.

1. On the **Roles** tab of the **Administration** dialog box, select the role that you want to delete in the left-hand pane.
2. Click **Delete**.
3. To permanently delete the user role, click **Yes** in the confirmation dialog box.

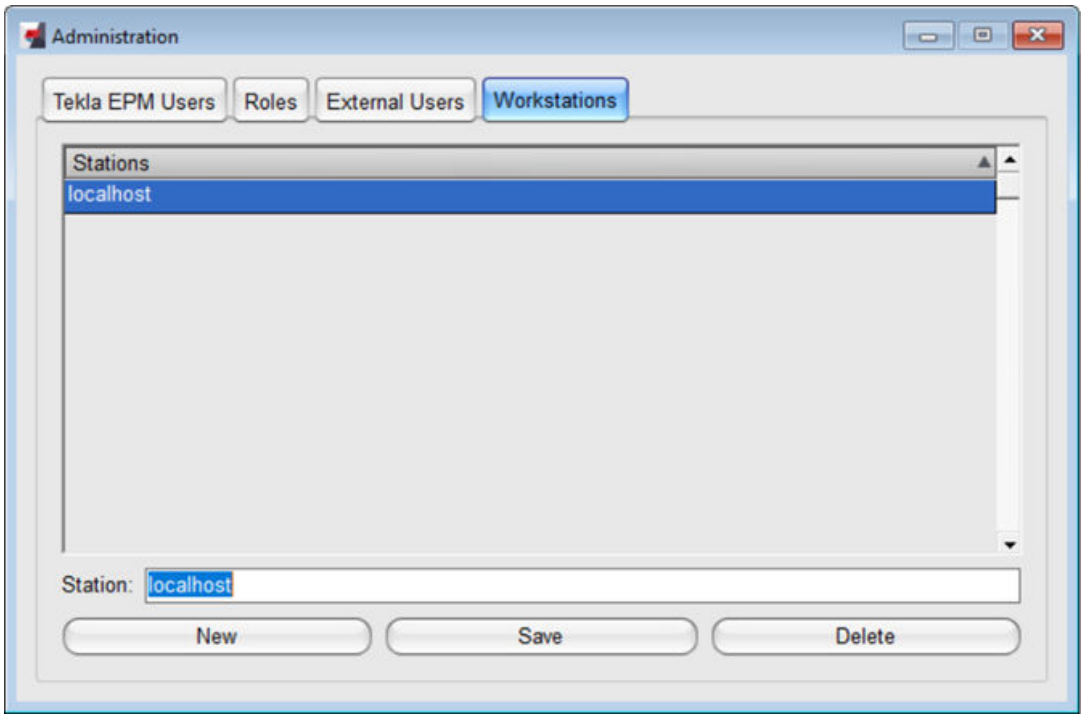
Add, modify, and delete workstations

On the **Workstations** tab of the **Administration** dialog box, you can add new workstations, modify existing workstations, or delete unnecessary workstations. Defining workstations allows creating replicas: when you set up a slave computer, you need to connect one of the previously defined workstations to the slave computer.

For more information on creating replicas, see Create replicas (page 70).

To manage workstations, do the following:

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Open the **Workstations** tab.



Add a workstation

1. On the **Workstations** tab of the **Administration** dialog box, click **New**.
2. In the **Station** field, type the workstation name or the computer ID.
3. Click **Add**.

Modify a workstation

1. On the **Workstations** tab of the **Administration** dialog box, select the workstation that you want to modify.
2. In the **Station** field, modify the workstation name or the computer ID.
3. Click **Save** to save the changes.

Delete a workstation

1. On the **Workstations** tab of the **Administration** dialog box, select the workstation that you want to delete.
2. Click **Delete**.
3. To permanently delete the workstation, click **Yes** in the confirmation dialog box.

View the users that are signed in

Administrators can use the **Users Currently Logged In** command to view the Tekla EPM users that are currently signed in. This can be useful when trying to run an update from one Tekla EPM version to another, which requires that other users exit Tekla EPM. Administrators can also close other users' Tekla EPM sessions and sign them out.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Click the **Administration** ribbon tab.
4. On the menu, select **Users Currently Logged In**.
5. In the **Users Currently Logged In** dialog box, view the users that are currently signed in.

   For users within the office, you can see the IP address of the computer on which the user is signed in and the time that the user has signed in.
6. If necessary, do either of the following:
   - To close a user's Tekla EPM session and sign them out, select the user and click **Force Shutdown**.
   - To cancel closing the user's Tekla EPM session and signing them out, click **Cancel Shutdown**.
7. To close the **Users Currently Logged In** dialog box, click the **Close** button (**X**) in the upper-right corner.

Note that you can also use the **Remote Users Currently Logged In** command to view the remote users that are currently signed in.

For remote users, you can see the time that they have signed in and the time of their last activity in Tekla EPM Go. However, you cannot close remote users' Tekla EPM Go sessions or sign the users out.

3.4 Adjust settings and company information

Administrators are responsible for adjusting the settings that define how Tekla EPM can be used, defining the company information, and deciding on the default folders for saving Tekla EPM files. Administrators can also create replicas by connecting to off-site computers.

For more information, see the following links:

Define and modify company information (page 63)

Define the administration settings (page 66)

Set the default folders for saving files (page 69)

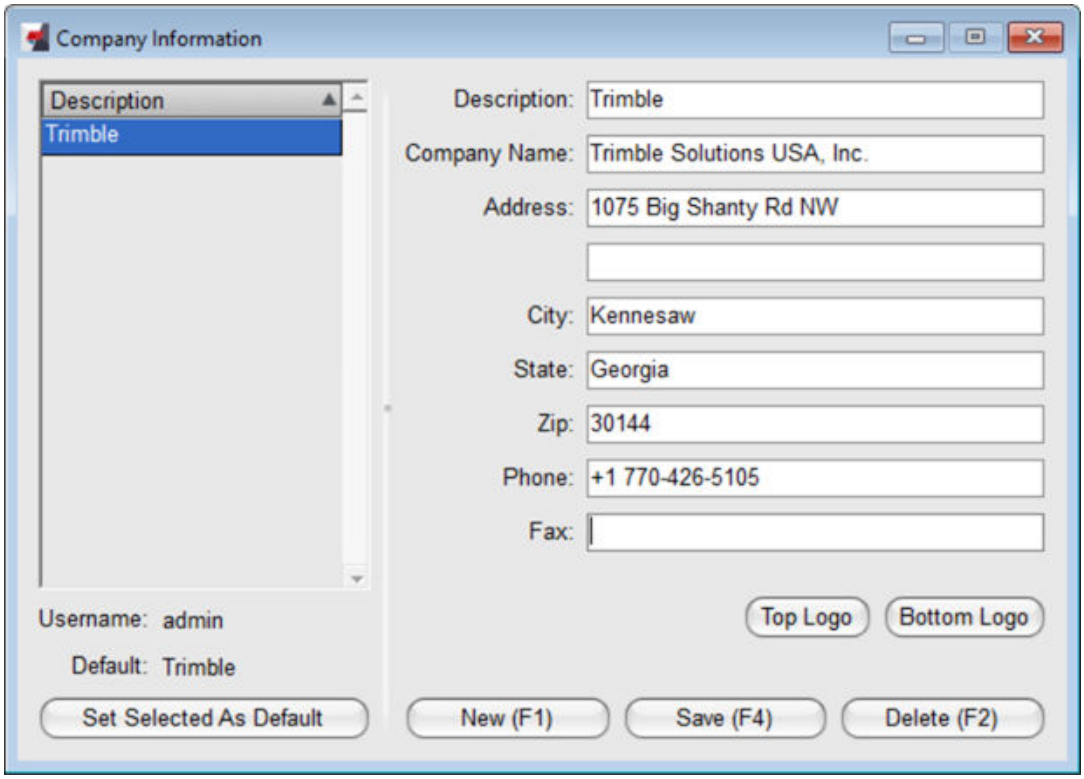
Create replicas (page 70)

Define and modify company information

In the **Company Information** dialog box, you can define the name and contact information of your company. The company information is used in all Tekla EPM modules when you create reports. You can also add multiple companies, if necessary.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Company Information**.

The **Company Information** dialog box opens.



Add company information

1. In the **Company Information** dialog box, click **New**.
2. Add a description for the company.

   For example, `Main`.
3. Define the company name, address, city, state, zip code, phone, and fax according to your needs.

   The company name is mandatory information. All other details are optional.
4. To add a logo for the company, do the following:

a. According to your needs, click one of the following buttons:
   - To place the company logo at the top of the reports, click **Top Logo**.
   - To place the company logo at the bottom of the reports, click **Bottom Logo**.

b. Click **Load From File**.

c. In the **Open** dialog box, browse to find the logo file, and select it.

   Note that the logo file needs to be a .bmp, .jpg, or .png file. We recommend using the .jpg format because logo files in any other format are converted to .jpg when you add them.

   The maximum height for the logo file is 3 inches, or 76,2 mm, at 96 pixels per inch. A maximum width is not enforced, but we recommend that you use a logo file that is narrower than the standard paper size of your company.

d. Double-click the logo file, or click **Open**.

e. Select if the logo should be aligned left, center, or right.

The logo is added for the company.

Note that if you want to use another logo file instead, you need to click **Top Logo** or **Bottom Logo** again, and click **Clear** in order to delete the current logo file.

5. Click **Add**.

The company is added to the list.

Note that you can add multiple companies, if necessary. For example, if you want the **Shipped From** location to be something other than the address of your main company, you need to add another company with that name and address. These can be the name and address of a vendor or a supplier.

You can change which one of the available companies is used in the **Report Types** dialog box.

Set the default company

If you have added multiple companies, you should set one of the companies as the default company used in reports.

Note that you can only set the default company for the current user.

1. In the **Company Information** dialog box, select the company that you want to set as the default company.
2. At the bottom of the dialog box, click **Set Selected As Default**.
3. To confirm using the selected company as the default option, click **Yes** in the confirmation dialog box.

The selected company is set as the default company used in reports.

Note that the default company is shown in the **Default** field at the bottom of the **Company Information** dialog box.

You can change which one of the available companies is used in the **Report Types** dialog box.

Modify company information

1. In the **Company Information** dialog box, select the company that you want to modify.
2. Modify the company description, name, address, city, state, zip code, phone, and fax according to your needs.
3. To modify the logo for the company, do the following:
   a. According to your needs, click one of the following buttons:
      - To modify the company logo at the top of the reports, click **Top Logo**.
      - To modify the company logo at the bottom of the reports, click **Bottom Logo**.

   b. Click **Clear** to delete the existing logo file.

   c. Click **Load From File**.

   d. In the **Open** dialog box, browse to find the logo file, and select it.

      Note that the logo file needs to be a .bmp, .jpg, or .png file. We recommend using the .jpg format because logo files in any other format are converted to .jpg when you add them.

      The maximum height for the logo file is 3 inches, or 76,2 mm, at 96 pixels per inch. A maximum width is not enforced, but we recommend that you use a logo file that is narrower than the standard paper size of your company.

   e. Double-click the logo file, or click **Open**.

   f. Select if the logo should be aligned left, center, or right.

   The logo is added for the company.
4. Click **Save** to update the company information.

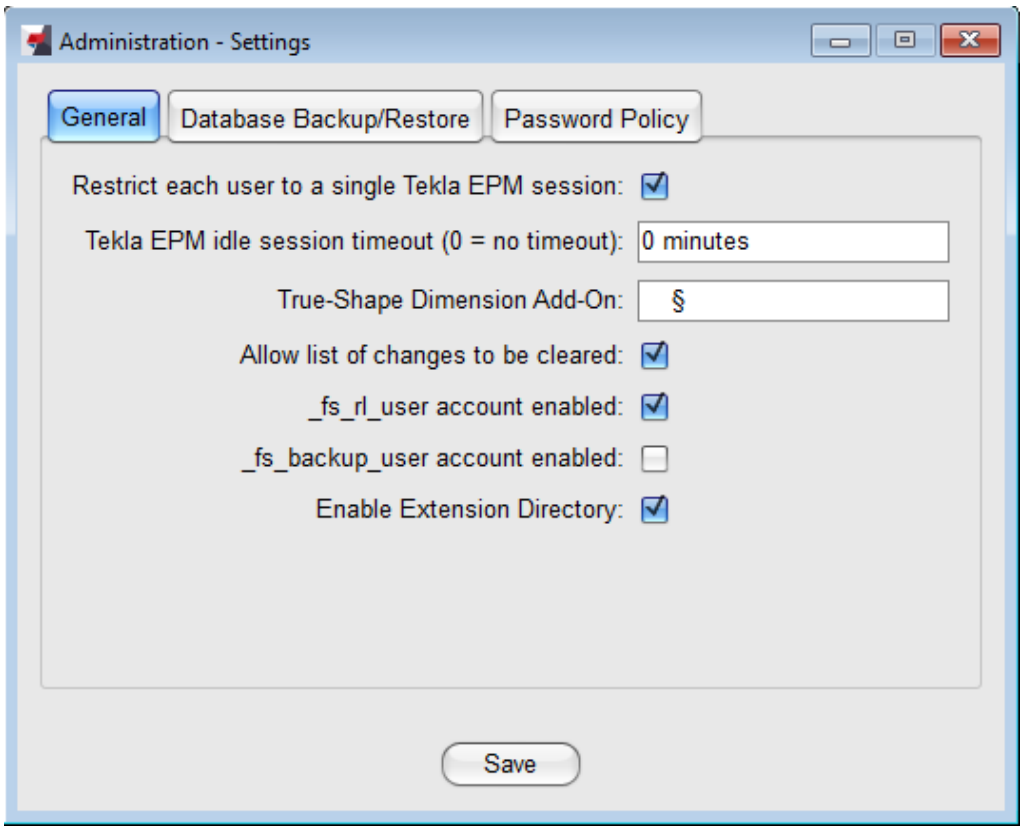
Delete company information

1. In the **Company Information** dialog box, select the company that you want to delete.
2. Click **Delete**.
3. To permanently delete the selected company and its information, click **Yes** in the confirmation dialog box.

Define the administration settings

In the **Administration - Settings** dialog box, administrators can define in which way Tekla EPM can be used. For example, administrators can only allow each user to have one Tekla EPM session open at a time. In addition, administrators can define a password policy that all Tekla EPM passwords need to follow.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Click the **Administration** ribbon tab.
4. On the menu, select **Settings**.



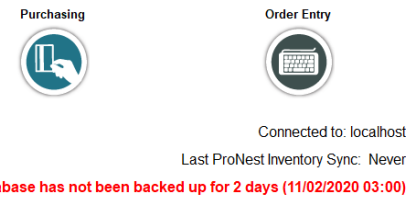
5. On the **General** tab of the **Administration - Settings** dialog box, define the settings according to your needs:

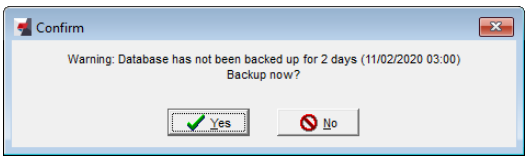
Option	Description
Restrict each user to a single Tekla EPM session	When selected, Tekla EPM users can only have one Tekla EPM session open at the same time. When cleared, Tekla EPM users can have multiple Tekla EPM sessions open at the same time.

Option	Description
Tekla EPM idle session timeout	Allows you to define the number of minutes that a Tekla EPM user can remain inactive before the user's session times out and the user is logged out. Type the number of minutes in the **Tekla EPM idle session timeout** field. If you do not want sessions to time out, type `0` in the **Tekla EPM idle session timeout** field.
True-Shape Dimension Add-On	The symbol that is displayed after dimensions if a plate item has a CNC file attached to it and the actual shape of the item in the CNC file is not a rectangle. For example, if a plate is triangular, Tekla EPM will know the true shape, although it cannot be shown in the item dimensions. You can replace the `§` symbol with `[SQM]` to display the area of non-rectangular plates in square feet or square meters.
Allow list of changes to be cleared	When selected, allows administrators and other users with the correct user permissions to clear the list of changes in a particular Tekla EPM module. When cleared, the list of changes cannot be cleared in any module, even by administrators or users that have the correct permissions.
_fs_rl_user account enabled	When selected, the built-in user login is enabled, so that the Tekla EPM Remote Server can connect to the Tekla EPM database without the administrator adding the username and password in the monitor settings. When cleared, the built-in user login is disabled, so the Tekla EPM Remote Server cannot connect to the Tekla EPM database without the administrator adding the username and password in the monitor settings.
_fs_backup_user account enabled	When selected, the built-in username and password are enabled, so that Tekla EPM can perform scheduled backups from the server computer without a username and password. When cleared, Tekla EPM cannot perform scheduled backups from the server computer without a username and a password.
Enable extension directory	When selected, users can use their own extensions with Tekla EPM. User-defined extensions need to

Option	Description
	be saved in the **Extension** default folder that is defined in the **Default Directories** dialog box. When cleared, users cannot use their own extensions with Tekla EPM. Also, the **Extension** option is not available in the **Default Directories** dialog box.

6. On the **Database Backup/Restore** tab, define how the Tekla EPM database can be restored and how often users should get reminders to create backup copies of the database.

Option	Description
Allow database restore from any workstation	When selected, allows administrators to restore the Tekla EPM database using any computer. When cleared, the Tekla EPM database can only be restored on the server computer. For more information, see Restore the Tekla EPM database (page 99).
Show background message if backup has not been run in 'x' days (0 for no message)	The number of days after the previous database backup when Tekla EPM should remind users with a background message about backing up the Tekla EPM database. You can type a different number of days for users with administrative rights and for regular Tekla EPM users. If you do not want to give a reminder message, type 0. See an example of a background message below.  For instructions on how to back up the Tekla EPM database, see Save a backup copy of the Tekla EPM database (page 98).

Option	Description
Show popup message if backup has not been run in 'x' days (0 for no message)	The number of days after the previous database backup when Tekla EPM should remind users with a pop-up message about backing up the Tekla EPM database. You can type a different number of days for users with administrative rights and for regular Tekla EPM users. If you do not want to give a reminder message, type 0. See an example of a pop-up message below.  For instructions on how to back up the Tekla EPM database, see Save a backup copy of the Tekla EPM database (page 98).

7. On the **Password Policy** tab, define the minimum length for Tekla EPM passwords and select the check boxes for the characters that all Tekla EPM passwords need to contain.

   If no password policy is defined, any passwords can be used. Note that Tekla EPM passwords are always case-sensitive.

8. Click **Save** to save the settings.

Set the default folders for saving files

Use the **Default Directories** dialog box to select the folders where Tekla EPM saves information by default.

TIP To ensure that the default folders are consistent on all computers, you can copy the `settings.ini` file from that first Tekla EPM installation to `C:\Users\Public\Documents\Tekla\Tekla EPM\Settings` for all later installations.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Default Directories**.

   The **Default Directories** dialog box opens. Here, you need to set the default folders for the following content:

- **Backup**: Tekla EPM database backup files
- **Export**: all exported files
- **Import**: all imported files, except for drawing files
- **Log**: import log and error log text files
- **Document Index**: all files saved in the **Document Index**
- **Drawing**: imported drawing files
- **Update**: Tekla EPM update files
- **Custom Report**: all customized report files
- **Extension**: extensions used together with Tekla EPM

You can use shared drives, IP addresses, or UNC file paths as default folders.

3. To change the default folders, do the following:
   a. Click **...** on the right side of a field.
   b. In the **Browse For Folder** dialog box, browse to find the folder that you want to set as the default folder.

      If necessary, you can add a new folder under the currently selected one by clicking **Make New Folder**.
   c. Select the folder.
   d. Click **OK**.

   Repeat steps a to d to set all necessary default folders.
4. To update the default folders, click **OK**.

Create replicas

In the **Replication** dialog box, administrators can connect to workstations in an off-site location to share Tekla EPM files and activity. Note that the off-site workstation needs to have Tekla EPM installed in order to connect. The Tekla EPM on the off-site workstation then becomes a slave to the server it is connected to. You can also delete any existing slave workstations, if necessary.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Click the **Administration** ribbon tab.
4. On the menu, select **Replication Administration**.
5. In the **Replication** dialog box, click **New Slave**.
6. At the bottom right corner of the dialog box, click the arrow buttons to move the workstations that you want to connect to the selected slave workstation to the **Stations Connecting** list.

7. To save the changes, click **Save Stations**.

3.5 Set up and work with integrated software

You can use Tekla EPM together with several integrated software products. Software integrations save you time and work, because you do not need to enter the same information to several software. Among other things, you can use software integrations to mult and nest materials, and visualize IFC models.

For more information, see the following links:

Link Tekla EPM to Trimble Connect (page 71)

Use Tekla EPM together with Tekla Warehouse (page 76)

Use customized extensions for combining (page 77)

Manage inventory, cut lists, and nests with ProNest (page 79)

Mult and nest materials with Steel Projects PLM (page 90)

Link Tekla EPM to Trimble Connect

To use Trimble Connect for viewing IFC models for estimating and production control jobs, you need to link Tekla EPM and Trimble Connect to each other. To enable updating the statuses of Tekla EPM items to Trimble Connect, you also need to set up status sharing.

Linked jobs in the **Estimating**, **Production Control**, and **Project Management** modules can all be linked to a Trimble Connect project.

Note that if an estimating or production control job is linked to a project management job, the Trimble Connect project is managed through the project management job. In this case, you need to link the project management job to Trimble Connect. The link is then applied to any linked estimating and production control jobs. The Trimble Connect project cannot be modified when you access it through the estimating or production control job.

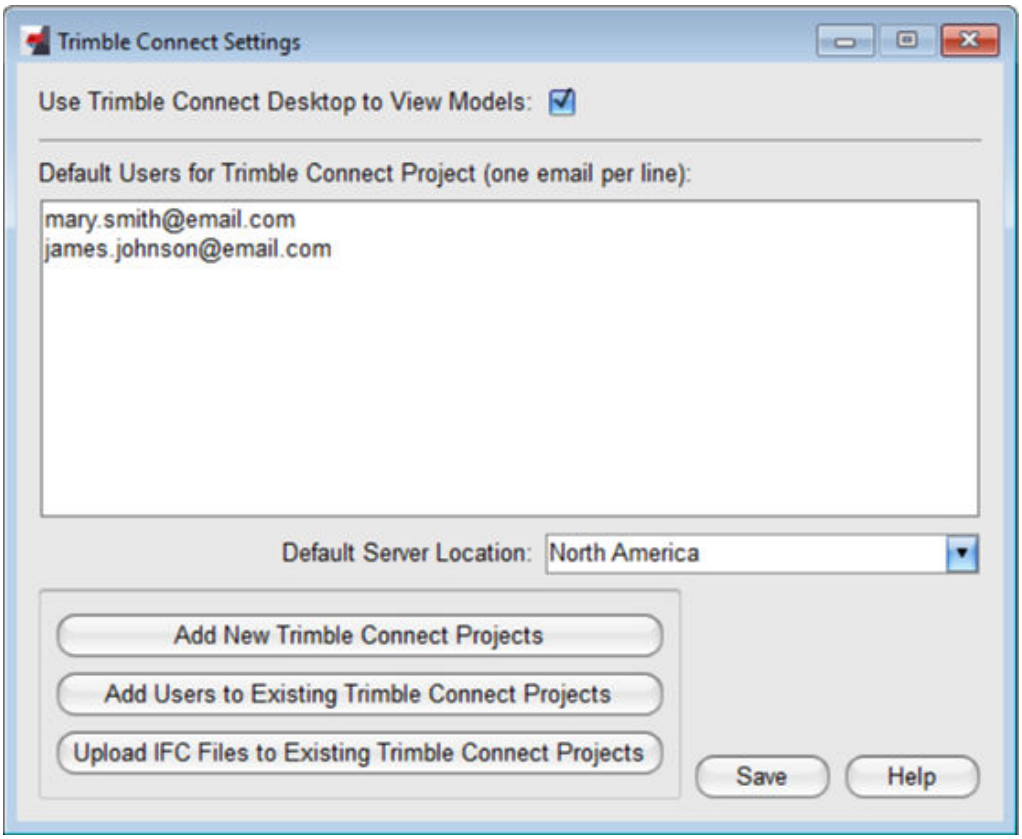
See also

Add Trimble Connect projects (page 74)

Add users to Trimble Connect projects (page 75)

Link Tekla EPM to Trimble Connect

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Integration Settings** --> **Trimble Connect** .



3. If you have not yet migrated to Tekla licensing, in **Trimble Connect Settings** dialog box, select the **Use Trimble Connect Desktop To View Models** check box.
4. To invite users to participate in your Trimble Connect projects, type their emails on separate lines in the **Default Users for Trimble Connect Project** section.

   The users whose email addresses you type here can later be added to existing Trimble Connect projects.
5. If necessary, click the arrow on the right side of the **Default Server Location** list, and change the server location.
6. Click **Save**.

Note that you need to restart Tekla EPM to be able to use Trimble Connect for viewing IFC models.

Set up status sharing with Trimble Connect

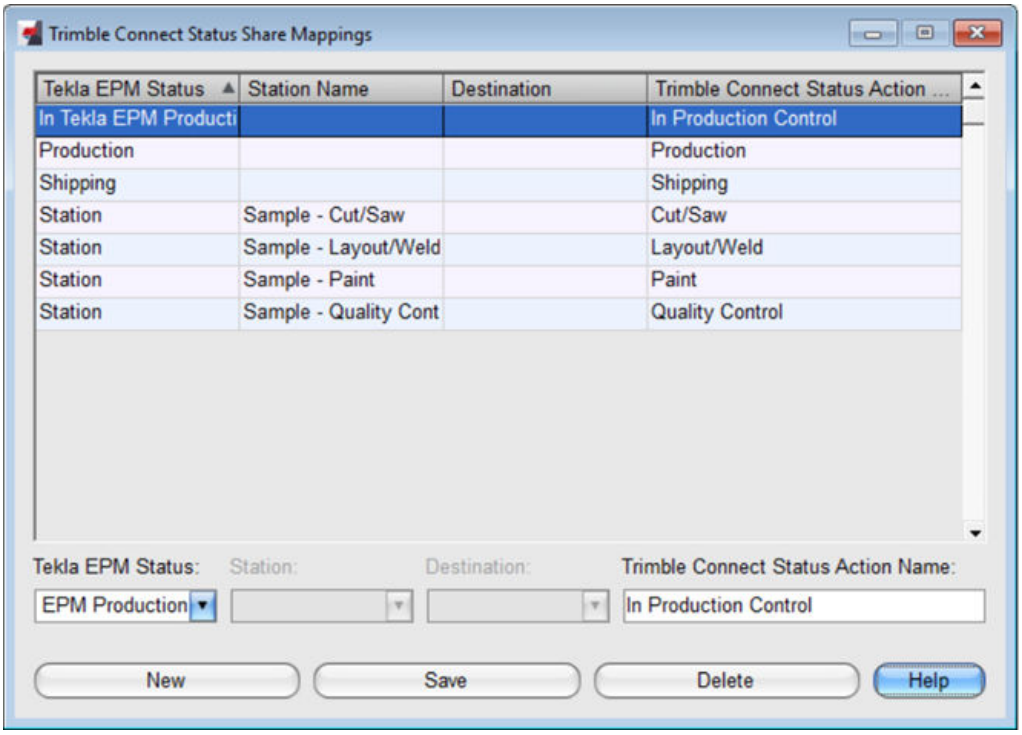
You can enable sharing the statuses of production control jobs to Trimble Connect.

The available status types are:

- **Purchasing**: **None**, **Started** (on a purchase order but not yet received), **Completed**

- **Production**: **None** (production not started), **Started**, **Completed**
- **Station**: can include all or any individual stations set up in Tekla EPM.
- **Shipping**: **None**, **Started** (at an intermediate shipping destination), or **Completed**
- **Destination**: can include all or any individual destinations set up in Tekla EPM.
- **In Tekla EPM Production**: items highlighted with green are in the production control job.
- **In Tekla EPM Estimating**: items highlighted with green are in the estimating job.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Integration Settings** --> **Trimble Connect Status Share** .



3. In the **Trimble Connect Status Share Mappings** dialog box, create the status types that can be shared to Trimble Connect:
   a. Click **New**.
   b. Click the arrow on the right side of **Tekla EPM Status** list, and select a status.
   c. Depending on the selected status, click the arrow on the right side of the **Station** or **Destination** list, and select an option in the list.
   d. In the **Trimble Connect Status Action Name** field, type the name used for the status in Trimble Connect.

e. Click **Add**.

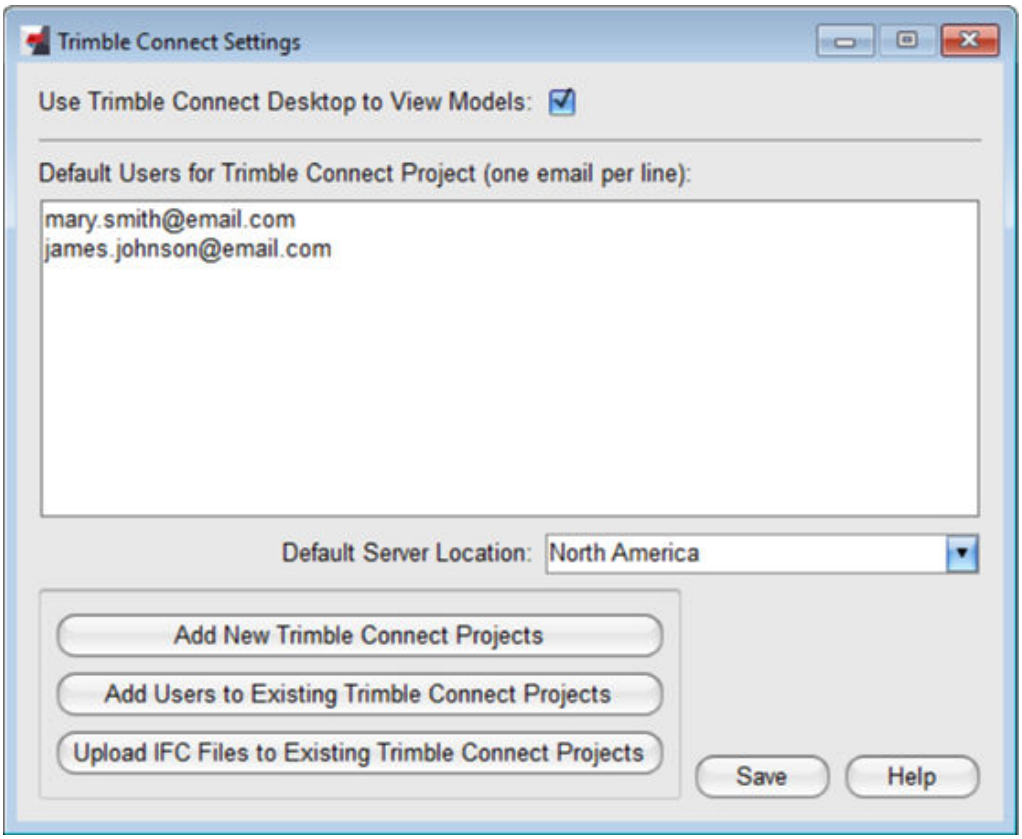
Repeat steps a to e for each status that you want to add.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Add Trimble Connect projects

Use the **Add New Trimble Connect Projects** command to create Trimble Connect projects based on the existing project management jobs.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Integration Settings** --> **Trimble Connect** .



3. In the **Trimble Connect Settings** dialog box, click **Add New Trimble Connect Projects**.
4. In the **Select Project** dialog box, click the arrow buttons to move the production control jobs that you want to add as projects to the **Included** list.
5. Click **OK**.

6. In the **Add Users to Project** dialog box, click the arrow buttons to move the users that need access to the new project to the **Included** list.

   All users that are set as default Trimble Connect users are automatically in the **Included** list.
7. Click **OK**.
8. In the **Status** dialog box, view the project creation process.
9. When the setup is completed, click **OK** to close the **Status** dialog box.
10. To attach an IFC model to the project, do the following:
    a. Open Trimble Connect for Windows.
    b. Double-click the new project to open it.
    c. In the **Explorer** side pane on the left, click the **Add File** button.
    d. In the **Add Files** dialog box, browse to find the IFC model.
    e. Select the IFC model and click **Open**.

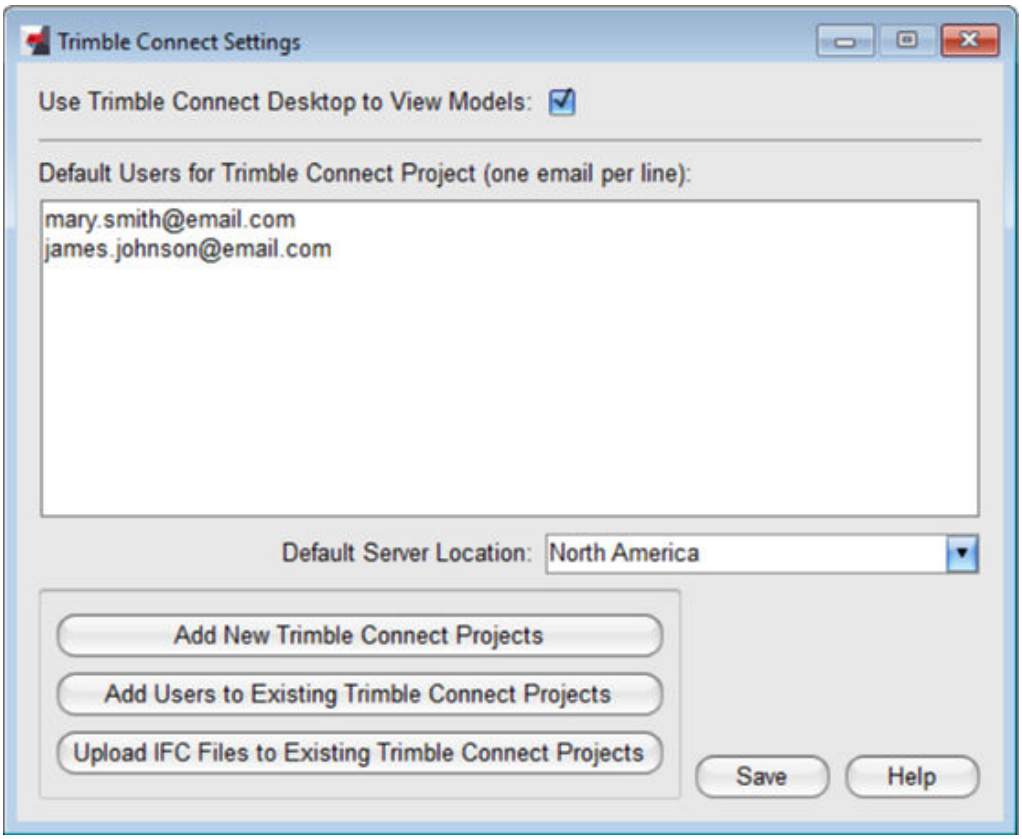
See also

Add users to Trimble Connect projects (page 75)

Add users to Trimble Connect projects

Use the **Add Users to Existing Trimble Connect Projects** command to invite users to participate in specific Trimble Connect projects.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Integration Settings** --> **Trimble Connect** .



3. In the **Trimble Connect Settings** dialog box, click **Add Users to Existing Trimble Connect Projects**.
4. In the **Add Users to Project** dialog box, click the arrow buttons to move the users that need access to the project to the **Included** list.

   The users in the **Included** list receive email invitations to the projects you select.
5. Click **OK**.
6. In the **Select Project** dialog box, click the arrow buttons to move the projects to which you want to add the selected users to the **Included** list.
7. Click **OK**.
8. In the **Status** dialog box, view the user invitation process.
9. When the setup is completed, click **OK** to close the **Status** dialog box.

The selected users have now been sent email invitations to the selected Trimble Connect projects.

See also

Add Trimble Connect projects (page 74)

Use Tekla EPM together with Tekla Warehouse

Tekla Warehouse is a service for collaboration, and for storing and sharing content used for Tekla Structures and Tekla EPM.

Tekla Warehouse provides centralized access to a wide range of content that you can use in Tekla Structures and Tekla EPM.

For example, you can download the Workflow Tools for Tekla Structures application from Tekla Warehouse to allows showing the statuses of items pushed from Tekla EPM to Trimble Connect in the related Tekla Structures model. Similarly, downloading Workflow Tools for Trimble Connect Desktop allow showing the statuses of items pushed from Tekla EPM to Trimble Connect in Trimble Connect for Windows.

Note that you need to have a Trimble Identity to download content from Tekla Warehouse.

To access Tekla Warehouse, go to https://warehouse.tekla.com/.

For more information on Tekla Warehouse, see Getting started with Tekla Warehouse.

See also

Manage Trimble Identities and Tekla Online licenses (page 36)

Use Trimble Connect with an estimating job (page 435)

Use Trimble Connect with a production control job (page 810)

Sign in to Tekla EPM (page 109)

Use customized extensions for combining

You can create your own extensions that send multing and nesting requests from Tekla EPM to other software. This way, using external multing or nesting software becomes smoother.

NOTE Before you can use extensions with Tekla EPM, users with administrator rights need to enable using extensions in the **Administration - Settings** dialog box. For more information, see Define the administration settings (page 66).

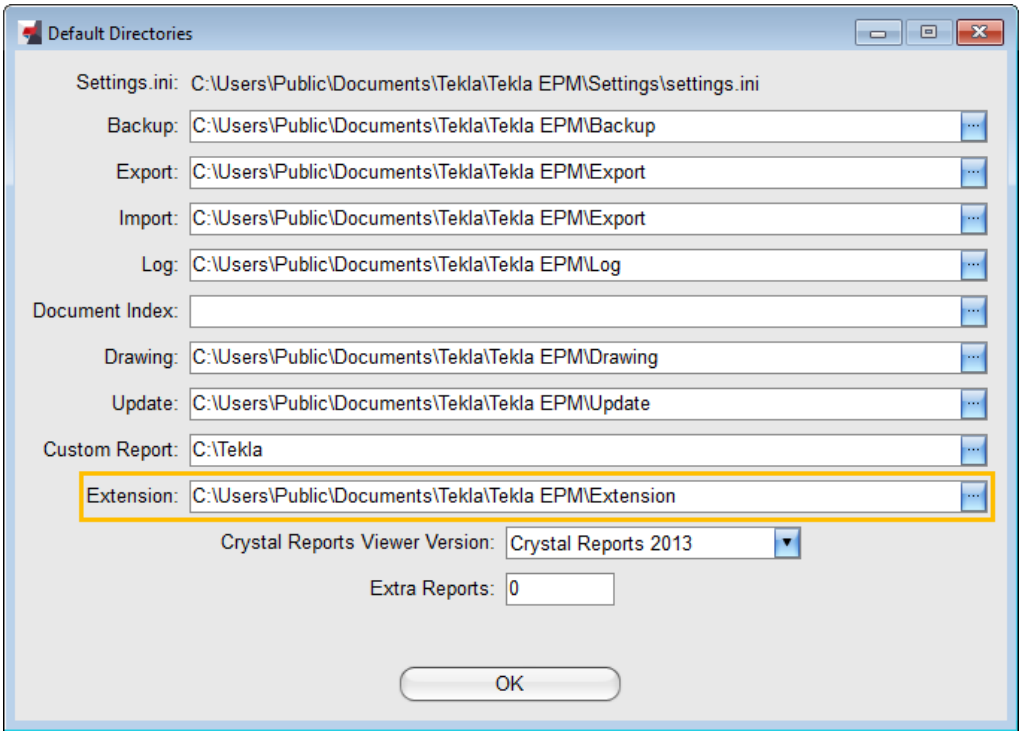
Add and save an extension

1. Create the extension with a suitable tool.

   For example, you can use Microsoft Visual Studio.

   Remember to create the necessary error messages if something goes wrong when you use or test the extension.

2. To check where the extension needs to be saved, click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
3. On the **File** menu, select **Default Directories**.



4. Save your extension to the default folder for extensions.

Export materials for combining

To test and use your extensions:

1. Open a job and click the contextual ribbon tab.

   For example, in an open production control job, click the **Production Control** tab.
2. On the menu, select **Combine**.
3. Select a combining command: **Mult**, **Nest**, or **Mult & Nest**.
4. Set the combining filters according to your needs.
5. Click **Optimizations**.
6. In the **Combining Setup** dialog box, set **Multing Software** or **Plate Nesting Software** to **Other**.
7. Combine the necessary items.
8. Click the **Combining Run** ribbon tab.
9. In the menu, go to **Export Parts for Nesting** and select your extension.

10. In the **Export Parts for Combining** dialog box, adjust the settings according to your needs:
    - To include existing inventory materials in the export, select the **Include available inventory** check box.
    - To include inventory materials that are on order in the export, select the **Include orderable inventory**.
    - In the **CNC files** list, select how you want to include CNC files in the export.
11. Click **Send**.

Manage inventory, cut lists, and nests with ProNest

You can use Tekla EPM and ProNest together to keep your inventory, cut lists, and nests synchronized, so that you do not have to enter the same information in both software.

Integration requirements

See the requirements for the ProNest integration below.

Software	Required vdersion
Tekla EPM	2019 or newer
ProNest	2019 or newer
ProNest DataSync	2019 or newer

Note that the integration also requires:

- having particular ProNest licenses. For more information, contact your ProNest representative.
- downloading the following files:

File name	Description	Download file to
`FabSuite Inventory Sync.xml`	The inventory sync task for ProNest DataSync.	On the ProNest database server
`Tekla EPM Work Order.xml`	Needed if you plan to export items from Tekla EPM in the work order format.	`C:\ProgramData\Hypertherm CAM\Data Sync [version]\Tasks\`
`ProNest to Tekla EPM Summary.fr3`	The custom report to import nested items from ProNest back to Tekla EPM.	`C:\ProgramData\Hypertherm CAM\ProNest 2019\Reports (FastReport)\Custom Reports\`

- having DataSyncCMD installed on the Tekla EPM server.
- having DataSyncCMD and DataSync server running on the ProNest server.

To test the connection between Tekla EPM and ProNest DataSync:

1. On the start screen of the Tekla EPM server, type `cmd` into the search.
2. In the command prompt, copy and paste the following:

   ```
   " "[Data Sync Path]" test1"
   ```

If you get the error message "The specified task name is unknown", DataSync is running properly.

If you get the error message "Cannot find Data Sync Service", contact your ProNest representative.

Set up Tekla EPM to work with ProNest

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Integration Settings** --> **ProNest**.
3. To allow sending inventory to ProNest and using ProNest for nesting plates, select the **Enable ProNest for Plate Nesting** check box at the top of the **ProNest Settings** dialog box.
4. In the **Nesting Request Format** list, select how you want to send nesting requests:
   - **Work Order**: allows you to send the part list in a single click, and after that, automatically imports to the part list in ProNest
   - **PNL/SNL**: allows sending both the part list and the available inventory to ProNest in two files with the same name. One of these files is a PNL file, and the other is an SNL file. Opening the PNL file in ProNest imports the parts, selects the imported parts for nesting, and sets the available inventory for the nest to the plates within the related SNL file.
5. On the **Database Connection** tab in the dialog box, define how Tekla EPM connects to the ProNest database to sync the inventory:

Option	Description
IP address	The IP address of the ProNest database. The default value is `[Computer name]\PRONEST`. Note that the computer name needs to be the name of the computer on which ProNest has been installed. This might not be the computer on which you are using Tekla EPM. If you want to check if Tekla EPM can connect to the ProNest database properly, click **Test Connection**. If the connection is not successful, open ProNest and ensure that the database is

Option	Description
	networked, and that you have typed the right computer name in the **IP address** field.
ProNest Version	The ProNest version that you are using. Note that the oldest available ProNest version is version 2012, or version 10.
Use Windows Authentication	If you want to use Windows Authentication to connect to the ProNest database, select the **Use Windows Authentication** check box. If you do not want to use Windows Authentication, clear the **Use Windows Authentication** check box.
Username, **Password**	Your username and password in ProNest.

6. On the **Inventory Sync** tab, define the inventory synchronization settings:

Option	Description
Inventory Sync Folder	The path to the folder in which inventory sync files are stored. Note that both Tekla EPM and ProNest need to be able to read from and write to the inventory sync folder. This means that if Tekla EPM and ProNest are installed on different computers, the inventory sync folder needs to be a shared folder.
Data Sync Command Path	The path to the location on the Tekla EPM workstation or the server where you have installed `DataSyncCmd.exe`.
Inventory Sync Timeout	The time in minutes that Tekla EPM will wait for `DataSyncCmd.exe` to respond. 3 to 5 minutes is usually a sufficient time.
Material Display Format	The material display format defined in ProNest regional settings. Note that the format needs to match the format used in ProNest.
Show File Location Errors for Cut Lists	If you want to get notifications when ProNest cut lists are located in unsuitable folders, select the **Show File Location Errors for Cut Lists** check box. If you do not want to see these errors, clear the **Show File Location Errors for Cut Lists** check box.
Import Cut List before Inventory Sync	To receive updates on which items have been cut before synchronizing the inventory, select the **Import Cut List before Inventory Sync** check

Option	Description
	box. We recommend that you select the **Import Cut List before Inventory Sync** check box. If you do not want to receive updates on cut items before synchronizing the inventory, clear the **Import Cut List before Inventory Sync** check box.
Sync Material On Order	To send material that has not yet been received to ProNest, select the **Sync Material On Order** check box. To avoid sending material that has not yet been received to ProNest, clear the **Sync Material On Order** check box.
Sync Combined Material	To synchronize inventory stock material that has been used in combining, select the **Sync Combined Material** check box. To prevent synchronizing inventory stock material that has been used in combining, clear the **Sync Combined Material** check box.
Enable Automatic Inventory Sync	If you want to allow Tekla EPM to automatically synchronize the inventory with ProNest, select the **Enable Automatic Inventory Sync** check box. If you do not want to allow Tekla EPM to automatically synchronize inventory with ProNest, clear the **Enable Automatic Inventory Sync** check box. **NOTE** If you have created an automated event (page 189) for synchronizing the inventory between Tekla EPM and ProNest, you should clear the **Enable Automatic Inventory Sync** check box. We recommend creating an automated event instead of selecting the **Enable Automatic Inventory Sync** check box.
Automatic Inventory Sync Interval	The time in minutes after which Tekla EPM automatically synchronizes the inventory with ProNest. The synchronization should happen frequently enough to keep your inventory up to date. We recommend using an interval between 10 and 60 minutes.

7. On the **Transfer Settings** tab, select to which ProNest fields you want to map the following Tekla EPM fields:

Option	Description
Tekla EPM Remnant ID Field	The unique, unchanging ID that EPM assigns to each remnant. If you want to see the remnant ID in ProNest as well, select the ProNest field in which you want to show the remnant ID.
Heat Serial Number Field	The heat serial number of each inventory item. Note that the heat number of each inventory item is automatically mapped to ProNest. If you use a heat serial number in Tekla EPM and want to see the heat serial number in ProNest as well, select the ProNest field in which you want to show the heat serial number.
PO Number Field	The purchase order on which the inventory item has been added. If you want to see the purchase order information in ProNest as well, select the ProNest field in which you want to show the purchase order number.
Bill of Lading Field	The bill of lading number, or the shipment number that the inventory item was received on. If you want to see the bill of lading number in ProNest as well, select the ProNest field in which you want to show the bill of lading number.
Secondary Location Field	The secondary location of each inventory item. Note that the primary location of each inventory item is automatically mapped to ProNest. If you want to see the secondary location in ProNest as well, select the ProNest field in which you want to show the secondary location.
ProNest Name Field	This setting corresponds to the information in the **Name** field in ProNest plate inventory. We recommend that you select the **Shape Grade Thickness** option. However, if you have used Tekla EPM and ProNest together without the integration before, you can also select the **PartNumber** option.
Dimension Units	Select if you want to show dimension lengths in imperial or metric units.
Blank Class	To ensure compatibility with ProNest, select an option for items without a class:

Option	Description
	• **Three Spaces**: use this option with newer versions of ProNest • **Empty**: use this option only with older versions of ProNest
Use Full Path for CNC Filename	To ensure that the ProNest integration works, select this check box if you use version 2021 of ProNest or newer.

8. Click **Save**.

Synchronize inventory information with ProNest

Use the **Sync with ProNest** command to synchronize Tekla EPM inventory information with ProNest and update the cut lists in ProNest. We recommend that you synchronize the two software regularly.

Before you begin, ensure that:

- `DataSyncCmd.exe` is running
- Tekla EPM can access the ProNest database

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Export** --> **Sync with ProNest** .

   The inventory information in Tekla EPM is exported to ProNest to synchronize the two software. You can view the process in the **Status** dialog box.
3. When the synchronization process is completed, click **OK** to close the **Status** dialog box.

In the synchronization process, Tekla EPM checks the ProNest database for new items and links each new item in the ProNest inventory to the appropriate piece in the Tekla EPM inventory. When synchronization is complete, ProNest has all the inventory items that Tekla EPM has.

Note that inventory items that have previously been in ProNest but have not been linked to Tekla EPM are not affected by the synchronization.

Import ProNest inventory to Tekla EPM

1. In ProNest, print the plates that you want to export into an HTML file.
2. In Tekla EPM, open the **Inventory** module.
3. Click the **Inventory** ribbon tab.
4. On the menu, select **Import** --> **Inventory from HTML**.
5. Browse to and select the inventory HTML file from ProNest.
6. Click **Open**.

The selected ProNest plates are imported into the Tekla EPM inventory. The import creates a link between Tekla EPM and ProNest, so that the imported plates can be used in nests.

Existing plates in the Tekla EPM inventory are updated, but their quantity is not decreased.

7. See the progress of the import in the **Import** dialog box.

   To see more details on the import, click **Open Import Log**.

8. When the import is complete, click the **Close** button (**X**) in the upper-right corner to close the **Import** dialog box.

Import ProNest cut lists to Tekla EPM

Before sending cut lists to Tekla EPM, send the nest to CNC in ProNest.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Import** --> **ProNest Cut List** .

   Tekla EPM imports the cut lists that are available in ProNest.

3. See the progress of the import in the **Import** dialog box.

   To see more details on the import, click **Open Import Log**.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Update the inventory using a cut list

After you have imported a ProNest cut list to Tekla EPM, you can update the inventory as follows:

1. Open a production control job.
2. Click the **Production Control** ribbon tab.
3. on the menu, select **Review** --> **Cut Lists**.
4. At the bottom of the **Cut Lists** dialog box, click **New**.
5. Click **Make Report**.
6. In the **Report Selection** dialog box, click **Save Cut List**.
7. Type a description and select a due date for the cut list.
8. Ensure that **Share Cut List** is selected.
9. Click **Save To Cut List**.

   The new cut list appears in the **Cut Lists** dialog box.

10. In the **Cut Lists** dialog box, double-click the new cut list.
11. To view the nest details of an item, double-click the item in the cut list.

12. To see images of the nest, click **Nest Image**.
13. When an item in the cut list has been cut by a machine, in the **Cut Lists** dialog box, select the item and click **Cut**.
14. Define the properties of the used inventory item.
15. Define the drop properties.
16. To remove the item from the Tekla EPM inventory and add the resulting remnant to the inventory, click **TFS**.

    The status of the item in the cut list is now set to **Complete** and highlighted in green.

    The remnant item is linked to ProNest and can be used in ProNest for further nesting.

    You can see an image of the remnant, if you double-click the remnant item in the **Inventory** dialog box.

Troubleshooting TFS

Sometimes, when you take an item from stock with the **TFS** command, you get an error saying "External Nesting Result is not available". This occurs when the cut list that was imported from ProNest to Tekla EPM could not be completed during the import.

This can happen if:

- the ProNest job was sent to CNC with the initial nesting, but the material items in Tekla EPM needed to be ordered. This means that the inventory did not exist in Tekla EPM when ProNest marked this item as cut.
- The ProNest job was sent to CNC multiple times.
- The cut list was imported to Tekla EPM before the material that was being cut had been received in the Tekla EPM inventory.
- Something in the nest changed in Tekla EPM, invalidating the nest. For example, this can happen if the reserved inventory was used for something else.

To fix the error, try the following:

1. Ensure that all inventory needed for the nest is in stock and received in the Tekla EPM inventory.
2. In ProNest, re-send the job to CNC.
3. Import the cut list to Tekla EPM again.

If you continue to face the same error after this, contact support.

Export plates to be nested in ProNest

1. Open a combining, estimating, or production control job, a requisition, or a purchase order.

2. Click the contextual ribbon tab.

   For example, if you are working on a combining job, click the **Combining** ribbon tab.

3. On the menu, select **Combine**.
4. In the **Select Combining Run** dialog box, click **Nest**.
5. It the lower-left corner of the **Combining Run Filters** dialog box, click **Optimizations**.
6. On the **Plate Nesting Settings** tab, set **Plate Nesting Software** to **ProNest**.
7. Click **Save**.
8. To combine the materials, click the button at the bottom of the **Combining Run Filters** dialog box, or press **F4**.

   In the **Combining Run Results** dialog box, all parts show as not combined.

9. Click **Save Combining Run**.
10. Click the **Combining Run** ribbon tab.
11. On the menu, select **Export Parts for Nesting** --> **Export to ProNest**.
12. Depending on the nesting request format that you have selected in the **ProNest Settings** dialog box, do one of the following:

If you have selected	Do this
the **Work Order** format	a. Click the arrow on the right side of **Work order due date**, and select a date in the calendar. b. To allow ProNest to mirror plates in the nesting process, select the **Mirror Plates** check box. c. To allow ProNest to rotate plates in the nesting process, select the **Allow plate to be rotated** check box. d. To include the job number in the piece marks of items, select the **Include Job Number in Piecemark** check box. For example, the piece mark `p1.dxf` in job called `Job123`

If you have selected	Do this
	would change into `Job123-p1.dxf`. This can help you to recognize items with the same piece numbers in different jobs. e. Click **Export Parts**. The work order is automatically created and imported to ProNest. The name and location of the work order file are not important. f. After the export is complete, open ProNest and click **Add Parts**, or select **Job** in the menu. g. On the **Home** tab, select **Edit Part List** --> **Edit Part List**. h. On the **Work Orders** tab of the **Edit Part List** dialog box, select some or all of the newly imported items, and drag them to the part list. i. Click the **Close** button (**X**) to return to nesting.
the **PNL/SNL** format	a. Click the arrow on the right side of **Work order due date**, and select a date in the calendar. b. To allow ProNest to nest onto current stock materials, select the **Include Sheets** check box, and define the priority for nesting onto current stock material. Priority 1 is the primary option for nesting. c. To allow ProNest to nest onto remnants, select the **Include Remnants** check box, and define the priority for nesting onto remnants. Priority 1 is the primary option for nesting. d. To allow ProNest to nest onto orderable inventory, select **Include Orderable Sizes** check

If you have selected	Do this
	box, and define the priority for nesting onto orderable inventory. Priority 1 is the primary option for nesting. e. To open the PNL file in ProNest when the file has been created, select the **Automatically Open PNL** check box. f. To include the job number in the piece marks of items, select the **Include Job Number in Piecemark** check box. For example, the piece mark `p1.dxf` in job called `Job123` would change into `Job123-p1.dxf`. This can help you to recognize items with the same piece numbers in different jobs. g. To use the ProNest setup for mirroring, select the **Auto-Tab** check box. h. Click **Export Parts**. The export creates two files: a PNL file, which contains the parts to nest, and an SNL file, which contains the inventory plates currently available for combining. i. If the PNL file is not automatically opened in ProNest, on the **Home** tab, select **Edit Part List** --> **Import Part List** and select the PNL file. The matching SNL file is imported automatically.

Import nesting results to Tekla EPM

1. In the **Combining Run Results** dialog box, click the **Combining Run** tab.
2. On the menu, select **Import Nested Parts**.
3. In the **Open** dialog box, browse for and select the nesting results file.

4. Click **Open**.

Mult and nest materials with Steel Projects PLM

You can use Steel Projects PLM to mult and nest materials outside Tekla EPM. You can also export cut lists from Tekla EPM to Steel Projects PLM.

Set up Tekla EPM to work with Steel Projects PLM

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Integration Settings** --> **Steel Projects**.
3. In the **Steel Projects Settings**, select the **Enable Steel Projects Integration** check box.
4. If you want to allow Steel Projects PLM to reserve material to a job that does not exist in Tekla EPM, select the **Allow Nests without a Tekla EPM Job** check box.
5. Click **Save**.
6. If you use Tekla EPM Go, we recommend that you create an external user.

   For detailed instructions, see Add, modify, and delete external users (page 51).
7. Give the external user the necessary remote permissions.

   For detailed instructions, see Manage remote user permissions (page 47).
8. Ensure that the Tekla EPM Remote Server is running.

   For detailed instructions, see Set up the Tekla EPM Remote Server (page 33).

Note that you still need to set up Steel Projects PLM to work with Tekla EPM. For detailed instructions, see the Steel Projects PLM documentation.

Send a work order to Steel Projects PLM

A work order is a nesting or multing request. A work order contains the CNC files to be cut, and the available and orderable inventory on which you can nest materials.

1. Open a combining, estimating, or production control job, a requisition, or a purchase order.
2. Click the contextual ribbon tab.

   For example, if you are working on a combining job, click the **Combining** ribbon tab.
3. On the menu, select **Combine**.

4. In the **Select Combining Run** dialog box, click a desired combining option to select it.

   The options are:

   - **Mult**: combines linear items, like beams and angles.
   - **Nest**: combines items that have area, like plates or gratings.
   - **Mult & Nest**: combines all items.

5. In the lower-left corner of the **Combining Run Filters** dialog box, click **Optimizations**.
6. Depending on which items will be combined, do one or both of the following:
   - On the **Mult Settings - Linear Material** tab, set **Multing Software** to **SteelProjects**.
   - On the **Plate Nesting Settings** tab, set **Plate Nesting Software** to **SteelProjects**.
7. Click **Save**.
8. To combine the materials, click the **Mult**, **Nest**, or **Mult and Nest** button at the bottom of the **Combining Run Filters** dialog box.

   In the **Combining Run Results** dialog box, all parts show as not combined.
9. Click **Save Combining Run**.
10. Click the **Combining Run** ribbon tab.
11. On the menu, select **Export Parts for Nesting** --> **Export to Steel Projects**.
12. In the **Export Parts for Combining** dialog box, adjust the settings according to your needs:
    - To include existing inventory materials in the export, select the **Include available inventory** check box.
    - To include inventory materials that are on order in the export, select the **Include orderable inventory**.
    - In the **CNC Files** list, select how you want to include CNC files in the export.
13. Click **Export Parts**.

Tekla EPM exports the parts to be multed and nested.

You can now open Steel Projects PLM and import the `XML` file that has been created by Tekla EPM. For detailed instructions on multing and nesting parts, see the Steel Projects PLM documentation.

After the parts have been nested in Steel Projects PLM, you can save the nesting results. The results will be automatically imported back to Tekla EPM.

If the required material is not available in the Tekla EPM inventory, Steel Projects PLM will ask you to create a requisition, which will then appear in the **Select Requisition/Purchase Order** dialog box.

Export a cut list to Steel Projects PLM

1. Open a production control job.
2. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
3. On the menu, select **Review** --> **Cut Lists**.
4. In the **Cut Lists** dialog box, click **New Cut List**.
5. In the **Enter Value** dialog box, click the arrow on the right side of the available field, and select the production control job for which you want to create the cut list.

   When you are creating a new cut list, Tekla EPM by default filters the items in the new cut list, so that only items that are not yet assigned to a cut list are included.
6. In the **Production Control Purchasing Report Filters** dialog box, click **Make Report**.
7. In the **Report Progress** dialog box, click **Save Cut List**.
8. In the **Save Cut List** dialog box, type a description and due date for the cut list.
9. To allow importing the cut list to Steel Projects PLM, select the **Share Cut List** check box.
10. Click **Save To Cut List**.

The cut list appears in the **Cut Lists** dialog box in Tekla EPM. You can now import the cut list to Steel Projects PLM.

Manage purchase orders with Trimble Viewpoint

Use the Trimble Viewpoint integration to manage your Tekla EPM purchase orders more efficiently. You can export your purchase orders or job costing transactions to Trimble Viewpoint, or audit the inventory information between Tekla EPM and Trimble Viewpoint.

Set up the Trimble Viewpoint integration

1. In the **Maintenance** menu, select **Integrations** --> **Trimble Viewpoint**.

2. On the **Global Settings** tab of the **Trimble Viewpoint Integration** dialog box, adjust the following settings:

Setting	Description
Viewpoint Software	Select if you are using Trimble Viewpoint Spectrum or Trimble Viewpoint Vista.
Workflow	Select if you want to perform job costing when items are consumed, or when items are purchased or reserved.
Company Code	Type the company code that you use in Trimble Viewpoint. If you want to ensure that the company code is correct each time you export purchase orders, select the **Prompt on export** check box below the **Company Code** field.
Cost Center	Type the cost center that you use in Trimble Viewpoint. If you want to ensure that the cost center is correct each time you export purchase orders, select the **Prompt on export** check box below the **Cost Center** field.

3. To save the settings on the **Global Settings** tab, click **Save Settings**.
4. On the **Receiving** tab, to ensure that you only export the newest transactions for receiving, click **Set** and enter the number of the last exported transaction.

   Only the transactions after the last exported transaction will be exported.
5. On the **Job Costing** tab, do the following:
   a. To ensure that you only export the newest transactions for job costing, click **Set** and enter the number of the last exported transaction.

      Only the transactions after the last exported transaction will be exported.
   b. Type the batch code, the GL debit account number, and the GL credit account number.

      If you want to ensure that the batch code, GL debit account number, or GL credit account number is correct each time you export purchase orders, select the **Prompt on export** check box below the related fields.

c. To update the job costing settings, click **Save Settings**.

6. If you want to create customized reports to use with the Trimble Viewpoint integration, do any of the following:

To create a customized report for	Do this
A purchase order	a. On the **Purchase Orders** tab, click **Design**. b. In the **Select Purchase Order** dialog box, double-click the purchase order. c. If you have selected the **Prompt on export** check boxes for any properties, ensure that the values are correct, and click **OK**. d. To confirm copying the report to your custom report directory, click **Yes**. e. Use the Stimulsoft Report Designer to customize the report. For instructions, see the Stimulsoft Reports user guide.
Receiving	a. On the **Receiving** tab, click **Design**. b. If you have selected the **Prompt on export** check boxes for any properties, ensure that the values are correct, and click **OK**. c. To confirm copying the report to your custom report directory, click **Yes**. d. Use the Stimulsoft Report Designer to customize the report. For instructions, see the Stimulsoft Reports user guide.
Job costing	a. On the **Job Costing** tab, click **Design**. b. If you have selected the **Prompt on export** check boxes for any properties, ensure that the values are correct, and click **OK**. c. To confirm copying the report to your custom report directory, click **Yes**.

To create a customized report for	Do this
	d. Use the Stimulsoft Report Designer to customize the report. For instructions, see the Stimulsoft Reports user guide.
Inventory summary	a. On the **Inventory Summary** tab, click **Design**. b. Select the inventory date and time in the available calendar and lists and click **OK**, or click **Use Current Inventory** to use the current inventory values. c. To confirm copying the report to your custom report directory, click **Yes**. d. Use the Stimulsoft Report Designer to customize the report. For instructions, see the Stimulsoft Reports user guide.

Saving the customized report in Stimulsoft Report Designer updates the changes to Tekla EPM.

7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

You can now start working with the Trimble Viewpoint.

According to your needs, see any of the following instructions.

Export the selected purchase orders to Viewpoint

You can export purchase orders to both Trimble Viewpoint Vista and Trimble Viewpoint Spectrum.

Before you export the purchase order, ensure that:

- The company code of the vendor in the Tekla EPM **Address Book** matches the vendor in Trimble Viewpoint
- The job number of the Tekla EPM purchase order matches the job number in Trimble Viewpoint
- The **Cost Code** field in Tekla EPM purchase orders is mapped to the phase in Trimble Viewpoint purchase orders.

1. Do any of the following:
   a. At the top of the Tekla EPM window, click the **Purchasing** button.

   b. On the **Maintenance** menu, select **Integrations** --> **Trimble Viewpoint**. Then, click **Export** on the **Purchase Orders** tab.

2. In the **Select Requisition/Purchase Order** dialog box, select the purchase orders that you want to export.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

3. Click the **Purchasing** ribbon tab.
4. On the menu, select **Export Purchase Orders** --> **Trimble Viewpoint - Selected**.
5. Click **Yes** to confirm exporting the selected purchase orders.
6. If you have selected the **Prompt on export** check boxes for any properties in the **Trimble Viewpoint Integration** dialog box, ensure that the values are correct, and click **OK**.
7. In the **Save As** dialog box, browse to the folder where you want to save the exported purchase orders.

   By default, Tekla EPM saves the purchase orders in the `Export` folder.

8. If necessary, change the file name.
9. Click **Save**.

The exported purchase orders are saved as a `.txt` file in the folder that you selected.

You can then import the `.txt` file to any Trimble Viewpoint solution according to your needs.

Export purchase orders with receiving transactions to Viewpoint

You can export purchase orders to both Trimble Viewpoint Vista and Trimble Viewpoint Spectrum.

Before you export the purchase order, ensure that:

- The company code of the vendor in the Tekla EPM **Address Book** matches the vendor in Trimble Viewpoint
- The job number of the Tekla EPM purchase order matches the job number in Trimble Viewpoint
- The **Cost Code** field in Tekla EPM purchase orders is mapped to the phase in Trimble Viewpoint purchase orders.

1. Do any of the following:

   a. At the top of the Tekla EPM window, click the **Purchasing** button.

   b. On the **Maintenance** menu, select **Integrations** --> **Trimble Viewpoint**. Then, click **Export** on the **Receiving** tab.

2. In the **Select Requisition/Purchase Order** dialog box, select the purchase orders that you want to export.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
3. Click the **Purchasing** ribbon tab.
4. On the menu, select **Export Purchase Orders** --> **Trimble Viewpoint - Receiving**.
5. In the **Save As** dialog box, browse to the folder where you want to save the exported purchase orders.

   By default, Tekla EPM saves the purchase orders in the **Export** folder.
6. If necessary, change the file name.
7. Click **Save**.

The exported purchase orders are saved as a `.csv` file in the folder that you selected.

NOTE To avoid errors, do not open an exported `.csv` file with Microsoft Excel. If you do so, the formatting of information changes, and the `.csv` file will fail to import to Trimble Viewpoint products.

Export job costing transactions

1. On the **Maintenance** menu, select **Integrations** --> **Trimble Viewpoint**.
2. On the **Job Costing** tab, click **Export**.
3. If you have selected the **Prompt on export** check boxes for any properties in the **Trimble Viewpoint Integration** dialog box, ensure that the values are correct, and click **OK**.
4. In the **Save As** dialog box, browse to the folder where you want to save the file with exported job costing transactions.

   By default, Tekla EPM saves the file in the **Export** folder.
5. If necessary, change the file name.
6. Click **Save**.

The exported job costing transactions are saved as a `.csv` file in the folder that you selected.

NOTE To avoid errors, do not open an exported `.csv` file with Microsoft Excel. If you do so, the formatting of information changes, and the `.csv` file will fail to import to Trimble Viewpoint products.

View the inventory summary report

To audit the inventory information between Tekla EPM and Trimble Viewpoint:

1. On the **Maintenance** menu, select **Integrations** --> **Trimble Viewpoint**.
2. On the **Inventory Summary** tab, click **View**.

3.6 Manage the Tekla EPM database

Administrators can manage the Tekla EPM database in multiple ways: save backup copies of the database, use a backup copy restore a compromised database, compress the database, clear information on user activity from log tables, or recover previously deleted jobs or import backup files.

For more information, see the following links:

Save a backup copy of the Tekla EPM database (page 98)

Restore the Tekla EPM database (page 99)

Compress the Tekla EPM database (page 100)

Clear all information from log tables (page 100)

Recover deleted files (page 101)

Save a backup copy of the Tekla EPM database

We recommend that administrators save backup copies of the Tekla EPM database regularly. This way, you can restore a compromised database by using a backup copy of the database.

NOTE The best way to ensure reliable database backups is using the automated event for creating automatic backups.

1. Close all dialog boxes that you have open in Tekla EPM.
2. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
3. On the **File** menu, select **Backup Database**.
4. In the **Save As** dialog box, browse to the location where you want to save the backup file.
5. If necessary, modify the name of the backup file.
6. Click **Save**.

Tekla EPM copies all database information to the selected folder as a compressed `7z` file.

NOTE You can change the compression level of backup copies in the `settings.ini` file under the folder where Tekla EPM has been installed. To do so:

1. Open the `settings.ini` file.
2. Find or add a section called `[DatabaseBackup]`.
3. Below the `[DatabaseBackup]` line, type `CompressionLevel`, an equal sign, and the compression value.

   The compression values are from 1 (lowest level of compression, fastest backup) to 5 (highest level of compression, slowest backup).

   For example, to save as compressed backup copies as possible, type:

   ```
   [DatabaseBackup]
   CompressionLevel=5
   ```

4. Save and close the `settings.ini` file.

See also

Restore the Tekla EPM database (page 99)

Restore the Tekla EPM database

Administrators can use the **Restore Database** command to replace the Tekla EPM database with a previously saved backup copy. This can be useful if the database has been compromised, or if the database needs to be moved from one server to another.

1. Ensure that all other users have logged out of Tekla EPM.
2. Close all dialog boxes that you have open in Tekla EPM.
3. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
4. On the **File** menu, select **Restore Database**.
5. In the **Open** dialog box, browse to find the backup file that you want to use.
6. Select the file and click **Open**.
7. To replace all existing information in the Tekla EPM database with the information in the backup file, click **Yes** in the confirmation dialog box.

   Tekla EPM restores the database.
8. In the **Message** dialog box, click **OK** to close Tekla EPM.

9. To use the restored database, restart Tekla EPM and log in.

See also

Save a backup copy of the Tekla EPM database (page 98)

Compress the Tekla EPM database

Administrators can use the **Optimize Tables** command to compress the Tekla EPM database.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Click the **Administration** ribbon tab.
4. On the menu, select **Optimize Tables**.

   The **Optimize Tables** dialog box opens, and the compression process starts.

   The more information is saved into Tekla EPM, the longer the compression process takes.
5. In the **Optimize Tables** dialog box, review the result of the compression process.
   - **Optimized** shows the number of files that were compressed.
   - **Optimization Not Required** shows the number of files that did not need to be compressed.
   - **Errors Found** shows the number of errors that were found in the compression process. The errors are also listed in the **Optimize Tables** dialog box.
6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Clear all information from log tables

All actions that are performed in Tekla EPM are saved in log tables. Administrators can use the **Clear Log Tables** command to manually clear extra logs from particular actions made by the Tekla EPM in the company.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Click the **Administration** ribbon tab.
4. On the menu, select **Clear Log Tables**.
5. To confirm clearing the log tables, click **Yes** in the confirmation dialog box.

Recover deleted files

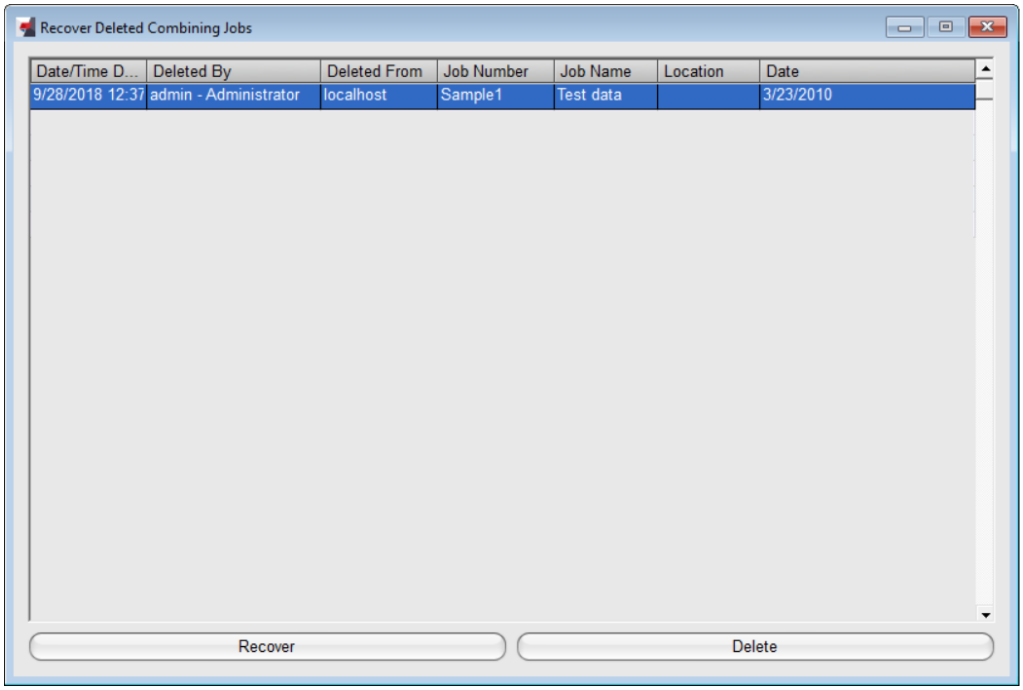
When a user deletes a combining job, estimating job, or a production control job, Tekla EPM saves the jobs in the Tekla EPM database as KISS files. Administrators can recover the deleted combining jobs, estimating jobs, and production control jobs within 30 days of deleting the job.

To access the recovering options, do the following:

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Click the **Administration** ribbon tab.

Recover jobs

1. On the menu, select any of the following depending on the job type:
   - **Recover Deleted Combining Jobs**
   - **Recover Deleted Estimating Jobs**
   - **Recover Deleted Production Control Jobs**



2. In the recovering dialog box that opens, select the jobs that you want to recover.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

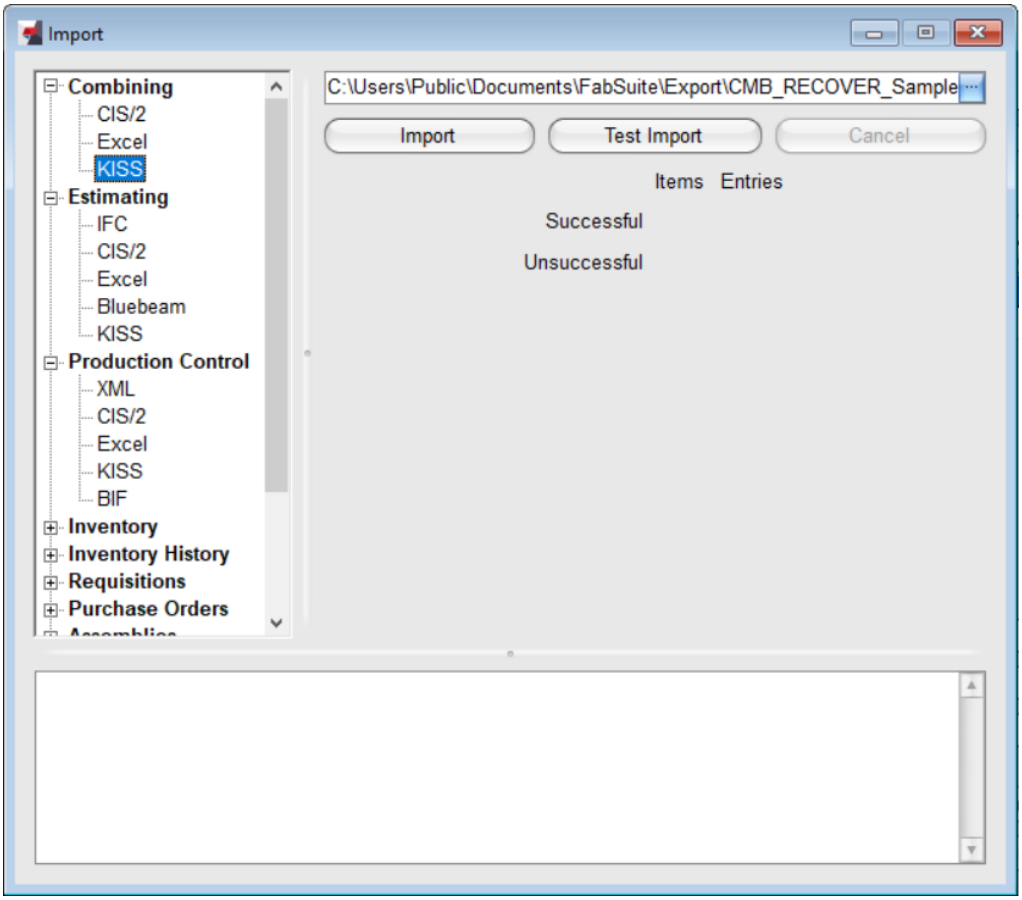
3. Click **Recover**.

   A message opens, informing you that Tekla EPM will create KISS files for the selected jobs. You can then import the KISS files back to Tekla EPM to view and modify the recovered job again.

4. Click **OK** to close the message.
5. In the **Save As** dialog box, browse to the location where you want to save the first KISS file for recovering the job.
6. If necessary, change the file name.
7. Click **Save**.

   Repeat steps 5 to 7 to select the saving location of all KISS files.

8. Close all open dialog boxes in the Tekla EPM.
9. To re-import the recovered job to Tekla EPM, click the **File** ribbon tab.
10. On the **File** menu, select **Import**.
11. In the navigation tree on the left of the **Import** dialog box, select the job type (**Combining**, **Estimating**, or **Production Control**) and then, select KISS.



12. Click the **...** button.

13. In the **Open** dialog box, browse to find the KISS file that you want to import.
14. Select the file and click **Open**.
15. Click **Import**.
16. In the job editing dialog box, modify the job information according to your needs.
17. Click **Save**.
18. In the **Import** dialog box, view the status of the import process.

    If necessary, you can view the import details and errors in a text file by clicking the **Open Import Log** button.
19. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

The recovered job can now be opened and modified when you open the related module in Tekla EPM.

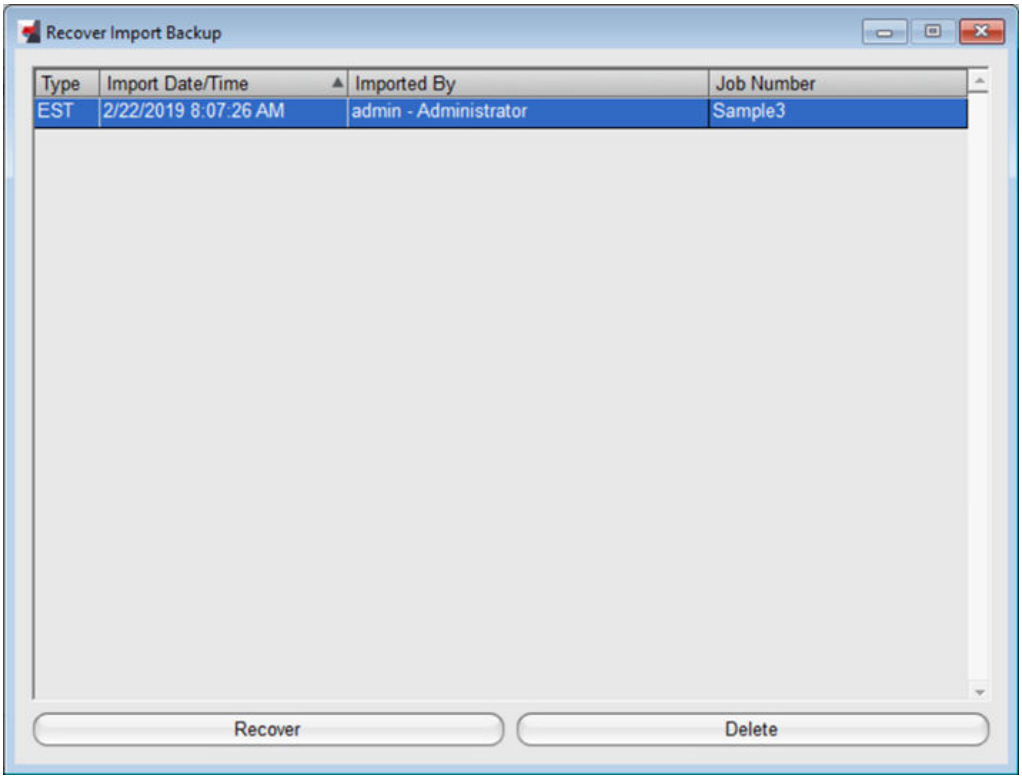
Recover import backups

Tekla EPM creates import backup files automatically when information is imported to a production control job. Import backup files contain the information of a production control job before any new information was imported. By recovering import backup files, you can revert a production control job to the state before new information was imported.

1. On the menu, select **Recover Import Backups**.

2. In the **Recover Import Backup** dialog box, select the import backup file.

   You can identify the correct backup file by the import date and time, the user that imported the information, and the job number.

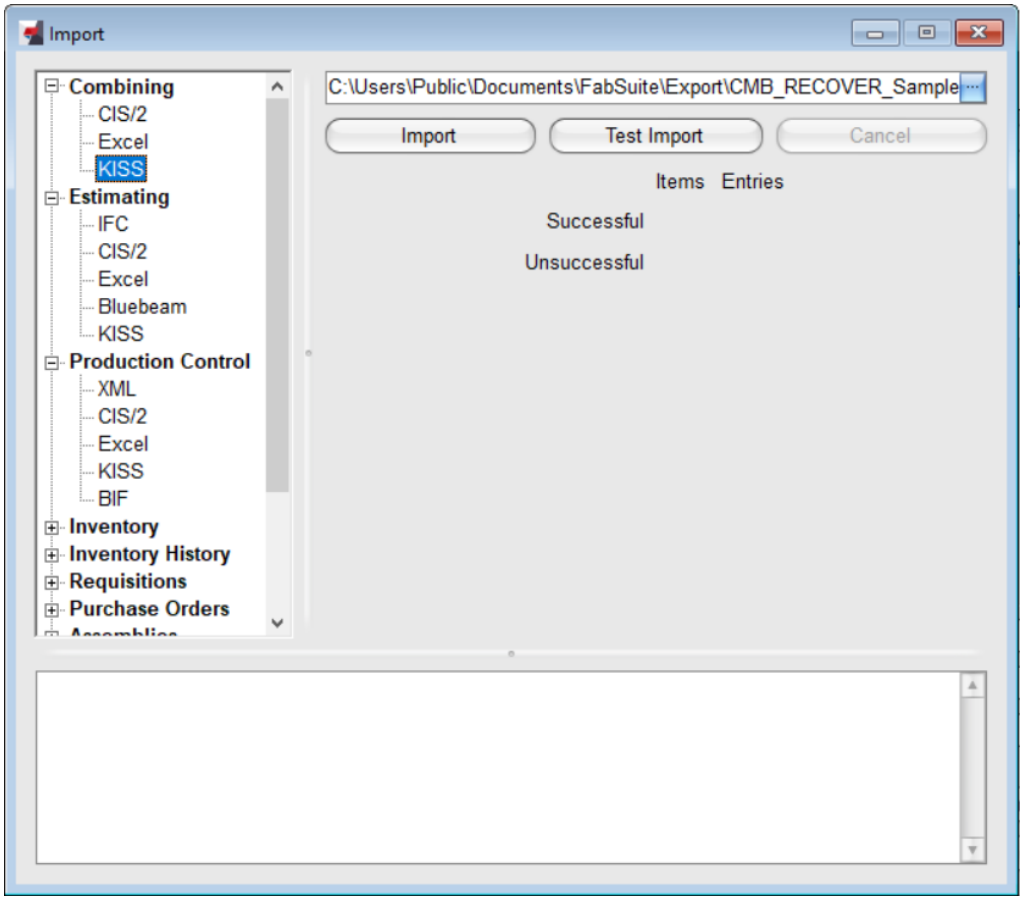


3. Click **Recover**.

   A message opens, informing you that Tekla EPM will create KISS files for the selected import backups. You can then import the KISS files back to Tekla EPM to revert the production control job to the state before importing information.

4. Click **OK** to close the message.
5. In the **Save As** dialog box, browse to the location where you want to save the KISS file.
6. If necessary, change the file name.
7. Click **Save**.
8. Close all open dialog boxes in Tekla EPM.
9. To revert the job to the state before new information was imported, Tekla EPM, click the **File** ribbon tab.

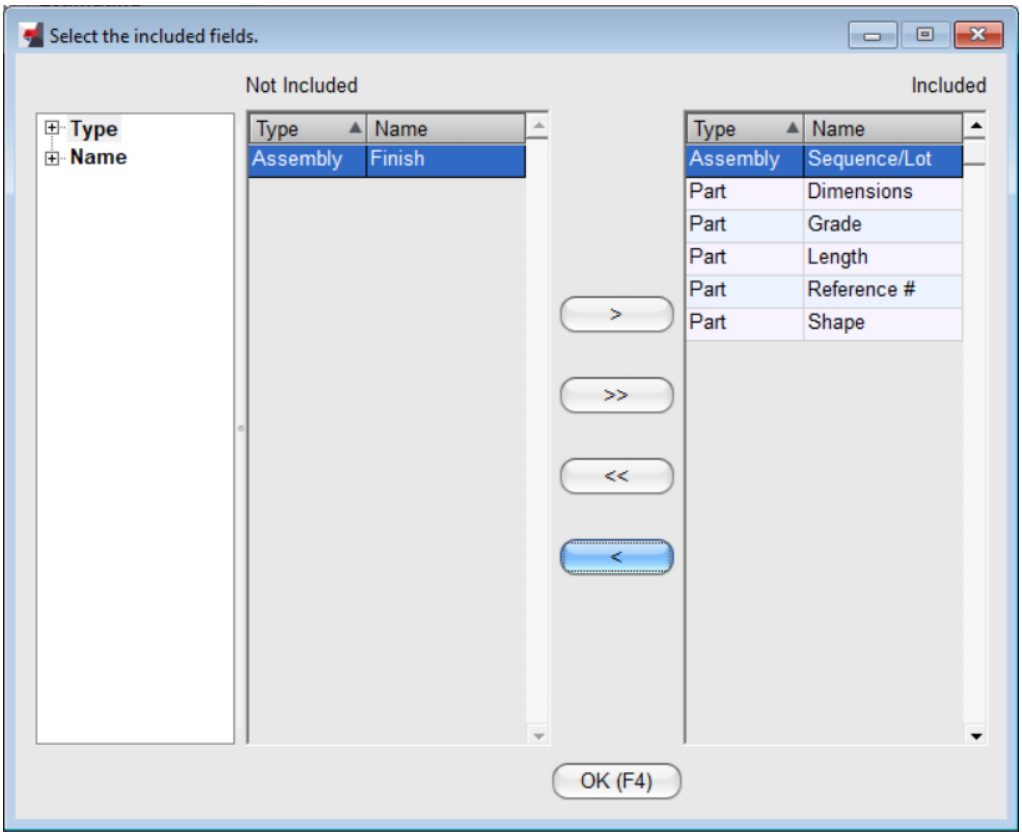
10. In the navigation tree on the left of the **Import** dialog box, select the import file type and then, select **KISS** .



11. Click the **...** button.
12. In the **Open** dialog box, browse to find the KISS file that you want to import.
13. Select the file and click **Open**.
14. Click **Import**.
15. In the **Job #** list, select the job that you want to revert to its previous state.
16. Click **Save**.
17. To overwrite the current information with the import backup file, in the **Import** dialog box, select **Add & Replace**.
18. Click **OK**.

    If you have selected the **Prompt to confirm import fields** in the **Company Standards** dialog box for the **Production Control** module, the **Select the included fields** dialog box opens.

19. In the **Select the included fields** dialog box, click the arrow buttons to move the fields whose information that you want to replace to the **Included** list.



20. Click **OK**.
21. Define other necessary information for the imported backup file.
22. Click **OK**.
23. In the **Import** dialog box, view the status of the import process.

    If necessary, you can view the import details and errors in a text file by clicking the **Open Import Log** button.
24. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

3.7 Repair program errors

Administrators can use the **Check/Repair Tables** commands on the server computer to find and repair errors in Tekla EPM. When one of these commands is executed, the program information is checked against the MYSQL database and any corrupt files are repaired.

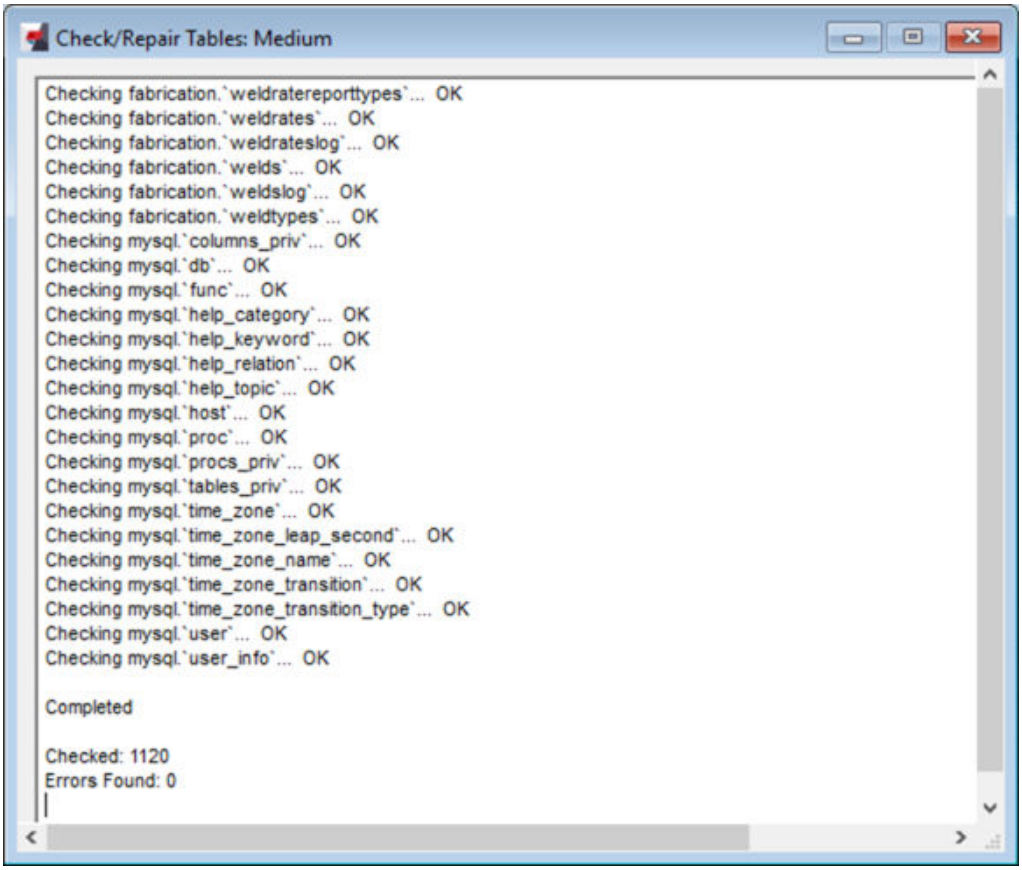
NOTE To repair errors, the administrator must execute the **Check/Repair Tables** commands on the server computer. On other workstations,

the **Check/Repair Tables** commands can help you find corrupted files, but the files cannot be prepared.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Administration**.
3. Click the **Administration** ribbon tab.
4. On the menu, select one of the following commands:
   - **Check/Repair Tables: Quick (Fast)**
   - **Check/Repair Tables: Medium (Recommended)**
   - **Check/Repair Tables: Extended (Slow)**

   The **Check/Repair Tables** dialog box opens, and the check and repair process starts.

   The more information is saved into Tekla EPM, the longer the check and repair process takes.
5. In the **Check/Repair Tables** dialog box, review the result of the check and repair process.



6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

4 Start using Tekla EPM

Tekla EPM is a software solution designed for the needs of the steel fabrication industry. Tekla EPM brings together various modules that integrate seamlessly with each other, so the information that you enter in one Tekla EPM module is available through the entire workflow.

Tekla EPM is built upon the industry best practices. However, the operations and options in Tekla EPM can be customized to match your existing processes and procedures.

Tekla EPM consists of the following modules:

- The **Combining** module allows you to create advanced bills of materials while optimizing the use of material and minimizing the waste.
- The **Estimating** module allows you to create estimates with customizable pricing based on multiple sources for material pricing and shop-specific labor.
- The **Inventory** module allows you to track your entire inventory across all jobs as material is received and consumed. The **Inventory** module also allows you to track stock materials and non-steel items.
- The **Project Management** module allows you to easily share project information to all users that participate in a project, and create and view project schedules in order to track the progress of the project.
- The **Production Control** module allows you to view and manage the fabrication process of material items.
- The **Purchasing** module allows you to create requisitions, and automate and optimize creating and tracking purchase orders.
- The **Order Entry** module allows you to manage all tasks related to selling material from your warehouse or shop, such as creating quotes and orders, invoicing, and recording payments.

For more information, see the following links:

Sign in to Tekla EPM (page 109)

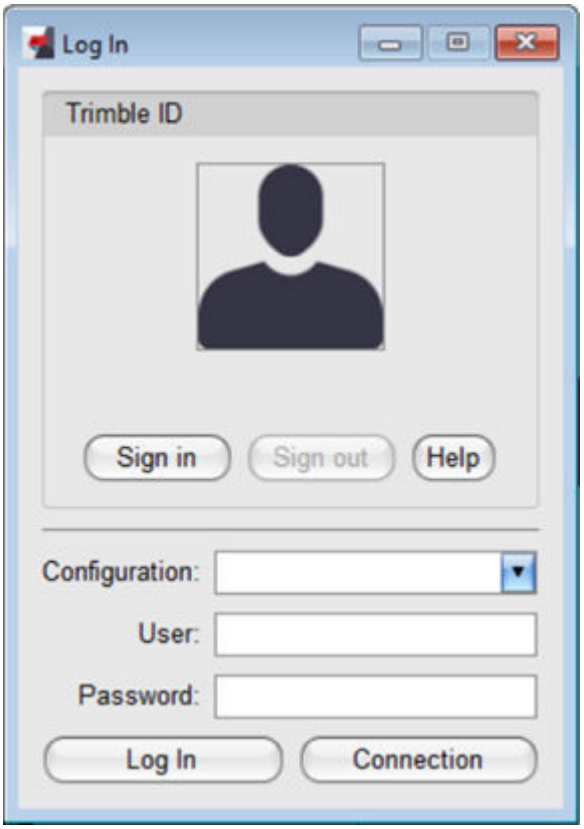
Set the default printer (page 166)

Set the standard categories for attached documents (page 166)
Manage the address book (page 169)
Manage taxes and currencies (page 176)
Import files to Tekla EPM (page 182)
Create, modify, and delete automated events (page 189)
Customize Tekla EPM (page 206)

4.1 Sign in to Tekla EPM

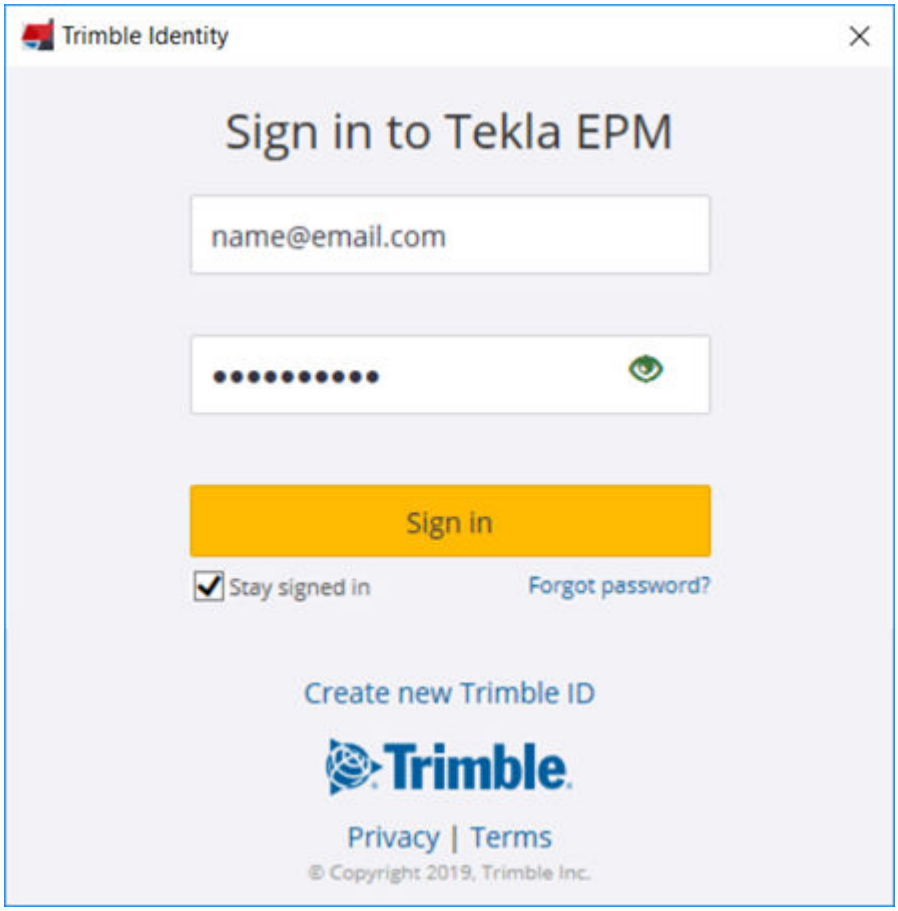
To sign in to Tekla EPM for the first time, do the following:

1. Start Tekla EPM.



2. In the **Trimble ID** section of the **Log In** dialog box, click **Sign in**.

If you do not have a Trimble Identity, see Create your Trimble Identity (page 111).



3. In the **Trimble Identity** dialog box, type your email address and password.
4. If you want to stay signed in with this Trimble Identity, select the **Stay signed in** check box.
5. Click **Sign in**.

   The **Trimble Identity** dialog box closes automatically.
6. If necessary, in the **Configuration** list of the **Log In** dialog box, select which configuration of Tekla EPM you want to use.

   Note that you only need to select a configuration if you have purchased more than one configuration of Tekla EPM.
7. Type your Tekla EPM username and password.

   The username and password need to be created by an administrator in your company.

   The default Tekla EPM sign-in information for administrators is:

   - username: `admin`

- password: `fab`

If you have previously used Fabsuite, your username and password are the same as in Fabsuite.

8. Click **Log In**.
9. In the **Enter Value** dialog box, do either of the following:
   - To save your Trimble Identity and use it automatically when you sign in to Tekla EPM, select **Yes** in the list.
   - To not use your Trimble Identity automatically when you log in, select **No** in the list.

See also

Tekla EPM configurations (page 111)

Create your Trimble Identity (page 111)

The Tekla EPM window (page 112)

Set or change your Tekla EPM password (page 113)

Tekla EPM configurations

Tekla EPM is available in different configurations that provide the opportunity to use different Tekla EPM modules and features.

The Tekla EPM modules included in different configurations are:

Name	Tekla EPM Full	Tekla EPM Production	Tekla EPM Estimating
Combining	✔	✔	✔
Estimating	✔		✔
Inventory	✔	✔	✔
Project Management	✔	✔	
Production Control	✔	✔	
Purchasing	✔	✔	✔
Order Entry	✔	✔	

In addition to the Tekla EPM configurations in the table, there are specific Tekla EPM configurations that replace the Fabsuite configurations used by former Fabsuite customers.

Create your Trimble Identity

You need a Trimble Identity to download and use Tekla EPM.

The licenses of each Tekla EPM user are tied to the user's Trimble Identity. For this reason, users always need to sign in to Tekla EPM with their Trimble Identity. In addition, each Tekla EPM user needs to be added to the company's organization by a user with administrator rights.

If you are the named contact at your organization, Trimble automatically creates an account for you or connects your existing Trimble Identity to your organization. The named contact has administrator status and must add other users into the organization to enable their access to content and services that require a valid maintenance contract.

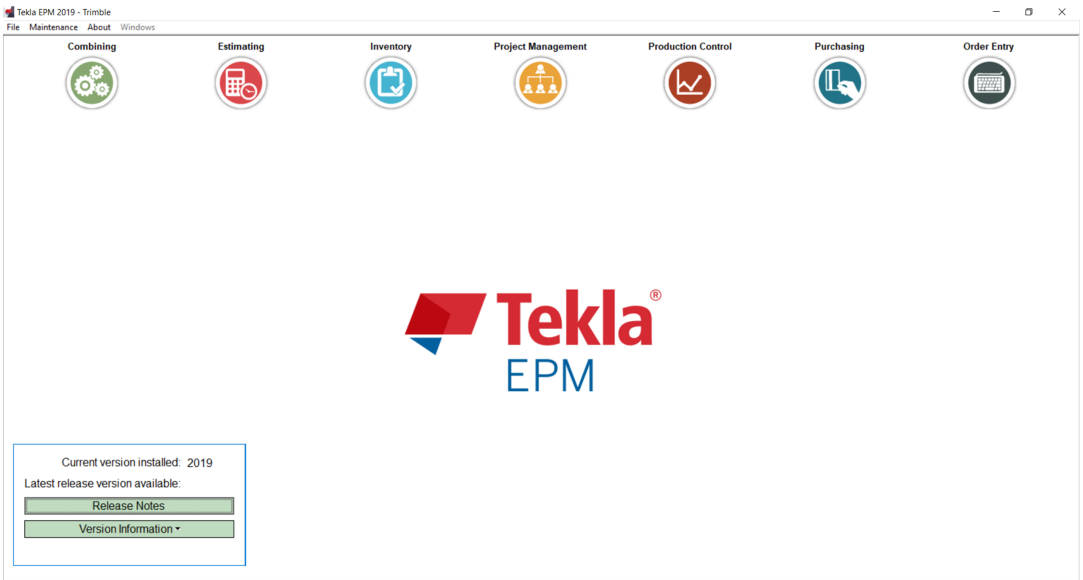
If you are the named contact, Trimble sends you an email with an invitation to accept membership in the organization group and complete the profile information if you did not have an existing Trimble Identity. You are then responsible for managing the organization group together with other administrators that you assign.

If you are not the named contact, you receive an email invitation to join the organization group when an administrator from your own organization invites you. You can also create a new Trimble Identity here.

If you are having problems using your Trimble Identity in Tekla Online services, see the troubleshooting information on this page.

The Tekla EPM window

See the elements of the Tekla EPM window in the following image:



- The **File** menu contains all administrative commands.

- The **Maintenance** menu allows you to adjust the settings of all Tekla EPM modules and jobs.
- The **About** menu allows you to access the Tekla EPM release notes, and configuration and version information.
- The **Windows** menu lists all your open Tekla EPM dialog boxes.

  You can select a dialog box in the menu to open it on top of other dialog boxes.
- A contextual menu is available when working in any Tekla EPM module.

  When you open a Tekla EPM module, the related contextual ribbon tab appears on the right side of the other ribbon tabs.

  By clicking the contextual ribbon tab, you can access the commands in the contextual menu. Any commands that you click in the contextual menu only affect the job that is currently open.
- The buttons at the top of the Tekla EPM window represent the various Tekla EPM modules.

  You can access a module by clicking the desired button.

  If you do not have rights to access a module, the module button appears gray and cannot be selected.

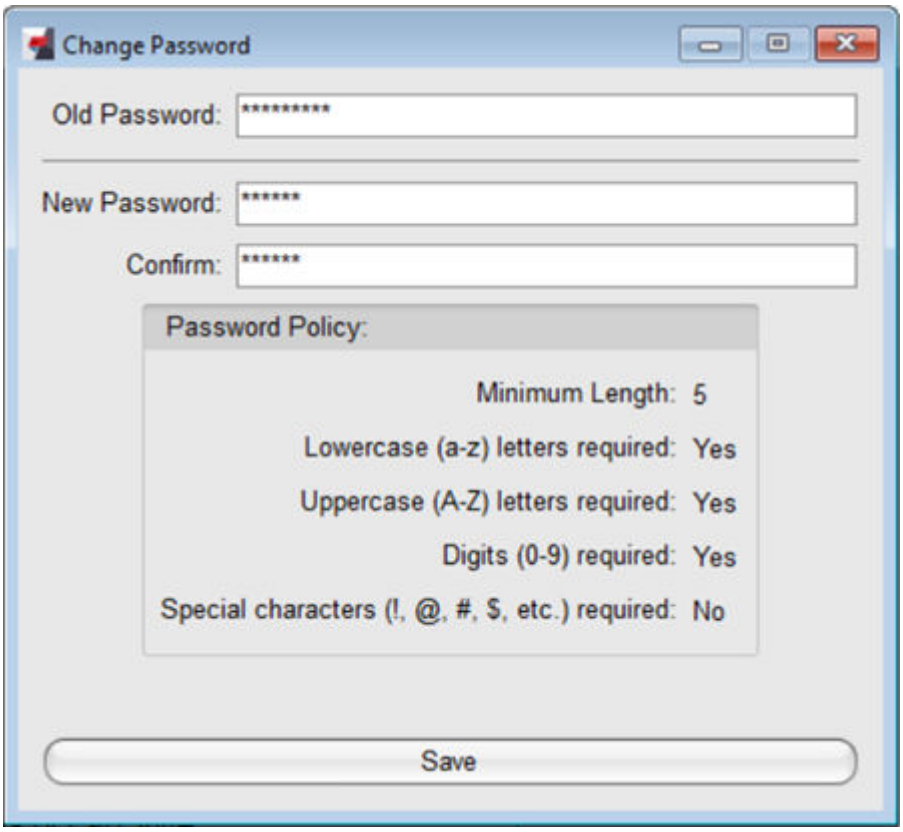
Set or change your Tekla EPM password

Use the **Change Password** command to either create the password you will use when you log in to Tekla EPM, or change your current password.

Note that passwords are case-sensitive.

If your initial password does not meet the company password policy, the **Change Password** dialog box opens automatically when you first log in to Tekla EPM.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Change Password**.



3. In the **Change Password** dialog box, type your old password in the **Old Password** field.

   If you are setting your password for the first time, leave the **Old Password** field blank.

4. Type your new password in the **New Password** and **Confirm** fields.

   The passwords in the **New Password** and **Confirm** fields need to be identical.

   You can verify your company's requirements for the password in the **Password Policy** section of the dialog box. The password policy is set by the Tekla EPM administrators of your company.

5. Click **Save** to update the password.

   A message appears, telling you that the password has been changed.

6. Click **OK** to close the message.

4.2 Adjust the initial settings

Before you start working in Tekla EPM, it is important to adjust the material database and pricing to match those of your company. You can also set the

default printer that you want to use, and define the standard categories that you want to use for attaching documents to jobs in **Document Index**.

See also

Set up the material database (page 115)

Set up pricing (page 147)

Set the default printer (page 166)

Set the standard categories for attached documents (page 166)

Set up the material database

Tekla EPM contains a variety of different materials, which are stored in the material database. These materials are the foundation of all material calculations in Tekla EPM, so adjusting the material database according to the needs of your company is extremely important.

You can also add any materials that you need to the material database. Note that you can also add material items that are not steel, from equipment and consumables to office supplies. Tekla EPM accepts a variety of property formats used to assist with material calculations for weights, pricing, and surface area for coating.

You can view and manage the materials that have been added to the material database in the **Shape / Grade / Size Maintenance** dialog box. You can both add new materials, and modify, deactivate, or delete existing materials.

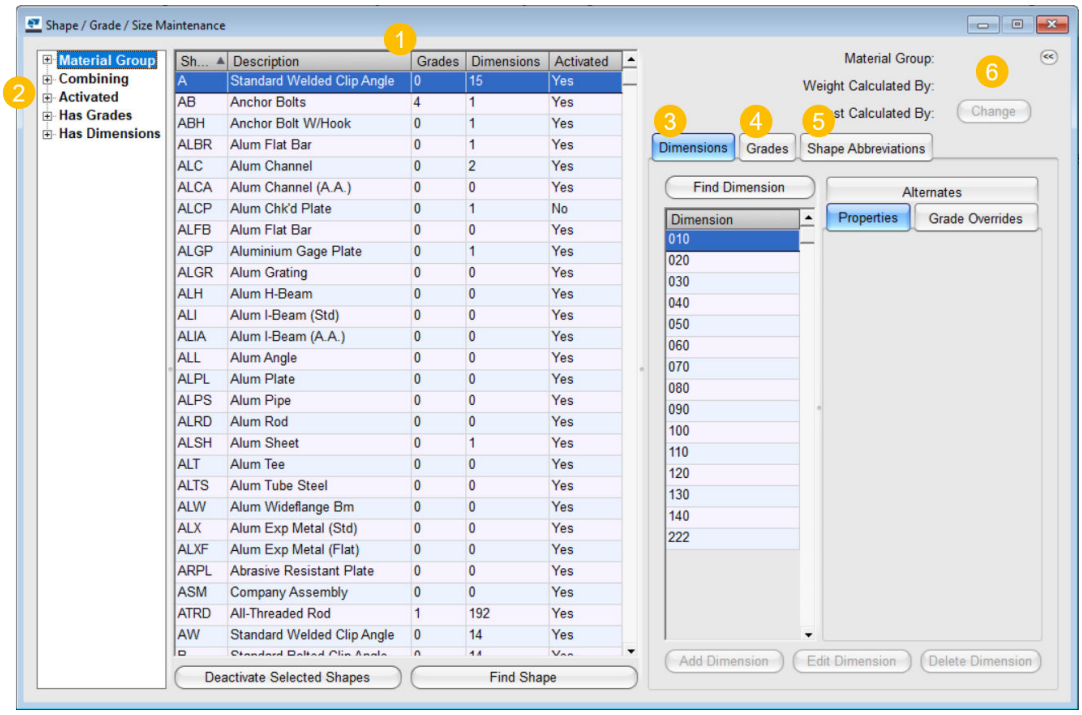
Note that when you add new materials to the material database, the materials still need to be added to the pricing database separately. The pricing database is where Tekla EPM looks for the material dimensions and lengths for combining materials.

If you add dimensions for shapes by importing, remember to check the material database for dimensions that do not have complete properties. You can easily find any dimensions with incomplete properties by creating a zero weight report. For detailed instructions on creating material reports, see Create material reports (page 144).

To start managing the materials in the Tekla EPM:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Shapes/Grades/Sizes**.

The **Shape / Grade / Size Maintenance** dialog box opens. See the structure of the dialog box in the following image:



(1) The shape list shows all shapes in the material database. You can see the shape abbreviation, the description of the shape, the number of material grades and dimensions, and whether the shape is activated or not. When you select a shape in the shape list, you can start managing its dimensions, grades, and abbreviations.

For more information, see Manage shapes (page 117).

(2) Use the navigation tree to filter which shapes are shown in the shape list. You can expand the categories in the navigation tree by clicking the **+** signs on the left side of the categories. For example, if you only want to show shapes that have material grades, click **+** on the left side of **Has Grades**, and select **Yes**.

(3) On the **Dimensions** tab, you can add new dimensions, modify dimension properties, add alternate dimensions and grade overides, show where particular dimensions are used in Tekla EPM, and delete unnecessary dimensions.

For more information, see Manage dimensions (page 134).

(4) On the **Grades** tab, you can add, modify, or delete grades, and add grade substitutions or grade redirections.

For more information, see Manage grades (page 128).

(5) On the **Shape Abbreviations** tab, you can add new abbreviations for shapes. By adding shape abbreviations, you can ensure that Tekla EPM recognizes any shapes that you import, even if the imported shapes do not use the Tekla EPM standard abbreviations.

For more information, see Add, modify, and delete shape abbreviations (page 124).

(6) When you have selected a shape, you can see the material group, weight calculation method, and cost calculation method, and the cost display units here. If necessary, you can change the cost display units.

See also

Find shapes, grades, dimensions, or shape abbreviations (page 117)

Find shapes, grades, dimensions, or shape abbreviations

Use the **Find** commands to find material shapes, grades, dimensions, and shape abbreviations in the **Shape / Grade / Size Maintenance** dialog box without scrolling.

1. In the **Shape / Grade / Size Maintenance** dialog box, do any of the following:
   - To find a shape, click **Find Shape** at the bottom of the dialog box.
   - To find a material dimension, open the **Dimensions** tab. Then, select the shape whose dimensions you want to view in the shape list, and click **Find Dimension**.
   - To find a material grade, open the **Grades** tab. Then, select the shape whose grades you want to view in the shape list, and click **Find Grade**.
   - To find a shape abbreviation, open the **Shape Abbreviations** tab. Then, select the shape whose abbreviations you want to view, and click **Find Abbreviation**.
2. In the **Find** dialog box, type the search term in the field.

   Note that when searching for a dimension, you need to leave a space on both sides of `x`. For example, `3 x 3 x 1/4`.
3. Click **OK**.

The shape, grade, dimension, or shape abbreviation that you searched for is selected in the **Shape / Grade / Size Maintenance** dialog box.

Manage shapes

You can manage the shapes in the Tekla EPM material database in several ways. You can add, delete, activate, and deactivate shapes. In addition, you can add grades, dimensions, and abbreviations for shapes.

Note that the shape list also contains system shapes that users cannot modify. Many of these system shapes may be missing some of the actual shape information, such as material grades or dimensions. These shapes are added

for user convenience. If necessary, you can add material grades or dimensions for the shapes, or deactivate the shapes (page 124).

If you want to, you can use separate shapes for materials that may have the same or similar shape but have different grades. You can use the Tekla EPM system shapes for this purpose: just add the necessary dimensions or grades for these system shapes.

The shape list in the **Shape / Grade / Size Maintenance** dialog box lists all existing shapes in alphabetical order. You can see different details of shapes:

Shape	Description	Grades	Dimensions	Activated
F	Frame	0	0	Yes
FB	Flat Bar	7	104	Yes
GBR	Grouser Bar	0	0	Yes
GDR	Plate Girders	0	0	Yes
GR	Grating	0	0	Yes
GRX	Grating (Heavy)	0	0	Yes
HL	Angle W/Holes	0	0	Yes
HP	H-Piles	1	25	No
HRBR	Hot Roll Flat Bar	0	0	Yes
HRFB	Hot Roll Flat Bar	0	0	Yes
HRGP	Hot Rolled Gage Plate	0	0	Yes
HRP	Hand Rail Pipe	0	0	Yes
HS	High Strength Bolt	4	153	Yes
HSS	Hollow Structural Section	6	382	Yes
HSSR	Hollow Structural Section - R	3	156	Yes
HYD	Hyd Parts	0	0	Yes
L	Angle	5	142	Yes
LD	Laydown	0	0	Yes
LG	Angle (Galvanized)	0	0	Yes
LS	Angle (Decimal Input)	0	0	Yes
LST	Lag Studs	0	0	Yes
LVL	Laminated Veneer Lumber	0	0	Yes
M	Misc Beams	3	19	Yes
MB	Machine Bolt	2	139	Yes
MC	Misc Channel	2	40	Yes
MDG	Metal Deck (Galv)	0	0	Yes
MDP	Metal Deck (Ptd)	0	0	Yes
MDU	Metal Deck (Uncoated)	0	0	Yes

- The **Shape** column lists the abbreviations for the material shape.

  Abbreviations are common references that Tekla EPM uses to recognize a particular shape. For example, when you import a bill of materials, Tekla EPM searches for a match in the shape list. If no match is found, Tekla EPM asks you to select one. For example, this could happen if flat bars were referenced as FL instead of FB.

  The material database also contains shapes that are identical but can be found under two abbreviations, such as HSS and TS. Both abbreviations are

available in the database to meet the needs of companies that use different terminology. Note that even though the two options are available, you should select one of them and use it consistently. This way, you can avoid problems when combining materials.

The abbreviation is defined when adding a new shape. New abbreviations can also be added to enable cross-referencing in Tekla EPM.

- The **Description** column shows the name of the shape.
- The **Grades** column shows the number of grades included for the shape.
- The **Dimensions** column shows the number of dimensions, or material sizes, included for the shape.
- The **Activated** column shows whether a shape is active within Tekla EPM.

  Deactivated shapes, marked with **No**, are not available for combining or pricing.

See also

Add, modify, and delete shapes (page 120)

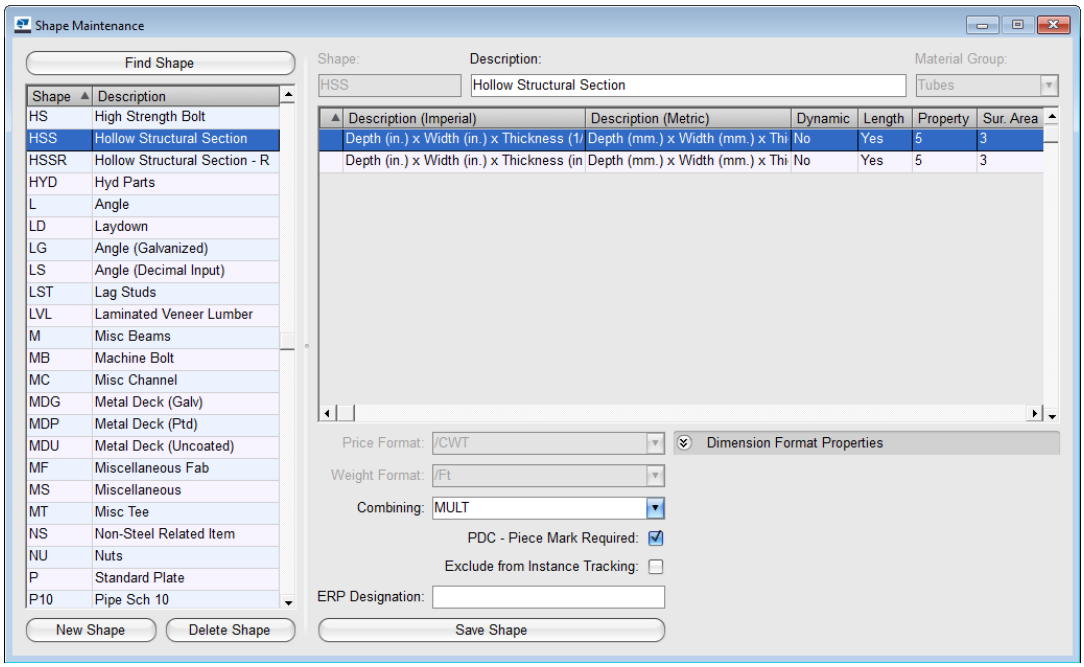
Activate or deactivate shapes (page 124)

Add, modify, and delete shape abbreviations (page 124)

Export shapes (page 126)

Add, modify, and delete shapes

The **Shape Maintenance** dialog box allows you to add new shapes to the material database. You can also select which dimension properties are used for the shapes, and permanently delete unnecessary shapes.



Each shape in the **Shape Maintenance** dialog box belongs to one of the following material groups:

- Angles
- Beams
- Plates
- Rods
- Tubes
- None

All material groups have their own dimension property sets that determine how Tekla EPM calculates the dimension properties and estimates labor.

Each shape in Tekla EPM has the following properties:

Property	Description
Description	Each dimension property has a description in both imperial and metric units.
Dynamic	Determines what kind of entries the shape accepts. If **Dynamic** is set to **Yes**, the shape accepts any entry that the user enters as dimension. If **Dynamic** is set to **No**, the dimensions of the shape need to be added to the list. Note that if you select **Yes**, you cannot assign weights or other dimension properties for the shape.
Length	Shows if the dimension has length or if the descriptions contain the length. If the dimension descriptions contain the length or the dimension does not have length, **Length** is set to **No**. If the descriptions do not contain the length, but the dimension has a length, **Length** is set to **Yes**.
Property	Shows the weight calculation format of the dimension. You can view the details of the format by expanding the **Dimension Format Properties** section and opening the **Property Formats** tab.
Sur. Area	Shows the surface area calculation format of the dimension. You can view the details of the format by expanding the **Dimension Format Properties** section and opening the **Surface Area Formats** tab.

Note that some shapes also have qualified alternate dimension properties that you can select to use. In this case, two or more lines are shown for the selected shape.

Description (Imperial)	Description (Metric)	Dynamic	Length	Property	Sur. Area
Depth (in.) x Width (in.) x Thickness (1/	Depth (mm.) x Width (mm.) x Thi	No	Yes	5	3
Depth (in.) x Width (in.) x Thickness (in	Depth (mm.) x Width (mm.) x Thi	No	Yes	5	3

- Select the line whose properties you want to use, and click **Save Shape** to save the changes.

Add a shape

1. In the **Shape / Grade / Size Maintenance** dialog box, click the **Shape / Grade / Size Maintenance** ribbon tab.
2. On the menu, select **Shape Maintenance**.
3. In the shape list of the **Shape Maintenance** dialog box, select a shape that has as similar properties as possible to the shape that you want to add.

   For example, when adding deformed bar anchors, you may want to select the anchor bolts shape, whose properties are calculated in the same way. This way, you do not have to modify the shape properties too much.
4. At the bottom of the dialog box, click **New Shape**.
5. In the **Shape** field, enter an abbreviation for the shape.

   You can use any abbreviation that is not currently used by another shape.
6. Enter a description for the shape.
7. In the **Material Group** list, select a suitable group for the shape.

   Note that if you select the **None** material group, Tekla EPM cannot calculate labor for the shape in the **Estimating** module.
8. Select the price and weight format for the shape.
9. In the **Combining** list, select if the shape should be multed, nested, or not combined at all.
10. If you want Tekla EPM to always look for a piece mark association when importing items of the new shape, select the **PDC - Piece Mark Required** check box.

    If piece marks are not used, you can leave the check box unselected. Whether you use piece marks or not is defined in your company standard settings for the **Production Control** module.
11. If you do not want to allow piece tracking for the shape, select the **Exclude from Instance Tracking** check box.

    Selecting the **Exclude from Instance Tracking** check box is especially useful for items like hardware.

12. If you are adding a shape that is also used in the enterprise resource planning (ERP) software, type the shape designation that is used in that software in the **ERP Designation** field.
13. Click **Save Shape**.

The new shape is added to the shape list.

Next, you can close the **Shape Maintenance** dialog box, and add dimensions (page 136), grades (page 130), additional shape abbreviations, (page 124) and other properties for the shape according to your needs.

Modify a shape

1. In the **Shape / Grade / Size Maintenance** dialog box, click the **Shape / Grade / Size Maintenance** ribbon tab.
2. On the menu, select **Shape Maintenance**.
3. In the shape list of the **Shape Maintenance** dialog box, select the shape that you want to modify.
4. Modify the shape properties according to your needs.

   For example, you can change how the shape should be combined, and which price and weight formats are used.
5. Click **Save Shape**.
6. To confirm changing the shape properties, click **Yes** in the confirmation dialog box.

Delete a shape

You can delete unnecessary shapes from the material database. For example, you might need to delete a shape whose properties are incorrect. Note that when you delete a shape in the **Shape Maintenance** dialog box, the shape and its properties are permanently deleted from Tekla EPM. Shapes that are currently used somewhere in Tekla EPM cannot be deleted.

NOTE We recommend that you deactivate shapes instead of deleting them. If needed, you can easily start using deactivated shapes by activating the shapes again.

---

1. In the **Shape / Grade / Size Maintenance** dialog box, click the **Shape / Grade / Size Maintenance** ribbon tab.
2. In the menu, select **Shape Maintenance**.
3. In the shape list on the left side of the **Shape Maintenance** dialog box, select the shape that you want to delete.
4. At the bottom of the dialog box, click **Delete Shape**.
5. To permanently delete the shape from Tekla EPM, click **Yes** in the confirmation dialog box.

Activate or deactivate shapes

In the **Shape / Grade / Size Maintenance** dialog box, you can activate and deactivate shapes to enable or disable using the shapes in Tekla EPM. You can also use the **Activated/Deactivated** list to select if you want to display activated, deactivated, or all shapes.

According to your needs, see any of the following instructions:

Deactivate shapes

NOTE We recommend that you deactivate shapes instead of deleting them. If needed, you can easily start using deactivated shapes by activating the shapes again.

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1. In the shape list, select the shapes that you want to deactivate.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Deactivate Selected Shapes**.
3. To confirm deactivating the shapes, click **Yes** in the confirmation dialog box.

The deactivated shapes are no longer available for Tekla EPM to use in combining and pricing. You can re-activate deactivated shapes at any time.

Activate shapes

1. In the shape list, select the shapes that you want to activate.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Activate Selected Shapes**.
3. To confirm activating the shapes, click **Yes** in the confirmation dialog box.

Add, modify, and delete shape abbreviations

Shape abbreviations allow Tekla EPM to identify a shape. By adding shape abbreviations, you can ensure that Tekla EPM recognizes the shapes in any files that you import, even if the files do not use the Tekla EPM standard shape abbreviations.

If you are importing a file and Tekla EPM does not recognize an abbreviation in the file, Tekla EPM automatically prompts you to select the shape and grade

that the abbreviation should redirect to. Then, Tekla EPM asks you if you want to add an abbreviation for the imported shape.

We recommend that you keep detailers up to date on the used shape abbreviations, so that you can minimize the need to create new shape abbreviations.

According to your needs, see any of the following instructions:

Add a shape abbreviation

1. In the shape list of the **Shape / Grade / Size Maintenance** dialog box, select a shape.
2. Open the **Shape Abbreviations** tab.

   You can see the existing abbreviations for the selected shape in the **Abbreviation** list.
3. At the bottom of the **Shape Abbreviations** tab, click **Add Abbreviation**.
4. In the **Abbreviation** field, type a letter combination or a number.
5. Click **OK**.

The abbreviation is added for the selected shape. If necessary, you can delete previous abbreviations.

Modify a shape abbreviation

1. In the table of the **Shape / Grade / Size Maintenance** dialog box, select a shape.
2. Open the **Shape Abbreviations** tab.

   The existing abbreviations for the selected shape appear in the **Abbreviation** list.
3. In the **Abbreviation** list, select the item that you want to modify.
4. At the bottom of the **Shape Abbreviations** tab, click **Edit Abbreviation**.
5. Modify the abbreviation.
6. Click **OK**.

The abbreviation is updated.

Delete shape abbreviations

1. In the table of the **Shape / Grade / Size Maintenance** dialog box, select a shape.
2. Open the **Shape Abbreviations** tab.

   The existing abbreviations for the selected shape appear in the **Abbreviation** list.
3. In the **Abbreviation** list, select the item that you want to delete.

4. At the bottom of the **Shape Abbreviations** tab, click **Delete Abbreviation**.
5. To permanently delete the abbreviation, click **Yes** in the confirmation dialog box.

Export shapes

Exporting shape information is useful for making shape identification changes while keeping all of the information defined in Tekla EPM. You can export either specific shapes or all shapes to the ASCII or XML format.

1. In the **Shape / Grade / Size Maintenance** dialog box, click the **Shape / Grade / Size Maintenance** ribbon tab.
2. On the menu, select **Export** and the export format.
3. Depending on the export format, do any of the following:

If you are exporting to	Do this
ASCII format (`.txt` file)	a. If you only want to export particular shapes, in the **Filter** dialog box, click the arrow buttons to move the shapes that you want to export to the **Included** list. b. Click **OK** c. In the **Save As** dialog box, browse to the folder where you want to save the file. By default, Tekla EPM saves the file to the `Export` folder. d. If necessary, change the file name. e. Click **Save**.
ProNest	a. In the **Save As** dialog box, browse to the folder where you want to save the file. By default, Tekla EPM saves the file to the `Export` folder. b. If necessary, change the file name. c. Click **Save**. You can see the progress of the export in the **Status** dialog box. After the export has finished, you can close the dialog box by clicking **OK**.

If you are exporting to	Do this
XML format	a. In the **XML Shapes Export Options** dialog box, select the check boxes for the items that you want to include in the export. b. Click **Export**. c. If you only want to export particular shapes, in the **Select Shapes** dialog box, click the arrow buttons to move the shapes that you want to export to the **Included** list. d. Click **OK**. e. In the **Save As** dialog box, browse to the folder where you want to save the file. By default, Tekla EPM saves the file to the `Export` folder. f. If necessary, change the file name. g. Click **Save**. You can see the progress of the export in the **Status** dialog box. After the export has finished, you can close the dialog box by clicking **OK**.
SigmaNest	a. In the **Select Supplier** dialog box, select the supplier warehouse of the shapes to be exported. b. Click **OK**. You can see the progress of the export in the **Status** dialog box. After the export has finished, you can close the dialog box by clicking **OK**.

For the **Export To ASCII**, **Export To ProNest**, **Export To XML** options, the exported shapes are saved to the selected folder, where you can find them and import them to the related software.

For **Export to SigmaNest**, the shapes are imported directly to SigmaNest through SimTrans.

Example: Changing the shape abbreviation FB to FL by exporting an ASCII .txt file

For example, you could change a material shape abbreviation for `FB` (flat bar) to `FL` (also an indicator for flat bar). This change can be made outside of Tekla EPM, when you export the shapes into a `.txt` file. After the change, the `.txt` file can be imported back to Tekla EPM.

To change the shape abbreviation, do the following:

1. In the **Filter** dialog box, only move the FB shapes to the **Included** list.
2. Name and save the file to the desired location.
3. Browse to find the saved file and open it in Microsoft Notepad.
4. Open the **Edit** menu in the upper-left corner of the Microsoft Notepad window.
5. Click **Replace**.
6. In the **Find what** field, type `FB`.
7. In the **Replace with** field, type `FL`.
8. Click **Replace All** and save the file.
9. In Tekla EPM, click the **File** tab, and select **Import** on the **File** menu.
10. In the navigation tree of the **Import** dialog box, select **Sizes** --> **ASCII** .
11. Click **...** to browse for and select the updated file.
12. Click **OK**.
13. Click **Import**.

    Since the ASCII file only contains the flat bar shapes, you do not need to filter the shapes. Instead, you can leave all shapes in the **Included** list.
14. Click **OK**.

The new shape list is imported to Tekla EPM, and the abbreviation of the flat bars changes.

See also

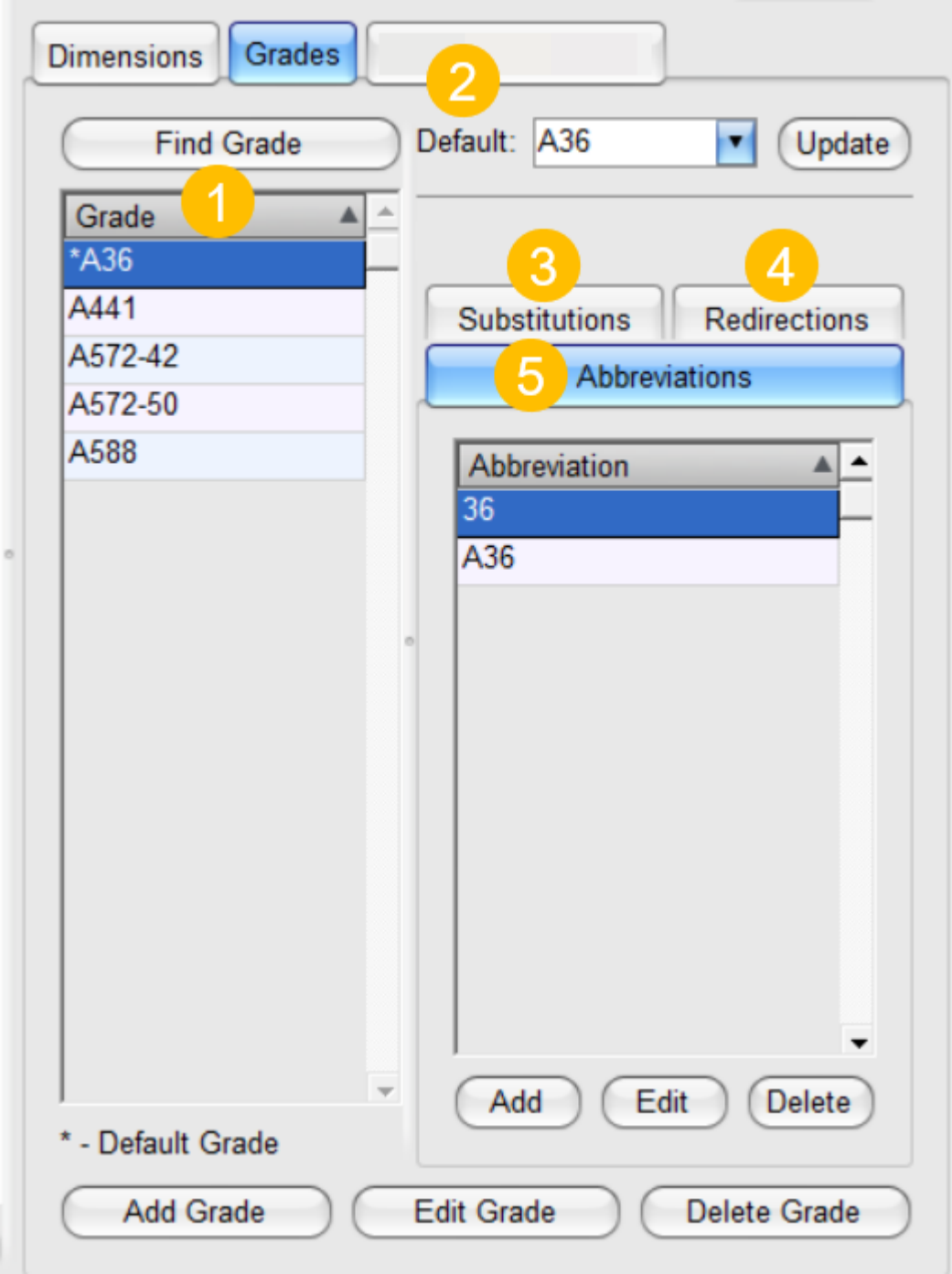
Add, modify, and delete shapes (page 120)

Add, modify, and delete shape abbreviations (page 124)

Manage grades

In the **Shape / Grade / Size Maintenance** dialog box, you can manage the material grades of shapes in multiple ways. You can add, modify, and delete grades, set default grades for shapes, and add grade overrides, grade redirections, grade substitutions, and grade abbreviations.

- To modify grade properties, select the shape whose grades you want to modify, and open the **Grades** tab.



The **Shape / Grade / Size Maintenance** dialog box shows the different grade details of the shape:

(1) The **Grade** list shows all available material grades included for the selected shape. To view the properties of a specific material grade, select it in the **Grade** list.

(2) The default grade of the selected shape. Each shape with grades has a default grade that Tekla EPM uses for the shape by default. The default grade of the shape is marked with an asterisk (*).

You can change the default grade by selecting another grade in the **Default** list, and clicking **Update**.

(3) The **Substitutions** tab shows the existing grade substitutions of the selected grade. Grade substitutions allow Tekla EPM to combine materials to material grades in the inventory that do not match the material grades in bills of materials. Grade substitutions can be useful when very little material of a particular material grade is needed, so another grade can be used instead.

You can add and delete grade substitutions, and increase or decrease the order of grade substitutions.

(4) The **Redirections** tab shows the existing grade redirections of the selected grade. Grade redirections allow Tekla EPM to recognize material grades that are imported to Tekla EPM with names that Tekla EPM does not initially recognize. When you use grade redirections, the imported material grades are redirected to the appropriate material grades.

(5) The **Abbreviations** tab shows the grade abbreviations added for the selected grade. Grade abbreviations are alternative spellings that you can use for your material grades in Tekla EPM.

See also

Add, modify, and delete grades (page 130)

Add grade substitutions (page 132)

Add grade redirections (page 133)

Add, modify, and delete grade abbreviations (page 132)

Add, modify, and delete grades

In the **Shape / Grade / Size Maintenance** dialog box, you can add material grades for a selected shape, modify the properties of existing grades, or delete unnecessary grades.

According to your needs, see any of the following instructions:

Add grades

1. In the **Shape / Grade / Size Maintenance** dialog box, open the **Grades** tab.
2. In the shape list, select a shape.
3. At the bottom of the dialog box, click **Add Grade**.
4. In the **Grade Details** dialog box, type the new grade in the **Grade** field.
5. If necessary, modify the weight multiplier.

6. If you use ProNest for nesting, type the ProNest shape to which you want to associate the grade in the **ProNest Shape Designation** field.
7. To save the grade, click **Save**.

   The material grade is added to the **Grade** list of the selected shape.

Modify grades

1. In the **Shape / Grade / Size Maintenance** dialog box, select the **Grades** option.
2. In the shape list, select a shape.
3. In the **Grade** list, select the grade that you want to modify.
4. At the bottom of the dialog box, click **Edit Grade**.
5. In the **Grade** dialog box, do one or more of the following to modify the grade:
   - In the **Grade** field, type a new name for the grade.
   - Modify the weight multiplier value.
   - To change the ProNest shape to which you want to associate the grade, type a new name in the **ProNest Shape Designation** field.
6. Click **Save**.

The grade properties are updated.

Delete grades

1. In the **Shape / Grade / Size Maintenance** dialog box, select the **Grades** option button.
2. In the shape list, select a shape.
3. In the **Grade** list, select the grade that you want to delete.
4. At the bottom of the dialog box, click **Delete Grade**.
5. To permanently delete the grade, click **Yes** in the confirmation dialog box.

   If a single grade that you are trying to delete is used somewhere else in Tekla EPM, a dialog box opens, showing in which jobs the grade is used.

   If multiple grades that you are trying to delete are used somewhere else in Tekla EPM, notification messages appear, telling you that the grades are used somewhere else in Tekla EPM. Then, deleting the selected grades is canceled.
6. Do one of the following:
   - View where the grades is used, and click **OK** to close the dialog box without deleting the grade. You can then change the grade used in the listed jobs, and delete the grade later.

- If you are sure that you want to delete the grade now, click **Force Delete**, select the new grade that will be used elsewhere in Tekla EPM instead of the grade that you are deleting, and click **Perform Force Delete**.

Add, modify, and delete grade abbreviations

Grade abbreviations are alternative spellings that you can use for your material grades in Tekla EPM.

1. In the **Shape / Grade / Size Maintenance** dialog box, open the **Grades** tab.
2. In the shape list, select a shape.
3. In the grade list, select the grade whose abbreviations you want to manage.
4. Open the **Abbreviations** tab.

According to your needs, see any of the following instructions:

Add a grade abbreviation

1. At the bottom of the **Abbreviations** tab, click **Add**.
2. Type the abbreviation.
3. To save the abbreviation, click **OK**.

The new grade abbreviation is added in the **Abbreviation** list.

Modify a grade abbreviation

1. In the **Abbreviation list**, select the abbreviation that you want to modify.
2. At the bottom of the **Abbreviations** tab, click **Edit**.
3. Modify the abbreviation according to your needs.
4. To save the abbreviation, click **OK**.

The modified grade abbreviation is updated to the **Abbreviation** list.

Remove a grade abbreviation

1. In the **Abbreviation list**, select the grade abbreviation that you want to modify.
2. At the bottom of the **Abbreviations** tab, click **Delete**.
3. To permanently delete the abbreviation, click **Yes** in the confirmation dialog box.

Add grade substitutions

Grade substitutions allow Tekla EPM to combine materials to material grades in the inventory that do not match the material grade in the bill of materials.

Creating grade substitutions can be useful when very little material of a certain grade is needed, so another grade can be used instead. Grade substitutions need to be created separately for each job.

Note that you should only add grade substitutions that meet or exceed the requirements of the current grade.

1. In the **Shape / Grade / Size Maintenance** dialog box, open the **Grades** tab.
2. In the shape list, select a shape.
3. In the **Grade** list, select a grade.
4. On the right side of the **Grades** tab, open the **Substitutions** tab.
5. Click **Add**.
6. In the **Select a substitute grade** list, select a grade.
7. Click **OK**.

   The new grade substitution is added to the list.
8. Use the **(+) Use Order** and **(-) Use Order** to move the substitute grade up or down in the list. This way, you can define the order in which Tekla EPM uses the substitute grades.

If necessary, you can delete substitute grades by selecting them in the substitution list and clicking **Delete** at the bottom of the **Substitutions** tab.

See also

Add, modify, and delete grades (page 130)

Add grade redirections (page 133)

Add grade redirections

Grade redirections allow Tekla EPM to recognize material grades that are imported to Tekla EPM with names that Tekla EPM does not initially recognize. When you use grade redirections, the imported material grades are redirected to the appropriate material grades. For example, if an item to be imported has the grade A500-GR.B, adding a redirection allows Tekla EPM to recognize the grade and use the A500 grade from the material database.

1. In the **Shape / Grade / Size Maintenance** dialog box, open the **Grades** tab.
2. In the shape list, select a shape.
3. In the **Grade** list, select the grade for which you want to add a redirection.
4. Open the **Redirections** tab.
5. At the bottom of the **Redirections** tab, click **Add**.
6. In the **Shape** list of the **Grade Redirection** dialog box, select the shape.

7. In the **Grade** field, type the grade that should be redirected to the selected grade.
8. Click **Save**.

See also

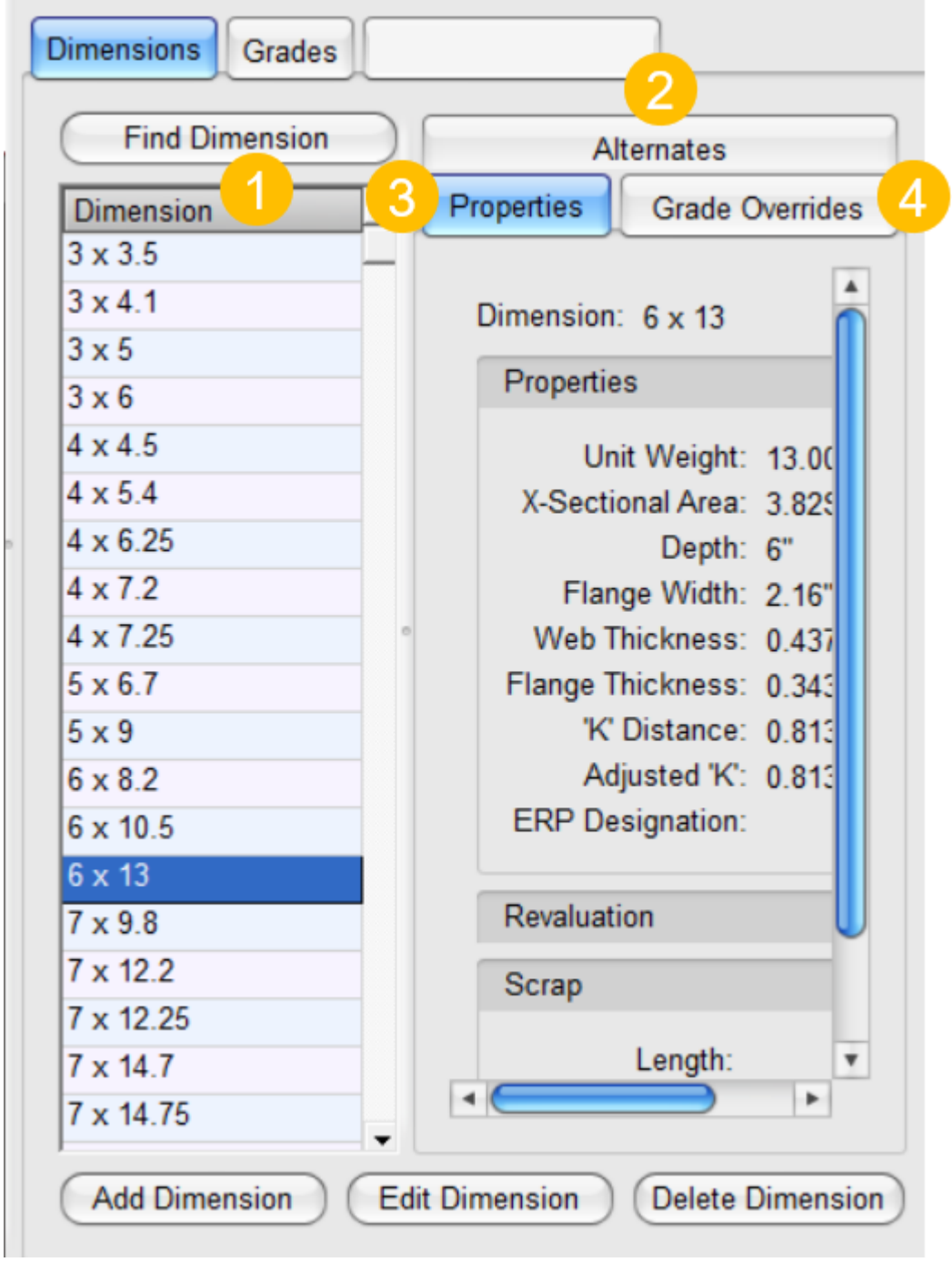
Add, modify, and delete grades (page 130)

Add grade substitutions (page 132)

Manage dimensions

You can manage material dimensions, or material sizes, in the Tekla EPM material database in several ways. You can add, modify, and delete dimensions, and add grade overrides or alternates for the dimensions.

- To view and modify dimension properties, open the **Dimensions** tab at the top of the **Shape / Grade / Size Maintenance** dialog box.



The **Shape / Grade / Size Maintenance** dialog box shows the different details of dimensions:

(1) The **Dimension** list shows all available dimensions for the selected shape. To view the properties of a specific dimension, select it in the list.

(2) On the **Alternates** tab, you can view, add, modify, and delete alternate dimensions. When importing a dimension with a description that Tekla EPM

does not recognize, alternate dimensions allow Tekla EPM to identify the imported dimension.

(3) The **Properties** tab shows the properties of the selected dimension.

(4) On the **Grade Overrides** tab, you can view, add, modify, and delete grade overrides. Grade overrides allow Tekla EPM to assign a specific unit weight for a specific dimension. Grade overrides should only be used for shapes that do not have linear unit weights, such as stainless steel.

See also

View the dimensions of a shape (page 136)

Add dimensions (page 136)

Modify dimension properties (page 138)

Modify the properties of multiple dimensions (page 140)

Add grade overrides (page 141)

Add alternate dimensions (page 142)

Show where grades and dimensions are used (page 142)

Delete dimensions (page 143)

View the dimensions of a shape

If necessary, you can hide shapes that do not have material dimensions. To do so, in the navigation tree on the left, click **+** on the left side of **Has Dimensions**. Then, select **Yes**.

1. In the shape list of the **Shape / Grade / Size Maintenance** dialog box, select a shape.
2. Open the **Dimensions** tab.

   The existing dimensions for the shape are shown in the **Dimension** list.

Add dimensions

You can add material dimensions, or material sizes, to the shape list in the **Shape / Grade / Size Maintenance** dialog box.

1. In the **Shape / Grade / Size Maintenance** dialog box, select a shape in the shape list.
2. Open the **Dimensions** tab.
3. Click **Add Dimension** at the bottom of the dialog box.

4. In the **Dimension** dialog box, define the dimension properties according to your needs.

   Note that the available and mandatory fields the **Dimension** dialog box vary according to the shape properties.

   a. If you want to add a name for the dimension that is used in an integrated software, type the designation in the **ERP Desgn** or **ProNest Desgn** field.

   b. In the **Revaluation** section, define the revaluation properties according to your needs.

      The revaluation settings discount the drop material by length by applying a percentage of the drop cost to the job using the stock length.

      You can set the revaluation calculation to either a percentage of the original value or a price for each length by selecting an option in the **Calc** list. We recommend using the **%** option because it is easier to maintain.

      For example, the revaluation of a 15'-0 drop might be considered worth 80% of the original price, and 10'-0 might be worth 50%. These values are then used for evaluating the remaining stock materials in the inventory for accounting purposes.

      If you want all the drop material below a particular length to be charged to the job where the original length was used, you can type the desired length in the **Charge Length** field. If you want all drop material to be charged to the job, typing `60'` in the **Charge Length** usually covers all items.

   c. In the **Scrap** section, set a scrap length.

      Use the scrap length settings to automatically keep your reserved items and open stock clear of unusable lengths. The material at scrap length or under is removed from the inventory and moved to the inventory history. The scrap information is handy in evaluating a project because it links to **Project Summary** report in **Project Management**. Scrap settings may vary according to material size and type.

   d. In the **Combining** section, define the kerf, squaring amounts, and clamp allowance according to your needs.

      Use the **Combining** settings to automatically calculate any material length loss due to cutting and other manufacturing requirements. The values defined in the **Combining** section are added to the cut lengths for performing the combining run. Adding the waste involved with managing materials may help to prevent material shortages.

      Defining **Combining** settings is optional. If these settings are not defined, return to stock lengths can be adjusted within the **Take**

From Stock process while working in the **Production Control** module or the **Inventory** module.

Select the **Clamp Allowance from Part** check box to allow the clamp allowance to be included in any length of the part that exceeds the clamp allowance. For example, if 6" pieces cut are cut from a 20' piece that has a 24" clamp allowance, the 24" would be considered waste. However, if there was a 36" piece cut with the 6" pieces, the 24" clamp allowance would be part of the 36" piece.

NOTE The **Valid Scrap %** field should only be used in conditions where extreme fine-tuning for the combining of materials is necessary. This setting is connected to the combining algorithms of Tekla EPM. Set **Valid Scrap %** to 0 unless the Tekla EPM Support instructs you otherwise.

5. Click **Save**.

The new dimension is added to the Tekla EPM material database and shown in the **Dimension** list for the selected shape.

See also

Modify dimension properties (page 138)

Modify the properties of multiple dimensions (page 140)

Modify dimension properties

In the **Dimension** dialog box, you can modify the different properties of dimensions. These properties include the revaluation settings, the scrap length, and the combining settings. The values that you set in the **Dimension** dialog box are used for calculating material weight, pricing, and combining, so accuracy is important.

1. In the shape list of the **Shape / Grade / Size Maintenance** dialog box, select a shape.
2. Open the **Dimensions** tab.
3. In the **Dimension** list, select the dimension whose settings you want to modify.
4. Click **Edit Dimension**.
5. In the **Dimension** dialog box, modify the dimension properties according to your needs.

   Note that the available and mandatory fields the **Dimension** dialog box vary according to the shape properties.

   a. In the **Revaluation** section, modify the revaluation properties according to your needs.

The revaluation settings discount the drop material by length by applying a percentage of the drop cost to the job using the stock length.

You can set the revaluation calculation to either a percentage of the original value or a price for each length by selecting an option in the **Calc** list. We recommend using the **%** option because it is easier to maintain.

For example, the revaluation of a 15'-0 drop might be considered worth 80% of the original price, and 10'-0 might be worth 50%. These values are then used for evaluating the remaining stock materials in the inventory for accounting purposes.

If you want all the drop material below a particular length to be charged to the job where the original length was used, you can type the desired length in the **Charge Length** field. If you want all drop material to be charged to the job, typing `60'` in the **Charge Length** usually covers all items.

b. In the **Scrap** section, change the scrap length.

   Use the scrap length settings to automatically keep your reserved items and open stock clear of unusable lengths. The material at scrap length or under is removed from the inventory and moved to the inventory history. The scrap information is handy in evaluating a project because it links to **Project Summary** report in **Project Management**. Scrap settings may vary according to material size and type.

c. In the **Combining** section, modify the combining properties according to your needs.

   Use the **Combining** settings to automatically calculate any material length loss due to cutting and other manufacturing requirements. The values defined in the **Combining** section are added to the cut lengths for performing the combining run. Adding the waste involved with managing materials may help to prevent material shortages.

   Defining **Combining** settings is optional. If these settings are not defined, return to stock lengths can be adjusted within the **Take From Stock** process while working in the **Production Control** module or the **Inventory** module.

   Select the **Clamp Allowance from Part** check box to allow the clamp allowance to be included in any length of the part that exceeds the clamp allowance. For example, if 6" pieces cut are cut from a 20' piece that has a 24" clamp allowance, the 24" would be considered waste. However, if there was a 36" piece cut with the 6" pieces, the 24" clamp allowance would be part of the 36" piece.

NOTE The **Valid Scrap %** field should only be used in conditions where extreme fine-tuning for the combining of materials is

necessary. This setting is connected to the combining algorithms of Tekla EPM. Set **Valid Scrap %** to 0 unless the Tekla EPM Support instructs you otherwise.

6. Click **Save** to update the dimension properties.

See also

Modify the properties of multiple dimensions (page 140)

Add dimensions (page 136)

Add grade overrides (page 141)

Add alternate dimensions (page 142)

Modify the properties of multiple dimensions

Use the **Global Edit** command to modify the settings of multiple dimensions of a particular shape at once. For example, using the **Global Edit** command can be useful when changing the revaluation settings for all dimensions of a shape.

NOTE The **Global Edit** command is only available for shapes that belong to the **Plate** and **Angle** material groups. For other material groups, you need to modify each dimension separately.

1. In the **Shape / Grade / Size Maintenance** dialog box, click the **Shape / Grade / Size Maintenance** ribbon tab.
2. On the menu, select **Global Edit**.
3. In the **Shape** list at the top of the **Shapes / Grades / Sizes Global Edit** dialog box, select the shape whose dimensions you want to modify.
4. Click the arrow buttons to move the dimensions that you want to modify to the **Included** list.
5. Modify any dimension properties according to your needs.

   For example, you can modify the scrap length or the kerf.
6. Select check boxes next to the properties that you want to update.
7. Click **Update**.

The dimensions in the **Included** list are updated according to the changes you made.

See also

Modify dimension properties (page 138)

Update dimension weights for newly added shapes

Use the **Global Edit - Dimension Values** command to update the unit weights of material groups when material weight standards change. For example, you can use the **Global Edit - Dimension Values** command to update the weights of newly added shapes. Tekla EPM then calculates the weights based on the existing dimensions.

1. In the **Shape / Grade / Size Maintenance** dialog box, click the **Shape / Grade / Size Maintenance** ribbon tab.
2. In the menu, select **Global Edit - Dimension Values**.
3. In the list at the top of the **Shapes / Grades / Sizes Global Edit - Dimension Values** dialog box, select the desired shape.
4. In the **Material** list, select the desired material group.
5. In the field on the right side of the **Material** list, define the weight of the material.
6. Click the arrow buttons to move the dimensions whose weights you want to update to the **Included** list.
7. Click **Save**.

Add grade overrides

Grade overrides allow Tekla EPM to assign a specific unit weight for a particular dimension. Grade overrides should only be used for shapes that do not have linear unit weights, such as stainless steel.

NOTE When you add a grade override, the cost to discount is still applied to the job using the original length of the dimension.

---

1. In the shape list in the **Shape / Grade / Size Maintenance** dialog box, select a shape.
2. Open the **Dimensions** tab.
3. In the **Dimension** list, select a dimension.
4. Open the **Grade Overrides** tab on the right side of the dialog box.
5. Click **Add**.
6. In the **Grade** list of the **Grade Override** dialog box, select a grade.
7. In the **Override Unit Weight**, type a weight.
8. Click **Save**.

The new grade override is added to the material database and shown in the list on the **Grade Overrides** tab.

See also

Add dimensions (page 136)

Add grade redirections (page 133)

Add alternate dimensions (page 142)

Modify dimension properties (page 138)

Delete dimensions (page 143)

Add alternate dimensions

If a dimension in a bill of materials that you want to import has a different description than in Tekla EPM, problems might occur when importing the file. Adding alternate dimensions enables Tekla EPM to cross-reference to the same dimension, and that way, identify the dimension.

1. In the shape list in the **Shape / Grade / Size Maintenance** dialog box, select the shape.
2. Open the **Dimensions** tab.
3. In the **Dimension** list, select a dimension.
4. Open the **Alternates** tab.
5. Below the existing alternate dimensions, click **Add**.
6. Type the description that will cross-reference to the selected dimension.
7. Click **OK**.

The new alternate dimension is added to the material database and shown in the **Dimension Alternate** list.

See also

Add dimensions (page 136)

Add grade overrides (page 141)

Show where grades and dimensions are used

If you cannot delete a grade or a dimension from the material database because it is used somewhere else in Tekla EPM, you can view the jobs in which the grade or dimension is used.

1. In the shape list in the **Shape / Grade / Size Maintenance** dialog box, select a shape.
2. Depending on whether you want to view the jobs that use a particular grade or a particular dimension, open the **Grades** or **Dimensions** tab.
3. Select the grade or dimension.
4. Click the **Shape / Grade / Size Maintenance** ribbon tab.
5. In the menu, select **Show Where The Selected Dimension/Grade Is Used**.

   A dialog box opens, listing the jobs where the grade or dimension is used.

6. Once you have viewed the locations, click **OK** to close the dialog box.

You can change the grade or dimension used in the listed jobs, so that it is safe to delete the selected grade or dimension from the material database.

If necessary, you can also delete the grade or dimension even if it is used somewhere else in Tekla EPM by using the **Force Delete** command.

See also

Delete dimensions (page 143)

Delete dimensions

If necessary, you can delete existing dimensions from the Tekla EPM material database.

1. In the shape list of the **Shape / Grade / Size Maintenance** dialog box, select the shape.
2. Open the **Dimensions** tab.
3. In the **Dimension** list, select the dimensions that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
4. Click **Delete Dimension** in the lower-right corner of the dialog box.
5. To permanently delete the dimensions, click **Yes** in the confirmation dialog box.

   If a single dimension that you are trying to delete is used somewhere else in Tekla EPM, a notification message appears and allows you to see where the dimension is used.

   If multiple dimensions that you are trying to delete are used somewhere else in Tekla EPM, notification messages appear, telling you that the dimensions are used somewhere else in Tekla EPM. Then, deleting the selected dimensions is canceled.
6. To view where the single dimension is used, click **OK**.

   A dialog box opens, displaying the jobs where the dimension is used.
7. Do one of the following:
   - View where the dimension is used, and click **OK** to close the dialog box without deleting the dimension.
   - If you are sure that you want to delete the dimension, click **Force Delete**, select the new dimension that will be used elsewhere in Tekla EPM instead of the dimension that you are deleting, and click **Perform Force Delete**.

See also

Add dimensions (page 136)

Manage material reports

While in the **Shape / Grade / Size Maintenance** dialog box, you can create various material reports, such as shape lists. After creating the reports, you can view, print, email, or export them in **Tekla EPM Report Viewer**.

See also

Create material reports (page 144)

View material reports (page 145)

Print material reports (page 145)

Send material reports via email (page 146)

Export material reports (page 146)

Create material reports

You can create various types of material reports in Tekla EPM, such as shape lists and size lists.

1. While in the **Shape / Grade / Size Maintenance** dialog box, click the **Shape / Grade / Size Maintenance** ribbon tab.
2. In the menu, select **Reports**.

   The **Report Filters** dialog box opens.
3. To only include specific materials in the reports, in the **Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, click the arrow buttons to move the material items that you want to include in the reports to the **Included** list.
5. Click **OK**.

   To further limit the included items, repeat steps 3 to 5 for all necessary filter types in the **Report Filters** dialog box.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, click the report that you want to create.

Next, you can view the report, print or export the report, or send the report via email in Microsoft Outlook.

See also

View material reports (page 145)

Print material reports (page 145)

Send material reports via email (page 146)

Export material reports (page 146)

View material reports

Once you have created a material report, you can view it in **Tekla EPM Report Viewer**.

1. Create a report.

   For detailed instructions, see Create reports (page 144).
2. In the **Report Selection** dialog box, click **View**.
3. In **Tekla EPM Report Viewer**, do any of the following according to your needs:

To	Do this
Move between pages	• Click the arrows at the top of **Tekla EPM Report Viewer**.
Go to a specific page of the report	• Type the page number in the empty field at the top of **Tekla EPM Report Viewer**.
Find a text in the report	a. Click the binocular icon. b. In the blank field, type the text that you want to find. c. Click **Find Next**. Any matching text is highlighted with a red box.
Zoom in or out	• Click the magnifying glass icon and select the zoom value in the list.

Once you have viewed the report, you can close **Tekla EPM Report Viewer**, or print, email, or export the report.

See also

Print material reports (page 145)

Send material reports via email (page 146)

Export material reports (page 146)

Print material reports

To print a material report in **Tekla EPM Report Viewer**, do the following:

1. Create a report.

   For detailed instructions, see Create reports (page 144).
2. In the **Report Selection** dialog box, click **View**.
3. At the top of **Tekla EPM Report Viewer**, click **Print Report**.

4. Select the printer that you want to use.
5. Define the pages that you want to print.
6. If necessary, modify other printer settings.
7. Click **Print**.

See also

Send material reports via email (page 146)

Export material reports (page 146)

Send material reports via email

You can send material reports via email as either Microsoft Excel workheets or PDF files. Note that the **Email Excel** and **Email PDF** commands only work with Microsoft Outlook. If you use some other email service, you need to export the report and attach it to an email manually.

1. Create a report.

   For detailed instructions, see Create reports (page 144).
2. In the **Report Selection** dialog box, click **View**.
3. In the upper-right corner of **Tekla EPM Report Viewer**, click either **Email Excel** or **Email PDF**.

   When the report is ready, the Microsoft Outlook icon appears at the bottom of the screen.
4. Click the icon to open Microsoft Outlook.
5. Modify the email according to your needs.
6. Send the email.

Export material reports

You might need to export a report, such as a shape list, to send it to the steel detailer. This way, they will have all the shape information used in Tekla EPM. Having the shape list will minimize the need to create new shape descriptions and abbreviations, grade abbreviations, substitutions, and redirections in Tekla EPM.

1. Create a report.

   For detailed instructions, see Create reports (page 144).
2. In the **Report Selection** dialog box, click **View**.
3. In the upper-left corner of **Tekla EPM Report Viewer**, click **Export Report**.
4. In the **Save As** dialog box, browse to the folder where you want to save the file.
5. If necessary, change the file name.

6. If necessary, select another file format in the **Save as type** list.
7. Click **Save**.

The report is saved to the selected location.

Change the display units of prices

Use the **Change** command to change the display units of a shape used in pricing. Changing the display units is useful for items like HSS, as the pricing is often by foot rather than by pound or hundredweight. Where applicable, pricing by item is also available.

1. In the **Shape / Grade / Size Maintenance** dialog box, select the shape whose display units you want to change.
2. In the upper-right corner of the dialog box, click **Change**.
3. In the **New Display Units** list, select the desired units.
4. Click **OK**.

The units used in the pricing of the shape are updated.

The selected pricing units are used in requisitions, purchase orders, and inventory.

Set up pricing

The material database used in **Pricing Maintenance** contains a variety of pre-loaded material shapes. However, only the most commonly used shapes are available in **Pricing Maintenance** by default. Missing material shapes should be added to **Pricing Maintenance** in order to combine materials in several Tekla EPM modules. If the required material shapes, grades, sizes, and lengths are not available in **Pricing Maintenance**, Tekla EPM cannot combine materials. We recommend that you set up the **Pricing Maintenance** database as early as possible, so that working in Tekla EPM becomes more seamless.

You can add new shapes, grades, sizes, lengths, and pricing information to the **Pricing Maintenance** database.

Note that you can create and use multiple pricing data sets in Tekla EPM. The pricing data sets are referred to as *supplier warehouses* in Tekla EPM. Despite their name, supplier warehouses can also represent pricing that is for pricing tiers or other purposes. Supplier warehouses they can be labeled in different ways according to their purpose.

Note that the supplier warehouse labeled **Warehouse** is meant for items that need to be purchased, not items that are in the company's warehouse.

You can update the pricing of multiple items by importing pricing information, or by using the **Global Edit** and **Global Edit Form** commands. You can also

update pricing while working in the **Purchasing** module, in the **Estimating** module, or while creating pricing forms.

For more information, see the following links:

Open Pricing Maintenance (page 148)

Add a supplier warehouse (page 164)

Find shapes, grades, and dimensions in Pricing Maintenance (page 149)

Manage material dimensions in pricing (page 150)

Modify lengths and pricing (page 152)

Create pricing forms (page 158)

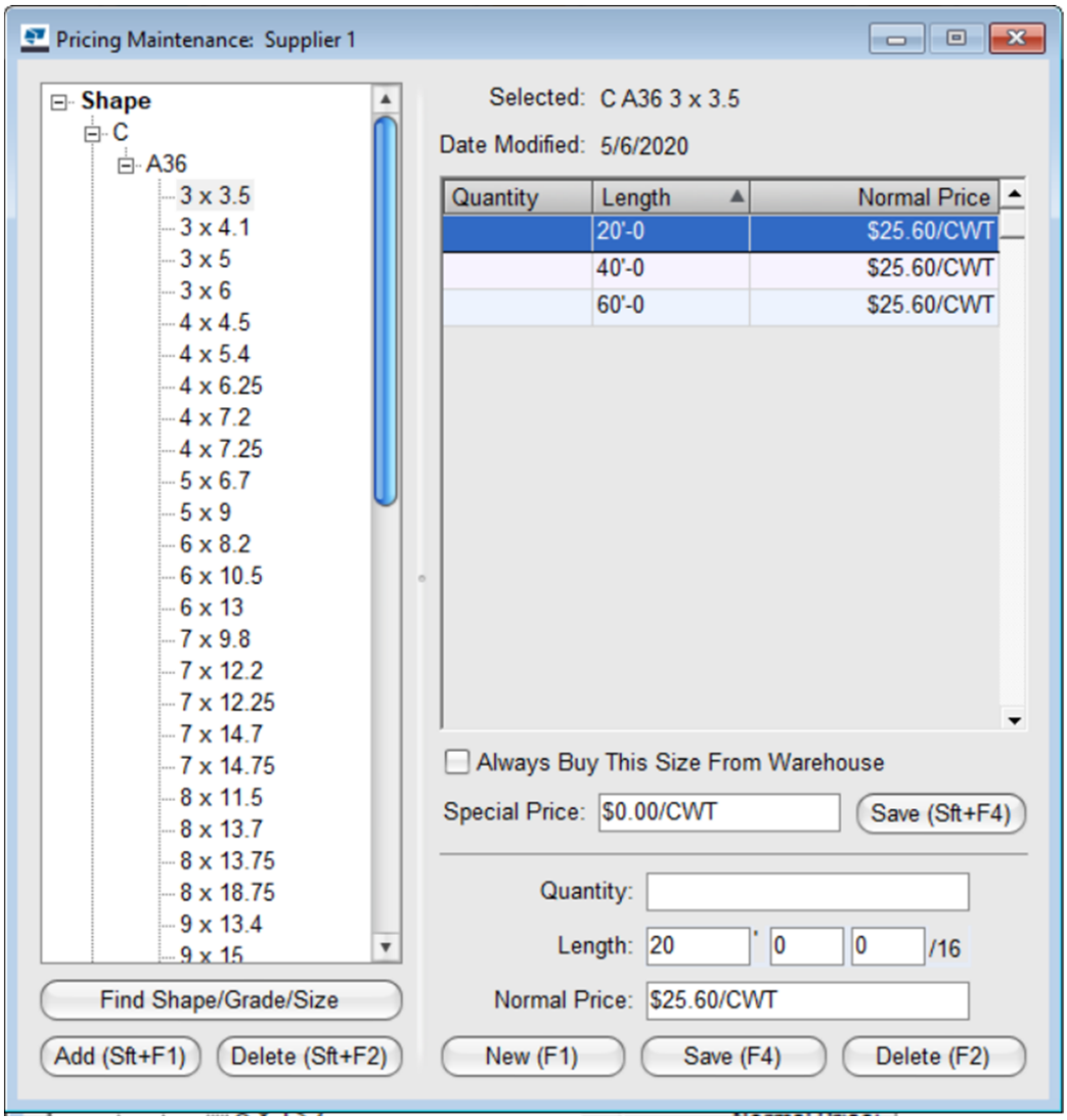
Create and manage pricing lists (page 160)

Open Pricing Maintenance

In **Pricing Maintenance**, you can add the material sizes and lengths that you want to use when combining materials in Tekla EPM.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Pricing Maintenance**.
3. In the **Select Supplier** dialog box, select a pricing warehouse.
4. Double-click the pricing warehouse, or click **Open**.
5. In the **Pricing Maintenance** dialog box, click the **+** signs to expand the options in the navigation tree:
   - Click **+** next to a material shape to view its grades.
   - Click **+** next to a material grade to view its dimensions.
6. Select the material dimension that you want to view or modify.

The properties of the selected material dimension appear on the right side of the dialog box.



You can also see the shape and grade of the material dimension at the upper-left corner, and the latest pricing updates at the upper-left corner.

Find shapes, grades, and dimensions in Pricing Maintenance

You can use the **Find Shape/Grade/Size** command in the **Pricing Maintenance** dialog box to find a particular material shape, grade, or dimension.

1. In the **Pricing Maintenance** dialog box, click **Find Shape/Grade/Size**.
2. In the **Find** dialog box, do one of the following:

- Type the name of the material shape, grade, or dimension in the related field.
- Click the arrow on the right side of the related field, and select the desired material shape, grade, or dimension in the list.

3. Click **Find**.

The shape, grade, or dimension is selected in the shape list on the left side of the **Pricing Maintenance** dialog box.

Manage material dimensions in pricing

You can manage material dimensions in the pricing database in several ways: you can add material dimensions either one by one or as groups, copy dimensions from one material grade to another, or remove unnecessary material dimensions from the pricing database.

For more information, see the following links:

Add a single material dimension to pricing (page 150)

Add material dimensions to pricing (page 151)

Copy material dimensions from one grade to another (page 151)

Delete material dimensions from pricing (page 152)

Add, modify, and delete material lengths and pricing information for a dimension (page 152)

Add a single material dimension to pricing

By default, only the most commonly used shapes are available in **Pricing Maintenance**. However, you can add new shapes that you need when combining materials in Tekla EPM.

NOTE Only material dimensions that are available in the material database (page 115) can be added to pricing.

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1. Below the **Shape** list in the **Pricing Maintenance** dialog box, select a grade and click **Add**.
2. In the **Shape** list, select the shape whose dimensions you want to add.
3. Click the **Dimensions** field.

   The **Shape** dialog box opens, displaying the available material dimensions.
4. Double-click the dimension that you want to add.
5. Ensure that the grade in the **Grade** list is correct. If not, select the correct grade in the **Grade** list.
6. Click **Save**.

The shape, grade, and dimension are added to the navigation tree and the pricing database.

Now, you can add lengths and pricing information for the newly added dimension. For more information, see Add, modify, and delete material lengths and pricing information for a dimension (page 152).

Add material dimensions to pricing

By default, only the most commonly used shapes are available in the pricing database and the **Pricing Maintenance** dialog box. However, you can add new material dimensions to the pricing database, if needed.

NOTE Only material dimensions that are available in the material database (page 115) can be added to pricing.

---

1. Below the **Shape** list in the **Pricing Maintenance** dialog box, click **Add**.
2. In the **Shape** list in the **Select Shape** dialog box, select the shape whose dimensions you want to add.
3. In the **Grade** list in the **Select Grade** dialog box, select the material grade whose dimensions you want to add.
4. In the **Select the sizes to add** dialog box, click the arrow buttons to move the dimensions that you want to add to the **Included** list.
5. Click **OK**.

The selected dimensions are added to the pricing database and appear in the **Pricing Maintenance** dialog box. Next, you need to add lengths and pricing information for the added dimensions (page 152).

Copy material dimensions from one grade to another

Use the **Copy Sizes** command to copy a list of dimensions and their pricing information from one material grade to another.

1. In the **Pricing Maintenance** dialog box, click the **Pricing** ribbon tab.
2. On the menu, select **Copy Sizes**.
3. In the **Select the sizes to copy** dialog box, click the arrow buttons to move the dimensions that you want to add to the **Included** list.
4. Click **OK**.
5. In the **New Grade** list, select the material grade to which the dimensions will be copied.
6. Click **OK**.
7. If the new grade already has dimensions in the current supplier warehouse, select if you want to overwrite the existing dimensions (**Yes**)

or only add dimensions that do not yet exist in the supplier warehouse (**No**).

A message appears, telling you that the selected dimensions have been copied to the new grade.

8. Click **OK** to close the message.

The pricing of the dimensions in the new material grade matches the pricing of the original material grade. If necessary, update the pricing either item by item or by using the **Global Edit** command. For more information, see Add, modify, and delete material lengths and pricing information for a dimension (page 152) or Modify the pricing of multiple items (page 155).

Delete material dimensions from pricing

You can permanently delete unnecessary material dimensions and their pricing information from the pricing database. Note that the dimensions are not automatically deleted from the material database.

1. In the **Shape** list of the **Pricing Maintenance** dialog box, do one of the following:
   - To delete one dimension, select the dimension.
   - To delete all dimensions of a particular grade, select the grade.
   - To delete all dimensions of a particular shape, select the shape.
2. Below the **Shape** list, click **Delete**.
3. To permanently delete the dimensions and their pricing information from the pricing database, click **Yes** in the confirmation dialog box.

Note that the dimensions and the material grade need to be separately deleted from the material database. For more information, see Delete dimensions (page 143) and Add, modify, and delete grades (page 130).

Modify lengths and pricing

You can add, modify, and delete material lengths and pricing information in two ways: either one dimension at the time, or by selecting multiple grades and dimensions of a shape. If necessary, you can also add special prices for lengths.

For more information, see the following links:

Add, modify, and delete material lengths and pricing information for a dimension (page 152)

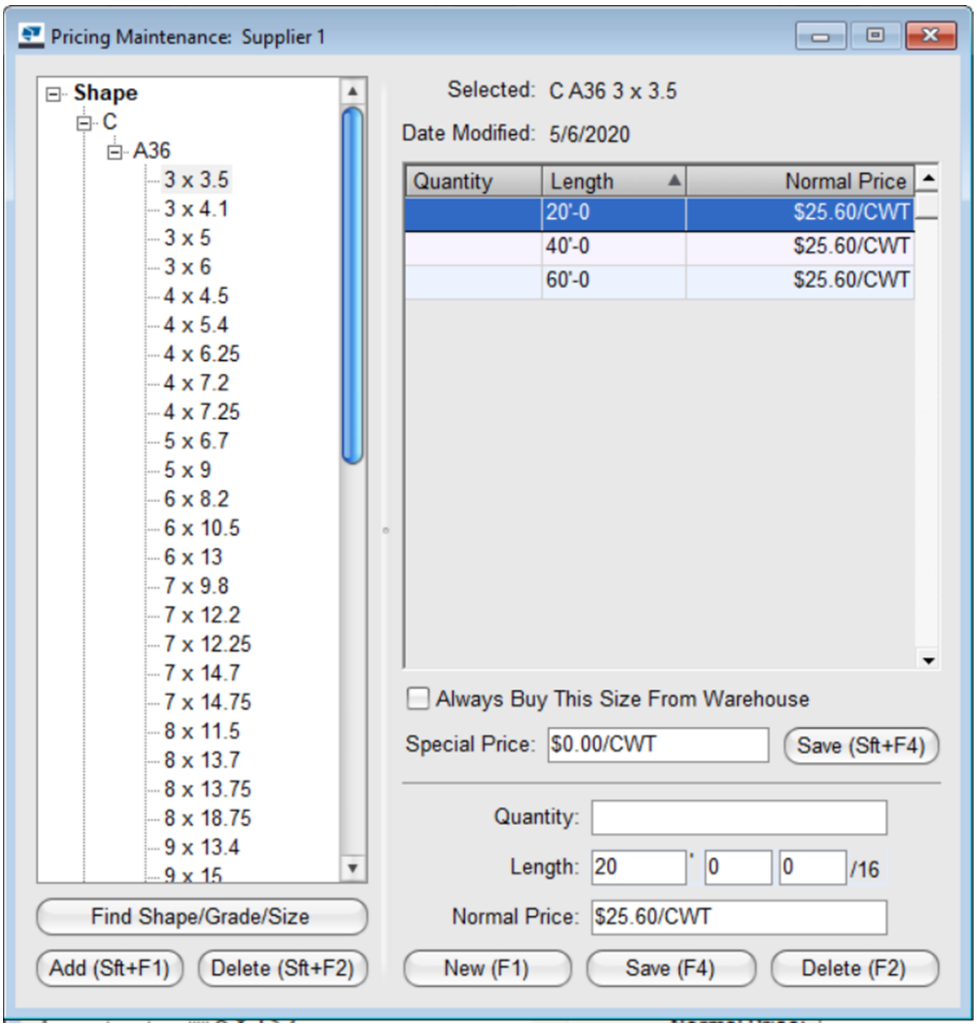
Add a special price (page 155)

Modify the pricing of multiple items (page 155)

Add, modify, and delete material lengths and pricing information for a dimension

You can add new purchasable material lengths or modify the existing lengths in **Pricing Maintenance**. Ensure that you add all lengths that you need when combining materials in the Tekla EPM modules. When adding lengths, it is important to also define the pricing. Otherwise, Tekla EPM will consider the material free. You can also delete any unnecessary lengths from the pricing database.

NOTE To make wholesale changes to multiple dimensions by shape, use the **Global Edit** command. For more information, see Modify the pricing of multiple items (page 155).



Add a material length and its pricing information

1. In the shape list in the **Pricing Maintenance** dialog box, select a shape and a dimension.

   The existing lengths of the dimension are shown in the length list on the right side of the **Pricing Maintenance** dialog box.

2. Below the length list, click **New**.
3. If only limited quantities of the material dimension are available, type a value in the **Quantity** field.

   Otherwise, leave the **Quantity** field blank.

   If you do not define a quantity, the **Quantity** column for the lengths of the material dimension will show an asterisk (*). This means that Tekla EPM allows an unlimited number of lengths.

4. In the **Length** field, type the material length.

   For some shapes, you may also need to define the material width.

5. In the **Normal Price** field, type a price for the dimension.

   TIP You can right-click the **Normal Price** field to change or convert the pricing units and currencies.

6. If necessary, type a price in the **Special Price** field and click **Save**.

   Note that the price in the **Special Price** field overrides the price in the **Normal Price** field.

7. To determine that the selected dimension is always bought from the current supplier, select the **Always Buy This Size From [Supplier]** check box.

   If you select the **Always Buy This Size From [Supplier]** check box for the material dimension in another supplier warehouse, the **Always Buy This Size From [Supplier]** check box is automatically cleared in the previous supplier warehouse.

8. Click **Add**.

The length and price are added for the selected dimension.

Modify a material length and its pricing information

1. In the shape list in the **Pricing Maintenance** dialog box, select a shape and a dimension.

   The existing lengths of the dimension are shown in the length list on the right side of the **Pricing Maintenance** dialog box.

2. Select a length in the length list.
3. Modify the length, the quantity, and the pricing properties according to your needs.

4. To save the changes, click **Edit** below the length list.

Delete a material length and its pricing information

1. In the shape list in the **Pricing Maintenance** dialog box, select a shape and a dimension.

   The existing lengths of the dimension are shown in the length list on the right side of the **Pricing Maintenance** dialog box.
2. Select a length in the length list.
3. Below the length list, click **Delete**.
4. To permanently delete the selected length and its pricing information from this supplier in the pricing database, click **Yes** in the confirmation dialog box.

Add a special price

If you have selected the **Use Special Price** option for the selected supplier, you can add a special price for a material dimension. Note that the special price overrides the normal price that you have defined for the dimension.

TIP If you want to add the same special price for multiple dimensions at one go, use the **Global Edit** command. For more information, see Modify the pricing of multiple items (page 155).

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1. In the shape list in the **Pricing Maintenance** dialog box, select a shape and a dimension.

   The existing lengths of the dimension are shown in the length list on the right side of the **Pricing Maintenance** dialog box.
2. Type a price in the **Special Price** field.
3. Under the length information, click **Edit**.

The special price is saved for the selected material dimension. Note that the special price will be used instead of the normal price until you remove the special price.

Modify the pricing of multiple items

Use the **Global Edit** command to modify pricing, available lengths for linear items and available lengths and widths for nested items, and to select whether a material dimension is always bought from a particular supplier.

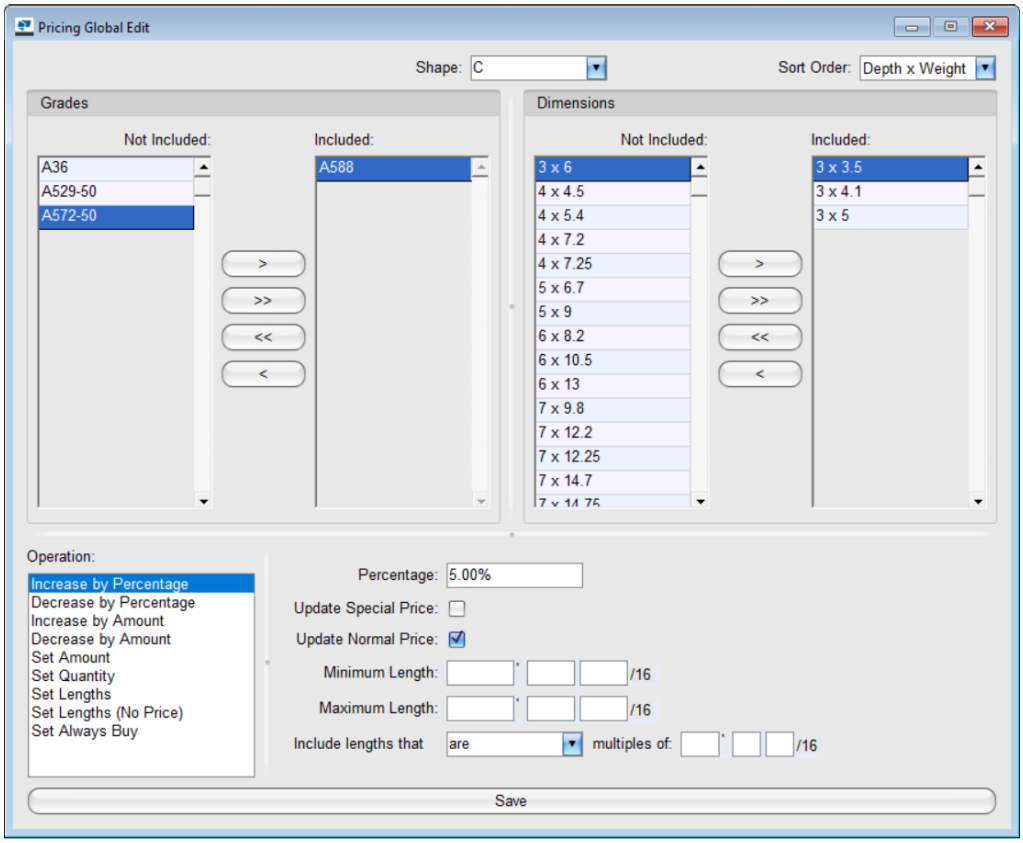
NOTE When you are using multiple supplier warehouses in **Pricing Maintenance**, you need to maintain the pricing of shapes in each warehouse separately.

The pricing information is used for multing and nesting material in multiple Tekla EPM modules. You can still combine the items with

updated pricing to any inventory or purchase order items, or manually combine the items in a requisition.

If you are combining material items to the specific supplier warehouse and the items in the modules do not match with the items that are available in the supplier's data set, Tekla EPM cannot combine the materials.

1. In the **Pricing Maintenance** dialog box, click the **Pricing** ribbon tab.
2. On the menu, select **Global Edit**.
3. In the **Shape** list at the top of the **Pricing Global Edit** dialog box, select the shape whose grades and dimensions you want to modify.



The grades and dimensions of the shape appear in the dialog box.

4. In the **Grades** section, click the arrow buttons to move the grades that you want to modify to the **Included** list.
5. In the **Dimensions** section, click the arrow buttons to move the dimensions that you want to modify to the **Included** list.
6. In the **Operation** list in the lower-light corner, select an option:
   - **Increase By Percentage**: Increases the prices of the selected items by a specific percentage.

- **Decrease By Percentage**: Decreases the prices of the selected items by a specific percentage.
- **Increase By Amount**: Increases the prices of the selected items by a certain sum.
- **Decrease By Amount**: Decreases the prices of the selected items by a certain sum.
- **Set Amount**: Sets the prices of the selected items to a specific sum.
- **Set Quantity**: Allows Tekla EPM to only use a specific number of the selected lengths.
- **Set Lengths**: Allows you to add lengths for the selected items either one by one or as a range.
- **Set Lengths (No Price)**: Allows you to add lengths for the selected items either one by one or as a range. No pricing information is added.
- **Set Always Buy**: Allows you to determine that the selected dimensions are always bought from the current supplier. To do so, select the **Always Buy From [Supplier]** check box.

  If you select the **Always Buy From [Supplier]** check box for the same dimensions in another supplier warehouse, the **Always Buy From [Supplier]** check box is automatically cleared in the previous supplier warehouse.

When you have selected the operations, the applicable fields are shown at the bottom of the dialog box.

7. Depending on the operation you selected, modify the pricing information.

   TIP You can right-click the **Amount** field to change or convert the pricing units and currencies.

8. Click **Save**.

Example: Set lengths

1. Select the **Set Lengths** option.

   A length list appears on the left side of the dialog box.
2. Click **New**.
3. Do one of the following:

To	Do this
Add lengths one by one	a. If the lengths only apply to a fixed quantity of items, type the quantity in the **Quantity** field.

To	Do this
	b. Define the length and the normal price. You can right-click the **Normal Price** field to change or convert the pricing units and currencies. c. Click **Add** to add the length and its pricing information to the list.
Add multiple lengths with the same interval	a. Click **Add Range**. b. In the **Add Range** dialog box, define the start and end lengths. c. Define the interval length. d. If necessary, define the quantity of items to which the range will apply. e. Define the normal price. **TIP** You can right-click the **Normal Price** field to change or convert the pricing units and currencies. f. Click **Add Range**.

4. When you have added all necessary lengths and pricing information, click **Save**.

   The length and pricing of the selected items are updated.

Create pricing forms

Use the **Global Edit Form** command to apply group-specific pricing for different material dimensions. For example, when updating pricing for groups of HSS shapes, the shapes that are either smaller or larger than the commonly used dimensions may need different pricing updates. By creating and using pricing forms, you can update each group of HSS shapes accordingly. You can create one pricing form that contains multiple shapes whose pricing you want to update in the current supplier warehouse, or pricing data set.

Creating pricing forms becomes even more efficient when you update the pricing from a requisition or a purchase order, as you can update multiple shapes and dimensions at one go.

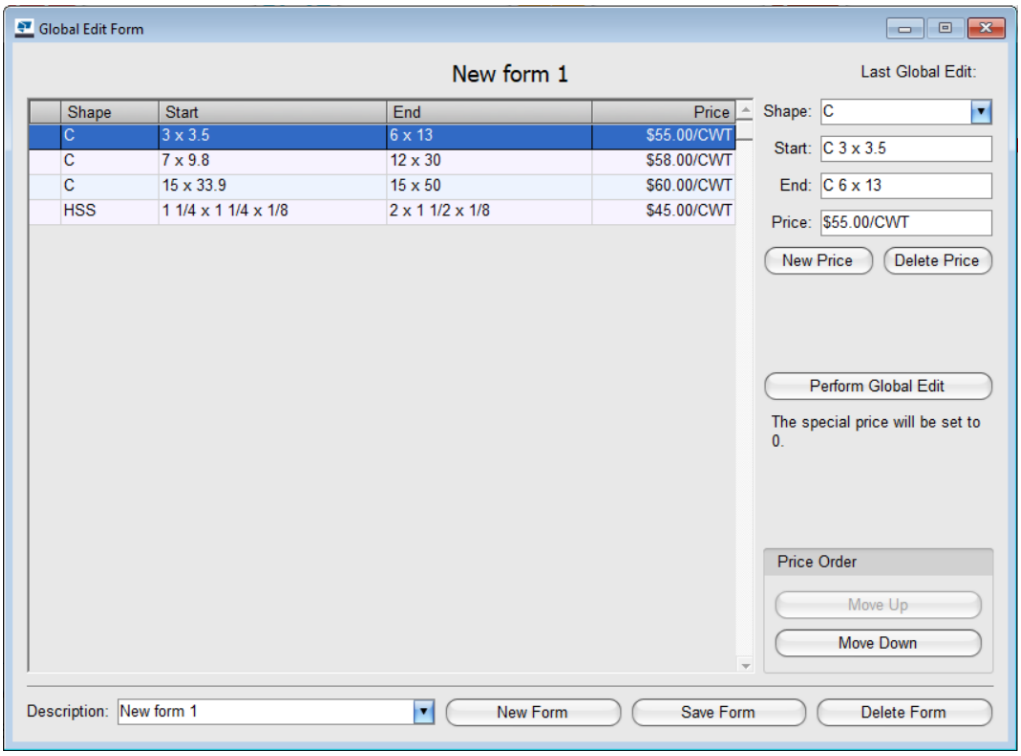
1. In the **Pricing Maintenance** dialog box, click the **Pricing** ribbon tab.
2. On the menu, select **Global Edit Form**.

3. At the bottom of the **Global Edit Form** dialog box, click **New Form**.
4. Type a name for the new form and click **OK**.
5. If another form already exists and you want to copy its content, click **Yes** in the confirmation dialog box.
6. On the right side of the **Global Edit Form** dialog box, click **New Price**.
7. In the **Shape** list, select a shape.
8. Click the **Start** field, and double-click the smallest dimension to which the new price applies.
9. Click the **End** field, and double-click the largest dimension to which the new price applies.
10. In the **Price** field, type the price.

TIP To change the units for the price, right-click the **Price** field and select a suitable option.

11. To save the changes, click **Save Form**.

    Repeat steps 6 to 11 for different dimensions of the selected shape and other shapes. You can see an example pricing form in the following image.



12. When you have added all the necessary forms and prices, click **Perform Global Edit**.

The pricing of the selected items is updated. The pricing forms that you created are saved for later use.

Create and manage pricing lists

You can view, email, or print the information in a supplier pricing database as a pricing list. You can filter the pricing list by shape to see a list of pricing for all dimensions of the selected shape, or leave the pricing list unfiltered to create a list containing all pricing information.

See also

Import a pricing list (page 162)

Create a pricing list

1. In the **Pricing Maintenance** dialog box, click the **Pricing** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. If you only want to display selected items in the report, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, click the arrow buttons to move the items that you want to include in the pricing list to the **Included** list.
5. Click **OK**.
6. Click **Make Report**.

Tekla EPM creates the pricing list, and the **Report Selection** dialog box opens. Here, you can view, print, or export the pricing list.

View the pricing list

1. In the **Report Selection** dialog box, click **View**.
2. In **Tekla EPM Report Viewer**, do any of the following according to your needs:

To	Do this
Move between pages	• Click the arrows at the top of **Tekla EPM Report Viewer**.
Go to a specific page of the report	• Type the page number in the empty field at the top of **Tekla EPM Report Viewer**.
Find a text in the report	a. Click the binocular icon. b. In the blank field, type the text that you want to find.

To	Do this
	c. Click **Find Next**. Any matching text is highlighted with a red box.
Zoom in or out	• Click the magnifying glass icon and select the zoom value in the list.

Print the pricing list

1. In the **Report Selection** dialog box, change the number of printed copies by clicking the **+** and **-** buttons.
2. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**.

   You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the used printer.
3. Click **Print**.
4. Click **Yes**.

Export the pricing list

1. Click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. Modify the file name according to your needs.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. To export the pricing list and save it to the selected location, click **Export**.

Email the pricing list as an Excel worksheet or a PDF file

Note that the **Email Excel** and **Email PDF** commands only allow you to send the pricing list via Microsoft Outlook email. If you use some other email service, you need to export the pricing list and attach it to an email manually.

1. In the **Report Selection** dialog box, click **View**.
2. In the upper-right corner of **Tekla EPM Report Viewer**, click either **Email Excel** or **Email PDF**.

   When the report is ready, the Microsoft Outlook icon appears at the bottom of the screen.

3. Click the icon to open Microsoft Outlook.
4. Modify the email according to your needs.
5. Send the email.

Import a pricing list

You can import a pricing list that has been revised by a supplier or that has user-modified pricing. Pricing lists can be imported either from Microsoft Excel or from an XML file. During the import, Tekla EPM overwrites the current pricing of the material items in the imported file. The pricing of material items that are not included in the file does not change.

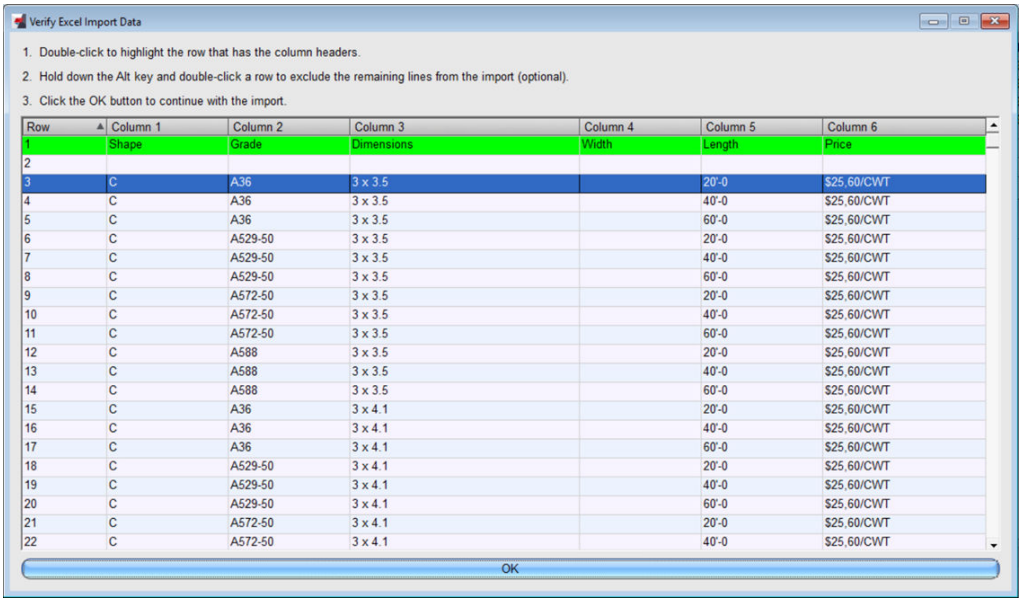
We recommend that you start by exporting the pricing list from Tekla EPM, modifying it, and importing it back to Tekla EPM. By doing so, you can ensure that the format and header information will match the headers in Tekla EPM when you import the modified pricing list back to Tekla EPM.

Note that the format of the pricing list that you import needs to match the pricing format in the pricing list or in the pricing **Pricing Maintenance** dialog box.

Import a pricing list from Microsoft Excel

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Pricing Maintenance**.
3. In the **Select Supplier** dialog box, click the **Pricing** ribbon tab.
4. On the menu, go to **Import Pricing** --> **Import Pricing From Excel File**.
5. In the **Open** dialog box, browse to find the Microsoft Excel worksheet that contains the pricing list.
6. Select the file and click **Open**.

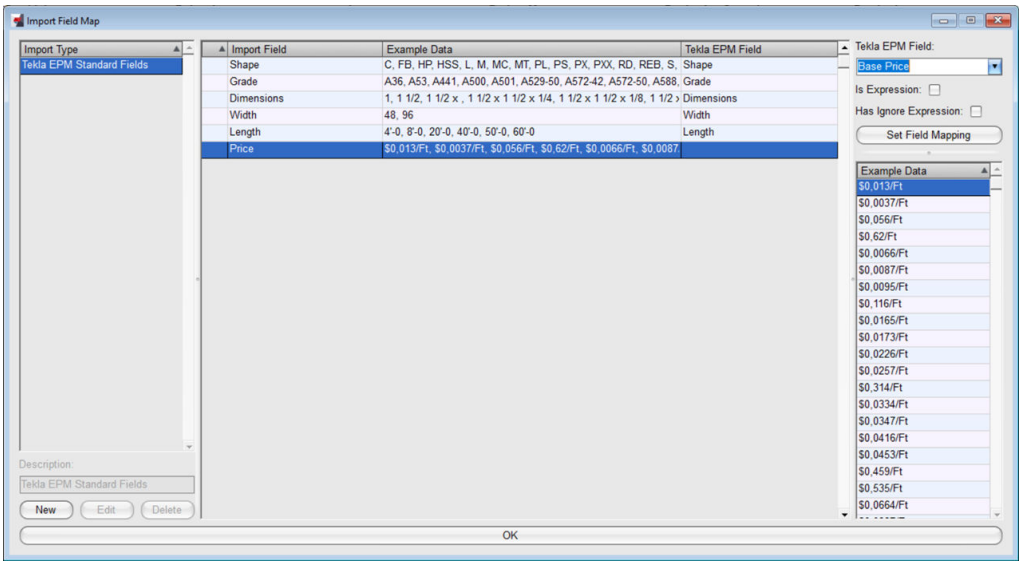
Tekla EPM reads the Microsoft Excel worksheet. Once the reading is finished, the **Verify Excel Import Data** dialog box opens.



Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
1	Shape	Grade	Dimensions	Width	Length	Price
2						
3	C	A36	3 x 3.5		20'-0	$25,60/CWT
4	C	A36	3 x 3.5		40'-0	$25,60/CWT
5	C	A36	3 x 3.5		60'-0	$25,60/CWT
6	C	A529-50	3 x 3.5		20'-0	$25,60/CWT
7	C	A529-50	3 x 3.5		40'-0	$25,60/CWT
8	C	A529-50	3 x 3.5		60'-0	$25,60/CWT
9	C	A572-50	3 x 3.5		20'-0	$25,60/CWT
10	C	A572-50	3 x 3.5		40'-0	$25,60/CWT
11	C	A572-50	3 x 3.5		60'-0	$25,60/CWT
12	C	A588	3 x 3.5		20'-0	$25,60/CWT
13	C	A588	3 x 3.5		40'-0	$25,60/CWT
14	C	A588	3 x 3.5		60'-0	$25,60/CWT
15	C	A36	3 x 4.1		20'-0	$25,60/CWT
16	C	A36	3 x 4.1		40'-0	$25,60/CWT
17	C	A36	3 x 4.1		60'-0	$25,60/CWT
18	C	A529-50	3 x 4.1		20'-0	$25,60/CWT
19	C	A529-50	3 x 4.1		40'-0	$25,60/CWT
20	C	A529-50	3 x 4.1		60'-0	$25,60/CWT
21	C	A572-50	3 x 4.1		20'-0	$25,60/CWT
22	C	A572-50	3 x 4.1		40'-0	$25,60/CWT

7. Review the items being imported, and click **OK**.

   The **Import Field Map** dialog box opens.



   In the **Import Field Map** dialog box, the headings of the Microsoft Excel worksheet need to be mapped to the standard Tekla EPM fields.

8. If the values of an item in the **Import Field** and **Tekla EPM Field** columns are different, do the following:

   a. Select the unmatched **Import Field** value.

   b. On the right side of the dialog box, select a suitable field in the **Tekla EPM Field** list.

c. Click **Set Field Mapping**.

Repeat steps a to c for all import fields that are not matched.

9. Click **OK** to continue.
10. In the **Select Supplier** dialog box, select the supplier warehouse for which the new pricing list is imported.
11. Click **Import**.

    The **Import** dialog box opens, and Tekla EPM continues importing the information from the Microsoft Excel worksheet.

    When the import is finished, the **Import** dialog box states that the import is completed. A copy of the import log is automatically saved in the log file location determined in the **Default Directories** dialog box.
12. To close the **Import** dialog box, click the **Close** button (**X**) in the upper-right corner.

Import from an XML file

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Pricing Maintenance**.
3. In the **Select Supplier** dialog box, click the **Pricing** ribbon tab.
4. On the menu, go to **Import Pricing** --> **From XML File**.
5. In the **Open** dialog box, browse to find the XML file that contains the pricing list.
6. Select the XML file and click **Open**.
7. In the **Select Supplier** dialog box, select the supplier warehouse for which the new pricing list is imported.
8. Click **Import**.

   Tekla EPM imports the items from the XML file. The import process may take some time.

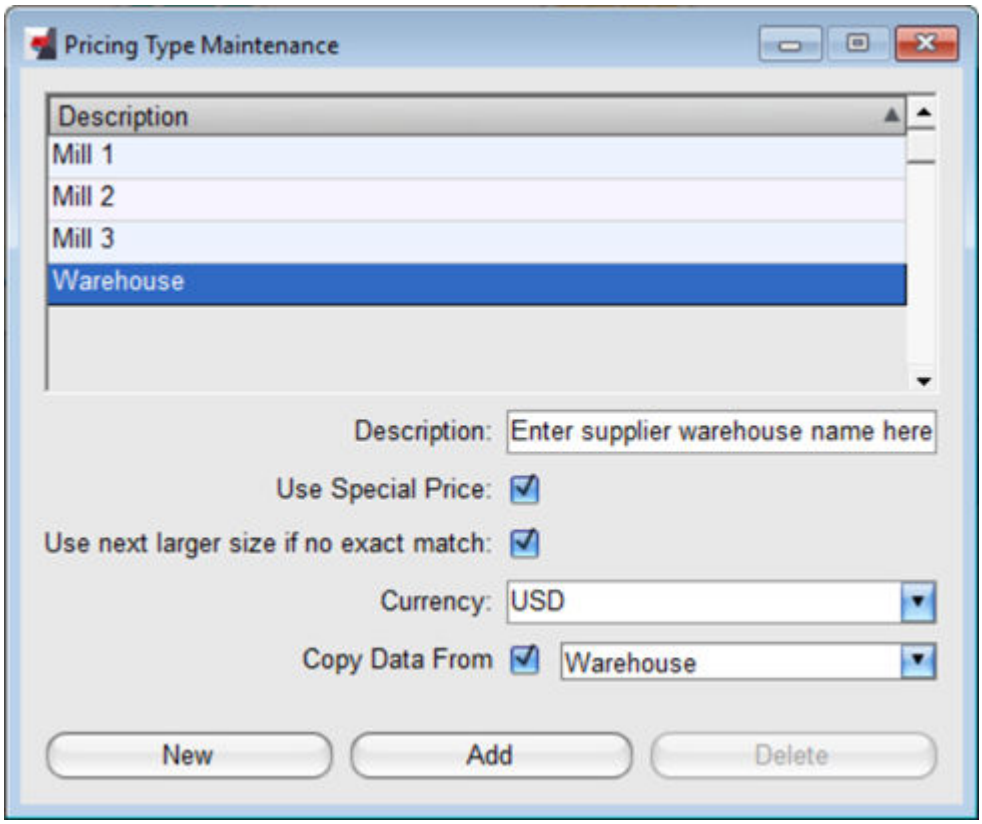
   When the import is finished, the **Import** dialog box states that the import is completed. A copy of the import log is automatically saved in the log file location determined in the **Default Directories** dialog box.
9. To close the **Import** dialog box, click the **Close** button (**X**) in the upper-right corner.

Add a supplier warehouse

Use the **Pricing Type Maintenance** command to add a supplier warehouse, or pricing set, to the pricing database.

Note that you can also modify and delete existing supplier warehouses in the **Pricing Type Maintenance** dialog box.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Pricing Maintenance**.
3. In the **Select Supplier** dialog box, click the **Pricing** ribbon tab.
4. On the menu, select **Pricing Type Maintenance**.
5. At the bottom of the **Pricing Type Maintenance** dialog box, click **New**.
6. In the **Description** field, type the name of the new supplier.



7. If you want the supplier warehouse to allow adding special prices for material dimensions, select the **Use Special Price** check box.
8. To allow pricing material dimensions in an estimate that do not exist in the selected supplier warehouse, select the **Use next larger size if no exact match** check box.
9. If you are using multiple currencies in Tekla EPM, in the **Currency** list, select the currency that the new supplier warehouse will use.

10. Select the **Copy Data From** check box, and select which existing supplier you want to use as the basis of the new supplier warehouse.
11. Click **Add**.

    The new supplier is added to the list.
12. To close the **Pricing Type Maintenance** dialog box, click the **Close** button (**X**) in the upper-right corner.

The new supplier warehouse is now available in the **Select Supplier** dialog box, and you can modify the pricing of the new supplier warehouse according to your needs.

See also

Manage material dimensions in pricing (page 150)

Modify lengths and pricing (page 152)

Create pricing forms (page 158)

Set the default printer

You can set or change the default printer for the current workstation. Setting a default printer for a workstation is optional.

1. Click the **Administration** ribbon tab.
2. On the **File** menu, select **Default Printer**.
3. To select or change the default printer, in the dialog box, click **Change**.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.
6. To confirm using the selected printer as the default printer, in the **Default Printer** dialog box, click **OK**.

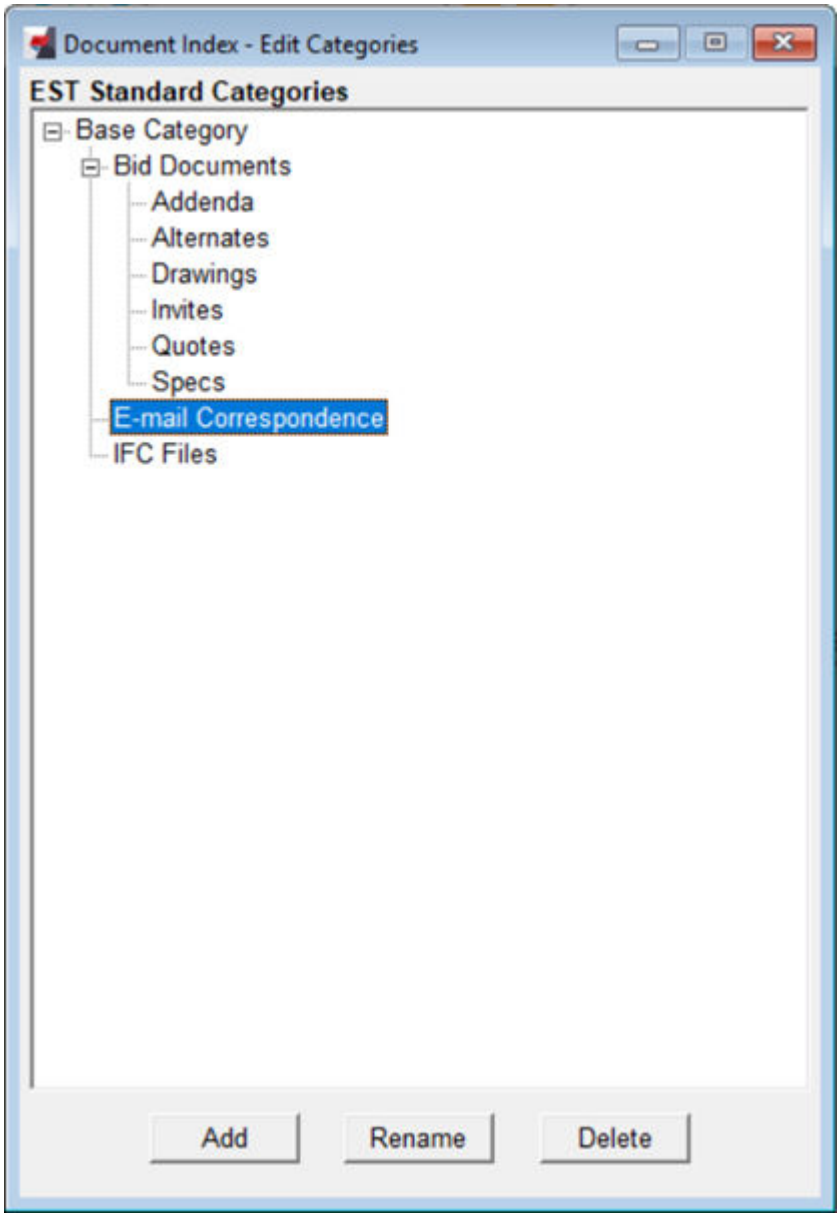
Set the standard categories for attached documents

Document Index in Tekla EPM allows you to organize and save documents for a job in the **Combining**, **Estimating**, **Order Entry**, **Project Management**, **Production Control**, and **Purchasing** modules. The standard categories where you can organize documents need to be set separately for each module.

1. Click the **Maintenance** ribbon tab.
2. On the menu, go to **Document Index**, and select any of the following:
   - **Standard Categories - CMB**: set the categories for organizing documents related to combining jobs.

- **Standard Categories - EST**: set the categories for organizing documents related to estimating jobs.
- **Standard Categories - ORD**: set the categories for organizing documents related to customer orders.
- **Standard Categories - PRJ**: set the categories for organizing documents related to project management jobs.
- **Standard Categories - PDC**: set the categories for organizing documents related to production control jobs.
- **Standard Categories - REQ**: set the categories for organizing documents related to requisitions.
- **Standard Categories - PO**: set the categories for organizing documents related to purchase orders.

The **Document Index - Edit Categories** dialog box opens.



Add a category

1. In the **Document Index - Edit Categories** dialog box, select the category under which you want to create the new category.
2. At the bottom of the dialog box, click **New**.
3. In the **New Category** dialog box, type a name for the category.
4. Click **OK** to add the category.

Rename a category

1. In the **Document Index - Edit Categories** dialog box, select the category that you want to rename.
2. Click **Rename**.
3. In the **New Category** dialog box, type a new name for the category.
4. Click **OK** to update the name.

Delete a category

Note that deleting a category is permanent and cannot be undone.

1. In the **Document Index - Edit Categories** dialog box, select the category that you want to delete.
2. Click **Delete**.
3. To permanently delete the category, click **Yes** in the confirmation dialog box.

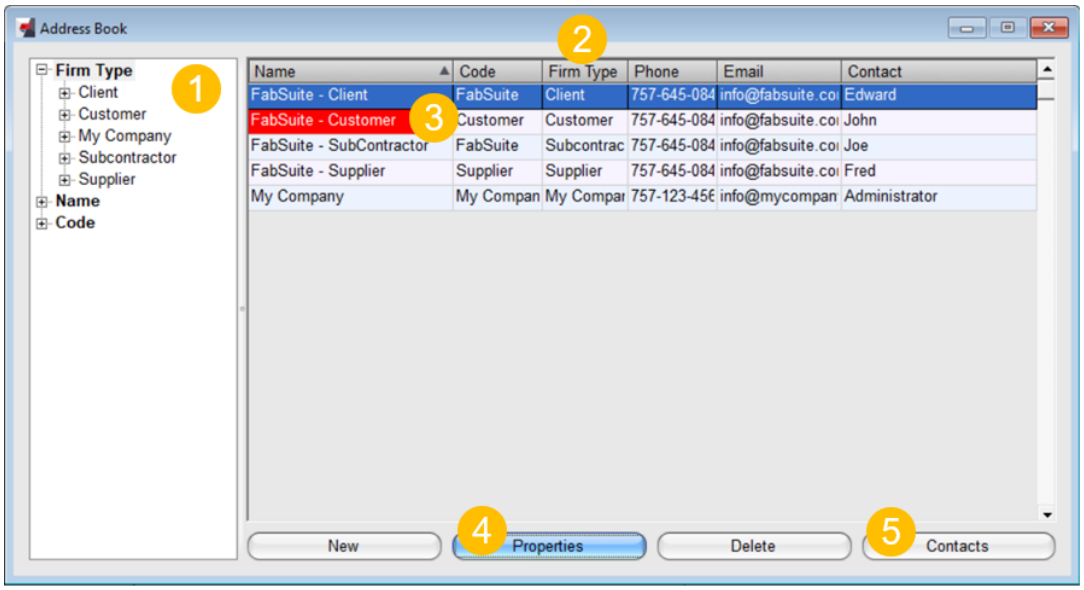
4.3 Manage the address book

Use the **Address Book** to define and manage the companies and contacts used in all Tekla EPM modules. We recommend that you set up the address book as early as possible, so that working in Tekla EPM becomes more fluent and efficient.

To access the **Address Book**, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Address Book**.

The **Address Book** dialog box opens.



The main components of the **Address Book** dialog box are:

(1) The navigation tree: allows you to only view specific companies.

Click **+** to expand and select options in the navigation tree. When you select an option, only companies that match the selected option are displayed.

For example, you can expand **Firm Type** and select **Supplier** to only display suppliers.

(2) The firm type: tells Tekla EPM where the company information should be used.

For more information, see View firm types (page 171).

(3) Red cells: indicate companies that are over their assigned credit limit.

(4) The **Properties** button: allows you to view the current company properties and credit settings and modify them.

(5) The **Contacts** button: allows you to switch to a view where the contact persons of the companies are displayed.

Note that you can customize the layout of the **Address Book** dialog box. For more information, see Customize the layout of a dialog box (page 214).

For more information, see the following links:

Find companies or contacts (page 171)

View firm types (page 171)

Add companies to the address book (page 172)

Add contacts to the address book (page 173)

Modify company or contact properties (page 174)

Import contacts to the address book (page 174)

Export companies or contacts (page 175)

Delete companies or contacts from the address book (page 176)

Find companies or contacts

You can use the **Find Company** and **Find Contact** commands to quickly find and select the correct company or contact in the **Address Book** dialog box.

Find companies

1. In the **Address Book** dialog box, click the **Address Book** ribbon tab.
2. On the menu, select **Find Company**.
3. Select if you want to search companies by name or by company code.
4. Type the company name or company code in the empty field, or click the arrow on the right side of the field and select the company in the list.
5. Click **OK**.

The company is selected in the **Address Book** dialog box.

Find contacts

1. In the **Address Book - Contacts** dialog box, click the **Address Book Contacts** ribbon tab.
2. On the menu, select **Find Contact**.
3. Type the contact name in the empty field, or click the arrow on the right side of the field and select the contact in the list.
4. Click **OK**.

The contact is selected in the **Address Book - Contacts** dialog box.

View firm types

The various firm types in the address book are used in different modules in Tekla EPM. Use the **Firm Types** command to quickly view the different firm types and where they can be used.

1. While in the **Address Book** dialog box, click the **Address Book** ribbon tab.
2. On the menu, select **Firm Types**.
3. In the **Firm Types** dialog box, review the firm types and where they can used in Tekla EPM.
4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Add companies to the address book

To add new companies to the address book and define their properties, do the following:

1. At the bottom left corner of the **Address Book** dialog box, click **New**.
2. On the **General** of the **Firm Details** dialog box, select a suitable firm type in the **Firm Type** list.

   Firm types help Tekla EPM to sort the list of companies in the address book. For more information, see View firm types (page 171).

   TIP You can add more than one firm type for a company. For example, a steel detailer can be added as both a detailer for **Project Management** and as a supplier for purchase orders.

3. Type a name and a code for the company.

   The company code can be any value. For example, you can use the accounting code of the company.

   Note that you cannot use the same company code for two companies that have the same firm type.
4. Select a primary currency type for the company.
5. If necessary, modify the credit limit of the company, and add any additional notes regarding the company.
6. Open the **Addresses** tab.
7. Click **New Address**.
8. Type a description for the address and enter other necessary contact information.

   Sometimes, it might be useful to have multiple addresses for a client. For example, if a client has different production control jobs, they can have multiple jobsite addresses that you should ship materials to. In these situations, you can use the jobsite names or job numbers as the descriptions of the jobsite addresses.

   Remember to add the jobsite contacts on the **Contacts** tab. For more information, see Add new contacts to the address book (page 173).
9. Select one of the available check boxes to define if the address is a shipping or mailing address.
10. Select the **Active** check box.

    If you do not select the **Active** check box, the address will not be available for use anywhere in Tekla EPM.
11. Click **Save Address**.

12. On the **Contacts** tab, add contacts for the company.

    For more information, see Add new contacts to the address book (page 173).

13. Click **Save**.

The **Firm Details** dialog box closes. The new company is saved to the address book.

See also

Modify company or contact properties (page 174)

Add contacts to the address book

You can add new contact persons either when adding or modifying company properties, or in the **Address Book - Contacts** dialog box. You can also view all existing contacts by clicking the **Contacts** tab at the bottom of the **Address Book** dialog box.

You can also import contacts to the address book. For more information, see Import contacts to the address book (page 174).

Add a new contact person in the company properties

1. In the **Firm Details** dialog box, go to the **Contacts** tab.
2. Click **New Contact**.
3. Type the name and contact information of the new contact person.
4. If the contact person is an inspector, select the **Inspector** check box and add an inspector ID.
5. Select the **Active** check box.

   If you do not select the **Active** check box, you cannot select the contact person anywhere in Tekla EPM.

6. To save the contact person and add the contact person to the list of contacts, click **Add Contact**.
7. In the **Default Contact** list, select a default contact person for the company.
8. Click **Save**.

   The **Firm Details** dialog box closes.

Add a new contact person in the contact list

1. At the bottom of the **Address Book**, click **Contacts**.

2. In the lower-left corner of the **Address Book - Contacts** dialog box, click **New**.
3. In the **Contact Details** dialog box, select the firm type and company for the new contact person.
4. Type the contact person's name and contact information.
5. If the contact person is an inspector, select the **Inspector** check box and add an inspector ID.
6. Select the **Active** check box.

   If you do not select the **Active** check box, you cannot select the contact person anywhere in Tekla EPM.
7. Click **Save**.

The **Contact Details** dialog box closes. The new contact person is added to the list of contacts.

Modify company or contact properties

You can modify the properties of existing companies and contacts in the **Address Book** dialog box. For example, this can be useful when you need to update phone numbers, or shipping and mailing addresses.

1. At the bottom of the **Address Book** dialog box, click **Properties**.

   The **General** tab of the **Firm Details** dialog box opens.
2. On the various tabs, modify the company properties according to your needs.

   For example, you can change the firm type or company code, update the addresses saved for the company, or create new contacts.
3. Click **Save**.

The company and contact details are updated, and the **Firm Details** dialog box closes.

Import contacts to the address book

You can import contacts from your Microsoft Outlook address book or a Microsoft Excel worksheet to Tekla EPM.

Import contacts from Microsoft Outlook

Before you import contacts from Microsoft Outlook, verify that the contacts are listed with the companies in the manner that you want them to appear in Tekla EPM.

1. In the **Address Book** dialog box, click the **Address Book** ribbon tab.

2. On the menu, select **Import Outlook Contacts**.

   The **Select Contacts to Import** dialog box opens.

   Tekla EPM reads the list of contacts in Microsoft Outlook, and the contacts appear on the **Included** side of the dialog box.
3. In the lefthand pane, select the contacts folder from which you want to import contacts.
4. If you want to include the contacts in the sub-folders of the selected folder, ensure that the **Include Sub-Folder Contacts** check box is selected.
5. Click the arrow buttons to move the contacts that you want to import to the **Included** list.
6. Click **Save**.

The selected Microsoft Outlook contacts are imported to the address book in Tekla EPM. The **Import Outlook Contacts** closes.

Import companies or contacts from Microsoft Excel

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Import**.
3. In the navigation tree on the left side of the **Import** dialog box, select **Address Book**.
4. Below **Address Book**, select if you want to import companies (**Firms**) or contacts.
5. Click the **...** button.
6. In the **Open** dialog box, browse to find the Microsoft Excel worksheet that you want to import, and select it.
7. Double-click the file, or click **Open**.
8. To import the file, click **Import**.

   If the Microsoft Excel worksheet contains unnecessary fields, Tekla EPM asks you if the fields can be ignored in the import.
9. To ignore the unnecessary fields, click **Yes**.

Tekla EPM imports the companies or contacts in the selected Microsoft Excel worksheet.

If any import errors occur, you can see the error details at the bottom of the **Import** dialog box. To see further details about errors in the import, click **Open Import Log**.

Export companies or contacts

You can export the current list of companies or contacts in the **Address Book** and save the list as a Microsoft Excel worksheet or a text file.

1. In the **Address Book** dialog box, click the **Address Book** ribbon tab.
2. On the menu, select either **Export Firms** or **Export Contacts**.
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. If necessary, select another file format in the **Save as type** list.
6. Click **Save**.

The list of companies or contacts is exported and saved to the selected location.

Delete companies or contacts from the address book

To keep the address book up to date, you may need to delete unnecessary and outdated companies and contacts.

1. Do one of the following according to your needs:
   - To delete a company, select the company in the **Address Book** dialog box.
   - To delete a contact, select the contact in the **Address Book - Contacts** dialog box.
2. Click **Delete** in the lower-right corner of the dialog box.
3. To permanently delete the company or contact from the address book, click **Yes** in the confirmation dialog box.

4.4 Manage taxes and currencies

Before you start working in Tekla EPM, you should set the necessary tax rates and currencies. You can also create tax groups that contain multiple tax rates.

For more information, see the following links:

Create, modify, or delete tax rates (page 177)

Create, modify, or delete tax groups (page 178)

Add, modify, or delete currencies (page 179)

Create, modify, or delete tax rates

Use the **Tax Rates** dialog box to define all individual taxes used in your projects. For example, the state sales tax may consists of a city tax rate and a county tax rate, and you should enter each tax rate separately. If necessary, you can group the associated tax rates into tax groups. In addition to adding tax rates, you can modify and delete existing tax rates.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Tax Rates**.
3. In the **Tax Rate Maintenance** dialog box, do any of the following:

To	Do this
Add a new tax rate	a. Click **New**. b. In the **Abbreviation** field, type an abbreviation code. The abbreviation code is visible in lists where you can select the tax rate to be applied. c. In the **Description** field, type a description for the tax rate. d. Define the state, county, city, and tax rate. e. In the **Tax Rate Applies To** section, select what the tax rate is applied to. You can also define an up to amount and select whether the tax rate is cascading. f. To save the new tax rate, click **Add**.
Modify a tax rate	a. Select the tax rate that you want to modify. b. Modify the abbreviation, description, state, county, city, and tax rate according to your needs. c. In the **Tax Rate Applies To** section, select what the tax rate is applied to. You can also define an up to amount and select whether the tax rate is cascading. d. Click **Edit** to save the changes.
Delete a tax rate	Note that you cannot delete tax rates that are used somewhere in Tekla EPM. a. Select the tax rate that you want to delete. b. Click **Delete**. c. To permanently delete tax rate, click **Yes**.

4. When you are finished, do either of the following according to your needs:
   - To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
   - To group the existing tax rates, click **Tax Group Maintenance** at the lower-right corner of the dialog box.

See also

Create, modify, or delete tax groups (page 178)

Create, modify, or delete tax groups

Creating tax groups that contain multiple tax rates can be helpful for record keeping. For example, city, county, and state tax rates can be combined into one group. Tax groups are available in the **Purchasing** and **Order Entry** modules. Creating tax groups is optional, so if you wish, you can define and use single tax rates instead.

1. To access **Tax Group Maintenance**, do one of the following:
   - Click the **Maintenance** ribbon tab and in the menu, select **Tax Groups**.
   - At the bottom right corner of the **Tax Rate Maintenance** dialog box, click **Tax Group Maintenance**.
2. In the **Tax Group Maintenance** dialog box, do any of the following:

To	Do this
Create a new tax group	a. Click **New**. b. In the **Abbreviation** field, type an abbreviation code. The abbreviation code will be used in lists where you can select the tax group. c. In the **Description** field, type a description for the tax group. d. If necessary, type the state, country, or city that the tax group applies to. e. Click **Add** to save the tax group and add it to the list. The new tax group is automatically selected. f. To select the tax rates that you want to add to the tax group, click **Included Tax Rates**.

To	Do this
	g. Click the arrow buttons to move the tax rates that you want to include in the tax group to the **Included** list. h. Click **OK**. The selected tax rates are added to the selected tax group.
Modify a tax group	a. Select a tax group in the list. b. Modify the abbreviation, description, state, county, and city according to your needs. c. If necessary, click **Included Tax Rates** to modify the tax rates included in the tax group. d. Click the arrow buttons to move the tax rates that you want to include in the tax group to the **Included** list. e. Click **Edit** to save the changes.
Delete tax groups	Note that you cannot delete tax groups that are used somewhere in Tekla EPM. a. Select a tax group in the list. b. Click **Delete**. c. To permanently delete tax group, click **Yes** in the confirmation dialog box.

3. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Create, modify, or delete tax rates (page 177)

Add, modify, or delete currencies

In the **Currencies** dialog box, you can add currencies that you need to use in Tekla EPM. You can also set the default currency, modify or delete existing currencies, and modify exchange rates.

To manage the available currencies, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Currencies**.

The **Currencies** dialog box opens.

Add a currency

1. In the **Currencies** dialog box, click **New**.
2. Define the currency properties:

Option	Description
Abbreviation	The abbreviation of the currency. For example, `EUR` is the abbreviation for euros. The abbreviation is used in lists where you need to select a currency. Type the abbreviation in the **Abbreviation** field.
Description	The currency name. For example, `Euros`. Type the currency name in the **Description** field.
Display Prefix	The currency code or symbol that is displayed before the sum. Type the currency code in the **Display Prefix** field.
Display Suffix	The currency code or symbol that is displayed after the sum. Type the currency code in the **Display Suffix** field.
Decimal Places	The number of decimal places in the currency. Type the number in the **Decimal Places** field.

3. If you want to make the new currency the default currency option, select the **Default Currency** check box.
4. Click **Add**.

The new currency is added to the list.

Now, you can modify the exchange rate of the new currency to other currencies.

Modify an exchange rate

1. In the **Currencies** dialog box, select the currency whose exchange rates you want to modify.

   The exchange rates of the selected currency are displayed in the lower-right corner of the dialog box.
2. Double-click the exchange rate that you want to modify.
3. In the **Currency Exchange Rate** dialog box, define the exchange rates from and to the selected currency.

   You can also only define the first exhange rate and automatically calculate the second one by selecting the **Calculate Inverse** check box.

4. Click **Save**.

Repeat steps 1 to 5 for all necessary exchange rates.

Set the default currency

By default, the default currency in Tekla EPM is US dollars. However, you can change the default currency according to your needs.

1. In the **Currencies** dialog box, select the currency that you want to set as the default option.
2. Select the **Default Currency** check box.
3. Click **Edit** to save the changes.

The selected currency is set as the default option.

Note that the **Default Currency** column of the selected currency now says **Yes**.

Modify a currency

1. In the **Currencies** dialog box, select the currency that you want to modify.
2. Modify the currency properties according to your needs:

Option	Description
Abbreviation	The abbreviation of the currency. For example, `EUR` is the abbreviation for euros. The abbreviation is used in lists where you need to select a currency. Type the abbreviation in the **Abbreviation** field.
Description	The currency name. For example, `Euros`. Type the currency name in the **Description** field.
Display Prefix	The currency code or symbol that is displayed before the sum. Type the currency code in the **Display Prefix** field.
Display Suffix	The currency code or symbol that is displayed after the sum. Type the currency code in the **Display Suffix** field.
Decimal Places	The number of decimals in the currency. Type the number in the **Decimal Places** field.

3. Click **Edit** to save the changes..

Delete a currency

Note that deleting a currency is permanent and cannot be undone.

You cannot delete currencies that are currently used somewhere in Tekla EPM.

1. In the **Currencies** dialog box, select the currency that you want to delete.
2. Click **Delete**.
3. To permanently delete the selected currency, click **Yes** in the confirmation dialog box.

4.5 Import files to Tekla EPM

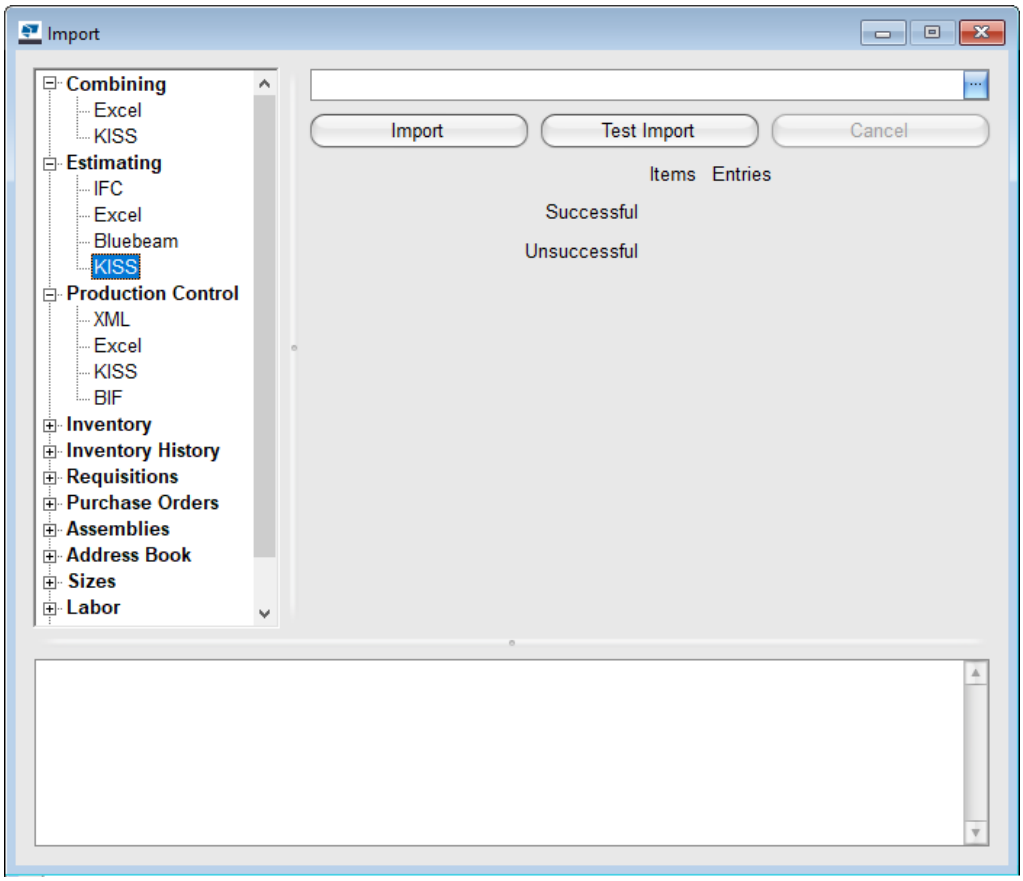
You can import various types of files to Tekla EPM. You can import jobs, requisitions, purchase orders, companies or contacts to the address book, inventory or inventory history information, assemblies, material dimensions, labor, and pricing information.

You can import the following file types:

- ASCII files
- BIF files
- IFC files
- KISS files
- KSTK files
- Microsoft Excel worksheets
- SSC files
- txt files
- XML files

Note that the file types that you can import depend on the location and module into which you are importing the files.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Import**.



3. In the navigation tree on the left side of the **Import** dialog box, select the location where you want to import a file.
4. Below the location, select the file type that you want to import.

   If a file type is not available below the selected location, you cannot import that type of a file to the selected location.

   For additional help on some import options, you can click the **Help** button in the **Import** dialog box.
5. Click the **...** button.
6. In the **Open** dialog box, browse to find the file that you want to import, and select it.
7. Double-click the file, or click **Open**.
8. To import the file, click **Import**.

   Some import locations have a **Test Import** button. By clicking **Test Import**, you can preview the effects of the import.

   What happens next depends on the imported file and the information within it. You may need to translate shapes and grades, modify the job

information, or select if the new information replaces the information in an existing job.

If any import errors occur, you can see the error details at the bottom of the **Import** dialog box.

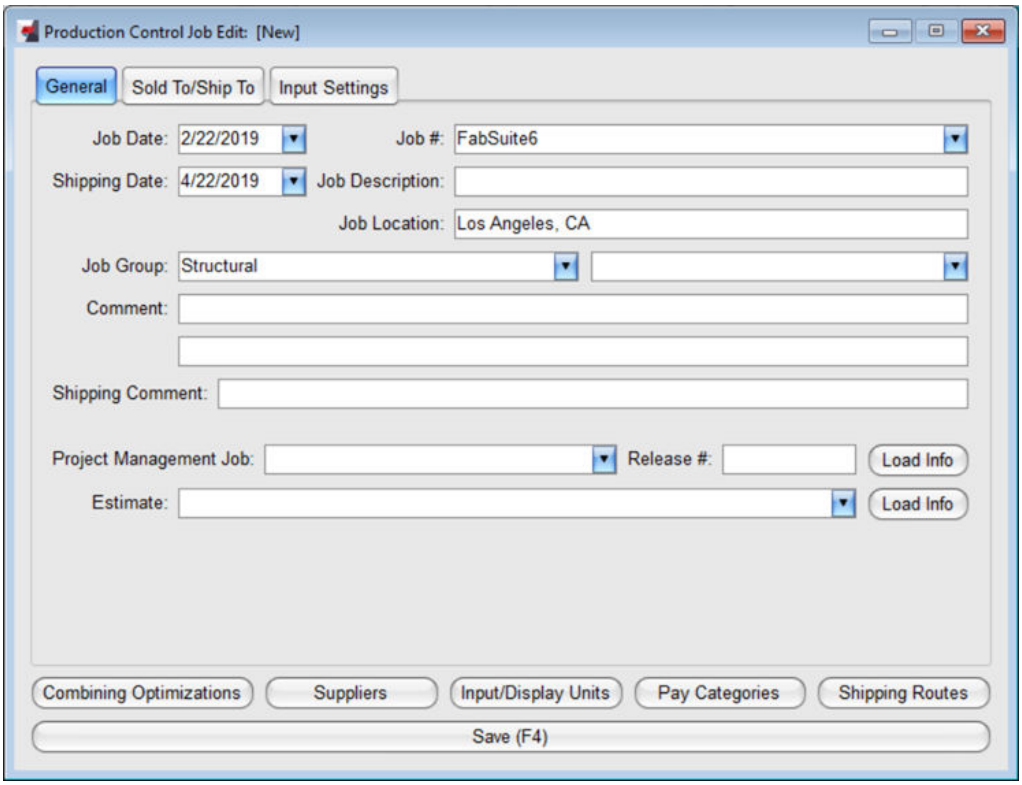
```
-IMPORT ERROR-The Item Already Exists- E, 10, , H, 0, 0, 0, USD, 0, USD, 0, /Item, , , Columns, , , , 0,
USD, 0, 0, USD, 0, 100C1-100C1, , , F, , ,
-IMPORT ERROR-The Item Already Exists- E, 20, , A, 0, 0, 0, USD, 0, USD, 0, /Item, , , , , , , 0, USD, 0, 0,
USD, 0, 100C1-p7, , , F, , ,
-IMPORT ERROR-The Item Already Exists- E, 30, , A, 0, 0, 0, USD, 0, USD, 0, /Item, , , , , , , 0, USD, 0, 0,
USD, 0, 100C1-p48, , , F, , ,
-IMPORT ERROR-The Item Already Exists- E, 40, , H, , , , USD, 0, USD, 0, /Item, , , Columns, , , , , USD, 0,
, USD, 0, , , , F, , ,
-IMPORT ERROR-The Item Already Exists- E, 50, , A, 0, 0, 0, USD, 0, USD, 0, /Item, , , , , , , 0, USD, 0, 0,
USD, 0, 101C1-p12, , , F, , ,

Import Completed: 2/22/2019 8:07:26.90

0 Successful Items
33 Successful Entries
5 Unsuccessful Items
5 Unsuccessful Entries
```

See the following example about importing a production control job.

Example: Import a new production control job

1. Open the **Import** dialog box.
2. In the navigation tree, select **Production Control** --> **KISS** .
3. Click **Import**.
4. In the **Production Control Job Edit**, type the job number and define other necessary job information.

   If you want to import drawings along with the production control job, you can either select an existing job in the **Project Management Job** list, or create a new project management job in step 6.

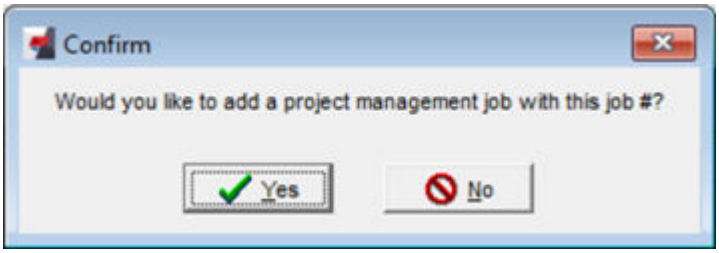


TIP When you first import a job, type a release number in the **Release #** field. This way, if you import new items into the job later, Tekla EPM will increase the initial release number.

5. Click **Save**.
6. If you want to create a related project management job with the same job number, click **Yes** in the confirmation dialog box.

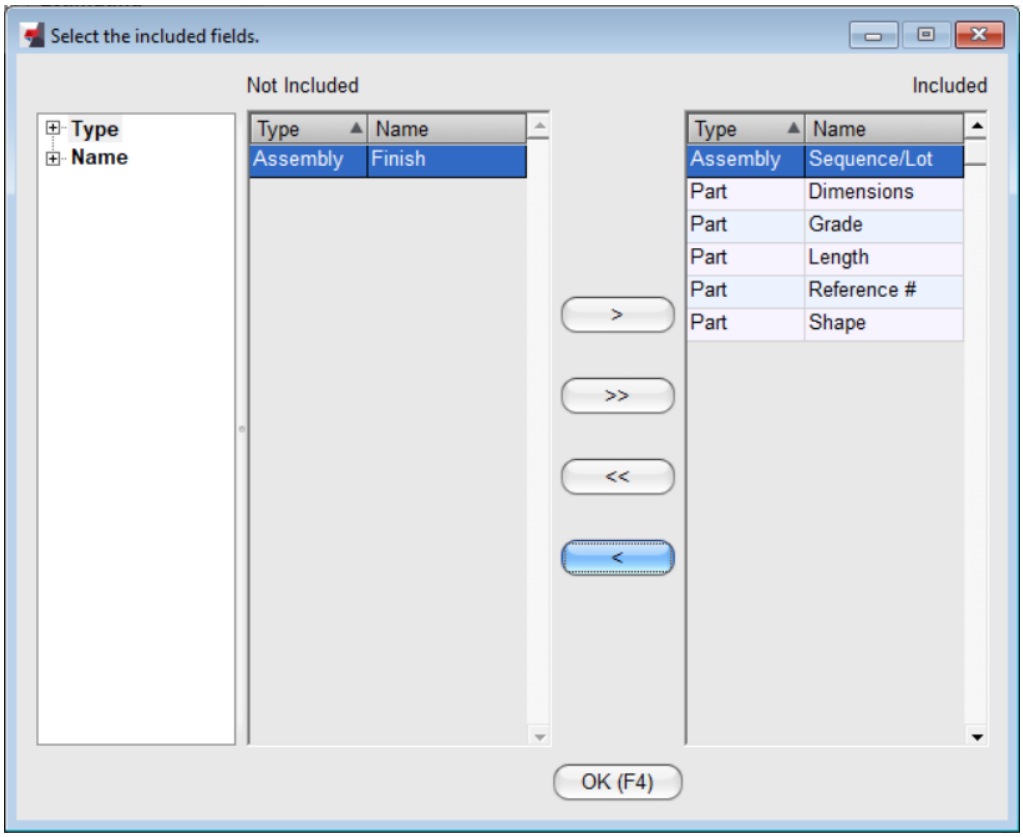
   If you do not want to create a related project management job, click **No**.

   If you do not create or link a related project management job to the imported production control job, you will not be able to import any related drawings.



If you have selected the **Prompt to confirm import fields** option in the **Company Standards** dialog box in the **Production Control** module, a dialog box opens, allowing you to select the information that is imported.

7. Click the arrow buttons to move the information that you want to import to the production control job to the **Included** list.



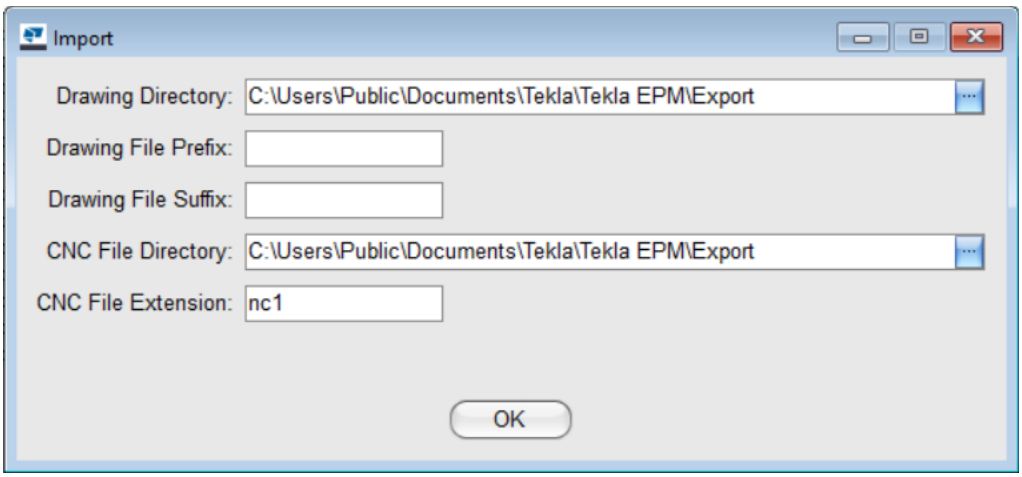
8. Click **OK**.
9. In the **Import** dialog box, click **...** to select the drawing folder and CNC file folder, and define the drawing file prefix and suffix, and the CNC file extension.

NOTE If you do not define a drawing file prefix or suffix, Tekla EPM expects that the drawing file names match the Tekla EPM drawing numbers exactly. If you use some text in the drawing file name before or after the drawing number, you should write this text as the drawing file prefix or the drawing file suffix.

For example, if you use the job number before the drawing number in job C23487, you should define the drawing name prefix as `C23847-`. This way, Tekla EPM can recognize the drawing by matching the remaining part of the file name. For example, the file name of drawing 100 vould be `C23847-100.pdf`.

You can also use the wildcard character (*) if the prefix or suffix is not exactly the same for every file. For example, when importing drawing revisions, the revision number changes. The first revision of a file might be `C23847-100-r1.pdf`, but later revisions of the

drawing could also be imported at the same time. In this case, it could be useful to define the drawing file suffix as `r*`.



Note that if you did not create or link a related project management job (page 728) to the imported production control job, drawings cannot be imported.

10. Click **OK**.

The import begins. Tekla EPM alerts you if any files, such as drawings, are missing.

Note that CNC files are not stores as individual files, but in a table within the Tekla EPM database. If you export CNC files with nesting results or nesting requests, the CNC files are recreated from the database.

You can see the number of the successfully and unsuccessfully imported items in the **Import** dialog box.

See also

Import assemblies and parametric assemblies (page 187)

Translate unknown shapes and grades (page 188)

Import assemblies and parametric assemblies

Besides labor time, you can also import assemblies and parametric assemblies. To be imported, the assemblies and parametric assemblies need to be saved as text files. You can use the imported assemblies and parametric assemblies in any estimating job.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Import**.
3. In the navigation tree on the left side of the **Import** dialog box, select one of the following depending on the assembly type:

- **Assemblies** --> **Assemblies**
- **Assemblies** --> **Parametric Assemblies**

4. Click the **...** button.
5. In the **Open** dialog box, browse to find the text file that you want to import.
6. Select the file and click **Open**.
7. Click **Import**.
8. View the status of the import process.

   If necessary, you can view the import details and errors in a text file by clicking the **Open Import Log** button.
9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Translate unknown shapes and grades

When you are importing files, such as drawings, to Tekla EPM, sometimes the shapes and grades in the imported files do not match the shapes and grades in Tekla EPM. In these cases, Tekla EPM does not recognize the shapes and grades. To solve the issue, you need to create an item association that allows Tekla EPM to identify the shapes and grades.

We recommend that your administrator sends a list of shapes and grades used in Tekla EPM to the detailers, so that you can ensure that the same abbreviations are used in the shop detail drawing bill of materials.

If you need to create an item association during the import process, the **Translate Shapes/Grades** dialog box opens automatically.

1. In the **Translate Shapes/Grades** dialog box, select the item that needs to be translated.
2. Click the arrow on the right side of the **New Shape** list, and select the shape abbreviation used in Tekla EPM.
3. If necessary, click the arrow on the right side of the **New Grade** list, and select the grade abbreviation used in Tekla EPM.
4. Click **Set Shape/Grade**.

   Repeat steps 1 to 4 for all items that are listed in the **Translate Shapes/Grades** dialog box.

   If you save a shape or grade abbreviation, the shape or grade will not appear in the **Translate Shapes/Grades** dialog box when you import files in the future. You should only save the shape and grave abbreviations if the detailer has no intention of conforming to the abbreviations used in Tekla EPM.

5. When you have translated all necessary shapes and grades, click **OK** to close the dialog box and continue the import.

NOTE The dimensions matching the properties of the shape are added for the shape during the import. Remember to review the dimensions that are added during the import to ensure that the properties of the shape are completely defined in the **Shapes/Grades/Sizes** database.

See also

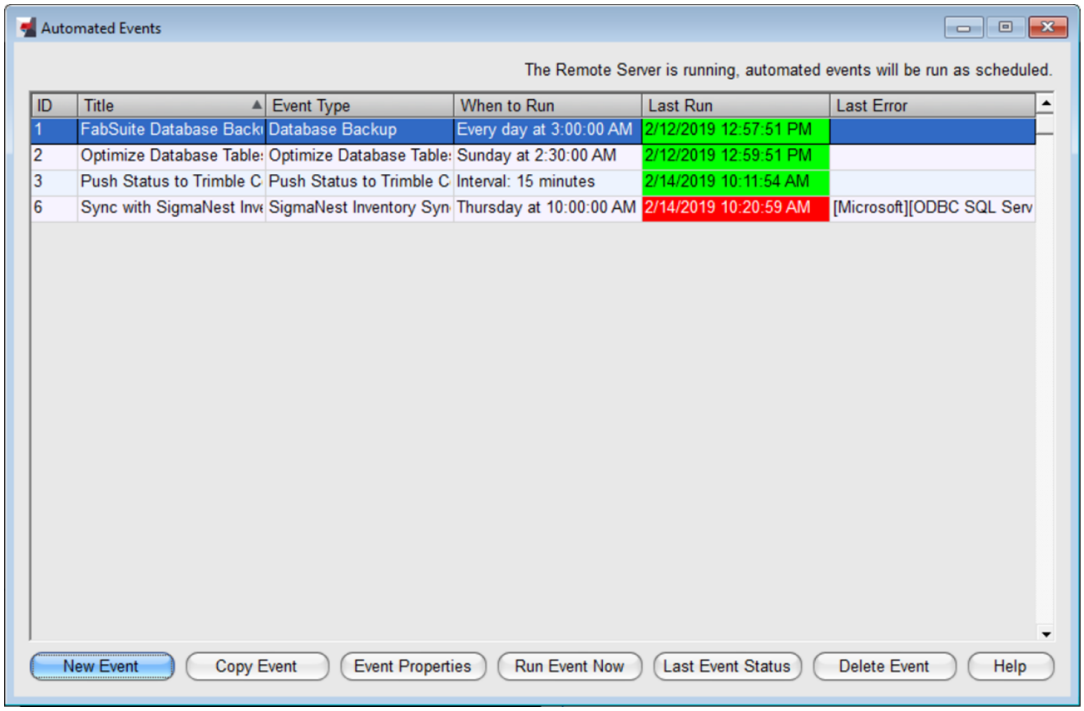
Import files to Tekla EPM (page 182)

4.6 Create, modify, and delete automated events

By creating automated events, you can have Tekla EPM perform operations either on demand or automatically according to a set schedule. For example, you can create automatic reports to stay up to date on the progress of a project.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Automated Events**.

The **Automated Events** dialog box opens.



Note that the Tekla EPM Remote Server must be running in order for automated events to run as scheduled. For more information on starting the Tekla EPM Remote Server, see Set up the Tekla EPM Remote Server (page 33).

If the Tekla EPM Remote Server is running normally, the message at the top of the dialog box is black.

If the Tekla EPM Remote Server is not running, the message at the top of the dialog box is highlighted in red and warns you that automated events will not be run as scheduled.

Define the outgoing email settings

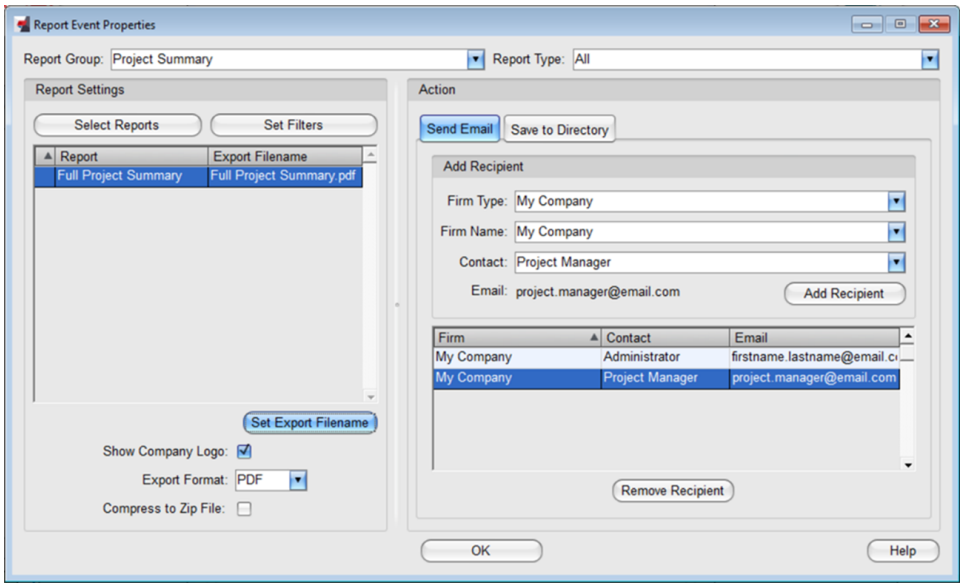
You need to define the outgoing email settings to receive automatic reports or failure notifications by email.

1. In the **Automated Events** dialog box, click the **Automated Events** ribbon tab.
2. On the menu, select **Outgoing Email Settings**.
3. On the **Outgoing SMTP Server** tab of the **Automated Event Email Settings** dialog box, select the **Enable Outgoing Email** check box.
4. Define the host, port, username, password, and sender name and email address.
5. To test the outgoing email server settings, click **Test**.
6. On the **Failure Notifications** tab, type the email addresses to which you want to send failure notifications.
7. Click **Save** to save the settings.

Create a report event

1. In the **Automated Events** dialog box, click **New Event**.
2. In the **Automated Event Details** dialog box, type a title and a description for the event.
3. In the **Event Type** list, select **Report**.
4. If you have created a report event, define the event properties as follows:
   a. Click the **Event Properties** button.

The **Report Event Properties** dialog box opens.



b. In the **Report Group** list at the top of the **Report Event Properties** dialog box, select the group to which the reports that you want to save or send belong.

c. Select the report list that contains the desired report.

d. Click the **Select Reports** button.

e. In the **Select Reports** dialog box, click the arrow buttons to move the reports that you want to include in the automated event to the **Included** list.

f. Click **OK**.

   The selected reports are added to the list on the left.

g. To filter the reports to only include particular items, click **Set Filters**.

h. To add fields that are not included in the report, click **Additional Report Parameters**, and type the missing field names and their values.

   The format for adding fields is `FieldName=Value`. For example, to add a field for cost center and set the value to A123, type `CostCode=A123`.

   Note that you need to separate each parameter with a semicolon (;).

i. To change the name of the report file, click **Set Export Filename**, type the desired name, and click **OK**.

   You can view the placeholders available for file names and folders on the **Save to Directory** of the **Report Event Properties** dialog box. You can use these placeholders in the file names of reports to ensure

that other files are not overwritten and that the event does not fail because a report with the same file name is open.

j. At the bottom of the dialog box, select if you want to show the company logo in the report files, and if you want to compress the reports into a .zip file.

k. In the **Export Format** list, select if you want to send or save the reports as PDF files, Microsoft Excel worksheets, or text files.

l. To send the report by email, on the **Send Email** tab, select firm type, company name, and contact person, and click **Add Recipient**.

   You can add more recipients by selecting a new firm type, company name, and contact person, and clicking **Add Recipient** again.

   Note that the company and contact person need to exist in the **Address Book**. The contact person also needs to have an email address in the **Address Book**.

m. To save the report in a folder, on the **Save to Directory** tab, click the **...** button, select the folder where you want to save the file, and click **OK**.

n. To save the settings of the report event, click **OK** at the bottom of the **Report Event Properties** dialog box.

5. Set the reporting frequency:

To	Do this
Create an automated event that repeats with a particular interval	a. In the **Repeat Type** list, select **Interval**. The **Interval** tab opens, allowing you to define the desired interval. b. In the **Interval Units** list, select if the interval is measured in hours, days, or weeks. c. In the **Value** field, type the number of hours, days, or weeks.
Create an automated event that repeats on particular days of the week	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens on the bottom half of the dialog box, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Week**. The **Day of Week** tab opens. d. Select check boxes next to the days when you want to run the automated event.

To	Do this
	e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.
Create an automated event that repeats on a particular day of the month	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Month**. The **Day of Month** tab opens. d. Define the day number. If you type `31`, the automated event runs on the last date of each month, including the months with less than 31 days. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.

6. To allow Tekla EPM to perform the event automatically, ensure that the **Event Enabled** check box is selected.
7. Click **Save** to create the automated event.

Create an automated Trimble Connect synchronization event

1. In the **Automated Events** dialog box, click **New Event**.
2. In the **Automated Event Details** dialog box, type a title and a description for the event.
3. In the **Event Type** list, select **Publish to Trimble Connect**.
4. To send an email if publishing the information to Trimble Connect fails:
   a. Click **Failure Notifications**.

b. If you have not yet defined the outgoing email settings, do so on the **Outgoing SMTP Server** tab.

   You need to select the **Enable Outgoing Email** check box and define the host, port, user name, password, sender name, and sender email address. You can also test the outgoing email server settings by clicking **Test**.

c. On the **Failure Notifications** tab, type the email addresses to which you want to send a message if the automated database optimization fails.

   Note that you need to type each email address on a separate line.

d. Click **Save**.

5. Click **Event Properties**.
6. Select which actions happen when the automated event is run:
   - **Publish to Organizer**: Publish jobs to Trimble Connect Organizer.
   - **Publish to Status Sharing**: Publish jobs to Trimble Connect Status Share.
   - **Push Projects**: Publish project management jobs to the selected applications.

     You can select which jobs should be published by clicking **Set Filter**.
   - **Push Estimates**: Publish estimating jobs to the selected applications.

     You can select which jobs should be published by clicking **Set Filter**.
   - **Push Production Control Jobs**: Publish production control jobs to the selected applications.

     You can select which jobs should be published by clicking **Set Filter**.
7. Click **Save** to save the actions to be published and the applied filters.
8. To allow Tekla EPM to perform the event automatically, ensure that the **Event Enabled** check box is selected.
9. Click **Save** to save the automated event.

Create an automated database optimization event

1. In the **Automated Events** dialog box, click **New Event**.
2. In the **Automated Event Details** dialog box, type a title and a description for the event.
3. In the **Event Type** list, select **Optimize Database Tables**.
4. To send an email if the database optimization fails:

   a. Click **Failure Notifications**.

b. If you have not yet defined the outgoing email settings, do so on the **Outgoing SMTP Server** tab.

   You need to select the **Enable Outgoing Email** check box and define the host, port, user name, password, sender name, and sender email address. You can also test the outgoing email server settings by clicking **Test**.

c. On the **Failure Notifications** tab, type the email addresses to which you want to send a message if the automated database optimization fails.

   Note that you need to type each email address on a separate line.

d. Click **Save**.

5. Set the reporting frequency:

To	Do this
Create an automated event that repeats with a particular interval	a. In the **Repeat Type** list, select **Interval**. The **Interval** tab opens, allowing you to define the desired interval. b. In the **Interval Units** list, select if the interval is measured in hours, days, or weeks. c. In the **Value** field, type the number of hours, days, or weeks.
Create an automated event that repeats on particular days of the week	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens on the bottom half of the dialog box, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Week**. The **Day of Week** tab opens. d. Select check boxes next to the days when you want to run the automated event. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.
Create an automated event that repeats on a	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens, allowing you to define the schedule.

To	Do this
particular day of the month	b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Month**. The **Day of Month** tab opens. d. Define the day number. If you type `31`, the automated event runs on the last date of each month, including the months with less than 31 days. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.

6. To allow Tekla EPM to perform the event automatically, ensure that the **Event Enabled** check box is selected.
7. Click **Save** to create the automated event.

Create an automated database backup

1. In the **Automated Events** dialog box, click **New Event**.
2. In the **Automated Event Details** dialog box, type a title and a description for the event.
3. In the **Event Type** list, select **Database Backup**.
4. To send an email if the database backup fails:
   a. Click **Failure Notifications**.
   b. If you have not yet defined the outgoing email settings, do so on the **Outgoing SMTP Server** tab.

      You need to select the **Enable Outgoing Email** check box and define the host, port, user name, password, sender name, and sender email address. You can also test the outgoing email server settings by clicking **Test**.
   c. On the **Failure Notifications** tab, type the email addresses to which you want to send a message if the automated database backup fails.

      Note that you need to type each email address on a separate line.
   d. Click **Save**.

5. Set the reporting frequency:

To	Do this
Create an automated event that repeats with a particular interval	a. In the **Repeat Type** list, select **Interval**. The **Interval** tab opens, allowing you to define the desired interval. b. In the **Interval Units** list, select if the interval is measured in hours, days, or weeks. c. In the **Value** field, type the number of hours, days, or weeks.
Create an automated event that repeats on particular days of the week	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens on the bottom half of the dialog box, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Week**. The **Day of Week** tab opens. d. Select check boxes next to the days when you want to run the automated event. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.
Create an automated event that repeats on a particular day of the month	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Month**. The **Day of Month** tab opens. d. Define the day number. If you type `31`, the automated event runs on the last date of each month, including the months with less than 31 days. e. In the **Run At** lists, select the time when you want to run the report.

To	Do this
	f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.

6. To allow Tekla EPM to perform the event automatically, ensure that the **Event Enabled** check box is selected.
7. Click **Save** to create the automated event.

Create an automated inventory sync event

Inventory can be synchronized to Tekla EPM from either ProNest or SigmaNest.

1. In the **Automated Events** dialog box, click **New Event**.
2. In the **Automated Event Details** dialog box, type a title and a description for the event.
3. In the **Event Type** list, select **ProNest Inventory Sync** or **SigmaNest Inventory Sync** .
4. To send an email if the automated inventory sync fails:
   a. Click **Failure Notifications**.
   b. If you have not yet defined the outgoing email settings, do so on the **Outgoing SMTP Server** tab.

      You need to select the **Enable Outgoing Email** check box and define the host, port, user name, password, sender name, and sender email address. You can also test the outgoing email server settings by clicking **Test**.
   c. On the **Failure Notifications** tab, type the email addresses to which you want to send a message if the automated inventory sync fails.

      Note that you need to type each email address on a separate line.
   d. Click **Save**.
5. Set the reporting frequency:

To	Do this
Create an automated event that repeats with a particular interval	a. In the **Repeat Type** list, select **Interval**. The **Interval** tab opens, allowing you to define the desired interval. b. In the **Interval Units** list, select if the interval is measured in hours, days, or weeks. c. In the **Value** field, type the number of hours, days, or weeks.

To	Do this
Create an automated event that repeats on particular days of the week	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens on the bottom half of the dialog box, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Week**. The **Day of Week** tab opens. d. Select check boxes next to the days when you want to run the automated event. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.
Create an automated event that repeats on a particular day of the month	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Month**. The **Day of Month** tab opens. d. Define the day number. If you type `31`, the automated event runs on the last date of each month, including the months with less than 31 days. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.

6. To allow Tekla EPM to perform the event automatically, ensure that the **Event Enabled** check box is selected.
7. Click **Save** to create the automated event.

Create an automated cut list import event

Inventory can be synchronized to Tekla EPM from ProNest, SigmaNest, or Peddinghaus Raptor.

1. In the **Automated Events** dialog box, click **New Event**.
2. In the **Automated Event Details** dialog box, type a title and a description for the event.
3. In the **Event Type** list, select of the following based on the software you use:
   - **ProNest Cut List Import**
   - **SigmaNest Cut List Import**
   - **Peddinghaus iDSTV+ Cut List Import**
4. To send an email if the automated cut list import fails:
   a. Click **Failure Notifications**.
   b. If you have not yet defined the outgoing email settings, do so on the **Outgoing SMTP Server** tab.

      You need to select the **Enable Outgoing Email** check box and define the host, port, user name, password, sender name, and sender email address. You can also test the outgoing email server settings by clicking **Test**.
   c. On the **Failure Notifications** tab, type the email addresses to which you want to send a message if the automated cut list import fails.

      Note that you need to type each email address on a separate line.
   d. Click **Save**.
5. If you selected the **Peddinghaus iDSTV+ Cut List Import** option, click **Event Properties**, and browse to find and select the directory from which you want to import iDSTV+ files that contain cut information.
6. Set the reporting frequency:

To	Do this
Create an automated event that repeats with a particular interval	a. In the **Repeat Type** list, select **Interval**. The **Interval** tab opens, allowing you to define the desired interval. b. In the **Interval Units** list, select if the interval is measured in hours, days, or weeks. c. In the **Value** field, type the number of hours, days, or weeks.

To	Do this
Create an automated event that repeats on particular days of the week	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens on the bottom half of the dialog box, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Week**. The **Day of Week** tab opens. d. Select check boxes next to the days when you want to run the automated event. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.
Create an automated event that repeats on a particular day of the month	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Month**. The **Day of Month** tab opens. d. Define the day number. If you type `31`, the automated event runs on the last date of each month, including the months with less than 31 days. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.

7. To allow Tekla EPM to perform the event automatically, ensure that the **Event Enabled** check box is selected.
8. Click **Save** to create the automated event.

Create a production status export event

You can export the production statuses of particular projects from Tekla EPM to another Tekla product, SDS/2, or Advance Steel.

1. In the **Automated Events** dialog box, click **New Event**.
2. In the **Automated Event Details** dialog box, type a title and a description for the event.
3. In the **Event Type** list, select **Production Status Export**.
4. To send an email if the automated production status export fails:
   a. Click **Failure Notifications**.
   b. If you have not yet defined the outgoing email settings, do so on the **Outgoing SMTP Server** tab.

      You need to select the **Enable Outgoing Email** check box and define the host, port, user name, password, sender name, and sender email address. You can also test the outgoing email server settings by clicking **Test**.
   c. On the **Failure Notifications** tab, type the email addresses to which you want to send a message if the production status export fails.

      Note that you need to type each email address on a separate line.
   d. Click **Save**.
5. To define the details of the automated event, click **Event Properties**.
6. If you want to export the production statuses of only particular projects, set filters:
   a. Click **Set Filter**.
   b. In the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
   c. In the **Filter** dialog box, click the arrow buttons to move the jobs or job groups whose statuses you want to export to the **Included** list.
   d. Click **OK** to save the filter.

      Repeat steps a to b to d to set all necessary filters.
   e. When you have set all necessary filters, click **OK** to apply the filters.
7. In the **Export Recipient** list, select the software to which you want to export the production status information.
8. Click **...** on the right side of the **Export Directory** field, browse to and select the folder where you want to export the production status information, and click **OK**.
9. If you want to include a time stamp in the file name, select **Include Timestamp in Export Filename** check box.
10. Click **Save** to save the event details.

11. Set the reporting frequency:

To	Do this
Create an automated event that repeats with a particular interval	a. In the **Repeat Type** list, select **Interval**. The **Interval** tab opens, allowing you to define the desired interval. b. In the **Interval Units** list, select if the interval is measured in hours, days, or weeks. c. In the **Value** field, type the number of hours, days, or weeks.
Create an automated event that repeats on particular days of the week	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens on the bottom half of the dialog box, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Week**. The **Day of Week** tab opens. d. Select check boxes next to the days when you want to run the automated event. e. In the **Run At** lists, select the time when you want to run the report. f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.
Create an automated event that repeats on a particular day of the month	a. In the **Repeat Type** list, select **Scheduled**. The **Scheduled** tab opens, allowing you to define the schedule. b. Click **Add**. c. In the **Schedule on** list at the top of the **Automated Event Schedule**, select **Day of Month**. The **Day of Month** tab opens. d. Define the day number. If you type `31`, the automated event runs on the last date of each month, including the months with less than 31 days. e. In the **Run At** lists, select the time when you want to run the report.

To	Do this
	f. Click **Save** to save the event schedule. The **Automated Event Schedule** dialog box closes.

12. To allow Tekla EPM to perform the event automatically, ensure that the **Event Enabled** check box is selected.
13. Click **Save** to create the automated event.

Create an API log check event

Several Tekla EPM integrations call for the API. The commands in these integrations are recorded in the API log. The **API Log Check** event searches the API log to find any failed commands since the last log check, and sends an email with the failed entries to the selected email addresses.

1. In the **Automated Events** dialog box, click **New Event**.
2. In the **Automated Event Details** dialog box, type a title and a description for the event.
3. In the **Event Type** list, select **API Log Check**.
4. To send an email if the API log check fails:
   a. Click **Failure Notifications**.
   b. If you have not yet defined the outgoing email settings, do so on the **Outgoing SMTP Server** tab.

      You need to select the **Enable Outgoing Email** check box and define the host, port, user name, password, sender name, and sender email address. You can also test the outgoing email server settings by clicking **Test**.
   c. On the **Failure Notifications** tab, type the email addresses to which you want to send a message if the API log check fails.

      Note that you need to type each email address on a separate line.
   d. Click **Save**.
5. To send a list of failed entries in the API log in an email:
   a. Click **Event Properties**.
   b. Type the email addresses to which you want to send the list of failed entries in the API log.

      Note that you need to type each email address on a separate line.
   c. Click **Save**.
6. To allow Tekla EPM to perform the event automatically, ensure that the **Event Enabled** check box is selected.

7. Click **Save** to create the automated event.

Run an automated event manually

1. In the **Automated Events** dialog box, select the automated event that you want to run.
2. Click **Run Event Now**.
3. To confirm running the event, click **Yes** in the confirmation dialog box.

   The event is run. Note that the event ID is highlighted with yellow in the **Automated Events** dialog box.

   The **Status** dialog box opens, showing the progress of the event.
4. When the event has been run, click **OK** to close the **Status** dialog box.

If the event has been run successfully, the **Last Run** column displays the latest run time on a green background.

You can view the details of the last run by clicking the **Last Event Status** button.

Copy an automated event

1. In the **Automated Events** dialog box, select the automated event that you want to copy.
2. Click **Copy Event**.
3. In the **Automated Event Details** dialog box, type a title and a description for the copied event.
4. Modify any other event properties according to your needs.
5. Click **Save** to save the properties of the copied event.

Modify an automated event

1. In the **Automated Events** dialog box, select the automated event that you want to modify.
2. Click **Event Properties**.
3. In the **Automated Event Details** dialog box, modify the title and the description for the event.
4. In the **Event Type** list, change the type of event according to your needs.

5. Modify the event properties and the reporting frequency as needed.

   For example, if you do not want Tekla EPM to perform the event automatically, clear the **Event Enabled** check box.

6. Click **Save** to update the automated event.

View the run history of an automated event

1. In the **Automated Events** dialog box, select the automated event whose entire run history you want to view.
2. Click **Event Properties**.
3. In the **Automated Event Details** dialog box, click **Result History**.
4. In the **Results** dialog box, review the result history of the automated event.

   If an error has occurred during a run, the **Error Message** column of the run is highlighted in red, and a brief description of the error is displayed.

5. To view more details about a particular run and its errors, select the run and click **Details**.
6. To close the **Results** dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete an automated event

Note that deleting an automated event is permanent and cannot be undone.

1. In the **Automated Events** dialog box, select the automated event that you want to delete.
2. Click **Delete Event**.
3. To permanently delete the automated event, click **Yes** in the confirmation dialog box.

4.7 Customize Tekla EPM

You can customize different information in Tekla EPM, including the display and input fields in various dialog boxes, the menu options for contextual ribbon tabs, report lists, and reports. You can also create module-wide filters that can be used for all jobs in a particular Tekla EPM module.

For more information, see the following links:

Customize display fields (page 207)

Customize input fields (page 209)

Customize menu options (page 212)
Create and modify module-wide filters (page 216)
Create customized report lists (page 217)
Create customized reports (page 222)
Switch information to metric or imperial mode (page 224)

Customize display fields

You can customize the fields in the display area of **Combining**, **Estimating**, **Inventory**, **Project Management**, **Production Control**, and **Purchasing** dialog boxes. For example, you can change the column names and locations, move columns up and down, or adjust the column width or alignment.

For some modules, you can modify the display fields of the dialog boxes separately. For example, in the **Purchasing** module, you can customize the display fields separately for purchase orders and requisitions. Similarly, in **Project Management**, you can modify the display fields of drawings, change orders, RFIs, and journal entries separately.

1. Click the **Maintenance** ribbon tab.
2. On the menu, go to the desired module and select a suitable **Edit Display Fields** option.
3. In the **Display Fields** dialog box, click **Edit Types**.
4. In the left-hand list, select the set of settings that you want to modify.
5. Click the arrow buttons to move the fields that you want to show to the **Included** list.

   The fields marked with an asterisk (*) are required fields that need to always be in the **Included** list.
6. According to your needs, do any of the following.

   Note that all options may not be available when customizing the display fields in different modules.

To	Do this
Change the order of the display fields	a. In the **Included Fields** list, select the field that you want to move. b. Click the **Move Up** and **Move Down** buttons to change the position of the field. Note that the top item in the list will be the column to the far left of the display area in the module.
Change the sort order of	a. In the **Included Fields** list, select the field whose sort order you want to change.

To	Do this
the display fields	b. Click the **Sort Order +** and **Sort Order -** to increase or decrease the sort value of the field.
Modify display field names, widths, and alignment	**NOTE** Be careful when customizing the names of display fields. Significant changes to the field names can prevent you from following the instructions given in the user guide or by the Tekla EPM support. a. In the **Included Fields** list, select the field that you want to modify. b. Click **Properties**. c. Type the desired values in the **Display Name** and **Field Width** fields. The display name appears in the column header, and the field width defines the width of the associated column. d. Select an alignment option in the **Alignment** list. The alignment affects the text alignments within the associated column. e. Click **OK** to save the changes.
Highlight the input field corresponding the selected display field	• At the top of the dialog box, select the **Highlight Input of Clicked Cell** check box. When you work in a dialog box and click a display field, the corresponding input field is highlighted.
Select how main pieces are highlighted in the **Production Control** module	• At the top of the dialog box, select an option in the **Highlight Main Piece** list. For example, if you select **Bold & Italic**, you can quickly identify main pieces at a glance. If you do not want main pieces to be highlighted in any way, select **None**.
Add display types	a. In the lower-left corner of the dialog box, click **New**. b. Enter a name for the new set of settings in the **Description** field. c. Click **Add**. d. In the left-hand list, select the new set of settings. e. Modify the settings according to your needs. f. Click **Save**. The changes you made are saved to the new set of settings.

To	Do this
Revert to the default settings	• At the bottom of the dialog box, click **Set to Default**.

7. Click **Save** to save the changes and then, click the **Close** button (**X**) in the upper-right corner to close the dialog box.

   The fields of the dialog box are updated and will be shown the next time you open the module.

8. In the **Type** list, select which settings you want to use by default in the associated dialog box.

   For example, you can select a set of personalized settings that you have created.

9. Click **Save**.

See also

Customize input fields (page 209)

Customize input fields

You can customize the fields in the input area of the **Combining**, **Estimating**, **Inventory**, **Project Management**, **Production Control**, and **Purchasing** dialog boxes according to your needs. For example, you can change the places of input fields, modify their names, change the field widths, and skip fields or preserve the value of fields when adding more items.

For some modules, you can modify the input fields of the dialog boxes separately. For example, in the **Purchasing** module, you can customize the input fields separately for purchase orders and requisitions. Similarly, in **Project Management**, you can modify the input fields of drawings, change orders, RFIs, and journal entries separately.

1. Click the **Maintenance** ribbon tab.
2. On the menu, go to the desired module and select a suitable **Edit Input Fields** option.
3. In the **Input Fields** dialog box, click **Edit Types**.
4. In the left-hand list, select the set of settings that you want to modify.
5. Click the arrow buttons to move the fields that you want to show to the **Included** list.

   The fields marked with an asterisk (*) are required fields that need to always be in the **Included** list.

6. According to your needs, do any of the following:

To	Do this
Select if you want to confirm all changes	• At the top of the dialog box, select the **Prompt on Edit** check box. Whenever you make changes in the associated dialog box, a confirmation dialog box appears and asks you to confirm the changes. If you do not want to have to confirm all changes, do not select the check box.
Change the order of the input fields	a. In the **Included Fields** list, select the field that you want to move. b. Click the **Move Up** and **Move Down** buttons to change the position of the field. The item at the top of the list will be the top field in the dialog box.
Change the input field names	**NOTE** Be careful when customizing the names of input fields. Significant changes to the field names can prevent you from following the instructions given in the user guide or by the Tekla EPM support. a. In the **Included Fields** list, select the field that you want to modify. b. Click **Set Display Name**. c. Type a new name in the field. d. Click **OK** to save the new name.
Skip input fields when using the tab key in input	a. In the **Included Fields** list, select the field that the users can skip. b. Select the **Skip Field** check box. The selected field can now be skipped when inputting information using the tab key. In order to add information to a skipped field, you need to click the field.
Preserve the value of a field when a new item is added	a. In the **Included Fields** list, select the field whose value you want to preserve for new items. b. Click the **Carry Over**: **No** button. The button name changes to **Carry Over**: **Yes**. For example, if you allow carrying over the **Shape** field, Tekla EPM uses the same shape for new items until you manually select a different one. **NOTE** Some fields cannot be carried over because the data in these fields is unique for each item.

To	Do this
	To clear the field when adding new items, click the **Carry Over** button again. The button name changes back to **Carry Over**: **No**.
Keep the additional labor when a new item is added	Note that the **Carry Over Additional Labor** check box is only available when customizing the input fields in the **Estimating** module. • At the top of the dialog box, select the **Carry Over Additional Labor** check box. Tekla EPM uses the same additional labor for new items until you manually select a different one.
Keep the standard clips when a new item is added	Note that the **Carry Over Standard Clips** check box is only available when customizing the input fields in the **Estimating** module. • At the top of the dialog box, select the **Carry Over Standard Clips** check box. Tekla EPM uses the same standard clips for new items until you manually select a different one.
Change the font size of the input fields	• In the **Font Size** field, type a new font size.
Change the input area width	• In the **Input Area Width** field, type the width in pixels.
Change the navigation tree width	• In the **Navigation Tree Width** field, type the width in pixels. To make the navigation tree narrower, type a value that is smaller than the current one, and to make it wider, type a greater value.
Add input types	a. In the lower-left corner of the dialog box, click **New**. b. Enter a name for the new set of settings in the **Description** field. c. Click **Add**. d. In the left-hand list, select the new set of settings. e. Modify the settings according to your needs. f. Click **Save**. The changes you made are saved to the new set of settings.

To	Do this
Revert to the default settings	• At the bottom of the dialog box, click **Set to Default**.

7. Click **Save** to save the changes and then, click the **Close** button (**X**) in the upper-right corner to close the dialog box.

   The fields of the dialog box are updated and will be shown the next time you open the module.

8. In the **Type** list, select which settings you want to use by default in the associated dialog box.

   For example, you can select a set of personalized settings that you have created.

9. Click **Save**.

See also

Customize display fields (page 207)

Customize menu options

You can customize the drop-down menu options available in the **Combining**, **Estimating**, **Inventory**, **Production Control**, and **Purchasing** modules. For example, you can add or modify the options visible in the menu, and define shortcuts to access the different menu commands.

For the **Purchasing** module, you can customize the menu items separately for purchase orders and requisitions.

NOTE Be careful when customizing the menu options. Significant changes to the menu options can prevent you from following the instructions given in the user guide or by the Tekla EPM support.

1. Click the **Maintenance** ribbon tab.
2. On the menu, go to the desired module and select **Menu Setup** .

   The **Menu Setup Types** dialog box opens.

   The dialog box contains two types of items:

   - Text items that serve as headings that group different commands.
   - Action items (marked with *), which are commands in the menu.

   Note that the current menu items of the module match the options in the **Included** list.

3. Click **Edit Types**.

4. To create personalized menu setup settings, click **New**.

   Creating personalized settings is useful because you can use a menu setup that meets your personal needs, while the default settings remain untouched.

5. In the **Description** field, type a name for the personalized settings.
6. To start customizing the menu, click **Save**.
7. In the left-hand list, select the settings that you want to customize.
8. According to your needs, do any of the following:

To	Do this
Add a text item to the menu	Text items serve as headings under which you can place action items, or items that are marked with an asterisk (*). a. In the **Included** list, select the item under which you want to add a text item. b. Click **Add Text Item**. c. Type text for the item. This text will be visible in the drop-down menu. d. Click the new text item in the **Included** list to select it. e. To add action items under the text item, click an action item in the **Not Included** list to select it. f. Click **>** to add the item under the new text item. The action item is moved under the text item.
Add a line to separate menu items	a. In the **Included** list, select the text item under which you want to add the line. b. Click **Add Line**.
Change the order of the menu items	a. In the **Included** list, select the item that you want to move in the menu. b. Click the **Up** and **Down** buttons to change the position of the menu item.
Add a shortcut	a. In the **Included** list, select the item to which you want to add a shortcut. b. In the **Shortcut** list, select a shortcut that you want to use to access the menu item. c. Click **Update**.
Change the name of a menu item	a. In the **Included** list, select the menu item that you want to rename. b. Click the **Edit Text** button. c. Type a new name for the menu item.

To	Do this
	d. Click **OK**.

9. Click **Save** to save the changes and then, click the **Close** button (**X**) in the upper-right corner to close the dialog box.
10. In the **Type** list, select the settings that you want to use when working in the associated module.
11. Click **Save**.

The menu items are updated to match the changes that you made.

Customize the layout of a dialog box

Use the **Customize grid** command to customize how and what information is displayed in different dialog boxes in Tekla EPM. For example, you can add new columns, change the column headers and column placement, and add spaces between rows and columns.

1. Open the desired dialog box.
2. Right-click anywhere in the display area of the dialog box.
3. In the context menu, click **Customize grid**.
4. To create a customized layout, in the **Grid Layout** dialog box, click **New Layout**.
5. Type a description for the layout.
6. Modify the following properties according to your needs:

Option	Description
Grid Mode	Allows you to select if you want the job list to have a fixed width or an automatically scaling width. Click the arrow on the right side of **Grid Mode** field, and select a suitable option in the list.
Number of rows per record	Allows you to have more than one row for each job, or record. By adding rows, you can either place the job information on multiple rows. Type the desired number of rows in the **Number of rows per record** field.
Default for all users	When selected, the layout that you are adding or modifying will be used as the default layout for all Tekla EPM users.
Current row	The row on which you are adding fields. The **Current row** only applies if the value in the

Option	Description
	Number of rows per record field is greater than 1. Click the arrow on the right side of **Current row** field, and select a row number in the list.
Fixed Columns	Allows you to freeze a desired number of columns from the top of the list, so that you can see them all the time when you scroll across different columns. Type the number of columns that you want to freeze in the **Fixed Columns** field.

7. In the **Available Fields** list, select the columns that you want to include in the dialog box, and click the arrow buttons to move them to the **Included Fields** list.
8. According to your needs, do any of the following:

To	Do this
Add an empty column	• On the right side of the dialog box, click **Add Empty**. An empty entry appears at the bottom of the list. This means that the empty column is the rightmost column in the selection dialog box. If necessary, you can still modify the location of the empty column. To remove the empty field, move it to the **Available Fields** list.
Change the order of columns	a. In the **Included Fields** list, click the column that you want to move left or right. b. Click the **Move Up** and **Move Down** buttons to move the column according to your needs. Note that the top field represents the leftmost column in the selection dialog box. Similarly, the bottom field represents the rightmost column in the dialog box.
Change the sort order of columns	a. In the **Included Fields** list, click the column whose sort order you want to change. b. Click the **Sort Order +** and **Sort Order -** to increase or decrease the sort value of the field.
Modify the column name, width, style, and alignment	a. In the **Included Fields** list, click a column to select it. b. Click **Properties**.

To	Do this
	c. Type the desired values in the **Display Name** and **Width** fields. The display name appears in the column header and the field width defines the width of the associated column. d. To modify the style of the column header, in the **Style** section, select any check boxes according to your preferences. e. Select an alignment option in the **Alignment** list. The alignment affects the text alignments within the associated column. f. If you want to hide all values in the column, select the **Hide Display** check box. g. Click **OK** to save the changes.

9. To save the customized layout, click **Save Layout**.
10. To use the layout in the selection dialog box, click **Apply Layout**.

    You can revert to the default layout or the current layout at any time by clicking the **Use Default State** and **Use Current State** buttons.

Create and modify module-wide filters

You can create module-wide filters that are available for all jobs in a particular Tekla EPM module. Module-wide filters are available for the **Combining**, **Estimating**, **Production Control**, **Project Management**, and **Purchasing** modules. In the **Purchasing** module, you can create module-wide filters separately for requisitions and purchase orders.

To start managing module-wide filters:

1. Click the **Maintenance** ribbon tab.
2. On the menu, go to the desired module or job type, and select **Global Filter Types**.

   For example, to create filters for requisitions, select **Requisitions** --> **Global Filter Types**.

The **Filter Types** dialog box opens.

Create module-wide filters

1. In the **Filter Types** dialog box, click **New**.

2. In the **Filter Type Description** field, type a description for the filter.
3. Select a filter type in the **Type** list, and click **Select**.
4. Click the arrow buttons to move the items that you want to include in the filter to the **Included** list.
5. Click **OK**.

   Repeat steps 3 to 5 to define all values that you want to include in the filter.
6. When you have added all necessary values, click **Add**.

The new filter is saved for the related Tekla EPM module.

To use the filter:

1. In an open job, click the contextual ribbon tab.

   For example, in an estimating job, click the **Estimating** ribbon tab.
2. On the menu, select **Filter**.
3. In the **Filter Types** list, select the new filter.

Modify module-wide filters

1. In the **Filter Type** list, select the filter that you want to modify.
2. If necessary, change the description in the **Filter Type Description** field.
3. Select a filter type in the **Type** list, and click **Select**.
4. Click the arrow buttons to move the items that you want to include in the filter to the **Included** list.
5. Click **OK**.

   Repeat steps 3 to 5 to define all values that you want to include in the filter.
6. When you have made the necessary changes, click **Save**.

Delete module-wide filters

1. In the **Filter Type** list, select the filter that you want to delete.
2. Click **Delete**.
3. To permanently delete the filter, click **Yes**.

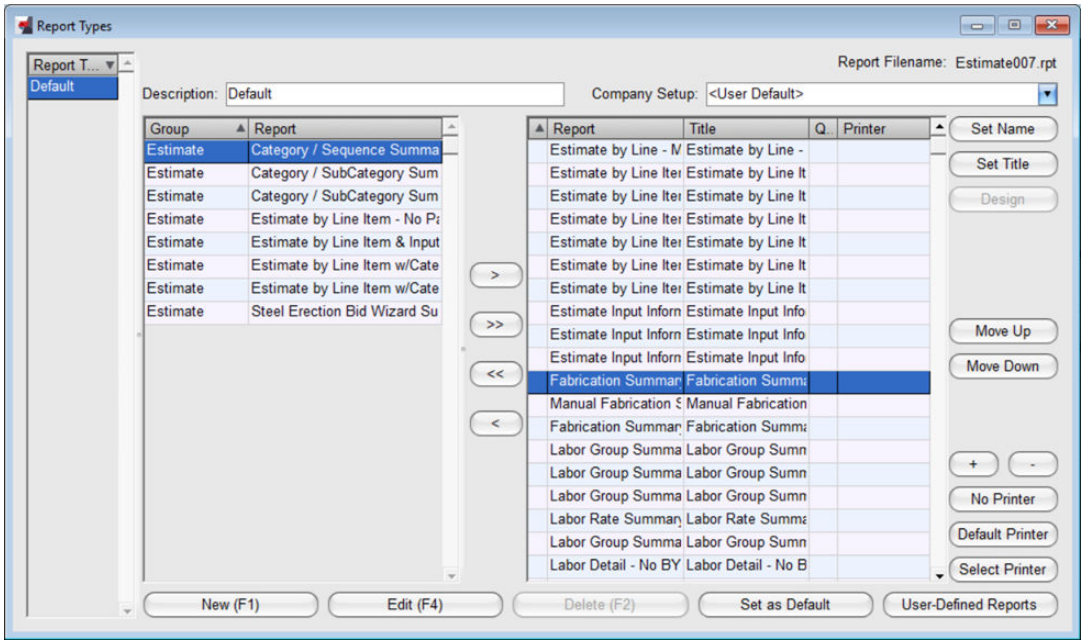
Create customized report lists

You can create customized report lists for different Tekla EPM users, so that each user can view their most used reports by default. You can also add user-defined reports in the report lists.

Note that report lists need to be created separately for each Tekla EPM module.

1. In any Tekla EPM job, click the associated ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. To only include particular information in the reports, in the **Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the information that you want to include to the **Included** list.
   - Type the maximum and minimum values for the items that you want to include.
5. Click **OK**.
6. Depending on the dialog box that opens, do the following:
   - In the **Report Selection** dialog box, click **Edit Report Types**.
   - In the **Report Progress** dialog box, click **Edit**.

The **Report Types** dialog box opens.



Create a report list

1. At the bottom of the **Report Types** dialog box, click **New**.
2. Type a description for the report type list.

   For example, you can type the user's name.
3. If you have created multiple companies in the **Company Information** dialog box, click the arrow on the right side of the **Company Setup** list and select the company that you want to include when creating reports.
4. Click the arrow buttons to move the reports that you want to include in the report list to the list on the right side of the dialog box.

   The reports on the left side of the dialog box are not displayed in the report list.
5. To modify the reports in the list, do any of the following:

To	Do this
Change the report name	The report name determines what the report is called in the **Report Selection** or the **Report Progress** dialog box. a. Select the report in the list on the right side of the dialog box. b. Click **Set Name**. c. In the **Enter Value** dialog box, type a new name for the report. d. Click **OK** to save the new report name.
Change the report title	The report title is displayed at the top of the report when you view, print, or export the report. a. Click **Set Title**. b. In the **Enter Value** dialog box, type a new name for the report. c. Click **OK** to save the new report title.
Move the report up or down in the report list	a. Click the **Move Up** and **Move Down** buttons until the report is in the desired location in the report list.
Change the default number of printed copies	a. Select the report in the list on the right side of the dialog box. b. Click the **+** and **-** buttons until the report has the desired number of copies.
Change the printer used when printing the report	a. Select the report in the list on the right side of the dialog box. b. Click **Select Printer**.

To	Do this
	c. In the **Select Printer** dialog box, click a printer to select it. d. Click **OK** to save the printer settings.
Create a custom report and add it to the report list	a. Click **User-Defined Reports**. b. In the **User-Defined Reports** dialog box, click **New**. c. Select the report that you want to use as the basis of the user-defined report. d. Click **Select Base Report**. e. Define the report name and title. The report name determines what the report is called in the **Report Selection** or the **Report Progress** dialog box. The report title is displayed at the top of the report when you view, print, or export the report. f. Click **Add**. g. To close the **User-Defined Reports** dialog box, click the **Close** button (**X**) in the upper-right corner. h. Click the arrow buttons to move the custom report to the list on the right side of the **Report Types** dialog box.

6. Click **Add**.

The report list can now be selected in the left-side pane of the **Report Selection** dialog box or the **Report List** list in the **Report Progress** dialog box.

Set the default report list

A default report list is the report list initially displayed in the **Report Selection** or **Report Progress** dialog box. To change the default report list, do the following:

1. In the left-hand pane of the **Report Types** dialog box, select the report list that you want to set as the default option.
2. Click **Set as Default**.
3. To confirm using the selected report list as the default option, click **Yes** in the confirmation dialog box.

Modify a report list

1. In the left-hand pane of the **Report Types** dialog box, select the report list that you want to modify.
2. If you have created multiple companies in the **Company Information** dialog box, click the arrow on the right side of the **Company Setup** list and select the company that you want to include when creating reports.
3. Click the arrow buttons to move the reports that you want to include in the report list to the list on the right side of the dialog box.

   The reports on the left side of the dialog box are not displayed in the report list.
4. To modify the reports in the list, do any of the following:

To	Do this
Change the report name	The report name determines what the report is called in the **Report Selection** or the **Report Progress** dialog box. a. Select the report in the list on the right side of the dialog box. b. Click **Set Name**. c. In the **Enter Value** dialog box, type a new name for the report. d. Click **OK** to save the new report name.
Change the report title	The report title is displayed at the top of the report when you view, print, or export the report. a. Click **Set Title**. b. In the **Enter Value** dialog box, type a new name for the report. c. Click **OK** to save the new report title.
Move the report up or down in the report list	a. Click the **Move Up** and **Move Down** buttons until the report is in the desired location in the report list.
Change the default number of printed copies	a. Select the report in the list on the right side of the dialog box. b. Click the **+** and **-** buttons until the report has the desired number of copies.
Change the printer used when printing the report	a. Select the report in the list on the right side of the dialog box. b. Click **Select Printer**. c. In the **Select Printer** dialog box, click a printer to select it.

To	Do this
	d. Click **OK** to save the printer settings.

5. Click **Edit** to save the changes.

To create customized reports and add them to report lists in Tekla EPM, see Create customized reports (page 222).

Delete a report list

Note that deleting a report list is permanent and cannot be undone.

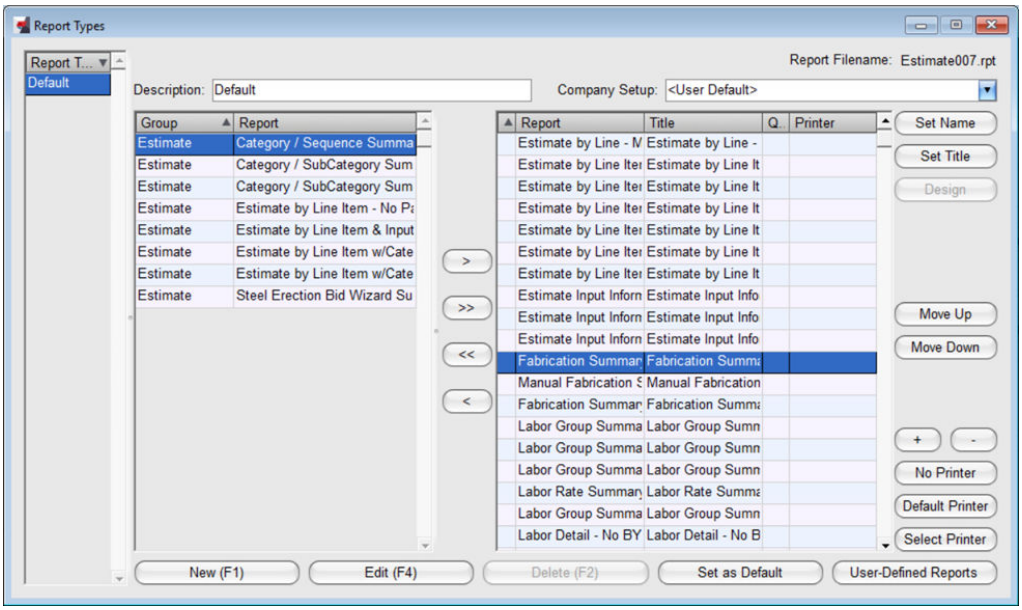
1. In the left-hand pane of the **Report Types** dialog box, select the report list that you want to delete.
2. Click **Delete**.
3. To permanently delete the report list, click **Yes** in the confirmation dialog box.

Create customized reports

Reports are template files that are used to display the filtered information from the Tekla EPM database. Tekla EPM automatically looks for the template first in the **Custom Report** folder set in the **Default Directories** dialog box, and after that, in the `C:\Program Files (x86)\Tekla EPM\Reports` folder. You can add a customized report to Tekla EPM by selecting an existing report that you want to use as the basis of the new report, and adding a new template file name in Tekla EPM.

Save the new report template in the custom report folder overwriting the report file name created for the new report that was displayed in the user defined report window. Now your new report is available.

1. Open the **Report Selection** dialog box where you can see the report that you want to use as the basis of the customized report.
2. In the upper-left corner of the dialog box, click **Edit Report Types**.
3. At the lower-right corner of the **Report Types**, click **User-Defined Reports**.

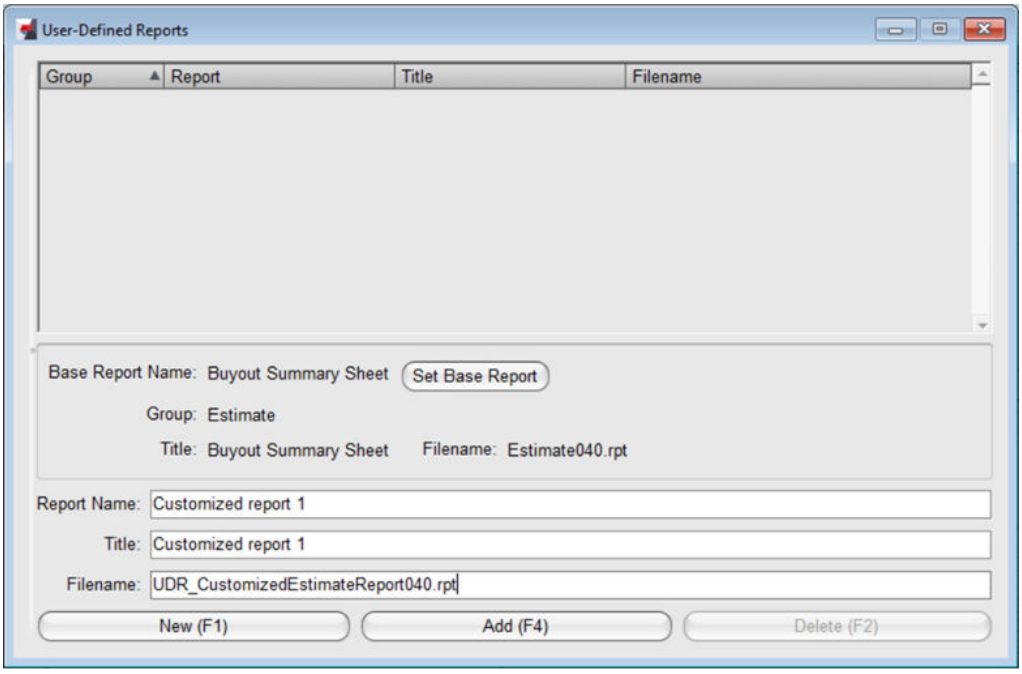


4. In the **User-Defined Reports** dialog box, click **New**.
5. In the **Select Base Report** dialog box, double-click the report that you want to use as the basis of the new report.

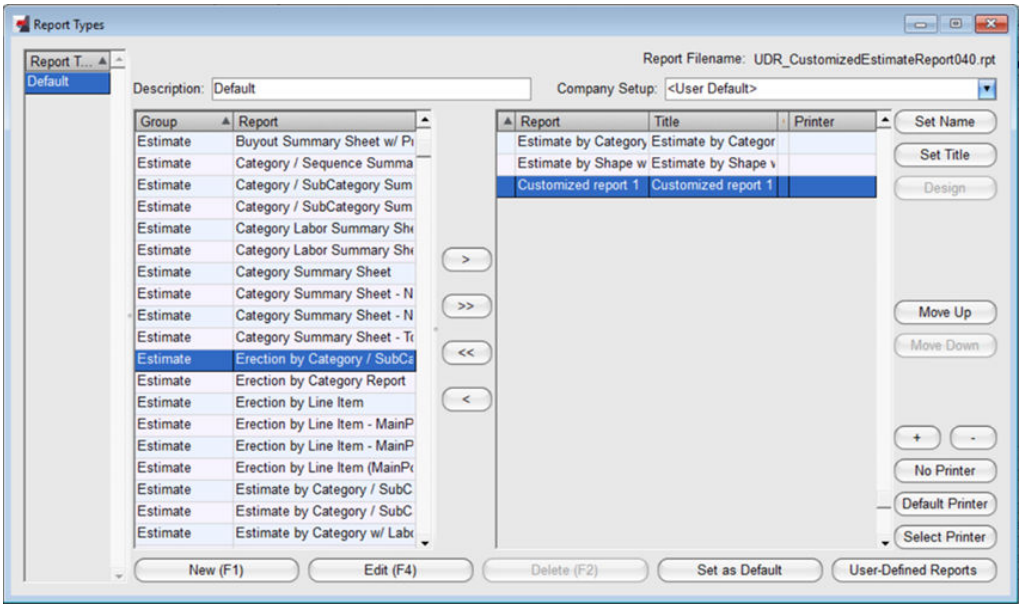
   The base report should contain all the correct tables and information for the new report. This can be achieved by modifying an existing report.

   In most cases, either the user who modified the base report or the report that you received tell you which base report you should select.

   When you have selected the base report, the file name of the base report appears at the bottom of the **User-Defined Reports** dialog box.



6. Type the desired name and title for the new report.
7. In the **Filename** field, type the desired file name for the new report.
8. Click **Add**.
9. To close the **User-Defined Reports** dialog box, click the **Close** button (**X**) in the upper-right corner.
10. In the **Report Types** dialog box, click the **>** button to move the customized report to the **Included** list.



11. Click **Edit** to save the changes.
12. Save the new report template in the **Custom Report** folder with the file name that you defined in the **User-Defined Reports** dialog box.

The customized report is now available in Tekla EPM.

See also

Create customized report lists (page 217)

Switch information to metric or imperial mode

You can choose to display material dimensions, lengths, weights, prices, or all previously mentioned information in either imperial or metric units in various dialog boxes in Tekla EPM.

1. In an open dialog box, click the contextual ribbon tab on the right side of the ribbon.
2. On the menu, select **Switch To Metric/Imperial Mode**.

3. On the extended menu, click an item whose mode you want to switch.

   If you select the **Switch To Metric Mode** or **Switch To Imperial Mode** option, all information in the dialog box is switched to the mode that is not currently active.

5 Create advance bills of materials

Use the **Combining** module in Tekla EPM to create and import advance bills of materials, or *combining jobs*. You can either add combining jobs manually or import them as Microsoft Excel worksheets, or KISS or CIS/2 files. The information in the imported files is automatically transferred into the applicable fields of the **Combining** module.

Once the materials have been entered in the **Combining** module, you can combine and re-combine them using different material lengths. Then, you can compare the different combinations.

You can also send the combining materials to a requisition for pricing, or to a purchase order. Tekla EPM then marks the items that are sent to purchasing, so that they cannot be sent to purchasing again.

NOTE Before you start working in the **Combining** module, remember to set up the module (page 227) according to your needs.

See also

Set up the Combining module (page 227)

Open the Combining module (page 234)

Find a combining job (page 235)

Create a combining job (page 236)

Open a combining job (page 241)

Filter information in the Combining dialog box (page 242)

Copy a page of combining items (page 251)

Manage combining items (page 245)

Combine materials in the Combining module (page 251)

Load combining items into purchasing (page 263)

View all changes in a combining job (page 243)

Export a combining job to KISS (page 266)

View or print combining reports (page 266)

5.1 Set up the Combining module

In **Combining Maintenance**, you can create and modify the settings used when working in the **Combining** module. For example, you can set up the display and the input order listing views in **Combining Maintenance**. In addition to setting custom views, you can modify the menu setup and add keyboard shortcuts to make working more efficient.

For more information, see the following links:

Define company standard settings for Combining (page 227)

Manage combining jobs (page 231)

Define company standard settings for Combining

In the **Company Standards** dialog box, you can create default settings that become the company standard settings used in each combining job. If necessary, you can change the settings on a job by job basis.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Combining** --> **Company Standards** .
3. In the **Combining Company Standards** dialog box, adjust the following settings according to your needs:

Option	Description
Job # Increment	Allows you to select the default option for automatic job numbering. The options are: • **Increment from Last Job #**: When you create a new job, Tekla EPM uses the next available job number after the latest job number created. • **Increment from Largest Job #**: Tekla EPM uses the next available job number after the largest job number created. • **Don't Increment**: Automatic job numbering is not used. You can modify the job number when you create a new job.

Option	Description
Mark Input Type	Allows you to select which format is used when defining mark numbers. The **Any Input** and **Any Input - Logical Sort** options allows you to use any format when defining marks. The difference between the two options is that the **Any Input - Logical Sort** sorts the items in a different way.
Auto-Increment	When selected, Tekla EPM automatically populates the new mark number with the next largest available mark number when you are adding items in the **Combining** dialog box.
Auto-Increment From Last Entered Value	When selected, Tekla EPM automatically populates the new mark number with the next mark number from the latest added mark number when you are adding items in the **Combining** dialog box.
Allow Blank	When selected, Tekla EPM allows blank mark numbers.
Allow Duplicate	When selected, Tekla EPM allows duplicate mark numbers.
Keep Job Selection Screen Open	When selected, the **Select Combining Job** dialog box stays open after a job has been opened. Otherwise, the **Select Combining Job** dialog box will close when you open a combining job.
Item Increment	Sets the auto-increment for item numbers. Using the default auto-increment of 10 allows items to be added in the list according to your needs, without having to renumber the other items in the job. For example, if items should be initially numbered as 10, 20, 30, ..., the input increment should be set to 10. If auto-increment of item numbers is not necessary, type `1` in the **Item Increment** field.
Job # Regular Expression	Allows the use of regular expressions to enforce a desired format for the job numbers. For more detailed instructions on job number regular expressions, click **Regular Expression Help**.

4. Click **Save**.

The changes you made are saved. You can further modify the company standards by clicking the **Input/Display Units**, **Combining Optimizations**, and **Suppliers** tabs.

Define input and display units for Combining

You can use either metric or imperial units for displaying and entering sizes, lengths, weights, and prices in the **Combining** module. In addition, you can select how you want to enter the data for the length of the piece.

1. In the **Combining Company Standards** dialog box, click the **Input/ Display Units** button.
2. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.
3. Click **OK**.
4. Remember to click **Save** in the **Combining Company Standards** to update the input and display units.

After saving the settings, the **Combining Company Standards** dialog box closes.

Define default suppliers for Combining

You can define the desired suppliers, or pricing data sets, for angles, beams, plates, rods, tubes, and other material. This way, you can use material pricing from the selected supplier pricing data sets for each material group.

1. In the **Combining Company Standards** dialog box, click the **Suppliers** button.
2. In the **Suppliers** dialog box, select suppliers for each material group in the available lists.
3. Click **OK**.
4. Remember to click **Save** in the **Combining Company Standards** dialog box to update the supplier settings.

See also

Define company standard settings for Combining (page 227)

Define combining optimizations for the Combining module

You can define company-level settings for multing and plate nesting for new combining jobs. The combining optimizations can be adjusted on a job by job basis.

1. At the bottom of the **Combining Company Standards** dialog box, click **Combining Optimizations**.
2. To use material grade substitutions with the optimization settings when performing a combining run, on the **General Settings** tab of the

Combining Setup dialog box, select the **Use Grade Substitutions** check box.

Grade substitutions must be set in the **Shape / Grade / Size Maintenance** dialog box. If the grade substitutions are not set, the material grades in the combining run and in the supplier pricing data set or the inventory need to match each other exactly.

3. Click the arrow buttons to move the optimization options that you want to use to the **Optimizations Included** list.

   The options are:

   - **Inventory Exact-Match (In Stock)**: Use this option for inventory items in stock that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Exact-Match (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Least-Scrap (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that will provide the least amount of scrap.
   - **Inventory Least-Scrap (In Stock)**: Use this option for inventory items in stock that will provide the least amount of scrap.
   - **Warehouse Least-Scrap**: Use this option to give preference to warehouse items that will provide the least amount of scrap. Warehouse items will only be used when they provide less scrap than the available inventory items.
   - **Warehouse Force Inventory**: Use this option to force the use of inventory regardless of the amount of scrap, no matter where it is located in the **Optimizations Included** list. This option is the opposite of **Warehouse Least-Scrap**.

     Note that you can only include **Warehouse Least-Scrap** or **Warehouse Force Inventory**, not both.

4. Use the **Move Up** and **Move Down** buttons to modify the order of the optimizations.

   The order is important while performing a combining run.

5. Click the **Mult Settings - Linear Material** tab to open it.
6. In **Multing Software**, select the multing software that you are using.
7. If you want to apply the material kerf settings defined in **Shape / Grade / Size Maintenance** to the combining as part of the cutting pattern, select the **Apply Kerf** check box.
8. Open the **Plate Nesting Settings** tab.
9. In the **Plate Nesting Software** list, click the plate nesting software that you are using to select it.

10. In the **Shear Cut Optimization** list, click a suitable shear cut option to select it.

    The selected option determines the plate allowance to be used with the combining:

    - Use **None** when cutting plate on a burn table.
    - Use **Shear Cut - First Cut Along Length** or **Shear Cut - First Cut Along Width** to alert Tekla EPM that the nesting needs to allow for that type of cut first. Then, the nesting will allow for all subsequent cuts to be made with that condition.
11. If the material grain direction is unimportant and you want Tekla EPM to create the best possible optimization of a plate, select the **Rotate Plates for Best Fit** check box.
12. If necessary, select the **Apply Kerf** check box.

    For more details, see step 7.
13. Click **Save**.
14. Remember to click **Save** in the **Combining Company Standards** dialog box to update the combining optimizations.

When you have saved the settings, the **Combining Company Standards** dialog box closes.

See also

Define company standard settings for Combining (page 227)

Manage combining jobs

In **Job Maintenance**, you can manage existing combining jobs. You can copy, renumber, merge, export, and delete combining jobs, and set up job groups.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Combining** --> **Job Maintenance** .
3. In the **Select Combining Job** dialog box, select the job that you want to manage.
4. At the bottom of the dialog box, click one of the available buttons to manage the job.

   The options are:

   - **Delete**
   - **Copy**
   - **Renumber**
   - **Merge**

- **Export**
- **Set Group Name**

For more information, see the following links:

Delete combining jobs (page 232)

Copy a combining job (page 232)

Renumber a combining job (page 233)

Merge combining jobs (page 233)

Export combining jobs (page 233)

Set job groups for combining jobs (page 234)

Delete combining jobs

You can delete unnecessary combining jobs at any time. Note that the jobs are deleted permanently. If you want to use jobs for reference later, we recommend that you export the jobs before deleting them.

Note that users with administrative rights can create a KISS file to restore a deleted combining job within 30 days from deleting the job.

1. In the **Select Combining Job** dialog box, select the job that you want to delete.
2. At the bottom of the dialog box, click **Delete**.
3. To delete the combining job, click **Yes** in the confirmation dialog box.

See also

Manage combining jobs (page 231)

Export combining jobs (page 233)

Copy a combining job

You can copy an existing job to use it as the base of a new similar job. Copying an existing job makes creating the new job quicker, as you do not have to set all properties manually or create items one by one.

1. In the **Select Combining Job** dialog box, select the job that you want to copy.
2. At the bottom of the dialog box, click **Copy**.
3. Type a number for the new job.
4. Click **OK**.

Tekla EPM creates a new job based on the selected job. You can modify the properties of the new job in the **Combining** module.

See also

Manage combining jobs (page 231)

Renumber a combining job

You can renumber a job to re-establish the desired item number increments. To renumber items in an existing combining job, do the following:

1. In the **Select Combining Job** dialog box, select the job that you want to renumber.
2. At the bottom of the dialog box, click **Renumber**.
3. In the **Select the pages to renumber** dialog box, click the arrow buttons to move the pages that you want to renumber to the **Included** list.
4. Click **OK**.
5. In the **Starting item #** field, type a new starting number.
6. In the **Item increment** field, type the desired numbering increment.

   For example, use 1 for single digit (1, 2, 3, ...), 5 for increments of five (5, 10, 15, ...), and 10 for increments on ten (10, 20, 30, ...).
7. To renumber the job, click **OK**.

See also

Manage combining jobs (page 231)

Merge combining jobs

You can create a new job by merging two existing jobs.

1. In the **Select Combining Job** dialog box, select the jobs that you want to merge.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. At the bottom of the dialog box, click **Merge**.
3. Type a number for the new job.
4. Click **OK**.

The new job appears in the list of jobs.

See also

Manage combining jobs (page 231)

Export combining jobs

Export jobs before deleting them to make the jobs available for future reference.

1. In the **Select Combining Job** dialog box, select the job that you want to export.
2. At the bottom of the dialog box, click **Export**.
3. In the **Save As** dialog box, browse to the folder where you want to save the file.
4. Use the automatically generated name or type a new one.
5. Click **Save**.

The exported file is saved to the selected folder.

See also

Manage combining jobs (page 231)

Set job groups for combining jobs

By setting job groups, you can provide a sorting method for combining jobs. For example, you can create job groups for commercial or industrial work, or by month or year.

1. In the **Select Combining Job** dialog box, select the jobs for which you want to set job groups.
2. At the bottom of the dialog box, click **Set Group Name**.
3. Select if you want to update the primary group or the secondary group.
4. Type a name for the group.
5. Click **OK**.

See also

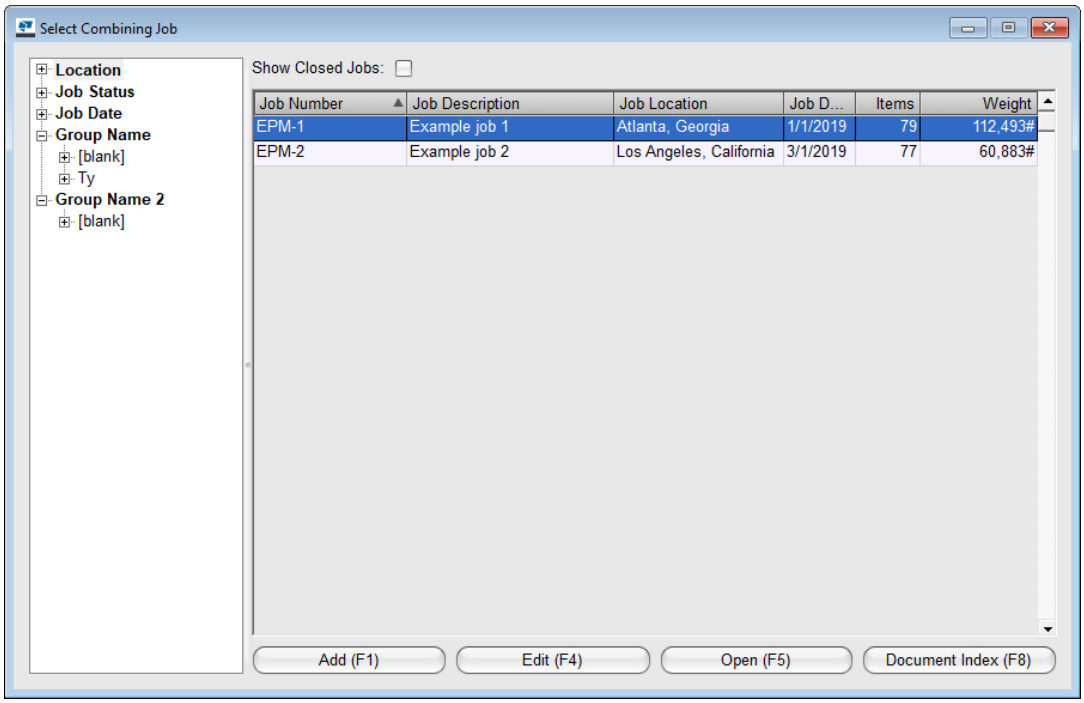
Manage combining jobs (page 231)

5.2 Open the Combining module

To create advance bills of material, you need to open the **Combining** module:

- Click the **Combining** button at the upper-left corner of the Tekla EPM window.

The **Select Combining Job** dialog box opens.



You can see all existing combining jobs. Next, you can create a new combining job, or open or modify an existing combining job.

See also

Find a combining job (page 235)

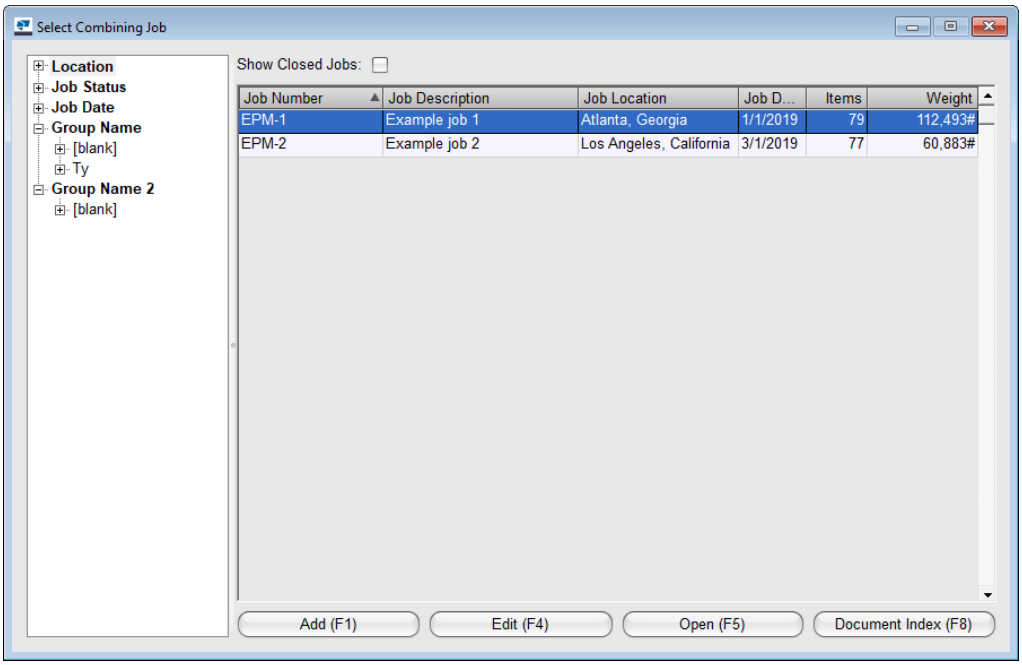
Create a combining job (page 236)

Open a combining job (page 241)

Find a combining job

Use search to find a specific combining job in the **Select Combining Job** dialog box.

1. At the top left corner of the Tekla EPM window, click **Combining**.



2. In the **Select Combining Job** dialog box, click the **Combining** ribbon tab.
3. On the menu, select **Find Job**, or press **Ctrl+F** on the keyboard.
4. In the **Enter Value** dialog box, click the arrow on the right side of the **Select a combining job** list, and select a combining job number.
5. Click **OK**.

The selected job is highlighted in the **Select Combining Job** dialog box. To open the job, double-click it, or click **Open**.

NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

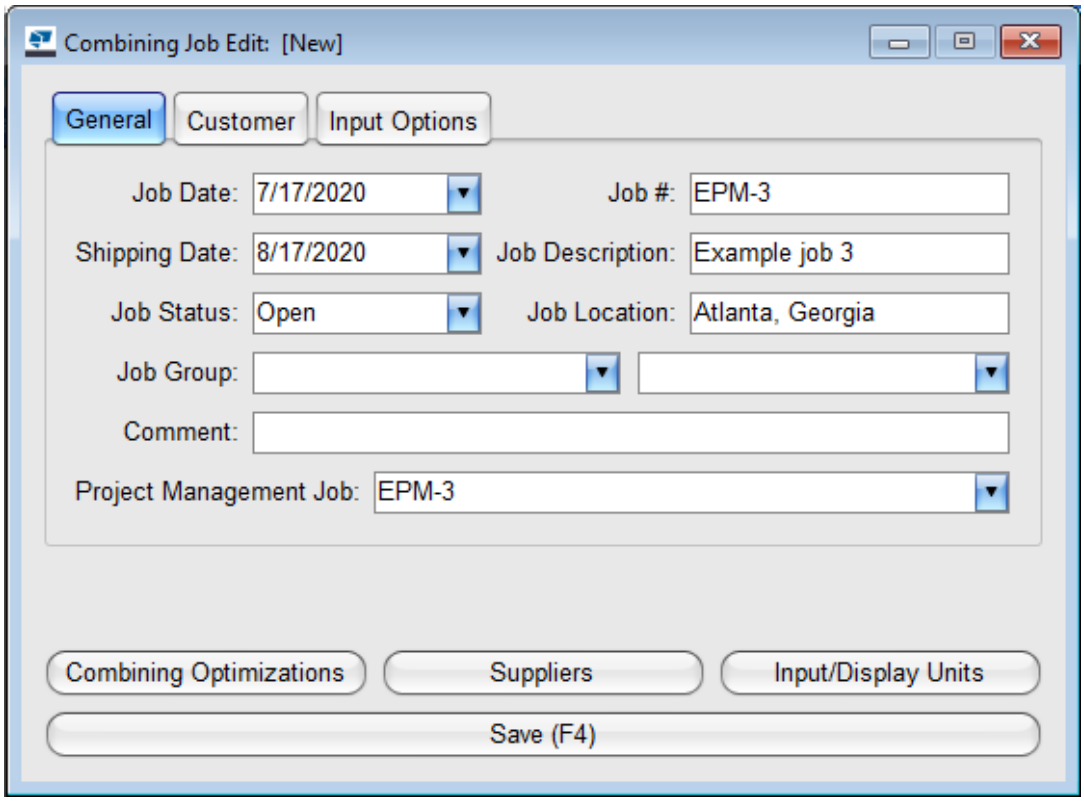
Create a combining job

You can create a combining job to Tekla EPM by simply defining the job number, job date, and shipping date, and then saving the new job. However, you can also further adjust the combining job properties to meet your needs: you can modify the combining optimizations, suppliers, and input and display units. The changes will override the company standard settings for the current combining job.

To add a new combining job, do the following:

- At the bottom of the **Select Combining Job** dialog box, click **Add**.

The **Combining Job Edit** dialog box opens on the **General** tab.



Note that you can also modify the combining job settings on the **Customer** and **Input Options** tabs.

Define general, customer, and input settings

1. On the **General** tab, define the following details according to your needs:

   Note that the fields marked with an asterisk (*) are mandatory.

Option	Description
Job Date *	The date on which the bid is due. Tekla EPM automatically uses the date when you create the job, but you can select a different date in the associated calendar.
Shipping Date *	The date on which the job will be shipped. Tekla EPM automatically uses the date when you create the job, but you can select a different date in the associated calendar.
Job # *	A unique number for the combining job. Note that the job number cannot be modified after the job has been created.
Job Description	The description of the combining job.

Option	Description
Job Location	The town or city where the job takes place.
Job Status	Select if the job is still in progress (**Open**), or if the job has already been finished (**Closed**). You can filter the **Select Combining Job** dialog box, so that only open jobs are shown.
Job Group	One or two job groups that help you identify and sort combining jobs. For example, the year of the job can be used as a job group. Either type a job group directly in the blank field, or click the arrow on the right side of the field to select an existing job group.
Comment	Type any additional comments on the job.
Project Management Job	The project management job that is linked to the estimating job. By linking combining and project management jobs to each other, you can share nesting results with the **Project Management** module. This way, you can save data transfer time.

2. On the **Customer** tab, add any relevant customer information.
3. On the **Input Options** tab, adjust how information can be entered in the combining job.

Option	Description
Mark Input Type	Allows you to select which format is used when defining mark numbers. The **Any Input** and **Any Input - Logical Sort** options allow you to use any format when defining marks. The difference between the two options is that the **Any Input - Logical Sort** sorts the items in a different way.
Auto-Increment	When selected, Tekla EPM automatically populates the new mark number with the next available mark number when you are adding items in the **Combining** dialog box.
Auto-Increment From Last Entered Value	When selected, Tekla EPM automatically populates the new mark number with the next mark number from the last added mark number.

Option	Description
Allow Blank	When selected, Tekla EPM allows blank mark numbers.
Allow Duplicate	When selected, Tekla EPM allows duplicate mark numbers.

4. Do one of the following:
   - To create the new job without further modifying the settings, click **Save**.
   - Click the **Combining Optimizations**, **Suppliers**, and **Input/Display Units** buttons to further modify the properties of the new job.

Modify combining optimizations

1. In the **Combining Job Edit** dialog box, click **Combining Optimizations**

   The **General Settings** tab of the **Combining Setup** dialog box opens.

2. To use material grade substitutions with the optimization settings when performing a combining run, on the **General Settings** tab of the **Combining Setup** dialog box, select the **Use Grade Substitutions** check box.

   Grade substitutions must be set in the **Shape / Grade / Size Maintenance** dialog box. If the grade substitutions are not set, the material grades in the combining run and in the supplier pricing data set or the inventory need to match each other exactly.

3. Click the arrow buttons to move the optimization options that you want to use to the **Optimizations Included** list.

   The options are:

   - **Inventory Exact-Match (In Stock)**: Use this option for inventory items in stock that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Exact-Match (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Least-Scrap (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that will provide the least amount of scrap.
   - **Inventory Least-Scrap (In Stock)**: Use this option for inventory items in stock that will provide the least amount of scrap.
   - **Warehouse Least-Scrap**: Use this option to give preference to warehouse items that will provide the least amount of scrap. Warehouse items will only be used when they provide less scrap than the available inventory items.

- **Warehouse Force Inventory**: Use this option to force the use of inventory regardless of the amount of scrap, no matter where it is located in the **Optimizations Included** list. This option is the opposite of **Warehouse Least-Scrap**.

  Note that you can only include **Warehouse Least-Scrap** or **Warehouse Force Inventory**, not both.

4. Use the **Move Up** and **Move Down** buttons to modify the order of the optimizations.

   The order is important while performing a combining run.

5. Click the **Mult Settings - Linear Material** tab to open it.
6. If you want to apply the material kerf settings defined in **Shape / Grade / Size Maintenance** to the combining as part of the cutting pattern, select the **Apply Kerf** check box.
7. Open the **Plate Nesting Settings** tab.
8. In the **Shear Cut Optimization** list, click a suitable shear cut option to select it.

   The selected option determines the plate allowance to be used with the combining:

   - Use **None** when cutting plate on a burn table.
   - Use **Shear Cut - First Cut Along Length** or **Shear Cut - First Cut Along Width** to alert Tekla EPM that the nesting needs to allow for that type of cut first. Then, the nesting will allow for all subsequent cuts to be made with that condition.

9. If necessary, select the **Apply Kerf** check box.

   For more details, see step 6.

10. If the material grain direction is unimportant and you want Tekla EPM to create the best possible optimization of a plate, select the **Rotate Plates for Best Fit** check box.
11. Click **Save**.
12. Remember to click **Save** in the **Combining Job Edit** dialog box to save the changes.

The combining optimization settings are saved for the new job.

Modify suppliers

1. In the **Combining Job Edit** dialog box, click the **Suppliers** button.
2. In the **Suppliers** dialog box, select suppliers for each material group in the available lists.
3. Click **OK**.

4. Remember to click **Save** in the **Combining Job Edit** dialog box to save the changes.

Modify the input and display units

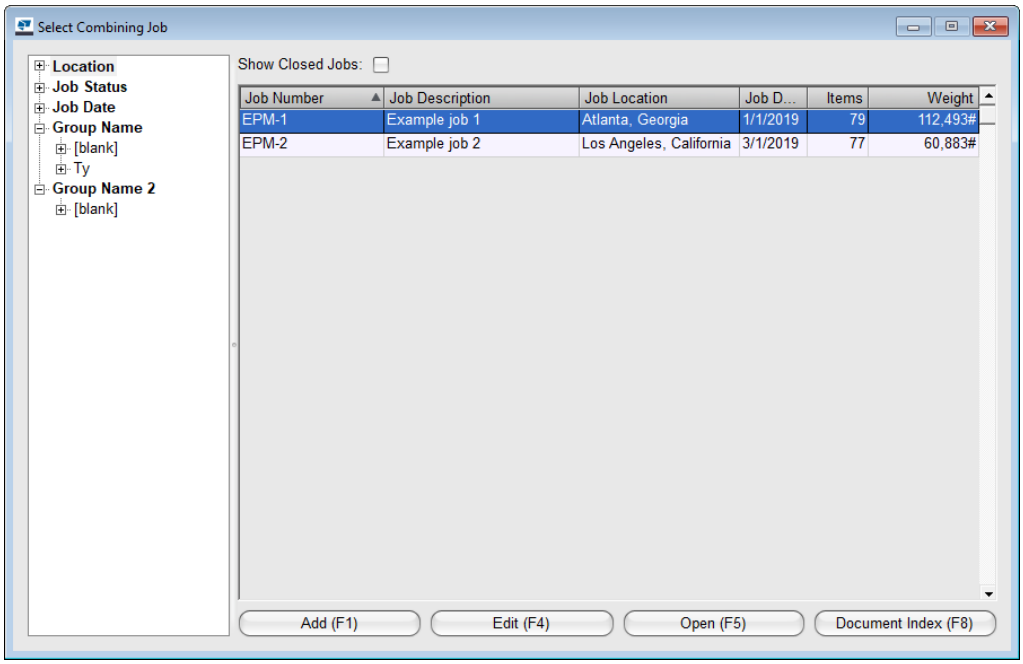
1. In the **Combining Job Edit** dialog box, click **Input/Display Units**.
2. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.
3. Click **OK**.
4. Remember to click **Save** in the **Combining Job Edit** dialog box to save the changes.

Open a combining job

To view the details and add new items to a combining job, you need to open it in the **Combining** dialog box.

1. At the top left corner of the Tekla EPM window, click **Combining**.

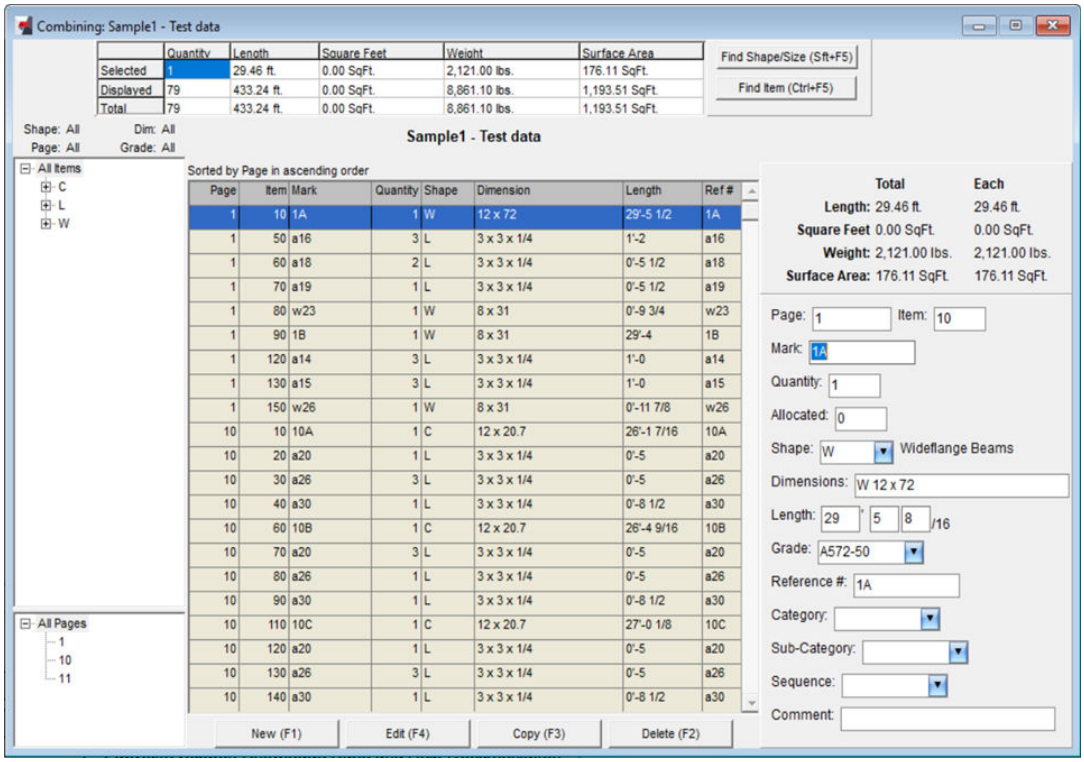


2. In the **Select Combining Job** dialog box, click the job that you want to open in the navigation tree on the left, or use the **Find Job** command.

NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

3. Double-click the job, or select it and click **Open**.

The combining job opens in the **Combining** dialog box.



The materials are listed in the display area at the center of the dialog box.

You can add or modify information for items in the input area on the right side.

To customize the **Combining** dialog box according to your preferences, see the instructions in Define company standard settings for combining (page 227).

See also

Find a combining job (page 235)

Filter information in the Combining dialog box

You can create filter settings to only show certain types of items in the **Combining** dialog box.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.
2. On the menu, select **Filter**.
3. To only display specific types of items, in the **Combining Filters** dialog box, select a filter type in the **Type** list, and click **Select**.

4. Use the arrows at the center to move the items that you want to show to the **Included** side of the dialog box.

   The items in the **Included** list will be shown when you apply the filter.

5. Click **OK**.

   If you want to further filter the information displayed in the **Combining** dialog box, repeat steps 3 to 5 for different items. Note that only items that match the items in the **Included** list will be available when setting more filters.

   If you want to clear all filter settings, click **Reset**.

6. To save commonly used filters, do the following:

   a. Click **Filter Types** in the lower-left corner.

   b. Click **New**.

   c. Type a description for the filter type.

   d. Create the filter settings.

      For more information, see steps 3 to 5.

   e. Click **Add**.

   f. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

      The newly created filter type is selected in the **Filter Types** list.

   g. To apply the filter type, click **Set**.

7. According to your needs, do one of the following:

   - To use the filter, click **Apply Filter**.
   - To use the filter in the job and save it until a new filter is set or the filter is cleared, click **Apply Filter & Save**.

     Note that the filter will remain in use even if you close and re-open the job. After you clear the filters, the filter settings cannot be used again.

Only the items that you selected are shown in the **Combining** dialog box. To show all items again, click **Clear Filters**.

To delete all saved filters, click **Reset** at the bottom right corner of the **Filter** dialog box.

View all changes in a combining job

To see all changes that have been made to the data in a combining job, you can create a specific type of report, called **List Of Changes**.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.
2. On the menu, select **List Of Changes**.
3. In the **List Of Changes Report Filters** dialog box, do any of the following:

To	Do this
Filter changes by user	a. Select the **User** filter type and click **Select**. b. Click the arrow buttons to move the users whose changes you want to view to the **Included** list. c. Click **OK**.
Filter changes by date	a. Select the **Transaction Date** filter type and click **Select**. b. Do one of the following: • Enter the start (**Minimum**) and end (**Maximum**) dates. • Select the **Expression** check box for the start or end date. Then, select the base date and select how many more or less days will be taken into account. c. Click **OK**.

4. Click **Make Report**.
5. In the **Report Progress** dialog box, do one of the following:

To	Do this
View the list of changes	• Click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the list of changes	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.

To	Do this
Export the list of changes	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

5.3 Manage combining items

You can manage combining items in many ways: add new ones, copy or modify existing ones, and delete unnecessary ones. You can modify existing combining items in a bill of materials either one by one or as a group. In addition, you can choose to modify items of a certain shape, or select the items to modify in the **Combining** dialog box. You can also copy a page of combining items onto a new page in the job.

For more information, see the following links:

Add a combining item (page 245)

Modify a single combining item (page 248)

Modify multiple combining items (page 248)

Modify selected combining items (page 249)

Modify the shape, grade, dimension, or length of combining items (page 250)

Modify the shape, grade, dimensions, or length of selected combining items (page 250)

Copy a page of combining items (page 251)

Add a combining item

To add a new material item to a combining job:

1. At the bottom of the **Combining** dialog box, click **New**.
2. Define the item properties.

   NOTE The visible input fields and their order depend on the settings that you have defined in the **Input Fields** dialog box that you can access via **Maintenance** --> **Combining** --> **Edit Input Fields** .

   The properties marked with an asterisk (*) in the following table are mandatory information.

Option	Description
Item *	The item number. You can modify the item number manually or use the item number automatically determined by Tekla EPM. Default item increments are set in **Combining Company Standards** dialog box, but you can modify them for each job. We recommend leaving spaces between items, so that you can later add items between existing items. If necessary, you can reset the item number intervals in **Job Maintenance**.
Quantity *	The number of pieces to be added. Use the numeric keypad in the quantity field to add, multiply, divide, or subtract numbers to adjust the quantity.
Shape *	The material shape of each piece. Either click the arrow on the right side of the **Shape** field to select the shape, or type the shape indicator in the field (for example, HSS).
Grade *	The material grade of each piece. Depending on the shape, the grade can also be mandatory information. Either click the arrow on the right side of the **Grade** list to select the grade, or type the grade indicator in the field.
Dimensions *	The material dimension, or material size, of each piece. Depending on the shape, the dimension can also be mandatory information.

Option	Description
	Click the **Dimensions** field to select an available material dimension, and double-click the desired dimension in the list. **TIP** You can also use a custom material dimension. Note that the dimension is not automatically added to the material database. To use a custom dimension, do the following: a. Click in the **Dimensions** field. b. Click **Add Size**. c. Define the dimension properties. d. Click **Save**. You can now select the dimension and use it.
Length	The length of each piece. Default length input settings are set in **Company Standards**, but you can modify them for each job.
Mark #	The mark number of the item. Enter maximum 25 characters. The maximum number of characters also depends on the **Mark Input Type** setting that you have selected in the **Combining Company Standards** dialog box.
Reference #	A reference number that links the items in the advanced bill of materials, or the combining job, to production control items. When you load materials from a combining job to **Purchasing**, this reference number is used. Later, when the purchased items are received and imported to **Production Control**, they will have the same reference number. You can enter maximum 255 characters in the **Reference #** field.
Category, **Sub-Category**	A class used for sorting items within a job. Categories and sub-categories can be used for filtering the information in the **Combining** dialog box. The available categories and sub-categories are created in **Combining Company Standards**.

Option	Description
	If necessary, you can also assign quantity multipliers to sub-categories. Click the arrow on the right side of the **Category** or **Sub-Category** field and select an existing category, or type a new category in the field.
Sequence	The sequence number assigned to the item. Click the arrow on the right side of the **Sequence** field to select a sequence number, or type the number in the field.
Comment	An optional comment that you can type for the item.

3. Click **Add**.

See also

Manage combining items (page 245)

Modify a single combining item

You can modify a single combining item in a bill of materials directly in the **Combining** dialog box.

1. In the upper navigation tree or the display area, click the item that you want to modify.

   The properties of the selected item appear on the right side of the dialog box.

2. Modify the properties according to your needs.

   For example, you can select another category in the **Category** list or change the number in the **Quantity** field.

3. Click **Edit** to save the changes.

The properties of the selected combining item are saved and updated to the **Combining** dialog box.

Modify multiple combining items

Use the **Global Edit** command to make specific changes to the properties of all or multiple items in a combining job at one go. This way, you can save time, as you do not need to change the properties of each item individually.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.

2. In the drop-down menu, select **Global Edit** --> **Global Edit**.

   The **Combining Global Edit Filters** dialog box opens.

3. To only modify specific types of items, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, click the arrow buttons to move the items whose properties you want to modify to the **Included** list.
5. Click **OK**. To further limit the items to be modified, repeat steps 3 to 5 for all necessary filter types.
6. At the bottom of the **Combining Global Edit Filters** dialog box, **OK**.
7. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

8. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

9. Click **Update**.

The **Global Edit** dialog box closes. The changes you made to the combining item properties are updated to the **Combining** dialog box.

Modify selected combining items

Use the **Global Edit Selected** command to select a group of combining items in a bill of materials and modify their properties at one go.

1. In the **Combining** dialog box, select the items that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Combining** ribbon tab.
3. On the menu, select **Global Edit** --> **Global Edit Selected** .
4. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

5. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

6. Click **Update**.

The changes you made to the combining item properties are updated to the **Combining** dialog box.

Modify the shape, grade, dimension, or length of combining items

Use the **Global Edit By Shape** command to modify the shape, grade, dimension, or length of the selected or filtered items in the **Combining** dialog box.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.
2. On the menu, select **Global Edit** --> **Global Edit By Shape** .
3. In the **Shape** list at the top of the **Combining Global Edit Filters** dialog box, select the shape.
4. To only modify specific types of items, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, click the arrow buttons to move the items whose properties you want to modify to the **Included** list.
6. Click **OK**.

   To further limit the items to be modified, repeat steps 4 to 6 for all necessary filter types.
7. At the bottom of the **Combining Global Edit Filters** dialog box, **OK**.
8. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.
9. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.
10. Click **Update**.

The changes you made to the combining item properties are updated in the Combining dialog box.

Modify the shape, grade, dimensions, or length of selected combining items

Use the **Global Edit By Shape** command to modify the shape, grade, dimension, or length of the selected items in the **Combining** dialog box.

1. In the **Combining** dialog box, select the items that you want to modify.
2. Click the **Combining** ribbon tab.
3. On the menu, select **Global Edit** --> **Global Edit Selected By Shape** .
4. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.
5. Modify the selected properties in the **Global Edit** dialog box according to your needs.
6. Click **Update**.

The changes you made to the combining item properties are updated to the **Combining** dialog box.

Copy a page of combining items

Use the **Copy Page** command to copy all items on a page of the combining job onto a new page.

1. In the **Combining** dialog box, select any item that is on the page that you want to copy.
2. Click the **Combining** ribbon tab.
3. On the menu, select **Copy Page**.
4. In the **Copy Page** dialog box, type the new page number in the **New Page #** field.
5. Click **Copy**.

The copied items are added to the **Combining** dialog box.

5.4 Combine materials in the Combining module

To mult and nest materials in the **Combining** dialog box, use the **Combine** command. You can then save and review the combining results.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.

2. On the menu, select **Combine**.

   The **Select Combining Run** dialog box opens. When you are performing the first combining run for a combining job, the list in the dialog box is empty.

3. Click a desired combining option to select it.

   The options are:

   - **Mult**: combines linear items, like beams and angles.
   - **Nest**: combines items that have area, like plates or gratings.
   - **Mult & Nest**: combines all items.

   The **Combining Run Filters** dialog box opens.

   NOTE Filtering items is optional, so you can skip steps 4 to 7 if you do not want to filter out items from the combining run.

4. To only combine specific types of materials, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to combine to the **Included** list.
   - Type the maximum and minimum values for the items that you want to combine.
6. Click **OK** to apply the filter.

   Repeat steps 4 to 6 for each filter type that you want to set.

7. In the **Combining Run Filters** dialog box, click **OK**.
8. To ensure that you are using the correct settings, click the **Optimizations**, **INV Filter**, and **Suppliers** buttons.

   If necessary, you can modify the settings.

9. To combine the materials, click the button at the bottom of the **Combining Run Filters** dialog box, or press **F4**.

Tekla EPM combines the materials. After the combining process is finished, the **Combining Run Results** dialog box opens.

- Piece mark items included with the selected stock lengths are displayed at the lower-left section of the dialog box.
- Combining results are shown in both the display area and in the summary grid at the lower-right section of the dialog box.

- The material cost represents the pricing of the materials in the pricing database that was used in the combining run.

TIP You can save the combining run to view it later and compare it with another combining run. To do so, click **Save Combining Run** at the bottom of the **Combining Run Results** dialog box. No cut lists are generated when you save the combining run.

See also

Rename a combining run (page 253)

Compare combining runs (page 261)

View combining run filter settings (page 253)

Modify run-specific pricing information (page 254)

Recombine all items (page 258)

Recombine items of a shape (page 258)

Recombine items of a material grade (page 259)

Recombine a material dimension (page 260)

Update combining information and recombine all items (page 260)

Export materials for combining (page 78)

Rename a combining run

When you save a combining run, Tekla EPM automatically uses the date/time stamp as the combining run name. You can also rename the combining run. Renaming the combining run makes it easier to identify a specific combining run when you want to compare combining runs.

1. In the **Combining Run Results** dialog box, click the **Run Description** button.
2. In the **Enter Value** dialog box, type a new name for the combining run.
3. Click **OK**.

The name is updated. You can see the combining run name in the **Run Description** button at the bottom of the **Combining Run Results** dialog box.

View combining run filter settings

You can view which filter settings are used in the current combining run. Note that you cannot modify the filter settings of the combining run.

1. In the **Combining Run Results** dialog box, click the **Combining Run** ribbon tab.

2. On the menu, select **View Filters**.
3. In the **Combining Run Filters** dialog box, do one or more of the following:
   - To view the optimization settings used for the combining run, click **Optimizations**.
   - To view the combining run inventory filter setting used for the combining run, click **INV Filter**.
   - To view the supplier settings used for the combining run, click **Suppliers**.
4. When you have viewed the settings, click the **Close** button (**X**) in the upper-right corner of the dialog box.

   The **Combining Run Filters** dialog box closes.

Modify run-specific pricing information

After performing the first combining run, you can modify length options that are only used in that specific combining job. For example, L 3 x 3 x ¼ materials have 40'0 and 20'0 lengths. If you only want to combine the 20'0 lengths, you need to delete the 40'0 lengths from **Run-Specific Pricing Maintenance**. Any changes that you make will override the values in the global pricing database, but only for the current combining run.

You can also modify a group of items in the combining run at one go. For more information, see Modify a group of items in run-specific pricing maintenance (page 256).

1. In the **Combining Run Results** dialog box, click the **Combining Run** ribbon tab.
2. On the menu, select **Run-Specific Pricing Maintenance**.
3. In the **Pricing Maintenance** dialog box, do any of the following according to your needs:

To	Do this
Add material shapes, grades and dimensions	a. At the bottom of the dialog box, click **Add**. b. In the **Shape** list, select the shape. c. Click the **Dimensions** field and select the dimensions that you want to add. d. In the **Grade** list, select the grades that you want to add. e. Click **Save**. The shape, its dimensions, and grades are added to the navigation tree.

To	Do this
Modify existing material shapes, grades, and dimensions	a. In the navigation tree, click the material dimension that you want to modify. b. At the lower-left corner of the dialog box, click **Edit**. c. In the **Shape** list, select the shape. d. Click the **Dimensions** field, and select the new dimensions in the dialog box that appears. e. In the **Grade** list, select the new grades. f. Click **Save**. The shape, its dimensions, and grades are updated to the navigation tree.
Add lengths or sizes	a. In the navigation tree, click the material dimension for which you want to add lengths. b. Click **New** under the **Normal Price** field. c. Type the length and price. d. Click **Add**. The length is added to the list of lengths.
Modify or delete lengths	a. In the navigation tree, click the material dimension that you want to modify or delete. b. In the list of lengths, select a length. c. Do one of the following: • To modify the length, type a new length and price, and click **Edit**. • To permanently delete the length, click **Delete**, and in the confirmation dialog box, click **Yes**.
Change the pricing of a length	a. In the navigation tree, select the material dimension whose pricing you want too change. b. In the list on the right side of the dialog box, select a length. c. Do any of the following: • To modify the special price, type a new value in the **Special Price** field, and click **Save**.

To	Do this
	• To modify the normal price, type a new value in the **Normal Price** field, and click **Edit**. You can also adjust the quantity and lengths of the material. To change the quantity to unlimited, type an asterisk (*) in the **Quantity** field. Click **Edit** to save the changes. The pricing of the length is updated.
Delete unnecessary material dimensions	a. In the navigation tree, select the material dimension that you want to delete. b. At the bottom of the dialog box, click **Delete**. c. In the confirmation dialog box, click **Yes** to confirm deleting the dimension.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

The changes are saved for the current combining run. Now, you need to recombine the materials to update the combining results.

See also

Recombine all items (page 258)

Recombine items of a shape (page 258)

Recombine items of a material grade (page 259)

Recombine a material dimension (page 260)

Update combining information and recombine all items (page 260)

Modify a group of items in run-specific pricing maintenance

You can modify the properties of a group of items while you are in the **Pricing Maintenance** dialog box. For example, you can only make certain lengths available for combining by using the **Set Lengths** option. Any changes that you make will override the values in the global pricing database, but only for the current combining run.

For information on how to access the **Pricing Maintenance** dialog box, see Modify run-specific pricing information (page 254).

1. In the **Pricing Maintenance** dialog box, click the **Pricing** ribbon tab.
2. On the menu, select **Global Edit**.

3. In the **Shape** list at the top of the **Pricing Global Edit** dialog box, select the shape whose grades and dimensions you want to modify.

   The grades and dimensions of the shape appear in the dialog box.
4. In the **Grades** section, click the arrow buttons to move the grades that you want to modify to the **Included** list.
5. In the **Dimensions** section, click the arrow buttons to move the dimensions that you want to modify to the **Included** list.
6. In the lower-right corner, select an option.

   The options are:

   - **Increase By Percentage**: Increases the prices of the selected items by a specific percentage.
   - **Decrease By Percentage**: Decreases the prices of the selected items by a specific percentage.
   - **Increase By Amount**: Increases the prices of the selected items by a certain sum.
   - **Decrease By Amount**: Decreases the prices of the selected items by a certain sum.
   - **Set Amount**: Sets the prices of the selected items to a specific sum.
   - **Set Quantity**: Allows Tekla EPM to only use a specific number of the selected lengths.
   - **Set Lengths**: Allows you to add lengths for the selected items either one by one or as a range.
   - **Set Lengths (No Price)**: Allows you to add lengths for the selected items either one by one or as a range. No pricing information is added.

   New fields appear at the bottom of the dialog box.
7. Modify the values in the fields according to your needs.
8. Click **Save**.
9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

The changes are saved for all selected material grades and dimensions. Now, you need to recombine the materials

Example: Change combining lengths of angles

In this example, we will modify all angles so that the only available length for combining is 20 inches.

1. In the **Shape** list at the top of the **Pricing Global Edit** dialog box, select **L**.
2. Click the double arrow buttons to move all grades and dimensions to the **Included** list.

3. Select the **Set Lengths** option button.
4. Click **New**.
5. Leave the **Quantity** field blank to allow Tekla EPM to use an unlimited quantity of the length.
6. **Length** field, enter `20'0"`.
7. In the **Normal Price** field, enter a price.

   For example, set the price to `$25,50/CWT`.
8. Click **Add**.
9. Click **Save**

Now, the only angle length available in recombining is 20'0".

See also

Recombine all items (page 258)

Recombine items of a shape (page 258)

Recombine items of a material grade (page 259)

Recombine a material dimension (page 260)

Update combining information and recombine all items (page 260)

Recombine all items

If the combining results need to be changed to fit specific material applications, such as different material lengths or plate sizes, you need to recombine items. The **Recombine All** command recombines all items in the previous combining run.

1. In the **Combining Run Results** dialog box, click the **Combining Run** ribbon tab.
2. On the menu, select **Recombine All**.
3. In the first confirmation dialog box, click **Yes** to recombine all items.
4. In the second confirmation dialog box, click **Yes** to save the previous combining run or **No** to recombine materials without saving the combining run.

   By saving the previous combining run, you can compare the differences between the previous combining run and the new one.

Tekla EPM performs the combining run and reloads the information that you selected. The materials recombine to the lengths changed in **Run-Specific Pricing Maintenance**.

Recombine items of a shape

To recombine materials after adding new items, use the **Recombine Shape** command in the **Combining Run Results** dialog box.

1. In the **Combined** navigation tree, click the **+** sign to show available material shapes.
2. Click the material shape to which you have added items.

   Only the items of the selected shape are shown.
3. Click the items that you want to recombine to select them.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
4. Click the **Combining Run** ribbon tab.
5. On the menu, select **Recombine Shape**.
6. In the first confirmation dialog box, click **Yes** to recombine the selected shape.
7. In the second confirmation dialog box, click **Yes** to save the previous combining run or **No** to recombine materials without saving the combining run.

   By saving the previous combining run, you can compare the differences between the previous combining run and the new one.

Tekla EPM recombines the selected items.

Recombine items of a material grade

To recombine materials after changes have been made to material grades, use the **Recombine Grade** command in the **Combining Run Results** dialog box.

1. In the **Combined** navigation tree, click the **+** sign under a material shape to show available material grades.
2. Click a material grade to select it.

   Only the selected material grade is shown.
3. Click the items that you want to recombine to select them.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
4. Click the **Combining Run** ribbon tab.
5. On the menu, select **Recombine Grade**.
6. In the first confirmation dialog box, click **Yes** to recombine the selected grade.

7. In the second confirmation dialog box, click **Yes** to save the previous combining run or **No** to recombine materials without saving the combining run.

   By saving the previous combining run, you can compare the differences between the previous combining run and the new one.

Tekla EPM recombines the selected items.

Recombine a material dimension

When changes have been made to a material dimension in the combining material list, use the **Recombine Size** command to recombine the dimension. Note that you need to have the **Combining Run Results** dialog box open.

1. In the **Combined** navigation tree, click the **+** sign, and select a material dimension.

   Only the selected material dimension is shown.

2. Click the **Combining Run** ribbon tab.
3. On the menu, select **Recombine Size**.

   A confirmation dialog box appears, asking if you want to recombine the selected dimension.

4. In the first confirmation dialog box, click **Yes** to recombine the selected dimension.
5. In the second confirmation dialog box, click **Yes** to save the previous combining run or **No** to recombine materials without saving the combining run.

   By saving the previous combining run, you can compare the differences between the previous combining run and the new one.

Tekla EPM recombines the selected material dimension.

Update combining information and recombine all items

When new materials have been added, or material pricing has changed, use the **Reload Information & Recombine All** command. Tekla EPM will then update the material and pricing information and perform a new combining run.

Note that all run-specific information will be lost if you use the **Reload Information & Recombine All** command.

1. In the **Combining Run Results** dialog box, click the **Combining Run** ribbon tab.

2. On the menu, select **Reload Information & Recombine All**.

   A confirmation dialog box appears, asking if you want to recombine all items.

3. In the first confirmation dialog box, click **Yes** to confirm recombining all items.

4. In the second confirmation dialog box, click **Yes** to save the previous combining run or **No** to recombine materials without saving the combining run.

   By saving the previous combining run, you can compare the differences between the previous combining run and the new one.

5. In the third confirmation dialog box, click **Yes** to reload and update the items to be recombined, or **No** to not reload and update the items.

6. In the fourth confirmation dialog box, click **Yes** to reload and update the pricing information, or **No** to keep the current pricing information.

Tekla EPM performs the combining run and reloads the information that you selected.

Compare combining runs

You can view and compare the changes that were made from one combining run to another. This is useful for comparing drops for the use of different stock lengths or pricing differences between two vendors.

Note that you must have saved a previous combining run to compare it with the current combining run.

1. In the **Combining Run Results** dialog box, click the **Combining Run** ribbon tab.

2. On the menu, select **Compare With a Previously Saved Run**.

3. In the **Select Combining Run** dialog box, click a previously saved combining run in the list to select it.

4. Click **Compare**.

   The **Combining Run Compare** dialog box opens, displaying the information of both combining runs. Any differences are marked with an asterisk (*).

5. In the navigation tree in the left-hand pane, click a material size to select it.

6. View the differences for the size in the different combining runs.

7. To close the comparison view, click the **Close** button (**X**) in the upper-right corner of the **Combining Run Compare** dialog box.

View, print, or export combining run reports

You can create different kinds of reports based on the combining run results. You can then view, print, or export the reports according to your needs.

1. In the **Combining Run Results** dialog box, click the **Combining Run** ribbon tab.
2. On the menu, select **Reports**.
3. To only include particular shapes, grades, or dimensions in the reports, in the **Combining Run Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, click the arrow buttons to move the shapes, grades, and dimensions that you want to include to the **Included** list.
5. Click **Make Report**.
6. In the **Report Selection** dialog box, select the report.
7. If you want to include your company's logo in the report, select **Show Company Logo**.
8. Do any of the following according to your needs:

To	Do this
View the report	• Click **View**.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the used printer. c. Click **Print**. d. Click **Yes**.
Export the report	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs.

To	Do this
	f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

See also

Combine materials in the Combining module (page 251)

5.5 Load combining items into purchasing

Load materials in a bill of materials into a requisition or a purchase order, so that they can be purchased. You can either load all combining items into a requisition or a purchase order, or select the items that you want to load.

Note that Tekla EPM only allows you to load the same materials into purchasing once.

When the materials are sent to purchasing, Tekla EPM populates the reference number for both the combining job items and the purchasing items. However, the combining items and the purchasing items are not linked.

See also

Load all combining items into a requisition (page 263)

Load selected combining items into a requisition (page 264)

Load all combining items into a purchase order (page 265)

Load the selected combining items into a purchase order (page 265)

Load all combining items into a requisition

To load all items in a bill of materials into a requisition, use the **Load Material Into Requisition** command.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.
2. On the menu, select **Purchasing** --> **Load Material Into Requisition** .
3. In the **Select Requisition** dialog box, select a requisition and click **OK**.

   If necessary, you can also create a new requisition and load the items into it.
4. Click **OK**.

5. In the **Purchasing Import Filters**, do one of the following:

To	Do this
Load all items	• Click **Import**.
Filter out items that you do not want to load	a. On the left side of the dialog box, select a filter type in the **Type** list, and click **Select**. b. Click **Select**. c. Click the arrow buttons to move the items that you want to load to the requisition to the **Included** list. The items on the **Not Included** side will not be sent to purchasing. d. Repeat the process for different filter types until you have filtered out all unnecessary items. e. Click **Import**.

6. In the **Import Items** dialog box, click **OK** to return to the **Combining** dialog box.

Items are sent to the selected requisition. To view and use the requisition, open the **Purchasing** module and go to the **Requisitions** tab.

Load selected combining items into a requisition

Use the **Load Selected Material Into Requisition** command to select the items in a bill of materials that you want to load into a requisition.

1. In the **Combining** dialog box, select the items that you want to load.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Combining** ribbon tab.
3. On the menu, select **Purchasing** --> **Load Selected Material Into Requisition** .
4. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.
5. Click **OK**
6. Click **OK** to close the **Import Items** dialog box.

Items are sent to the selected requisition. To view and use the requisition, open the **Purchasing** module and go to the **Requisitions** tab.

Load all combining items into a purchase order

Use the **Load Material Into Purchase Order** command to load all items in a bill of materials into a purchase order.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.
2. On the menu, select **Purchasing** --> **Load Material Into Purchase Order** .
3. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.
4. Click **OK**
5. In the **Purchasing Import Filters**, do one of the following:

To	Do this
Load all items	• Click **Import**.
Filter out items that you do not want to load	a. On the left side of the dialog box, select a filter type in the **Type** list, and click **Select**. b. Click **Select**. c. Click the arrow buttons to move the items that you want to load to the requisition to the **Included** list. The items on the **Not Included** side will not be sent to purchasing. d. Repeat the process for different filter types until you have filtered out all unnecessary items. e. Click **Import**.

6. Click **OK** to close the **Import Items** dialog box.

Items are loaded into the selected purchase order. To view and use the purchase order, go to the **Purchasing** module and open the **Purchase Orders** tab.

Load the selected combining items into a purchase order

Use the **Load Selected Material Into Purchase Order** command to select the items in a bill of materials that are loaded into a purchase order.

1. In the **Combining** dialog box, select the items that you want to load.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. On the menu, select **Purchasing** --> **Load Selected Material Into Purchase Order** .
3. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.
4. Click **OK**
5. Click **OK** to close the **Import Items** dialog box.

Items are loaded into the selected purchase order. To view and use the purchase order, go to the **Purchasing** module and open the **Purchase Orders** tab.

5.6 Export a combining job to KISS

One way to save a combining job for later use is exporting it to KISS.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.
2. On the menu, select **Export to KISS**.
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. Click **Save**.

A copy of the file is saved in the KISS format.

5.7 View or print combining reports

You can view or print reports that show different information about the combining job. You can create different kinds of reports and filter the items in the reports in several ways.

1. In the **Combining** dialog box, click the **Combining** ribbon tab.
2. In the menu, select **Reports**.

   The **Report Filters** dialog box opens.
3. To only include specific materials in the reports, in the **Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, click the arrow buttons to move the material items that you want to include in the reports to the **Included** list.

5. Click **OK**.

   To further limit the included items, repeat steps 3 to 5 for all necessary filter types in the **Report Filters** dialog box.

6. Click **Make Report**.
7. In the **Report Selection** dialog box, click the report that you want to create.
8. Do one or both of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. In the **Select Printer** dialog box, click a printer to select it. d. Click **OK**.

9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

6 Create estimates

Use the **Estimating** module to create and modify estimates in Tekla EPM. You can add different items to your estimates, including accessories and assemblies. You can also mult and nest the material in an estimate, send material to purchasing, or export the estimate to KISS, among many other options.

NOTE Before you start working in the **Estimating** module, ensure that you have adjusted estimating settings to meet the standards of your shop. For more information, see Set up the Estimating module (page 269).

See also

Set up the Estimating module (page 269)
Open the Estimating module (page 368)
Create an estimating job (page 370)
Find an estimating job (page 369)
Open an estimating job (page 377)
Modify an estimating job (page 396)
Store document references for an estimating job (page 388)
Add an estimating item (page 401)
Copy and multiply estimating items (page 414)
Modify estimating items (page 417)
View the labor times of items (page 381)
Delete an estimating item (page 419)
Add an assembly (page 411)
Add a parametric assembly (page 412)
Create, modify, and delete production codes (page 419)
Calculate the total material cost (page 388)

Recalculate an estimate (page 388)
View all changes in an estimating job (page 384)
Import files to and export files from the Estimating module (page 430)
Use Trimble Connect with an estimating job (page 435)
Combine materials in the Estimating module (page 439)
Load estimating materials into purchasing (page 423)
Load materials into another estimate (page 426)
Load materials into Production Control (page 428)
Create a proposal (page 440)
View, email, export, and print estimating reports (page 385)

6.1 Set up the Estimating module

Before you start to create estimates and proposals in the **Estimating** module, we recommend that you take the time to set it up carefully. Once you have created and adjusted all necessary options, standard estimating items, and settings, working in the **Estimating** module is easier and more efficient.

To access the different **Estimating Maintenance** commands, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, go to **Estimating**.

For more information, see the following links:

Create, modify, and delete accessories (page 276)
Create and manage parametric assemblies (page 282)
Adjust cleaning types and cleaning costs (page 294)
Create, modify, and delete paint types (page 298)
Modify freight pricing (page 301)
Manage estimating jobs (page 303)
Adjust labor information (page 307)
Manage estimate statuses (page 353)
Adjust standard shop information (page 354)
Create and modify shop setups (page 361)
Define company standard settings for Estimating (page 270)
Create a standard proposal setup (page 365)

Define company standard settings for Estimating

In the **Estimating Company Standards** dialog box, you can define the standard data entry settings for the **Estimating** module. Among other things, you can set the job numbering and the default material finish of items, create fabrication categories and sub-categories, select material suppliers, define galvanizing costs including freight, and select the size input and display units. Yyou can also modify these settings on a job by job basis in the **Estimating** module.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Company Standards** .
3. In the **Estimating Company Standards** dialog box, adjust the following options according to your needs:

Option	Description
Job # Increment	Allows you to select the default option for automatic job numbering. The options are: • **Increment from Last Job #**: When you create a new job, Tekla EPM uses the next available job number after the latest job number created. • **Increment from Largest Job #**: Tekla EPM uses the next available job number after the largest job number created. • **Don't Increment**: Automatic job numbering is not used. You can modify the job number when you create a new job.
Default Finish	The most typical material finish for most estimating jobs and items.
Item Increment	Sets the auto-increment for item numbers. Using the default auto-increment of 10 allows items to be added in the list according to your needs, without having to renumber the other items in the job.
Keep Job Selection Screen Open	When selected, the **Select Estimating Job** dialog box stays open after a job has been selected.
Report Pricing - Automatically Select Last Combining Run	When selected, Tekla EPM automatically uses the pricing used in the last saved combining run.

Option	Description
Imports - Use Piece Mark as Part #	When selected, imported piece marks are automatically used as part number items in the estimating material list.
Imports - Use as Production Code	Select whether you want to use assembly main marks, piece marks, drawing descriptions, or assembly descriptions as production codes. **TIP** If you use piece marks as production codes, you can ensure that each item in a production control job matches the same item in a linked estimating job. This guarantees that the corresponding items have the same labor times.
Job # Regular Expression	Allows the use of regular expressions to enforce a desired format for the job numbers.

4. Click the buttons at the bottom of the dialog box to modify galvanizing settings (page 271), fabrication categories and sub-categories (page 272), input and display units (page 273), combining optimizations (page 274), and suppliers (page 275).
5. When you have defined all necessary settings, click **Save**.

Define default galvanizing settings

You can define default galvanizing costs and freight settings used in all estimating jobs. Whenever an item in an estimating job is marked as galvanized, these default costs are applied to it.

1. At the bottom of the **Estimating Company Standards** dialog box, click **Galvanizing**.

   The **Galvanizing** dialog box opens.
2. Define the cost per pound, minimum cost, and freight cost.
3. In **Trailer Capacity**, type the trailer capacity.

   If you type 0 in the field, the freight cost value will be the total cost. If you enter a greater value, the freight cost value will be the cost per truck.
4. Define the labor prep cost as price per pound.
5. In the **Weight - Percent Added** field, define the percentage of galvanizing weight to be added for each galvanized item.

   The percentage is only used to calculate the galvanizing cost. It does not affect the weights of galvanized items in the **Estimating** module or reports.
6. Click **OK**.

7. In the **Estimating Company Standards** dialog box, click **Save**.

The default galvanizing settings are updated.

Note that you can also set job-specific galvanizing settings that override the default galvanizing settings.

Create categories and sub-categories for Estimating

Categories are user-defined keywords that you can use for sorting, tracking, and reporting. Creating categories also helps you to quickly identify the items in your estimating jobs. For example, you can categorize jobs by fabrication type. In addition to manually creating categories, you can choose to use existing categories used in Steel Erection Bid Wizard. To further filter items, you can also add sub-categories.

Note that you can also create new categories and sub-categories manually when creating or modifying an estimating job.

Add a category

1. At the bottom of the dialog box, click the **Categories** button.
2. In the **Company Categories** dialog box, do any of the following according to your needs:

To	Do this
Add a new category manually	a. Click **New**. b. In the **Category** field, type a name for the category. For example, `Skewed beam`. c. Click **Add**. The new category is added to the **Category** list. Repeat steps a to c for all new categories.
Add categories used in Steel Erection Bid Wizard	a. Click **Add SEBW Categories**. b. click the arrow buttons to move the categories that you want to add to the **Included** list. c. Click **OK**. The categories are added to the **Category** list.

NOTE If you need to modify or delete a category, click a category to select it in the **Category** list and either:

- Click **Edit**, change the category name, and click **Edit** again.

- Click **Delete** and then, click **Yes** to confirm deleting the category.

3. In the **Estimating Company Standards** dialog box, click **Save** to update the categories.

The **Estimating Company Standards** dialog box closes. The categories are saved for the **Estimating** module.

Add a sub-category

1. At the bottom of the **Estimating Company Standards** dialog box, click the **Sub-Categories** button.
2. In the **Company Sub-Categories** dialog box, click **New**.
3. In the **Sub-Category** field, type a name for the sub-category.
4. Click **Add**.

   The new sub-category is added to the **Sub-Category** list.

   Repeat steps 1 to 4 for all new sub-categories.

NOTE If you need to modify or delete a sub-category, click a sub-category to select it in the **Sub-Category** list and either:

- Click **Edit**, change the sub-category name, and click **Edit** again.
- Click **Delete** and click **Yes** to confirm deleting the sub-category.

  You can also add multipliers for sub-categories in the **Estimating** module.

5. In the **Estimating Company Standards** dialog box, click **Save** to update the categories.

The **Estimating Company Standards** dialog box closes. The sub-categories are saved for the **Estimating** module.

Define default input and display units for Estimating

You can use either metric or imperial units for displaying and entering sizes, lengths, weights, and prices in the **Estimating** module. In addition, you can select how you want to enter the length and thickness for an item.

1. At the bottom of the **Estimating Company Standards** dialog box, click **Input/Display Units**.
2. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.

3. Click **OK**.

The input and display units are saved as default units used for new estimating jobs. If necessary, you can also adjust the units used in individual jobs. For more information, see Define input and display units for an estimating job (page 375).

Define default combining optimizations for Estimating

Define company-level settings for multing and nesting in the **Estimating** module. If necessary, you can later change the settings job by job.

1. At the bottom of the**Estimating Company Standards** dialog box, click **Combining Optimizations**.
2. To use material grade substitutions with the optimization settings when performing a combining run, on the **General Settings** tab of the **Combining Setup** dialog box, select the **Use Grade Substitutions** check box.

   Grade substitutions must be set in the **Shape / Grade / Size Maintenance** dialog box. If the grade substitutions are not set, the material grades in the combining run and in the supplier pricing data set or the inventory need to match each other exactly.
3. Click the arrow buttons to move the optimization options that you want to use to the **Optimizations Included** list.

   The options are:

   - **Inventory Exact-Match (In Stock)**: Use this option for inventory items in stock that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Exact-Match (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Least-Scrap (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that will provide the least amount of scrap.
   - **Inventory Least-Scrap (In Stock)**: Use this option for inventory items in stock that will provide the least amount of scrap.
   - **Warehouse Least-Scrap**: Use this option to give preference to warehouse items that will provide the least amount of scrap. Warehouse items will only be used when they provide less scrap than the available inventory items.
   - **Warehouse Force Inventory**: Use this option to force the use of inventory regardless of the amount of scrap, no matter where it is

located in the **Optimizations Included** list. This option is the opposite of **Warehouse Least-Scrap**.

Note that you can only include **Warehouse Least-Scrap** or **Warehouse Force Inventory**, not both.

4. Use the **Move Up** and **Move Down** buttons to modify the order of the optimizations.

   The order is important while performing a combining run.

5. Click the **Mult Settings - Linear Material** tab to open it.
6. In **Multing Software**, select the multing software that you are using.
7. If you want to apply the material kerf settings defined in **Shape / Grade / Size Maintenance** to the combining as part of the cutting pattern, select the **Apply Kerf** check box.
8. Open the **Plate Nesting Settings** tab.
9. In the **Plate Nesting Software** list, click the plate nesting software that you are using to select it.
10. In the **Shear Cut Optimization** list, click a suitable shear cut option to select it.

    The selected option determines the plate allowance to be used with the combining:

    - Use **None** when cutting plate on a burn table.
    - Use **Shear Cut - First Cut Along Length** or **Shear Cut - First Cut Along Width** to alert Tekla EPM that the nesting needs to allow for that type of cut first. Then, the nesting will allow for all subsequent cuts to be made with that condition.

11. If the material grain direction is unimportant and you want Tekla EPM to create the best possible optimization of a plate, select the **Rotate Plates for Best Fit** check box.
12. If necessary, select the **Apply Kerf** check box.

    For more details, see step 7.

13. Click **Save**.

See also

Define company standard settings for Estimating (page 270)

Define default suppliers for Estimating

You can define different suppliers for angles, beams, plates, rods, tubes, and other material used in the **Estimating** module. This way, you can use material pricing from the selected supplier databases by material group.

You can manage the available suppliers in **Pricing Maintenance**. To make suppliers available in the **Suppliers** dialog box, the suppliers will first need to be added in **Pricing Maintenance**.

1. At the bottom of the **Estimating Company Standards** dialog box, click **Suppliers**.
2. In the **Suppliers** dialog box, select suppliers for each material group in the available lists.
3. Click **OK**.

Create, modify, and delete accessories

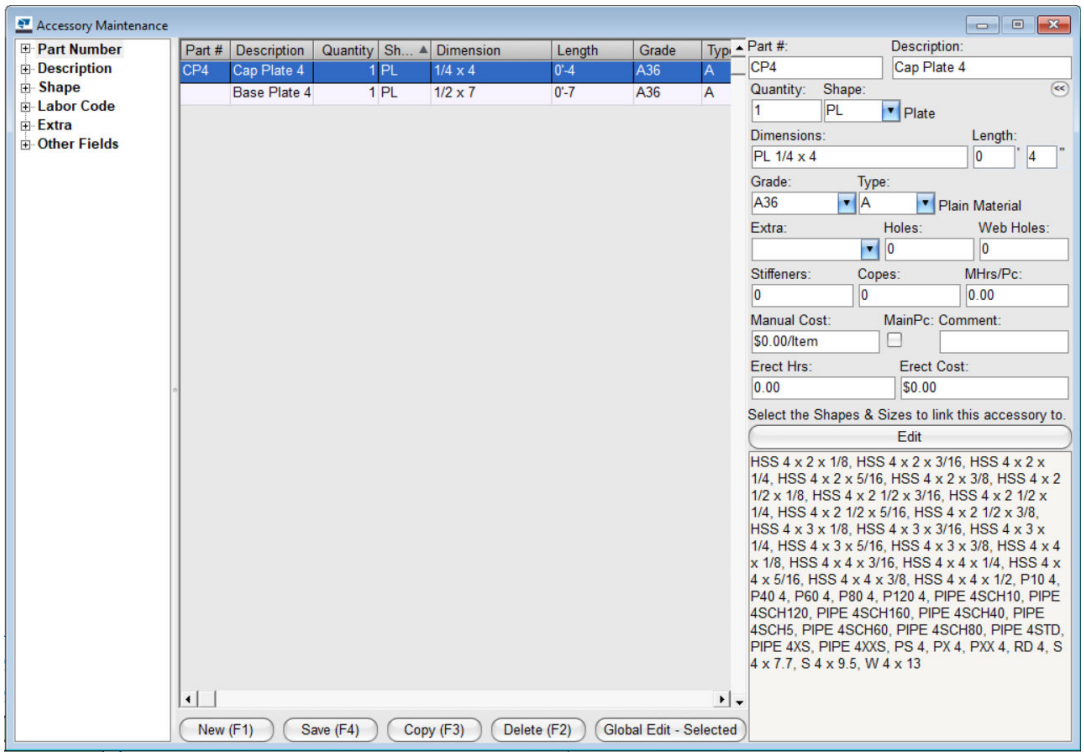
Accessories are frequently used items that can be added to any estimate. For example, stiffeners, gussets, base and cap plates, and embeds are good examples of accessories. We recommend that you create all necessary accessories at once before starting to create estimates, so that working in the **Estimating** module is as quick and efficient as possible.

We recommend that you create, modify, and delete accessories in **Accessory Maintenance**. You can also create accessories in an estimating job, but these job-specific accessories cannot be saved to the accessory library, so they cannot be reused in other estimating jobs.

To access the **Accessory Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Accessory Maintenance** .

The **Accessory Maintenance** dialog box opens.



Create an accessory

The information that you enter for the accessory identifies the accessory together with the material cost and the required labor time.

1. Click **New**.
2. If necessary, type a part number for the accessory.

   Assigning part number allows you to add an accessory to an estimating item simply by selecting it in the item properties. Part numbers also make identifying accessories easier. However, note that if you add an item to the estimate by selecting the part number, you cannot modify the properties of the accessory in the estimating job.
3. Type a description for the accessory.
4. Determine the remaining properties of the accessory:

Option	Description
Quantity	The number of accessories per item to which they are added.
Shape	The material shape of the accessory.
Dimensions	The material size of the accessory.
Length	The length of the accessory.
Grade	The material grade of the accessory.

Option	Description
Type	The labor code of the accessory.
Extra	The estimate extras applied to the accessory. To add estimate extras, double-click the **Extra** field.
Holes	The number of holes in the accessory.
Web Holes	The number of web holes in the accessory.
Stiffeners	The number of stiffeners in the accessory.
Copes	The number of copes in the accessory.
MHrs/Pc	The number of man hours spent on the accessory.
Manual Cost	The cost for the accessory that you can enter manually. The manual cost is optional, and it overrides the pricing information in the pricing database.
MainPc	When selected, the item to which the accessory is added is considered a main piece.
Comment	An optional and additional comment on the accessory.
Erect Hrs	The number of man hours spent on erecting the accessory.
Erect Cost	The cost of erecting the accessory.
Prod. Code	The production code applied to the accessory.
Camber	The camber size used with the accessory.
Holes w/o Bo	The number of holes per piece in the accessory. No bolts will be added.
Top Flg Holes, **Bot Flg Holes**	The number of top flange holes or bottom flange holes per accessory.
Welded Studs	The number of welded studs per accessory.
Detailing Hrs	The number of hours spent on erecting the accessory.
Detailing Cost	The amount of money used for erecting the accessory.
Cost/Pc	A cost per piece that is added to the material cost of the accessory.

NOTE The visible input fields and their order partially depend on the settings that you have defined in **Estimating Maintenance**. You can modify the input fields and their order via **Maintenance** --> **Estimating** --> **Edit Input Fields** .

5. If necessary, select the linked material shapes and sizes to which the accessory can be added by clicking **Edit**.

   Selecting linked material shapes and sizes is optional. However, limiting the use of the accessory to the selected material shapes and sizes makes working easier, as you do not need to scroll through all existing accessory options whenever you want to add an accessory. If you do not select linked material shapes, the accessory can be added to all material items.

6. In the **Filter** dialog box, click the arrow buttons to move the desired material shapes and sizes to the **Included** list.

   Note that there are also lists at the bottom of the **Filter** dialog box that allow you to select the material shapes.

7. Click **OK**.
8. Click **Add** to save the accessory.

Example: Create a stiffener for W12 beams

Note that the following example uses imperial units.

1. Click **New**.
2. Set the properties as follows:
   a. **Part #**: `W12m`
   b. **Description**: `W12 Stiffener`
   c. **Quantity**: `1`
   d. **Shape**: `PL`
   e. **Dimensions**: `5/16 x 4`
   f. **Length**: `0'-11`
   g. **Grade**: `A36`
   h. **Type**: `W` (Baffle)
3. Click **Edit** and link the accessory to the range `W 12 x 14 - W 12 x 152`.
4. Click **OK**.
5. Click **Add** to save the accessory.

Copy accessories

1. In the accessory list, select the accessories that you want to copy.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click **Copy**.

   Copies of the selected accessories are added to the list in the **Accessory Maintenance** dialog box.
3. If necessary, define part numbers for the copied accessories.
4. Modify the properties of the copied accessories according to your needs.
5. Click **Save** to update the accessories.

Modify an accessory

1. In the accessory list, select the accessory that you want to modify.
2. Modify the properties according to your needs.
3. Click **Save** to update the accessory.

Modify multiple accessories at once

1. In the accessory list, select the accessories that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Global Edit - Selected**.
3. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.
4. Modify the selected properties in the **Global Edit** dialog box according to your needs.
5. Click **Update**.

Delete an accessory

1. In the accessory list, select the accessories that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Delete**.
3. To permanently delete the accessories, click **Yes** in the confirmation dialog box.

View, customize, print, and export accessory reports

Accessory reports show lists of existing accessories and accessory parts. You can view the reports, print them, or export them to another file format. You

can also create a customizable copy of the accessory reports and modify it according to your needs.

1. In the **Accessory Maintenance** dialog box, click the **Accessory Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. In the **Report Selection** dialog box, select the report that you want to view, customize, print, or export.
4. Do one or more of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Customize the report	a. At the top right corner of the dialog box, click **Design**. A customizable copy of the report opens. b. Customize the report according to your needs.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. To confirm printing the selected report, click **Yes** in the confirmation dialog box. d. In the **Select Printer** dialog box, click a printer to select it. e. Click **Print** or press **F2** on the keyboard.
Export the report	a. In the **Report Selection** dialog box, click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Modify the file name according to your needs. e. Browse to the location where you want to save the exported file, and click **Save**. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.

To	Do this
	g. To open the file after exporting it, select the **Open Exported Document** check box. h. In the **Report Selection** dialog box, click **Export**.

5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Create, modify, and delete accessories (page 276)

Create and manage parametric assemblies

Parametric assemblies can be any fabricated items that may vary in height, width, or length, or according to any other variables that you define. For example, stairs, ladders, and handrails are common parametric assemblies can be created in Tekla EPM. Existing parametric assemblies can be added to an estimate while working in the **Estimating** dialog box.

See also

Create a parametric assembly (page 282)

Example parametric assembly: Roof ladder without cage (page 288)

Modify a parametric assembly (page 292)

Import assemblies and parametric assemblies (page 187)

Export parametric assemblies (page 293)

Delete a parametric assembly (page 294)

Create a parametric assembly

You can use parametric assemblies in any estimating job, and modify the variable values according to your needs. Tekla EPM calculates the parametric assembly according to the values you have given.

Note that all information entered in the **Parametric Assembly** dialog box will be added to the estimate when the parametric assembly is selected.

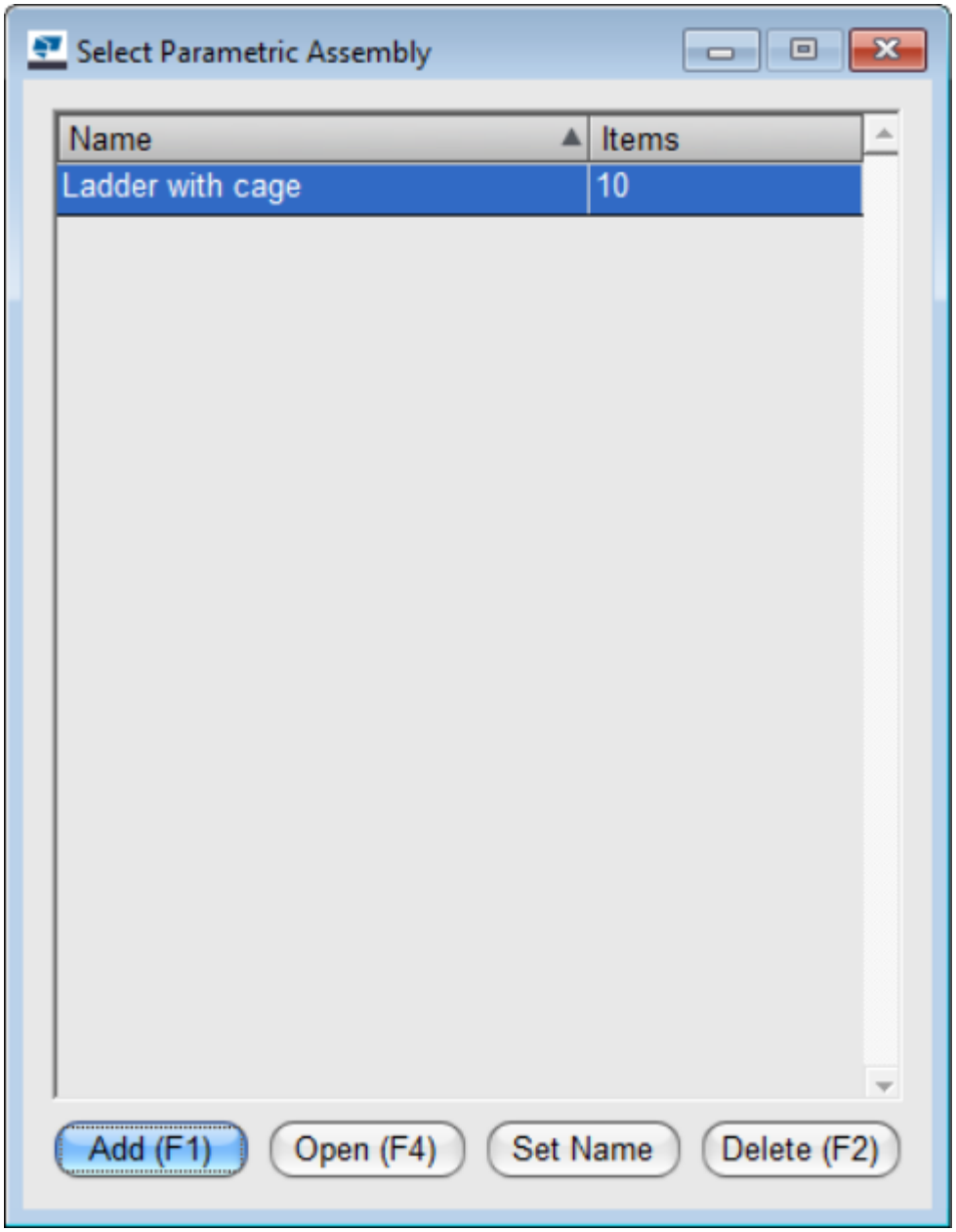
TIP To see a concrete example of creating a parametric assembly, see Example parametric assembly: Roof ladder without cage (page 288).

To create parametric assemblies, do the following:

1. Create and name the assembly template

1. Click the **Maintenance** ribbon tab.

2. On the menu, select **Estimating Maintenance** --> **Parametric Assembly Maintenance** .



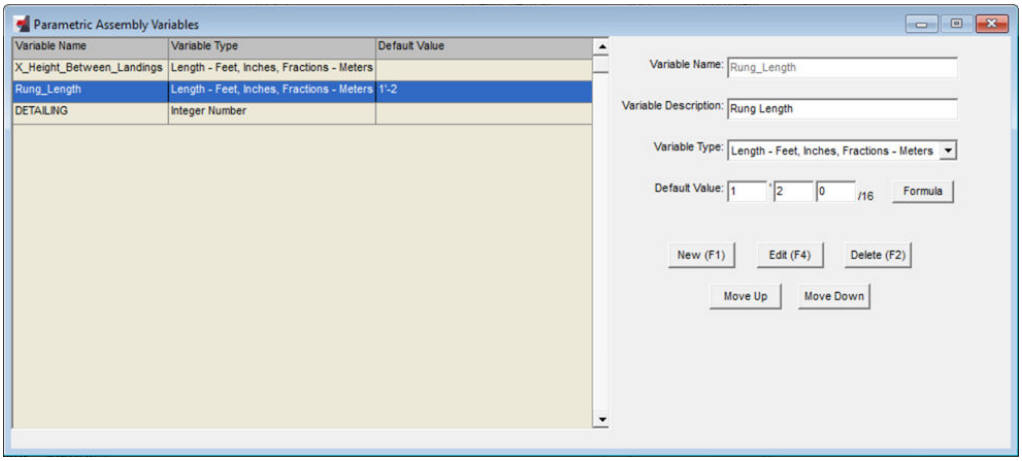
3. In the **Select Parametric Assembly** dialog box, click **Add**.
4. Name the parametric assembly.
5. To use an existing parametric assembly as the basis for the new one, select the parametric assembly in the **Template** list.

   Copying the information from an existing parametric assembly speeds up creating a parametric assembly. However, you can also create the parametric assembly from scratch.
6. Click **Add**.

2. Create variables, items, and formulas

Variables define the parametric calculations to be used.

1. In the **Parametric Assembly** dialog box, click the **Parametric Assembly** ribbon tab.
2. On the menu, select **Parametric Assembly Variables**.



3. In the **Parametric Assembly Variables** dialog box, click **New**.
4. Enter a name and description for the variable.
5. Select a suitable variable type:
   - **Integer Number**: a whole number. The **Integer Number** variable type is normally used for quantity type calculations where no fractions are required.
   - **Decimal Number**: a decimal number. The **Decimal Number** variable type has various uses.
   - **Length - Feet, Inches, Fractions - Meters**: length. The correct input format is determined in the name of the variable type.
   - **Length - Inches, Fractions - Millimeters**: length. The correct input format is determined in the name of the variable type.
   - **Length - Decimal Feet - Meters**: length. The correct input format is determined in the name of the variable type.
   - **Length - Inches, Fractions - Millimeters**: length. The correct input format is determined in the name of the variable type.
   - **Dimension**: allows you to change the dimension of the material by adding another variable. For example, you can have one material dimension for a short span and one for a long span in the assembly. The length applied to the span variable then determines which dimension variable is used. The dimension variable can also be set when adding the parametric assembly to an estimating job.

- **Property from EST Line Item**: uses the selected property of the estimating item that was selected when the parametric assembly was added to the estimating job.
- **Property from Assembly Line Item**: uses the selected property of an item within the parametric assembly. Note that you need to select the desired property in the **Property** list, and type the item number in the **From Item #** field.

6. If necessary, define a default value for the variable.
7. Click **Add**.

   Repeat steps 3 to 5 to add all necessary variables.
8. To close the **Parametric Assembly Variables** dialog box, click the **Close** button (**X**) in the upper-right corner.
9. To add items to the parametric assembly, click **New** at the bottom of the **Parametric Assembly** dialog box.
10. Create a comment as the first item in the parametric assembly:
    a. Set **Quantity** to `1` and press **Enter**.
    b. Set **Shape** to `CO` and press **Enter**.
    c. In the **Description** field, type the parametric assembly name and press **Enter**.
    d. Click **Add**.

    Adding a comment as the first item of the parametric assembly makes it easier to recognize the parametric assembly in an estimating job.
11. To add another item, click **New**.
12. Enter properties for the item.
13. For properties that vary in the assembly, click the **Formula** button and define a formula using the previously created variables.

    For more information on creating formulas, see Create formulas (page 286).
14. If you need to add additional labor or clips to the item, click **Additional Labor & Clips** and determine their properties.

    Additional labor operations could be, for example, welding, burning, punching, or drilling. You can either determine the properties manually, or use formulas to use conditions for the additional labor and clips.

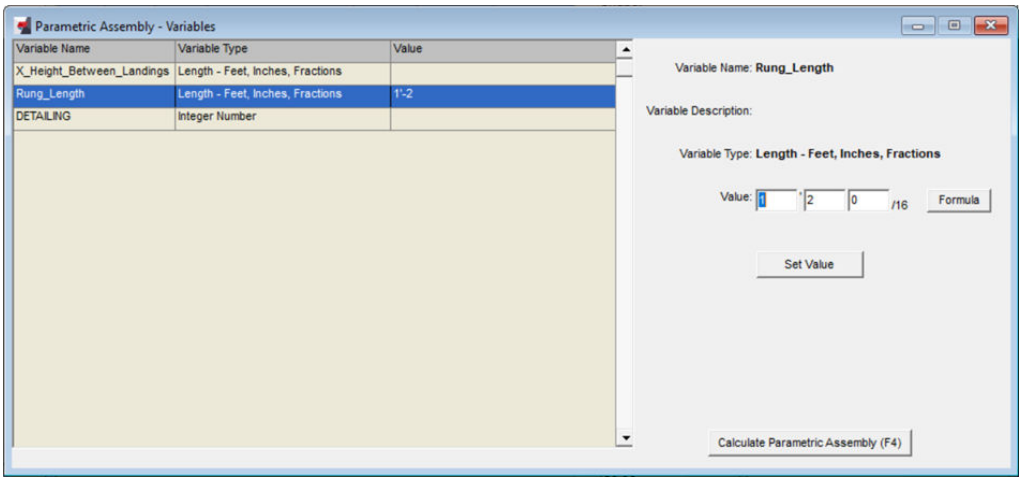
    Note that standard clips will be added according to the selected labor code when you add the parametric assembly to an estimate.
15. Once you have determined all necessary properties for the item, click **Add**.

    Repeat steps 9 to 12 to add the remaining items to the parametric assembly.

3. Test the parametric assembly

We recommend that you test all parametric assemblies that you have created to verify that the calculations work as expected.

1. While in the **Parametric Assembly** dialog box, click the **Parametric Assembly** ribbon tab.
2. On the menu, select **Test Parametric Assembly**.



3. In the **Parametric Assembly - Variables** dialog box, enter a value for a variable and click **Set Value**.

   For example, you could set the `Ladder Length` variable created in our example to `20'-0` and `Ladder Width` to `1'-6"`.

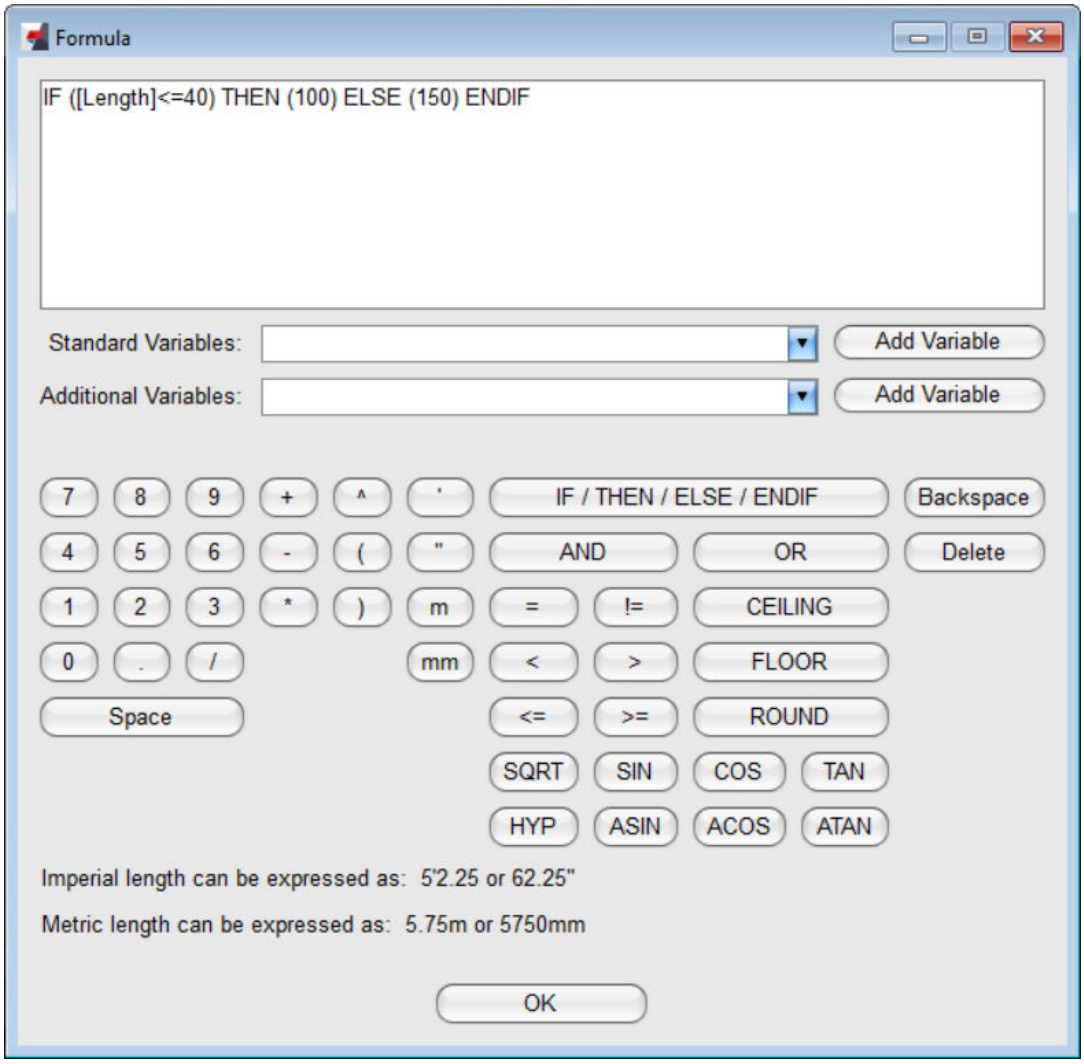
   Repeat step 3 for each variable in the parametric assembly.
4. Click **Calculate Parametric Assembly**.

   You can now see the results of the calculations. Verify that the information is correct.
5. To view the additional labor and clips that were added for the selected item when creating the parametric assembly, click **Additional Labor & Clips**.
6. To close the results, click the **Close** button (**X**) in the upper-right corner.
7. Do one of the following:
   - To re-test the calculations, set new values for the variables.
   - To close the **Parametric Assembly - Variables** dialog box, click the **Close** button (**X**) in the upper-right corner.

Create formulas

In the **Formula** dialog box, you can create formulas that Tekla EPM uses to calculate values. For example, you can create a formula to define the cost of an estimate extra, or to define the size of an angle used in a parametric

assembly. You can access the **Formula** dialog box by clicking the **Formula** button on the right side of a field.



The formula functions allow you to add the following things to the formula:

- **Standard Variables**: the properties of a material item.
- **Additional Variables**: any previously added variables related to the parametric assembly or the estimate extra.
- `IF / THEN / ELSE / ENDIF` statements
- The `CEILING`, `FLOOR`, and `ROUND` rounding functions.

  The `CEILING` function always rounds up, the `FLOOR` function always rounds down, and the `ROUND` function rounds up at half and down by less than half.
- Several trigonometry functions, such as `SIN`, `COS`, and `HYP`.

Example formula: Calculate the cost of an estimate extra

In this example, we want the estimate extra to add a cost of $100 if the length of the item is less than or equal to 40'. If the length is greater than 40', the added cost should be $150.

In this case, we need the following formula:

```
IF ([Length] <= 40') THEN (100) ELSE (150) ENDIF
```

1. In the **Estimate Extra** dialog box, select the **Cost Expression** option, and click **Formula**.
2. In the **Formula** dialog box, click the **IF / THEN / ELSE / ENDIF** button.
3. Go to the parenthesis after `IF`.
4. In the **Additional Variables** list, select **Length**.
5. Click **Add Variable**.

   `[Length]` appears inside the parenthesis after `IF`.
6. Enter a space after `[Length]`.
7. After the space, type `<=40'`
8. Go to the parenthesis after `THEN`.
9. Type `100`
10. Go to the parenthesis after `ELSE`.
11. Type `150`

    The formula is now ready.
12. Click **OK** to close the **Formula** dialog box and use the formula in the estimate extra.

Example parametric assembly: Roof ladder without cage

The following example describes creating a roof ladder as a parametric assembly in Tekla EPM. The example can be helpful when you are learning to create parametric assemblies yourself.

1. Create a description for the parametric assembly

1. Click **New** and create an item with the following properties:
   - **Shape**: `CO`
   - **Description**: `Roof ladder (no cage)`
2. Click **Add**.

2. Create variables for calculating the ladder length and the number of rungs and collection clips

To create variables for calculating appropriate length, and the number of rungs and connection clips for the ladder, do the following:

1. Click the **Parametric Assembly** ribbon tab.
2. On the menu, select **Parametric Assembly Variables**.
3. Create the following variables without adding default values:
   - Overall length of the ladder
     - **Variable Name** and **Variable Description**: `Ladder Length`
     - **Variable Type**: `Length – Feet, Inches, Fractions – Meters`
   - Overall width of the ladder
     - **Variable Name** and **Variable Description**: `Ladder Width`
     - **Variable Type**: `Length – Feet, Inches, Fractions – Meters`
4. To close the **Parametric Assembly Variables** dialog box, click the **Close** button (**X**) in the upper-right corner.

3. Create side rails

1. Click **New** and create an item with the following properties:
   - **Quantity**: `2`
   - **Shape**: `FB`
   - **Dimensions**: `½ x 3`
2. To create a formula for calculating the length, click **Formula** next to **Length**.
3. In the **Formula** dialog box, do the following:
   a. Clear the existing text in the box at the top of the dialog box.
   b. In the **Additional Variables** list, select **Ladder Length**.
   c. Click **Add Variable**.
   d. To have the ladder project beyond the landing elevation, type `+` and the length in feet and inches without a space between.

      The formula should now read approximately: `[Ladder Length] +3'6`.
   e. Click **OK** to save the length formula and return to the **Parametric Assembly** dialog box.

      Note that whenever a property is calculated with a formula, it is marked with (F) in the **Parametric Assembly** dialog box.

4. Click **Add**.

4. Create the rungs

1. Click **New**.
2. To create a formula for calculating the number of rungs, click **Formula** next to **Quantity**.

   We want to calculate the number of rungs determined by the ladder length, starting 6 inches above the landing. The result should then be divided by 1'-0.
3. In the **Formula** dialog box, do the following:
   a. Clear the existing text in the box at the top of the dialog box.
   b. In the **Parametric Assembly Variables** list, select **Ladder Length**.
   c. Click **Add Variable**.
   d. Type `+6"`.
   e. Add parentheses () around `[Ladder Length]+6"`.
   f. Type `/12"` directly after the right parenthesis.
   g. Click **OK** to save the length formula and return to the **Parametric Assembly** dialog box.
4. Set the shape and dimension properties of the rungs as follows:
   - **Shape**: `RD` (round bar)
   - **Dimensions**: ¾"
5. To create a formula for calculating the length of the rungs, click **Formula** next to **Length**.
6. In the **Formula** dialog box, do the following:
   a. Clear the existing text in the box at the top of the dialog box.
   b. In the **Parametric Assembly Variables** list, select **Ladder Width**.
   c. Click **Add Variable**.
   d. Click **OK** to save the length formula and return to the **Parametric Assembly** dialog box.
7. Click **Add**.

5. Create the connection clips

1. Click **New**.
2. To create a formula for calculating the number of clips , click **Formula** next to **Quantity**.

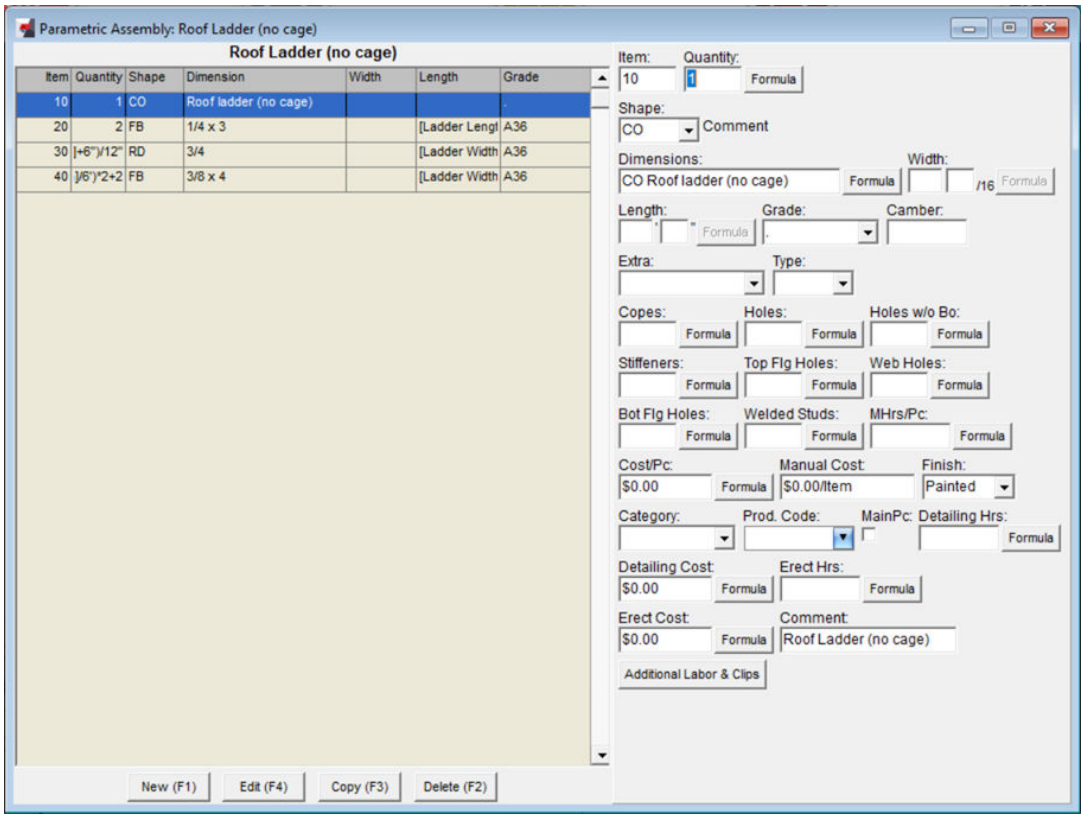
   We want to calculate the number of clips based on the length of the ladder.

3. In the **Formula** dialog box, do the following:
   a. Clear the existing text in the box at the top of the dialog box.
   b. Type `CEILING`.
   c. Type the left parenthesis (.
   d. In the **Parametric Assembly Variables** list, select **Ladder Length**.
   e. Click **Add Variable**.
   f. After the variable, type `/6')`.
   g. To calculate enough clips for both sides, type `*2`.
   h. To include the first and last clips for both rails, type `+2`.

      The calculation should read `CEILING([Ladder Length]/6')*2+2`. This means that Tekla EPM calculates the total ladder length divided by 6'-0, rounds it to the nearest foot, multiplies the result by 2, and then adds 2 more connection clips.
   i. Click **OK** to save the length formula and return to the **Parametric Assembly** dialog box.
4. Set the shape and dimension properties as follows:
   - **Shape**: `FB`
   - **Dimensions**: `3/8 x 4`
5. Click **Add**.

6. View the result

You can now view the result and test the parametric assembly.



For more information on testing a parametric assembly, see Create a parametric assembly (page 282).

Modify a parametric assembly

Existing parametric assemblies can be modified later on. You can rename the parametric assembly, or modify the items that form the parametric assembly or the variables used in calculations.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Parametric Assembly Maintenance** .
3. In the **Select Parametric Assembly** dialog box, select the desired parametric assembly that you want to modify.
4. Do any of the following:

To	Do this
Change the name of the parametric assembly	a. At the bottom of the **Select Parametric Assembly** dialog box, click **Set Name**. b. Type a new name for the assembly.

To	Do this
	c. Click **OK**.
Modify items	a. At the bottom of the **Select Parametric Assembly** dialog box, click **Open**. b. Select the item that you want to modify. c. Modify the properties of the item according to your needs. Among other things, you can change the quantity, shape, dimensions, or length of the item. d. Click **Edit** to save the changes.
Modify variables	a. At the bottom of the **Select Parametric Assembly** dialog box, click **Open**. b. Click the **Parametric Assembly** ribbon tab. c. On the menu, select **Parametric Assembly Variables**. d. Select the variable that you want to modify. e. Modify the variable name, description, variable type, and default value according to your needs. f. Click **Edit** to save the changes.

5. To close the **Select Parametric Assembly** dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Create a parametric assembly (page 282)

Example parametric assembly: Roof ladder without cage (page 288)

Delete a parametric assembly (page 294)

Export parametric assemblies

You can export a parametric assembly as a text file.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Parametric Assembly Maintenance** .
3. In the **Select Parametric Assembly** dialog box, select the parametric assembly that you want to export.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

4. Click the **Parametric Assembly** ribbon tab.
5. On the menu, select **Export Selected Parametric Assemblies**.
6. In the **Save As** dialog box, browse to the location where you want to save the text file.
7. Name the text file.
8. Click **Save**.

   The parametric assembly is saved in the selected location as a text file.
9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete a parametric assembly

You can delete any parametric assemblies that you do not use. Note that deleting a parametric assembly cannot be reversed, so a deleted assembly can no longer be used in Tekla EPM.

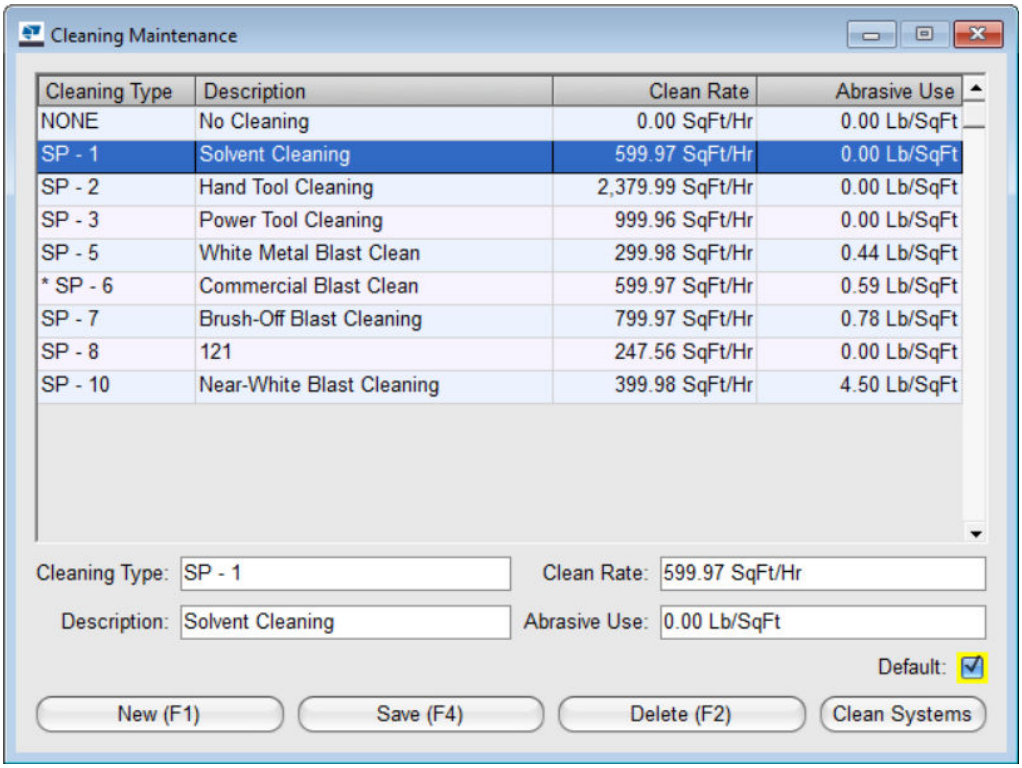
1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Parametric Assembly Maintenance** .
3. In the **Select Parametric Assembly** dialog box, select the parametric assembly that you want to delete.
4. Click **Delete**.
5. To permanently delete the selected parametric assembly, click **Yes** in the confirmation dialog box.

Adjust cleaning types and cleaning costs

Tekla EPM contains multiple standard cleaning types that you can use in the **Estimating** module. In the **Cleaning Maintenance** dialog box, you can review the existing cleaning types, and modify the cleaning types and cleaning costs to meet your needs. You can also add new cleaning types, and set the default cleaning type used in all future estimating jobs.

1. Click the **Maintenance** ribbon tab.
2. On the menu, go to **Estimating Maintenance** --> **Cleaning Maintenance** .

The **Cleaning Maintenance** dialog box opens, showing the existing clean types.



TIP If necessary, you can change the units in the dialog box from imperial to metric or the other way around. Click the **Cleaning Maintenance** ribbon tab, and in the menu, select a suitable **Switch To Metric/Imperial Mode** command.

3. Do any of the following:

To	Do this
Add a new cleaning type	a. Click **New**. b. In the **Cleaning Type** field, type an abbreviation for the cleaning type. c. Type a description for the cleaning type. d. Type the cleaning rate and the amount of abrasive use. e. To set the cleaning type as the default cleaning type for new

To	Do this
	estimating items, select the **Default** check box. If necessary, you can also change the default cleaning type for each existing estimating job manually by modifying the estimating jobs one by one (page 396). f. Click **Add**.
Modify a cleaning type	a. Select the cleaning type in the list. b. Modify the cleaning type abbreviation, description, cleaning rate, or amount of abrasive use. c. To set the cleaning type as the default cleaning type for new estimating items, select the **Default** check box. If necessary, you can also change the default cleaning type for each existing estimating job manually by modifying the estimating jobs one by one (page 396). d. Click **Save**.
Delete a cleaning type	a. Select the cleaning type in the list. b. Click **Delete**. c. To permanently delete the cleaning type, click **Yes**.

4. Click **Save**.

Note that you can create cleaning systems that contain various cleaning types. For more information, see Create and apply clean systems (page 296).

Create and apply clean systems

Clean systems allow you to apply more than one cleaning type to estimating items. You can create global estimating jobs which can be used for all new estimating jobs, or job-specific clean systems.

Create global clean systems

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Cleaning Maintenance**.
3. In the **Cleaning Maintenance** dialog box, click **Clean Systems**.
4. Click **New Clean System**.
5. Type a description for the cleaning system.
6. Use the arrow buttons to move the cleaning types that you want to include in the clean system to the **Included** list.
7. To add or reduce the times each cleaning type requires, change the value in the **Quantity** field.
8. If you only want to apply the cleaning system if cleaning is included in the labor code of the item, select the **Check Labor Code For Include Cleaning** check box.
9. To set the clean system as the default clean system used for new items, select the **Default** check box.
10. Click **Add Clean System**.

Note that the labor times and costs for cleaning need to be set in **Cleaning Maintenance**.

Create job-specific clean systems

1. In the **Select Estimating Job** dialog box, do one of the following:
   - To add a cleaning system for a new estimating job, click **New**.
   - To add a cleaning system for an existing estimating job, select it in the list, and click **Edit**.
2. In the **Estimate Job Edit** dialog box, open the **Clean Systems** tab.
3. Click **New Clean System**.
4. Type a description for the cleaning system.
5. Use the arrow buttons to move the cleaning types that you want to include in the clean system to the **Included** list.
6. To add or reduce the times each cleaning type requires, change the value in the **Quantity** field.
7. If you only want to apply the cleaning system if cleaning is included in the labor code of the item, select the **Check Labor Code For Include Cleaning** check box.
8. To set the clean system as the default clean system used for new items, select the **Default** check box.

9. Click **Add Clean System**.

Note that the labor times and costs for cleaning need to be set in **Cleaning Maintenance**.

Apply clean systems to estimating items

If you cannot see the **Clean System** field in an estimating job, modify the visible input fields via **Maintenance** --> **Estimating** --> **Edit Input Fields** .

Whether or not you select the **Carry Over** option for the **Clean System** field determines if new items initially use the default clean system or the clean system used for the previously created item.

1. Open the estimating job.
2. Do one of the following:

To apply the clean system to	Do this
One item	a. In the **Estimating** dialog box, select an item. b. Select a clean system in the **Clean System** list. c. Click **Edit** to save the changes.
Multiple items	a. In the **Estimating** dialog box, click the **Estimating** ribbon tab. b. On the menu, select **Global Edit** --> **Global Edit** c. To only modify specific types of items, in the **Estimating Global Edit Filters** dialog box, select a filter type in the **Type** list, and click **Select**. d. Select a clean system in the **Clean System** list. e. Click **Update**.

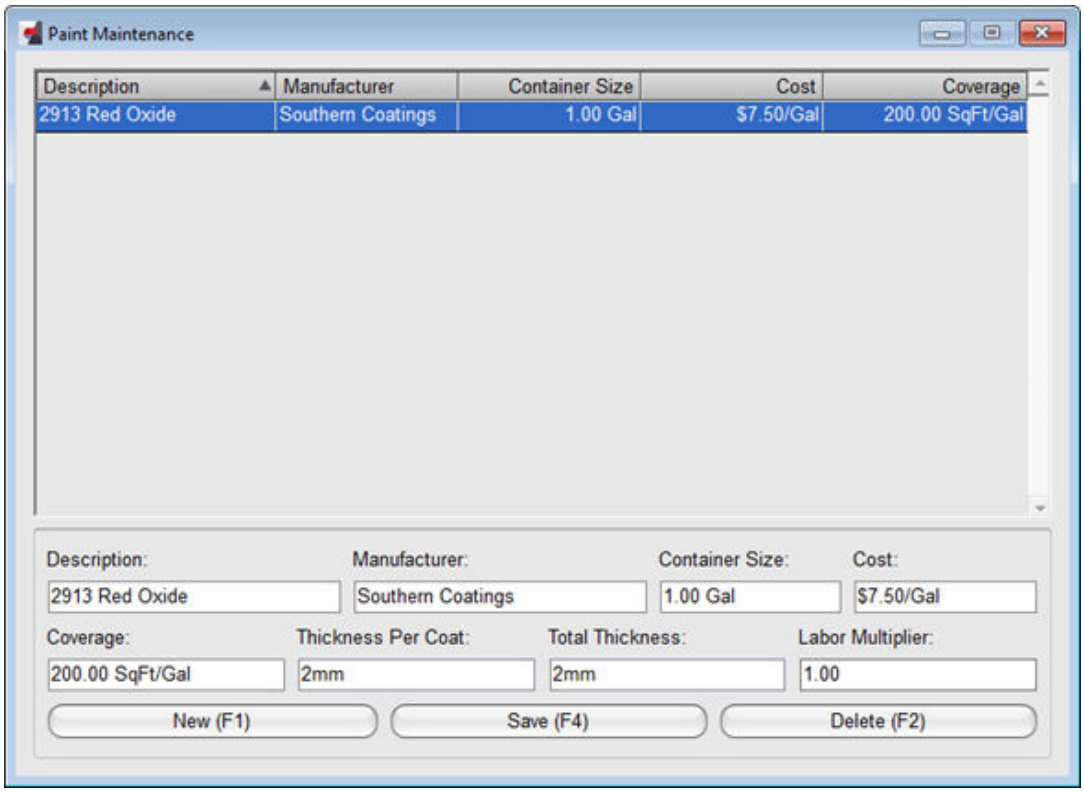
Create, modify, and delete paint types

In the **Paint Maintenance** dialog box, you can add, modify, and delete paint types that you want to use in estimating jobs. We recommend that you only add paint types that are regularly used in your shop to **Paint Maintenance**. If a paint type is only used in a particular estimating job, you can create a job-specific paint type instead.

To access the **Paint Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Paint Maintenance** .

The **Paint Maintenance** dialog box opens.



Create a new paint type

1. In the **Paint Maintenance** dialog box, click **New** to add a new paint type.
2. Type a description, manufacturer, container size, cost, coverage, and thickness for the paint type.
3. If the painting process requires more time than usually, enter a labor multiplier value.

   The labor multiplier helps Tekla EPM to calculate the labor correctly.
4. Click **Add**.

   The new painting type is added to the list.

   Repeat steps 3 to 6 to add all regularly used paint types.

When you have created the necessary paint types, you can also create paint systems using the paint types. For more information, see Create paint systems (page 300).

Modify a paint type

1. In the **Paint Maintenance** dialog box, select the paint type that you want to modify.
2. Modify the properties of the paint type according to your needs.

3. Click **Save**.

Delete a paint type

1. In the **Paint Maintenance** dialog box, select the paint type that you want to delete.
2. At the bottom of the dialog box, click **Delete**.
3. To permanently delete the selected paint type, click **Yes** in the confirmation dialog box.

Create paint systems

By using paint systems, you can apply more than one coat of paint for an estimating job. When you select a paint system in an estimating job, Tekla EPM calculates the applicable costs and adds them to the estimate. Note that globally available paint systems need to be created before creating the estimating jobs where you want to use them. Otherwise, the paint systems will not be available.

1. While in the **Paint Maintenance** dialog box, click the **Paint Maintenance** ribbon tab.
2. Open the **Paint Systems** ribbon tab.
3. Do any of the following:

To	Do this
Add a new paint system	a. Click **New**. b. Type a description for the paint system. c. Click the arrow buttons to move the paint types that you want to include to the **Paints Included** list. d. To change the number of coats, select an included paint type and type a new value in the **Quantity** field. e. If you want to set the paint system as the default paint system for new estimating jobs, select the **Default** check box. f. Click **Add Paint System.**
Modify a paint system	a. Select the paint system in the list.

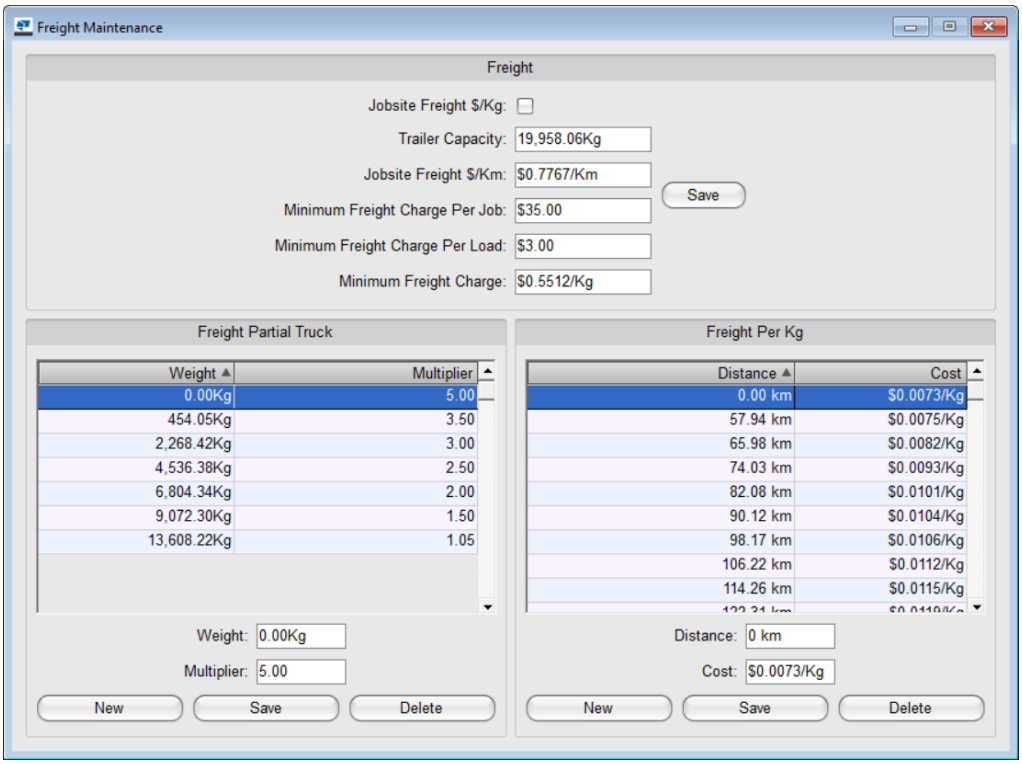
To	Do this
	b. Change the description, included paints, or the number of paint coats according to your needs. c. If you want to set the paint system as the default paint system for new estimating jobs, select the **Default** check box. d. Click **Save Paint System**.
Delete a paint system	a. Select the paint system in the list. b. Click **Delete Paint System**. c. To permanently delete the paint system, click **Yes**.

Note that you can also create job-specific paint systems. For more information, see Create job-specific paint systems (page 374).

Modify freight pricing

In the **Freight Maintenance** dialog box, you can modify freight pricing used in **Estimating**. The freight information that you set in the **Freight Maintenance** dialog box can be applied to all estimates.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Freight Maintenance** .



3. To change the costs of inbound freight and purchased items, in the **Freight** section of the **Freight Maintenance** dialog box, modify the trailer capacity, jobsite freight costs, and minimum freight charges.
4. To update the inbound freight costs, click **Save** at the bottom of **Freight** section.
5. Select or clear the **Jobsite Freight $/CWT** or **Jobsite Freight $/KG** check box according to your needs:

When the Jobsite Freight $/CWT or Jobsite Freight $/KG check box is...	It means that...
selected	• Tekla EPM calculates freight as dollar per hundredweight or per kilogram. • When the total shipping weight is less than the trailer capacity, the **Freight Partial Truck** multipliers are added to the total calculation for **Freight Per CWT/KG**.
cleared	• Tekla EPM calculates freight as dollar per mile (the **Freight Per Mile** value is used). • When **Freight Per Mile** is less than **Minimum Freight Charge Per Job**, the **Minimum Freight Charge Per Job** is used instead.

Add or update the weight range and multiplier for different load sizes

The **Freight Partial Truck** options are used together with the **Jobsite Freight $/CWT**/**Freight Per CWT/KG** options when the **Jobsite Freight $/CWT**/**Jobsite Freight $/KG** check box is selected.

The **Freight Partial Truck** pricing also initiates a multiplier to the **Freight Per Mile** cost.

- Do any of the following:

To	Do this
Add a new weight range and multiplier	1. In the **Freight Partial Truck** section, click **New**. 2. Type the minimum and maximum weight. 3. In the **Multiplier** field, type the base load cost multiplier. The multiplier value is used to calculate the **Freight Per Mile** cost for loads that fall within the weight range. 4. Click **Add**.
Modify an existing weight range and multiplier	1. In the **Freight Partial Truck** section, click to select a distance in the list. 2. Modify the weight range or the multiplier value. 3. Click **Edit** to save the changes.

Add or update freight pricing per hundedweight or kilogram

- Do any of the following:

To	Do this
Add new pricing for a distance	1. In the **Freight Per CWT/KG** section, click **New**. 2. Define values for minimum miles, maximum miles, and cost. 3. Click **Add**.
Modify the pricing of an existing distance	1. In the **Freight Per CWT/KG** section, click to select a distance in the list. 2. Modify the cost. 3. Click **Edit** to save the changes.

Manage estimating jobs

You can manage existing estimating jobs in different ways. You can copy, renumber, merge, export, and delete combining jobs, and set job groups and job statuses.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Job Maintenance** .
3. In the **Estimating Job Maintenance** dialog box, select the jobs that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
4. At the bottom of the dialog box, click any of the available buttons.

   The options are:

   - **Delete**
   - **Copy**
   - **Renumber**
   - **Merge**
   - **Export**
   - **Set Group Name**
   - **Set Job Status**
5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Delete estimating jobs (page 304)

Copy an estimating job (page 305)

Renumber an estimating job (page 305)

Merge estimating jobs (page 306)

Export estimating jobs (page 306)

Set job groups for estimating jobs (page 306)

Set job statuses for estimating jobs (page 307)

Delete estimating jobs

You can delete unnecessary estimating jobs at any time in **Job Maintenance**. Note that the jobs are deleted permanently. If you want to use estimating jobs for reference later, we recommend that you export the estimating jobs before deleting them.

1. In the **Estimating Job Maintenance** dialog box, select the jobs that you want to delete.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
2. At the bottom of the dialog box, click **Delete**.
3. To permanently delete the estimating job, click **Yes** in the confirmation dialog box.

See also

Export estimating jobs (page 306)

Copy an estimating job

If necessary, you can copy an existing job to use it as the basis for a similar new job. Copying an existing job makes creating the new job quicker, as you do not have to set all properties manually, or create items one by one.

1. In the **Estimating Job Maintenance** dialog box, select the job that you want to copy.
2. At the bottom of the dialog box, click **Copy**.
3. Type a number for the new job.
4. Click **OK**.

Tekla EPM creates a new job based on the selected job. You can modify the properties of the new job in the **Estimating** module.

See also

Manage estimating jobs (page 303)

Renumber an estimating job

You can renumber a job to re-establish the desired item number increments. To renumber items in an existing estimating job, do the following:

1. In the **Estimating Job Maintenance** dialog box, select the job that you want to renumber.
2. At the bottom of the dialog box, click **Renumber**.
3. In the **Select the pages to renumber** dialog box, click the arrow buttons to move the pages that you want to renumber to the **Included** list.
4. Click **OK**.
5. In the **Starting item #** field, type a new starting number.

6. In the **Item increment** field, type the desired numbering increment.

   For example, use 1 for single digit (1, 2, 3, ...), 5 for increments of five (5, 10, 15, ...), and 10 for increments on ten (10, 20, 30, ...).

7. To renumber the job, click **OK**.

Merge estimating jobs

You can create a new job by merging two existing jobs. For example, merging jobs can be useful when you have separate estimating jobs in the same project.

1. In the **Estimating Job Maintenance** dialog box, select the jobs that you want to merge.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.

2. At the bottom of the dialog box, click **Merge**.
3. Type a number for the new job.
4. Click **OK**.

See also

Manage estimating jobs (page 303)

Export estimating jobs

Export jobs before deleting them to make the jobs available for future reference. Note that in Tekla EPM, only estimating jobs can be exported to KISS files.

1. In the **Estimating Job Maintenance** dialog box, select the job that you want to export.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.

2. At the bottom of the dialog box, click **Export**.
3. In the **Save As** dialog box, browse to the folder where you want to save the file.
4. Use the automatically generated name or type a new one.
5. Click **Save**.

If you have selected multiple jobs, repeat steps 3 to 5 for each job.

Set job groups for estimating jobs

Job groups allow you to identify and sort projects that are similar. For example, you can create job groups for commercial or industrial work, or by year. Assigning job groups to jobs makes it easier to sort a long list of jobs.

1. In the **Estimating Job Maintenance** dialog box, select the jobs for which you want to set job groups.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
2. At the bottom of the dialog box, click **Set Group Name**.
3. Select if you want to update the primary group or the secondary group.
4. Type a name for the group.
5. Click **OK**.

See also

Manage estimating jobs (page 303)

Set job statuses for estimating jobs

The job status determines if a job is still in progress (**Open**) or finished (**Closed**). By setting statuses for estimating jobs, you can view only the current jobs in the **Select Estimating Job** dialog box. Any finished jobs will be hidden by default.

1. In the **Estimating Job Maintenance** dialog box, select the jobs whose status you want to change.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
2. At the bottom of the dialog box, click **Set Job Status**.
3. Select the new job status in the list.
4. Click **OK**.

Note that only open jobs are available in Tekla EPM Go.

See also

Manage estimating jobs (page 303)

Open an estimating job (page 377)

Modify an estimating job (page 396)

Adjust labor information

Before you start working in the **Estimating** module, we recommend that you view the information in the Tekla EPM labor database, including labor groups, labor codes, and material-specific labor times. If necessary, you can then adjust this information to reflect the labor data of your shop.

NOTE Before making changes to the labor information, we recommend that you export the labor information and save it in a text file. This way, you can re-import the information later, if necessary.

1. Click the **Maintenance** ribbon tab.
2. On the menu, go to **Estimating** --> **Labor Maintenance** .
3. Select the desired menu command.

For more information, see the following links:

Calculating labor time (page 308)

Create assemblies (page 311)

View, rename, copy, and delete assemblies (page 314)

Adjust labor times for column splices (page 315)

Adjust labor times for copes, punches, and stiffeners (page 316)

Create estimate extras (page 316)

View extrapolation factors (page 320)

Adjust labor codes (page 321)

Create, modify, and delete labor groups (page 326)

Create, modify, and delete labor operations (page 329)

Adjust labor standards (page 332)

Adjust quantity and weight labor factors (page 337)

Manage standard clips (page 339)

Adjust labor times for burning (page 341)

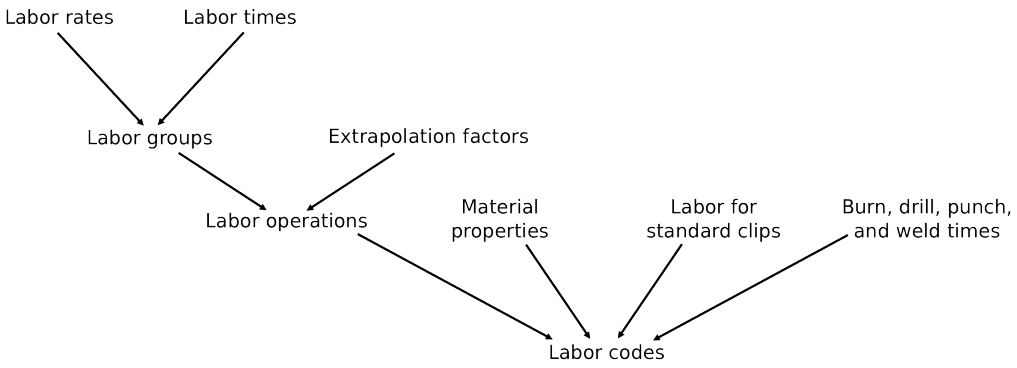
Adjust labor times for drilling (page 344)

Adjust labor times for punching (page 347)

Adjust labor times for welding (page 350)

Calculating labor time

The labor database consists of different elements that work together to calculate accurate labor times. See the purposes of each labor element:



Labor rates

Labor rates are hourly rates for specific fabrication functions, such as detailing, erecting, and shop labor.

Labor rates are assigned to different labor groups.

For instructions on adjusting labor rates, see Create and modify labor rates (page 360).

Labor groups

Labor groups bring together the assigned labor times and the hourly labor rates. A labor group can be described as a bucket where you put labor time and assign a labor rate.

The labor group is assigned to the labor operations. The labor from the labor operation is then summarized in the labor group, and a labor rate is applied.

For instructions on adjusting labor groups, see Create, modify, and delete labor groups (page 326).

Labor operations

Labor operations bring together the labor group and the extrapolation factor.

A labor operation is assigned an extrapolation factor and the time defined in the labor standard. Based on this information, Tekla EPM calculates the amount of labor based on the properties of the material.

Labor operations can be assigned through labor codes, estimate extras, or in some cases, additional labor.

To use a labor operation in an estimating job, you need to add it to a labor code in **Labor Codes**.

The labor time used for each labor operation is determined in **Labor Standards Maintenance**. For more information, see Adjust labor standards (page 332).

For instructions on adjusting labor operations, see Create, modify, and delete labor operations (page 329).

Labor codes

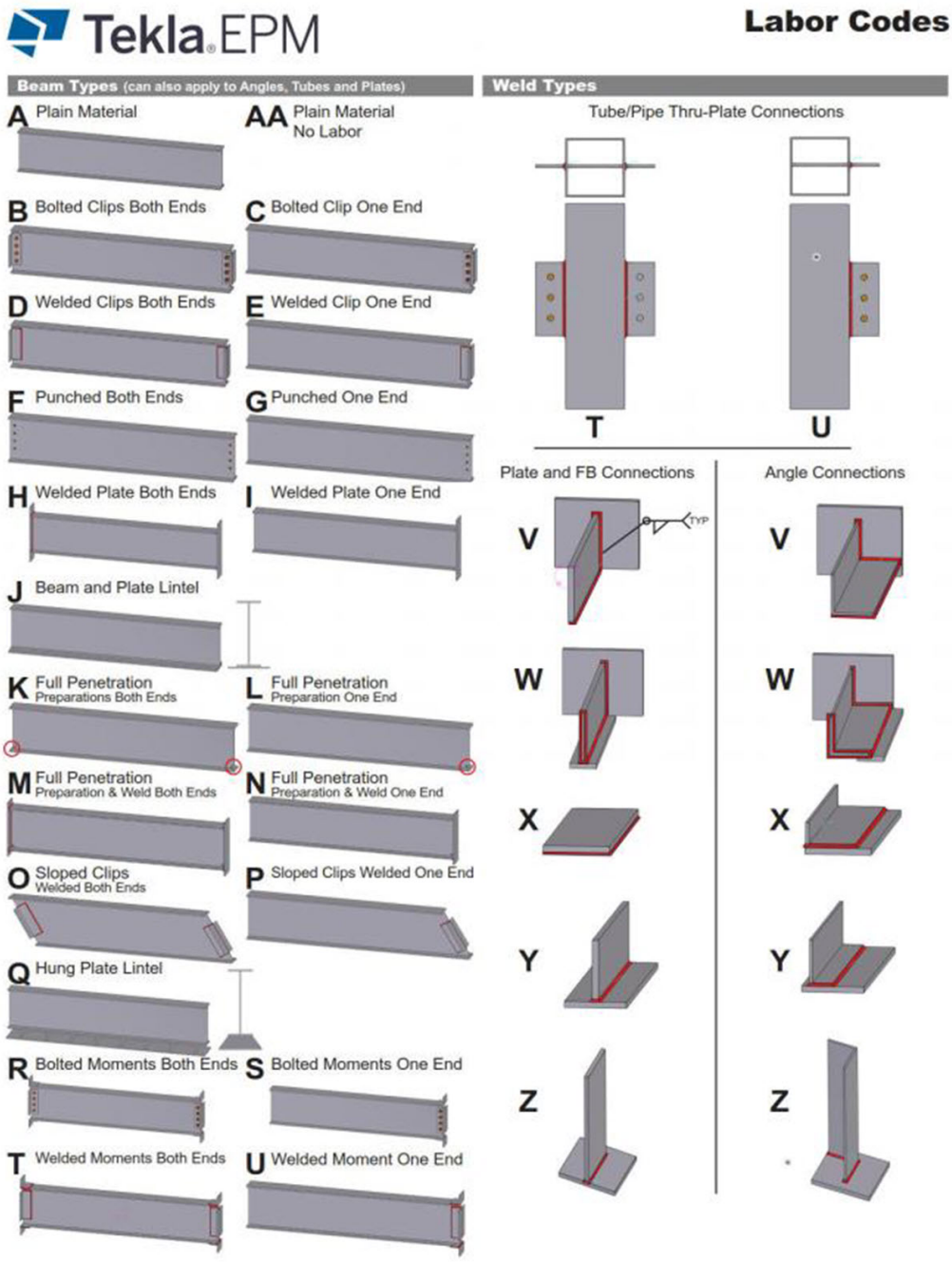
Labor codes group labor operations together with formulas that calculate burn, drill, punch, and weld time, the material and labor for standard clips.

The estimating items that do not belong to any material group, such as comments, hardware, and buy-out items, are not included in labor codes.

Labor codes also include the assignment of shop or field bolts, including the cleaning and splicing when those operations are required.

For instructions on adjusting labor codes, see Adjust labor codes (page 321).

See the default labor codes in Tekla EPM in the following image:

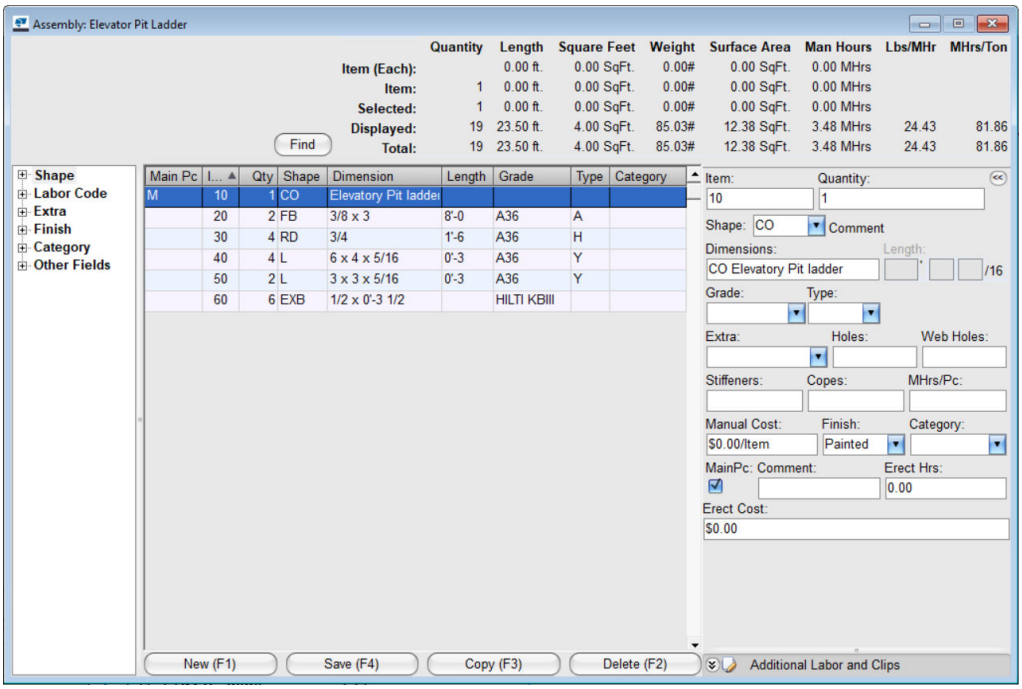


Create assemblies

You can create a library of commonly used assemblies, or bid items, that you can use in all estimating jobs. Assemblies can contain multiple items with different shapes, dimensions, finishes and categories, as well as accessories and parametric assemblies. By adding an assembly to your estimating job, you are actually adding all these items at once.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Assemblies** .
3. In the **Select Assembly** dialog box, click **Add**.
4. Type a name for the assembly, and click **OK**.

   The **Assembly Maintenance** dialog box opens.



   The summary on top of the dialog box shows the quantity, length, weight, surface area, and work time in man hours for each of the selected items, all of the selected items, all items visible in the job, and the entire job. The summary also displays the pounds per man hour and man hours per ton calculations for the selected items, all items visible in the job, and the entire job.

   Use the **Find** button to find items of a specific shape, material grade, or material dimension, or a particular item in the assembly. For instructions, see Find estimating items (page 413).

   Use the navigation tree on the left side of the dialog box to only view particular items. For instructions, see View only particular items or pages in the Esimating dialog box (page 378).

5. Click **New** to add the first item to the assembly.
6. Create a comment item as the header line of the assembly:
   a. Set **Shape** to CO.
   b. Click the **Dimensions** field.
   c. Type a description for the assembly, and press **Enter**.

d. Click **Add**

7. To add more items:
   a. Click **New**.
   b. Define the quantity, shape, dimensions, and other properties for the item that you are adding.
   c. Click **Add**.
8. To add additional labor and clips to an item:
   a. Select the item in the item list.
   b. Expand the **Additional Labor and Clips** section.
   c. Click **Edit**.
   d. In the **Assembly Item** dialog box, click **New** under **Additional Labor** or **Clips**, depending on the type of item you are adding.
   e. Define the item properties.
   f. Click **Add**.
   g. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
9. To add accessories or parametric assemblies to the assembly:

To	Do this
Add an accessory	a. Click the **Assembly Maintenance** ribbon tab. b. On the menu, select **Add Accessory**. c. In the **Select Accessory** dialog box, select the accessory that you want to add. d. Use the check boxes under the accessory list to select if you want to use the finish and category of the original item, or set the category as the accessory description. e. Click **Add Selected**. The accessory is added to the assembly.
Add a parametric assembly	a. Click the **Assembly Maintenance** ribbon tab. b. On the menu, select **Add Parametric Assembly**.

To	Do this
	c. Double-click the parametric assembly that you want to add. d. If necessary, in the **Parametric Assembly - Variables** dialog box, set values for the variables. e. Click **Calculate Parametric Assembly**. f. Click **Add Parametric Assembly**. The parametric assembly is added to the assembly.

10. When the assembly is ready, click the **Close** button (**X**) in the upper-right corner.

The assembly is now available for all estimating jobs. You can also see the assembly in the **Select Assembly** dialog box.

You can also create job-specific assemblies. For more information, see Add an assembly (page 411).

See also

View, rename, copy, and delete assemblies (page 314)

View, rename, copy, and delete assemblies

You can view, rename, and delete both globally available and job-specific assemblies in the **Assembly Maintenance** dialog box. Furthermore, you can copy job-specific assemblies to the assembly library, so that they will be available in all estimating jobs.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Assembly Maintenance** .

   The **Assembly Maintenance** dialog box opens.

   You can view the existing global assemblies in a list on the left side, and the job-specific assemblies on the right side.
3. According to your needs, do any of the following:

To	Do this
Rename an assembly	a. Select an assembly in either of the lists. b. Type a new name in the empty field under the list. c. Click **Rename**.

To	Do this
Delete an assembly	a. Select an assembly in either of the lists. b. Click **Delete** under the list. c. To permanently delete the assembly, click **Yes** in the confirmation dialog box.
Copy a job-specific assembly to the assembly library	a. In the **Job** list, click to select the estimating job from which you want to copy an assembly. b. Select the assembly that you want to copy. c. Click **<Copy**. The assembly is now available for all estimating jobs.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Create assemblies (page 311)

Adjust labor times for column splices

In **Column Splices Maintenance**, you can adjust the labor times for different times of column splices. These labor times will be used in all estimates by default. If necessary, create new column splice types or modify the existing ones.

To use column splices, you need to add them to labor codes. For more information, see Adjust labor codes (page 321).

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Column Splices** .
3. In the **Column Splices Maintenance** dialog box, do any of the following:

To	Do this
Create a new column splice type	a. Click **New**. b. In the **Type** field, enter a letter indicator. c. Type a description and define the labor time in man hours. d. Click **Add**.
Modify an existing column splice type	a. Select a column splice type in the list. b. Modify the letter indicator, description, and labor time according to your needs.

To	Do this
	c. Click **Edit** to save the changes.
Delete a column splice type	a. Select a column splice type in the list. b. Click **Delete**. c. To permanently delete the column splice type, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Adjust labor times for copes, punches, and stiffeners

In **Cope Punch Stiffener**, adjust the default labor times for the layout of copes, punches, and stiffeners. For stiffeners, you can also adjust the fit-up time. The labor times that you define will be used in all estimating jobs.

- To define the labor time used for cutting the cope, see Adjust labor times for burning (page 341).
- To modify cope and stiffener weld settings, see Modify labor operation settings (page 356).

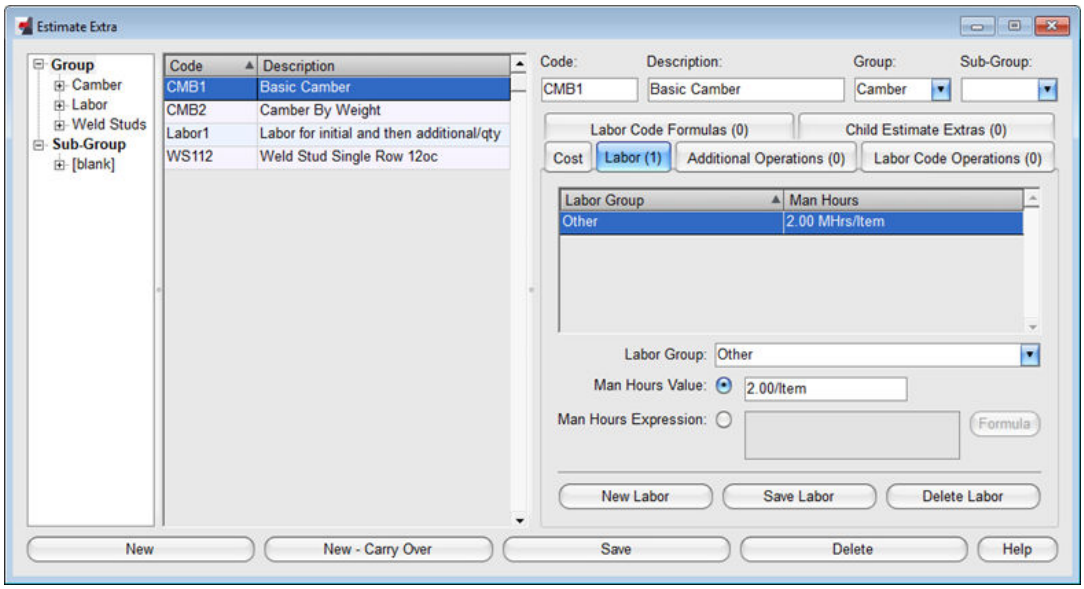
1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Cope / Punch / Stiffeners** .
3. In the **Cope Punch Stiffener** dialog box, type labor times for the different copes, punches, and stiffeners.
4. Click **Save**.

Create estimate extras

Create estimate extras to add costs and labor for commonly used special items when there are no applicable labor codes in Tekla EPM. Estimate extras allow you to add as much labor and cost to a single item in an estimating job as needed. Estimate extras are often used for all labor done outside of your shop. For example, you can create estimate extras for items such as camber, rolling, and forming.

1. Click the **Maintenance** ribbon tab
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Estimate Extras** .

The **Estimate Extra** dialog box opens.



Create an estimate extra

1. In the **Estimate Extra** dialog box, click **New**.

   NOTE To create copy of an estimate extra and use it as the basis of a new one, select the existing estimate extra in the list and click **New - Carry Over**.

2. In the **Code** field, type an abbreviation that helps you identify the estimate extra.

   The abbreviation will be shown when you apply estimate extras to estimating items.

3. Type a description, group, and sub-group for the estimate extra.

   Groups and sub-groups are only used for filtering the estimate extras in the dialog box.

4. Click **Add**.

5. Click the other tabs to enter more information about the estimate extra.

   According to your needs, see any of the following instructions:

Add labor code formulas

You can add new labor code formulas in the **Labor Code Maintenance** dialog box. For more information, see Adjust labor codes (page 321).

For more information on creating formulas, see Create formulas (page 286).

1. Open the **Labor Code Formulas** tab.

2. Click **New Formula**.

3. In the **Formula** list, select an existing labor code formula.
4. Do one of the following:
   - In the **Quantity** field, enter the number of times the formula is used for the estimate extra.
   - Click **Formula** on the right side of the **Quantity** field and create a quantity formula.
5. Click **Add Formula**.

   Add as many formulas as necessary to define the extra labor.
6. Click **Save** at the bottom of the dialog box.

Add child estimate extras

Child estimate extras allow you to add more than one labor operation to the main estimate extra item. In practice, this means that you can group many labor functions together into one estimate extra.

1. Open the **Child Estimate Extras** tab.
2. Click **New Child Extra**.
3. In the **Child Estimate Extra** list, select an existing estimate extra that you want to add as a child item for the current estimate extra.
4. Do one of the following:
   - In the **Quantity** field, enter the number of times the formula is used for the estimate extra.
   - Click **Formula** on the right side of the **Quantity** field and create a quantity formula.
5. Click **Add Child Extra**.
6. Repeat steps 1 to 5 to add all necessary child estimate extras.
7. Click **Save** at the bottom of the dialog box.

Add costs

1. Open the **Cost** tab.
2. According to your needs, do any of the following:

To	Do this
Add a fixed cost	a. Select the **Cost Value** option. b. Type the cost in the **Cost Value** field. **TIP** If you want to change the units, right-click in the **Cost Value** field and select the new units.

To	Do this
Enter a formula for calculating the cost	a. Select the **Cost Expression** option. b. Click **Formula**. c. Build the formula by entering the necessary elements and adding variables. d. Click **OK**.

3. To assign the cost to a specific category, select an option in the **Cost Directed To** list.
4. Click **Save** at the bottom of the dialog box.

Add labor times for a labor group

1. Open the **Labor** tab.
2. Click **New Labor**.
3. In the **Labor Group** list, select the labor group for which you want to add labor times regarding the estimate extra.
4. Do any of the following:

To	Do this
Add a fixed amount of labor time	a. Select the **Man Hours Value** option. b. Type the labor time in the **Man Hours Value** field. **TIP** If you want to change the units, right-click in the **Man Hours Value** field and select the new units.
Add an expression to calculate the labor time	a. Click the **Man Hours Expression** option. b. Click **Formula**. c. Build the formula by entering the necessary elements and adding variables. d. Click **OK**.

5. Click **Add Labor**.
6. Click **Save** at the bottom of the dialog box.

Add welding, burning, punching, or drilling

1. Open the **Additional Operations** tab.

2. Click **New Operation**.
3. In the **Operation** list, select the labor operation.
4. In the **Type** list, select if the operation is manual, semi-automatic, or automatic.
5. Enter values or create formulas for **Quantity**, **Thickness**, and **Length**.
6. Click **Add Operation**.
7. Click **Save** at the bottom of the dialog box.

Add labor code operations

Labor code operations allow you to add the same operations for the selected estimate extra that are used for labor codes.

1. Open the **Labor Code Operations** tab.
2. Click **New Operation**.
3. Select the material group and the operation in the appropriate lists.
4. Type a quantity in the **Quantity** field, or click **Formula** to define a formula that calculates the quantity.
5. Click **Add Operation**.
6. Click **Save** at the bottom of the dialog box.

View extrapolation factors

Extrapolation factors are variables that Tekla EPM uses in calculating the labor times when labor applied to the materials. Extrapolation factors work together with labor operations and labor groups to properly apply labor times listed in labor standards. Extrapolation factors are also specific to certain labor operations.

You cannot create any additional extrapolation factors, but simply view the existing ones.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Extrapolation Factors** .
3. In the **Extrapolation Factor Maintenance** dialog box, view the extrapolation factors.
4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Create, modify, and delete labor groups (page 326)

Create, modify, and delete labor operations (page 329)

Adjust labor standards (page 332)

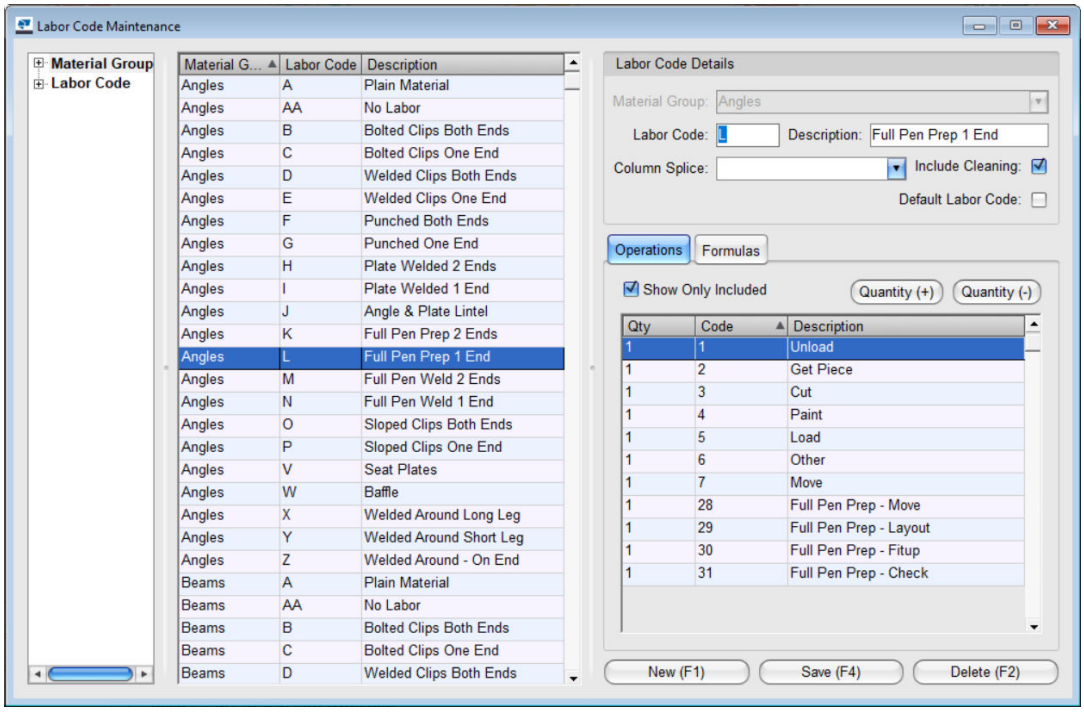
Adjust labor codes

Labor codes group labor operations together with formulas. View the labor codes applied to different material groups in **Labor Code Maintenance**. You can also add more labor codes for common labor, such as adding sloped clips for bolted connections. In the **Estimating** module, you can use a labor code for an item by selecting it in the **Type** list.

To access the **Labor Code Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Labor Codes** .

The **Labor Code Maintenance** dialog box opens.

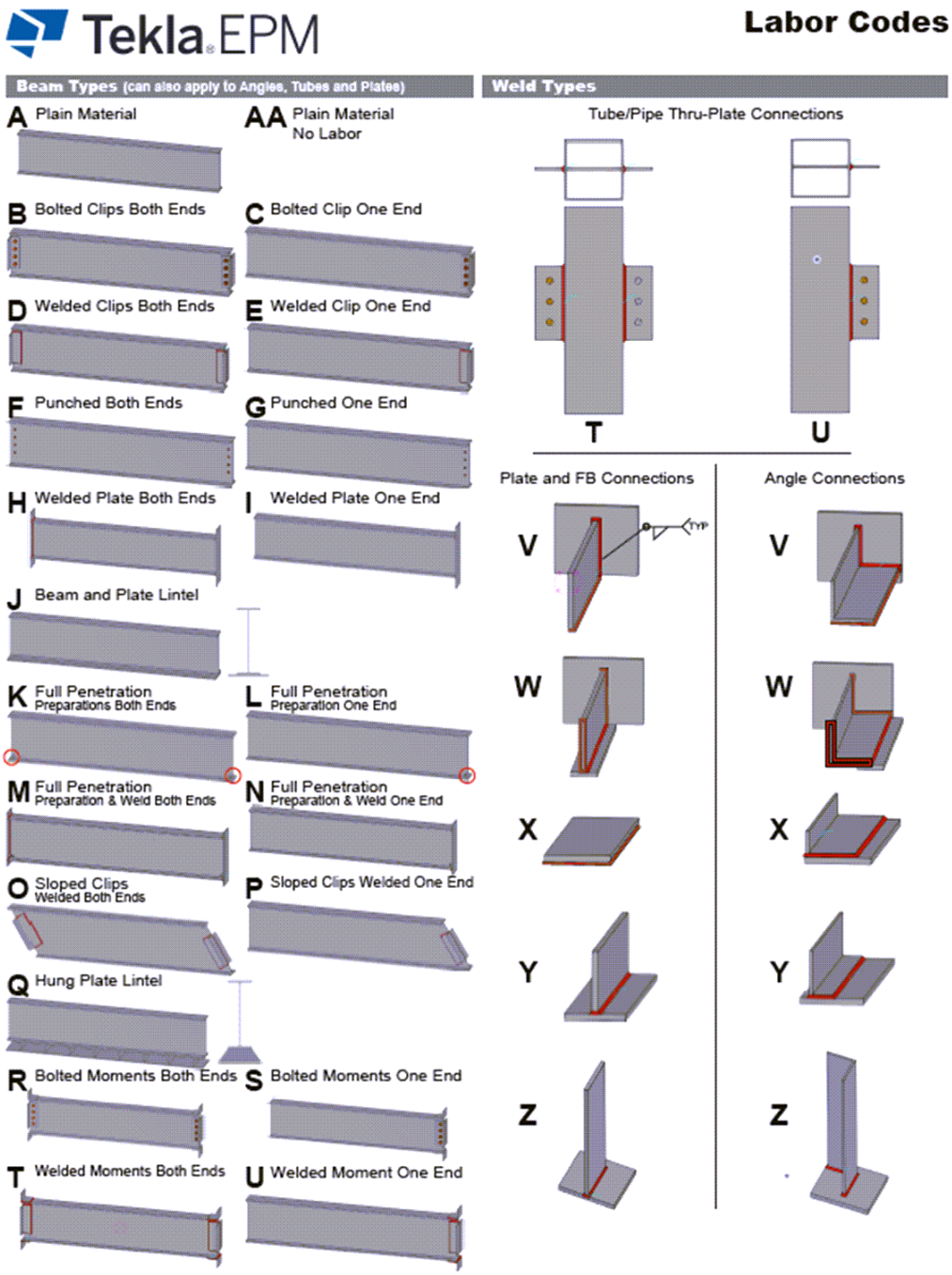


Labor codes are always used by certain material groups, or types of shapes. You can view the labor codes by material group by scrolling the labor code list.

In the **Operations** section, you can set the number of times an operation is done within the labor code, or how many times the labor data from labor standards is entered for each item. When the **Qty** column is blank, the operation does not belong to the selected labor code.

In the **Formulas** section, you can see the formulas applied to calculating weld, burn, drill, and punch times, along with the labor times spent for standard clips. You can then set the number of times a formula is applied. When the **Qty** column is blank, the formula is not applied.

The preloaded labor codes



Change the default labor code of a material group

1. Scroll to find the material group.
2. Scroll to find and select the labor code that you want to set as the default option.

3. Select the **Default Labor Code** check box.
4. At the bottom of the dialog box, click **Save**.

The selected labor code is now used by default for the material group in the **Estimating** module.

Add a new labor code

1. At the bottom of the **Labor Code Maintenance** dialog box, click **New**.
2. In the **Material Group** list, select the material for which the new code is added.

   The labor code will only be available for the selected material group.
3. Type an abbreviation and description for the labor code.
4. If you want to add a column splice to the labor code, select an option in the **Column Splice** list.
5. To include cleaning in the labor code, select the **Include Cleaning** check box.
6. To set the new labor code as the default labor code for the material group, select the **Default Labor Code** check box.
7. On the **Operations** tab, ensure that the necessary operations are included to the labor code.

   If necessary, use the **Quantity (+)** and **Quantity (-)** buttons above the list to add or subtract the number of operations.
8. On the **Formula** tab, ensure that the necessary formulas are applied.

   If necessary, use the **Quantity (+)** and **Quantity (-)** buttons above the list to add or subtract the number of formulas.
9. Click **Add**.

The new labor code is created and is available in the **Estimating** module.

Add or subtract operations and formulas

1. Scroll to find and select the material group.
2. Scroll to find and select the labor code.
3. Select the operation or formula whose quantity you want to modify in the labor code.
4. Above the list, click **Quantity (+)** or **Quantity (-)** to change the quantity.
5. Click **Save**.

Add column splices to a labor code

You can apply column splices to any labor code. Tekla EPM calculates the labor time used in the column splice automatically.

1. Scroll to find and select the material group.
2. Scroll to find and select the labor code.
3. In the **Column Splice** list, select the column splice type that you want to use for the labor code.
4. Click **Save**.

Column splices are added to the labor code.

Note that the required splice materials need to be added manually in the **Estimating** module.

Add cleaning to a labor code

1. In the **Material Group** list, select the material group.
2. In the **Labor Code** list, select the labor code.
3. Select the **Include Cleaning** check box.
4. Click **Save**.

Add, modify, and delete formulas

1. Click the **Labor Code Maintenance** ribbon tab.
2. On the menu, select **Formula Maintenance**.

   The **Formula Maintenance** dialog box opens. The existing formulas are displayed in the list on the left of the dialog box.

   Each formula type includes options for quantity, weld, thickness and length.
3. Do any of the following:

To	Do this
Create a new formula	a. Click **New Formula**. b. In the **Formula Type** list, select an option. The formula type that you select determines the variables for which you need to enter values on the right side of the dialog box. For example, if you select **Burn**, you will need to determine the quantity, burn operation, thickness, and length. c. For each variable, click the **Edit Formula** button on the right side of the field, and type a value or build a formula.

To	Do this
	d. To save the formula, click **Edit Formula** at the bottom of the dialog box.
Modify an existing formula	a. Select the formula that you want to modify. b. If necessary, in the **Formula Type** list, select a different option. c. For each variable, click the **Edit Formula** on the right side of the field, and modify the value or formula according to your needs. d. To change the position of an operation in the formula, select the operation, and move it by clicking the **Move Up** and **Move Down** buttons. e. To save the changes, click **Edit Formula** at the bottom of the dialog box.
Delete an existing formula	Note that the formula will be permanently deleted and cannot be used in any labor code. a. Select the formula that you want to delete. b. Click **Delete**. c. To permanently delete the formula, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View and print a list of labor codes

1. Click the **Labor Code Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. To only include particular material groups or labor codes, in the **Labor Code Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. Click the arrow buttons to move the material groups or labor codes that you want to include to the **Included** list.
5. Click **OK**.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, do any of the following according to your needs:

To	Do this
View the labor code list	• Click **View**.

To	Do this
Print the labor code list	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the labor code list	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

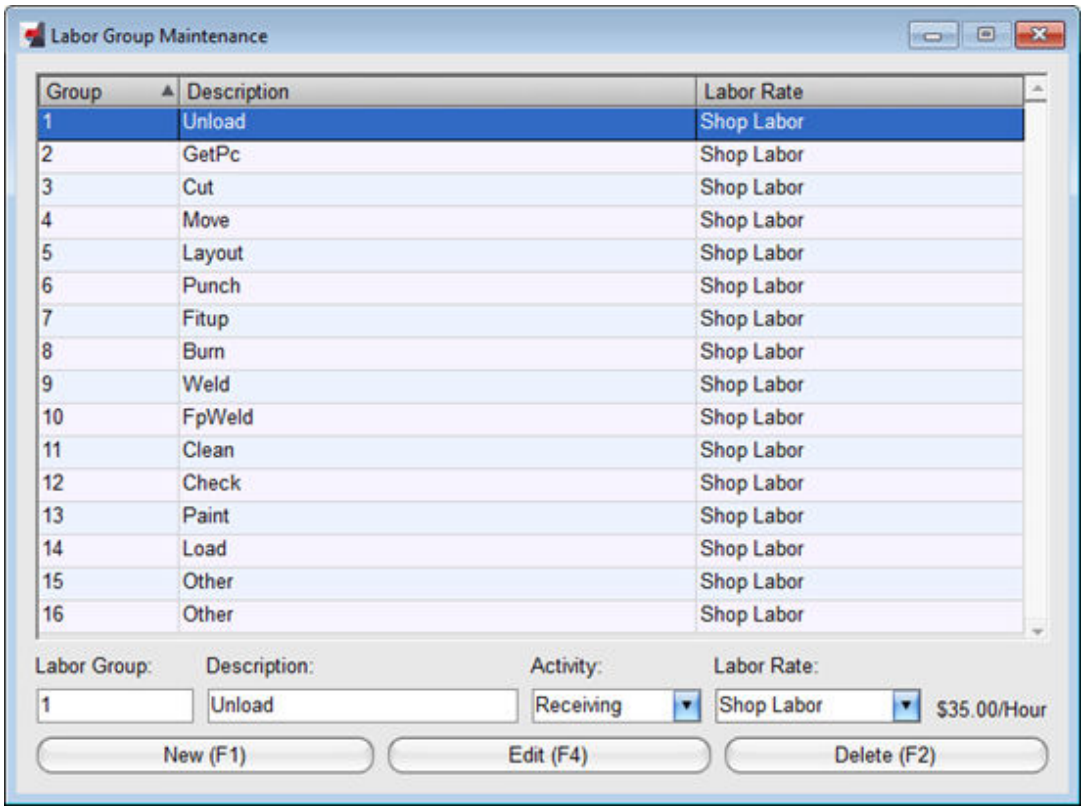
Create, modify, and delete labor groups

Labor groups define the different labor types being used in an estimating job. All labor times, except for the erection and detailing times, defined in Tekla EPM are assigned to a particular labor group. Tekla EPM already contains labor groups for labor types such as cutting, cleaning, or loading. You can view and modify the existing labor groups in the **Labor Group Maintenance** dialog box, or add new ones according to the needs of your shop.

To access the **Labor Group Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Labor Groups** .

The **Labor Group Maintenance** dialog box opens.



Create a labor group

1. Click **New**.
2. In the **Labor Group** field, type a number that is not used by any existing labor group.
3. Type a description for the labor group.
4. In the **Activity** list, select which activity the new labor group is associated to.
5. In the **Labor Rate** list, select which labor rate the new labor group is associated to.

   The labor rates are created in **Fabricator Information**. For more information, see Create and modify labor rates (page 360).

   The cost of the labor appears on the right side of the **Labor Rate** list.
6. Click **Add**.

The new labor group is created. You can now assign different labor times, such as burn time or manual labor time, to the labor group.

Modify a labor group

1. Select the labor group that you want to modify.

2. Modify the labor group number, description, activity, and labor rate according to your needs.
3. Click **Edit** to save the changes.

Delete a labor group

Deleting a labor group is permanent and cannot be undone.

1. Select the labor group that you want to delete.
2. Click **Delete**.
3. To permanently delete the labor group, click **Yes** in the confirmation dialog box.

Modify miscellaneous labor groups

In the **Miscellaneous Labor Group** dialog box, you can determine in which labor group specific operations, such as cleaning or manual labor, are included.

1. Click the **Labor Group Maintenance** ribbon tab.
2. On the menu, select **Miscellaneous Labor Groups**.
3. In the available lists in the **Miscellaneous Labor Group** dialog box, select to which labor groups the different labor times are assigned.
4. Click **Save**.

View, print, or export the labor group list

1. Click the **Labor Group Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. In the **Report Selection** dialog box, do any of the following according to your needs:

To	Do this
View the labor group list	• Click **View**.
Print the labor group list	a. Change the number of printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.

To	Do this
Export the labor group list	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. To export the labor group list, click **Export**.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Create, modify, and delete labor operations

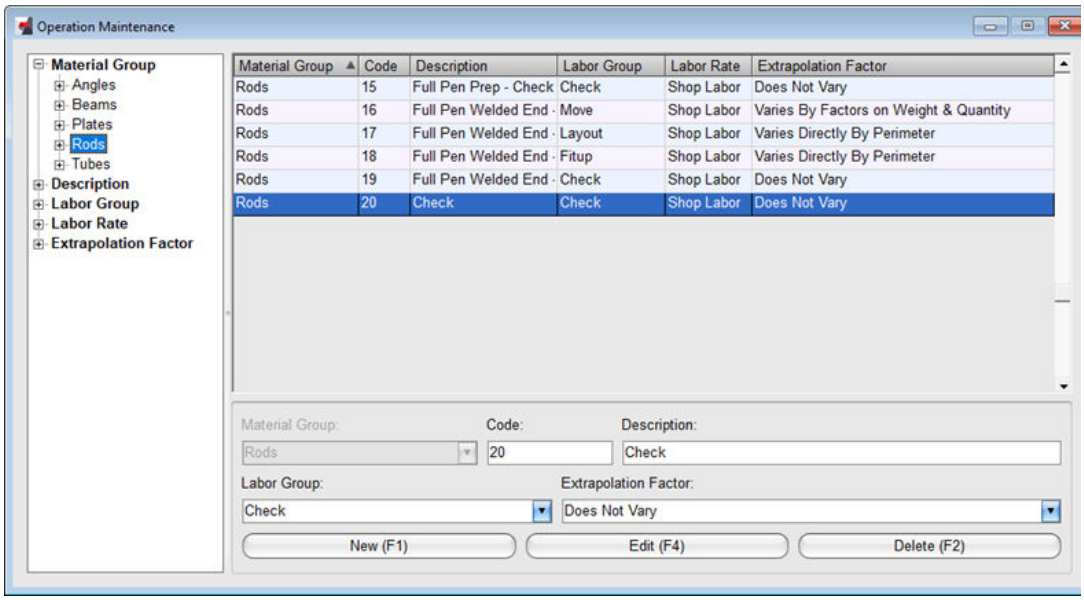
Labor operations are operations that take place in the fabrication process, such as unloading, painting, or moving material. A labor operation is assigned an extrapolation factor and the time in the labor standard, so that Tekla EPM can calculate the amount of labor based on the properties of the material. You can view and modify the existing labor operations in **Operation Maintenance**. You can also create new labor operations according to the needs of your shop.

To modify the burn, drill, punch, and weld settings for labor operations, see Modify labor operation settings (page 356).

To access the **Operation Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Labor Operations** .

The **Operation Maintenance** dialog opens.



Create a labor operation

1. Click **New**.
2. In the **Code** field, type a number that is not in use by another labor operation.
3. Type a description for the labor operation.
4. In the **Labor Group** list, click to select the labor group to which the labor operation is assigned.
5. In the **Extrapolation Factor** list, click to select the variable used in calculating labor times.
6. Click **Add**.

The new labor operation is created.

Note that before you can use the labor operation in estimating jobs, you need to add it to a labor code in Labor Codes (page 321) and enter the labor time in Labor Standard Maintenance (page 332).

Modify an existing labor operation

1. Select a labor operation in the list.
2. Modify the code, description, labor group, and extrapolation factor according to your needs.
3. Click **Edit** to save the changes.

Delete a labor operation

Note that deleting a labor operation is permanent and cannot be undone.

1. Select a labor operation in the list.
2. Click **Delete**.
3. To permanently delete the labor operation, click **Yes** in the confirmation dialog box.

View, print, or export the labor operation list

The labor operation list shows how Tekla EPM applies labor for each material group.

1. Click the **Labor Operation Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. To only include particular material groups in the labor operation list, in the **Labor Operation Report Filters** dialog box, click **Edit** on the right side of **Material Group**.
4. Click the arrow buttons to move the material groups that you want to include to the **Included** list.
5. Click **OK**.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, do any of the following according to your needs:

To	Do this
View the labor operation list	• Click **View**.
Print the labor operation list	a. Change the number of printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the labor operation list	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**.

To	Do this
	e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. To export the labor operation list, click **Export**.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Adjust labor standards

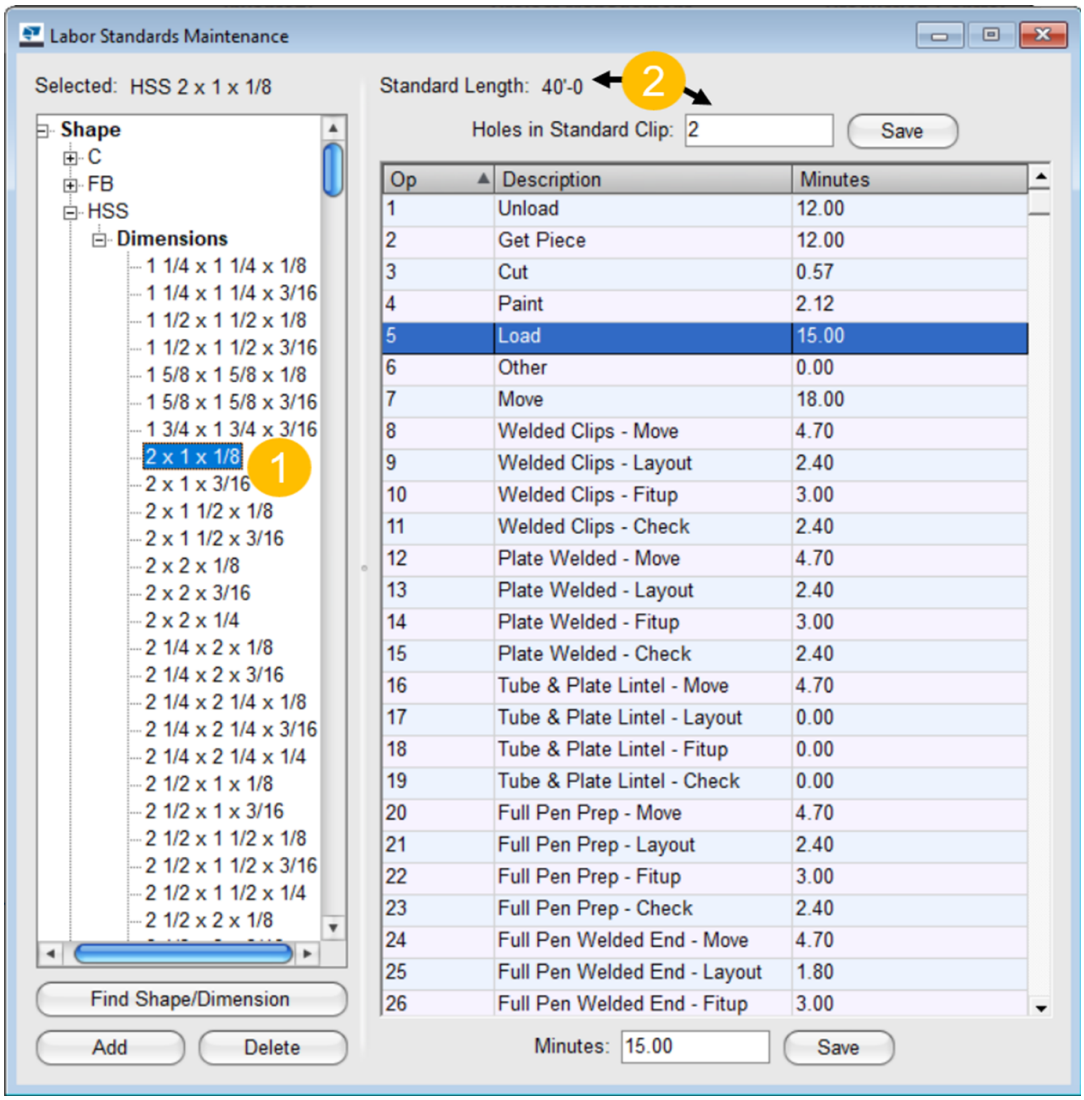
In the **Labor Standards Maintenance** dialog box, you can view the labor time spent in each material operation by material dimension and shape. If necessary, you can modify the labor times, or add new labor times, shapes and material dimensions. You can also delete shapes and the applied labor time from **Labor Standards**.

NOTE Before making changes to labor standards, we recommend that you create a new shop setup based on the original labor database. Then, modify the new shop setup, so that the original labor information remains untouched.

To access **Labor Standards Maintenance**, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Standards** .

The **Labor Standards Maintenance** dialog box opens.



(1) You can browse the existing material shapes and dimensions on the navigation tree on the left.

When you click a dimension in the navigation tree to select it, its labor times by labor operation appear on the right side of the dialog box.

(2) The standard length and the number of standard clip holes of the selected material dimension are displayed at the top of the dialog box.

According to your needs, see any of the following instructions:

View the compiled labor time of a dimension

NOTE Remember to view the compiled labor time by labor code before and after making changes to the labor time by labor group.

1. Select the material dimension whose properties you want to view.
2. Click the **Labor Standards Maintenance** ribbon tab.

3. On the menu, select **View Labor Code Labor Values**.

   The **Labor Code** dialog box opens.

   The total labor time is shown at the top of the dialog box. The information on shop bolts, field bolts, weld cost, and weld weight are shown at the bottom of the dialog box. All these properties are added to an estimate when the labor code is added for an item.

4. In the labor code list on the left, click a labor code to view the labor times of the material dimension when that labor code is selected.
5. To view the labor operation times and the total man hours without standard clips, clear the **Include Standard Clips** check box.
6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
7. If necessary, make changes to the labor times in the **Labor Standards Maintenance** dialog box.

Add shapes and dimensions

1. At the bottom of the dialog box, click **Add**.
2. In the **Shape** list, select a shape.
3. In the **Select the sizes to add** dialog box, click the arrow buttons to move the dimensions that you want to add to the **Included** list.
4. Click **OK**.

   The dimensions are added for the shape.

5. Use the **Global Edit - Operations** command to add labor times for the new dimensions.

   For more information, see **Copy labor times to multiple material dimensions**.

After the dimensions have been added, you also need to add their pricing and combining length to the pricing database in **Pricing Maintenance**.

Modify the number of standard clip holes for a single dimension

1. In the shape list, select a shape and a material dimension.
2. In the **Holes in Standard Clip** field, type the desired number of holes.
3. Click **Save**.

Modify the number of standard clip holes for multiple dimensions

1. While in the **Labor Standards Maintenance** dialog box, click the **Labor Standards Maintenance** ribbon tab.
2. On the menu, select **Global Edit - Holes in Standard Clip**.

3. To automatically filter which shapes and operations are modified, select a filter in the **Filter Group** list, or click **Edit Filter Groups** to create a new filter.
4. On the **Shapes** section, use the arrows to move shapes whose standard clip holes you want to modify to the **Included** list.
5. On the **Dimensions** section, use the arrows to move the dimensions whose standard clip holes you want to modify to the **Included** list.
6. Click **OK**.
7. Type the desired number of holes in the **Holes in Standard Clip** field.
8. Click **Save**.

   The number of standard clip holes of the selected material shapes and dimensions is updated.

Copy labor times to multiple dimensions

1. Change the labor times of labor operations for one dimension according to your needs.
2. In the navigation tree, select the material dimension whose labor times you want to copy to other dimensions.
3. Click the **Labor Standards Maintenance** ribbon tab.
4. On the menu, select **Global Edit - Operations**.
5. To automatically filter which shapes and operations are modified, select a filter in the **Filter Group** list, or click **Edit Filter Groups** to create a new filter.
6. On the **Shapes** section of the **Global Edit - Operations** dialog box, use the arrows to move shapes whose labor times you want to modify to the **Included** list.
7. On the **Dimensions** section, use the arrows to move the dimensions whose labor times you want to modify to the **Included** list.
8. Click **OK**.
9. Click the arrow buttons to move the operations whose labor times you want to copy to the **Included** list.
10. Click **Save**.

The labor times of the selected operations are copied for the material dimensions that you selected.

Remove an individual material dimension

You can remove all labor standards connected to a material dimension. The dimension will remain available in the **Shapes / Grades / Sizes** dialog box and **Pricing Maintenance**, and you can add it back to **Labor Standards Maintenance** at any time.

NOTE If you remove a dimension from **Labor Standards Maintenance**, you will need to add labor times for all items of the dimension manually when you use that dimension in an estimating job.

1. Select the dimension that you want to remove.
2. At the bottom of the dialog box, click **Delete**.
3. To permanently delete the selected dimension, click **Yes** in the confirmation dialog box.

Remove a shape and all of its dimensions

If necessary, you can remove all labor standards connected to a shape from labor standards. The shape and dimensions will remain available in the **Shapes / Grades / Sizes** dialog box and **Pricing Maintenance**. You can add the shape and dimensions back to **Labor Standards Maintenance** at any time.

NOTE If you remove a shape from **Labor Standards Maintenance**, you will need to add labor times manually for all items that use the shape in estimating jobs.

1. Select the shape that you want to remove.
2. At the bottom of the dialog box, click **Delete**.
3. To permanently delete the selected shape and all its dimensions, click **Yes** in the confirmation dialog box.

Create labor standard reports

1. In the **Labor Standards Maintenance** dialog box, click the **Labor Standards Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. To only show specific shapes or dimensions, select a filter type in the **Type** list, and click **Select**.
4. Click the arrow buttons to move the shapes and dimensions that you want to modify to the **Included** list.
5. Click **OK**.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, do any of the following according to your needs:

To	Do this
View the labor standards list	• In the **Report Selection** dialog box, click **View**.

To	Do this
Print the labor standards list	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the labor standards list	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. To export the labor group list, click **Export**.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Adjust quantity and weight labor factors

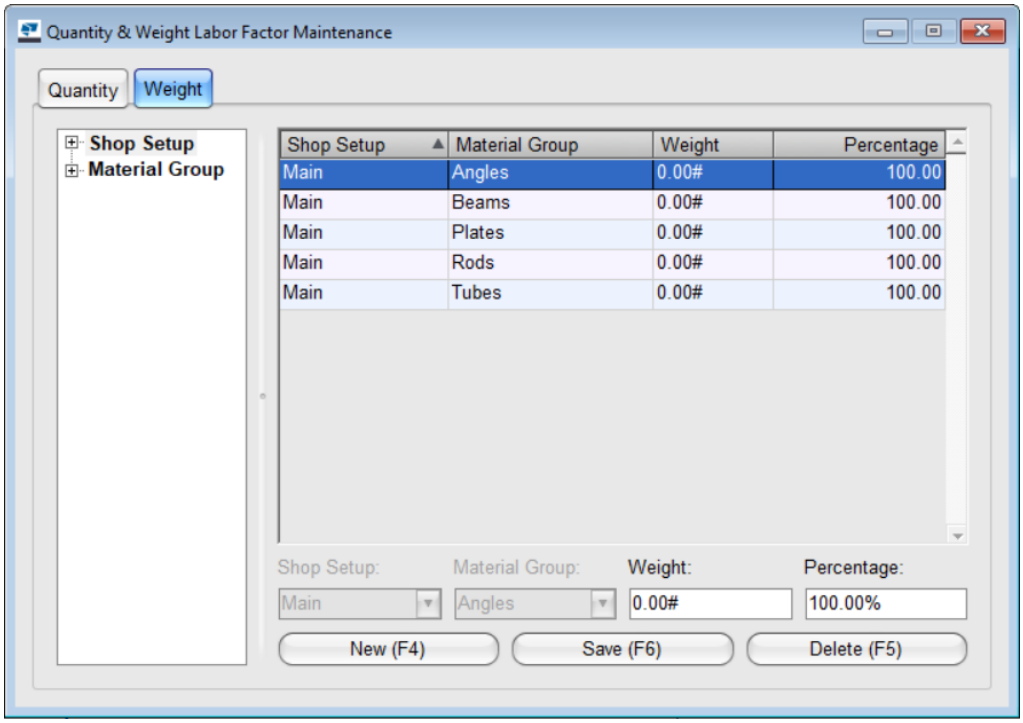
Quantity and weight labor factors are used in extrapolation factors, which affect the efficiency of labor for specific labor operations. For example, for longer items, the efficiency may be greater than normal, and for heavy items, the efficiency may decrease. In **Quantity and Weight Labor Factor Maintenance**, you can add, modify, and delete these labor factors by material group.

To see which labor operations use the quantity and weight labor factors, refer to the **Operation Maintenance** dialog box.

To open the **Quantity and Weight Labor Factor Maintenance** dialog box:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Quantity & Weight Labor Factors** .

   The **Quantity and Weight Labor Factor Maintenance** dialog box opens.



   The quantity labor factors are adjusted on the **Quantity** tab, whereas the weight labor factors are adjusted on the **Weight** tab.

NOTE Quantity and weight labor factors are created separately for each shop setup in Tekla EPM. To switch to another shop setup, see Change the active shop setup (page 362). Remember to add the labor factors to each shop where they are needed.

Add quantity or weight labor factors

Before you add labor factors, ensure that you are on the right tab. To add quantity labor factors, you need to have the **Quantity** tab open. To add weight labor factors, you need to have the **Weight** tab open.

1. In the **Shop Setup** list, select to which shop the labor factor will be added.
2. In the **Material Group** list, select the material group whose labor factors you want to modify.

3. In the **Quantity** or **Weight** field, type a value.

   This value defines the area for efficiency.

4. In the **Percentage** field, type the efficiency percentage.

   Increasing the efficiency percentage lowers the applied labor time for an operation that contains quantity and weight extrapolation factors.

5. Click **Add**.

The new labor factor is added to the selected shop setup.

Modify quantity or weight labor factors

1. In either the **Quantity** or **Weight** list, select the labor factor that you want to modify.
2. Modify the quantity or weight and percentage.
3. Click **Save** to update the labor factor.

Delete quantity or weight labor factors

1. On either the **Quantity** or **Weight** tab, select the labor factor that you want to delete.
2. In the lower-right corner, click **Delete**.
3. To permanently delete the labor factor, click **Yes** in the confirmation dialog box.

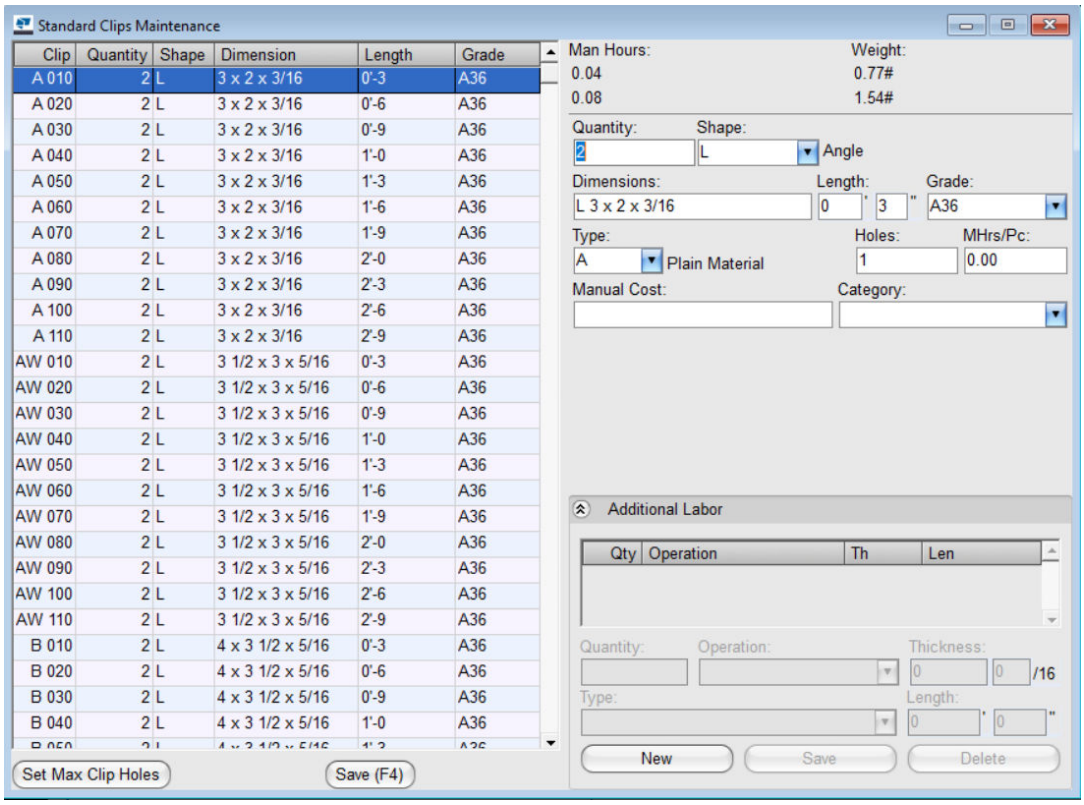
Manage standard clips

In **Standard Clips Maintenance**, you can modify existing standard clips, and add material items and additional labor for weld, burn, drill, and punch to standard clips. Note that standard clips are only used if you have selected the **Auto Clip-Angles** check box in **Fabricator Information**. If necessary, you can also modify the standard clips on a job by job basis.

To access the **Standard Clips Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Standard Clips** .

The **Standard Clips Maintenance** dialog box opens.



You can see the labor time in man hours and the weight of the selected item in the top right corner of the dialog box.

Modify the properties of standard clips

1. In the list on the left, select the standard clip.
2. On the right, modify the standard clip properties according to your needs.

   For example, you can change the material shape or the quantity of clips. Note that even though the shape of the clip can be changed, you can only change the shape within the original material group.
3. If you want to change the maximum number of holes in the clip, do the following:

   a. In the lower-left corner, click **Set Max Clip Holes**.

   b. Type the maximum hole number.

   c. Click **Set Max Holes**.

   d. Click **Yes** to confirm changing the maximum number of holes.

   Note that you cannot reduce the maximum number of holes if the selected clip is used in an estimating job.
4. To update the standard clip properties, click **Save** below the list of standard clips.

Add additional labor or material items to a standard clip

1. In the list on the left, select the standard clip.
2. Under the **Additional Labor** list, click **New**.
3. Determine the quantity, operation, thickness, operation type, and length.
4. Click **Add**.
5. To update the standard clip properties, click **Save** below the list of standard clips.

The additional labor is added to the clip. You can see the labor time of the additional labor at the bottom right corner of the dialog box.

Modify additional labor or material items

1. In the list on the left, select the standard clip.
2. In the **Additional Labor** list, select the desired item.
3. Change the quantity, operation, thickness, operation type, or length.
4. To save the changes, click **Save** under the **Additional Labor** list.
5. To update the standard clip properties, click **Save** below the list of standard clips.

Delete additional labor or material items

1. In the list on the left, select the standard clip.
2. In the **Additional Labor** list, select the desired item.
3. Click **Delete** to permanently delete the item.
4. To update the standard clip properties, click **Save** below the list of standard clips.

Adjust labor times for burning

In **Burn Maintenance**, you can view, add, and modify burn time information to match the time standards of your shop. If necessary, you can also add new burn types or create a list of burn rates.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Burn** .
3. In the **Burn Maintenance** dialog box, do any of the following:

To	Do this
Add new burn rate	a. Click **New**. b. In the **Shop Setup** list, select the shop to which you want to add the burn rate.

	c. In the **Burn Type** list, select how the burning process is executed: • Use **Automatic** for automated equipment. • Use **Semi-Automatic** for track burners. • Use **Manual**for burning by hand torch. d. Determine the thickness and rate per hour. e. Click **Add**.
Modify an existing burn rate	a. Select a burn rate in the list. b. Modify the thickness and rate per hour. c. Click **Edit** to save the changes.
Delete a burn rate	a. Select a burn rate in the list. b. Click **Delete**. c. To permanently delete the burn rate, click **Yes** in the confirmation dialog box.

See also

Add burn types (page 342)

View, print, or export a burn rate list (page 343)

Add burn types

If your shop uses other burn types than the existing ones, you can add the missing burn types in **Burn Type Maintenance**. Then, you can use the new burn types in your estimating jobs.

1. In the **Burn Maintenance** dialog box, click the **Burn Maintenance** ribbon tab.
2. On the menu, select **Burn Type Maintenance**.
3. In the **Burn Type Maintenance** dialog box, click **New**.
4. Add a description and abbreviation for the burn type.
5. In the **Labor Group** list, select which labor group the burn type belongs to.

   The selection determines where Tekla EPM saves the labor time used in burning. Normally, burn times are saved to the **Burn** labor group.
6. Click **Add**.

The new burn type is created and will be available in **Burn Maintenance**.

Note that the new burn type will only be visible and available for filtering in the **Burn Maintenance** dialog box once you create a burn rate with the new burn type.

7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Adjust labor times for burning (page 341)

View, print, or export a burn rate list

When you are making changes to burn times in **Burn Maintenance**, having a list of the existing burn rates organized by burn type can be helpful. You can either view the burn rate list in the **Tekla EPM Report Viewer**, print the list, or export the list to another file format.

1. In the **Burn Maintenance** dialog box, click the **Burn Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. Do any of the following:

To	Do this
View the burn rate list	• In the **Report Selection** dialog box, click **View**.
Print the burn rate list	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the burn rate list	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**.

To	Do this
	d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Adjust labor times for burning (page 341)

Adjust labor times for drilling

In **Drill Maintenance**, you can view, add and modify drill time information to match the time standards of your shop. You can also add new drill types or create a list of drill rates. The drill times set in **Drill Maintenance** are used when you directly apply them to an estimating job as additional labor.

The labor time entered in **Drill Maintenance** maintenance will be applied according to the drill settings determined in the **Fabrication Information - Operations** dialog box. For more information, see Modify labor operation settings (page 356). Note that when the thickness that you have defined for punching is greater than the punch capacity, Tekla EPM automatically switches to drill times.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Drill** .

   The **Drill Maintenance** dialog box opens.

   You can click an item in the navigation tree on the left to filter the drill information that is displayed.
3. According to your needs, do any of the following:

To	Do this
Add a new drill rate	a. Click **New**.

To	Do this
	b. In the **Shop Setup** list, select the shop for which you want to add the rate. c. In the **Drill Type** list, select if drilling is done automatically or manually. d. Determine the thickness and the number of holes per hour. e. Click **Add**. The new drill rate is added to the list.
Modify an existing drill rate	a. Select the drill rate that you want to modify. b. Modify the shop, drill type, thickness, and holes per hour information. c. Click **Edit** to save the changes.
Delete a drill rate	a. Select the drill rate that you want to delete. b. Click **Delete**. c. To permanently delete the drill rate, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Add drill types (page 345)

View, print, or export the drill rate list (page 346)

Add drill types

If your shop uses other drill types than automatic and manual, you can add the necessary drill types to Tekla EPM. Then, you can use the new drill types in any estimating job.

1. In the **Drill Maintenance** dialog box, click the **Drill Maintenance** ribbon tab.
2. On the menu, select **Drill Type Maintenance**.
3. In the **Drill Type Maintenance** dialog box, click **New**.
4. Add a description and abbreviation for the drill type.
5. In the **Labor Group** list, select which labor group the drill type belongs to.

   The selection determines where Tekla EPM saves the labor time used in drilling. Normally, drill times are saved to the **Punch** labor group.
6. Click **Add**.

The new drill type is created and will be available in **Drill Maintenance**.

Note that the new drill type will only be visible and available for filtering in the **Drill Maintenance** dialog box once you create a drill rate with the new drill type.

7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Adjust labor times for drilling (page 344)

View, print, or export the drill rate list

When you are making changes to drill times in **Drill Maintenance**, having a list of the existing drill rates organized by drill type can be helpful. You can either view the drill rate list in the **Tekla EPM Report Viewer**, print the list, or export the list to another file format.

1. While in the **Drill Maintenance** dialog box, click the **Drill Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. Do any of the following:

To	Do this
View the drill rate list	• In the **Report Selection** dialog box, click **View**.
Print the drill rate list	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the drill rate list	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**.

To	Do this
	e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Adjust labor times for drilling (page 344)

Adjust labor times for punching

In **Punch Maintenance**, you can view, add, and modify punch time information to match the time standards of your shop. If necessary, you can also add new punch types or create a list of punch rates. The punch times set in **Punch Maintenance** are used when you directly apply them to an estimating job as additional labor.

Note that when the material thickness exceeds the punch capacity, Tekla EPM automatically switches to drill times. You can modify the punch capacity in the **Fabrication Information - Operations** dialog box. For more information, see Modify labor operation settings (page 356).

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Punch Maintenance** .
3. In the **Punch Maintenance** dialog box, do any of the following according to your needs.

To	Do this
Add a new punch rate	a. Click **New**. b. In the **Shop Setup** list, select the shop for which you want to add the rate. c. In the **Drill Type** list, select if punching is done automatically or manually. • Use **Automatic** for automated equipment. • Use **Manual** for punch by an iron worker.

To	Do this
	d. Determine the thickness and the number of holes per hour. e. Click **Add**. The new punch rate is added to the list.
Modify an existing punch rate	a. Select the punch rate that you want to modify. b. Modify the shop, punch type, thickness, and holes per hour information. c. Click **Edit** to save the changes.
Delete a punch rate	a. Select the punch rate that you want to delete. b. Click **Delete**. c. To permanently delete the punch rate, click **Yes** in the confirmation dialog box.

See also

Add punch types (page 348)

View, print, or export the punch rate list (page 349)

Add punch types

If your shop uses other punch types than the existing ones, you can add the missing punch types in **Punch Type Maintenance**. Then, you can use the new punch types in any estimating job.

1. While in the **Punch Maintenance** dialog box, click the **Punch Maintenance** ribbon tab.
2. On the menu, select **Punch Type Maintenance**.
3. In the **Punch Type Maintenance** dialog box, click **New**.
4. Add a description and abbreviation for the punch type.
5. In the **Labor Group** list, select which labor group the punch type belongs to.

   The selection determines where Tekla EPM saves the labor time used in punching. Normally, punch times are saved to the **Punch** labor group.
6. Click **Add**.

   The new punch type is created and will be available in **Punch Maintenance**.

   Note that the new punch type will only be visible and available for filtering in the **Punch Maintenance** dialog box once you create a punch rate with the new punch type.
7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Adjust labor times for punching (page 347)

View, print, or export the punch rate list

When you are making changes to punch times in **Punch Maintenance**, having a list of the existing punch rates organized by punch type can be helpful. You can either view the punch rate list in the **Tekla EPM Report Viewer**, print the list, or export the list to another file format.

1. While in the **Punch Maintenance** dialog box, click the **Punch Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. Do any of the following according to your needs:

To	Do this
View the punch rate list	• In the **Report Selection** dialog box, click **View**.
Print the punch rate list	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the punch rate list	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and

To	Do this
	send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

See also

Adjust labor times for punching (page 347)

Adjust labor times for welding

In **Weld Maintenance**, you can view, add, and modify weld time information to match the time standards of your shop. If necessary, you can also add new weld types or create a list of weld rates. Weld times are used when included in an estimating job within a labor code, but they may also be directly applied to an estimating job as additional labor.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Maintenance** --> **Weld** .
3. In the **Weld Maintenance** dialog box, do any of the following according to your needs:

To	Do this
Add a new weld rate	a. Click **New**. b. In the **Shop Setup** list, select the shop for which you want to add the rate. c. In the **Weld Type - Process** list, select the weld type and process. • Use **Automatic** options for automated equipment. • Use **Semi-Automatic** options for wire feed machines. • Use **Manual** options for stick welding. d. Determine the thickness, rate per hour, material weight per foot, and cost per pound. e. Click **Add**. The weld rate is added to the list.
Modify an existing weld rate	a. Select the weld rate that you want to modify.

To	Do this
	b. Modify the shop, weld type and process, thickness, rate per hour, weight, and cost information according to your needs. c. Click **Edit** to save the changes.
Delete a weld rate	a. Select the weld rate that you want to delete. b. Click **Delete**. c. To permanently delete the weld rate, click **Yes** in the confirmation dialog box.

See also

Add weld types (page 351)

View, print, or export a weld rate list (page 352)

Add weld types

If your shop uses other weld types than the existing ones, you can add the missing weld types in **Weld Type Maintenance**. Then, you can use the new weld types in your estimating jobs.

1. While in the **Weld Maintenance** dialog box, click the **Weld Maintenance** ribbon tab.
2. On the menu, select **Weld Type Maintenance**.

   The **Weld Type Maintenance** dialog box opens.
3. Click **New**.
4. Type a type description, a type abbreviation, a process description, and a process abbreviation for the weld type.

   The type description forms the first part of the weld type description, while the process description forms the second part. The two parts of the description are connected with a hyphen.

   Similarly, the type abbreviation and the process abbreviation together form the abbreviation of the weld type. The two parts of the abbreviation are connected with a hyphen.
5. In the **Labor Group** list, select in which labor group the weld type belongs to.

   The selection determines where Tekla EPM saves the labor time used in welding. Normally, labor time spent on full penetration welding is saved to the **FpWeld** labor group, while other weld times are saved to the **Weld** labor group.
6. In the **Weld Type Mapping** field, type any weld descriptions that should be mapped to this weld type when importing weld information.

   Type each additional weld description on a separate line.

7. Click **Add**.

   The new weld type is created and will be available in **Weld Maintenance**.

   Note that the new weld type will only be visible and available for filtering in the **Weld Maintenance** dialog box once you create a weld rate with the new weld type.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Adjust labor times for welding (page 350)

View, print, or export a weld rate list

When you are making changes to weld times in **Weld Maintenance**, having a list of the existing weld rates organized by weld type can be helpful. You can either view the weld rate list in the **Tekla EPM Report Viewer**, print the list, or export the list to another file format.

1. While in the **Weld Maintenance** dialog box, click the **Weld Maintenance** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. In the **Report Progress** dialog box, do one of the following:

To	Do this
View the weld rate list	• In the **Report Selection** dialog box, click **View**.
Print the weld rate list	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the weld rate list	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs.

To	Do this
	f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Adjust labor times for welding (page 350)

Manage estimate statuses

Estimate statuses indicate the level of completion of estimate items. By using estimate statuses, you can quickly view the situation of each estimating job. You can also color-code the material items in an IFC model in Trimble Connect for Windows according to their estimate statuses. Tekla EPM contains four preloaded status indicators, but you can modify the list of statuses according to your needs: you can add, modify, deactivate, and delete estimate statuses.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Estimate Status Maintenance** .
3. In the **Estimate Status Maintenance** dialog box, do any of the following:

To	Do this
Add a new estimate status	a. Click **New**. b. Type a description for the status. c. In the **Purpose** list, select a purpose for the status. d. Click **Add**.
Set the default estimate status	a. Select a status in the list. b. Select the **Default** check box. c. Click **Save**. The new default estimate status is marked with an asterisk (*).

To	Do this
Deactivate an estimate status	If you deactivate an estimate status, it will no longer be available for estimates. However, you can activate the status again at any time. a. Select a status in the list. b. Clear the **Active** check box. c. Click **Save**. To re-activate the estimate status, select the **Active** check box again.
Modify an existing estimate status	a. Select a status in the list. b. Modify the description, purpose, and other properties according to your needs. c. Click **Save**.
Delete an existing estimate status	a. Select a status in the list. b. At the bottom of the dialog box, click **Delete**. c. To permanently delete the estimate status, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

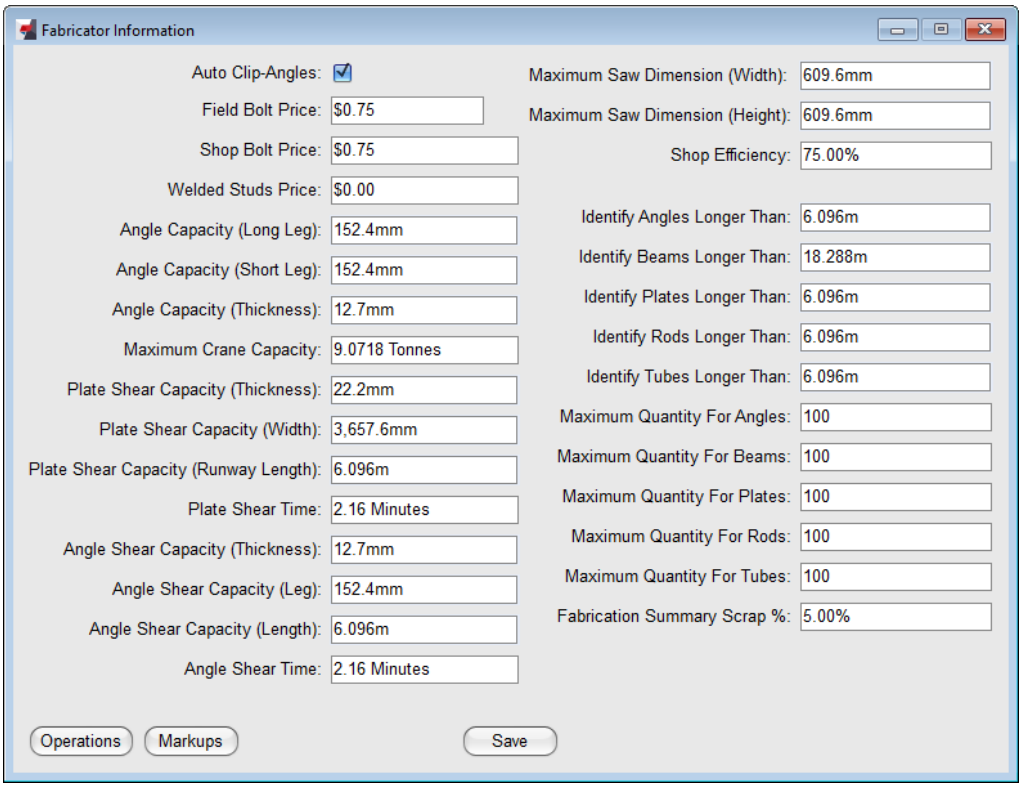
See also

Color-code estimating items in the IFC model (page 437)

Adjust standard shop information

In **Fabricator Information**, you can adjust all standard shop information according to your shop's actual hourly rates, pricing, equipment capacity, and efficiency. When you set the standard shop information correctly, Tekla EPM will be able to make more accurate calculations for your estimates. The sub dialog boxes of **Fabricator Information** also allow you to modify shop operations, labor rates, and markups percentages.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Fabricator Information** .



3. In the **Fabricator Information** dialog box, modify the settings to match your shop standards.

   In the following table, see details on some of the shop standard settings:

Option	Description	Further information
Auto Clip-Angles	When selected, Tekla EPM uses the standard clip settings, automatically adding the labor and materials for them according to the labor code.	To modify the standard clips, see Manage standard clips (page 339).
Identify [Items] Longer Than	The maximum length allowed for the named items.	When the item length exceeds this value, Tekla EPM will add it into the **Problem Summary Sheet** report.
Maximum Quantity For [Items]	The maximum number allowed for the named items.	When the item quantity exceeds this value, Tekla EPM will add it into the **Problem Summary Sheet** report.

Option	Description	Further information
Shop Efficiency	The shop efficiecy percentage used in all future estimating jobs.	The shop efficiency percentage affects the labor time and can be used in different ways. For example, it may be useful to set a lower percentage if your shop is fabricating miscellaneous items instead of structural ones. Note that the shop efficiency can be manually changed for each job. Existing estimating jobs are not affected by changing the efficiency percentage. If necessary, the percentage can exceed 100 percent. For example, changing the shop efficiency to 125% will reduce the standard labor time by 20%, whereas using the shop efficiency of 75% will add 33% to the standard labor time.

4. Modify labor operations according to your needs, or define markup percentages.

NOTE Do not click **Save** until you have modified the labor operations and markup percentages. Saving the settings closes the **Fabricator Information** dialog box.

For more information, see the following links:

Modify labor operation settings (page 356)

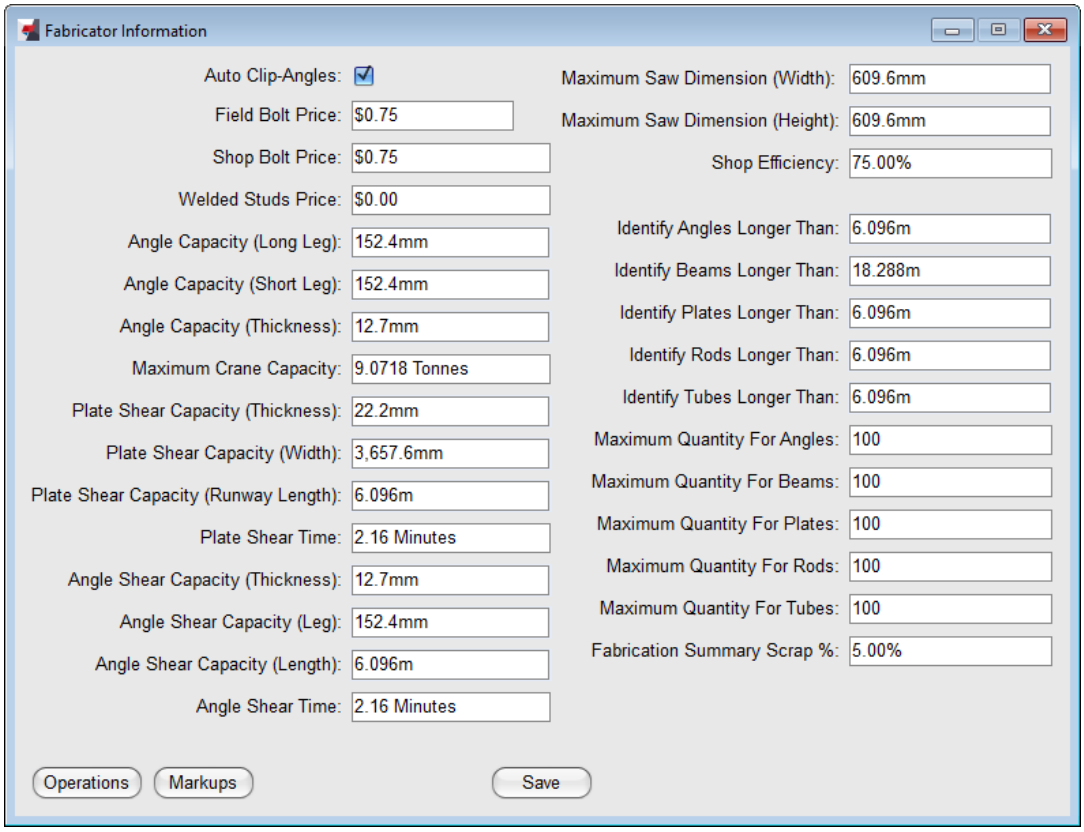
Define markup percentages (page 358)

Modify labor operation settings

In the **Fabricator Information Operation Form** dialog box, you can modify the punch and drill type and capacity for different items to match those of

your shop. You can also determine how copes are burned and stiffeners are executed.

Setting an operation as automated or manual directly affects the labor time in Tekla EPM.



1. In the lower-left corner of the **Fabricator Information** dialog box, click **Operations**.
2. At the top of the **Fabricator Information Operation Form** dialog box, do one of the following according to your needs:
   - To consider the operation rate thickness as the minimum value of the range, select he **Consider the Burn/Drill/Punch/Weld rate thickness as the minimum of the range** check box.
   - To consider the operation rate thickness as the maximum value of the range, clear the **Consider the Burn/Drill/Punch/Weld rate thickness as the minimum of the range** check box.
3. On the **Angles**, **Beams**, **Plates**, **Tubes**, and **Other** tabs, do the following:
   a. In the **Punch** list, select if punching is done automatically or manually.
   b. In the **Punch Capacity** field, type the thickness of the material.

If an estimate requires a greater capacity, Tekla EPM uses the drill time information instead.

If the material group does not have a punch process, type `0/16` to ensure that the drill operation is used instead.

c. In the **Drill** list, select if drilling is done automatically or manually.

4. On the **Copes** tab, use the **Burn** list to select if the burn process of copes is manual, automated, or semi-automated.
5. On the **Stiffeners** tab, use the **Weld** list to select how the weld process of stiffeners is handled.
6. Click **OK**.

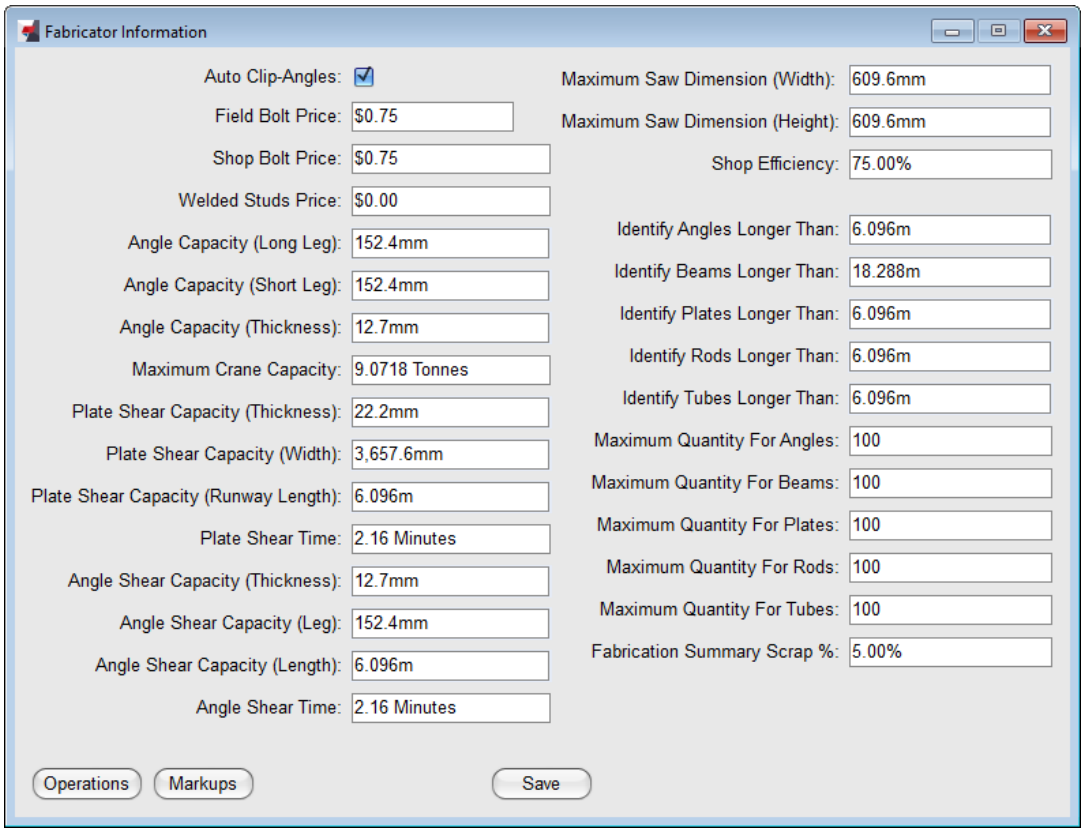
The changes are saved, and the **Fabricator Information Operation Form** dialog box closes.

See also

Adjust standard shop information (page 354)

Define markup percentages

While defining the standard shop information, you can also determine the markup percentages that you want to use in Tekla EPM. The markup percentages are divided into three different categories: overhead, profit, and sales, general, and administration.



1. At the bottom of the **Fabricator Information** dialog box, click **Markups**.

   The **Markup** dialog box opens.

   The **O.H.** column stands for overhead markup percentages, and the **S, G&A** column stands for sales, general, and administration markup percentages.

2. Modify the markup percentages in any of the following ways:

To	Do this
Modify percentages one by one	a. Click in the field that you want to modify. b. Erase the existing percentage and type a new one.
Apply the same markup percentage to multiple items at once	a. In the lower-right corner of the dialog box, click **Global Edit**. b. Click the arrow buttons to move the items that you want to modify to the **Included** list. c. Click **OK**. d. Type the markup percentage that you want to apply to all selected items.

To	Do this
	e. Click **OK**. The markup percentages of the selected items are updated.

3. Click **OK**.

   The **Markup** dialog box closes.

4. Once you have finished modifying the properties, in the **Fabricator Information** dialog box, click **Save**.

The changes are saved, and the **Fabricator Information** dialog box closes.

See also

Adjust standard shop information (page 354)

Create and modify labor rates

We recommend that you create different labor rates that match the fabrication functions and rates of your shop. By modifying labor rates to match those of your shop, you can ensure that Tekla EPM calculates the prices in your estimates as accurately as possible.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Labor Rates**.
3. In the **Labor Rates** dialog box, do any of the following:

To	Do this
Add a new labor rate	a. Click **New**. b. Type a description and a price per hour. c. Click **Add**.
Modify an existing labor rate	**NOTE** The **Detailing** and **Erecting** labor codes cannot be renamed or deleted. a. Select a labor rate in the list. b. Modify the description and price per hour. c. Click **Edit** to save the changes.
Delete a labor rate	**NOTE** The **Detailing** and **Erecting** labor codes cannot be renamed or deleted. a. Select a labor rate in the list.

To	Do this
	b. Click **Delete**. c. To permanently delete the labor rate, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

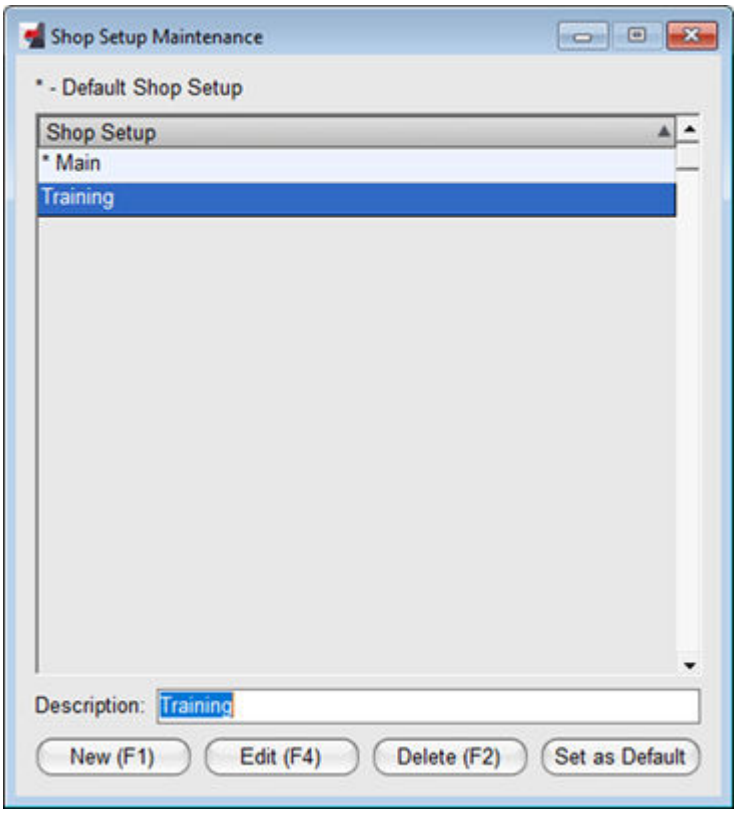
To modify where each labor rate is used, see Create, modify, and delete labor groups (page 326).

The labor rate assignments will be used on all summary reports that show the labor cost. For a breakdown of the labor rates, use the **Labor Rate Summary** or the **Summary Information - to Excel** report option.

Create and modify shop setups

If your company has multiple shops, you can create additional labor databases, called shop setups, in Tekla EPM. We also recommend that you create an additional test shop if you are still learning to use Tekla EPM, so that you do not accidentally make changes to the original shop.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Labor Maintenance** --> **Shop Setup Maintenance** .



3. To create a new shop setup, in the **Shop Setup Maintenance** dialog box, click **New**.
4. In the **Description** field, type a name for the shop setup.
5. If you want to use an existing shop setup as the base of the new setup, select it in the **Copy From Shop Setup** list.
6. Click **Add**.

The new shop setup is added to the list. You can now customize all the shop settings according to your needs.

TIP To modify the name of an existing shop setup, select the shop setup, rename it, and click **Edit**.

See also

Change the active shop setup (page 362)

Change the default shop setup (page 363)

Change the active shop setup

If you have created multiple shop setups, also called labor databases, in Tekla EPM, you can modify the **Estimating Maintenance** properties of each shop separately. If you want to modify a shop setup, you need to activate it first.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Current Shop Setup** .

   You can see the active shop setup in the **Estimating Maintenance** menu after the **Current Shop Setup** text.

   The **Select Shop Setup** dialog box opens.
3. Select a shop setup in the list.
4. Click **OK**.

The shop setup, or the labor database, is changed.

If necessary, you can also change the shop setup of an individual estimating job while working in the **Estimating** module.

See also

Create and modify shop setups (page 361)

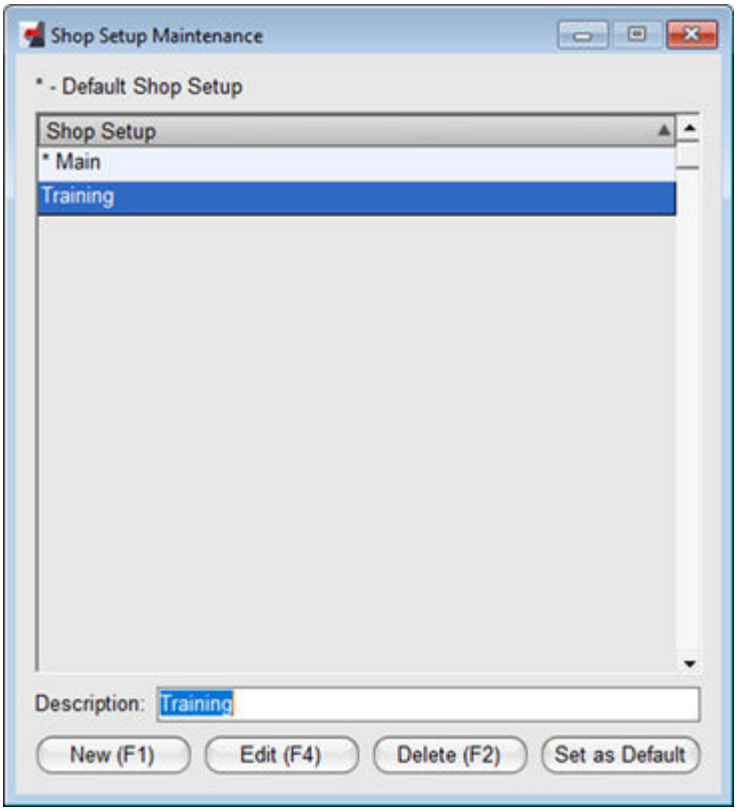
Change the default shop setup (page 363)

Change the default shop setup

The default shop setup is the default shop database used for all future estimating jobs created in Tekla EPM. You can change the default shop setup in **Shop Setup Maintenance**. Note that changing the default shop setup does not change the settings of existing estimating jobs.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating Maintenance** --> **Labor Maintenance** --> **Shop Setup Maintenance** .

The **Shop Setup Maintenance** dialog box opens.



The current default shop setup is marked with an asterisk (*).

3. Select a shop in the list.
4. Click **Set as Default**.
5. To change the default shop setup, click **Yes** in the confirmation dialog box.

The default shop setup is updated. The new default shop is marked with an asterisk (*).

See also

Change the active shop setup (page 362)

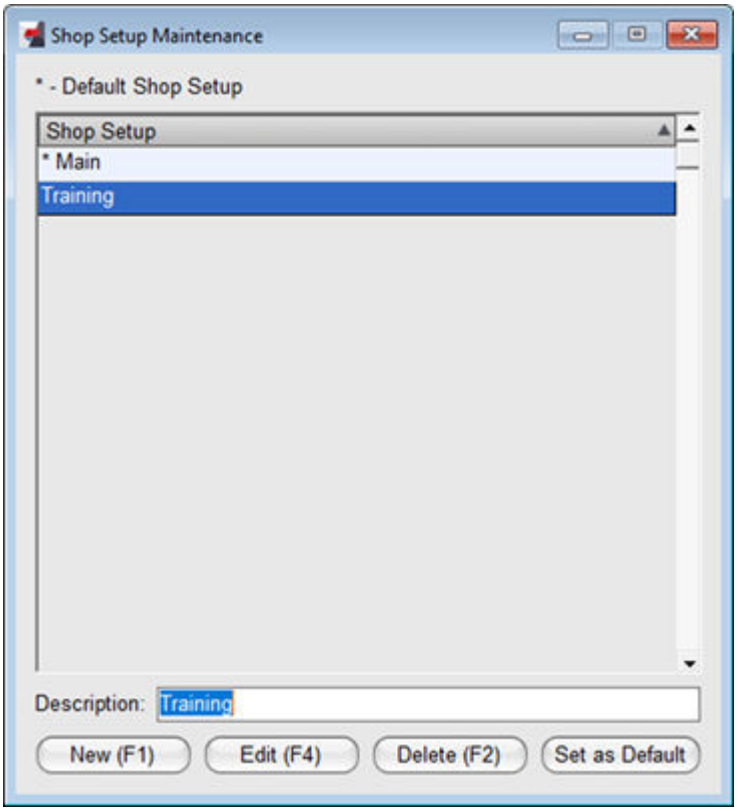
Create and modify shop setups (page 361)

Delete shop setups

You can delete any unnecessary shop setups in **Shop Setup Maintenance**. For example,you can delete a test shop database that you no longer use. Note that you cannot delete the current default shop, but you need to select a new shop setup first.

1. Click the **Maintenance** ribbon tab.

2. On the menu, select **Estimating Maintenance** --> **Labor Maintenance** --> **Shop Setup Maintenance** .



3. In the **Shop Setup Maintenance** dialog box, select the shop that you want to delete.
4. Click **Delete**.
5. To permanently delete the shop, click **Yes** in the confirmation dialog box.

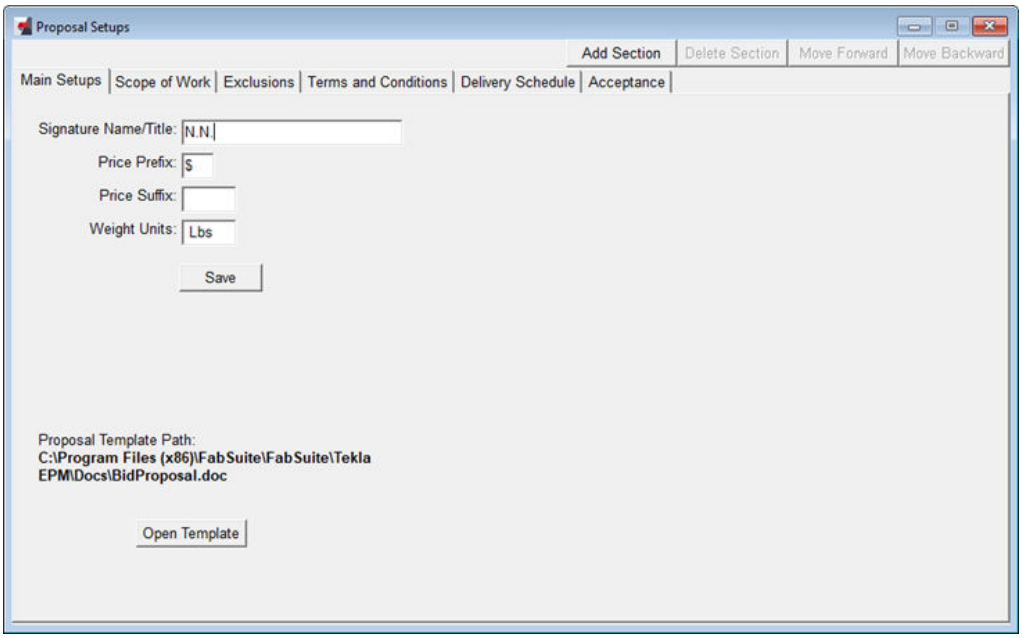
See also

Create and modify shop setups (page 361)

Create a standard proposal setup

In **Proposal Setups**, you can customize the content of bid proposals. Among other things, you can create different sections for the proposals and add entries for each section. We also recommend that you modify the existing entries and delete unnecessary entries according to your needs. You can also change the order of sections, and modify the titles and styles in the proposal according to your needs. The sections and entries that you have set up are used for creating an individual bid proposal based on each estimate.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Estimating** --> **Proposal Setups** .



3. On the **Main Setups** tab of the **Proposal Setups** dialog box, determine the signature name or title, price prefix, price suffix, and weight units.

   The **Main Setups** tab controls details that affect the entire proposal, whereas the other tabs represent different sections of the proposal.

4. Click **Save**.

5. Do any of the following according to your needs:

Option	Description
Modify the appearance of the proposal	a. On the **Main Setups** tab, click **Open Template**. The proposal template opens in Microsoft Word. The items marked with << >> pull information from Tekla EPM and can be adjusted there, but the other information and font types can be changed in Microsoft Word. b. Make the necessary changes to the template. c. In the Microsoft Word window, click **File** --> **Save** .

Option	Description
	d. Save the modified proposal as a custom report in the default folder that your company uses for custom reports. You can verify the default folder by opening the **File** menu and selecting **Default Directories**. Note that any changes made to the proposal document outside of Tekla EPM are not available in Tekla EPM.
Add a new entry	a. Go to the section tab on which you want to add the new entry. b. At the bottom of the dialog box, click **New**. c. Type the desired text in the space the bottom of the dialog box. d. Click **Add**.
Modify an entry	a. Go to the section tab on which you want to modify an entry. b. Select the entry that you want to modify. c. Change the entry text according to your needs. d. Click **Edit** to save the changes.
Move an entry up or down in the proposal	a. Go to the section tab on which the desired entry is located. b. Select the entry that you want to move. c. To move the entry, click the **Move Up** and **Move Down** buttons at the bottom of the dialog box.
Change the indentation of an entry	a. Go to the section on which the desired entry is located. b. Select the entry that you want to move. c. Click the **Move Left** and **Move Right** buttons to shift the position of the item in the proposal.
Delete an entry	a. Go to the section tab from which you want to delete an entry. b. Select the entry that you want to delete. c. Click **Delete**. d. To permanently delete the entry, click **Yes** in the confirmation dialog box.

Option	Description
Change the titles or headings of the proposal	a. Go to the section tab whose titles or headings you want to change. b. Do any of the following: • To change the main title of the section, type a new title in the **Title** field and click **Set Title**. • To change the style of the headings, click **Attributes** and select appropriate styles in the lists. Then, click **Save**. • To add a subtitle, click **Attributes** and type a title in the **Subtitle** field. Then, click **Save**. The subtitle appears under the title in the proposal.
Add a section	a. At the top of the dialog box, click **Add Section**. b. Type a title for the section. c. Click **OK**. The new tab is added at the end of the proposal setup.
Delete a section	a. Go to the section tab that you want to delete. b. At the top of the dialog box, click **Delete Section**. c. To permanently delete the section, click **Yes** in the confirmation dialog box.
Move a section forward or backward in the proposal	a. Go to the desired section tab. b. In the upper-right corner of the dialog box, click **Move Forward** or **Move Backward**.

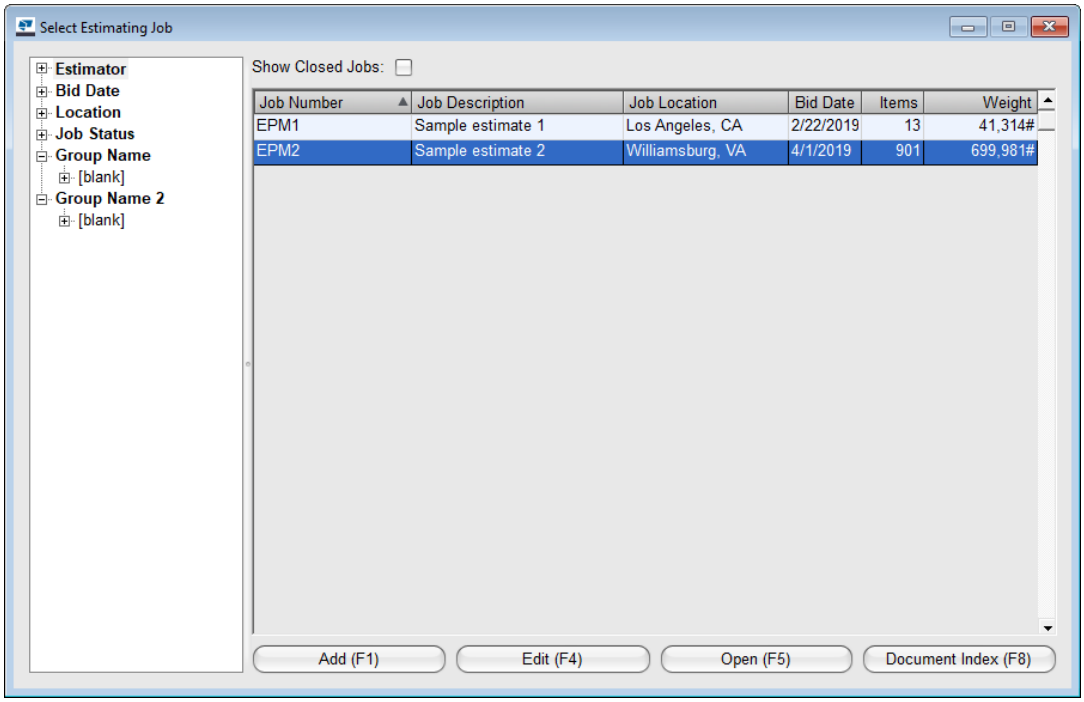
6. Click **Save**.
7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

6.2 Open the Estimating module

To start creating estimates, you need to open the **Estimating** module:

- At the top of the Tekla EPM window, click the **Estimating** button.

The **Select Estimating Job** dialog box opens.



NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

You can continue with adding a new estimating job, modifying the properties of an existing estimating job, opening an estimating job, or viewing the **Document Index**.

You can also customize the **Select Estimating Job** dialog box according to your needs.

See also

Find an estimating job (page 369)

Create an estimating job (page 370)

Open an estimating job (page 377)

Modify an estimating job (page 396)

Store document references for an estimating job (page 388)

Delete estimating jobs (page 304)

Find an estimating job

You can use the **Find Job** command in the **Select Estimating Job** dialog box to find an estimating job that you want to open or modify.

Note that sometimes sorting estimating jobs by estimator, bid date, or other properties in the navigation tree of the **Select Estimating Job** dialog box can be quicker than using the **Find Job** command.

1. While in the **Select Estimating Job** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Find Job**.

   You can also press **Ctrl+F** to find a job when you are in the **Select Estimating Job** dialog box.
3. Type the job name in the field, or click the arrow on the right side of the field to select an option in the list.
4. Click **OK**.

The estimating job that you searched for is selected in the **Select Estimating Job** dialog box. You can now open or modify it.

NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

See also

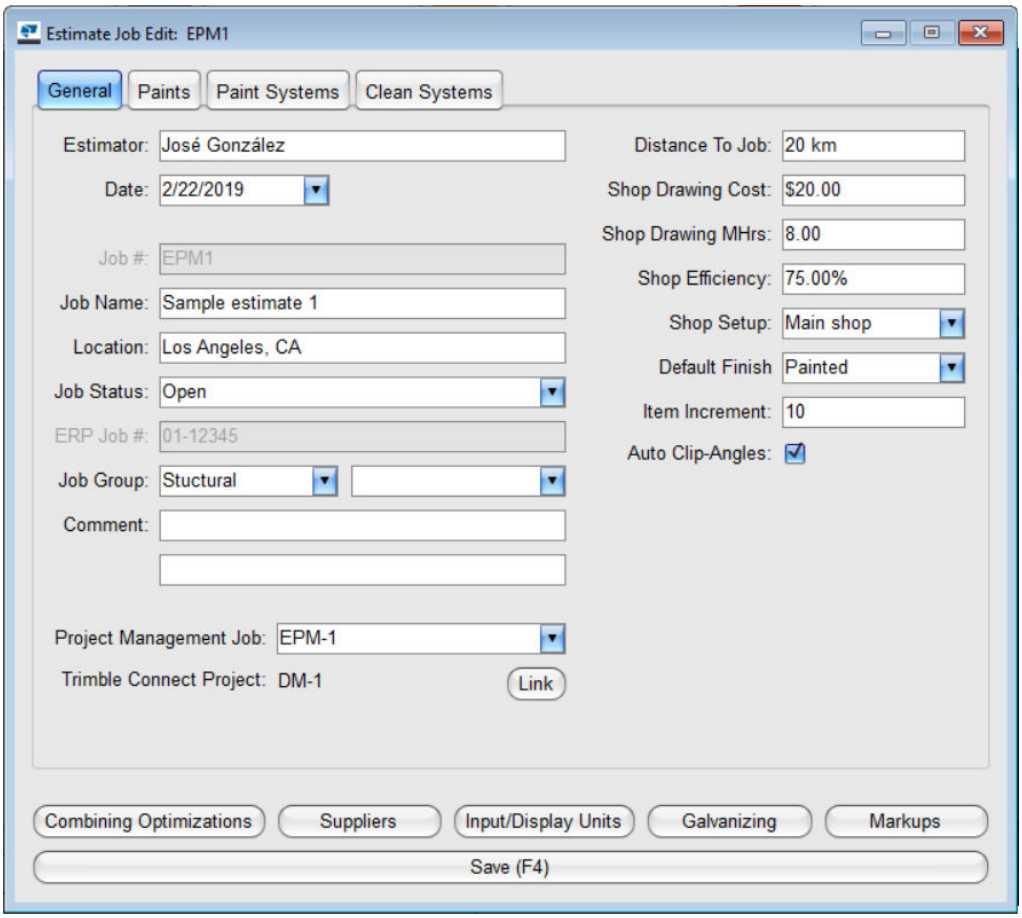
Open an estimating job (page 377)

Modify an estimating job (page 396)

Create an estimating job

To create a new estimating job, do the following:

1. At the bottom of the **Select Estimating Job** dialog box, click **Add**.



2. On the **General** tab of the **Estimate Job Edit** dialog box, type the job number.

   The job number cannot be changed after creating the estimating job. All other details can be modified later.

3. Adjust the following properties according to your needs:

Option	Description
Estimator	The name of the estimator. You can sort estimating jobs based on the estimator.
Date	The date on which the bid is due. Tekla EPM automatically uses the date when you create the job, but you can select a different date in the associated calendar.
Job Name	The description of the estimating job.
Location	The town or city where the job takes place.

Option	Description
Job Status	Select if the job is still in progress (**Open**), or if the job has already been finished (**Closed**). You can filter the **Select Estimating Job** dialog box, so that only open jobs are shown.
ERP Job #	The accounting system job number. Typing the accounting system job number in the **ERP Job #** field allows you to link material items properly when you export information to the accounting system, such as Trimble Viewpoint.
Job Group	One or two job groups that help you identify and sort estimating jobs. For example, the year of the estimating job can be used as a job group. Either type a job group directly in the blank field, or click the arrow on the right side of the field to select an existing job group.
Comment	Type any additional comments on the job.
Distance To Job	The distance to the job site. Tekla EPM uses the distance to calculate freight costs if you have selected the **Freight Per Mile** option in **Freight Maintenance**. For more information, see Modify freight pricing (page 301).
Shop Drawing Cost	The total cost of the shop drawings. The value will be used in the fabrication summary report.
Shop Drawing MHrs	The total labor hours used in shop detail drawings. The value will be used in the fabrication summary. Costs will automatically include the **Detailing** labor rate set in **Labor Rates**.
Shop Efficiency	The efficiency percentage of the shop, used for calculating labor times. Shop efficiency is calculated by dividing the labor times accordingly. For example, typing `75%` would increase overall labor times by 33.3%, whereas entering `125%` would reduce the labor times by 20%. Note that the shop efficiency cannot be set to `0`.
Shop Setup	The labor database used for the estimating job. Note that the **Shop Setup** is only available if more than one shop setup has been created. To use another labor database instead, click **Change Shop Setup** and double-click the shop that you want to use.

Option	Description
Default Finish	The default finish used for new items in the estimating job. You can change the finish item by item.
Item Increment	Sets the auto-increment for item numbers. Using the default auto-increment of 10 allows items to be added in the list according to your needs, without having to renumber the other items in the job.
Auto Clip-Angles	When selected, Tekla EPM adds standard clips in the estimating items according to their labor codes. When cleared, standard clips are not used.
Project Management Job	The project management job that is linked to the estimating job. By linking estimating and project management jobs to each other, you can share the labor and material information with the **Project Management** module. Among other details, all the bid documents of the estimating job can be automatically linked to the **Project Management** job, which saves data transfer time. Note that the related production control job needs to be linked to the estimate separately in the **Production Control Job Edit** dialog box. To link a job, click the arrow on the right side of the **Project Management Job** field, and select an existing project management job in the list. The job numbers do not need to match.
Trimble Connect Project	The Trimble Connect project that is linked to the current estimating job. To link the estimating job to a Trimble Connect project, click **Link**, select a project in the **Link Project to Trimble Connect** dialog box, and click **Link Project**. For more information, see Use Trimble Connect with an estimating job (page 435).

4. On the **Paints** tab, create the paints used in the current estimating job:
   - To add a new paint type, click **New Paint**, define the paint properties, and click **Add**.
   - To modify a paint type, select the paint type, modify the properties, and click **Save Paint**.

- To delete a paint type from the estimating job, select the paint type and click **Delete Paint**.

If you do not assign a paint system to the items on the **Paint Systems** tab, all paints listed on the **Paints** tab will be applied to all painted items by default. Assigning a paint system to an item in the estimating job overrides the paints listed here. For more information on the properties of paint types, see Create, modify, and delete paint types (page 298).

5. On the **Paint Systems** tab, create job-specific paint systems, if needed.

   For detailed instructions, see Create job-specific paint systems (page 374).

6. On the **Clean Systems** tab, create job-specific clean systems, if needed.

   For detailed instructions, see Create and apply clean systems (page 296).

7. If necessary, adjust the combining optimizations, galvanizing settings, supplier information, input and display units, and markup percentages according to your needs.

   For more information on the available settings, see Define default combining optimizations for Estimating (page 274), Define and modify job-specific galvanizing settings (page 375), Define suppliers for an estimating job (page 376), Define input and display units for an estimating job (page 375), and Define markup percentages (page 358).

8. Click **Save**.

The **Estimate Job Edit** dialog box closes. The estimating job is added to the list in the **Select Estimating Job** dialog box.

See also

Create and apply clean systems (page 296)

Create job-specific paint systems (page 374)

Define input and display units for an estimating job (page 375)

Define and modify job-specific galvanizing settings (page 375)

Link an estimating job to a project management job (page 376)

Modify an estimating job (page 396)

Create job-specific paint systems

To create paint systems that are only used in the current estimating job, do the following:

NOTE To use job-specific paint types in paint systems, you first need to define them in the **Estimate Job Edit** dialog box.

---

1. While in the **Estimate Job Edit** dialog box, open the **Paint Systems** tab.
2. Click **New Paint System**.

3. Type a description for the new paint system.
4. Use the arrows to move the paints that you want to include in the paint system to the **Included** list.
5. Type the number of paint coats in the **Quantity** field.
6. If you want to set the paint system as the default paint system for new items in the estimating job, select the **Default** check box.

If you cannot see the **Paint System** field in the estimating job, modify the visible input fields via **Maintenance** --> **Estimating** --> **Edit Input Fields** .

See also

Modify an estimating job (page 396)

Create paint systems (page 300)

Define and modify job-specific galvanizing settings

In the **Galvanizing** dialog box, you can modify the pricing, minimum costs and freight information that is applied to a galvanized item in a specific estimating job. If you do not want to modify these settings for a single estimating job, Tekla EPM will automatically use the galvanizing settings that you defined in **Estimating Company Standards**.

1. In the **Select Estimating Job** dialog box, do one of the following:
   - To define or modify galvanizing settings of a new estimating job, click **New**.
   - To define or modify galvanizing settings of an existing estimating job, select the job in the list, and click **Edit**.
2. At the bottom of the **Estimate Job Edit** dialog box, click the **Galvanizing** button.
3. In the **Galvanizing** dialog box, modify the galvanizing costs, the trailer capacity, the labor prep costs per pound, and the weight percent added.
4. Click **OK** to save the changes.
5. Click **Save** in the **Estimate Job Edit** dialog box.

The changes that you made to galvanizing settings are saved for the selected estimating job.

See also

Define default galvanizing settings (page 271)

Define input and display units for an estimating job

You can use either metric or imperial units for displaying and entering sizes, lengths, weights, and prices in a particular estimating job. In addition, you can select how you want to enter the length and thickness of items.

Defining input and display units for each estimating job is not mandatory. If you do not define job-specific input and display units, Tekla EPM uses the default units defined in the **Estimating Company Standards** dialog box.

1. At the bottom of the **Estimate Job Edit** dialog box, click **Input/Display Units**.
2. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.
3. Click **OK**.

See also

Modify an estimating job (page 396)

Create an estimating job (page 370)

Define default input and display units for Estimating (page 273)

Define suppliers for an estimating job

You can define different suppliers for angles, beams, plates, rods, tubes, and other materials used in a particular estimating job. Note that defining suppliers for an estimating job is optional. If you do not define job-specific suppliers, Tekla EPM uses the default suppliers defined in the **Estimating Company Standards** dialog box.

You can manage the available suppliers in **Pricing Maintenance**. To make suppliers available in the **Suppliers** dialog box, the suppliers will first need to be added in **Pricing Maintenance**.

1. At the bottom of the **Estimate Job Edit** dialog box, click **Suppliers**.
2. In the **Suppliers** dialog box, select suppliers for each material group in the available lists.
3. Click **OK**.

See also

Create an estimating job (page 370)

Modify an estimating job (page 396)

Define default suppliers for Estimating (page 275)

Link an estimating job to a project management job

By linking an estimating job to a project management job, you can share the labor and material information with the **Project Management** and **Production Control** modules. This allows you to compare the estimate information with the actual production information.

1. At the top of the Tekla EPM window, click the **Estimating** button.
2. In the **Select Estimating Job** dialog box, select the estimating job that you want to link to a project management job.
3. Click **Edit**.
4. In the **Estimate Job Edit** dialog box, click the arrow on the right side of the **Project Management Job** list, and select the desired project management job in the list.

   The project names and job numbers do not need to match.
5. Click **Save**.

Note that you also need to link the production control job to the project management job.

NOTE To unlink an estimating job from a project management job:

1. Erase the job number in the **Project Management Job** field.
2. Click **Save**.

See also

Link a production control job to an estimating job and a project management job (page 728)

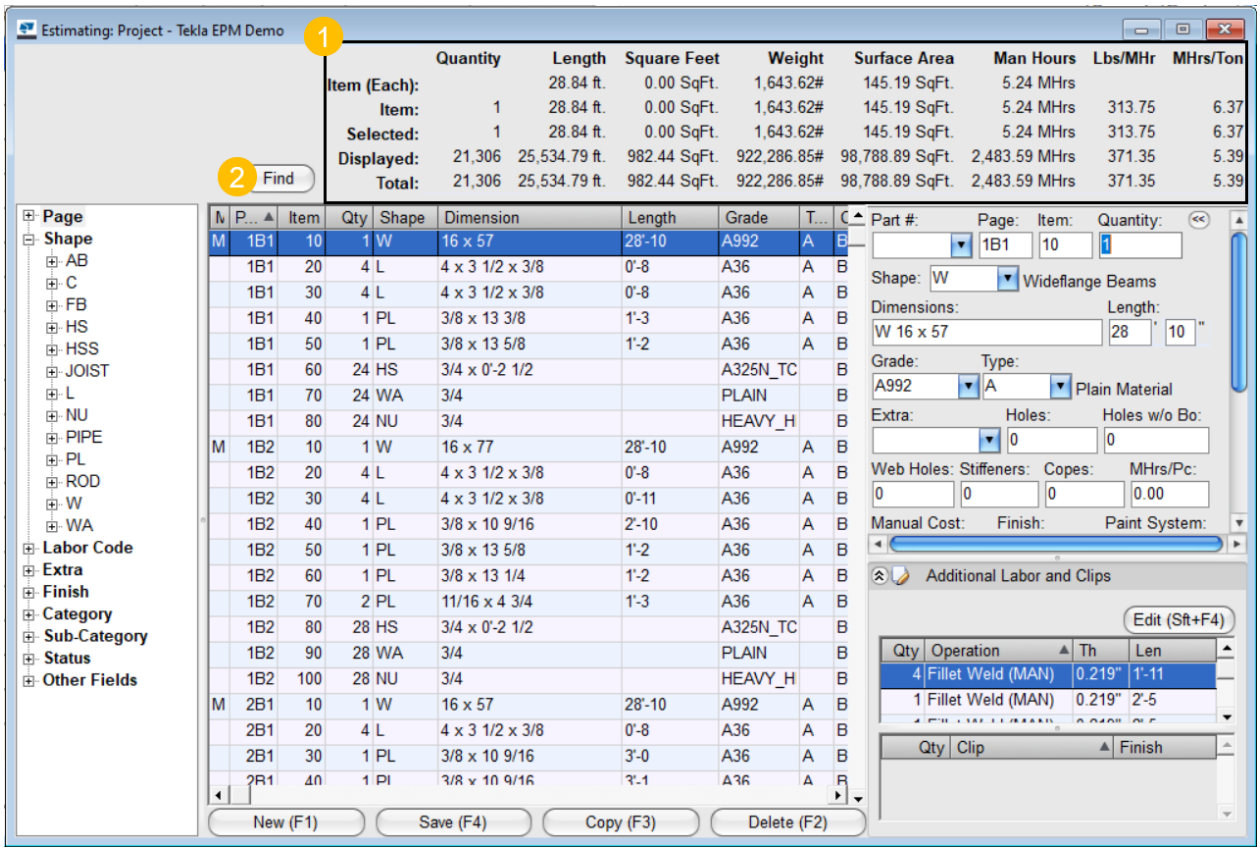
Open an estimating job

To open an existing estimating job, do the following:

1. At the top of the Tekla EPM window, click the **Estimating** button.
2. In the **Select Estimating Job** dialog box, select the job that you want to open.

   NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.
3. Double-click the job, or click **Open**.

The **Estimating** dialog box opens. View the components of the dialog box in the following image:



(1) The summary: shows the quantity, length, weight, surface area, and work time in man hours for each of the selected items, all of the selected items, all items visible in the job, and the entire job.

The summary also displays the pounds per man hour and man hours per ton calculations for the selected items, all items visible in the job, and the entire job.

(2) The **Find** button: click to find items in the job. You can select if you want to find items of a specific shape, material grade, or material dimension, or a particular item in the job. For more information, see Find estimating items (page 413).

You can now continue to adding new items, or modifying and deleting existing items.

View only particular material items or pages in the Estimating dialog box

Use the navigation trees on the left side of the **Estimating** dialog box to only view particular material items of a specific shape, grade, or size, or particular pages of the estimating job.

1. In the **Estimating** dialog box, go to the navigation tree on the left.
2. Click **+** next to a main category in the navigation tree.

   The values for that category are shown.

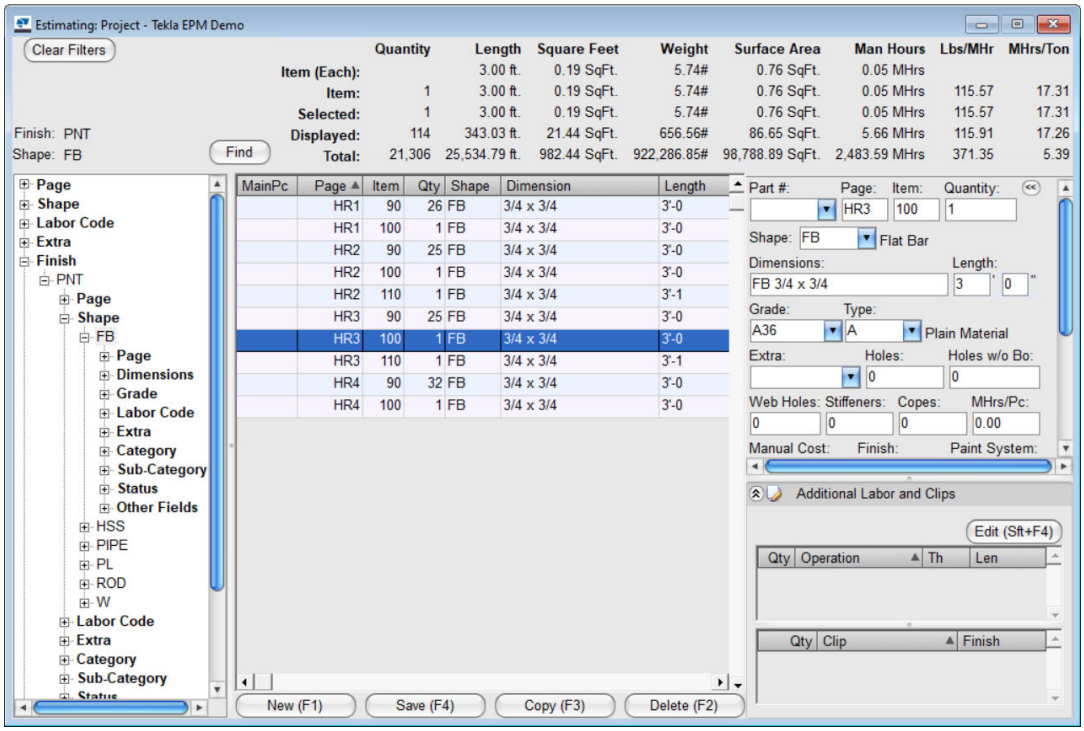
   For example, you can click **+** next to **Finish** to see the finish options that are used in the current job.
3. Select a value.

   For example, to only show items who have been painted, select **PNT**.

   Only the items that match the selected value are shown.

You can select more values or categories under the selected value, or under another main category.

In the example below, only items flat bars with painted finish are shown.



To show all items in the job again, click one of the main categories, such as **Page** or **Finish**.

See also

Filter information in the Estimating dialog box (page 380)

Filter information in the Estimating dialog box

Use the **Filter** command to create filter settings that are commonly used in the **Estimating** dialog box. For example, you can view labor totals by category to check averages, or view the totals for items with a specific finish. You can also save the filter settings for later use.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Filter**.
3. To filter the displayed items according to selected criteria, in the **Estimating Filters** dialog box, select a filter type in the **Type** list, and click **Select**.

   For some filter types, such as page, labor code, or comment, you can also click **Find** and type the desired value in the blank field to use it. This way, you do not have to scroll through all the available items.
4. In the **Filter** dialog box, click the arrow buttons to move the items that you want to display to the **Included** list.
5. Click **OK**.

   If you want to further filter the information displayed in the **Estimating** dialog box, repeat steps 3 to 5 for different items. Note that only items that match the items in the **Included** list will be available when setting more filters.

   If you want to clear all filter settings, click **Reset**.
6. To save commonly used filters, do the following:
   a. Click **Filter Types** in the lower-left corner.
   b. Click **New**.
   c. Type a description for the filter type.
   d. Create the filter settings.

      For more information, see steps 3 to 5.
   e. Click **Add**.
   f. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

      The newly created filter type is selected in the **Filter Types** list.
   g. To apply the filter type, click **Set**.
7. According to your needs, do one of the following:
   - To use the filter, click **Apply Filter**.

- To use the filter in the job and save it until a new filter is set or the filter is cleared, click **Apply Filter & Save**.

  Note that the filter will remain in use even if you close and re-open the job. After you clear the filters, the filter settings cannot be used again.

The **Estimating Filters** dialog box closes, and the **Estimating** dialog box is filtered according to the filter settings you created.

TIP To display all information in the **Estimating** dialog box again, click **Clear Filters** in the upper-left corner.

View estimating job details

You can view various details regarding an estimating job, including the labor times of each material item and all changes made in the estimating job. You can also create estimating reports that show the details of the job, and view, email, or export the reports.

See also

View the labor times of items (page 381)

View all changes in an estimating job (page 384)

View, email, export, and print estimating reports (page 385)

View the labor times of items

Use the **View Labor Details** command to easily review the labor time of an item or a group of items, as well as the labor time of the entire estimating job. If necessary, you can override the labor time calculated by Tekla EPM and enter the labor time manually instead.

1. In the **Estimating** dialog box, select the items whose labor details you want to view.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Estimating** ribbon tab.
3. On the menu, select **View Labor Details**.

   The **Labor Details** dialog box opens.

   The labor estimated time used on the selected items, the displayed items, and the total estimating job are viewed in a table, categorized by labor group.
4. If you want to enter labor time manually, do the following:

   a. In the table, select and right-click the labor time that you want to override.

   b. In the context menu, click **Set Manual Override**.

c. Select if you want to enter the labor time in hours or minutes.

d. Enter the desired labor time in the **Manual Override** field.

e. Click **Set Manual Override**.

The items whose values have changed are highlighted with yellow. Other items affected by the change are highlighted with blue.

If you want to remove the manual override and revert to the labor time calculated by Tekla EPM, right-click the item and select **Remove Manual Override**.

5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

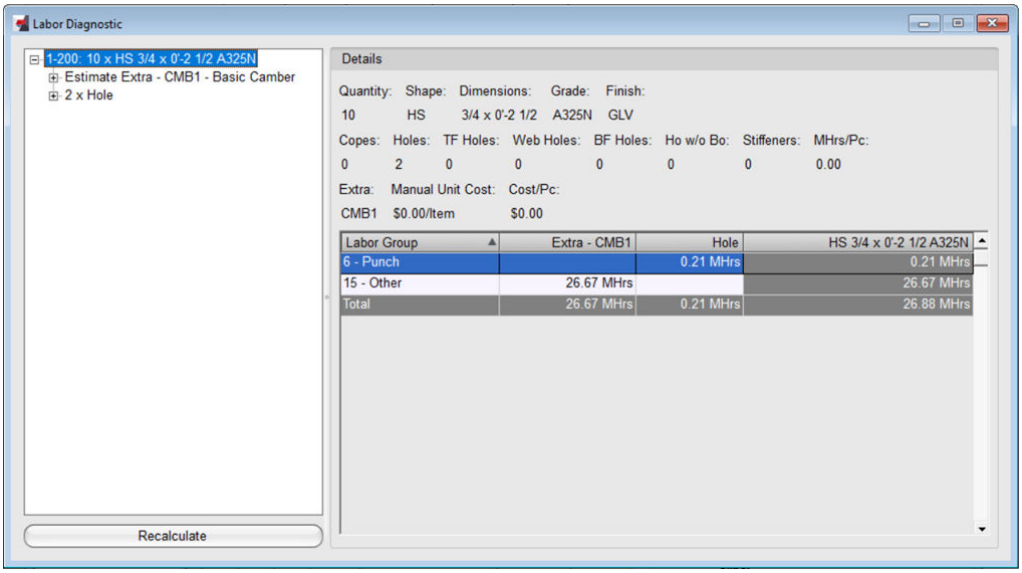
To print, email, or export the information in the **Labor Details** dialog box, create a **Labor Detail** report. For more information on creating reports, see View, email, export, and print estimating reports (page 385).

View and modify the labor time of an item

In the **Labor Diagnostic** dialog box, you can view and modify the labor time of an item. The labor time is divided into categories based on the different labor operations used for the item.

1. In the **Estimating** dialog box, double-click the item whose labor time you want to view.

   The **Labor Diagnostic** dialog box opens, displaying all labor time used on the selected item.



   In the navigation tree on the left, you can view all labor operations that the selected item goes through. These labor operations are defined by the labor code that is used. Each labor operation has buttons that allow you to access the settings that affect how the labor operation is calculated.

2. In the navigation tree, select a labor operation to view the labor operation details.
3. According to your needs, do any of the following:

To	Do this
Add a labor time manually	a. Right-click the labor time that you want to modify. b. In the context menu, click **Set Manual Override**. c. Select if you want to enter the labor time in hours or minutes. d. Enter the desired labor time in the **Manual Override** field. e. Click **Set Manual Override**. The manual override is created. Note that the override only applies to the selected item, not other items of the same shape, grade and size. If you want to remove the manual override and revert to the labor time calculated by Tekla EPM, right-click the item and select **Remove Manual Override**.

View and modify labor codes, labor operations, labor standards, or labor factors	**NOTE** Modifying the following settings will affect all new estimating jobs.
	• Click one of the buttons on the right side of the dialog box:
	  • Click **Labor Codes** to modify labor codes.
	  • Click **Labor Operations** to modify the labor operations.
	  • Click **Labor Standards** to view and modify labor times for different material dimensions and shapes.
	  • Click **Labor Factors** to modify the extrapolation factors used for specific labor operations.

4. Click **Recalculate**.

   Tekla EPM applies the changed values.

5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
6. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
7. On the menu, select **Recalculate Estimate**.

   Tekla EPM recalculates the current estimating job to ensure accurate total values. The changes you made are applied to the estimating job.

View all changes in an estimating job

Tekla EPM records every change made in the system. This is useful because you can view all changes made in the current estimating job at once. You can filter the information to see changes made by a particular user, or on a particular date. You can also print or export the list of changes.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **List Of Changes**.
3. In the **List Of Changes Report Filters** dialog box, do any of the following:

To	Do this
Filter changes by user	a. Select the **User** filter type and click **Select**. b. Click the arrow buttons to move the users whose changes you want to view to the **Included** list. c. Click **OK**.
Filter changes by date	a. Select the **Transaction Date** filter type and click **Select**. b. Do one of the following: • Enter the start (**Minimum**) and end (**Maximum**) dates. • Select the **Expression** check box for the start or end date. Then, select the base date and select how many more or less days will be taken into account. c. Click **OK**.

4. Click **Make Report**.
5. In the **Report Selection** dialog box, do one of the following:

To	Do this
View the list of changes	• Click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the list of changes	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the list of changes	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

View, email, export, and print estimating reports (page 385)

View, email, export, and print estimating reports

You can create multiple types of reports based on your estimating jobs. Some examples of available reports are different estimates, fabrication summaries,

job summaries, and material pricing reports. Once you have selected which report you want to create, you can view, email, export, or print it, according to your needs.

To create estimating reports, do the following:

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. To only display certain items in the report, in the **Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to include in the reports to the **Included** list.
   - Type the maximum and minimum values for the items that you want to include in the reports.
5. Click **OK**.

   Repeat steps 3 to 5 for every filter type that you want to use.
6. In the **Use Pricing Data From** list, select which pricing information you want to use.
7. Click **Make Report**.

   The **Report Selection** dialog box opens.

   Note the purpose of the following buttons:
   - If you want to include your company logo in the report, select the **Show Company Logo** check box.
   - If you want to modify the filters you set for the reports, click **Change Filters**.
   - If you want to modify the design of a report, select it and click **Design**.
   - If you want to create a customized report list, click **Edit Report Types**.

   According to your needs, see any of the following instructions:

View or email estimating reports

1. Select the report that you want to view.

   To select more than one report at a time, hold down the **Ctrl** key while clicking reports in the list.
2. In the **Report Selection** dialog box, click **View**.
3. In the **Tekla EPM Report Viewer** window, view the report.

4. If you want to attach the report to a Microsoft Outlook email, click either **Email Excel** or **Email PDF** at the top of the window.

   Microsoft Outlook automatically opens and creates a new email. You can then modify the message, add the recipient, and send the email.

5. Once you have viewed all necessary report details, click **Close** in the upper-right corner of the **Tekla EPM Report Viewer**.

Print estimating reports

1. Select the report that you want to print.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **+** and **-** buttons to increase or decrease the number of copies.
3. Click **Print**.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Tekla EPM prints the report.

Export estimating reports

1. Select the report that you want to export.

   To select more than one report at a time, hold down the **Ctrl** key while clicking reports in the list.

2. In the **Report Selection** dialog box, click **Export**.
3. In the **Export Format** list, select an export format.
4. Click **Browse**.
5. Modify the file name according to your needs.
6. Browse to the location where you want to save the exported file, and click **Save**.
7. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
8. To open the file after exporting it, select the **Open Exported Document** check box.
9. In the **Report Selection** dialog box, click **Export**.

Tekla EPM saves the report to the selected location in the selected file format.

Calculate an estimating job

Use the **Calculate Material Cost** command to view the total material cost of the displayed or selected estimating items, or use the **Recalculate Estimate**

command to update the estimating job value after making changes to the labor or material databases.

See also

Calculate an estimating job (page 387)

Recalculate an estimate (page 388)

Calculate the total material cost

To view the current total material cost of the displayed or selected items, use the **Calculate Material Cost** command. Note that the total material cost does not contain costs that have been applied to items by adding estimate extras.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Calculate Material Cost**.

   The **Material Cost** dialog box opens and displays the total material cost of selected, displayed, and all items in the estimating job.
3. View the material costs.
4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Recalculate an estimate

By recalculating the entire estimating job, you can ensure accurate total value even after making multiple changes to the labor and material databases.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Recalculate Estimate**.
3. To recalculate the estimate, click **Yes** in the confirmation dialog box.

Store document references for an estimating job

Document Index is where you can store documents for reference. When you store documents in **Document Index**, each user with access to the estimating job can view the documents, so it is easy to keep up-to-date on the estimating job. You can save all bid documents, contract drawings and specifications, as well as Microsoft Outlook emails, in **Document Index**.

To access **Document Index**, do the following:

1. In the **Select Estimating Job** dialog box, select the job whose document references you want to view or modify.
2. Click **Document Index**, or press **F8**. If the estimating job is linked to a project management job and a production control job, Tekla EPM asks you if you want to open the **Document Index** dialog box related to the linked project management job.

3. According to your needs, do any of the following:
   - To view and manage the document references of both the linked project management job and the current estimating job, click **Yes**.
   - To only view and manage the documents of the current estimating job, click **No**.

   If you clicked **Yes**, Tekla EPM asks if you want to view and manage the documents in the linked production control job as well.
4. According to your needs, do any of the following:
   - To view and manage the document references of the linked production control job as well, click **Yes**.
   - To only view and manage the documents of the current estimating job and the linked project management job, click **No**.

The **Document Index** dialog box opens.

Next, you can either modify the available folders for document references, or add, modify, delete, open, and email document reference files.

See also

Manage document reference categories (page 389)

Open a document reference (page 394)

Add document references (page 391)

Modify a document reference (page 395)

Attach a document reference to an email (page 396)

Delete a document reference (page 396)

Manage document reference categories

Use the **Edit Categories** command in **Document Index** to manage the categories that you can use to organize document references. You can add new categories, rename categories, and delete unnecessary categories. You can also change the default folder where document references are saved.

1. At the bottom of the **Document Index - By Category** dialog box, click **Edit Categories**.
2. In the **Document Index - Edit Categories** dialog box, do any of the following:

To	Do this
Add a new category	a. In the navigation tree at the top of the dialog box, select the parent category for the new category. b. Click **Add**.

To	Do this
	c. Type a name for the new category. For example, `Miscellaneous documents`. d. Click **OK**. The new category is added to the list.
Rename a category	a. In the navigation tree at the top of the dialog box, select the category that you want to rename. b. Type a new name for the category. c. Click **OK**. The category name is updated.
Delete a category	a. In the navigation tree at the top of the dialog box, select the category that you want to delete. b. Click **Delete**. Note that you cannot delete a category that has sub-categories. c. To permanently delete the category, click **Yes** in the confirmation dialog box.
Change the default folder where documents are saved	When documents are added in **Document Index**, the selected document can be either moved or copied to the selected folder. This way, Tekla EPM retains all documents that have been saved to **Document Index**, even if the original documents are moved or deleted. The default folder for saving documents needs to be in the Tekla EPM default folders, so that all users can view the attached documents. Files saved elsewhere than the default location cannot be viewed by other Tekla EPM users. a. Click **Default Dir**. b. Do one of the following: • Select the folder that you want to use as the default folder. • Click **Make New Folder** to add a new folder under the currently selected one, and click it to use it as the default folder. c. Click **OK**.

3. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Add document references

You can either upload completely new document references, such as documents, Microsoft Outlook emails, and Microsoft Outlook email attachments to **Document Index**, or add documents already loaded to **Document Index** for the current job.

Add new documents

1. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the document.
2. Click **Add Document Reference**.

   If you are viewing the document references of multiple modules and have not selected a module-specific category in the navigation tree, Tekla EPM asks you for which module you want to save the file.
3. Select the desired module.
4. In the **Document Index - Add Document Reference** dialog box, click **Add File**.

   You can also drag and drop files to the **Document Index - Add Document Reference** dialog box. If you do so, skip steps 5 and 6.
5. In the **Open** dialog box, browse to find the document that you want to add, and select the document.
6. Click **Open**.

   If you want to add more documents with the same settings, click **Add Additional File** and repeat steps 4 to 6 for each document.
7. In the **Add File** dialog box, select the company and contact that provided you with the document in the **File Source** lists.

   You can also drag and drop files to the **Add File** dialog box.
8. According to your needs, do one of the following:
   - To compress multiple documents into one archive, select the **Compress Files into a Single Archive** option.
   - To leave the documents that you added uncompressed, select the **Leave Files Uncompressed** option.
9. If you want to change the folder where the document is saved, click **Browse** and select a new folder.
10. According to your needs, do one of the following:
    - To move the original document to the selected folder, select the **Move File** option.
    - To copy the document to the selected folder but leave the original untouched, select the **Copy File (Leave Original)** option.
11. Type a description for the attached document.

12. Click **Add File**.
13. Type a description for the entire document reference.

    This description applies to all documents, emails, and email attachments that you add.
14. When you have added all necessary documents, emails and email attachments, click **Add Document Reference**.

The **Document Index - Add Document Reference** closes, and the documents are added to **Document Index**. You can see all added documents in the list in the **Document Index - By Category** dialog box.

Add a Microsoft Outlook email

1. In Microsoft Outlook, select the email that you want to add.
2. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the email.
3. Click **Add Document Reference**.
4. In the **Document Index - Add Document Reference** dialog box, click **Add Outlook Email**.

   A copy of the email is added to **Document Index**.

   The text of the email is added to the **Description** field.
5. Click **Add File**.
6. Type a description for the entire document reference.

   This description applies to all documents, emails, and email attachments that you add.
7. When you have added all necessary documents, emails and email attachments, click **Add Document Reference**.

The **Document Index - Add Document Reference** closes, and the emails are added to **Document Index**.

Add an attachment from a Microsoft Outlook email

1. In Microsoft Outlook, select the email with the attachment that you want to add.
2. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the attachment.
3. Click **Add Document Reference**.
4. In the **Document Index - Add Document Reference** dialog box, click **Add Outlook Attachments**.
5. Browse to the folder where you want to save the email attachment, and click the folder to select it.

6. Click **Open**.
7. In the **Add File** dialog box, select the company and contact that provided you with the email attachment in the **File Source** lists.
8. According to your needs, do one of the following:
   - To compress multiple email attachments into one archive, select the **Compress Files into a Single Archive** option.
   - To leave the email attachments you added uncompressed, select the **Leave Files Uncompressed** option.
9. Type a description for the email attachment.
10. Click **Add File**.
11. Type a description for the entire document reference.

    This description applies to all documents, emails, and email attachments that you add.
12. When you have added all necessary documents, emails and email attachments, click **Add Document Reference**.

The **Document Index - Add Document Reference** closes, and the email attachments are added to **Document Index**.

Search for and add a document already in Document Index

To find and add documents for the current job that are already saved in **Document Index**, use the **Search** command.

1. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the document.
2. Click **Add Document Reference**.
3. In the **Document Index - Add Document Reference** dialog box, click **Search**.
4. In the **Search** dialog box, click **Browse** and select the folder where you want to look for documents.

   TIP To also search from the sub-folders of the selected folder, select the **Sub-Directories** check box.

5. To narrow the search, do one or more of the following:
   - Type the document name, document size, and file name extension.
   - In **File Date**, select the dates between which the document has been created or downloaded onto your computer.
   - In **Date Loaded**, select the dates between which the document has been added to **Document Index**.

- In the **Source** lists, select the contact and company that have provided the document.

6. To include archived documents in the search, select the **Include All Archive Files** check box.
7. Click **Search**.

   The search results appear at the top of the **Search** dialog box.
8. In the search results, double-click the document that you want to add.

The document is added to **Document Index** for the current job.

Browse for and add a document already in Document Index

To browse to and add documents to the current job that are already saved in **Document Index**, use the **Find By Directory** command. You can also add new documents, delete existing documents, rename documents and categories, move documents to other folders, and open documents.

1. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the document.
2. Click **Add Document Reference**.
3. In the **Document Index - Add Document Reference** dialog box, click **Find By Directory**.
4. In the navigation tree on the left of the **Document Index - By Directory** dialog box, select a category.

   If you want to rename the selected category, you can click **Rename Directory**, type a new name, and click **OK**.

   The documents within the category are listed in the display area of the dialog box.
5. Select a document.
6. In the lower-right corner, click **Select**.

   Note that besides adding an existing document to the current job, you can also use the buttons at the bottom of the dialog box to:

   - Add new documents (**Add File**).
   - Delete a document (**Delete File**).
   - Move a document to another folder within the document index folder (**Move File**).
   - Rename a document (**Rename File**).
   - Open a document (**Open File**).

The document is added to **Document Index** for the current job.

Open a document reference

Use the **Open File** command to open and view a document reference.

1. In the **Document Index - By Category**, select the document that you want to open.
2. Click **Open File**.

The selected document opens.

See also

Add document references (page 391)

Modify a document reference (page 395)

Attach a document reference to an email (page 396)

Delete a document reference (page 396)

Modify a document reference

Use the **Edit Document Reference** command to modify the source and description of a document in **Document Index**.

1. In the **Document Index - By Category** dialog box, select the document that you want to modify.
2. Click **Edit Document Reference**.
3. In the **Document Reference Details** dialog box, click **Filename**.
4. In the **File Details** dialog box, modify the file source and description according to your needs.
5. Click **Save**.
6. To close the **File Details** dialog box, click the **Close** button (**X**) in the upper-right corner.
7. Modify the description according to your needs.

   Entering a description in the **Document Reference Details** dialog box will override the description that you entered in the **File Details** dialog box. This description will then appear in the **Description** column in the **Document Index - By Category** dialog box.
8. Click **Save**.
9. To close the **Document Reference Details** dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Add document references (page 391)

Open a document reference (page 394)

Delete a document reference (page 396)

Attach a document reference to an email

Use the **Email File** command to create a new Microsoft Outlook email and send a document to the desired recipients via email.

1. In the **Document Index - By Category** dialog box, select the document that you want to send via email.
2. Click **Email File**.

   Microsoft Outlook opens. A new email with the selected document is created, with the selected document attached to it.
3. Add recipients and modify the text of the email.
4. Send the email.

See also

Add document references (page 391)

Open a document reference (page 394)

Delete a document reference

Deleting a document reference from **Document Index** is permanent and cannot be undone. If you delete a document reference, you or any other Tekla EPM users will not be able to access the document reference or any documents, emails, or attachments that it contains, from **Document Index**.

1. In the **Document Index - By Category** dialog box, select the document reference that you want to delete.
2. Click **Delete Document Reference**.
3. To permanently delete the document reference, click **Yes** in the confirmation dialog box.

See also

Add document references (page 391)

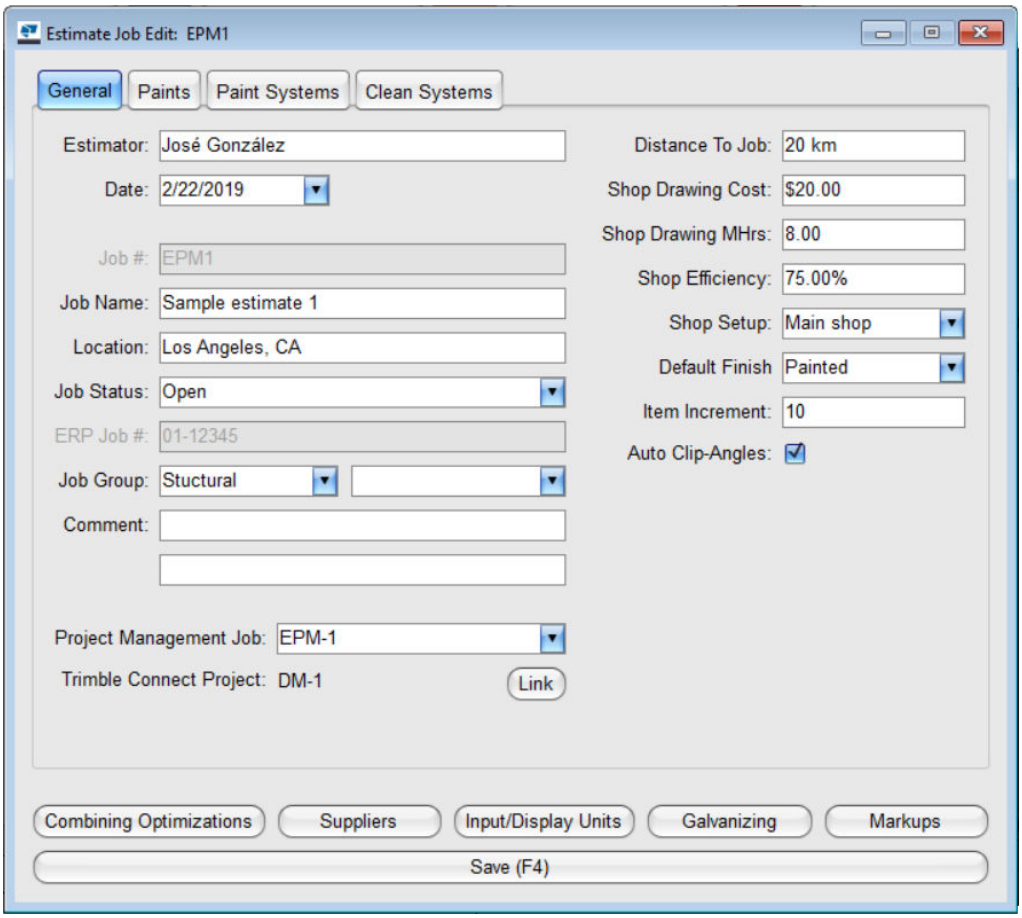
Modify a document reference (page 395)

Open a document reference (page 394)

Modify an estimating job

You can modify any properties of an estimating job later, except for the job number.

1. In the **Select Estimating Job** dialog box, select the job that you want to modify.
2. At the bottom of the dialog box, click **Edit**.



3. On the **General** tab of the **Estimate Job Edit** dialog box, modify the estimating job properties according to your needs:

Option	Description
Estimator	The name of the estimator. You can sort estimating jobs based on the estimator.
Date	The date on which the bid is due. Tekla EPM automatically uses the date when you create the job, but you can select a different date in the associated calendar.
Job Name	The description of the estimating job.
Location	The town or city where the job takes place.
Job Status	Select if the job is still in progress (**Open**), or if the job has already been finished (**Closed**). You can filter the **Select Estimating Job** dialog box, so that only open jobs are shown.

Option	Description
ERP Job #	The accounting system job number. Typing the accounting system job number in the **ERP Job #** field allows you to link material items properly when you export information to the accounting system, such as Trimble Viewpoint.
Job Group	One or two job groups that help you identify and sort estimating jobs. For example, the year of the estimating job can be used as a job group. Either type a job group directly in the blank field, or click the arrow on the right side of the field to select an existing job group.
Comment	Type any additional comments on the job.
Distance To Job	The distance to the job site. Tekla EPM uses the distance to calculate freight costs if you have selected the **Freight Per Mile** option in **Freight Maintenance**. For more information, see Modify freight pricing (page 301).
Shop Drawing Cost	The total cost of the shop drawings. The value will be used in the fabrication summary report.
Shop Drawing MHrs	The total labor hours used in shop detail drawings. The value will be used in the fabrication summary. Costs will automatically include the **Detailing** labor rate set in **Labor Rates**.
Shop Efficiency	The efficiency percentage of the shop, used for calculating labor times. Shop efficiency is calculated by dividing the labor times accordingly. For example, typing `75%` would increase overall labor times by 33.3%, whereas entering `125%` would reduce the labor times by 20%. Note that the shop efficiency cannot be set to `0`.
Shop Setup	The labor database used for the estimating job. Note that the **Shop Setup** is only available if more than one shop setup has been created. To use another labor database instead, click **Change Shop Setup** and double-click the shop that you want to use.
Default Finish	The default finish used for new items in the estimating job. You can change the finish item by item.

Option	Description
Item Increment	Sets the auto-increment for item numbers. Using the default auto-increment of 10 allows items to be added in the list according to your needs, without having to renumber the other items in the job.
Auto Clip-Angles	When selected, Tekla EPM adds standard clips in the estimating items according to their labor codes. When cleared, standard clips are not used.
Project Management Job	The project management job that is linked to the estimating job. By linking estimating and project management jobs to each other, you can share the labor and material information with the **Project Management** module. Among other details, all the bid documents of the estimating job can be automatically linked to the **Project Management** job, which saves data transfer time. Note that the related production control job needs to be linked to the estimate separately in the **Production Control Job Edit** dialog box. To link a job, click the arrow on the right side of the **Project Management Job** field, and select an existing project management job in the list. The job numbers do not need to match.
Trimble Connect Project	The Trimble Connect project that is linked to the current estimating job. To link the estimating job to a Trimble Connect project, click **Link**, select a project in the **Link Project to Trimble Connect** dialog box, and click **Link Project**. For more information, see Use Trimble Connect with an estimating job (page 435).

4. On the **Paints** tab, modify the paints used in the current estimating job:
   - To add a new paint type, click **New Paint**, define the paint properties, and click **Add**.
   - To modify a paint type, select the paint type, modify the properties, and click **Save Paint**.
   - To delete a paint type from the estimating job, select the paint type and click **Delete Paint**.

   If you do not assign a paint system to the items on the **Paint Systems** tab, all paints listed on the **Paints** tab will be applied to all painted items by

default. Assigning a paint system to an item in the estimating job overrides the paints listed here. For more information on the properties of paint types, see Create, modify, and delete paint types (page 298).

5. On the **Paint Systems** tab, modify the job-specific paint systems, if needed.

   For detailed instructions, see Create job-specific paint systems (page 374).

6. On the **Clean Systems** tab, modify the job-specific clean systems, if needed.

   For detailed instructions, see Create and apply clean systems (page 296).

7. If necessary, adjust the combining optimizations, galvanizing settings, supplier information, input and display units, and markup percentages according to your needs.

   For more information on the available settings, see Define default combining optimizations for Estimating (page 274), Define and modify job-specific galvanizing settings (page 375), Define suppliers for an estimating job (page 376), Define input and display units for an estimating job (page 375), and Define markup percentages (page 358).

8. Click **Save**.

The **Estimate Job Edit** dialog box closes. The estimating job is updated to match the changes that you made.

See also

Create job-specific paint systems (page 374)

Create and apply clean systems (page 296)

Define and modify job-specific galvanizing settings (page 375)

6.3 Manage estimating items

You can manage the material items in an estimating job in different ways.

For more information, see the following links:

Add materials to an estimating job (page 400)

Copy and multiply estimating items (page 414)

Modify estimating items (page 417)

Delete an estimating item (page 419)

Create, modify, and delete production codes (page 419)

Add materials to an estimating job

In addition to manually added estimating items, you can add accessories, assemblies, and parametric assemblies to estimating jobs.

See also

Add an estimating item (page 401)

Add an accessory (page 409)

Add an assembly (page 411)

Add a parametric assembly (page 412)

Add an estimating item

To add a new item to an estimating job, do the following:

1. At the bottom of the **Estimating** dialog box, click **New**.
2. Define the item properties.

   NOTE The visible input fields and their order depend on the settings that you have defined in the **Input Fields** dialog box that you can access via **Maintenance** --> **Estimating** --> **Edit Input Fields** .

   The properties marked with an asterisk (*) in the following table are mandatory information.

Option	Description
Page *	The number of the page on which the item is added. The page number can be used to color-code or filter items in Trimble Connect. For more information, see Use Trimble Connect with an estimating job (page 435). You can modify the page number manually or use the page number automatically determined by Tekla EPM.
Item *	The item number. You can modify the item number manually or use the item number automatically determined by Tekla EPM. Default item increments are set in **Company Standards**, but you can modify them for each job. We recommend leaving spaces between items, so

Option	Description
	that you can later add items between existing items. If necessary, you can reset the item number intervals in **Job Maintenance**.
Quantity *	The number of pieces to be added. Use the numeric keypad in the quantity field to add, multiply, divide, or subtract numbers to adjust the quantity.
Shape *	The material shape of each piece. Either click the arrow on the right side of the **Shape** field to select the shape, or type the shape indicator in the field (for example, HSS).
Grade *	The material grade of each piece. Depending on the shape, the grade can also be mandatory information. Either click the arrow on the right side of the **Grade** list to select the grade, or type the grade indicator in the field.
Dimensions *	The material dimension, or material size, of each piece. Depending on the shape, the dimension can also be mandatory information. Click the **Dimensions** field to select an available material dimension, and double-click the desired dimension in the list. **TIP** You can also use a custom material dimension. Note that the dimension is not automatically added to the material database. To use a custom dimension, do the following: a. Click in the **Dimensions** field. b. Click **Add Size**. c. Define the dimension properties. d. Click **Save**. You can now select the dimension and use it.

Option	Description
Length	The length of each piece. Default length input settings are set in **Company Standards**, but you can modify them for each job.
Type	The labor code applied to the item. Note that the available labor codes depend on the material group of the selected shape. The labor code can be used to color-code or filter items in Trimble Connect. Click the arrow on the right side of the **Type** field to select a labor code, or type the labor code abbreviation in the field.
Extra	The estimate extra applied to the item. Estimate extras are additional costs and labor that you can add to an estimating item. Estimate extras can also contain formulas that calculate the additional costs and labor. To apply estimate extras to the item, do one of the following: • To apply one estimate extra to the item, click the arrow on the right side of the **Extra** field to select the extra that you want to apply. • To apply multiple extras to the item, double-click in the **Extra** field, and click the arrow buttons to move the desired extras to the **Included** list.
Holes, **Web Holes**, **Top Flg Holes**, **Bot Flg Holes**	The number of the holes, web holes, top flange holes, or bottom flange holes per piece. Bolts are automatically added for beams and tubes with holes. When you define the number of holes, Tekla EPM automatically adds the labor time spent on holes to the item.
Holes w/o Bo	The number of holes per piece. No bolts will be added. When you define the number of holes, Tekla EPM automatically adds the labor time spent on holes to the item.

Option	Description
Stiffeners	The number of stiffeners per piece. When you define the number of stiffeners, Tekla EPM automatically calculates and adds the labor time spent on stiffeners to the item. Note that you need to add the material for the stiffeners separately because such material is not added automatically.
Copes	The number of copes per piece. When you define the number of stiffeners, Tekla EPM automatically calculates and adds the labor time spent on copes to the item.
MHrs/Pc	The number of man hours per piece. This time will be added to the labor time already calculated by Tekla EPM.
Manual Cost	A cost that replaces the material cost of the item in reports. **TIP** If necessary, you can change and convert the units by right-clicking in the **Manual Cost** field. Select a suitable option in the context menu.
Finish	The finish type of the item. The default options are **Painted**, **Unpainted**, and **Galvanized**. The finish type can be used to color-code or filter items in Trimble Connect. For more information, see Use Trimble Connect with an estimating job (page 435). You can apply paint systems to an item whose finish type is **Painted** to use other finishes than the standard ones.
Category, **Sub-Category**	A class used for sorting items within a job. Categories and sub-categories can be used for filtering the information in the **Estimating** dialog box and color-coding or filtering items in Trimble Connect. The available categories and sub-categories are created in **Estimating Company Standards**.

Option	Description
	If necessary, you can also assign quantity multipliers to sub-categories. Click the arrow on the right side of the **Category** or **Sub-Category** field and select an existing category, or type a new category in the field.
MainPc	When selected, indicates that the item is a main piece in an assembly. When cleared, indicates that the item is not a main piece. Marking items as main pieces allows you to consider whole assemblies in fabrication. If you use main pieces, you can create reports that show the properties for each main piece, or assembly. Selecting the **MainPc** check box is optional, but be consistent: either select the check box for all main pieces in the estimating job, or do not select it for any of them.
Comment	An optional comment that you can type for the item.
Erect Hrs	The number of hours spent on erecting the item.
Erect Cost	The amount of money used for erecting the item.
Status	The estimate status of the item. The status indicates the level of completion of the item. The status can be used to color-code or filter items in Trimble Connect. For more information, see Use Trimble Connect with an estimating job (page 435).
Detailing Cost	The amount of money used for erecting the item. The **Detailing Cost** field is identical with the **Erect Cost** field.
Detailing Hrs	The number of hours spent on erecting the item. The **Detailing Hrs** field is identical with the **Erect Hrs** field.
Prod. Code	The production code applied to the item. Production codes group items so that you can apply man hour per ton and per labor group percentages to items in the linked production control job. The production code can be used to color-code or filter items in Trimble Connect. For more

Option	Description
	information, see Use Trimble Connect with an estimating job (page 435). Production codes group similar items together within jobs.
Sequence	The sequence number assigned to the item. The sequence can be used to color-code or filter items in Trimble Connect. For more information, see Use Trimble Connect with an estimating job (page 435). Click the arrow on the right side of the **Sequence** field to select a sequence number, or type the number in the field.
Clean System	The clean system applied to the item. Click the arrow on the right side of the **Clean System** field to select an existing clean system.
Paint System	The paint system applied to an item whose finish type is **Painted**. Click the arrow on the right side of the **Paint System** field to select an existing clean system. If no paint system is selected for a painted item, the default paints defined in the **Estimate Job Edit** dialog box are applied. For more information, see Modify an estimating job (page 396).
Cost/Pc	A cost per piece that is added to the material cost of the item.
Welded Studs	The number of welded studs per piece. The price per welded stud is defined in **Fabricator Information** for a typical stud price. You can also add welded studs as separate items. Tekla EPM will then price them accordingly.
Camber	The camber size used with the item. Type the labor time used in cambers in the **MHrs/Pc** field. Do not define the cost of cambers in the **Manual Cost** field. The cost entered in the **Manual Cost** overrides the material cost of cambers. Instead, you can type the cost in the **Cost/Pc** field.
Part #	The part number that identifies the accessory item. The selected part number populates the applicable fields with the information from **Accessory**

Option	Description
	Maintenance. The applicable fields need to be modified in the **Accessory Maintenance** dialog box.
PRC Unit Cost, **PRC Cost**, **PRC Date**	Fields that show the current pricing information of the selected item from the selected supplier. If no date is displayed in the **PRC Date** field, the material does not exist in the selected supplier's pricing data set. Double-click one of the fields to open the **Pricing Maintenance** dialog box and enter pricing information.

3. If necessary, apply additional labor and clips to the item.

   For more information, see Apply additional labor and clips (page 407).

4. Click **Add**.

The item is added to the display area.

See also

Apply additional labor and clips (page 407)

Modify a single estimating item (page 417)

Copy estimating items (page 415)

Delete an estimating item (page 419)

Apply additional labor and clips

You can apply additional labor operations, such as welding or burning, or standard clips to an estimating item.

To apply additional labor and clips, do the following:

1. In the **Estimating** dialog box, select the item to which you want to apply additional labor or clips.
2. In the lower-right corner of the dialog box, expand the **Additional Labor and Clips** section.
3. Click **Edit**, or press **Shift+F4**.

The **Estimating Item** dialog box opens.

You can add additional labor on the left side of the dialog box, and clips on the right side of the dialog box. To apply additional labor or clips, see the following sets of instructions.

Apply additional labor

1. In the **Additional Labor** section of the dialog box, click **New**.

2. In the **Quantity** field, enter the number of operations that you want to add.
3. In the **Operation** list, select which labor operation you want to add.
4. To define the material thickness, do either of the following:
   - Type the desired material thickness in the **Thickness** field.
   - In the list on the right side of the **Thickness** field, select **Thickness** to apply the thickness defined in the material dimensions.

   Note that the available options for thickness depend on the shape of the selected item. If the selected item is a beam, the list on the right side of **Thickness** allows you to select if the applied thickness is the flange thickness or the web thickness.
5. Select the operation type in the **Type** list.
6. If necessary to define the length, do either of the following:
   - Type the desired length in the **Length** field.
   - In the list on the right side of the **Length** field, select an option to apply a value defined in the material dimensions.

   Note that the available options for length depend on the shape of the selected item. If the selected item is a beam, the list on the right side of **Length** allows you to select if the applied thickness is the flange thickness or the web thickness.
7. Click **Add**.

   The additional labor operations are added to the list and applied to the selected item.

   You can view the labor time, cost, and weight associated with the additional labor at the bottom of the **Additional Labor** section in the **Estimating Item** dialog box.
8. To close the **Estimating Item** dialog box, click **X** in the upper-right corner.

Apply clips

The available clips are standard clips defined in **Standard Clips Maintenance**. For more information, see Manage standard clips (page 339).

1. In the **Clips** section of the dialog box, click **New**.
2. In the **Quantity** field, enter the number of clips that you want to add.
3. Select the shape, clip, and finish in the available list.
4. If you set the clip finish to **Painted**, select the paint system in the **Paint System** list.
5. If necessary, select a cleaning system for the clip in the **Clean System** list.
6. Click **Add**.

The clips are added to the list and applied to the selected item.

You can view the labor time associated with the clips and the clip weights in the list at the bottom of the **Clips** section in the **Estimating Item** dialog box.

7. To close the **Estimating Item** dialog box, click **X** in the upper-right corner.

Add an accessory

Accessories are commonly used items that you can add to items in your estimating jobs. You can create accessories for items such as stiffeners, base plates, or embeds. Accessories can also be linked to specific material shapes and sizes, so that they can only be added to items of that shape and size. To add an accessory to an item, use the **Add Accessory** command.

Note that a you can also add an accessory by typing the part number of the accessory in the **Part #** field.

1. In the **Estimating** dialog box, select the item for which you want to add an accessory.
2. Click the **Estimating** ribbon tab.
3. On the menu, select **Add Accessory**.

   The **Select Accessory** dialog box opens.

   If the accessory list is empty, there are no accessories linked to the selected material shape and size. In these cases, you can either create a new accessory in (page 276), or create a job-specific accessory (page 409).
4. In the accessory list, select the accessory that you want to add.
5. Select or clear the check boxes at the bottom of the dialog box according to your needs.
6. Click **Add Selected**.

The **Select Accessory** dialog box closes.

The accessory is added as the last item of the selected page in the **Estimating** dialog box.

Note that accessories have the same input fields and properties as other estimating items. In addition, accessories have a description.

Create a job-specific accessory

You can create accessories that are only used within the current estimating job. Remember that all labor and material costs associated with the accessory will be added to the estimating job.

NOTE We recommend that you create, modify, and delete accessories in **Accessory Maintenance**. You can also create accessories in an estimating job, but these job-specific accessories cannot be saved to

the accessory library, so they cannot be reused in other estimating jobs.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Job-Specific Accessory Maintenance**.
3. In the **Accessory Maintenance** dialog box, click **New**.
4. If you want to use the accessory multiple times in the current estimating job, enter a part number.
5. Type a description for the accessory.
6. Enter the remaining properties for the accessory:

Option	Description
Quantity	The number of accessories per item to which they are added.
Shape	The material shape of the accessory.
Dimensions	The material size of the accessory.
Length	The length of the accessory.
Grade	The material grade of the accessory.
Type	The labor code of the accessory.
Extra	The estimate extras applied to the accessory. To add estimate extras, double-click the **Extra** field.
Holes	The number of holes in the accessory.
Web Holes	The number of web holes in the accessory.
Stiffeners	The number of stiffeners in the accessory.
Copes	The number of copes in the accessory.
MHrs/Pc	The number of man hours spent on the accessory.
Manual Cost	The cost for the accessory that you can enter manually. The manual cost is optional, and it overrides the pricing information in the pricing database.
MainPc	When selected, the item to which the accessory is added is considered a main piece.
Comment	An optional and additional comment on the accessory.
Erect Hrs	The number of man hours spent on erecting the accessory.
Erect Cost	The cost of erecting the accessory.
Prod. Code	The production code applied to the accessory.

Option	Description
Camber	The camber size used with the accessory.
Holes w/o Bo	The number of holes per piece in the accessory. No bolts will be added.
Top Flg Holes, **Bot Flg Holes**	The number of top flange holes or bottom flange holes per accessory.
Welded Studs	The number of welded studs per accessory.
Detailing Hrs	The number of hours spent on erecting the accessory.
Detailing Cost	The amount of money used for erecting the accessory.
Cost/Pc	A cost per piece that is added to the material cost of the accessory.

7. Click **Add**.

   The accessory is added to the list, and you can add it in the current estimating job.

   You can also use the other buttons at the bottom of the **Accessory Maintenance** to modify the job-specific accessories:

   - Click **Edit** to modify the selected accessory.
   - Click **Copy** to create a new accessory based on the selected accessory.
   - Click **Delete** to permanently delete the selected accessory.
   - Click **Global Edit Selected** to modify the properties of multiple selected accessories at once.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

9. Add the accessory to an item in the estimating job.

   For more information, see Add an accessory (page 409).

Add an assembly

Assemblies are commonly used bid items that can contain multiple pieces with different shapes, labor codes, finishes, and other properties, as well as accessories and parametric assemblies. By adding the assembly to your estimating job, you can add all these pieces at once. We recommend that you add assemblies at the end of the page in an estimating job.

Note that assemblies often begin with a comment line that describes and labels the assembly. This makes it easier to recognize assemblies.

1. Scroll to the end of the page in the **Estimating** dialog box.
2. Click the **Estimating** ribbon tab.

3. On the menu, select **Add Assembly**.
4. In the **Add Assembly** dialog box, type the number of assemblies you want to add in the **Quantity** field.
5. If you want to be able to select from assemblies that are available for all jobs, ensure that the **Show Global Assemblies** check box is selected.

   If the **Show Global Assemblies** check box is not selected, you can only select assemblies that have been added in the current estimating job.
6. Do one of the following:
   - In the **Assembly** list, select the assembly that you want to add.

     If you have selected the **Show Global Assemblies** check box, the **Assembly** list contains all assemblies that are available in **Assembly Maintenance**.
   - If you want to create a new assembly, click **New**, type a name for the assembly, and click **OK**. For further instructions, see Create assemblies (page 311).

     NOTE The new assembly will initially only be available in the current estimating job, but you can later add it to the assembly library. For instructions, see View, rename, copy, and delete assemblies (page 314).
   - If you want to modify an existing assembly, select the assembly in the **Assembly** list, and click **Edit**.
7. If you want to assign a sub-category to the assembly, select the **Set Sub-Category** check box, and select an option in the **Sub-Category** list.

   Assigning a sub-category to the assembly allows you to easily identify and filter assemblies.
8. Click **Add Assembly**.

The **Add Assembly** dialog box closes, and the assembly is added at the end of the item list in the current estimating job.

Add a parametric assembly

Use the **Add Parametric Assembly** command to add assemblies with variables to an estimating job. These assemblies, called parametric assemblies, may vary in height, width or length, so you can use them in different situations. When you define the variable values, Tekla EPM calculates the parametric assembly according to the defined values.

We recommend that you add assemblies at the end of the page in an estimating job.

Note that parametric assemblies often begin with a comment line that describess and labels the assembly.

1. Scroll to the end of the page in the **Estimating** dialog box.
2. Click the **Estimating** ribbon tab.
3. On the menu, select **Add Parametric Assembly**.

   The **Select Parametric Assembly** dialog box opens, displaying all parametric assemblies.
4. Select the parametric assembly that you want to add.
5. Click **OK**.

   The **Parametric Assembly - Variables** dialog box opens, displaying all variables in the parametric assembly.
6. Select a variable in the list.
7. In the **Value** field, type a value for the variable.
8. Click **Set Value**.

   Repeat steps 6 to 8 for all variables.
9. Click **Calculate Parametric Assembly**.

   Tekla EPM calculates the parametric assembly. When the calculation process is finished, the **Parametric Assembly - Results** dialog box opens.
10. Verify that the calculations are correct.
11. If you want to assign a sub-category to the parametric assembly, click the arrow button on the right side of the **Sub-Category** list and select a sub-category.

    Assigning a sub-category to the assembly allows you to easily identify and filter assemblies.
12. Click **Add Parametric Assembly**.

The parametric assembly is added at the end of the estimating job.

Find estimating items

Use the **Find** button in to quickly find estimating items. You can search for items by material shape, grade, and dimensions, or by page and item number.

1. In an open estimating job, click **Find**.
2. Do one of the following:

To	Do this
Find all items that have a particular shape, grade, and dimensions	a. In the **Find** menu, select **Find Shape/Grade/Size**.

To	Do this
	b. In the **Find** dialog box, select the right shape, grade, and dimensions in the available lists. You can also start typing the shape, grade, or dimensions. Tekla EPM will suggest options that match what you have typed. c. Click **Find**. The **Find** dialog box closes. Only the items that match your search are now shown in the **Estimating** dialog box.
Find the right item on a particular page of the estimating job	a. In the **Find** menu, select **Find Item**. b. In the **Find** dialog box, select the right page number and item number in the available lists. You can also start typing the page number or item number. Tekla EPM will suggest options that match what you have typed. c. Click **Find**. The **Find** dialog box closes. Only the items that match your search are now shown in the **Estimating** dialog box.

See also

Manage estimating items (page 400)

Copy and multiply estimating items

Creating an estimate becomes quicker when you use the available commands for copying and multiplying items. By doing so, you can avoid having to enter the same items one by one on different pages, and modifying the quantities of items one by one.

For more information, see the following links:

Copy estimating items (page 415)

Copy a page of estimating items (page 415)

Copy and multiply a group of estimating items (page 415)

Multiply the quantity of the selected estimating items (page 416)

Multiply the quantity of all estimating items in a sub-category (page 416)

Copy estimating items

You can copy estimating items in the **Estimating** dialog box and use them as the basis of a similar item. Then, modify the properties of the new items according to your needs. By copying items, you can save time and avoid entering the same information multiple times in an estimating job.

1. In the **Estimating** dialog box, select the items that you want to copy.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Copy**.

   Copies of the selected items appear at the bottom of the current page.
3. Adjust the properties of the new items according to your needs.
4. Click **Edit** to save the changes.

See also

Copy a page of estimating items (page 415)

Copy and multiply a group of estimating items (page 415)

Copy a page of estimating items

Use the **Copy Page** command to copy all items on a page of the estimating job onto a new page.

1. In the **Estimating** dialog box, select any item on the page that you want to copy.
2. Click the **Estimating** ribbon tab.
3. On the menu, select **Copy Page**.
4. In the **Copy Page** dialog box, type the new page number in the **New Page #** field.
5. Click **Copy**.

Copy and multiply a group of estimating items

Use the **Copy Special** to copy a group of items on a page and multiply their quantity while copying. You can either copy the items on the same page or on another page.

1. In the lower navigation tree of the **Estimating** dialog box, select a page.
2. In the display area, select the items that you want to copy.

To select multiple items, hold down **Ctrl**.

To select a range of subsequent items, hold down **Shift**.

3. Click **Estimating**.
4. On the menu, select **Copy Special**.
5. In the **Qty Multiplier** field, type a number by which all selected items will be multiplied.
6. In the **New Page #** field, type a page name.
7. Click **Copy**.

The items are copied at the end of the selected page, and their quantity is multiplied. To view the items, click the page number in the lower navigation tree.

See also

Copy a page of estimating items (page 415)

Multiply the quantity of the selected estimating items

Use the **Selected Items Multiplier** command to multiply specific items in the estimating job. This is a quick way to you can increase the quantity of multiple estimating items at once.

1. In the **Estimating** dialog box, select the items that you want to multiply.
2. Click the **Estimating** ribbon tab.
3. On the menu, select **Selected Items Multiplier**.
4. In the **Multiplier** field, type the number by which you want to multiply the selected items.
5. Click **Save**.

The quantities of the selected items are multiplied.

See also

Multiply the quantity of all estimating items in a sub-category (page 416)

Multiply the quantity of all estimating items in a sub-category

Use the **Sub-Category Multipliers** command to multiply the quantity of all items that are associated with a specific sub-category in an estimating job.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Sub-Category Multipliers**.

   The **Sub-Category Multipliers** dialog box opens.
3. In the list, select a sub-category.

4. In the **Multiplier** field, type the number by which you want to multiply the quantity of items.
5. Click **Save**.

   The quantity of each item in the sub-category is multiplied.
6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Note that the quantity of the items in the **Quantity** field of the **Estimating** dialog box remains the same. The multiplication factor appears on the right side of the **Quantity** field.

See also

Multiply the quantity of the selected estimating items (page 416)

Modify estimating items

You can either modify the items in estimating jobs one by one, or use the different **Global Edit** commands to modify multiple items at one go.

For more information, see the following links:

Modify a single estimating item (page 417)

Modify multiple estimating items (page 417)

Modify the selected estimating items (page 418)

Modify a single estimating item

You can modify a single estimating item directly in the **Estimating** dialog box.

1. In the **Estimating** dialog box, select the item that you want to modify.
2. On the right side of the dialog box, modify the item properties.

   For example, change the quantity, adjust the labor time, or add additional labor and clips.
3. Click **Edit** to save the changes.

See also

Modify multiple estimating items (page 417)

Modify the selected estimating items (page 418)

Modify multiple estimating items

Use the **Global Edit** command to modify the properties of all or multiple estimating items at one go. This way, you can save time, as you do not need to change the properties of each item individually.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Global Edit** --> **Global Edit**.
3. To only modify specific types of items, in the **Estimating Global Edit Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to modify to the **Included** list.
   - Type the maximum and minimum values for the items that you want to modify.
5. Click **OK**.

   To further limit the item types that you want to modify, repeat steps 2 to 5 for all necessary filter types.
6. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.
7. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.
8. Click **Update**.

The changes you made to estimating item properties are updated to the **Estimating** dialog box.

Modify the selected estimating items

Use the **Global Edit Selected** command to modify the properties of multiple selected items in the estimating job. This way, you can save time, as you do not need to change the properties of each item individually.

1. In the **Estimating** dialog box, select the items that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Estimating** ribbon tab.
3. On the menu, select **Global Edit** --> **Global Edit Selected** .
4. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

5. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

6. Click **Update**.

The properties of the selected estimating items are updated to the **Estimating** dialog box.

Delete an estimating item

You can delete one or multiple unnecessary items from an estimating job. Note that deleting the items is permanent and cannot be undone.

1. In the **Estimating** dialog box, select the item that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click **Delete** or press **F2** on the keyboard.
3. To permanently delete the items, click **Yes** in the confirmation dialog box.

Create, modify, and delete production codes

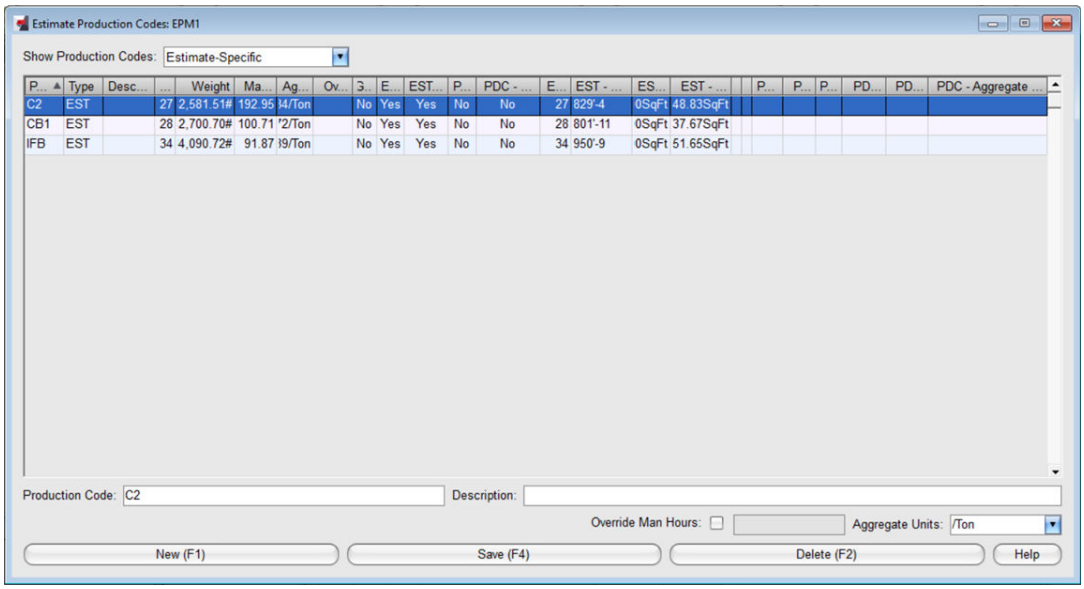
Use production codes to group similar items together within estimating jobs. If necessary, you can then override the man hours of all items that production code. Production codes also allow you to link estimating items to production control job items. This way, the **Production Control** module can use estimate information, such as man hours, and you can view project details and parts easily.

Production codes can be as broad or as specific as you like. For example, you can use one production code for the entire estimating job to add the labor estimates to the production control job. The man hours will then be calculated based on all work that must be done for the entire job. However, you can also set every piece mark to have its own production code, so that man hours in the estimating job and in the production control job match for each item.

To access the **Production Codes** dialog box, do the following:

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Production Codes**.

The **Production Codes** dialog box opens.



You can filter the production codes that are displayed by selecting an option in the **Show Production Codes** list at the top of the dialog box. The options are:

- **Global**: production codes that can be used in all jobs in both **Production Control** and **Estimating**.
- **Estimate-Specific**: production codes that can only be used within a specific estimating job and the linked production control job. These are the production codes that you can create in the current dialog box.
- **In Use**: production codes that are used.

You can also create a report that lists all production codes used in an estimating job. The report is called **Production Code Summary**. For more information on creating reports, see View, email, export, and print estimating reports (page 385).

According to your needs, see any of the following instructions:

Create a production code

Note that you can only create production codes for the current estimating job in the **Production Codes** dialog box. Globally available production codes are created in **Global Production Code Maintenance**.

1. At the bottom of the dialog box, click **New**.
2. Name the production code and type a description.
3. Do any of the following:

To	Do this
Use the estimated labor times of items within	The man hours associated with the production codes are only used in **Production Control**. Production codes do not affect or apply labor to

To	Do this
the production code in **Production Control**	estimating items. The purpose of the man hours is to pull labor information from the estimate in the form of man hours per ton and labor percentages by labor group. • In the **Aggregate Units** list, select a calculation option.
Override the estimated labor time of items within the production code in **Production Control**	**NOTE** Manually overriding man hours applies an aggregate unit, man hours per ton, that can be applied to production control items. However, if the manual override is used, the labor information does not include labor group percentages. Therefore, the labor group percentages cannot be applied to any production control stations. Further, the information cannot be applied to tasks in the project schedule and to resources that feed information to the production schedule. Manually overriding man hours can also prevent you from comparing the linked production control job with the estimating job. a. Select the **Override Man Hours** check box. b. Type the labor time in the field on the right side of the check box. **TIP** To change the units, right-click in the field and select a suitable option in the context menu.

4. Click **Add**.

Modify a production code

1. Select the production code that you want to modify.
2. Modify the production code properties according to your needs.
3. Click **Save** to update the production code properties.

Delete a production code

1. Select the production code that you want to delete.
2. Click **Delete**.

3. In the confirmation dialog box, click **Yes** to permanently delete the production code.

Apply a production code

To apply an existing production code to the estimating job:

1. Ensure that you have the **Prod. Code** display and input fields visible in the **Estimating** dialog box.

   If not, do the following:

   a. Go to **Maintenance** --> **Estimating** --> **Edit Display Fields** .

   b. Move the **Production Code** field to the **Included Fields** list.

   c. Click **Save**.

   d. Go to **Maintenance** --> **Estimating** --> **Edit Input Fields** and repeat steps b and c.

   e. Re-open the estimating job.

2. Click the **Estimating** ribbon tab.
3. On the menu, select **Global Edit** --> **Global Edit** .
4. To only apply the production code to specific types of items, in the **Estimating Global Edit Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, click the arrow buttons to move the items whose properties you want to modify to the **Included** list.
6. Click **OK** to apply the filter.
7. In the **Estimating Global Edit Filters** dialog box, click **OK**-
8. In the **Global Edit** dialog box, select the check box on the left side of **Prod. Code**.
9. In the **Prod. Code** list, select the production code that you want to use for the selected item types.
10. Click **Update**.
11. To update the production code for the selected items, click **Yes** in the confiramtion dialog box.
12. Repeat steps 2 to 10 to assign a production code for each item in the estimating job.

See also

Create, modify, and delete production codes (page 419)

Load estimating materials to other modules

You can load the material items in an estimate to another estimate, a requisition or a purchase order, or a production control job.

See also

Load materials into another estimate (page 426)

Load estimating materials into purchasing (page 423)

Load materials into Production Control (page 428)

Load estimating materials into purchasing

You can load material items in an estimating job into a purchase order or a requisition. Either send material items into a purchase order in order to purchase the items, or send material items to a requisition in order to get pricing information from suppliers and apply the received pricing to the estimating items.

You can either load all estimating items into a requisition or a purchase order, or select the items that you want to load to purchasing.

Load all estimating items into a requisition

Use the **Load Material Into Requisition** command to load all material in an estimating job into a requisition. This way, you can get pricing information from a supplier and apply it to the estimate-specific pricing. You can either add the items into an existing requisition or create a new one.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Purchasing** --> **Load Material Into Requisition** .
3. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.
4. In the **Purchasing Import Filters**, do one of the following:

To	Do this
Load all items	• Click **Import**.
Filter out items that you do not want to load	a. On the left side of the dialog box, select a filter type in the **Type** list, and click **Select**. b. Click **Select**. c. Click the arrow buttons to move the items that you want to load to the requisition to the **Included** list. The items on the **Not Included** side will not be sent to purchasing.

To	Do this
	d. Repeat the process for different filter types until you have filtered out all unnecessary items. e. Click **Import**.

5. Click **OK** to close the **Import Items** dialog box. the **Estimating** dialog box.

Items are sent to the selected requisition. To view and use the requisition, open the **Purchasing** module and go to the **Requisitions** tab.

See also

Load all estimating items into a purchase order (page 424)

Load the selected estimating items into a requisition (page 425)

Load all estimating items into a purchase order

Use the **Load Material Into Purchase Order** command to load all estimating material items into a purchase order. You can either add the items into an existing purchase order or create a new one.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Purchasing** --> **Load Material Into Purchase Order** .
3. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.
4. In the **Purchasing Import Filters**, do one of the following:

To	Do this
Load all items	• Click **Import**.
Filter out items that you do not want to load	a. On the left side of the dialog box, select a filter type in the **Type** list, and click **Select**. b. Click **Select**. c. Click the arrow buttons to move the items that you want to load to the requisition to the **Included** list. The items on the **Not Included** side will not be sent to purchasing. d. Repeat the process for different filter types until you have filtered out all unnecessary items. e. Click **Import**.

5. Click **OK** to close the **Import Items** dialog box. the **Estimating** dialog box.

Items are loaded into the selected purchase order. To view and use the purchase order, go to the **Purchasing** module and open the **Purchase Orders** tab.

See also

Load all estimating items into a requisition (page 423)

Load the selected estimating items into a requisition

Use the **Load Selected Material Into Requisition** command to select the items in an estimating job that are loaded into a requisition. This way, you can get pricing information from a supplier and apply it to the estimate-specific pricing. You can either add the items into an existing purchase order or create a new requisition.

1. In the **Estimating** dialog box, select the items that you want to load.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Estimating** ribbon tab.
3. On the menu, select **Purchasing** --> **Load Selected Material Into Requisition** .
4. In the **Select Requisition** dialog box, select a requisition and click **OK**.

   If necessary, you can also create a new requisition and load the items into it.
5. Click **OK** to close the **Import Items** dialog box. the **Estimating** dialog box.

Items are sent to the selected requisition. To view and use the requisition, open the **Purchasing** module and go to the **Requisitions** tab.

See also

Load all estimating items into a requisition (page 423)

Load the selected estimating items into a purchase order (page 425)

Load the selected estimating items into a purchase order

Use the **Load Selected Material Into Purchase Order** command to select the items in an estimating job that are loaded into a purchase order. You can either add the items into an existing purchase order or create a new one.

1. In the **Estimating** dialog box, select the items that you want to load.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Estimating** ribbon tab.

3. On the menu, select **Purchasing** --> **Load Selected Material Into Purchase Order** .
4. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.
5. Click **OK** to close the **Import Items** dialog box. the **Estimating** dialog box.

Items are loaded into the selected purchase order. To view and use the purchase order, go to the **Purchasing** module and open the **Purchase Orders** tab.

See also

Load all estimating items into a purchase order (page 424)

Load the selected estimating items into a requisition (page 425)

Load materials into another estimate

Use the **Load Material Into Estimate** and **Load Selected Material Into Estimate** commands to copy material from an estimating job to either another existing estimating job or to a new one. These commands are particularly useful when more than one person is working on a bid, or when you are making pricing breakouts on adds or deducts. You can load all items into another estimating job or select the items that you want to load manually.

NOTE To create pricing for the added material, you need to delete the copied items manually from the original location. Tekla EPM does not automatically remove items from any estimate.

Load all or filtered items into an estimate

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Load Material** --> **Load Material Into Estimate** .
3. In the **Select Estimating Job** dialog box, do either of the following:

To	Do this
Load the material into an existing estimating job	• Double-click the estimating job to which you want to load the material.
Load the material into a new estimating job	a. Click **Add**. b. In the **Estimate Job Edit** dialog box, type a job number.

To	Do this
	c. Define any other necessary properties for the new estimating job. Note that you can also change the estimating job properties later. d. Click **Save**. e. Double-click the new estimating job in the **Select Estimating Job** dialog box.

4. In the **New Page #** field, type the page where you want to copy the material.
5. Click **OK**.
6. To only load specific types of items, in the **Estimating Import Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
7. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to load to the **Included** list.
   - Type the maximum and minimum values for items that you want to load.
8. Click **OK**.

   To further limit the items to be loaded, repeat steps 6 to 9 for the necessary filter types.
9. Click **Import**.

Tekla EPM loads all or filtered items into the selected estimating job. You can see the progress of the process in the **Import Items** dialog box. After loading the material has finished, click **OK** to close the **Import Items** dialog box.

Load selected items into an estimate

1. In the **Estimating** dialog box, select the items that you want to load to another estimate.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Estimating** ribbon tab.
3. On the menu, select **Load Material** --> **Load Selected Material Into Estimate** .
4. In the **Select Estimating Job** dialog box, do either of the following:

To	Do this
Load the material into an existing estimating job	• Double-click the estimating job to which you want to load the material.
Load the material into a new estimating job	a. Click **Add**. The **Estimate Job Edit** dialog box opens. b. Type a job number. c. Enter any other necessary properties for the new estimating job. Note that you can also change the estimating job properties later. d. Click **Save**. e. Double-click the new estimating job in the **Select Estimating Job** dialog box.

5. In the **New Page #** field, enter the page where you want to copy the material.
6. Click **OK**.

Tekla EPM loads the selected items into the selected estimating job. You can see the progress of the process in the **Import Items** dialog box. After loading the material has finished, click **OK** to close the **Import Items** dialog box.

Load materials into Production Control

Use the **Load Material Into Production Control** and **Load Selected Material Into Production Control** commands to send items from the currently open estimating job to a new or existing production control job.

Load all items into a production control job

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Load Material Into Production Control**.
3. In the **Select Production Control Job** dialog box, do one of the following:

To	Do this
Load the items to an existing production control job	• Select the production control job in the list.
Load the items to a new production control job	a. Click **Add**. b. In the **Production Control Job Edit** dialog box, type a job number.

To	Do this
	c. Modify the other properties of the production control job according to your needs. Note that you can also modify the properties later. d. Click **Save**. e. To create the production control job, click **Yes** in the confirmation dialog box. The **Production Control Job Edit** dialog box closes. f. Select the new production control job in the list.

4. If you want to use the item number as the piece mark in the production control job, select the **Use Item # as Piece Mark** check box at the bottom of the dialog box.
5. Click **OK**.

   The **Estimating Import Filters** dialog box opens.
6. To only load specific types of items, in the **Estimating Import Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
7. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to load to the **Included** list.
   - Type the maximum and minimum values for items that you want to load.
8. Click **OK**.

   To further limit the items to be loaded, repeat steps 6 to 9 for the necessary filter types.
9. Click **Import**.

The material is loaded into the selected production control job. After the process is finished, click **OK** to close the **Import Items** dialog box.

Load selected items into a production control job

1. In the **Estimating** dialog box, elect the items that you want to load to a production control job.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Estimating** ribbon tab.

3. On the menu, select **Load Selected Material Into Production Control**.
4. In the **Select Production Control Job** dialog box, do one of the following:

To	Do this
Load the items to an existing production control job	• Select the production job in the list.
Load the items to a new production control job	a. Click **Add**. b. In the **Production Control Job Edit** dialog box, type a job number. c. Modify the other properties of the production control job according to your needs. Note that you can also modify the properties later. d. Click **Save**. e. To create the production control job, click **Yes** in the confirmation dialog box. f. Select the production job in the list.

5. If you want to use the item number as the piece mark in the production control job, select the **Use Item # as Piece Mark** check box at the bottom of the dialog box.
6. Click **OK**.

The material is loaded into the selected production control job. After the process is finished, click **OK** to close the **Import Items** dialog box.

6.4 Import files to and export files from the Estimating module

Use the import commands to import useful files to the **Estimating** module. The compatible file types contain IFC files, CIS2 files, KISS files, Bluebeam files, and Microsoft Excel worksheets. You can also export an estimating job to the KISS format to save a copy of it before making any changes due to pricing changes or revisions, or export labor database information to view the currently set labor times.

See also

Import files to the Estimating module (page 431)

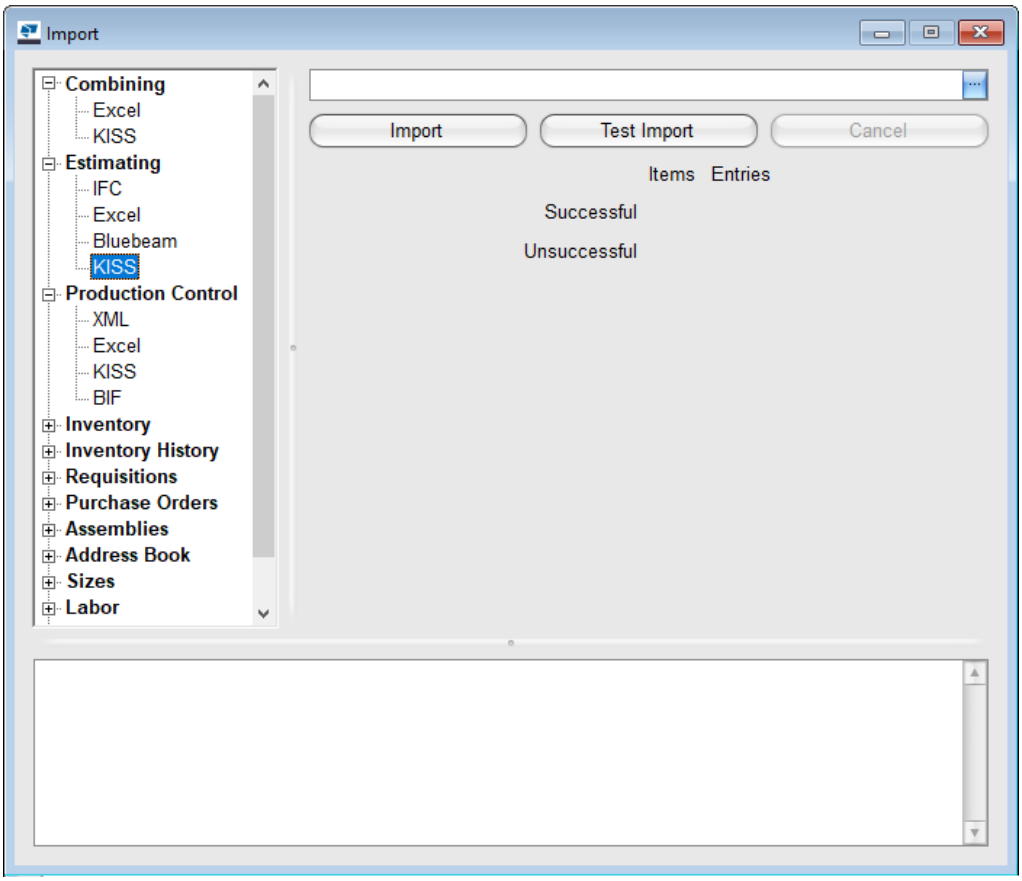
Export an estimating job to KISS (page 432)

Export labor information (page 432)

Import files to the Estimating module

You can import several file types into the **Estimating** module. You can import IFC files, KISS files, Bluebeam files, and Microsoft Excel worksheets.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Import**.
3. In the navigation tree of the **Import** dialog box, click the desired import option under **Estimating**.



4. To select the file that you want to import, click the **...** button in the upper-right corner of the dialog box.
5. Browse to find the file, and click **Open**.

   Note that you can click the **Test Import** button to test importing a KISS file before actually importing it. This way, you can ensure that all information will be imported successfully.
6. Click **Import**.

   What happens next depends on the type of file that you are importing. For example, when you are importing an Microsoft Excel worksheet, the

Import Field Map dialog box asks you to connect the Microsoft Excel columns with the Tekla EPM standard fields.

Note that you should only save your field mapping selections if you are absolutely sure that you will continue to use the same mapping. This is because the **Import Field Map** dialog box may not open in the future when you import new files that match the previously saved mapping.

After you have done so, the import continues.

Once the import is completed, a message appears at the bottom of the **Import** dialog box.

7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Export an estimating job to KISS (page 432)

Export an estimating job to KISS

Exporting an estimating job to KISS allows you to archive a copy of the estimating job.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Export to KISS**.
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. Click **Save**.

A copy of the file is saved in the KISS format.

See also

Import files to the Estimating module (page 431)

Export labor information

Use the **Export Labor** command to create a text file with the values set in a labor database. Exporting labor information allows you to view the currently set labor times.

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Export Labor**.

3. If you have created multiple labor databases, in the **Shop Setup** dialog box, select the shop whose labor information you want to export.
4. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
5. If necessary, change the file name.
6. Click **Save**.

The labor database information is converted to a text file and saved in the selected location.

If necessary, you can import the labor information to a different Tekla EPM database.

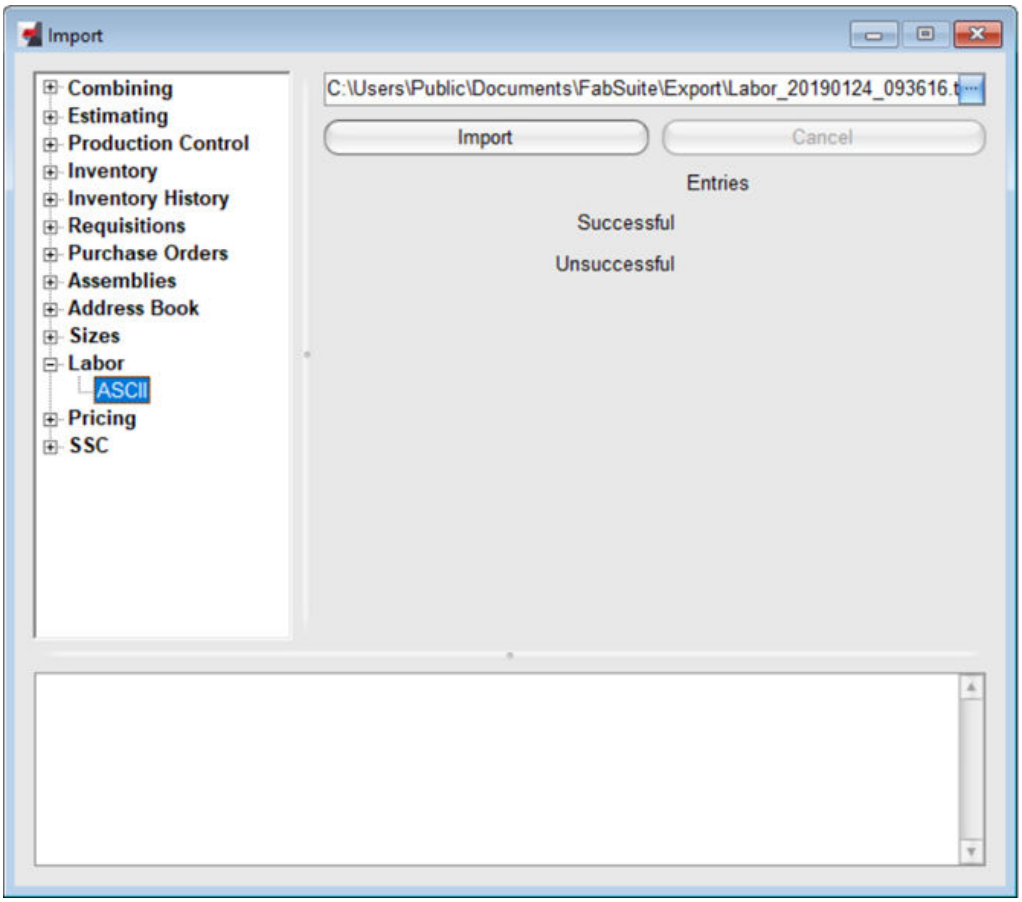
See also

Import labor information to Tekla EPM (page 433)

Import labor information to Tekla EPM

To import labor information from a text file to Tekla EPM, do the following:

1. Click the **File** ribbon tab in the upper-left corner of the Tekla EPM window.
2. On the **File** menu, select **Import**.
3. In the navigation tree on the left side of the **Import** dialog box, select **Labor** --> **ASCII** .



4. Click the **...** button.
5. In the **Open** dialog box, browse to find the text file that you want to import.
6. Select the file and click **Open**.
7. Click **Import**.
8. If you have created multiple labor databases, in the **Select Shop Setup** dialog box, select the labor database to which you want to import the labor information.
9. Click **OK**.
10. In the confirmation dialog box, do one of the following:
    - To confirm deleting the current labor information and replacing it entirely with the imported information, click **Yes**.
    - To only replace the information included in the imported file, click **No**.

      Use this option to import text files that only contain part of the labor information.

11. In the **Import** dialog box, view the status of the import process.

    If necessary, you can view the import details and errors in a text file by clicking the **Open Import Log** button.

12. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Export labor information (page 432)

6.5 Use Trimble Connect with an estimating job

You can view the estimating job information in IFC models using Trimble Connect. You can interact with the model in several ways. For example, you can color-code items in IFC models, or select the same items simultaneously in an IFC model and in the estimating job.

We recommend that you start the estimating job by importing an IFC file from Tekla Structures. The IFC file includes GUIDs, unique identifiers that match the identifiers in the IFC model. The necessary IFC settings for Tekla Structures can be downloaded from Tekla Warehouse.

Before you can view the job information in Trimble Connect, your Tekla EPM administrator needs to set up the Trimble Connect integration settings.

See also

Link an estimating job to Trimble Connect (page 435)

Color-code estimating items in the IFC model (page 437)

Select the same items in the estimating job and in the IFC model (page 438)

Visualize jobs with Trimble Connect Organizer and Trimble Connect Content Browser (page 815)

Link an estimating job to Trimble Connect

Before you can view the estimating job information in Trimble Connect for Windows, you need to link the job to a Trimble Connect project. You can either link the job to an existing project or create a new project.

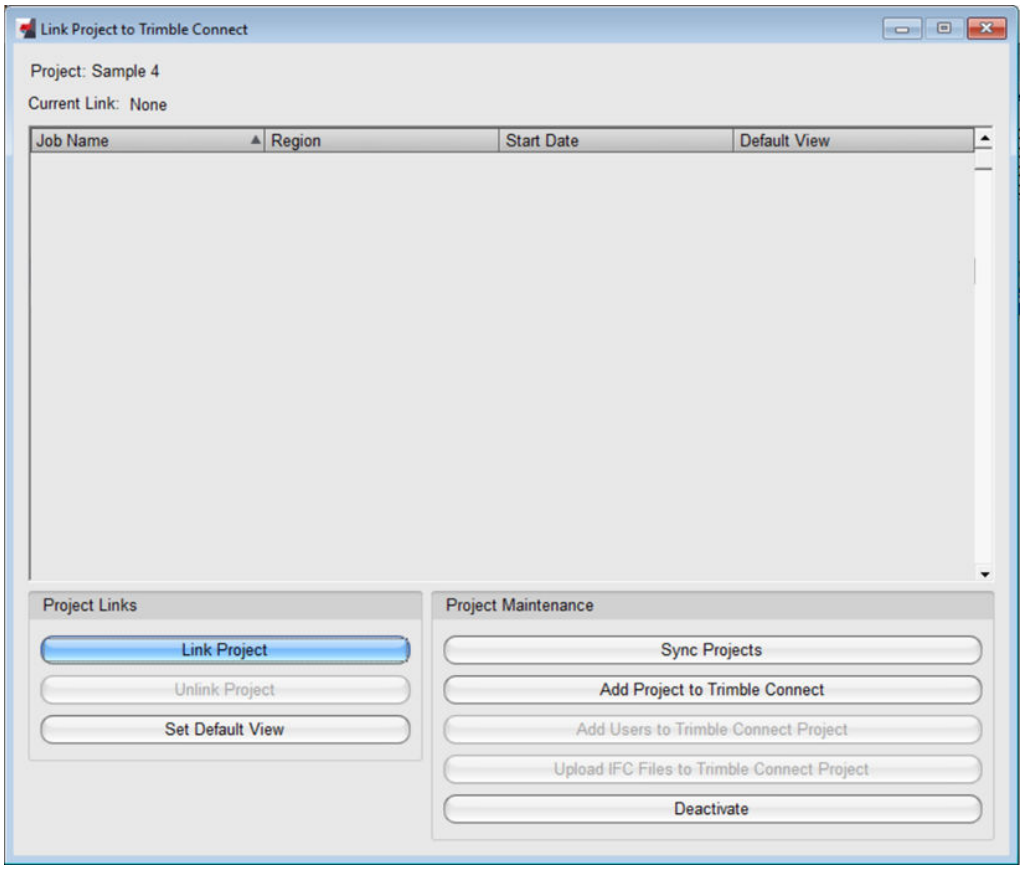
Note that if an estimating job is linked to a project management job, the Trimble Connect project is managed through the project management job. In this case, you need to link the project management job to Trimble Connect. The link is then applied to any linked estimating jobs. The Trimble Connect project cannot be modified when you access it through the estimating job.

1. In the **Estimating** dialog box, right-click anywhere in the display area.

2. In the context menu, click **Model Interface**.

   A message appears, telling you that the current job is not linked to a Trimble Connect project.

3. Click **OK** to close the message.



4. In the **Link Project to Trimble Connect** dialog box, do one of the following:

To	Do this
Link the job to an existing Trimble Connect project	a. To display the available Trimble Connect projects, click **Sync Projects**. b. Select the desired project, and click **Link Project**.
Create a new Trimble Connect project and link the job to it	a. Click **Add Project to Trimble Connect**. b. In the **Add Users to Project** dialog box, click the arrow buttons to move the users that participate in the project to the **Included** list. c. Click **OK**. Tekla EPM creates a Trimble Connect project with the same name and information as the current job.

To	Do this
	d. In the **Status** dialog box, review the creation process of the Trimble Connect project. A message appears, telling you that the project has been created successfully. e. Click **OK** to close the message. f. In Trimble Connect for Windows, press the **Back** button to exit the empty 3D view. g. In the **Explorer** side pane on the left, click the **Add File** button. h. In the **Add Files** dialog box, browse to find the IFC model. i. Select the IFC model and click **Open**. The IFC model is imported to Trimble Connect for Windows.

The estimating job and the Trimble Connect project are now linked.

Unlink an estimating job from Trimble Connect

1. In the **Select Estimating Job** dialog box, select the job that you want to unlink.
2. At the bottom of the dialog box, click **Edit**.
3. In the **Estimate Job Edit** dialog box, click **Link** on the right side of the **Trimble Connect Project** field.
4. In the **Link Project to Trimble Connect** dialog box, click **Unlink project**.
5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
6. In the **Estimate Job Edit** dialog box, click **Save**.

Color-code estimating items in the IFC model

To color-code items in the IFC model according to their properties, use the **Colorize** command in the **Model Viewer Interface** dialog box. For example, you can color-code items according to their category or finish. You can also set filters to only color-code particular items in the model. By using a filter, for example, you could first filter the items by their category, and then color-code the items in that category by their finish.

1. In the **Estimating** dialog box, right-click anywhere in the display area.
2. In the context menu, click **Model Interface**.

3. If necessary, in the **Model Viewer Interface** dialog box, filter the items that you want to color-code:
   a. Click **Set Filters**.
   b. In the **Estimating Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
   c. In the **Filter** dialog box, do one of the following depending on the filter type:
      - Click the arrow buttons to move the items that you want to display in the model to the **Included** list.
      - Type the maximum and minimum values for the items that you want to display in the model.
   d. Click **OK**.

      Repeat steps b to d for all filter types that you want to set.
   e. Click **Apply Filter**.
4. Click the arrow on the right side of the **Colorize By** list and select a property in the list.
5. Click **Colorize**.

The items in the IFC model are color-coded according to the selected property.

To revert to the original colors in the IFC model, click **Reset** in the **Model Viewer Interface** dialog box.

See also

Select the same items in the estimating job and in the IFC model (page 438)

Select the same items in the estimating job and in the IFC model

When you have linked an estimating control job to Trimble Connect, you can select an item that is selected in one of the software simultaneously in the other one. Do the following:

1. In the **Estimating** dialog box, right-click anywhere in the display area.
2. In the context menu, do one of the following:
   - To select the item that is selected in the estimating job also in the IFC model, select **Select in Model**.
   - To select the item that is selected in the IFC model also in the estimating job, select **Select from Model**.

See also

Color-code estimating items in the IFC model (page 437)

6.6 Combine materials in the Estimating module

Use the **Combine** command to mult and nest materials in the **Estimating** dialog box. You can then save and review the combining results.

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Combine**.

   The **Select Combining Run** dialog box opens. When you are performing the first combining run for a combining job, the list in the dialog box is empty.
3. Click a desired combining option to select it.

   The options are:

   - **Mult**: combines linear items, like beams and angles.
   - **Nest**: combines items that have area, like plates or gratings.
   - **Mult & Nest**: combines all items.

   The **Combining Run Filters** dialog box opens.

   NOTE Filtering items is optional, so you can skip steps 4 to 7 if you do not want to filter out items from the combining run.

4. To only combine specific types of materials, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:

   - Click the arrow buttons to move the items that you want to combine to the **Included** list.
   - Type the maximum and minimum values for the items that you want to combine.
6. Click **OK**.
7. To ensure that you are using the correct settings, click the **Optimizations**, **INV Filter**, and **Suppliers** buttons.

   If necessary, you can modify the settings.
8. To combine the materials, click the button at the bottom of the **Combining Run Filters** dialog box, or press **F4**.

- Piece mark items included with the selected stock lengths are displayed at the lower-left section of the dialog box.
- Combining results are shown in both the display area and in the summary grid at the lower-right section of the dialog box.

- The material cost represents the pricing of the materials in the pricing database that was used in the combining run.

To save the combining run for comparing it with another one, you can click **Save Combining Run** at the bottom of the **Combining Run Results** dialog box.

See also

Rename a combining run (page 253)

Compare combining runs (page 261)

View combining run filter settings (page 253)

Modify run-specific pricing information (page 254)

Recombine all items (page 258)

Recombine items of a shape (page 258)

Recombine items of a material grade (page 259)

Recombine a material dimension (page 260)

Update combining information and recombine all items (page 260)

Export materials for combining (page 78)

6.7 Create a proposal

Once you are happy with the estimate, you can create a proposal out of it. Proposals are estimating bid letters whose setups you can modify according to your needs. You can then save the proposals on your computer as Microsoft Word documents, and print or send them to your client. After creating the first proposal, you can also create revisions according to your client's needs.

The standard proposal setup is set in the **Proposal Setups** dialog box that you can access via **Maintenance** --> **Estimating** --> **Proposal Setups** .

1. In the **Estimating** dialog box, click the **Estimating** ribbon tab.
2. On the menu, select **Proposal**.

   The **Estimating Proposals** dialog box opens. Here, you can create new proposals, modify existing proposals, or delete unnecessary proposals.
3. To create a new proposal, click **New**.
4. Type a revision number and a title for the proposal.

NOTE Steps 5 to 10 only apply when you are creating a first proposal based on the estimating. When you create revisions, you can skip these steps.

5. In the available lists, select the date of the proposal, the firm type of the recipient company, and the recipient company.

   You can only select recipient companies that have already been added to the **Address Book**.

6. Click **Add**.

7. In the **Select Sections** dialog box, click the arrow buttons to move the sections that you want to include in the proposal to the **Included** list.

8. Click **OK**.

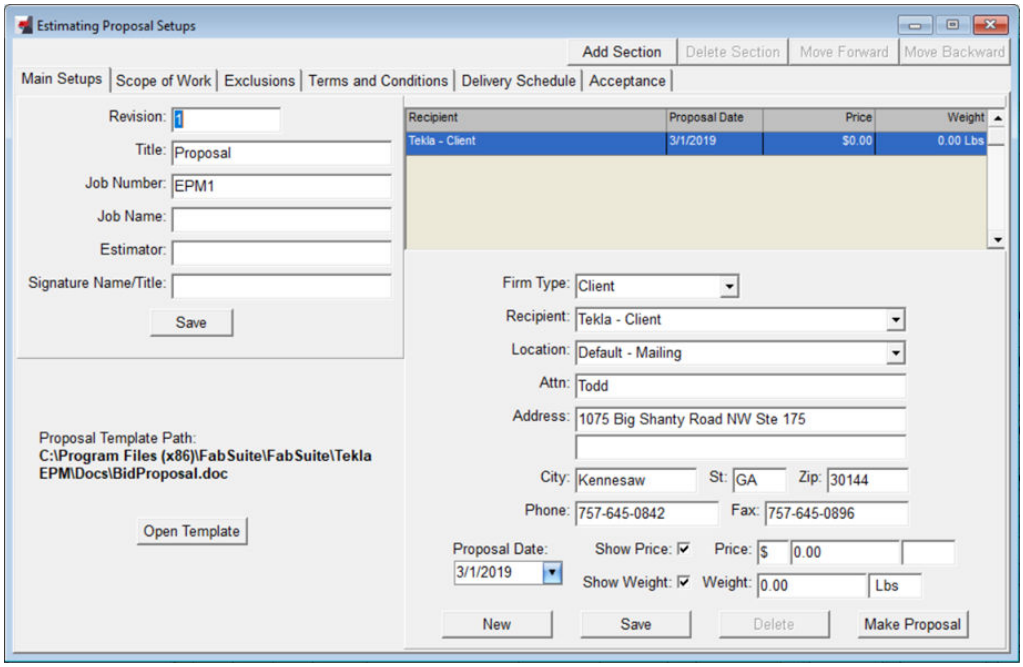
   A dialog box appears, asking you to select which text items you want to include in a section of the proposal.

9. Click the arrow buttons to move the items that you want to include in the proposal to the **Included** list..

10. Click **OK**.

    Repeat steps 9 to 10 for all sections that you included.

    The **Estimating Proposal Setups** dialog box opens.



11. In the **Estimating Proposal Setups**, do any of the following according to your needs:

To	Do this
Display the price and weight of the project in the proposal	a. On the **Main Setups** tab, select the **Show Price** and **Show Weight** check boxes. b. Type the price and weight in the fields on the right side of the check boxes.

To	Do this
Modify the appearance of the proposal	a. On the **Main Setups** tab, click **Open Template**. The proposal template opens in Microsoft Word. The items marked with << >> pull information from Tekla EPM and can be adjusted there, but the other information and font types can be changed in Microsoft Word. b. Make the necessary changes to the template. c. In the Microsoft Word window, click **File** --> **Save** . d. Save the modified proposal as a custom report in the default folder that your company uses for custom reports. You can verify the default folder by opening the **File** menu and selecting **Default Directories**.
Add a new entry	a. Go to the section tab on which you want to add the new entry. b. At the bottom of the dialog box, click **New**. c. Type the desired text in the space the bottom of the dialog box. d. Click **Add**.
Modify an entry	a. Go to the section tab on which you want to modify an entry. b. Select the entry that you want to modify. c. Change the entry text according to your needs. d. Click **Edit** to save the changes.
Move an entry up or down in the proposal	a. Go to the section tab on which the desired entry is located. b. Select the entry that you want to move. c. To move the entry, click the **Move Up** and **Move Down** buttons at the bottom of the dialog box.
Change the indentation of an entry	a. Go to the section on which the desired entry is located. b. Select the entry that you want to move. c. Click the **Move Left** and **Move Right** buttons to shift the position of the item in the proposal.
Delete an entry	a. Go to the section tab from which you want to delete an entry. b. Select the entry that you want to delete.

To	Do this
	c. Click **Delete**. d. To permanently delete the entry, click **Yes** in the confirmation dialog box.
Change the titles or headings of the proposal	a. Go to the section tab whose titles or headings you want to change. b. Do any of the following: • To change the main title of the section, type a new title in the **Title** field and click **Set Title**. • To change the style of the headings, click **Attributes** and select appropriate styles in the lists. Then, click **Save**. • To add a subtitle, click **Attributes** and type a title in the **Subtitle** field. Then, click **Save**. The subtitle appears under the title in the proposal.
Add a section	a. At the top of the dialog box, click **Add Section**. b. Type a title for the section. c. Click **OK**. The new tab is added at the end of the proposal setup.
Delete a section	a. Go to the section tab that you want to delete. b. At the top of the dialog box, click **Delete Section**. c. To permanently delete the section, click **Yes** in the confirmation dialog box.
Move a section forward or backward in the proposal	a. Go to the desired section tab. b. In the upper-right corner of the dialog box, click **Move Forward** or **Move Backward**.

12. Click **Save**.
13. Click **Make Proposal**.
14. In the **Save As** dialog box, browse to the folder where you want to save the proposal.
15. If necessary, change the file name.
16. Click **Save**.

17. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

We recommend that you save the exported proposals in the estimating **Document Index** for future reference. For more information, see Store document references for an estimating job (page 388).

7 Set up and manage the inventory

The **Inventory** module in Tekla EPM consists of two separate parts: inventory and inventory history. In **Inventory**, you can take items from stock, return them to stock, reserve items for a customer order, and so on. In **Inventory History**, you can view the entire history of items in the inventory.

Any item in Tekla EPM becomes an inventory item when it is loaded into a purchase order. Note that you cannot modify the properties of these types of items as long as the items have not yet been received.

For more information, see the following links:

Define the default inventory settings (page 446)

Open the Inventory module (page 449)

Open Inventory History (page 454)

Add an item to the inventory (page 461)

Copy an inventory item (page 468)

Modify inventory items (page 469)

Take material from stock and return material to stock (page 472)

Move an item to another inventory location (page 474)

Delete inventory items (page 477)

Add, modify, and delete stock quantities to be maintained (page 479)

Store document references for the inventory (page 455)

Add inventory items to Order Entry (page 475)

Combine inventory items manually (page 477)

View inventory details (page 482)

Import and export inventory information (page 496)

7.1 Define the default inventory settings

Before you start using the **Inventory** module for making orders, taking material from stock, and so on, we recommend that you define default settings for the **Inventory** module. Define the company standard settings and the countries of origin, adjust the visible input and display fields of both **Inventory** and **Inventory History**, and customize the drop-down menu commands in the **Inventory** module.

For more information, see the following links:

Define company standard settings for Inventory (page 446)

Define the countries of origin (page 448)

Define company standard settings for Inventory

In the **Inventory Company Standards** dialog box, define the default settings for the **Inventory** module.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Inventory** --> **Company Standards** .
3. In the **Inventory Company Standards** dialog box, set the following properties according to your needs:

Option	Description
Auto-Calc Part #	When selected, Tekla EPM automatically enters a part number for each item when new material is received. When cleared, you need to enter the part number manually.
Part # Format	The part number format. To change the part number format, click the arrow on the right side of the **Part # Format** field, and select an option in the list. The options are: • **[PO#]-[Item#]-[Receive Count]-[RTS Count]**: The part number consists of the purchase order number, purchase order item number, receive count, and return to stock count. Note that the receive count number does not refer to the quantity received, but the occurrence of receiving the material. The

Option	Description
	returned to stock count number indicates how many times the material has been cut. For example, if the purchase order number was 123, the item number 50, quantity 5, and 2 are received, the part number would be 123-50-1-0. When the remaining 3 pieces were received, the part number would be 123-50-2-0. If the length of the material was 40'-0 and you took 25'-0 and returned 15'-0 to inventory, the part number would be 123-50-1-1. • **Sequential, Increments each receipt**: The part numbering starts from 00001, and each time an item is received on a purchase order, the item is assigned an incremented part number (for example, 00002). • **Sequential, Increments each receipt, with RTS count**: The part number consists of a sequential number and the returned to stock count. The part numbering starts from 00001, and each time an item is received on a purchase order, the item is assigned an incremented part number (for example, 00002). The returned to stock count indicates how many times the material has been cut. An example part number could be 00003-1.
Inventory History - Default number of days to view (0 for all)	Allows you to set a filter that defines the number of days that items remain visible in the **Inventory History** dialog box. Note that you can clear the filter in the **Inventory History** dialog box to display all items in the inventory history again. Enter a number in the field. To always display all items in the **Inventory History** dialog box, enter 0.
Transaction History - New Method	When selected, the **Transaction History** opens more quickly. We recommend that you do not clear the **Transaction History - New Method** check box.

4. To adjust the units used in the **Inventory** module, click **Input/Display Units**.

5. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.

6. Click **OK**.
7. At the bottom of the **Inventory Company Standards** dialog box, click **Save**.

The default settings of the **Inventory** module are updated.

Define the countries of origin

In the **Countries** dialog box, you can add new countries of origin for items in the inventory. If necessary, modify or delete any existing countries to match the countries used by your company.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Inventory** --> **Countries of Origin** .
3. In the **Countries** dialog box, do any of the following according to your needs:

To	Do this
Add a new country	a. Click **New**. b. Type the country and an abbreviation for it. Only the abbreviation will be shown when you set a country of origin for an item in the **Inventory** dialog box. c. Click **Add**. The new country is now available in the **Inventory** dialog box.
Modify an existing country	a. Select the country that you want to modify. b. Modify the country and its abbreviation. c. Click **Edit** to save the changes.
Delete a country	a. Select the country that you want to delete. b. Click **Delete**. c. In the confirmation dialog box, click **Yes** to permanently delete country.

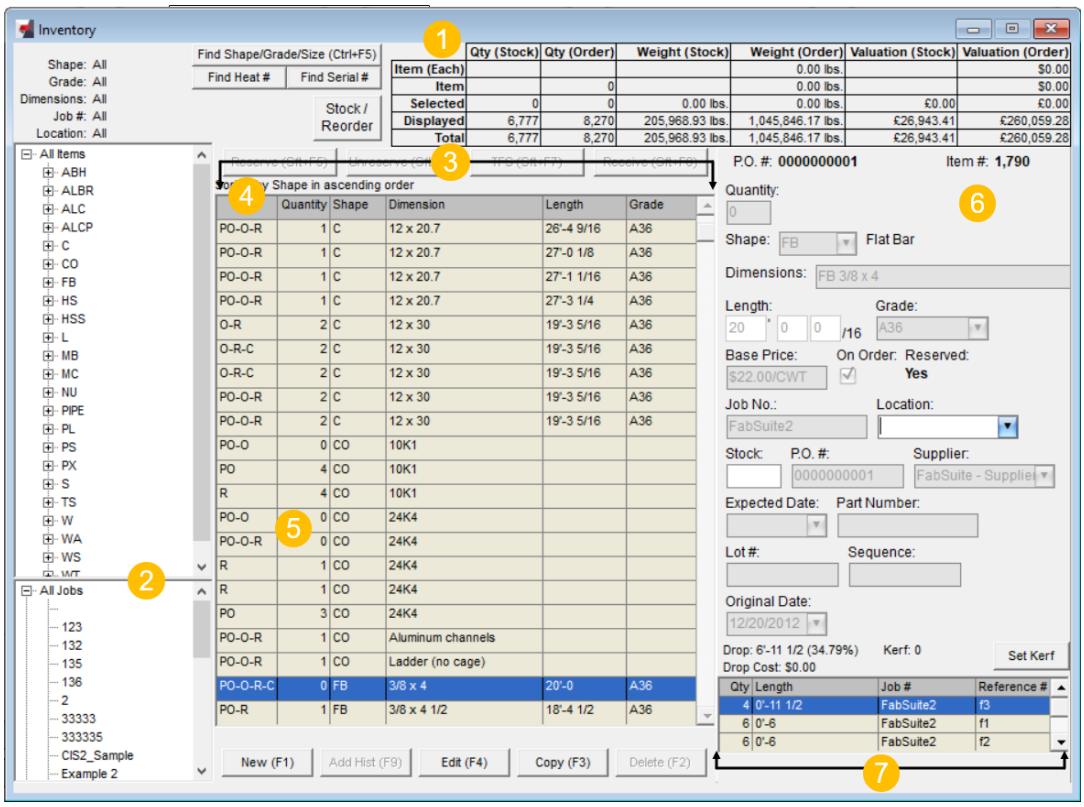
4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

7.2 Open the Inventory module

To access the **Inventory** module, do the following:

- In the Tekla EPM dialog box, click the **Inventory** icon.

The **Inventory** dialog box opens. See the elements of the dialog box in the following image:



(1) The summary grid shows the quantities, weights, and valuations of items in stock and on order.

(2) The navigation trees on the left to select which items you want to view. The upper navigation tree allows you to only view selected shapes, whereas the lower navigation tree allows you to only view items in a selected job or inventory location.

You can click **+** to expand the list. Then, click the items that you want to view in the display area.

For detailed instructions, see View only particular material dimensions, jobs, or locations in the Inventory dialog box (page 451).

(3) The display area lists all material items in the inventory.

(4) The leftmost unnamed column shows the statuses of different material items. The status indicators consist of the following abbreviations:

- PO: Items are on a purchase order

- O: Items are on order (not yet received)
- R: Items are reserved for a job
- C: Items have been combined

For example, items labeled PO-O-R-C have been combined and are on a purchase order, have been reserved for a job, and have not yet been received.

Items without any status indicator in this column are open stock items and were entered manually.

(5) Zero quantity items are placeholders for items that have been received on a purchase order, but have not been finalized yet. Zero quantity items cannot be modified in the inventory, and the combining details table below the input area does not display any information about whether items are properly linked to production control jobs.

Using zero quantity items in the inventory allows Tekla EPM to properly modify the base pricing if the pricing in the purchase order is modified after the materials have been received and split into different line items.

You can hide the zero quantity items by creating and saving a filter that excludes these items. This way, you will not mistake them for additional material items in the inventory. For more information, see Filter information in the Inventory dialog box (page 452).

(6) The input area allows you to add information for existing or new items. It also displays the properties of an item selected in the display area.

Note that properties of items that are on a purchase order or that are placeholders with zero quantity cannot be modified, so the input fields become inactive if you select them in the display area.

You can modify the available fields in the **Edit Input Fields** dialog box.

(7) The combining details table shows the parts to be cut from the item selected in the display area.

Note that under the combining details table, you can see if the items that are combined to the selected inventory item are properly linked to a production control job.

See also

View only particular material dimensions, jobs, or locations in the Inventory dialog box (page 451)

Filter information in the Inventory dialog box (page 452)

Search for items in the Inventory dialog box (page 453)

Add an item to the inventory (page 461)

Modify inventory items (page 469)

Take material from stock and return material to stock (page 472)

Delete inventory items (page 477)

View only particular material dimensions, jobs, or locations in the Inventory dialog box

Use the navigation trees on the left side of the **Inventory** dialog box to only view particular material dimensions, items reserved for specific jobs, and items in specific inventory locations.

- In the **Inventory** dialog box, do any of the following:

To	Do this
View items of the selected shape, grade, and material dimension	1. In the upper navigation tree, click **+** to show all shapes in the estimating job. 2. In the upper navigation tree, click a shape indicator. 3. Optionally, select a material grade and dimension as well. Only items of the selected shape, grade, and material dimension are shown in the display area.
View items of all shapes	• Click **All Items** at the top of the upper navigation tree.
View items reserved for a particular job	1. In the lower navigation tree, click **+** to show all jobs. 2. Click to select a job number. Only items reserved for that job number are shown in the display area.
View all open stock items	1. In the lower navigation tree, click **+** on the left side of **All Jobs** to show all jobs. 2. Click the blank branch directly under **All Jobs**. Only items that are not received for any job are shown in the display area.
View items in all jobs	• In the lower navigation tree, click **All Jobs**.
View items in a specific inventory location	1. In the lower navigation tree, click **+** on the left side of **All Locations** to show all jobs. 2. Click the location. Only items in that inventory location are shown in the display area.
View items without inventory location	1. In the lower navigation tree, click **+** on the left side of **All Locations** to show all jobs.

To	Do this
	2. Click the blank branch directly under **All Locations**. Only items that have not been assigned an inventory location are shown in the display area.
View items in all locations	• In the lower navigation tree, click **All Locations**.

The current selections in the navigation trees are shown above the navigation trees.

Note that the navigation trees also work together, so that you can also limit the displayed information also by selecting items in both navigation trees. For example, you can view items of a specific dimension in a specific job or inventory location.

See also

Filter information in the Inventory dialog box (page 452)

Search for items in the Inventory dialog box (page 453)

Filter information in the Inventory dialog box

Use the **Filter** command to only show the desired items in the **Inventory** dialog box. Filters can be handy for viewing specific inventory materials. You can reset the applied filters at any time by clicking **Clear Filters** at the upper-left corner of the dialog box, so that all items are displayed again.

Note that using filters only affects the way you see the **Inventory** dialog box, so you cannot accidentally change other users' settings.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Filter**.

   The **Inventory Filters** dialog box opens.
3. To filter the displayed items according to selected criteria, select a filter type in the **Type** list, and click **Select**.

   For some filter types, such as location, reference number, or heat number, you can also click **Find** and type the desired value in the blank field to use it. This way, you do not have to scroll through all the available items.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to display to the **Included** list..

- Type the maximum and minimum values for the items that you want to display.

5.

6. Click **OK**.

   If you want to further filter the information displayed in the **Inventory** dialog box, repeat steps 3 to 5 for different items.

   If you want to clear all filter settings, click **Reset**.

7. To save commonly used filters, do the following:

   a. Click **Filter Types** in the lower-left corner.

   b. Click **New**.

   c. Type a description for the filter type.

   d. Create the filter settings.

      For more information, see steps 3 to 5.

   e. Click **Add**.

   f. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

      The newly created filter type is selected in the **Filter Types** list.

   g. To apply the filter type, click **Set**.

8. According to your needs, do one of the following:

   - To use the filter, click **Apply Filter**.
   - To use the filter in the job and save it until a new filter is set or the filter is cleared, click **Apply Filter & Save**.

     Note that the filter will remain in use even if you close and re-open the job. After you clear the filters, the filter settings cannot be used again.

The **Estimating Filters** dialog box closes, and the **Inventory** dialog box is filtered according to the settings you made.

To display all information in the **Inventory** dialog box again, click **Clear Filters** in the upper-left corner.

Search for items in the Inventory dialog box

Use the different **Find** commands in the **Inventory** dialog box to quickly find the needed material items. You can search for items by material shape, grade, or size, heat number, or serial number.

Search for items by material shape, grade, or size

1. At the top of the **Inventory** dialog box, click **Find Shape/Grade/Size**, or press **Ctrl+F5**.
2. Select the material shape, and optionally grade and dimensions in the appropriate lists.

   You can also type the shape, grade, and dimensions in the appropriate fields.
3. Do any of the following:
   - To find items with the selected material shape, click **Find Shape**.
   - To find items with the selected material shape and grade, click **Find Grade**.
   - To find items with the selected material shape and dimensions, click **Find Size**.

Only items that match your search are displayed in the **Inventory** dialog box. The selected material shape, grade, and dimensions are shown above the navigation trees on the left side of the dialog box.

To view all items again, click **All Items** in the upper navigation tree.

Search for an item by heat number

1. At the top of the **Inventory** dialog box, click **Find Heat #**.
2. Select the heat number in the list, or type it in the field.
3. Click **Find Heat #**.

The item with the selected heat number is selected the **Inventory** dialog box.

Search for an item by serial number

1. At the top of the **Inventory** dialog box, click **Find Serial #**.
2. Select the serial number in the list, or type it in the field.
3. Click **Find Serial #**.

The item with the selected serial number is selected the **Inventory** dialog box.

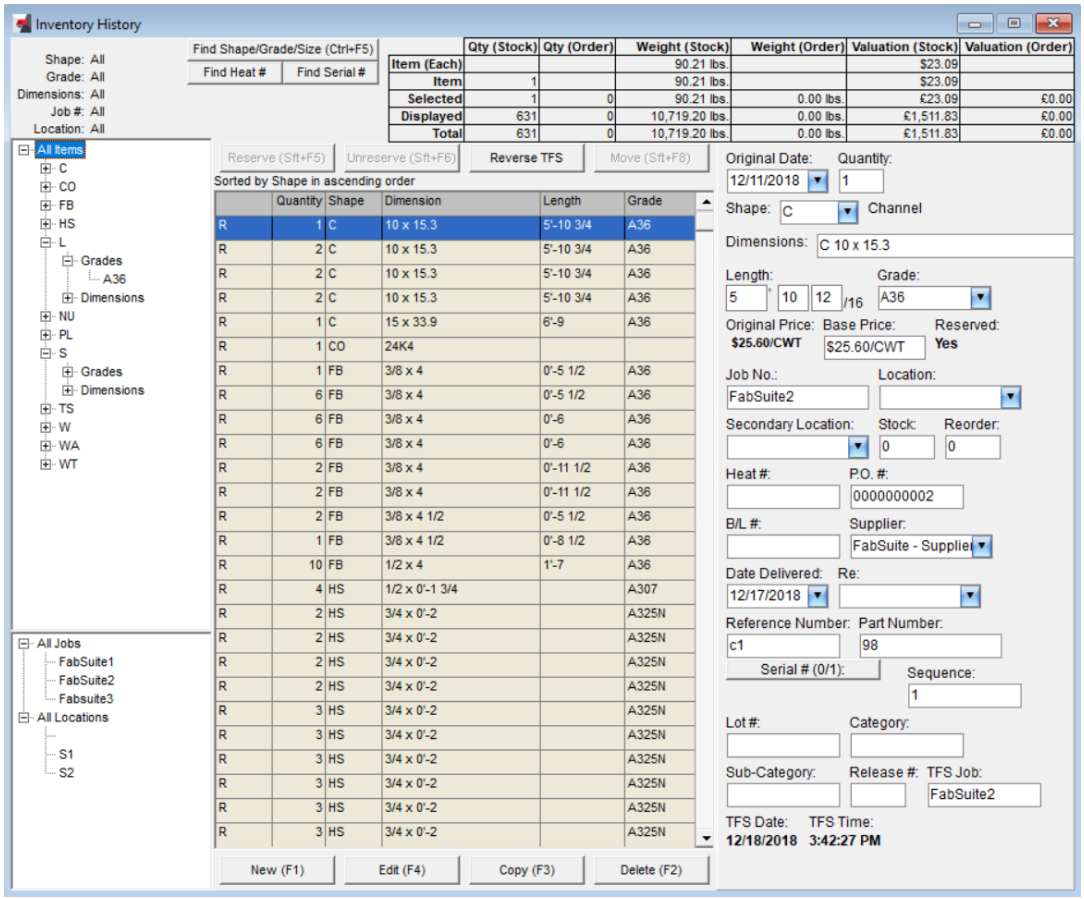
Open Inventory History

In the **Inventory History** dialog box, you can view all material that has been taken from stock for a job.

1. While in the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Inventory History**.

TIP If you hold down **Shift** when selecting the **Inventory History** command, the **Inventory History** opens in a new dialog box. This way, you can view the inventory and the inventory history at the same time.

The **Inventory History** dialog box opens.



TIP Use the navigation trees on the left of the dialog box to filter which items are visible. For example, to only show items in a specific job, click a job number in the lower navigation tree.

To return to the **Inventory** dialog box, do the following:

1. Click the **Inventory** ribbon tab.
2. On the menu, select **Inventory**.

7.3 Store document references for the inventory

Document Index is where you can store documents for reference. When you store documents in **Document Index**, each user that has access to inventory

can view them, so it is easy to keep up-to-date. You can save all heat documents, as well as Microsoft Outlook emails and their attachments, in **Document Index**.

To access **Document Index** in the **Inventory** module, do the following:

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Document Index**.

The **Document Index - By Category** dialog box opens. Next, you can either modify the available folders for document references, or add, modify, delete, open, and email document reference files.

See also

Manage document reference categories (page 389)

Add document references to the inventory (page 456)

Open a document reference (page 394)

Modify a document reference (page 395)

Attach a document reference to an email (page 396)

Delete a document reference (page 396)

Add document references to the inventory

You can either upload completely new document references, such as files, emails, and email attachments to **Document Index**, or add files that are already loaded to **Document Index** to the list of inventory document references.

Add new files

1. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the document.
2. Click **Add Document Reference**.
3. In the **Document Index - Add Document Reference** dialog box, click **Add File**.
4. In the **Open** dialog box, browse to find the document that you want to add, and select the document.
5. Click **Open**.

   If you want to add more documents with the same settings, click **Add Additional File** and repeat steps 4 to 6 for each document.

6. In the **Add File** dialog box, select the company and contact that provided you with the document in the **File Source** lists.

   You can also drag and drop files to the **Add File** dialog box.

7. According to your needs, do one of the following:
   - To compress multiple documents into one archive, select the **Compress Files into a Single Archive** option.
   - To leave the documents that you added uncompressed, select the **Leave Files Uncompressed** option.
8. According to your needs, do one of the following:
   - To move the original document to the selected folder, select the **Move File** option.
   - To copy the document to the selected folder but leave the original untouched, select the **Copy File (Leave Original)** option.
9. Type a description for the attached document.
10. Click **Add File**.
11. For heat documents, select the supplier, purchase order number, and heat number in the available lists, or type new values in the fields.

    If you are adding a heat document for an item, note that the heat number of the document reference must match the heat number of the item, entered in the **Inventory** dialog box.

12. Type a description for the entire document reference.

    This description applies to all documents, emails, and email attachments that you add.

13. When you have added all necessary documents, emails and email attachments, click **Add Document Reference**.

The **Document Index - Add Document Reference** closes, and the documents are added to **Document Index**. You can see all added documents in the list in the **Document Index - By Category** dialog box.

Add a Microsoft Outlook email

1. In Microsoft Outlook, select the email that you want to add.
2. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the email.
3. Click **Add Document Reference**.
4. In the **Document Index - Add Document Reference** dialog box, click **Add Outlook Email**.

   A copy of the email is added to **Document Index**.

   The text of the email is added to the **Description** field.

5. Click **Add File**.
6. Type a description for the entire document reference.

   This description applies to all documents, emails, and email attachments that you add.
7. When you have added all necessary documents, emails and email attachments, click **Add Document Reference**.

The **Document Index - Add Document Reference** closes, and the emails are added to **Document Index**.

Add an attachment from a Microsoft Outlook email

1. In Microsoft Outlook, select the email with the attachment that you want to add.
2. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the attachment.
3. Click **Add Document Reference**.
4. In the **Document Index - Add Document Reference** dialog box, click **Add Outlook Attachments**.
5. Browse to the folder where you want to save the email attachment, and click the folder to select it.
6. Click **Open**.
7. In the **Add File** dialog box, select the company and contact that provided you with the document in the **File Source** lists.
8. According to your needs, do one of the following:
   - To compress multiple documents into one archive, select the **Compress Files into a Single Archive** option.
   - To leave the documents that you added uncompressed, select the **Leave Files Uncompressed** option.
9. Type a description for the email attachment.
10. Click **Add File**.
11. Select the supplier, purchase order number, and heat number in the available lists, or type new values in the fields.

    If you are adding a heat document for an item, note that the heat number of the document reference must match the heat number of the item entered in the **Inventory** dialog box.
12. Type a description for the entire document reference.

    This description applies to all documents, emails, and email attachments that you add.

13. When you have added all necessary documents, emails and email attachments, click **Add Document Reference**.

The **Document Index - Add Document Reference** closes, and the email attachments are added to **Document Index**.

Search for and add a file already in Document Index

To find and add files that already exist in the document index directory to the inventory side of **Document Index**, use the **Search** command.

1. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the file.
2. Click **Add Document Reference**.
3. In the **Document Index - Add Document Reference** dialog box, click **Search**.
4. In the **Search** dialog box, click **Browse** and select the folder where you want to look for documents.

   TIP To also search from the sub-folders of the selected folder, select the **Sub-Directories** check box.

5. To narrow the search, do one or more of the following:
   - Type the document name, document size, and file name extension.
   - In **File Date**, select the dates between which the document has been created or downloaded onto your computer.
   - In **Date Loaded**, select the dates between which the document has been added to **Document Index**.
   - In the **Source** lists, select the contact and company that have provided the document.
6. To include archived documents in the search, select the **Include All Archive Files** check box.
7. Click **Search**.

   The search results appear at the top of the **Search** dialog box.
8. In the search results, double-click the document that you want to add.
9. Select the supplier, purchase order number, and heat number in the available lists, or type new values in the fields.

   If you are adding a heat document for an item, note that the heat number of the document reference must match the heat number of the item, entered in the **Inventory** dialog box.

10. Type a description for the entire document reference.

    This description applies to all documents, emails, and email attachments that you add.

11. When you have added all necessary documents, emails and email attachments, click **Add Document Reference**.

The file is added to the list of inventory documents in **Document Index**.

Browse for and add a file already in Document Index

To browse for and add files that already exist in the document index directory to the inventory side of **Document Index**, use the **Find By Directory** command. You can also add new files, delete existing files, rename folders and files, move files to other folders, and open files.

1. In the navigation tree of the **Document Index - By Category** dialog box, select the category where you want to save the file.
2. Click **Add Document Reference**.
3. In the **Document Index - Add Document Reference** dialog box, click **Find By Directory**.
4. In the navigation tree on the left of the **Document Index - By Directory** dialog box, select a category.

   If you want to rename the selected category, you can click **Rename Directory**, type a new name, and click **OK**.

   The documents within the category are listed in the display area of the dialog box.
5. Select a document.
6. In the lower-right corner, click **Select**.

   Note that besides adding an existing document to the current job, you can also use the buttons at the bottom of the dialog box to:

   - Add new documents (**Add File**).
   - Delete a document (**Delete File**).
   - Move a document to another folder within the document index folder (**Move File**).
   - Rename a document (**Rename File**).
   - Open a document (**Open File**).
7. Select the supplier, purchase order number, and heat number in the available lists, or type new values in the fields.

   If you are adding a heat document for an item, note that the heat number of the document reference must match the heat number of the item, entered in the **Inventory** dialog box.

8. Type a description for the entire document reference.

   This description applies to all documents, emails, and email attachments that you add.

9. When you have added all necessary documents, emails and email attachments, click **Add Document Reference**.

The file is added to the list of inventory documents in **Document Index**.

7.4 Manage inventory items

You can manage inventory items in multiple ways. After adding the necessary inventory items, you can copy and modify the items according to your needs. You can also take material from stocks and return the remaining material to stock, reserve or send inventory items to customer orders, combine inventory items, or delete unnecessary inventory items.

For more information, see the following links:

Add an item to the inventory (page 461)

Copy an inventory item (page 468)

Modify inventory items (page 469)

Take material from stock and return material to stock (page 472)

Add inventory items to Order Entry (page 475)

Combine inventory items manually (page 477)

Delete inventory items (page 477)

Add an item to the inventory

To add new items manually to the inventory, do the following:

1. In the **Inventory** dialog box, click **New**.
2. Modify the item properties according to your needs:

   The properties marked with an asterisk (*) in the following table are mandatory information.

Option	Description
Original Date *	The date on which the item has originally been added to inventory. Click the arrow on the right side of the **Original Date** field and select a date in the calendar.

Option	Description
Quantity *	The number of pieces to be added. Use the numeric keypad in the quantity field to add, multiply, divide, or subtract numbers to adjust the quantity.
Shape *	The material shape of each piece. Either click the arrow on the right side of the **Shape** field to select the shape, or type the shape indicator in the field (for example, HSS).
Grade	The material grade of each piece. Depending on the shape, the grade can also be mandatory information. Either click the arrow on the right side of the **Grade** list to select the grade, or type the grade indicator in the field.
Dimensions	The material dimension, or material size, of each piece. Depending on the shape, the dimension can also be mandatory information. Click the **Dimensions** field to select an available material dimension, and double-click the desired dimension in the list. **TIP** You can also use a custom material dimension. Note that the dimension is not automatically added to the material database. To use a custom dimension, do the following: a. Click in the **Dimensions** field. b. Click **Add Size**. c. Define the dimension properties.

Option	Description
	d. Click **Save**. You can now select the dimension and use it.
Length	The length of each piece. Default length input settings are set in **Company Standards**, but you can modify them for each job.
Base Price	The base price of the material item. We recommend that you use base prices to create more detailed reports. Type the base price in the **Base Price** field. To change the base price units and convert the current price to the selected units, right-click the **Base Price** field, and select an appropriate option in the context menu.
On Order	When selected, the material item is on order and has not yet been received. When cleared, the material item is marked as received. Items that are on order are marked with an **O** in the leftmost column of the **Inventory** dialog box.
Job No.	Any job number. For example, you can use the **Job No.** field to reserve material for the shop or maintenance, so that it cannot be used elsewhere. Type any desired information in the **Job No.** field.
Location	The inventory location of the material item. Click the arrow on the right side of the **Location** field and select a location in the list, or type a new location in the **Location** field.

Option	Description
Secondary Loc	The secondary inventory location of the material item. Click the arrow on the right side of the **Secondary Loc** field and select a location in the list, or type a new secondary location in the **Secondary Loc** field. For example, you can use secondary locations to represent the inventory sites or the date the location was verified. You can also use the **Secondary Loc** field to provide a temporary location for storing some pieces of a material item. This way, you can split the quantity of the material item without affecting the location.
Stock	Any stock information about the item. Type any information in the **Stock** field. **NOTE** Use the **Stock/Reorder** command to set stock quantities to be maintained. See Add, modify, and delete stock quantities to be maintained (page 479).
Reorder	Any reordering information about the item. Type any information in the **Reorder** field. **NOTE** Use the **Stock/Reorder** command to set stock quantities to be maintained. See Add, modify, and delete stock quantities to be maintained (page 479).

Option	Description
Heat #	The heat number of the material item. Type the heat number in the **Heat #** field. Note that you need to type a heat number for a material item before attaching documents to it in **Document Index**.
P.O. #	The number of the purchase order that contains the material item. Type the purchase order number in the **P.O. #** field. Note that you need to type a purchase order number for a material item before attaching documents to it in **Document Index**.
B/L #	The bill of lading number or the shipment number that the material item was received on. Type the number in the **B/L #** field.
Supplier	The supplier of the material item. Either type a supplier in the **Supplier** field, or click the arrow on the right side of the **Supplier** field and click the supplier that you want to select. Note that you need to type a supplier for a material item before attaching documents to it in **Document Index**.
Date Delivered	The date when the material item has arrived to inventory. Do one of the following: • Type the date in the **Date Delivered** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Date Delivered** field and

Option	Description
	select the delivery date in the calendar. Note that the **Date Delivered** field is only available if the **On Order** check box is cleared.
Re	Any comments or remarks that you want to add about the material item. Type the remarks in the **Re** field, or click the arrow on the right side of the **Re** field and click an existing comment in the list to use it.
Reference Number	A reference number that links items in inventory or purchasing to the production control job. The reference number can be different depending on the case: • If an item is sent from **Production Control** to **Purchasing** or **Inventory**, Tekla EPM creates a copy of the record, and the item is linked to include the reference number. • If an item is sent to purchasing from an advanced bill of material, the system mark number or a combination of the page number and the item number in the combining job (for example, 1-30) becomes the reference number. • If the item is sent to purchasing later in the process, the reference number is the mark or piece mark number. However, if the reference number has been assigned in the production control job, that reference number is maintained in the inventory as well. We recommend that you do not type information in the **Reference Number** field when adding items to the inventory manually.

Option	Description
Serial #	The serial number of the material item. To add a serial number, click the **Serial #** button. For more information, see Define serial numbers for an inventory item (page 469).
Part Number	The part number of the material item. Type the part number in the **Part Number** field. To adjust part number settings, see Define the default inventory settings (page 446).
Lot #	The lot identification assigned to the material item in **Production Control**. We recommend that you do not type any information in the **Lot #** field when you add inventory items manually. Note that if you type any information manually in the **Lot #** field, the information will be overwritten if you combine or link material from **Production Control** to the inventory item.
Sequence	The sequence number assigned to the item in **Production Control**. We recommend that you do not type any information in the **Sequence** field when you add inventory items manually. Note that if you type any information manually in the **Sequence** field, the information will be overwritten if you combine or link material from **Production Control** to the inventory item.
Category **Sub-Category**	Classes used for sorting items, assigned to the item in **Production Control**. Categories and sub-

Option	Description
	categories can be used for filtering information. We recommend that you do not type any information in the **Category** and **Sub-Category** fields when you add inventory items manually. Note that if you type any information manually in the **Category** or **Sub-Category** field, the information will be overwritten if you combine or link material from **Production Control** to the inventory item.
Country	The country of origin of the material item. Click the arrow on the right side of the **Country** field, and select a country in the list. The available countries can be modified in the **Countries** dialog box. For more information, see Define the countries of origin (page 448).
Heat SN	A property that ensures that heat numbers are not duplicated. However, duplications are extremely rare, so using the **Heat SN** field is optional. If necessary, type a value in the **Heat SN** field.

3. Click **Add**.

The new material item is added to the list in the **Inventory** dialog box.

Copy an inventory item

Copy a material item in the **Inventory** dialog box and use it as the basis of a similar item. Then, adjust any properties according to your needs. By copying items, you can save time and avoid entering the same data multiple times.

1. In the **Inventory** dialog box, click the material item that you want to copy.
2. At the bottom of the dialog box, click **Copy**.

The item is copied and added in the list.

Note that not all values in the leftmost column are copied. For example, **PO** indicates that the item has been sent to a purchase order, so it is not used for new, manually added inventory items.

Modify inventory items

You can either modify items in inventory one by one, or use the different **Global Edit** commands to modify multiple items at one go. Note that inventory items that are on a purchase order or that are placeholders with zero quantity cannot be modified, so the input fields become inactive if you select them in the display area.

For more information, see the following links:

Modify multiple inventory items (page 470)

Modify selected inventory items (page 471)

Define serial numbers for an inventory item

You can add serial numbers for a material item in the **Inventory** dialog box. Note that you can only add a serial number for items that have been marked as received, and are not on order.

1. In the **Inventory** dialog box, click a material item to select it.
2. On the right side of the dialog box, click **Serial #** under the **Reference Number** field.
3. In the **Serial Numbers** dialog box, do one of the following:
   - To assign a different serial number for each piece of the material item, select the **Serialized** option.

     If you use or plan to use bar codes, do not select the **Serialized** option. Using the **Serialized** option prevents displaying serial numbers in some reports.
   - To use the same serial number for all pieces of the material item, select the **Non-Serialized** option.
4. Click **Update**.
5. Click **New** to define a new serial number.
6. Enter the serial number in the **Serial #** field.
7. Click **Add**.

   Repeat steps 5 to 7 for each serial number that you want to create.

   If necessary, you can:

   - Modify a serial number, and update it by clicking **Save**.

- Delete a serial number by clicking **Delete**, and then, clicking **Yes** to confirm.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

The serial numbers appear under the **Serial #** button in the **Inventory** dialog box.

Modify a single inventory item

You can modify the properties of a single inventory item directly in the **Inventory** dialog box.

Note that if you only want to modify some pieces in an item, you need to split the item first. You can do so by either moving the desired quantity of pieces to a different location or secondary location, or changing the reservation of the quantity.

1. In the **Inventory** dialog box, select the item that you want to modify.
2. On the right side of the dialog box, modify the item properties according to your needs.
3. Click **Edit** to save the changes.

See also

Modify selected inventory items (page 471)

Modify multiple inventory items (page 470)

Modify multiple inventory items

Use the **Global Edit** command to make specific changes to the properties of all or multiple items in the inventory at one go. This way, you can save time, as you do not need to change the properties of each item individually.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Global Edit** --> **Global Edit** .
3. To only modify specific types of items, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, click the arrow buttons to move the items whose properties you want to modify to the **Included** list.
5. Click **OK**.

   To further limit the items to modify, repeat steps 3 to 5 for all necessary filter types.

6. Click **OK** at the bottom of the **Inventory Global Edit Filters** dialog box.

7. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

8. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

9. Click **Update**.

10. To update the selected properties, click **Yes** in the confirmation dialog box.

The **Global Edit** dialog box closes. The changes you made to the inventory item properties are updated to the **Inventory** dialog box.

See also

Modify selected inventory items (page 471)

Modify selected inventory items

Use the **Global Edit Selected** command to select a group of inventory items and modify their properties at one go.

1. In the **Inventory** dialog box, select the items that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Inventory** ribbon tab.

3. On the menu, select **Global Edit** --> **Global Edit Selected** .

4. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

5. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

6. Click **Update**.

The **Global Edit** dialog box closes. The changes you made to the inventory item properties are updated to the **Inventory** dialog box.

See also

Modify multiple inventory items (page 470)

Take material from stock and return material to stock

Use the **TFS** command to take materials from stock and cut them. Then, use the **RTS** command to return the remaining lengths to stock.

1. In the **Inventory** dialog box, click items to select them.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click **TFS**, or press **Shift+F7**.

   Depending on whether the items are linked or combined to a job, one of the following happens:

   - If the items are not linked or combined to a job or you have selected multiple items that are linked or combined to a job, the **Take From Stock** dialog box opens.
   - If a single item is selected and it is linked or combined to a job, a confirmation dialog box appears.

3. Do one of the following:

To	Do this
Take from stock one or multiple items that are not linked or combined to a job	a. In the **Take From Stock** dialog box, type the quantity of pieces and the job number. Note that if you have selected multiple items, Tekla EPM automatically takes all available pieces from stock. b. If necessary, modify the category, sub-category, sequence, lot number, and release number. c. Click **TFS** to take the material from stock. d. In the **RTS** section of the dialog box, type the quantity, width, length, location, and job number of items that you want to return to stock. e. Click **RTS** to return the remaining material lengths to stock. f. Click **Apply**.
Take from stock multiple items that are linked or combined to a job	a. In the **Take From Stock** dialog box, type the job number.

To	Do this
	b. If necessary, modify the category, sub-category, sequence, lot number, and release number. c. To return all drop left from cutting to stock, select the **Return Drop of Combined Items to Stock** check box. d. Click **TFS** to take the material from stock.
Take from stock a single item that is linked or combined to a job	a. To update the linked production control when taking the material from stock, click **Yes** in the confirmation dialog box. b. In the **Enter Value** dialog box, do one of the following: • Type the date in the **Enter Value** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Date Required** field and select the date in the calendar. c. Click **OK**. d. To confirm taking the material item from stock, click **Yes** in the confirmation dialog box. e. In the **TFS** dialog box, do one of the following: • To close the dialog box and return to the **Inventory** dialog box, click **Close**. • To view or print TFS reports, click **Reports**. For more information, see View and print TFS reports (page 494).

Take selected materials from stock

Use the **TFS - Selected** command to take selected inventory items from stock, cut them, and move the cut lengths into the inventory history. The remaining drop remains in the inventory. Once the materials have been taken from stock, you can view or print different reports for the materials.

1. In the lower navigation tree of the **Inventory** dialog box, select a job number.

   Only the items within the selected job are displayed in the display area.

2. Click the **Inventory** ribbon tab.

3. On the menu, select **Production Control** --> **TFS - Selected** .

   The **Enter Value** dialog box opens.

4. Enter a date for taking the materials from stock.
5. Click **OK**.
6. To take the selected materials from stock, click **Yes** in the confirmation dialog box.

   The selected items are taken from stock. You can see the progress in the **TFS** dialog box. Wait until the process is completed.

7. Do any of the following:

To	Do this
View or print a report on the TFS process	a. Click **Reports**. The **Report Progress** dialog box opens. b. Select the report that you want to print or view. c. Do any of the following: • To view the report, click **View**. • To print the report, click **Print**, select the printer, and click **OK**. d. To close the **Report Progress** dialog box, click the **Close** button (**X**) in the top right corner.
Close the **TFS** dialog box	• Click **Close**.

Move an item to another inventory location

Use the **Move** command to move a single inventory item to another inventory location.

1. In the **Inventory** dialog box, select the item whose location you want to change.
2. Click **Move**, or press **Shift+F8**.

   The **Move** dialog box opens.

3. In the **Quantity** field, enter the number of pieces that you want to move.
4. Click the arrow on the right side of the **Location** list and select the new location.
5. If necessary, click the arrow on the right side of the **Sec Location** list to select a secondary location.

6. Click **Move**, or press **F4**.

The selected quantity of items is moved to the selected location.

Add inventory items to Order Entry

Use the **Add Selected to Order** and **Quick Quote** commands to add items to **Order Entry**. The **Add Selected to Order** command reserves the selected items for a customer order, whereas the **Quick Quote** command adds the selected items directly into a quote or a customer order. Note that you can only add unreserved items to **Order Entry**.

Reserve items for a customer order

1. In the **Inventory** dialog box, select the items that you want to load to a customer order.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Inventory** ribbon tab.
3. On the menu, select **Order Entry** --> **Add Selected to Order** .
4. In the **Select Quote/Order** dialog box, select the customer order to which you want to load the items.
5. Click **OK**.

The **Select Quote/Order** dialog box closes. The items are reserved for the selected customer order.

Send items to a customer order

1. In the **Inventory** dialog box, select the items that you want to add to a quote or customer order.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Inventory** ribbon tab.
3. On the menu, select **Order Entry** --> **Quick Quote** .

   The **Quick Quote** dialog box opens. The properties of the selected items are visible in the **Details** section of the dialog box.
4. In the **Customer Name** list, select the customer company.

   Note that the customer must already be saved in the **Address Book**.

   Tekla EPM automatically fills in the customer code and the default contact.
5. If necessary, in the **Contact** list, select another contact person.

6. According to your needs, do any of the following:

To	Do this
Send items to an existing quote or customer order	a. Click **Save to Quote/Order**. The **Select Quote/Order** dialog box opens. b. Select the quote or order to which you want to send the items. c. Click **OK**. The items are sent to the selected quote or order.
Send items to a new quote	a. Click **Save to New Quote**. b. To create a new quote and send the selected items to it, click **Yes** in the confirmation dialog box. c. In the **Quote** dialog box, modify the quote according to your needs. For more information, see Create a quote or an order (page 943). d. Click **Save Quote Information**. e. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
Send items to a new customer order	a. Click **Save to New Order**. b. To create a new order and send the selected items to it, click **Yes** in the confirmation dialog box. c. In the **Order** dialog box, modify the order according to your needs. For more information, see Create a quote or an order (page 943). d. Click **Save Order Information**. e. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

7. To close the **Quick Quote** dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete inventory items

You can delete unnecessary material items from inventory. Note that deleting the items is permanent and cannot be undone.

You can still view the deleted items in the transaction history. For more information, see View the transaction history in the Inventory module (page 490).

1. In the **Inventory** dialog box, click the items that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click **Delete**.
3. To permanently delete the inventory item, click **Yes** in the confirmation dialog box.

Combine inventory items manually

You can manually combine items in the **Inventory** dialog box by activating the manual combine mode. You can select pieces to combine them into a stock length, or uncombine pieces from a stock length.

Switch to the manual combine mode

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Switch to Manual Combine Mode**.

The **Inventory** dialog box changes to the manual combine mode. New buttons appear at the bottom of the dialog box to enable adding and removing combined items from the selected inventory item.

You can now combine inventory items manually.

Combine materials

Use the **Add Items** command to combine materials into a selected stock length.

1. In the **Inventory** dialog box, click a stock length to select it.
2. At the bottom of the dialog box, click **Add Items**.

   The **Add Item** dialog box opens. You can see all available uncombined materials that can be combined to the selected stock length. If the dialog

box is blank, no materials are available to be combined to the selected stock length.

Note that the available materials come from requisitions. If the items that you want to combine are in a production control job, you need to add them to a requisition before you can combine them manually.

3. In the **Add Item** dialog box, click an uncombined item to select it.
4. If necessary, modify the quantity of inventory items that you are combining materials to.

   If the quantity is greater than 1, the materials should be multiples of that quantity in order to be displayed and selected in the **Add Item** dialog box.
5. To allow material grade substitutions, select the **Use Grade Substitutions** check box.
6. Click **Add**.

The selected material items are combined to the selected stock length.

Uncombine materials

Use the **Remove Item** to uncombine material items from a selected stock length.

1. In the **Inventory** dialog box, click a stock length to select it.
2. At the bottom of the dialog box, click **Remove Item**.

   If the selected stock length is not combined, the **Remove Item** button is not available.
3. In the **Remove Item** dialog box, use the arrow buttons to move the materials that you want to uncombine to the **Included** list.

   To only move one piece of the selected item, click the **Qty 1** buttons.
4. Click **OK**.
5. In the confirmation dialog box, do one of the following:
   - To simply uncombine the pieces, click **No**.

     Select the **No** option if you are removing items to clear the material of items that are no longer linked.
   - To uncombine the pieces and return the items to the requisition from which they were loaded to a purchase order, click **Yes**.

The items are held in the requisition to be recombined and purchased, or combined into a different stock length.

If the requisition no longer exists or the material item was never on a requisition, Tekla EPM asks you to select a requisition or add a new one.

The confirmation dialog box and the **Remove Item** dialog box close. The pieces are uncombined from the selected stock length.

Switch back to the input mode

1. Click the **Inventory** ribbon tab.
2. On the menu, select **Switch to Input Mode**.

The **Inventory** dialog box changes back to the input mode.

7.5 Add, modify, and delete stock quantities to be maintained

In the **Stock/Reorder** dialog box, you can add, modify, and delete stock quantities that should always be maintained in inventory. This way, Tekla EPM can alert you when you need to reorder items.

To access the **Stock/Reorder** dialog box, do the following:

- At the top of the **Inventory** dialog box, click **Stock/Reorder**.

The **Stock/Reorder** dialog box opens, displaying previously created records.

Note that the items in the **Stock/Reorder** dialog box are color-coded:

- Green items are equal or above the required stock quantity.
- Yellow items are below the required stock quantity.
- Red items are below both the required stock quantity and the required reorder quantity.

Add a new stock record

1. At the bottom of the **Stock/Reorder** dialog box, click **Add New Record**.

   The **Stock/Reorder - Add** dialog box opens.
2. Select the shape, dimensions, grade, and length to be ordered.
3. If necessary, in the **Location** list, select the location where the items will be stored.

   Note that if you select a location, the record only applies to the quantities of items in the assigned location.

4. In the **Stock Qty** field, enter the stock quantity that should be maintained.
5. In the **Reorder Qty**, enter the quantity at which Tekla EPM prompts you to reorder the item.
6. Click **Add**.

The **Stock/Reorder - Add** dialog box closes, and the new record is added to the list in the **Stock/Reorder** dialog box.

Modify stock records

1. In the list in the **Stock/Reorder** dialog box, click the record that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Modify the values in the **Stock Qty** and **Reorder Qty** fields according to your needs.
3. Click **Save**.

Delete stock records

1. In the list in the **Stock/Reorder** dialog box, click the record that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Delete Selected**.
3. To permanently delete the record, click **Yes** in the confirmation dialog box.

Load stock items to a requisition

1. In the list in the **Stock/Reorder** dialog box, click the items that you want to send to a requisition.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Requisition**.

3. In the **Select Requisition** dialog box, do one of the following according to your needs:

To	Do this
Add the items into a new requisition	a. Click **Add**. b. Modify the requisition number and description according to your needs. c. If necessary, modify other requisition properties. d. Click **Save**. e. Select the new requisition in the list. f. Click **OK**.
Add the items into an existing requisition	a. Select a requisition in the list. b. Click **OK**.

The items are loaded to the selected requisition.

Load stock items to a purchase order

1. In the list in the **Stock/Reorder** dialog box, click the items that you want to send to a purchase order.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Purchase Order**.
3. In the **Select Purchase Order** dialog box, do any of the following according to your needs:

To	Do this
Add the items into a new requisition	a. Click **Add**. b. Modify the purchase order number according to your needs. c. Add vendor details for the purchase order. d. If necessary, modify other purchase order properties. e. Click **Save**. f. Select the new purchase order in the list. g. Click **OK**.
Add the items into an existing requisition	a. Select a purchase order in the list.

To	Do this
	b. Click **OK**.

The items are loaded to the selected purchase order. In the **Stock/Reorder** dialog box, the items are color-coded to reflect the purchase activity.

7.6 View inventory details

You can view different details of inventory materials, including the heat documents attached to items, the location of barcoded materials, the total value of inventory materials, and the transaction history. You can also view TFS report and inventory reports, and print or export them according to your needs.

For more information, see the following links:

View heat documents attached to inventory items (page 482)

View the location of barcoded materials (page 484)

View the value of inventory materials (page 486)

View the transaction history in the Inventory module (page 490)

View and print TFS reports (page 494)

View, print, and export inventory reports (page 494)

View heat documents attached to inventory items

Use the **Check Heat Documents** command to view if inventory items have heat documents attached to them. You can also save or print the available heat documents, or create reports on the items that have or do not have heat documents.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Check Heat Documents**.
3. To limit the item types whose heat documents you want to check, in the **Inventory - Check Heat Documents** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   a. Click the arrow buttons to move the items whose heat documents you want to view to the **Included** list.
   b. Type the maximum and minimum values for the items whose heat documents you want to view.

5. Click **OK**.

   To further limit the item types, repeat steps 3 to 5 for all necessary filter types.

6. Click **Check Heat Documents**.

   All inventory items that match the filters that you set are displayed. If an item has attached heat documents, you can see the number of the heat documents in the **Docs** column. If an item does not have attached heat documents, the **Docs** column is highlighted with red.

7. According to your needs, do any of the following:

To	Do this
Update heat document information	• Click **Refresh**. Any new or modified information is updated.
Add, modify, and delete heat documents in **Document Index**	a. Click **Open Document Index**. **Document Index** opens. For more information, see Store document references for the inventory (page 455).
Save heat documents	a. Do one of the following: • To only save particular heat documents, click the item whose documents you want to save, and click **Save Documents** --> **Save Documents - Selected** . • To save all available heat documents, click **Save Documents** --> **Save Documents - All** . b. In the **Browse For Folder** dialog box, browse to an empty folder where you want to save the heat document information. c. Click **OK**. A report of the heat documents opens.
Print heat documents	a. Do one of the following: • To only print particular heat documents, click the items whose documents you want to print, and click **Print Documents** --> **Print Documents - Selected** . • To print all available heat documents, click **Print Documents** --> **Print Documents - All** . b. In the **Select Printer** dialog box, click a printer to select it.

To	Do this
	c. Click **OK**. All or the selected heat documents are printed.
Create reports	a. Do one of the following: • To create a report only containing particular items, click the items to select them, and click **Reports** --> **Reports - Selected** . • To create a report containing all items, click **Reports** --> **Reports - All** . b. In the **Report Selection** dialog box, click the report that you want to create. c. Do one of the following: • To view the report, click **View**. • To print the report, change the number of copies by clicking the **+** and **-** buttons, and click **Print**. • To export the report, click **Export**, modify the export format, file name, and location, and click **Export** again.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View the location of barcoded materials

Use the **Location Sweep** command to create location sweep reports, which show the location of yard materials that have been identified by barcodes. Note that the **Location Sweep** command is only available for items with serial numbers.

To access the **Inventory Location Sweeps** dialog box, do the following:

1. While in the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Barcode** --> **Location Sweep** .

The **Inventory Location Sweeps** dialog box opens.

According to your needs, do any of the following.

View the location of barcoded materials

1. Click **New Location Sweep**.

2. To only view locations of specific types of materials, select a filter type in the **Type** list, and click **Select**.
3. In the **Filter** dialog box, click the arrow buttons to move the materials that you want to include in the location sweep to the **Included** list.

   To further limit the materials included, you can repeat steps 2 to 3 for all necessary filter types.
4. Click **Make Report**.
5. In the **Report Selection** dialog box, select the report that you want to view.
6. In the **Report Selection** dialog box, click **View**.

   The location sweep report opens in **Tekla EPM Report Viewer**.

Delete a location sweep

1. Select an existing location sweep in the **Inventory Location Sweeps** dialog box.
2. Click **Delete Location Sweep**.
3. To permanently delete the location sweep, click **Yes** in the confirmation dialog box.

Cancel remaining items from a location sweep

1. Select an existing location sweep in the **Inventory Location Sweeps** dialog box.
2. Click **Cancel Remaining**.
3. To cancel the remaining items, click **Yes** in the confirmation dialog box.

Complete the location sweep and move remaining items

1. Select an existing location sweep in the **Inventory Location Sweeps** dialog box.
2. Click **Complete - Move Remaining**.
3. To complete the location sweep and move the remaining items, click **Yes** in the confirmation dialog box.

View, print or export reports of an existing location sweep

1. Select an existing location sweep in the **Inventory Location Sweeps** dialog box.
2. Click **Reports - Selected**.

3. In the **Report Selection** dialog box, select the report that you want to view, print, or export.
4. According to your needs, do any of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. In the **Select Printer** dialog box, click a printer to select it. d. Click **OK**.
Export the report	a. In the **Report Selection** dialog box, click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. In the **Report Selection** dialog box, click **Export**. The location sweep report is saved to the selected location.

View the value of inventory materials

Use the **Valuation** command to view the value of materials in inventory. You can view the value either by date and time, by date, or by archive.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Valuation** and one of the following options:
   - **Valuation by Date/Time**: shows the current value of materials in stock or on order, or the value of materials on a specific date and time.
   - **Valuation by Date**: shows the value of material on a specific date.
   - **Valuation from Archive**: shows the valuation of materials in an archive file.

According to your needs, see one of the following sets of instructions.

View the current material value in inventory or the material value on a specific date and time

1. On the menu, select **Valuation** --> **Valuation by Date/Time** .
2. In the **Archive Date/Time** dialog box, do one of the following:
   - To view the material values on a specific date and time, select the date and time in the appropriate lists, and click **OK**.
   - To view the current material values, click **Use Current Inventory**.
3. To only include specific types of items in the valuation report, in the **Inventory Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. click the arrow buttons to move the item types that you want to include to the **Included** list.
5. Click **OK**.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, select the report that you want to view, print, or export.
8. According to your needs, do any of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**. The **Tekla EPM Report Viewer** opens.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. In the **Select Printer** dialog box, click a printer to select it.

To	Do this
	d. Click **OK**.
Export the report	a. In the **Report Selection** dialog box, click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. In the **Report Selection** dialog box, click **Export**.

9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View the material value on a specific date

1. On the menu, select **Valuation** --> **Valuation by Date** .

   The **Inventory Valuation** dialog box opens, showing the valuation of material in stock and on order on the current date.

2. In the **Date** list, select the date whose inventory valuation you want to view.
3. Click **OK**.

   The valuation on the bottom of the dialog box updates.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View the value from an archive file

1. On the menu, select **Valuation** --> **Valuation from Archive** .
2. In the **Open** dialog box, browse to find and click to select the archive file that you want to use.

3. Click **Open**.
4. In the **Select** dialog box, select if you want to view inventory reports or inventory location reports.
5. In the **Report Selection** dialog box, select the report that you want to view, print, or export.
6. According to your needs, do any of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**. The **Tekla EPM Report Viewer** opens.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. In the **Select Printer** dialog box, click a printer to select it. d. Click **OK**.
Export the report	a. In the **Report Selection** dialog box, click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. In the **Report Selection** dialog box, click **Export**.

7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View the transaction history in the Inventory module

Use the **Transaction History** dialog box to view all transactions made in the **Inventory** dialog box. You can also view further transaction details and item history, and view or print different transaction history reports.

View the transaction history of an item

1. In either the **Inventory** or **Inventory History** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Transaction History**.

   The **Transaction History** dialog box opens with the **Transaction List** tab open.
3. To filter the transactions shown in the list:
   a. In the **Filters** section of the **Transaction History** dialog box, click **Edit** next to a filter type.

      The available filter types are the transaction date, the user that made the transaction, the transaction type, and the operation type.

      You can also click **Find** to search for the right user, transaction type, or opertaion type.
   b. Do one of the following:
      - For transaction date, enter the start and end dates to define a range within which the transactions have taken place.
      - For user, transaction type, and operation type, use the arrow buttons to move the desired items to the **Included** list.
   c. Click **OK**.
4. To view more information about a transaction, do the following:
   a. Click to select the transaction in the list on the **Transaction List** tab.
   b. Click the **Transaction Details** tab to view the details of the selected transaction.
   c. Click the **Item History** tab to view the item history of the selected transaction.

According to your needs, see any of the following instructions:

Find a transaction by transaction number

1. On the **Transaction List** tab, click **Find Transaction #**.
2. Enter the transaction number in the field.

3. Click **OK**.

The transaction with the selected transaction number is selected on the **Transaction List** tab.

Create transaction history reports

1. Click the **Transaction History** ribbon tab.
2. On the menu, select **Reports**.
3. To only include specific items in the transaction history report, select a filter type in the **Type** list, and click **Select**.
4. Do one of the following:
   - For dates, select the start and end dates in the calendar to define a range within which the transactions have taken place.

     You can also select the **Expression** check box to create expressions that allow you to set the base date and the number of days before or after that date.
   - For other filter types, use the arrow buttons to move the desired items to the **Included** list.
5. Click **OK**.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, select the report that you want to view or print.
8. Do any of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.

To	Do this
Export the report	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

View all changes in the transaction history

Tekla EPM records every change made in the system. This is useful because you can view all changes made in the transaction history of items in a purchase order. You can then filter the information to see changes made by a particular user or on a particular date. If necessary, you can also print the list of changes.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **List Of Changes**.
3. In the **List Of Changes Report Filters** dialog box, do any of the following:

To	Do this
Filter changes by user	a. Select the **User** filter type and click **Select**. b. Click the arrow buttons to move the users whose changes you want to view to the **Included** list. c. Click **OK**.
Filter changes by date	a. Click **Edit** on the right side of the **Date** section. b. Enter the start (**Min**) and end (**Max**) dates.

To	Do this
	c. Click **OK**.

4. Click **Make Report**.
5. In the **Report Selection** dialog box, do any of the following:

To	Do this
View the list of changes	• Click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the list of changes	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the list of changes	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View and print TFS reports

Use the **TFS - Reports Only** command to view and print reports for items that have been or could be taken from stock. TFS reports show the cut details, but no items are actually cut or taken from stock when you use the **TFS - Reports Only** command.

1. In the lower navigation tree of the **Inventory** dialog box, select a job number.

   Only the items within the selected job are displayed in the display area.
2. Click the **Inventory** ribbon tab.
3. On the menu, select **Production Control** --> **TFS - Reports Only** .
4. In the **TFS** dialog box, click **Reports**.
5. In the **Report Progress** dialog box, select the report that you want to view or print.
6. According to your needs, do any of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. In the **Select Printer** dialog box, click a printer to select it. d. Click **OK**.

7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Take material from stock and return material to stock (page 472)

Take selected materials from stock (page 473)

View, print, and export inventory reports

You can create different inventory reports, such as subtotal reports, shape summaries, or receiving tickets.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.

3. In the **Inventory Report Filters** dialog box, select either the **Inventory Report** or **Inventory Location Report** option according to your needs.
4. To only include specific items in the report, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, click the arrow buttons to move the items that you want to include in the report to the **Included** list.
6. Click **OK**.
7. If you want to view the inventory situation of a previous date in the reports, do the following:
   a. Click **From Archive**.
   b. Select the archive date and time in the applicable lists.
   c. Click **OK**.
8. To view barcode audit reports in the **Report Selection** dialog box, select the **Barcode Audit** check box.
9. Click **Make Report**.
10. In the **Report Selection** dialog box, click the report that you want to view, print, or export.

According to your needs, see one of the following sets of instructions.

View inventory reports

1. In the **Report Selection** dialog box, click **View**.

   The **Tekla EPM Report Viewer** dialog box opens, displaying the selected report.
2. In **Tekla EPM Report Viewer**, do any of the following according to your needs:

To	Do this
Move between pages	• Click the arrows at the top of **Tekla EPM Report Viewer**.
Go to a specific page of the report	• Type the page number in the empty field at the top of **Tekla EPM Report Viewer**.
Find a text in the report	a. Click the binocular icon. b. In the blank field, type the text that you want to find. c. Click **Find Next**. Any matching text is highlighted with a red box.

To	Do this
Zoom in or out	• Click the magnifying glass icon and select the zoom value in the list.

Print inventory reports

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. In the **Select Printer** dialog box, click a printer to select it.
4. Click **OK**.

Export inventory reports

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. Modify the file name according to your needs.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. In the **Report Selection** dialog box, click **Export**.

The report is saved to the selected location.

7.7 Import and export inventory information

You can import inventory information or a cut list to Tekla EPM, or export inventory information from Tekla EPM to KSTK, ProNest, Timberline, and XML format.

For more information, see the following links:

Export inventory information to the KSTK format (page 497)

Export inventory transactions to Timberline (page 497)

Export inventory to SigmaNest (page 498)

Export inventory information to XML (page 498)

Synchronize inventory information with ProNest (page 498)

Import inventory information from an HTML file (page 499)
Import ProNest cut lists to Tekla EPM (page 499)
Archive jobs (page 500)

Export inventory information to the KSTK format

Use the **Export to KSTK** command to save inventory information in the KSTK format.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Export to KSTK**.
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. Click **Save**.

   A message opens, showing where the inventory information was saved.
6. Click **OK** to close the message.

Export inventory transactions to Timberline

Use the **Export Inventory Transactions to Timberline** command to export inventory information to the Timberline accounting software. Note that Timberline must be open, so that it can receive the inventory information.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Export Inventory Transactions to Timberline**.

   The **Export Inventory Transactions to Timberline** dialog box opens.
3. In the **Export From Transaction #** and **To (leave blank for all)** fields, enter the numbers of the first and last transactions that you want to export.
4. In the **Job # Export Option** list, select how you want the job number to be exported.
5. Enter the general ledger code.
6. To not export material that has been received directly to inventory history, select the **Ignore material received directly to inventory history** check box.
7. Click **Export Transactions**.

The selected transactions are exported to Timberline.

Export inventory to SigmaNest

We recommend that you regularly export the Tekla EPM inventory to SigmaNest to keep the Tekla EPM inventory and SigmaNest in sync.

Before you can export inventory information to SigmaNest, you need to set up Tekla EPM to work with SigmaNest. For more information, see SigmaNest Integration.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Export** --> **Export to SigmaNest**.

   NOTE If you cannot see the **Export to SigmaNest** option, ensure that you have enabled SigmaNest:

   a. On the **Maintenance** menu, select **Integration Settings** --> **SigmaNest**.

   b. In the **SigmaNest Settings** dialog box, ensure that the **Enable SigmaNest for Plate Nesting** check box is selected.

   The inventory information in Tekla EPM is exported to SigmaNest. You can view the process in the **Status** dialog box.
3. When the synchronization process is completed, click **OK** to close the **Status** dialog box.

Export inventory information to XML

Use the **Export to XML** command to save inventory information in an XML file.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Export** --> **Export to XML** .
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. Click **Save**.

   The **Status** dialog box opens, showing the status of the export process.
6. When the export is completed, click **OK** to close the **Status** dialog box.

The file is saved to the location you selected.

Synchronize inventory information with ProNest

Use the **Sync with ProNest** command to synchronize Tekla EPM inventory information with ProNest and update the cut lists in ProNest. We recommend that you synchronize the two software regularly.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Export** --> **Sync with ProNest** .

   The inventory information in Tekla EPM is exported to ProNest to synchronize the two software. You can view the process in the **Status** dialog box.
3. When the synchronization process is completed, click **OK** to close the **Status** dialog box.

You can now view the inventory information exported from Tekla EPM in ProNest.

Import inventory information from an HTML file

Use the **Inventory From HTML** command to import inventory information from an HTML file to Tekla EPM.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Import** --> **Inventory From HTML** .
3. In the **Open** dialog box, browse to find and select the HTML file that you want to import.
4. Click **Open**.

The inventory information is imported to Tekla EPM.

Import ProNest cut lists to Tekla EPM

You can import cut lists available in the ProNest nesting software to Tekla EPM. By importing cut lists, you receive information on the scrap of a ProNest nesting process to inventory.

Before sending cut lists to Tekla EPM, send the nest to CNC in ProNest.

1. In the **Inventory** dialog box, click the **Inventory** ribbon tab.
2. On the menu, select **Import** --> **ProNest Cut List** .

   Tekla EPM imports the cut lists that are available in ProNest.
3. When the import is completed, click **Open Import Log** to view, print, or save the import log.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Once a cut list is imported, it can be cut in Tekla EPM. This way, you can remove the used plate from inventory and add the proper scrap.

See also

Synchronize inventory information with ProNest (page 498)

Archive jobs

Use the **Archive Jobs** command to export jobs from **Inventory History** and save them as KSTK or TXT files.

1. In the **Inventory History** dialog box, click the **Inventory History** ribbon tab.
2. On the menu, select **Export** --> **Archive Jobs** .
3. In the **Select Jobs to Archive** dialog box, click the arrow buttons to move the jobs that you want to archive to the **Included** list.
4. If you want to delete the jobs from inventory history after archiving them, select **Yes** in the **Purge Archived Jobs** list.
5. Click **OK**.
6. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
7. If necessary, change the file name.
8. If necessary, select another file format in the **Save as type** list.
9. Click **Save**.

   A message opens, showing you the location and the file where the archived jobs have been saved.
10. Click **OK** to close the message.

8 Manage projects

The **Project Management** module brings together all information regarding the project: the information from the related estimating jobs or combining jobs, and the materials, hours, weight, sequencing and tracking from the related production control job. You can bring information from multiple estimating jobs, combining jobs, and production control jobs to the project management job. In **Project Management**, you can add drawings and journal entries, create transmittals or requests for information, and assign tasks to Tekla EPM users.

NOTE Before you start working in the **Project Management** module, ensure that you have adjusted the project management settings according to your needs.

For more information, see the following links:

Open the Project Management module (page 529)

Create a project management job (page 530)

Open a project management job (page 532)

Store document references for a project management job (page 534)

Manage and assign project tasks (page 536)

Manage companies in the project (page 556)

Manage drawings (page 537)

Manage transmittals (page 558)

Manage requests for information (page 572)

Manage the project journal (page 587)

Manage change orders (page 594)

Manage the project task list (page 604)

Manage the project check list (page 608)

View and adjust the project schedule (page 613)

Manage contract and invoicing information (page 657)

View, print, or export the project summary (page 671)
Import and export project management information (page 666)
View, print, or export project management reports (page 669)

8.1 Set up the Project Management module

Before you start to use the **Project Management** module, we recommend that you take the time to customize the properties and available items according to your needs. Once you have created and modified all necessary items and settings, working in the **Project Management** module is easier and more efficient.

When setting up the **Project Management** module, you can:

- Customize the display and input fields in the **Drawing Log**, **Transmittals**, **RFIs**, **Journal**, and **Change Orders** dialog boxes.
- Create, modify, and delete the resources that are available in the production schedule.
- View and filter the production schedule.
- Create, modify, and delete calendars that are available for the project schedule.
- Modify the project schedule settings.
- Create templates that you can apply to quickly create a baseline for the project schedule.
- Define the standard settings used in the **Project Management** module.
- Create, modify, and delete approval statuses available for drawings.
- Create, modify, and delete common steps that are available for all project management jobs.
- Delete project management jobs.
- Rename project management jobs.
- Set job groups for project management jobs.
- Create, modify, and delete methods that are available for sending documents.
- Create, modify, and delete items that are commonly used in transmittals.
- Create, modify, and delete commonly used purposes for transmittals.
- Create, modify, and delete pieces of text that are commonly used in transmittals.

- Create reports for all or a group of project management jobs.

Many of the settings and selections can be saved by user. This way, each user can adjust Tekla EPM to meet their individual needs and preferences without changing the default settings.

For more information, see the following links:

Create, modify, and delete schedule calendars (page 515)

Modify the project schedule settings (page 506)

Create, modify, and delete schedule templates (page 507)

Define company standard settings for Project Management (page 503)

Create, modify, and delete approval statuses (page 517)

Create, modify, and delete common steps for project management jobs (page 518)

Manage project management jobs (page 520)

Create, modify, and delete methods for sending documents (page 522)

Create, modify, and delete transmittal items (page 523)

Create, modify, and delete transmittal purposes (page 523)

Create, modify, and delete commonly used text items for transmittals (page 524)

View, print, or export project reports (page 527)

Define company standard settings for Project Management

In the **Project Company Standards** dialog box, you can create settings that become the company default settings that are used for new project management jobs. If necessary, you can change the settings job by job.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Company Standards** .
3. In the **Project Company Standards** dialog box, adjust the following settings according to your needs:

Option	Description
Job # Increment	Allows you to select the default option for automatic job numbering. The options are: • **Increment from Last Job #**: When you create a new job, Tekla EPM uses the next available job

Option	Description
	number after the latest job number created. • **Increment from Largest Job #**: Tekla EPM uses the next available job number after the largest job number created. • **Don't Increment**: Automatic job numbering is not used.
Drawing Number Input Type	Allows you to select the input format for drawing numbers.
Drawing File Prefix	By default, Tekla EPM expects that the names of drawing files match the drawing numbers. The **Drawing File Prefix** option allows you to determine the prefix that appears in the names of all drawing files that are imported. Determining a drawing file prefix is optional. However, the drawing file prefix can help you to ensure that the correct files are imported from the selected folder. For example, drawing files might consist of the job number followed by a dash and the drawing number. In this case, drawing 100 could be named `C12345-100.pdf`. In consequence, the drawing file prefix would be `C12345-`. If the drawing file prefix varies, you can use an asterisk (*) as a wildcard character. For example, if the prefix of some drawing files that you want to import was not C12345, you could set the drawing file prefix to `*-`. Type the acceptable prefix in the **Drawing File Prefix** field.
Drawing File Suffix	By default, Tekla EPM expects that the names of drawing files match the drawing numbers. The **Drawing File Suffix** option allows you to determine

Option	Description
	the suffix that appears in the names of all drawing files that are imported. Determining a drawing file suffix is optional. However, the drawing file suffix can help you to ensure that the correct files are imported from the selected folder. For example, drawing files might include a revision number after the drawing number. In this case, the file name of the first revision of drawing 100 could be `C12345-100-r1.pdf`. In consequence, the drawing file suffix would be `-r1`. If the drawing file suffix varies, you can use an asterisk (*) as a wildcard character. For example, if some drawing files had different revision numbers, you could set the drawing file suffix to `-r*`. Type the acceptable suffix in the **Drawing File Suffix** field.
Transmittal Recipients Available	Allows you to select which companies can be selected as transmittal recipients. Click the arrow on the right side of the **Transmittal Recipients Available** list and select an option.
Transmittal Recipient Selection	Allows you to select which information is displayed for the companies in the **Recipient** list. Click the arrow on the right side of the **Transmittal Recipient Selection** list and select either the firm code or the firm name.
Keep Job Selection Screen Open	When selected, the **Select Project Management Job** dialog box stays open after a job has been opened. Otherwise, the selection screen closes when you open a job.
Update Production Control Approval Status	When selected, the approval statuses of shop drawings that are used in

Option	Description
	Production Control are automatically updated.
Resources - Use Period Ending Date	When selected, the date that is shown in production schedules for resources is the last date of a period. This option only applies when the scale of the schedule is set to week or month. For example, February 2019 would be shown as `2/28/2019` in the mm/dd/yyyy format. When cleared, the date that is shown is the first date of a period. In this case, February 2019 would be shown as `2/1/2019` in the mm/dd/yyyy format. For more information, see Modify resource capacity (page 770).
Job # Regular Expression	Allows the use of regular expressions to enforce a desired format for the job numbers. For more detailed instructions on job number regular expressions, click **Regular Expression Help**.

4. Click **Save** to update the company standard settings.

Set up schedules

Before creating project and production schedules, we recommend that you adjust the schedule settings according to your needs. You can also create the necessary schedule calendars and schedule templates, and modify or delete the existing ones.

For more information, see the following links:

Modify the project schedule settings (page 506)

Create, modify, and delete schedule calendars (page 515)

Create, modify, and delete schedule templates (page 507)

Modify the project schedule settings

In the **Schedule Settings** dialog box, you can set the default settings for project schedules. You can define settings for accessing and remaining in the edit mode, and set the default project breakdown levels and fields.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Schedule Settings** .
3. On the **Edit Mode** tab of the **Schedule Settings** dialog box, adjust the following settings:

Option	Description
Edit Mode Timeout	The number of seconds that a user can be in the edit mode without making changes before the edit mode times out. The edit mode ensures that Tekla EPM users do not make conflicting changes if they work on the project schedule simultaneously. Type the desired number of seconds in the **Edit Mode Timeout** field.
Auto-Acquire Edit Mode	When selected, Tekla EPM no longer asks you if you want to access the edit mode when making changes. This means that all changes to the project schedule are made without confirmation, provided that no other Tekla EPM users are currently in the edit mode and modifying the same project schedule.

4. Click the **Project Breakdown** tab to open it.
5. To define the available breakdown levels and fields, click the arrows next to the breakdown fields, and select suitable options in the list.

   By default, two levels of breakdown items (sequences and lot numbers) are available. To make more levels available, select options in the **Default Breakdown Field 3**, **Default Breakdown Field 4**, and **Default Breakdown Field 5** lists. If you do not want a breakdown level to be available, select **None**.

   For example, to enable categories as the breakdown level below lots, select **Category** in the **Default Breakdown Field 3** list.
6. Click **Save**.

The changes you made are saved as default settings for all new project schedules. If necessary, you can adjust the breakdown levels and fields on a job by job basis.

See also

View and adjust the project schedule (page 613)

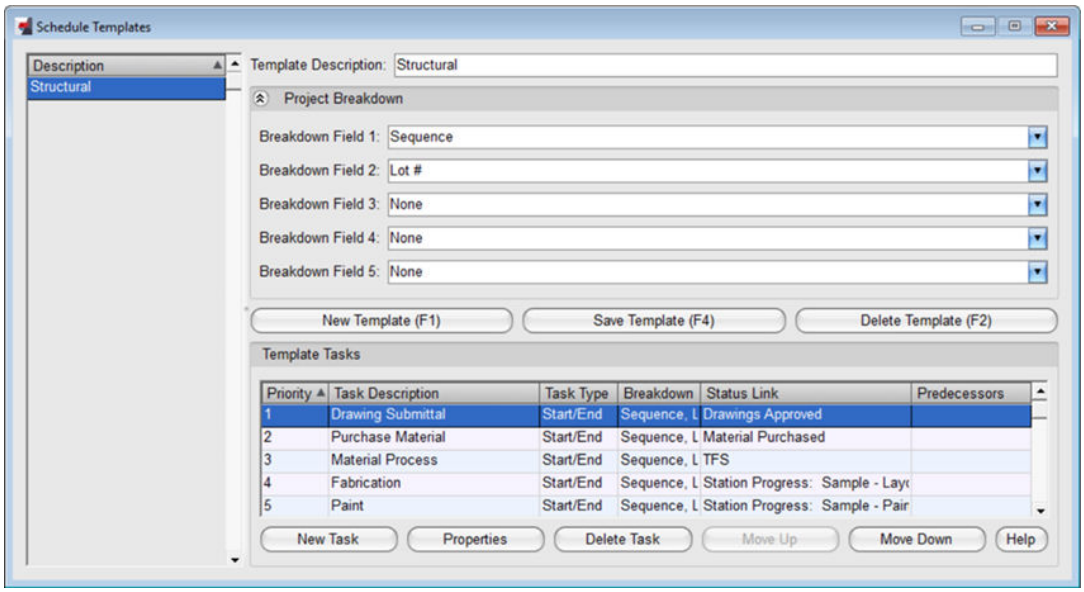
Create, modify, and delete schedule templates

In the **Schedule Templates** dialog box, you can create, modify, and delete templates that are used as the basis of project schedules with pre-determined tasks and settings. Creating schedule templates saves time when creating

project schedules, because you can easily apply the template to any project schedule. When the template is applied to the project schedule, you can modify the tasks according to your needs.

To access the **Schedule Templates** dialog box, do the following:

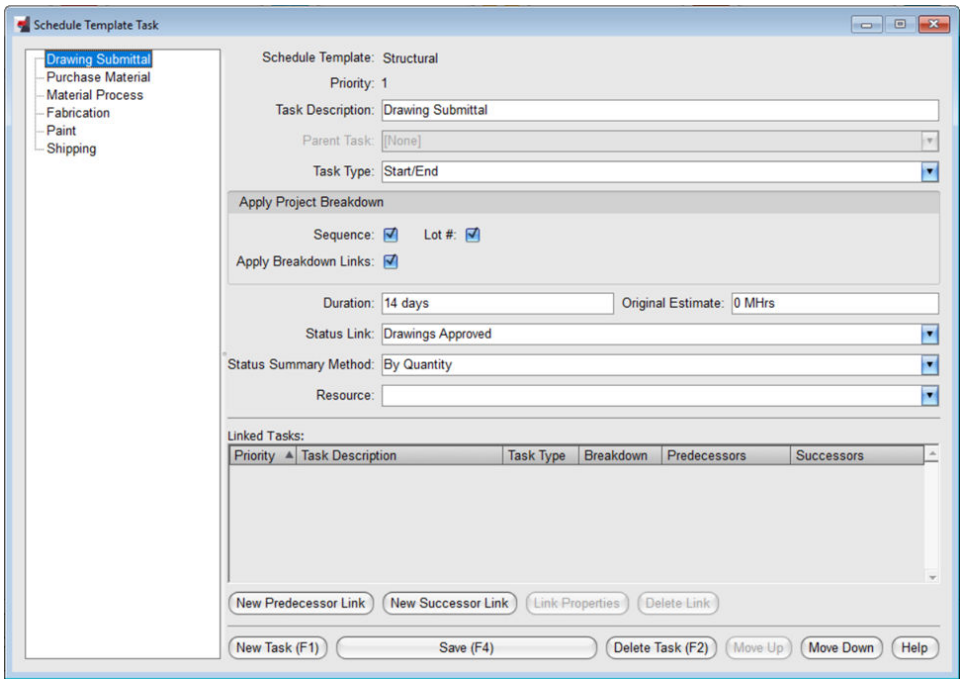
1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Schedule Templates** .



Create a schedule template

1. Click **New Template**.
2. In the **Template Description** field, type a name for the new template.
3. Click **Add Template**.

   The template is added to the list on the left side of the dialog box.
4. To add tasks to the template, do the following:
   a. Click **New Task**.



b. In the **Schedule Template Task** dialog box, type a description for the task.

c. Modify the task properties according to your needs:

Option	Description
Parent Task	If the task you are creating is a sub-task, for an existing task, you need to select the main task. Click the arrow on the right side of **Parent Task** field, and select a task in the list. If you are creating a top-level task, select **None**. Note that you cannot modify the task type, duration, or original estimate time of a main task if you add a sub-task.
Task Type	Specifies the behavior of the task on the **Gantt Chart** tab. The available task types are: • **Start/End**: an action to be performed over a period of time. Properties include the start date, end date, and duration. Start/end tasks can be directly re-sized an moved on the **Gantt Chart** tab. • **Summary**: takes the aggregate values from its sub-tasks. The start date of a summary task is automatically set to the earliest date of the sub-tasks. The end date is set to the latest sub-task end date, and the percent completed is

Option	Description
	aggregated based on the status summary method. Summary tasks cannot be re-sized on the **Gantt Chart** tab directly. However, the sub-tasks can be re-sized and moved, and the summary main task will re-sized and moved accordingly. • **Milestone**: an event in the schedule. For example, a project kickoff meeting can be a milestone task. The end date and the start date are always the same, and the duration is set to one day.
Apply Breakdown Links	When selected, the links set in the project schedule are added between sub-tasks. For example, any links set between sequences 1, 2, and 3 would be added.
Duration	The expected number of working days to complete a task. The duration can only be adjusted if the task type is set to **Start/End**. Type the number of days in the **Duration** field.
Original Estimate	The time originally estimated for the entire main task or a sub-task. The hours will automatically be distributed among the sub-tasks on the Gantt chart. Type the time in man hours in the **Original Estimate** field.
Status Link	The information that affects the status of the task when the project schedule is updated. The available options are: • **Drawings Approved**: the number of drawings with the **Approved** status. • **Material Purchased**: the production material that is linked to material that is either in stock or on order. • **Material Received**: the production material that is linked to material that is in stock. • **TFS**: the production material that has been cut. • **Production Completed**: the production material that has been assigned a route and has completed all stations in that route.

Option	Description
	• **Production Progress**: the production material that has been assigned a route and has completed some stations in that route. • **Station Progress**: the production material that has been assigned a route that includes the selected station and has completed that station. • **Shipping Destination Progress**: the production material that has been assigned a shipping route that includes the selected destination and has completed that destination. • **Shipping Completed**: the production material that has completed all assigned shipping destinations.
Status Summary Method	The method that determines how the percentage completed of a main task will be calculated from the sub-tasks. Each option specifies the weight that is given to each sub-task in the calculation. The available options are: • **No Factor**: no weight is given to the individual sub-tasks. The percentage completed of the main task is an average of the sub-tasks. • **By Quantity**: the percentage completed is weighed by the quantity of each sub-task. • **By Weight**: the percentage completed is weighed by the weight of each sub-task. • **By Duration**: the percentage completed is weighed by the duration of each sub-task.
Resource	An object with a time-based capacity to be added on a production schedule, and the resource by which station work will be executed. Linking a task from the project schedule to a resource connects the project and production schedules. Click the arrow on the right side of **Resource** list, and select a resource in the list.

d. Click **Add**.

e. Select the new task in the navigation tree.

f. In the **Link Tasks** section of the dialog box, define dependencies between two tasks.

By creating links, you can make the schedule cascade from one task to another.

Note that:

- A task cannot link to itself.
- A link cannot be created between a task and one of its sub-tasks.
- Duplicate links are not allowed. There can be only one link between a pair of tasks.
- Link cycles are not allowed. For example, if a link is created from task 1 to task 2, a link cannot be created from task 2 to task 1.
- When you use links, and the duration of an item changes, the positions of all linked items also changes. Do not link items that need to remain static, or are independent from other items in the schedule.

Do any of the following:

To	Do this
Add a link that ends with the current given task	Note that if a previous snapshot is displayed instead of the current project schedule information, you cannot add a predecessor link. 1. Click **New Predecessor Link**. 2. Click the arrow on the right side of **Link From** list, and in the list, select the starting task of the link. 3. Click the arrow on the right side of upper **Position** field, and in the list, select if the link originates from the start or end of the starting task. 4. Click the arrow on the right side of lower **Position** field, and in the list, select if the link ends at the start or finish of the second task. 5. In the **Minimum Interval** field, type the minimum number of working days between the two tasks. The minimum interval is enforced in the Gantt chart. The later task cannot be moved earlier in the Gantt chart than the value in the **Minimum Interval** field determines. 6. Click **Add**.

To	Do this
	7. In the confirmation dialog box, click **Yes**. For example, to define that shipping must start when the fabrication is finished, select **Shipping** and set the link a follows: • **Link From**: **Fabrication** • Upper **Position**: **Finish** • Lower **Position**: **Start** • **Minimum Interval**: `0 days`
Add a link that begins with the current task	Note that if a previous snapshot is displayed instead of the current project schedule information, you cannot add a successor link. 1. Click **New Successor Link**. 2. Click the arrow on the right side of the upper **Position** field, and in the list, select if the link originates from the start or end of the starting task. 3. Click the arrow on the right side of the **Link To** field, and in the list, select the task that is the ending point of the link. 4. Click the arrow on the right side of the lower **Position** field, and in the list, select if the link ends at the start or finish of the second task. 5. In the **Minimum Interval** field, type the minimum number of working days between the two tasks. The minimum interval is enforced in the Gantt chart. The later task cannot be moved earlier in the Gantt chart than the value in the **Minimum Interval** field determines. 6. Click **Add**. 7. In the confirmation dialog box, click **Yes**. For example, to define that shipping must start when the fabrication is finished, select **Fabrication** and set the link a follows: • Upper **Position**: **Finish** • **Link To**: **Shipping** • Lower **Position**: **Start** • **Minimum Interval**: `0 days`

To	Do this
View and modify link properties	1. Click **Link Properties**. 2. Modify the starting task, ending task, the task positions, and interval according to your needs. 3. Click **Save** to update the link properties.
Delete a link	1. Click a link in the list to select it. 2. Click **Delete Link**. 3. In the confirmation dialog box, click **Yes** to permanently delete the links.

g. To save the links, click **Save**.

h. To close the **Schedule Template Task** dialog box, click the **Close** button (**X**) in the upper-right corner.

Repeat steps a to i for all tasks that you want to add to the template.

5. In the **Schedule Templates** dialog box, click **Save Template**.

Modify a schedule template

1. In the list on the left of the **Schedule Templates** dialog box, select the template that you want to modify.
2. Do any of the following:

To	Do this
Add a task to the schedule template	See Create a schedule template.
Modify an existing task	a. In the **Template Tasks** list, select the task that you want to modify. b. Click **Properties**. c. In the **Schedule Template Task**, modify the task description, properties, and links according to your needs. For more information on task properties and links, see Create a schedule template. d. Click **Save** to save the changes.
Move a task earlier or later in the schedule template	a. In the **Template Tasks** list, select the task that you want to move earlier or later in the schedule template. b. Click the **Move Up** and **Move Down** to change the location of the task.

To	Do this
Delete a task from the schedule template	Note that deleting a task from the schedule template is permanent and cannot be undone. a. In the **Template Tasks** list, select the task that you want to delete. b. Click **Delete Task**. c. To permanently delete the task, click **Yes** in the confirmation dialog box.

3. Click **Save Template** to save the changes.

Delete a schedule template

Note that deleting a schedule template is permanent and cannot be undone.

1. In the list on the left of the **Schedule Templates** dialog box, select the template that you want to delete.
2. Click **Delete Template**.
3. To permanently delete the schedule template, click **Yes** in the confirmation dialog box.

Create, modify, and delete schedule calendars

Schedule calendars determine the working days in a project schedule. By default, Tekla EPM uses a schedule calendar with a five-day working week from Monday to Friday, excluding national holidays. If necessary, in the **Schedule Calendars** dialog box, you can create additional schedule calendars. For example, this can be useful if your shop has a seven-day working week. You can also modify or delete the existing schedule calendars, and select which schedule calendar is used as the default option.

To access the **Schedule Calendars** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Schedule Calendars** .

You can view the existing schedule calendars on the left side of the **Schedule Calendars** dialog box.

Create a schedule calendar

1. Click **New**.
2. In the **Calendar Description** field, type a name for the new calendar.
3. Select the check box next to each weekday that you want to mark as a working day.

   Note that in the calendar at the bottom of the dialog box, the non-working days are bolded.

4. Click **Add**.

The new schedule calendar is added to the list on the left side of the dialog box. If necessary, you can now add working day exceptions to the schedule calendar.

Add working day exceptions

If necessary, you can add working day exceptions to a schedule calendar. For example, you can set national holidays as non-working days, or set a particular Saturday or Sunday as a working day.

1. In the list on the left side of the **Schedule Calendars** dialog box, click the calendar to which you want to add working day exceptions.
2. At the bottom of the dialog box, click **Working Day Exceptions**.
3. In the **Schedule Calendar - Working Day Exceptions** dialog box, click **New**.
4. Type a description for the working day exception.
5. If you want the date to be a working day, select the **Is Working Day** check box.
6. Select the exception date in the calendar.
7. Click **Add**.

The working day exception is added to the list on the left side of the **Schedule Calendar - Working Day Exceptions** dialog box.

If necessary, you can select a working day exception in the list, and then either:

- Modify the working day exception by changing its properties and clicking **Edit**.
- Delete the working day exception by clicking **Delete**, and then **Yes** to confirm.

Set a schedule calendar as the default option

The current default schedule calendar is marked with an asterisk (*) in the list on the left side of the **Schedule Calendars** dialog box. If you want to use another calendar as the default option, do the following:

1. In the list on the left side of the **Schedule Calendars** dialog box, click the calendar that you want to set as the default option.
2. Click **Set as Default**.
3. In the confirmation dialog box, click **Yes** to set the selected calendar as the default option in all new project schedules.

The selected calendar is set as the default option and marked with an asterisk (*).

Modify a schedule calendar

1. In the list on the left side of the **Schedule Calendars** dialog box, click the calendar that you want to modify.
2. In the **Calendar Description** field, modify the name of the calendar.
3. Select the check box next to each weekday that you want to mark as a working day.
4. Click **Edit** to save the changes.

Delete a schedule calendar

Deleting a schedule calendar is permanent and cannot be undone. Note that the default calendar cannot be deleted.

1. In the list on the left side of the **Schedule Calendars** dialog box, click the calendar that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the calendar.

Create, modify, and delete approval statuses

In the **Approval Status** dialog box, you can create, modify, or delete approval statuses for drawings. The **Approval Status** dialog box is available through both the **Production Control** module and the **Project Management** module.

To access the **Approval Status** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Approval Status Maintenance** or **Project Management** --> **Approval Status Maintenance** .

The **Approval Status** dialog box opens. You can view all existing approval statuses.

Create an approval status option

1. Click **New**.
2. In the **Approval Status** field, type an abbreviation for the new approval status.
3. In the **Description** field, type a description for the new approval status.
4. If you wish, in the **Purpose** list, select if items with the status option are approved or on hold.

No matter how many approval statuses you create, the only available purpose options are **Approved** and **Hold**.

Approved means that drawings are ready for fabrication. The **Approved** purpose is used as the status link in the project schedule.

whereas **Hold** means that the drawings are not ready for fabrication. Items with the **Hold** option can move through fabrication processes, but they will be highlighted in red, and warning pop ups will appear during processing updates. Any loads that contain items with the **Hold** purpose option cannot be shipped.

5. Click **Add**.

Modify an existing approval status

1. In the list, click the approval status that you want to modify.
2. Modify the approval status abbreviation, description, and purpose according to your needs.
3. Click **Edit** to save the changes.

Delete an approval status

Note that deleting an approval status is permanent and cannot be undone.

1. In the list, click the approval status that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the approval status.

Create, modify, and delete common steps for project management jobs

In the **Check List Item Maintenance** dialog box, you can create, modify, and delete check list items. Check list items are steps that are commonly performed in project management jobs, such as receiving a signed contract from the client. The check list items that you create in the **Check List Item Maintenance** dialog box are automatically available for all future project management jobs. However, you need to add them manually to existing project management jobs.

To access the **Check List Item Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.

2. On the menu, select **Project Management** --> **Check List Item Maintenance** .

The check list items created in the **Check List Item Maintenance** dialog box serve as reminders in each project management job. Tekla EPM also records the date when each of these tasks are completed and the user who performs the tasks.

Create a check list item

1. Click **New**.
2. In the **Description** field, type a description for the item.

   For example, `Get signed contract from the client`.
3. Click **Add**.

The check list item is now available for all project management jobs, and you can be assigned it to particular users' task lists within the projects.

To add the new check list item to an existing project management job, you need to do the following:

1. Open the project management job.
2. Click the **Project Management** ribbon tab.
3. On the menu, select **Check List**.
4. In the **Check List** dialog box, click the **Check List** ribbon tab.
5. On the menu, select **Add Additional Check List Items**.
6. In the **Add Check List Items** dialog box, click the arrow buttons to move the items that you want to add to the **Included** list.
7. Click **Add**.
8. In the **Check List** dialog box, click **Save**.

Modify a check list item

1. In the list, select the check list item that you want to modify.
2. Modify the item description according to your needs.
3. Click **Edit** to save the changes.

Change the position of a check list item

1. In the list, select the check list item that you want to move up or down in the list of tasks.
2. Click the **Position (+)** and **Position (-)** buttons to move the item to the desired position.

Delete a check list item

Note that deleting a check list item is permanent and cannot be undone.

1. In the list, select the check list item that you want to delete.
2. Click **Delete**.
3. To permanently delete the check list item, click **Yes** in the confirmation dialog box.

Manage project management jobs

In the **Project Maintenance** dialog box, you can manage existing project management jobs. You can delete and rename jobs, or set up job groups for sorting project management jobs.

To access the **Project Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Job Maintenance** .
3. In the **Project Maintenance** dialog box, select the jobs that you want to manage.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
4. At the bottom of the dialog box, click any of the available buttons.

   The options are:

   - **Delete**
   - **Rename**
   - **Set Group Name**

For more information, see the following links:

Delete project management jobs (page 520)

Rename a project management job (page 521)

Set job groups for project management jobs (page 521)

Delete project management jobs

You can delete unnecessary project management jobs at any time in the **Project Maintenance** dialog box.

Note that deleting a project management job is permanent and cannot be undone.

1. In the **Project Maintenance** dialog box, select the project that you want to delete.
2. At the bottom of the dialog box, click **Delete**.
3. To permanently delete the selected job, click **Yes** in the confirmation dialog box.

Rename a project management job

Do the following to rename an existing project management job:

1. In the **Project Maintenance** dialog box, select the job that you want to rename.
2. At the bottom of the dialog box, click **Rename**.
3. Type a new name for the job.
4. Click **OK**.

Set job groups for project management jobs

Job groups allow you to identify and sort projects that are similar. For example, you can create job groups based on the year or the project manager name. Assigning job groups to jobs makes it easier to sort a long list of jobs.

1. In the **Project Maintenance** dialog box, select the jobs for which you want to create a job group.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
2. At the bottom of the dialog box, click **Set Group Name**.
3. Select if you want to update the primary group or the secondary group.
4. Type a name for the group.
5. Click **OK**.

Set up transmittals

Before you start creating transmittals, we recommend that you create the necessary methods for sending documents, transmittal items, transmittal purposes, and commonly used text for transmittals.

For more information, see the following links:

Create, modify, and delete methods for sending documents (page 522)

Create, modify, and delete transmittal items (page 523)

Create, modify, and delete transmittal purposes (page 523)

Create, modify, and delete commonly used text items for transmittals (page 524)

Create, modify, and delete methods for sending documents

In the **Sent Via Maintenance** dialog box, you can create, modify, and delete methods for sending documents. Sending methods allow you to mark how a document was sent to the recipient when you are creating transmittals. For example, documents can be sent via email, fax, or mail. You can also set the default method for sending documents.

To access the **Sent Via Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Sent Via Maintenance** .

Create a sending method

1. Click **New**.
2. Type a description for the sending method.
3. Click **Add**.

Modify a sending method

1. In the list, select the sending method that you want to modify.
2. Modify the description according to your needs.
3. Click **Edit** to save the changes.

Set the default sending method

The current default sending method is marked with an asterisk (*). Note that you can also select another sending method for each document that you send.

1. In the list, select the sending method that you want to set as the default option.
2. Click **Set as Default**.
3. To confirm using the sending method as the default option, click **Yes** in the confirmation dialog box.

The selected sending method is set as the default option and marked with an asterisk (*).

Delete a sending method

Note that deleting a sending method is permanent and cannot be undone.

1. In the list, select the sending method that you want to delete.
2. Click **Delete**.
3. To permanently delete the sending method, click **Yes** in the confirmation dialog box.

Create, modify, and delete transmittal items

In the **Transmittal Item Maintenance** dialog box, you can create, modify, and delete commonly used items that are sent with a transmittal. These items also appear in the transmittal document. Creating transmittal items saves time, because you do not have to type each item manually when you create a transmittal in the **Transmittals** dialog box. Instead, you can select existing transmittal items in the **Items** list.

To access the **Transmittal Item Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Transmittal Item Maintenance** .

Create a transmittal item

1. Click **New**.
2. Type a description for the transmittal item.
3. Click **Add**.

Modify a transmittal item

1. In the list, select the transmittal item that you want to modify.
2. Modify the item description.
3. Click **Edit** to save the changes.

Delete a transmittal item

Note that deleting a transmittal item is permanent and cannot be undone.

1. In the list, select the transmittal item that you want to delete.
2. Click **Delete**.
3. To permanently delete the transmittal item, click **Yes** in the confirmation dialog box.

Create, modify, and delete transmittal purposes

In the **Transmittal Purpose Maintenance** dialog box, you can create, modify, and delete commonly used purposes for sending transmittals. The purpose of the transmittal appears on the transmittal document and informs the recipient why the document has been sent. Creating transmittal purposes saves time, because you do not have to type the purposes manually each time that you create a transmittal in the **Transmittals** dialog box. Instead, you can select existing transmittal purposes in the **Purpose** list.

To access the **Transmittal Purpose Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Transmittal Purpose Maintenance** .

Create a transmittal purpose

1. Click **New**.
2. Type a description fot the transmittal purpose.
3. Click **Add**.

Modify a transmittal purpose

1. In the list, select the transmittal purpose that you want to modify.
2. Modify the purpose description according to your needs.
3. Click **Edit** to save the changes.

Delete a transmittal purpose

Note that deleting a transmittal purpose is permanent and cannot be undone.

1. In the list, select the transmittal purpose that you want to delete.
2. Click **Delete**.
3. To permanently delete the transmittal purpose, click **Yes** in the confirmation dialog box.

Create, modify, and delete commonly used text items for transmittals

In the **Transmittal Standard Text Maintenance** dialog box, you can create, modify, and delete commonly used text items that can be added to transmittal documents. For example, a text item can contain information on how quickly the recipient should react to the transmittal. Creating text items saves time, because you do not need to type the text each time you create a similar transmittal in the **Transmittals** dialog box. Instead, you can select an applicable text item in the **Standard Text** list.

Note that you can only add one text item per transmittal.

To access the **Transmittal Standard Text Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Transmittal Standard Text Maintenance** .

See any of the following sets of instructions according to your needs.

Create a text item

1. Click **New**.
2. In the **Description** field, type a name for the text item.

   This name will appear in the **Standard Text** list of the **Transmittals** dialog box.
3. In the **Standard Text** field, type the text that you want to include in the text item.
4. Click **Add**.

Modify a text item

1. In the list, select the text item that you want to modify.
2. Modify the description and text according to your needs.
3. Click **Edit** to save the changes.

Delete a text item

Note that deleting a standard text item is permanent and cannot be undone.

1. In the list, select the text item that you want to delete.
2. Click **Delete**.
3. To permanently delete the text item, click **Yes** in the confirmation dialog box.

Manage drawing logs

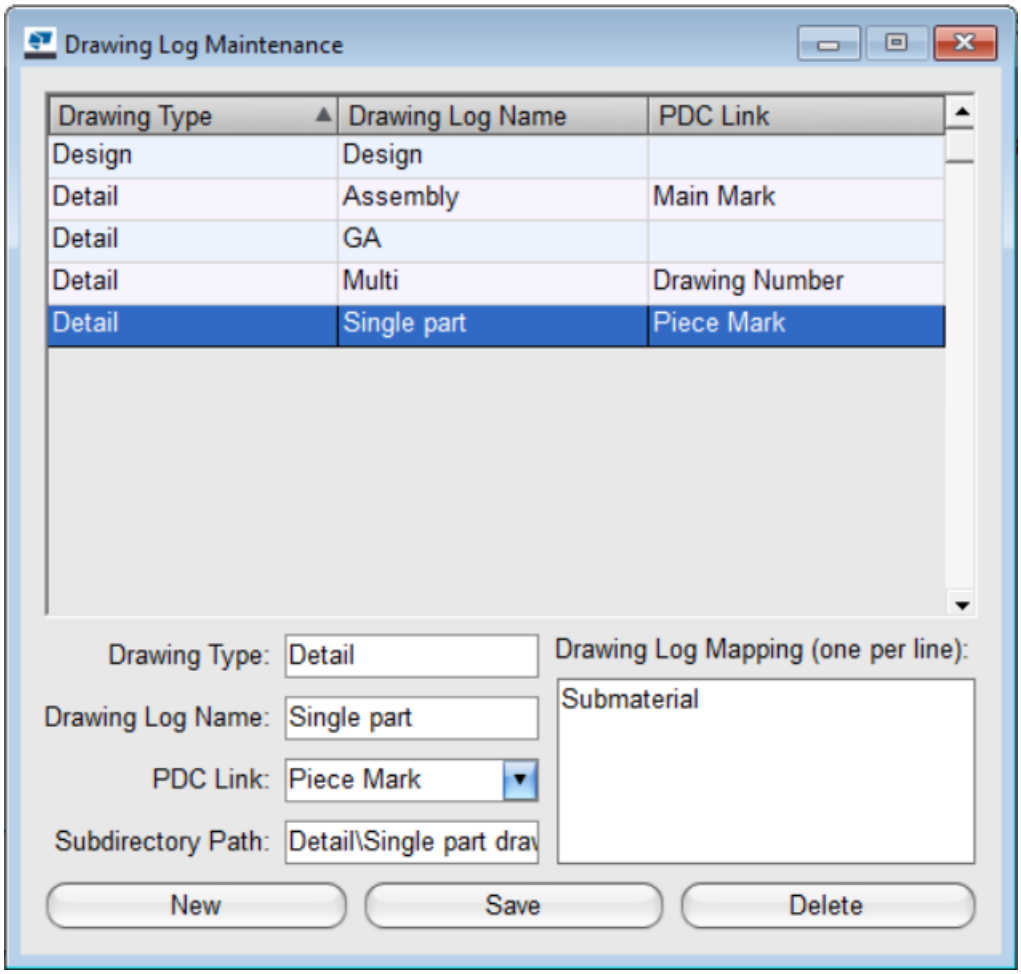
You can add your own drawing logs for different drawing types, such as general arrangement drawings or part drawings. You can also modify existing drawing logs, or delete unnecessary drawing logs from Tekla EPM.

Note that the drawing logs that you set up are available for all new project management jobs. If you need to adjust the drawing logs used in an existing project management job, see Adjust project-specific drawing settings and drawing logs (page 539).

To start managing drawing logs:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Global Drawing Log Maintenance**.

The **Drawing Log Maintenance** dialog box opens.



Add a drawing log

1. At the bottom of the **Drawing Log Maintenance** dialog box, click **New**.
2. In the **Drawing Type** field, type the drawing type.
3. In the **Drawing Log Name** field, type a name for the drawing log.
4. In the **PDC Link** list, select the field in **Production Control** to which the drawings are connected.

   Note that the **PDC Link** setting only applies to drawing log types with assemblies or materials that have counterparts in **Production Control**.
5. In the **Subdirectory Path** field, type the path to the sub-folder under the drawing default folder where the drawings in that drawing log are stored.

For example, type `Detail\Erection drawings`

The default folder for storing drawings is set in the dialog box (page 69).

6. In the **Drawing Log Mapping** field, type which drawing types to direct to the selected drawing log.

   Tekla EPM determines the drawing log where imported drawings are stored based on the drawing types assigned to the drawings in the `XML` file created with Tekla EPM Plugin for Tekla Structures, or with the Data Transfer tool in SDS/2. By default, the drawing types in Tekla EPM match the drawing types in Tekla Structures.

   Note that you need to type each drawing type on a separate line.

7. Click **Add**.

Modify a drawing log

1. In the **Drawing Log Maintenance** dialog box, select the drawing log that you want to modify.
2. Change the drawing log settings according to your needs.
3. Click **Save**.

Delete a drawing log

1. In the **Drawing Log Maintenance** dialog box, select the drawing log that you want to delete.
2. Click **Delete**.
3. To permanently delete the drawing log, click **Yes**.

View, print, or export project reports

Use the **Project Reports** command to create reports that contain information from a group of project management jobs. You can either view or print the reports, or export the reports to another file format.

Create a project report

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Project Management** --> **Project Reports** .
3. In the **Select Project** dialog box, click the arrow buttons to move the projects that you want to include in the report to the **Included** list.
4. To only include particular types of items in the report, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.

5. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to include to the **Included** list.
   - Type the maximum and minimum values for the items that you want to include.
6. Click **OK**.
7. In the **Report On** section of the dialog box, select check boxes on the right side of the information for which you want to create reports.

   For example, to create a drawing list, select the **Drawings** check box.
8. Click **Make Report**.
9. In the **Report Selection** dialog box, select the report that you want to create.

View the report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. Modify the file name according to your needs.

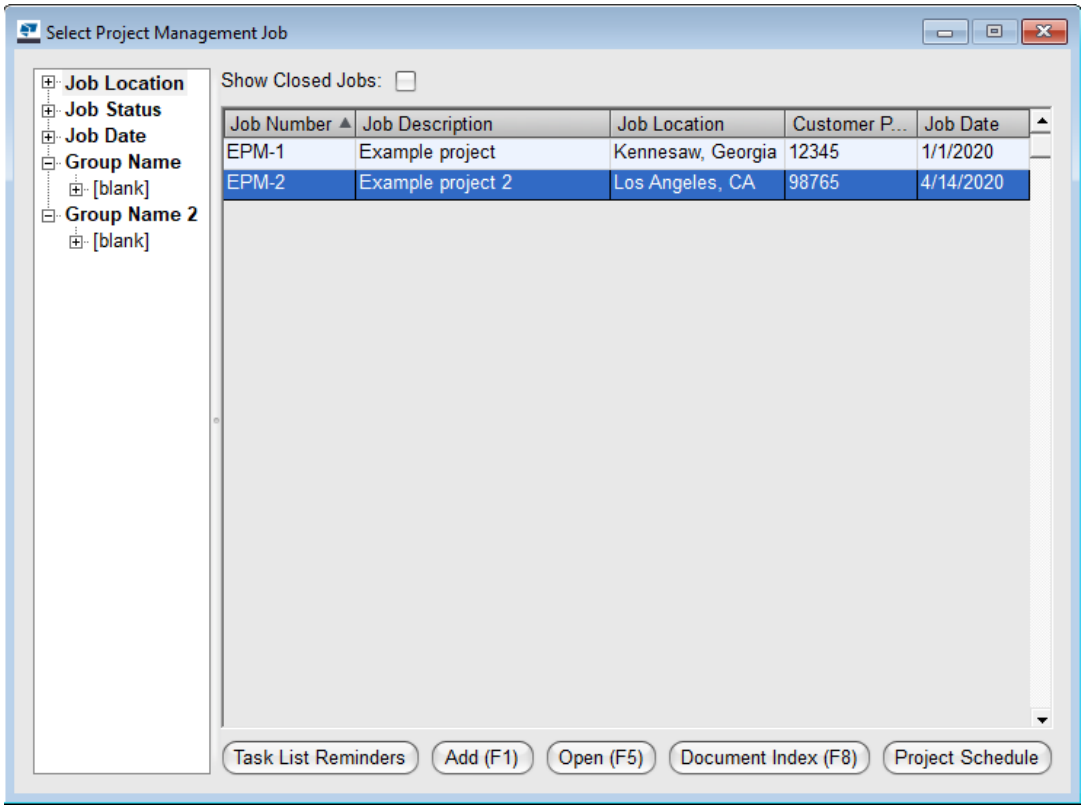
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. In the **Report Selection** dialog box, click **Export**.

8.2 Open the Project Management module

To start adding and modifying the information in a project, you need to open the **Project Management** module:

- At the top of the Tekla EPM window, click the **Project Management** button.

The **Select Project Management Job** dialog box opens.



NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

Next, you can:

- View, add, and modify task list reminders.
- Create a new project management job.

- Open or modify an existing project management job.
- Attach document to a project management job in **Document Index**.
- View and modify the project schedule of the selected project management jobs.

See also

Create a project management job (page 530)

Open a project management job (page 532)

Store document references for a project management job (page 534)

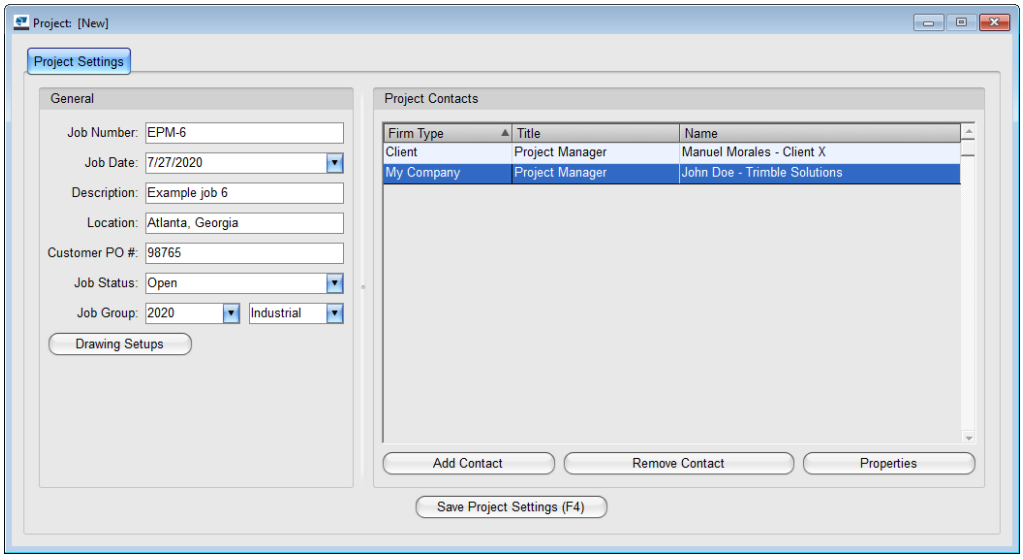
Manage and assign project tasks (page 536)

View and adjust the project schedule (page 613)

Create a project management job

To create a project management job, do the following:

1. At the top of the Tekla EPM window, click the **Project Management** button.
2. In the **Select Project Management Job** dialog box, click **Add**.



3. At the top of the **Project Edit: [New]** dialog box, define the properties of the new job.

   The properties marked with an asterisk (*) are mandatory.

Option	Description
Job Number *	The job name. Type a suitable name in the **Job Number** field.

Option	Description
Job Date	The job date. Tekla EPM automatically uses the current date. For example, you can select the date when your company received the job, or the shipping date. The job date is used as the initial start date of the project in the project schedule. Click the arrow on the right side of **Job Date** field, and select a date in the calendar.
Job Description	Any description of the job. Type a description in the **Job Description** field.
Location	The city or town of the project management job. Type the appropriate location in the **Location** field.
Customer PO #	The purchase order number of the customer company, or the contract number. Type the number in the **Customer PO #** field.
Job Status	The job status shows whether the job is still in progress (**Open**) or already closed (**Closed**). In the **Select Project Management Job** dialog box, you can choose to show only open jobs by clearing the **Show Closed Jobs** check box.
ERP Job #	The accounting system job number. Typing the accounting system job number in the **ERP Job #** field allows you to link material items properly when you export information to an accounting system, such as Trimble Viewpoint.
Job Group	The job groups to which the current project management job belongs. Click the arrows on the right side of the **Job Group** fields and select existing job groups in the list, or type new job groups directly in the fields.

4. If necessary, modify the drawing settings of the new job:
   a. Click the **Drawing Setups** button.
   b. In the **Drawing Setup** dialog box, modify the drawing settings according to your needs.

   NOTE The **Drawing Number Input Type** needs to be the same in the project management job and the related production control jobs.

c. Click **OK**.

5. In the **Project Contacts** section, add all companies related to the new job and their contact persons:

   a. Click **Add Contact**.

   b. In the **Contact Properties** dialog box, select the company type in the **Type** list.

   c. Do any of the following:

To	Do this
Add a company that has been saved in the **Address Book**	• In the **Name** list, select the company.
Add a new company	1. In the **Name** field, type the name of the new company. 2. Press **Enter** on the keyboard. 3. To add the new company in the **Address Book**, click **Yes**. Note that you need to add the contacts for the new company manually. To do so, click **Edit** on the right side of the **Name** field. For detailed instructions, see Manage companies in the project (page 556).

   d. If necessary, type the title of your contact person in the **Title** field.

      For example, there might be a billing contact, a project manager, a project engineer, and a site supervisor within the same company.

   e. In the **Ship To Address** and **Bill To Address** lists, select the right shipping and billing addresses.

   f. In the **Contact** list, select the contact that you want to add.

      Note that the contact needs to be saved in the **Address Book**.

   g. Click **OK**.

   Repeat steps a to g for all companies that you want to add to the project.

6. Click **Save** to create the job.

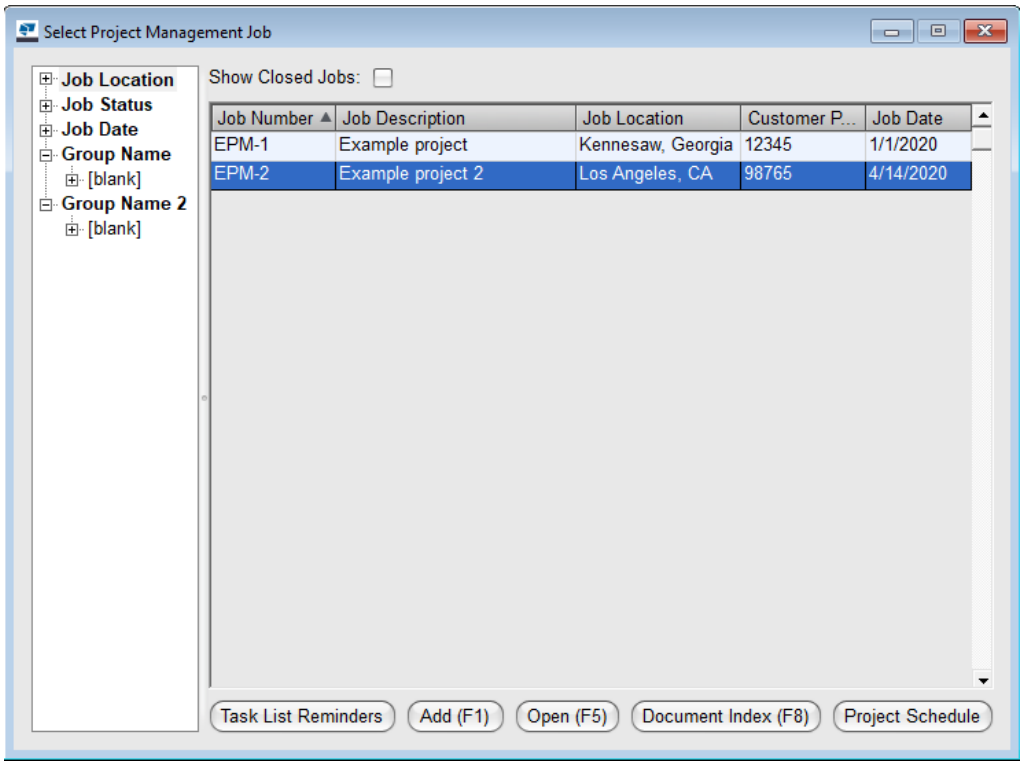
You can now open the new project management job (page 532) and start modifying it.

Note that you can link a project management job to a matching production control job.

Open a project management job

To open a project management job:

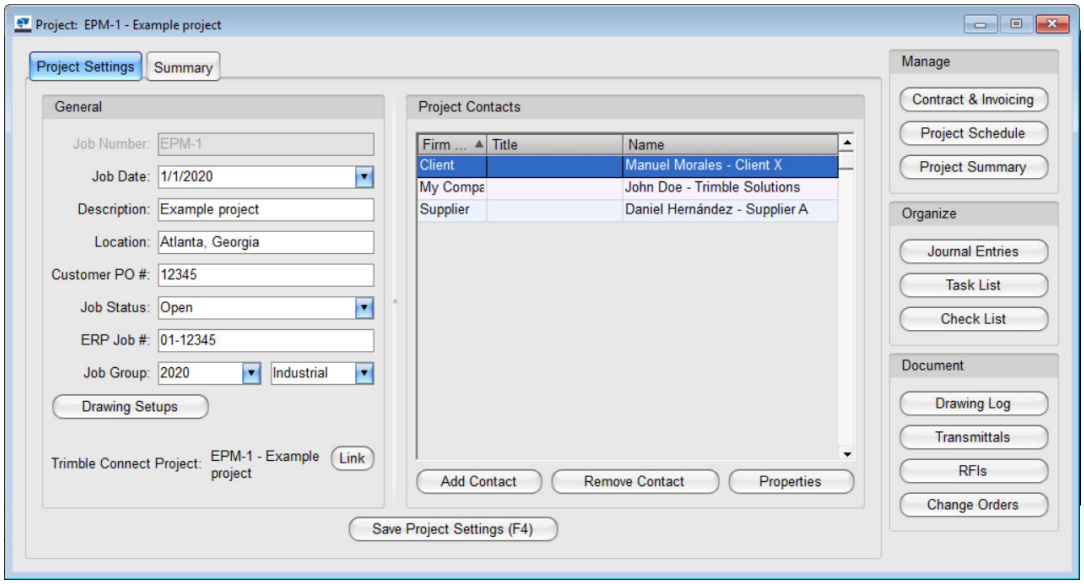
1. At the top of the Tekla EPM window, click the **Project Management** button.
2. In the **Select Project Management Job** dialog box, select the job that you want to open.



NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

3. Double-click the job, or click **Open**.

The **Project Management** dialog box opens.



On the **Project Settings** tab, you can adjust the project details and contacts.

On the **Summary** tab, you can see an overview of the different areas in the project.

You can start managing different project areas on either tab.

See also

Manage drawings (page 537)

Manage transmittals (page 558)

Manage requests for information (page 572)

Manage the project journal (page 587)

Manage change orders (page 594)

Manage the project task list (page 604)

Manage the project check list (page 608)

Manage contract and invoicing information (page 657)

View, print, or export the project summary (page 671)

Store document references for a project management job

Document Index is where you can store documents for reference. When you store documents in **Document Index**, each user who has access to the project management job can view them, so it is easy to keep up to date on the project.

You can save any documents, as well as Microsoft Outlook emails, in **Document Index**.

Note that all project management jobs have their own document references.

To access **Document Index**, do the following:

1. In the **Select Project Management Job** dialog box, select the job whose document references you want to view or modify.
2. Click **Document Index**, or press **F8**.

The **Document Index** dialog box opens. Next, you can either modify the available folders for document references, or add, modify, delete, open, and email document reference files.

See also

Manage document reference categories (page 389)

Open a document reference (page 394)

Add document references (page 391)

Modify a document reference (page 395)

Attach a document reference to an email (page 396)

Delete a document reference (page 396)

8.3 Add and modify project information

You can add different types of information for projects, including drawings, transmittals, requests for information (RFIs), journal entries, change orders, tasks, and check lists. You can also modify the existing project information according to your needs.

For more information, see the following links:

Manage and assign project tasks (page 536)

Manage companies in the project (page 556)

Manage drawings (page 537)

Manage transmittals (page 558)

Manage requests for information (page 572)

Manage the project journal (page 587)

Manage change orders (page 594)

Manage the project task list (page 604)

Manage the project check list (page 608)

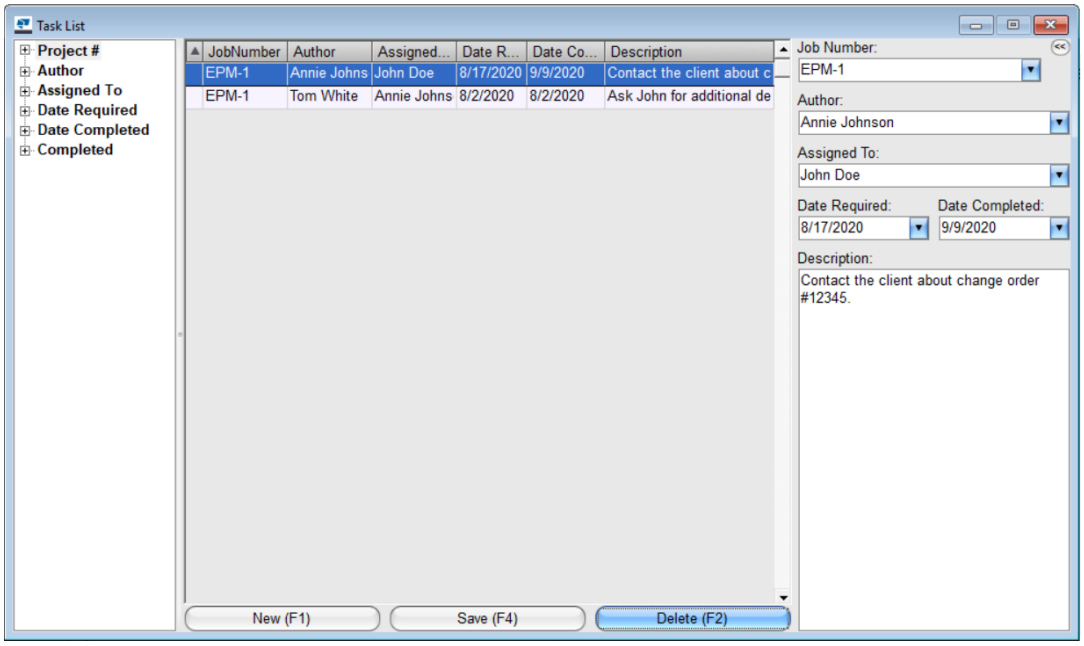
Manage and assign project tasks

In the **Task List Reminders** dialog box, you can view all existing tasks in the selected project and assign project tasks to Tekla EPM users. You can also manage the project tasks according to your needs: add new tasks, and modify or delete project tasks. Check list items can also be moved to the task list and assigned to users.

To access the **Task List Reminders** dialog box, do the following:

1. In the lower-left corner of the **Select Project Management Job** dialog box, click **Task List Reminders**.

The **Task List Reminders** dialog box opens, displaying the existing project tasks.



According to your needs, see any of the following sets of instructions.

Create a project task

1. Click **New**.
2. Click the arrow on the right side of **Job Number** list and select a project management job in the list.
3. Click the arrow on the right side of **Author** list and select the creator of the project task in the list.

   The list contains all Tekla EPM users in your company.
4. Click the arrow on the right side of **Assigned To** list and select the user to which you want to assign the task.

The list contains all Tekla EPM users in your company.

When a task has been assigned to a user, the **Task List Reminders** dialog box automatically opens when the user signs in to Tekla EPM. When the task is marked as completed, the **Task List Reminders** dialog box no longer opens when the user signs in.

5. Click the arrow on the right side of **Date Required** list, and select the deadline of the task in the calendar.
6. If necessary, click the arrow on the right side of the **Date Completed** list, and select the date when the task was completed.

   Tekla EPM records the date and time when each task is completed.
7. Type a description for the task.
8. Click **Add**.

Modify a project task

You might need to modify an existing task later. For example, you can assign the task to a different Tekla EPM user, or mark the task as completed.

1. In the list, select the project task that you want to modify.
2. Modify the job number, author, assignee, date required, date completed, and description according to your needs.
3. Click **Save**.

Delete a project task

Note that deleting a project task is permanent and cannot be undone.

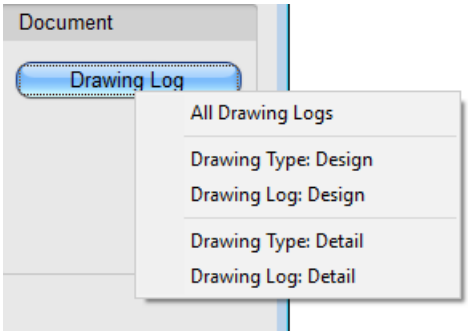
1. In the list, select the project task that you want to delete.
2. Click **Delete**.
3. To permanently delete the task, click **Yes** in the confirmation dialog box.

Manage drawings

You can store several types of drawings within the drawing logs in your project management jobs. You can create customized drawing logs, add drawings, search for and filter drawings, view or print drawings, create drawing reports, and so on.

To open a drawing log:

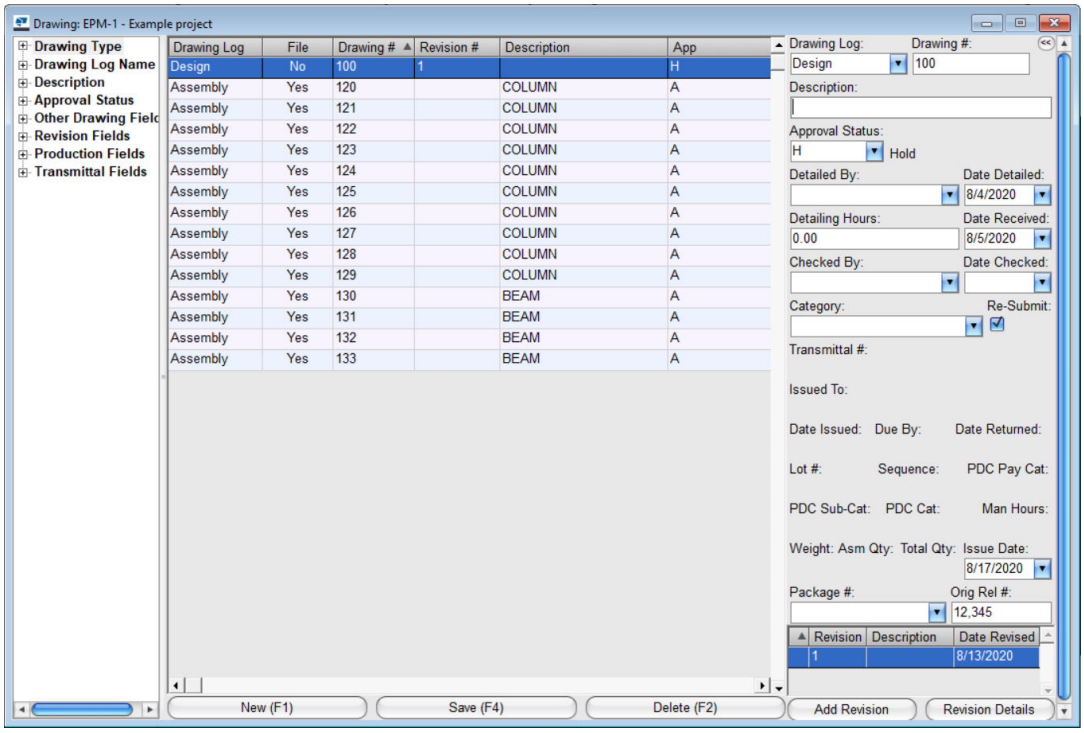
1. On the right side of an open project management job, click **Drawing Log**.



2. In the context menu, select which drawing log you want to open.

   The **All Drawing Logs** option lists all drawings that are stored in any drawing log.

The selected drawing log opens.



For more information, see the following links:

Adjust project-specific drawing settings and drawing logs (page 539)

Find a drawing (page 542)

Add, modify, and delete drawings (page 543)

Add, modify, and delete drawing revisions (page 548)

View a drawing (page 551)

Copy drawing files to another location (page 552)

Add multiple drawings to a drawing log (page 545)
Modify multiple drawings (page 547)
Update the links to a drawing log (page 554)
Print drawings (page 553)
View the issue history of selected drawings (page 554)
View, print, or export drawing reports (page 554)

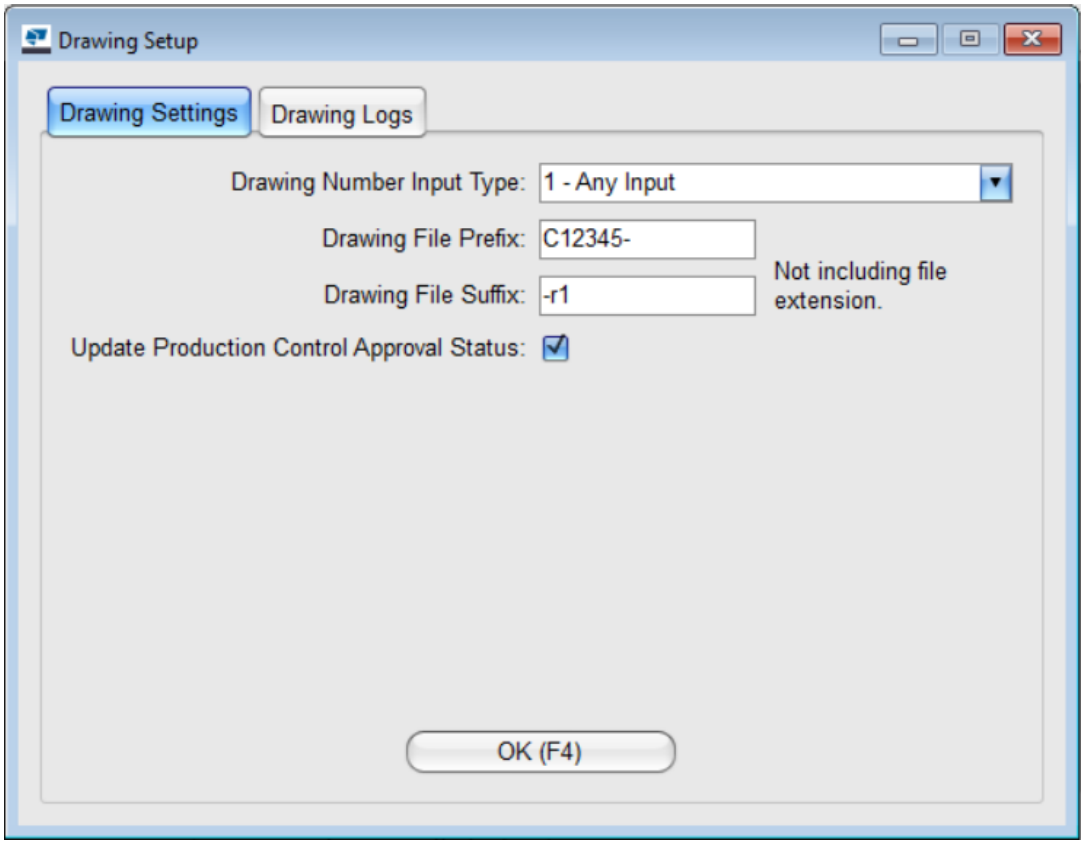
Adjust project-specific drawing settings and drawing logs

In the **Drawing Setup** dialog box, you can adjust the drawing settings related to the current project management job. In addition, you can add, modify, and remove drawing logs that are used in the project management job.

To manage project-specific drawing settings and drawing logs:

1. On the **Project Settings** tab of an open project management job, click **Drawing Setups**.

The **Drawing Setup** dialog box opens.



Use the **Drawing Settings** tab to adjust the project drawing settings.

Use the **Drawing Logs** tab to add, modify, and delete drawing logs.

Note that the changes that you make in the **Drawing Setup** dialog box are only saved for the current project management job.

Adjust project drawing settings

1. On the **Drawing Settings** tab, adjust any of the following settings:

Option	Description
Drawing Number Input Type	Allows you to select the input format for drawing numbers. Select a suitable option in the **Drawing Number Input Type** list.
Drawing File Prefix	By default, Tekla EPM expects that the names of drawing files match the drawing numbers. The **Drawing File Prefix** option allows you to determine the prefix that appears in the names of all drawing files that are imported. Determining a drawing file prefix is optional. However, the drawing file prefix can help you to ensure that the correct files are imported from the selected folder. For example, drawing files might consist of the job number followed by a dash and the drawing number. In this case, drawing 100 could be named `C12345-100.pdf`. In consequence, the drawing file prefix would be `C12345-`. If the drawing file prefix varies, you can use an asterisk (*) as a wildcard. For example, if the prefix of some drawing files that you want to import was not C12345, you could set the drawing file prefix to `*-`. Type the prefix in the **Drawing File Prefix** field.
Drawing File Suffix	By default, Tekla EPM expects that the names of drawing files match the drawing numbers. The **Drawing File Suffix** option allows you to determine

Option	Description
	the suffix that appears in the names of all drawing files that are imported. Determining a drawing file suffix is optional. However, the drawing file suffix can help you to ensure that the correct files are imported from the selected folder. For example, drawing files might include a revision number after the drawing number. In this case, the file name of the first revision of drawing 100 could be `C12345-100-r1.pdf`. In consequence, the drawing file suffix would be `-r1`. Note that the file name extension is not included in the drawing file suffix. If the drawing file suffix varies, you can use an asterisk (*) as a wildcard. For example, if some drawing files had different revision numbers, you could set the drawing file suffix to `-r*`. Type the suffix in the **Drawing File Suffix** field.
Update Production Control Approval Status	When selected, the approval statuses of production control items that correspond to drawings in the project management job are automatically updated when the drawing approval statuses are updated. When cleared, the approval statuses of production control items need to be updated manually.

2. If necessary, manage the project-specific drawing logs on the **Drawing Logs** tab.
3. To save the settings and close the dialog box, click **OK**.

Add a drawing log

1. On the **Drawing Logs** tab, click **New**.
2. In the **Drawing Type** field, type the drawing type.
3. In the **Drawing Log Name** field, type a name for the drawing log.

4. In the **PDC Link** list, select the field in **Production Control** to which the drawings are connected.

   Note that the **PDC Link** setting only applies to drawing log types with assemblies or materials that have counterparts in **Production Control**.

5. In the **Subdirectory Path** field, type the path to the sub-folder under the drawing default folder where the drawings in that drawing log are stored.

   For example, type `Detail\Erection drawings`

   The default folder for storing drawings is set in the **Default Directories** dialog box.

6. In the **Drawing Log Mapping** field, type which drawing types should be directed to the selected drawing log.

   Tekla EPM determines the drawing log where imported drawings are stored based on the drawing types assigned to the drawings in the `XML` file created with Tekla EPM Plugin for Tekla Structures, or with the Data Transfer tool in SDS/2. By default, the drawing types in Tekla EPM match the drawing types in Tekla Structures.

   Note that you need to type each drawing type on a separate line.

7. Click **Add**.

Modify a drawing log

1. On the **Drawing Logs** tab, select the drawing log that you want to modify.
2. Change the drawing log settings according to your needs.
3. Click **Save**.

The changes are saved to the current project management job.

Delete a drawing log

1. On the **Drawing Logs** tab, select the drawing log that you want to delete.
2. Click **Delete**.
3. To permanently delete the drawing log from the current project management job, click **Yes**.

Find a drawing

Use the **Find Drawing** command to quickly find the desired drawing.

1. On the right side of an open project management job, click **Drawing Log**.

2. In the context menu, select the drawing log in which the drawing is stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added, so if you select that option, you can find any drawing regardless of the drawing log where the drawing is stored.
3. In the open drawing log, click the **Drawing Log** ribbon tab.
4. On the menu, select **Find Drawing**.
5. In the **Enter Value** dialog box, click the arrow on the right side of the **Select drawing #** field.
6. Start typing the drawing number in the **Select drawing #** field.

   Tekla EPM suggests drawings whose drawing numbers start in the same way.
7. Press **Enter** to use the suggested drawing number.
8. Click **OK**, or press **Enter** again.

Tekla EPM selects the related drawing in the current drawing log.

If the related drawing is in the drawing log that is not currently open, Tekla EPM will not find the drawing.

Add, modify, and delete drawings

Use drawing logs to manage and save the project drawings or PDF files. You can add, modify, and delete drawings, or view the files attached to the stored drawings. You can also attach drawings to transmittals and send them to project parties.

To access drawing logs:

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added, so if you select that option, you can find any drawing regardless of the drawing log where the drawing is stored.

Add a drawing

By following these instructions, you can add one drawing at a time. To add multiple drawings at one go and attach files to the drawings while adding them, see Add multiple drawings to a drawing log (page 545).

Note that the available input fields in the drawing log depend on the set input fields.

1. Click **New**.

   The drawing number field is automatically populated with the next available number.

2. Modify the drawing number according to your needs.

   The drawing number can contain a maximum of 25 characters, depending on the **Mark Input Type** option that you have selected in the **Project Company Standards** dialog box.

3. Enter the drawing properties:

Option	Description
Description	A written description of the drawing. The description can contain a maximum of 255 characters.
Approval Status	The approval status of the drawing. The available options are set in **Approval Status Maintenance**.
Detailed By	The person who has detailed the drawing.
Drawing Date	The date when the drawing has been created.
Date Received	The date when the drawing has been received.
Category	A category that can be used for filtering drawings in the drawing log. For example, you can create categories for architectural or structural drawings. You can then use the drawing categories to filter which drawings are visible in the drawing log. You can either select a category in the **Category** list, or type a new category in the **Category** field.
Re-Submit	If you are re-submitting a drawing for approval, select the **Re-Submit** check box. If you are submitting the drawing for the first time, ensure that the **Re-Submit** is not selected.
Issue Date	The shop issue date of the drawing.
Package #	The package number of the drawing.
Orig Rel#	The original release number of the drawing.

4. Click **Add**.

The correct drawing file will automatically be attached to the drawing when it is added to the default drawing folder (page 69) (by default, `C:\Users\Public\Documents\Tekla EPM\Drawing`) in the correct job folder and revision folder.

Modify a drawing

1. In the list, select the drawing that you want to modify.
2. On the right side of the dialog box, modify the drawing properties according to your needs.

   To add revisions, see Add, modify, and delete drawing revisions (page 548).
3. Click **Save**.

Delete a drawing

Note that deleting a drawing is permanent and cannot be undone.

1. In the list, select the drawing that you want to delete.
2. Click **Delete**.
3. To permanently delete the drawing, click **Yes** in the confirmation dialog box.

Add multiple drawings to a drawing log

You can add multiple drawings at one go to any one of your drawing logs. Use the **Batch Insert** command to add multiple drawings without attachments, or the **Batch Insert - From Files** command to add multiple drawings with PDF attachments.

To access drawing logs:

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added. If you select the **All Drawing Logs** option, you can add drawings to any drawing log.

Add a batch of drawings without PDF attachments to a drawing log

1. In the open drawing log, click the **Drawing Log** ribbon tab.
2. On the menu, select **Batch Insert**.
3. In the **Insert Drawings** dialog box, go to the **Add Range** tab.
4. Enter the prefix and suffix of the drawing file names to be added. For example, if your project name was C23847, the revision number was 1,

and the drawing number was 100, your drawing name could be `C23487-100-r1.pdf`. In this drawing name, the file prefix would be `C23847-`, and the file suffix would be `-r1`. Note that the file extension is not part of the file suffix.

5. In the **Start Number** field, type the number of the first drawing that you want to add.
6. In the **End Number** field, type the number of the last drawing that you want to add.
7. Define other properties for the drawings according to your needs.
8. Click **Add**.

The drawings are added to the drawing log.

Note that you will need to add any PDF attachments to the drawings manually.

Add drawings with PDF attachments to a drawing log

1. In the open drawing log, click the **Drawing Log** ribbon tab.
2. On the menu, select **Batch Insert - From Files**.
3. On the menu, select **Batch Insert**.
4. In the **Insert Drawings** dialog box, go to one of the following tabs:
   - To add all drawings with a particular prefix and suffix, go to the **Add Drawings** tab.
   - To add revisions to particular drawings, go to the **Add Revisions** tab.
5. On the right side of the **Directory field**, click **...**
6. In the **Browse For Folder** dialog box, select the folder from which you want to import the attachments.
7. Click **OK**.
8. To save copies of the drawings in the `\Tekla EPM Documents\Drawing` folder, select the **Copy Files into Drawing Directory** check box.

   By copying the drawings to the `\Tekla EPM Documents\Drawing` folder, you can ensure that Tekla EPM always finds the attached files, even if you change their location on your computer.
9. Enter the prefix and suffix of the drawing file names to be added. For example, if your project name was C23847, the revision number was 1, and the drawing number was 100, your drawing name could be `C23487-100-r1.pdf`. In this drawing name, the file prefix would be `C23847-`, and the file suffix would be `-r1`. Note that the file extension is not part of the file suffix.
10. Define other properties for the drawings according to your needs.

11. Click **Add From Files**.

The drawings and their attachments are added to the drawing log. Notice that **Yes** appears in the **File** column for each drawing, indicating that the drawings have PDF files attached to them.

Modify multiple drawings

You can modify the properties of multiple drawings at one go with the **Global Edit** command. You can modify all drawings, specific types of drawings, or the drawings that are currently selected in the drawing log.

Modify all or specific types of drawings

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log in which the drawing is stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added.
3. In the open drawing log, click the **Drawing Log** ribbon tab.
4. On the menu, select **Global Edit**.
5. To only modify specific types of drawings, in the **Drawing Log Global Edit Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
6. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the drawings that you want to modify to the **Included** list.
   - Type the maximum and minimum values for the drawings that you want to modify.

     For example, define the earliest and latest revision date for the drawings.
7. Click **OK** to apply the filter.

   To further limit the drawing types that you want to modify, repeat steps 5 to 7 for all necessary filter types.
8. At the bottom of the **Drawing Log Global Edit Filters** dialog box, click **OK**.
9. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.
10. Modify the selected properties in the **Global Edit** dialog box according to your needs.

    For example, change the approval status, or select another drawing date.
11. Click **OK**.

12. To confirm the changes that you made, click **Yes** in the confirmation dialog box.

The modified drawing properties are updated in the drawing log.

Modify the selected drawings

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log in which the drawing is stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added.
3. In the open drawing log, select the drawings that you want to modify.

   To select multiple drawings, hold down **Ctrl**.

   To select a range of subsequent drawings, hold down **Shift**.
4. Click the **Drawing Log** ribbon tab.
5. On the menu, select **Global Edit Selected**.
6. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.
7. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, change the approval status or select another drawing date.
8. Click **OK**.

The modified drawing properties are updated in the drawing log.

Add, modify, and delete drawing revisions

You can add revisions for your drawings in any one of your drawing logs. You can also modify existing revisions according to your needs, or delete unnecessary revisions.

Add a single drawing revision

To add multiple drawing revisions, see Add multiple drawings to a drawing log (page 545).

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log in which the drawing is stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added, so you can add revisions to any drawing.
3. In the drawing list, select the drawing for which you want to add a revision.
4. At the bottom of the drawing log, click **Add Revision**.

5. In the **Drawing Revisions** dialog box, click **New**.
6. Type the revision number and a description of the revision.
7. Type appropriate names in the **Revised By** and **Checked By** fields.
8. Click the arrow on the right side of **Date Revised** and **Date Received** fields, and select dates in the calendars.
9. Click the arrow on the right side of **Date Checked** field, and select a date in the calendar.
10. Type a release number for the revision.
11. Click **Save** to add the revision.

The new drawing revision is added to the revision list. You can view the details of all of the drawing's revisions by clicking **Revision Details**.

Note that because you did not attach a PDF file to the drawing revision, the **File** column says **No**. If a PDF file has been attached to the drawing revision, the **File** column has **Yes** in it, and you can double-click the drawing to view the attached PDF file.

The correct PDF file will automatically be attached to the revision when it is added to the default drawing folder (by default, `C:\Users\Public\Documents\Tekla EPM\Drawing`) in the correct job folder and revision folder.

Modify a drawing revision

Note that you can only modify one drawing revision for one drawing at a time.

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log in which the drawing is stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added, so you can modify the revisions of any drawing.
3. In the drawing list, select the drawing whose revisions you want to modify.
4. At the bottom of the drawing log, click **Revision Details**.
5. In the **Drawing Revisions** dialog box, select the revision that you want to modify.
6. Modify the revision properties according to your needs.
7. Click **Save** to save the changes.

Modify multiple drawing revisions

1. On the right side of an open project management job, click **Drawing Log**.

2. In the context menu, select the drawing log in which the drawings are stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added, so you can modify the revisions of any drawing.

3. In the drawing log, select the drawings whose revisions you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

4. Click the **Drawing Log** ribbon tab.
5. In the menu, select **Global Edit Revisions**.
6. In the **Global Edit - Revisions** dialog box, select which revisions you want to update:
   - To update all revisions of the selected drawing, select **Update All Revisions**.
   - To update the latest revision of the selected drawing, select **Update Latest Revision**.
   - To update a particular revision number, select **Update Revision #**, and type the revision number in the **Revision #** field.
7. Select the check boxes next to the properties that you want to update.
8. Modify the selected properties according to your needs.

   For example, select a **Date Checked** date and type a name in the **Checked By** field.

9. Click **Update**.

Delete a drawing revision

Note that deleting a drawing revision is permanent and cannot be undone.

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log in which the drawing is stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added, so you can modify the revisions to any drawing.

3. In the drawing list, select the drawing whose revisions you want to modify.
4. At the bottom of the drawing log, click **Revision Details**.
5. In the **Drawing Revisions** dialog box, select the revision that you want to delete.
6. Click **Delete**.

7. To permanently delete the selected revision, click **Yes** in the confirmation dialog box.

Delete multiple drawing revisions

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log in which the drawings are stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added, so you can modify the revisions of any drawing.
3. In the drawing log, select the drawings whose revisions you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
4. Click the **Drawing Log** ribbon tab.
5. In the menu, select **Delete Revisions**.
6. In the **Delete Drawing Revision - Batch** dialog box, select one of the following options:
   - To delete the latest revisions of the selected drawings, select **Delete Latest Revision**.
   - To delete particular revisions of the selected drawings, select **Delete Revision #**, and type the revision number in the **Revision #** field.
7. Click **Delete**.
8. To permanently delete the revisions, click **Yes**.

View a drawing

Use the **Drawing Files** command to open and view a specific drawing. Note that only drawings that have files attached to them can be viewed.

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log in which the drawing is stored.
3. In the drawing log, select the drawing.
4. Do one of the following:
   - Double-click the drawing.
   - Click the **Drawing Log** ribbon tab, and in the menu, select **Drawing Files**.

5. If the file has multiple revisions, in the **Files** dialog box, click the arrow on the right side of the **Revision** list and select the revision that you want to open.

   If you double-clicked a drawing to open it, the latest revision of the selected drawing is automatically opened.

6. Click **OK** to open the drawing.

Copy drawing files to another location

Use the **Copy Drawing Files** and **Copy Drawing Files - Selected** commands to copy the attached drawing files to another location, so that they can be issued to the shop or field, or be printed.

To open a drawing log:

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log whose attached files you want to copy.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added, so if you select that option, you can copy any drawing files regardless of the drawing log where they are stored.

Copy all drawing files in the current drawing log

1. In the open drawing log, click the **Drawing Log** ribbon tab.
2. On the menu, select **Copy Drawing Files**.
3. To only copy particular drawing files, in the **Copy Files Filter** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the drawings whose attached files you want to copy to the **Included** list.
   - Type the maximum and minimum values for the drawings whose attached files you want to copy.
5. Click **OK**.
6. In the **Browse For Folder** dialog box, browse to and select the folder where you want to copy the drawing files.

   The default location is the drawing default folder that has been set in the **Default Directories** dialog box.

7. Click **OK**.

   The `file-list` text file opens in Microsoft Notepad, showing the drawing files that were copied to the selected location.

8. Ensure that all necessary drawings and files are listed in the `file-list` text file.
9. To close Microsoft Notepad and return to the drawing log, click the **Close** button (**X**) in the upper-right corner.

Copy drawing files attached to the selected drawings

1. In the open drawing log, select the drawings whose attached files you want to copy.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Drawing Log** ribbon tab.
3. On the menu, select **Copy Drawing Files - Selected**.
4. In the **Browse For Folder** dialog box, browse to and select the folder where you want to copy the drawing files.

   The default location is the drawing default folder that has been set in the **Default Directories** dialog box.
5. Click **OK**.

   The `file-list` text file opens in Microsoft Notepad, showing the drawing files that were copied to the selected location.
6. Ensure that all necessary drawings and files are listed in the `file-list` text file.
7. To close Microsoft Notepad and return to the drawing log, click the **Close** button (**X**) in the upper-right corner.

Print drawings

Use the **Print Drawings - Selected** command to print one or multiple drawings that are stored in a drawing log. Note that you can only print drawings that have attached files.

1. In the open drawing log, select the drawings that you want to print.

   To select multiple drawings, hold down **Ctrl**.

   To select a range of subsequent drawings, hold down **Shift**.
2. Click the **Drawing Log** ribbon tab.
3. On the menu, select **Print Drawings - Selected**.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.
6. In the **Enter Value** dialog box, type the number of the printed copies.
7. Click **OK** to print the drawings.

Update the links to a drawing log

Use the **Refresh** command to update the links to the drawing log. If you have recently attached files to drawings manually, you can also use the **Refresh** command to see the newly attached files in the drawing log. The attached files are also updated when you close and re-open a drawing log.

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added.
3. In the open drawing log, click the **Drawing Log** ribbon tab.
4. On the menu, select **Refresh**.

The links to the current drawing log are updated.

View the issue history of selected drawings

Use the **Issue History - Selected** command to view the entire activity history of the selected drawings. Among other things, the issue history shows the transmittals in which the drawings are included.

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log in which the drawings are stored.

   Note that the **All Drawing Logs** option opens a drawing log that lists all drawings that you have added.
3. In the open drawing log, select the drawings.
4. Click the **Drawing Log** ribbon tab.
5. On the menu, select **Issue History - Selected**.
6. In the **Drawing Issue History** dialog box, view the activity of the selected drawings.
7. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View, print, or export drawing reports

You can create reports based on the information in drawing logs. For example, you can create a drawing list, or a report on the drawing issue history. You can then view, print, or export the created reports. Use the **Reports** command to create a report on all drawings in the drawing log or on the drawings that match specific filters, or use the **Reports - Selected** command to create a report on the drawings that you select in the drawing log.

Create a drawing report

1. On the right side of an open project management job, click **Drawing Log**.
2. In the context menu, select the drawing log whose information you want to include in the report.

   Note that the **All Drawing Logs** option opens a drawing log that contains the information of all drawings that you have added.
3. In the drawing log, do one of the following:

To	Do this
Create reports on all drawings or on specific drawing types	a. Click the **Drawing Log** ribbon tab. b. On the menu, select **Reports**. c. To only create drawing reports, at the bottom of the **Project Management Report Filters** dialog box, ensure that only the **Drawings** check box is selected. d. To only include specific types of drawings in the reports, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**. e. In the **Filter** dialog box, do one of the following depending on the filter type: • Click the arrow buttons to move the drawing properties that you want to include in the report to the **Included** list. • Type the maximum and minimum values for the drawings that you want to include. f. Click **OK**. To further limit the types of drawings that are included in the reports, repeat steps c to f for all necessary filter types. g. Click **Make Report**.
Create reports on the currently selected drawings	a. In the drawing log, select the drawings that you want to include in the reports. To select multiple items, hold down **Ctrl**. To select a range of subsequent drawings, hold down **Shift**. b. Click the **Drawing Log** ribbon tab. c. On the menu, select **Reports - Selected**.

4. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

View the drawing report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the drawing report

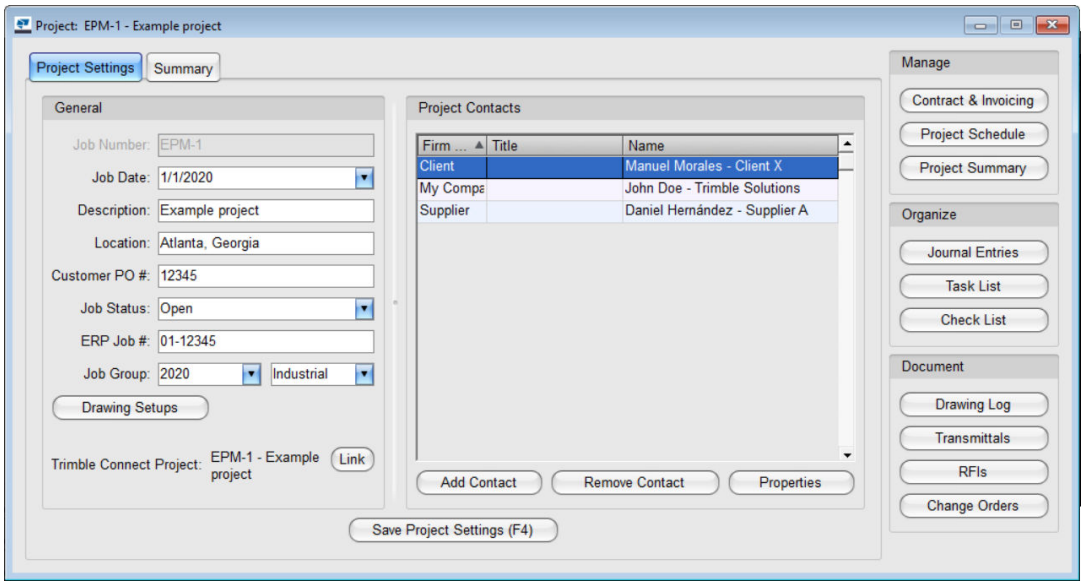
1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the drawing report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

Manage companies in the project

To share project information with the other parties of the project, you need to add the parties to the project management job. Use the **Add Contact** command to add the necessary companies and contacts to the project. You can also modify the existing companies and contact persons, or remove any unnecessary companies from the project.



Add a company contact

1. In the **Project Contacts** section of the **Project** dialog box, click **Add Contact**.
2. In the **Contact Properties** dialog box, select the company type in the **Type** list.
3. Do any of the following:

To	Do this
Add a company that has been saved in the **Address Book**	• In the **Name** list, select the company.
Add a new company	a. In the **Name** field, type the name of the new company. b. Press **Enter** on the keyboard. c. To add the new company in the **Address Book**, click **Yes**. Note that you need to add the contacts for the new company manually. To do so, click **Edit** on the right side of the **Name** field. For detailed instructions, see Add contacts to the address book (page 173).

4. If necessary, type the title of your contact person in the **Title** field.
5. In the **Ship To Address** and **Bill To Address** lists, select the right shipping and billing addresses.

6. In the **Contact** list, select the contact that you want to add.

   Note that the contact needs to be saved in the **Address Book**.

7. Click **OK**.

Modify a contact

1. In the **Project Contacts** section of the **Project** dialog box, select the contact.
2. Click **Properties**.
3. If necessary, change the company by selecting another company in the **Name** list.
4. If necessary, change the title of your contact person in the **Title** field.
5. In the **Ship To Address** and **Bill To Address** lists, select the right shipping and billing addresses.
6. In the **Contact** list, select the contact person that you want to use.

   Note that the contact needs to be saved in the **Address Book**.

   If you want to change the contact details of a contact person, you need to do so in the **Address Book**.

7. Click **OK**.

Remove a company from the project

Removing a company from the project is permanent and cannot be undone. If you remove a company, you will no longer be able to send project documents to the company.

1. In the **Project Contacts** section of the **Project** dialog box, select the contact.
2. Click **Remove Contact**.
3. To permanently delete the contact from this project, click **Yes**.

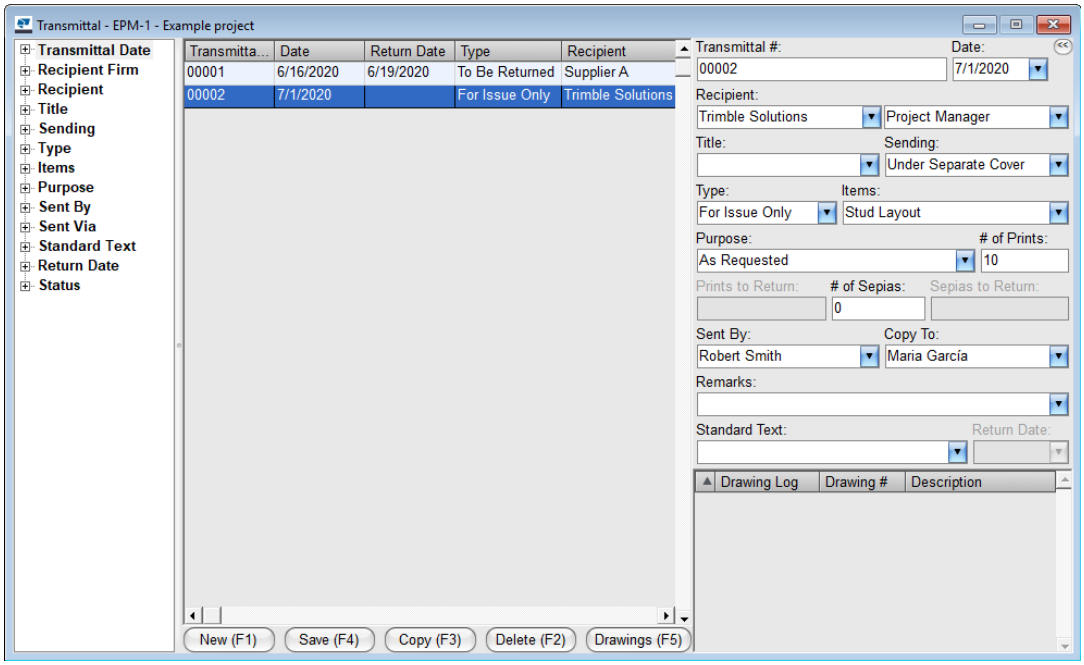
Manage transmittals

Transmittals are cover sheets to which drawings can be attached in order to be sent. Tekla EPM records the time when a drawing has been issued and is to be returned, and marks drawings that are overdue or outstanding.

To access the **Transmittal** dialog box, do any of the following:

- On the right side of the **Project** dialog box, click the **Transmittals** button.
- On the **Summary** tab of the **Project** dialog box, click **+** in the upper-right corner of the **Transmittals** section, and select which transmittals you want to see.

The **Transmittal** dialog box opens.



For more information, see the following links:

Create, modify, and delete transmittals (page 559)

View transmittals (page 567)

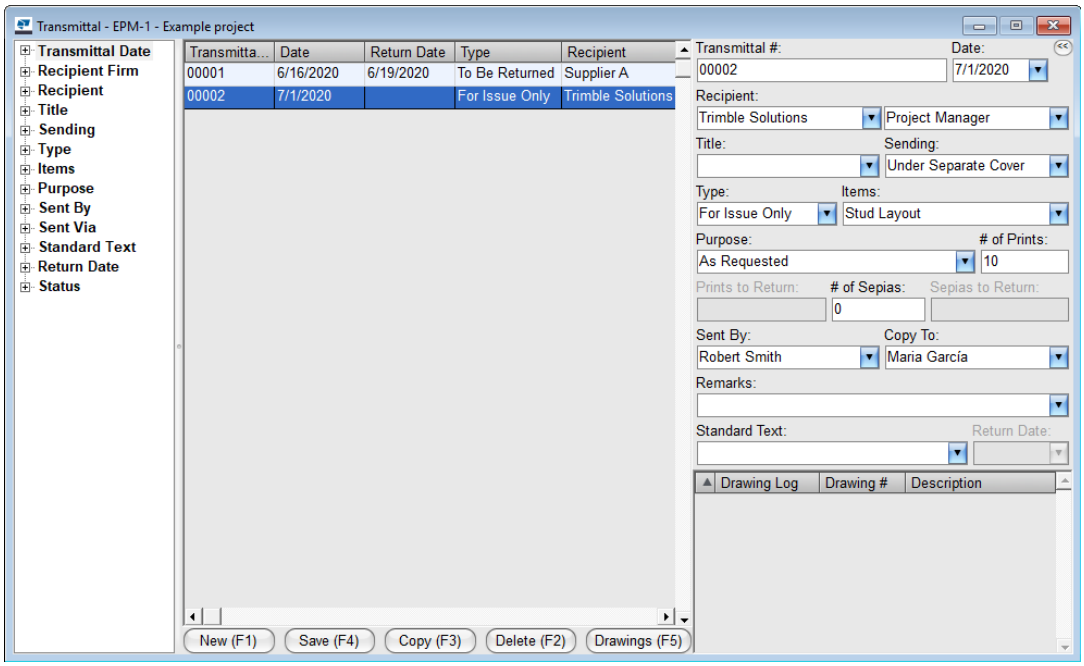
Print transmittals (page 568)

Mark drawings in a transmittal as received (page 569)

Send a transmittal via email (page 569)

Create, modify, and delete transmittals

Use the **Transmittal** dialog box to manage transmittals. You can create new transmittals, attach drawings to transmittals, modify the properties of existing transmittals, or delete unnecessary transmittals.



Create a transmittal

1. At the bottom of the **Transmittal** dialog box, click **New**.

   The next available transmittal number is populated in the **Transmittal #** field.

2. If necessary, modify the transmittal number.

3. Define the properties for the transmittal.

   The items that are marked with an asterisk (*) in the following table are mandatory.

Option	Description
Date *	The date of the transmittal. Click the arrow on the right side of the **Date** field, and select the date in the calendar.
Recipient *	The company and contact person that will receive the transmittal once it is ready. Note that the available companies and contact persons are set in the **Project Company Standards** dialog box. Click the arrow on the right side of the leftmost **Recipient** list, and select the recipient company in the list.

Option	Description
Title *	The title that will appear at the top of the transmittal. In the **Title** field, type a title for the transmittal.
Sending *	Allows you to define how the drawings are sent to the recipient. Click the arrow on the right side of the **Sending** list, and select one of the following options: • **Enclosed**: the drawings are sent enclosed in the transmittal. • **Under Separate Cover**: the drawings are sent under a separate cover.
Type *	Allows you to define if the recipient needs to return the drawings. Click the arrow on the right side of the **Type** list, and select one of the following options: a. **To Be Returned**: the recipient needs to return the drawings by a specific date. b. **For Issue Only**: the recipient does not need to return the drawings.
Items *	The types of the items that are sent with the transmittal. If necessary, you can select multiple options. The options are set in the **Transmittal Item Maintenance** dialog box. To add items to the transmittal, do the following: a. Click the **Items** field. b. In the **Select Items** dialog box, click the arrow buttons to move the types of items to be included in the transmittal to the **Included** list. c. Click **OK**.
Purpose *	The purposes of sending the transmittal. For example, transmittals can be sent to be approved or for pricing. If necessary, you can select multiple purposes. The options are set in the **Transmittal Purpose Maintenance** dialog box. The **Select Purposes** dialog box opens automatically when you click **OK** in the **Select**

Option	Description
	Items dialog box. In the dialog box, do the following: a. Click the arrow buttons to move the purposes for sending the transmittal to the **Included** list. b. Click **OK**.
# of Prints	The number of prints included in the transmittal. Type a number in the **# of Prints** field.
Prints to Return	If **Type** is set to **To Be Returned**, define the number of prints to be returned. Type a number in the **Prints to Return** field.
# of Sepias	The number oincluded in the transmittal. Type a number in the **# of Sepias** field.
Sepias to Return	If **Type** is set to **To Be Returned**, define the number of sepias to be returned. Type a number in the **Sepias to Return** field.
Sent By	The sender of the transmittal. Do one of the following: • Click the arrow on the right side of the **Sent By** list, and select a previously defined sender in the list. • Type a new sender name in the **Sent By** field. The name is saved and will be available for future transmittals.
Copy To	The people who receive a copy of the transmittal. Do one of the following: • Click the arrow on the right side of the **Copy To** list, and select a previously defined name in the list. • Type a new name in the **Sent By** field. The name is saved and will be available for future transmittals.
Remarks	Any remarks that you want to add to the transmittal. Type the remarks in the **Remarks** field.

Option	Description
Standard Text	The text items that you want to include in the transmittal. You can only select one option. The text items are set in the **Transmittal Standard Text Maintenance** dialog box. Click the arrow on the right side of the **Standard Text** list, and select an option in the list.
Return Date *	If **Type** is set to **To Be Returned**, define the date by which the drawings should be returned. Remember to add a return date for returned drawings, so that they do not appear as overdue. Click the arrow on the right side of the **Return Date** field, and select a date in the list.

4. To attach drawings to the new transmittal, do the following:
   a. At the bottom of the dialog box, click **Drawings**.
   b. At the bottom of the **Transmittal Drawings** dialog box, click **Add Drawings**.
   c. In the **Add Transmittal Drawings** dialog box, click the arrow buttons to move the drawings that you want to attach to the **Included** list.

      To select multiple items, hold down **Ctrl**.

      To select a range of subsequent items, hold down **Shift**.
   d. Click **Add**.
   e. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

   You can see the attached drawings in the lower-right corner of the **Transmittal** dialog box.
5. Click **Add**.

Modify a transmittal

Modify a transmittal to change its properties. For example, you should add a return date for returned drawings, so that they do not appear as overdue.

1. In the **Transmittal** dialog box, select the transmittal that you want to modify.
2. Modify the properties for the transmittal.

The items that are marked with an asterisk (*) in the following table are mandatory.

Option	Description
Date *	The date of the transmittal. Click the arrow on the right side of the **Date** field, and select the date in the calendar.
Recipient *	The company and contact person that will receive the transmittal once it is ready. Note that only the companies that have been added for the project in the **Project Management** dialog box and their contact persons are available in the **Recipient** lists. Click the arrow on the right side of the leftmost **Recipient** list, and select the recipient company in the list. Click the arrow on the right side of the rightmost **Recipient** list, and select the contact person in the list.
Title *	The title that will appear at the top of the transmittal. In the **Title** field, type a title for the transmittal.
Sending *	Allows you to define how the drawings are sent to the recipient. Click the arrow on the right side of the **Sending** list, and select one of the following options: • **Enclosed**: the drawings are sent enclosed in the transmittal. • **Under Separate Cover**: the drawings are sent under a separate cover.
Type *	Allows you to define if the recipient needs to return the drawings. Click the arrow on the right side of the **Type** list, and select one of the following options: a. **To Be Returned**: the recipient needs to return the drawings by a specific date. b. **For Issue Only**: the recipient does not need to return the drawings.

Option	Description
Items *	The types of the items that are sent with the transmittal. You can select multiple options. The options are set in the **Transmittal Item Maintenance** dialog box. To add items to the transmittal, do the following: a. Click the **Items** field. b. In the **Select Items** dialog box, click the arrow buttons to move the types of items to be included in the transmittal to the **Included** list. c. Click **OK**.
Purpose	The purposes of sending the transmittal. For example, transmittals can be sent to be approved or for pricing. If necessary, you can select multiple purposes. The options are set in the **Transmittal Purpose Maintenance** dialog box. The **Select Purposes** dialog box opens automatically when you click **OK** in the **Select Items** dialog box. In the dialog box, do the following: a. Click the arrow buttons to move the purposes for sending the transmittal to the **Included** list. b. Click **OK**.
# of Prints	The number of prints included in the transmittal. Type a number in the **# of Prints** field.
Prints to Return	If **Type** is set to **To Be Returned**, define the number of prints to be returned. Type a number in the **Prints to Return** field.
# of Sepias	The number of prints included in the transmittal. Type a number in the **# of Sepias** field.
Sepias to Return	If **Type** is set to **To Be Returned**, define the number of sepias to be returned. Type a number in the **Sepias to Return** field.
Sent By	The sender of the transmittal. Do one of the following: • Click the arrow on the right side of the **Sent By** list, and select a previously defined sender in the list.

Option	Description
	• Type a new sender name in the **Sent By** field. The name is saved and will be available for future transmittals.
Copy To	The people who receive a copy of the transmittal. Do one of the following: • Click the arrow on the right side of the **Copy To** list, and select a previously defined name in the list. • Type a new name in the **Sent By** field. The name is saved and will be available for future transmittals.
Remarks	Any remarks that you want to add to the transmittal. Type the remarks in the **Remarks** field.
Standard Text	The text items that you want to include in the transmittal. You can only select one option. The text items are set in the **Transmittal Standard Text Maintenance** dialog box. Click the arrow on the right side of the **Standard Text** list, and select an option in the list.
Return Date *	If **Type** is set to **To Be Returned**, define the date by which the drawings should be returned. Remember to add a return date for returned drawings, so that they do not appear as overdue. Click the arrow on the right side of the **Return Date** field, and select a date in the calendar.

3. To attach drawings to the new transmittal, do the following:
   a. At the bottom of the dialog box, click **Drawings**.
   b. In the **Transmittal Drawings** dialog box, do any of the following:
      - To add new drawings, click **Add drawings**, select the drawings, and click **Add**.
      - To set shop issue date, select the drawings and click **Set Shop ISsue Date**. Then, select the date in the calender and click **OK**.
      - To return drawings, select the drawings and click **Return**. Then, select the approval status and return date, and click **Update**.

        Note that if this is not the first time that these drawings have been returned, you should select the **Re-Submit** check box.

- To cancel returning drawings, select the drawings and click **Un-Return**. Then, select the approval status and click **OK**.
- To remove drawings from the transmittal, select the drawings and click **Remove Selected drawings**.

c. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

You can see the attached drawings in the lower-right corner of the **Transmittal** dialog box.

4. Click **Save**.

Delete transmittals

1. In the **Transmittal** dialog box, select the transmittals that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Delete**.
3. To permanently delete the transmittals, click **Yes** in the confirmation dialog box.

View transmittals

Use the **View Selected Transmittals** command to view the selected transmittals in the **Tekla EPM Report Viewer**.

1. In the **Transmittal** dialog box, select the transmittals that you want to view.

   To select multiple transmittals, hold down **Ctrl**.

   To select a range of subsequent transmittals, hold down **Shift**.
2. Click the **Transmittal** ribbon tab.
3. On the menu, select **View Selected Transmittals**.
4. In the **View Transmittal** dialog box, select or clear the following check boxes according to your needs:

To	Do this
Show Company Logo (If Exists)	When selected, your company logo is visible in the transmittal.

To	Do this
Combine Drawings	When selected, consecutive drawing numbers are combined, so that the drawing numbers are displayed as 1 – 3, instead of 1, 2, 3. To be combined, the drawings need to have the same dates, revisions, and descriptions, and be in a series.

5. In the **Report Selection** dialog box, click **View**.

The transmittal opens in the **Tekla EPM Report Viewer**.

In the **Tekla EPM Report Viewer**, you can email the transmittal as a Microsoft Excel worksheet or a PDF file, export it to another file format, or print it.

Print transmittals

Use the **Print Selected Transmittals** to print one or multiple transmittals related to the current project management job.

1. In the **Transmittal** dialog box, select the transmittals that you want to print.

   To select multiple transmittals, hold down **Ctrl**.

   To select a range of subsequent transmittals, hold down **Shift**.
2. Click the **Transmittal** ribbon tab.
3. On the menu, select **Print Selected Transmittals**.
4. On the **Report Settings** tab of the **Print Transmittal** dialog box, select or clear the following check boxes according to your needs:

To	Do this
Show Company Logo (If Exists)	When selected, your company logo is visible in the transmittal.
Combine Drawings	When selected, consecutive drawing numbers are combined, so that the drawing numbers are displayed as 1 – 3, instead of 1, 2, 3. To be combined, the drawings need to have the same dates, revisions, and descriptions, and be in a series.

5. On the **Printer Settings** tab, type the number of copies in the **Copies** field.
6. To set the printer, click **Change Printer**.
7. In the **Select Printer** dialog box, click a printer to select it.
8. Click **OK**.
9. Click **Print**.

Mark drawings in a transmittal as received

When the recipient of the transmittal has returned the drawings, you should mark the drawings as received in the **Transmittal** dialog box.

Note that you can only receive drawings in transmittals whose type is **To Be Returned**.

1. In the **Transmittal** dialog box, click the transmittal whose drawings you want to receive.
2. At the bottom of the dialog box, click **Drawings**.
3. In the **Selected Drawings** dialog box, click the arrow buttons to move the returned drawings to the **Included** list.
4. Click **Receive**.
5. In the **Receive Drawings** dialog box, click the arrow on the right side of the **Date Returned** field, and select the date in the calendar.
6. Click the arrow on the right side of **Approval Status** list, and select the approval status of the drawings in the list.
7. If the drawings have been re-submitted for approval, select the **Re-Submit** check box.
8. Click **OK**.
9. In the **Selected Drawings** dialog box, select all drawings in the **Included** list.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
10. Click **Set Shop Issue Date of Included Drawings**.
11. Click the arrow on the right side of the date field, and select a date in the calendar.
12. Click **OK**.
13. To close the **Selected Drawings** dialog box, click **OK**.

Send a transmittal via email

Use the **Email Selected Transmittal** command to send the selected transmittals via email directly from the **Transmittal** dialog box.

Note that the **Email Selected Transmittal** command only works with Microsoft Outlook, so you need to have Microsoft Outlook open before trying to send a transmittal by email.

1. In the **Transmittal** dialog box, select the transmittals that you want to send via email.

To select multiple items, hold down **Ctrl**.

To select a range of subsequent items, hold down **Shift**.

2. Click the **Transmittal** ribbon tab.
3. On the menu, select **Email Selected Transmittal**.

   The **Email Transmittal** dialog box opens.

   Note that the people who were marked as recipients of the transmittal are automatically included in the **Recipients Included** list.
4. In the **Email Transmittal** dialog box, click the arrow buttons to move additional recipients to the **Recipients Included** list.
5. If some of the recipients do not have an email address saved in the **Address Book**, do the following:
   a. Select the recipient in the **Recipients Included** list.
   b. Click **Contact Details**.
   c. Type the email address in the **Email Address** field.
   d. Click **Save**.
6. Select or clear the following check boxes according to your needs:

Option	Description
Attach Drawing Files	When selected, the drawing files that match the items and purposes defined in the **Transmittals** dialog box are attached to the transmittal.
Compress Drawing Files	When selected, the drawing files are compressed into a .zip package. The drawings are still separate PDF files within the .zip package. Note that the size of a .zip package may prevent Microsoft Outlook from sending the transmittal via email.
Show Company Logo (If Exists)	When selected, your company logo is visible in the transmittal.
Combine Drawings	When selected, consecutive drawing numbers are combined, so that the drawing numbers are displayed as 1 – 3, instead of 1, 2, 3.

7. Click **Email** to send the email.

View, print, and export transmittal reports

You can create reports based on the transmittals related to the current project. For example, you can create a report containing all existing transmittals or all overdue transmittals. You can then view, print, or export the created reports. Use the **Reports** command to create a report on all

transmittals or transmittals that match specific filters, or use the **Reports - Selected** command to create a report on the transmittals that are currently selected in the **Transmittals** dialog box.

Create a transmittal report

1. In the **Transmittal** dialog box, click the **Transmittal** ribbon tab.
2. Do either of the following:

To	Do this
Create reports on all transmittals or specific types of transmittals	a. On the menu, select **Reports**. b. To only create transmittal reports, at the bottom of the **Project Management Report Filters** dialog box, ensure that the **Transmittals** check box is selected. c. To only include specific types of transmittals in the reports, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**. d. In the **Filter** dialog box, do one of the following depending on the filter type: • Click the arrow buttons to move the transmittal properties that you want to include in the report to the **Included** list. • Type the maximum and minimum values for the transmittals that you want to include. For example, select the earliest and latest drawing date for the transmittals. e. Click **OK**. To further limit the transmittals that are included in the reports, repeat steps b to d for all necessary filter types. f. To combine the drawing numbers of drawings with the same dates, revisions, and descriptions, select the **Transmittal - Combine Drawings** check box. g. Click **Make Report**.
Create reports on the currently selected transmittals	a. On the menu, select **Reports - Selected**.

3. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

View the transmittal report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the transmittal report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the transmittal report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

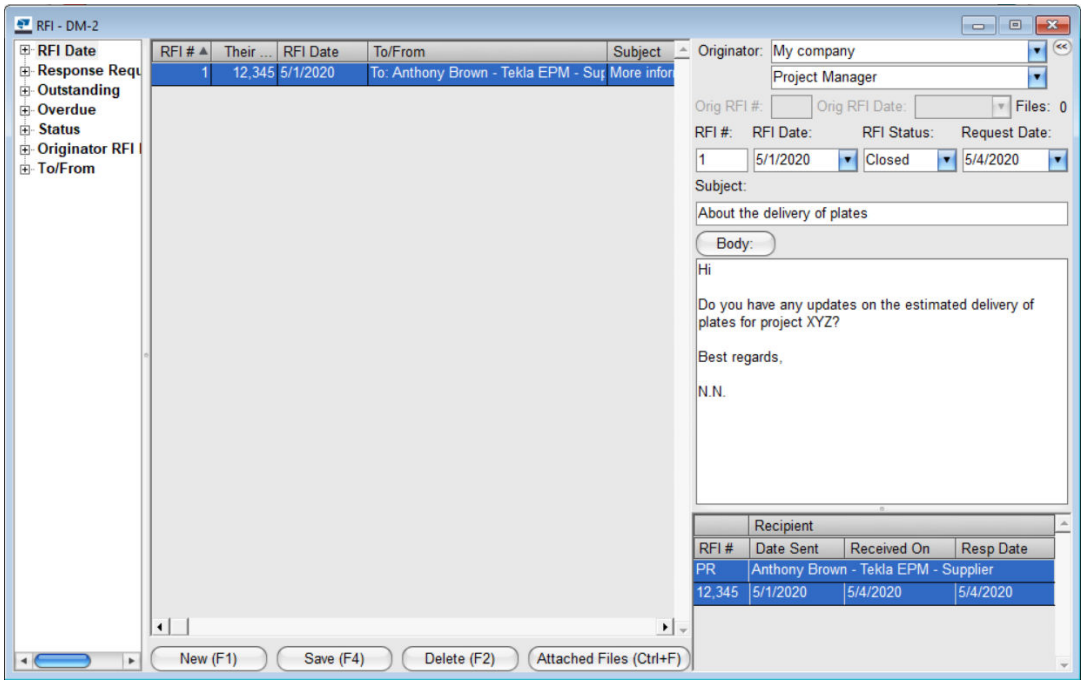
Manage requests for information

Official requests for information, or RFIs, allow you to log the flow of information between parties in construction projects. RFIs can be used to clarify the design intent, get missing information, receive approval for alternate methods or materials, get approved fixes for any conflicts in the field, or get any other critical information to ensure that the project conforms to the intent of the design team. You can save all RFIs and their responses to Tekla EPM, so that everyone in the current project can keep track of the project easily.

- Do any of the following:
  - On the right side of the **Project** dialog box, click the **RFIs** button.

- On the **Summary** tab of the **Project** dialog box, click **+** in the upper-right corner of the **RFIs** section, and select which requests for information you want to see.

The **Request For Information** dialog box opens.



For more information, see the following links:

Create, modify, and delete requests for information (page 573)

View requests for information (page 581)

Print requests for information (page 582)

Import or export requests for information (page 583)

Save a request for information as a Microsoft Word document (page 584)

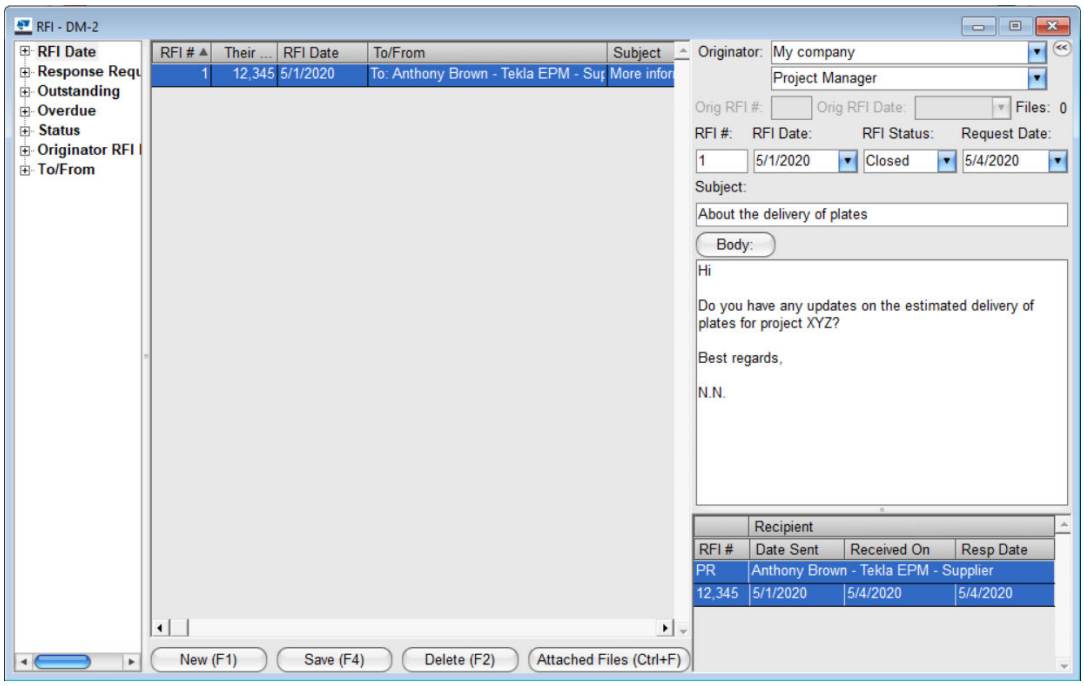
Send a request for information via email (page 584)

View, print, or export RFI reports (page 586)

Create, modify, and delete requests for information

Use the **Request For Information** dialog box to manage requests for information, or RFIs. You can create new requests, add recipients for the requests, attach files or emails to requests, modify the properties of existing requests, or delete unnecessary requests.

Note that requests by either your company or any other party in the project can be recorded in the **Request For Information** dialog box.



Create a request

1. In the **Request For Information** dialog box, click **New**.
2. Define the properties of the request.

   The items that are marked with an asterisk (*) in the following table are mandatory.

Option	Description
Originator *	The party that initiated the original request. Click the arrow on the right side of the upper **Originator** list, and in the list, select the originator company. Click the arrow on the right side of the lower **Originator** list, and in the list, select the contact person that initiated the request. Note that only the companies that have been added for the project in the **Project Management** dialog box and their contact persons are available in the **Originator** lists.

Option	Description
Orig RFI # *	The number of the original request that was sent to your company. Note that the **Orig RFI #** is only available and mandatory if the originator of the request is some other party than your company. Type the request number in the **Orig RFI #** field.
Orig RFI Date *	The date when the original request was sent to your company. Note that the **Orig RFI Date** is only available and mandatory if the originator of the request is some other party than your company. Click the arrow on the right side of the **Orig RFI Date** list, and select a date in the calendar.
RFI # *	The number of the request or response that you are sending. Note that an RFI number can only be used once. Type the request number in the **RFI #** field.
RFI Date *	The date when you sent the request. Click the arrow on the right side of the **RFI Date** list, and select a date in the calendar.
RFI Status	Indicates if all necessary information regarding the request has been received. Remember to close requisitions once they have been responded to. Click the arrow on the right side of **RFI Status** list, and select one of the following options: • **Open**: all necessary information has not been received. • **Closed**: all necessary information has been received.

Option	Description
	NOTE Setting the RFI status as **Closed** does not close the request, so the request can still be shown as overdue. To actually close the request, you need to define a response date when you have received all necessary information from the primary recipient of the request.
Request Date *	The date by which the requested information should be received. Click the arrow on the right side of **Request Date** list, and select a date in the calendar.
Subject *	The subject of the request. Type a subject in the **Subject** field.
Body *	The body text of the request. Type the text of the request in the **Body** field.

3. To add recipients for the request, do the following:
   a. Click anywhere in the **Recipient** table.
   b. In the **Recipients** dialog box, click one of the following buttons:
      - **New Primary Recipient**: creates a primary recipient.
      - **New Carbon Copy Recipient**: creates a recipient that receives a copy of the original request.
   c. Define the recipient properties:

Option	Description
To	The recipient company and person. Click the arrow on the right side of the leftmost **To** list, and select the recipient company in the list. Click the arrow on the right side of the rightmost **To** list, and select the recipient in the list. Note that only the companies that have been added for the project in the **Project Management** dialog box and their contact persons are available in the **Originator** lists.

Option	Description
Their RFI #	The recipient's request number. Type a number in the **Their RFI #** field.
Date Sent	The date when the request was sent to the recipient. Click the arrow on the right side of the **Date Sent** field, and select a date in the calendar.
Sent Via	The method with which the request was sent. The available methods are set in **Sent Via Maintenance**. Click the arrow on the right side of the **Sent Via** list, and select a sending method in the list.
Date Received	The date when the first response from the recipient was received. Click the arrow on the right side of the **Date Received** field, and select a date in the calendar.
Response Date	The date when all necessary information was received, and the request status could be set to **Closed**. The response date is included in RFI reports. Click the arrow on the right side of the **Response Date** field, and select a date in the calendar.
Response Details	Any information regarding the response. The response details are included in RFI reports. Type details in the **Response Details** field.

   d. To add the recipient, depending on the recipient type, click **Add PR** or **Add CC**.

      Repeat steps b to d for all necessary recipients.

   e. To close the **Recipients** dialog box, click the **Close** button (**X**) in the upper-right corner.

4. In the **Request For Information** dialog box, click **Add** to create the request.

5. To attach files to the new request, do the following:

   a. Select the request in the list.

   b. Click **Attached Files**.

   c. In the **RFI Files** dialog box, click **New**.

   d. In the **Document Index - Add Document Reference** dialog box, add a file, a Microsoft Outlook email, or Microsoft Outlook email attachments.

e. Click the arrow on the right side of the leftmost **RFI** list, and select the related request in the list.

f. Click the arrow on the right side of the rightmost **RFI** list, and select if the attachment is a request or a response.

g. Type a description for the attached file.

h. Click **Add Document Reference**.

   Repeat steps c to h for all necessary attachments.

i. In the **RFI Files** dialog box, click **Save**.

j. To close the **RFI Files** dialog box, click the **Close** button (**X**) in the upper-right corner.

Modify a request

Modify a request to change its properties. For example, you should close a request after receiving all necessary information.

1. In the **Request For Information** dialog box, select the request that you want to modify.
2. Modify the request properties according to your needs:

Option	Description
Originator	The party that initiated the original request. Click the arrow on the right side of the upper **Originator** list, and in the list, select the originator company. Click the arrow on the right side of the lower **Originator** list, and in the list, select the contact person that initiated the request. Note that only the companies that have been added for the project in the **Project Management** dialog box and their contact persons are available in the **Originator** lists.
Orig RFI #	The number of the original request that was sent to your company. Note that the **Orig RFI #** is only available and mandatory if the originator of the request is some other party than your company. Type the request number in the **Orig RFI #** field.

Option	Description
Orig RFI Date	The date when the original request was sent to your company. Note that the **Orig RFI Date** is only available and mandatory if the originator of the request is some other party than your company. Click the arrow on the right side of the **Orig RFI Date** list, and select a date in the calendar.
RFI #	The number of the request or response that you are sending. Note that an RFI number can only be used once. Type the request number in the **RFI #** field.
RFI Date	The date when you sent the request or a response to the request. Click the arrow on the right side of the **RFI Date** field, and select a date in the calendar.
RFI Status	Indicates if all necessary information regarding the request has been received. Remember to close requisitions once they have been responded to. Click the arrow on the right side of the **RFI Status** list, and select one of the following options: • **Open**: all necessary information has not been received. • **Closed**: all necessary information has been received.
Request Date	The date by which the requested information should be received. Click the arrow on the right side of the **Request Date** list, and select a date in the calendar.
Subject	The subject of the request. Type a subject in the **Subject** field.

Option	Description
Body	The body text of the request. Type the text of the request in the **Body** field.

3. To add recipients for the request, do the following:
   a. Click anywhere in the **Recipient** table.
   b. In the **Recipients** dialog box, modify the recipient properties according to your needs:

Option	Description
To	The recipient company and person. Click the arrow on the right side of the leftmost **To** list, and select the recipient company in the list. Click the arrow on the right side of the rightmost **To** list, and select the recipient in the list. Note that only the companies that have been added for the project in the **Project Management** dialog box and their contact persons are available in the **Originator** lists.
Their RFI #	The recipient's request number. Type a number in the **Their RFI #** field.
Date Sent	The date when the request was sent to the recipient. Click the arrow on the right side of the **Date Sent** field, and select a date in the calendar.
Sent Via	The method with which the request was sent. The available methods are set in **Sent Via Maintenance**. Click the arrow on the right side of the **Sent Via** list, and select a sending method in the list.
Date Received	The date when the first response from the recipient was received. Click the arrow on the right side of the **Date Received** field, and select a date in the calendar.
Response Date	The date when all necessary information was received, and the request status could be set to **Closed**. The response date is included in RFI reports. Click the arrow on the right side of the **Response Date** field, and select a date in the calendar.

Option	Description
Response Details	Any information regarding the response. The response details are included in RFI reports. Type details in the **Response Details** field.

c. Click **Edit** to save the changes.

   If necessary, you can also delete recipients by selecting them, clicking **Delete**, and clicking **Yes** to confirm.

d. To close the **Recipients** dialog box, click the **Close** button (**X**) in the upper-right corner.

4. To modify the files that are attached to the request, do the following:

   a. Select the request in the list.

   b. Click **Attached Files**.

   c. In the **RFI Files** dialog box, select an attachment and modify its description according to your needs.

   d. If necessary, click the arrow on the right side of the list that is next to the description, and select if the attachment is related to a request or a response.

   e. Click **Save**.

      If necessary, you can also delete attached files by selecting them, clicking **Delete**, and clicking **Yes** to confirm.

   f. To close the **RFI Files** dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete a request

Note that deleting a request is permanent and cannot be undone.

1. In the **Request For Information** dialog box, select the request that you want to delete.
2. Click **Delete**.
3. To permanently delete the request, click **Yes** in the confirmation dialog box.

View requests for information

Use the **View Selected RFIs** command to open the currently selected requests for information in **Tekla EPM Report Viewer**.

1. In the **Request For Information** dialog box, select the requests that you want to view.

   To select multiple requests, hold down **Ctrl**.

   To select a range of subsequent requests, hold down **Shift**.

2. Double-click one of the selected requests.
3. In the **View RFI** dialog box, select or clear the following check boxes according to your needs:

Option	Description
Show Company Logo (If Exists)	When selected, your company logo is visible in the requests.
Include Impact Text	When selected, Tekla EPM includes text regarding the importance of the requested information and the delay that may be caused if the response is not sent on time.

4. If necessary, in the **Additional Pages** field, type the number of pages you want to add to the request for the attachments to be included.
5. In the **Author** field, type the name of the author.

   If you do not type a name in the **Author** field, Tekla EPM uses the name of your company instead.
6. To view the request, click **View Request**.

The selected requests open in **Tekla EPM Report Viewer**.

In the **Tekla EPM Report Viewer** window, you can send the requests via email either as PDF files or Microsoft Excel worksheets, print the requests, or export the requests and save them in another file format.

See also

Print requests for information (page 582)

Send a request for information via email (page 584)

Print requests for information

Use the **Print Selected RFIs** command to print one or multiple requests for information.

1. In the **Request For Information** dialog box, select the requests that you want to print.

   To select multiple requests, hold down **Ctrl**.

   To select a range of subsequent requests, hold down **Shift**.
2. Click the **Request For Information** ribbon tab.
3. On the menu, select **Print Selected RFIs**.

4. In the **Print RFI** dialog box, select or clear the following check boxes according to your needs:

Option	Description
Show Company Logo (If Exists)	When selected, your company logo is visible in the requests.
Include Impact Text	When selected, Tekla EPM includes text regarding the importance of the requested information and the delay that may be caused if the response is not sent on time.

5. If necessary, in the **Additional Pages** field, type the number of pages you want to add to the request for the attachments to be included.
6. In the **Author** field, type the name of the author.

   If you do not type a name in the **Author** field, Tekla EPM uses the name of your company instead.
7. In the **Copies** field, type the number of printed copies.
8. Click **Change Printer**.
9. In the **Select Printer** dialog box, click a printer to select it.
10. Click **OK**.
11. Click **Print RFI**.

See also

Send a request for information via email (page 584)

Import or export requests for information

You can import or export requests for information. Use the XML file format when exporting requests, so that the requests can easily be imported back to Tekla EPM by another party in the current project.

Import requests

1. In the **Request For Information** dialog box, click the **Request For Information** ribbon tab.
2. On the menu, select **Data Exchange** --> **Import** .
3. In the **Open** dialog box, browse to find the file that you want to import.
4. Double-click the file that you want to import, or click **Open**.
5. In the **Import Tekla EPM Exchange File** dialog box, review the import progress.
6. When the import process is completed, click **Close**.

Export requests

1. In the **Request For Information** dialog box, click the request that you want to export.
2. On the menu, select **Data Exchange** --> **Export Selected RFIs** .
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. Click **Save**.

Save a request for information as a Microsoft Word document

Use the **Make Word Document** command to save a request for information as a Microsoft Word document.

1. In the **Request For Information** dialog box, select the request that you want to save as a Microsoft Word document.
2. Click the **Request For Information** ribbon tab.
3. On the menu, select **Make Word Document**.
4. In the **Save As** dialog box, browse to the folder where you want to save the file.
5. If necessary, change the file name.
6. Click **Save**.

See also

Import or export requests for information (page 583)

Send a request for information via email

Use the **Email Selected RFI** command to send the currently selected request for information via email.

Note that the **Email Selected RFI** command only works with Microsoft Outlook, so you need to have Microsoft Outlook open before trying to send a transmittal by email.

1. In the **Request For Information** dialog box, select the requests that you want to send via email.
2. Click the **Request For Information** ribbon tab.
3. On the menu, select **Email Selected RFI**.

   The **Email RFI** dialog box opens.

   Note that the recipients and attachments defined in the **Request For Information** are automatically added to the **Recipients Included** list.

4. Click the arrow buttons to move additional recipients to the **Recipients Included** list.
5. If some of the recipients do not have an email address saved in the **Address Book**, do the following:
   a. Select the recipient in the **Recipients Included** list.
   b. Click **Contact Details**.
   c. Type the email address in the **Email Address** field.
   d. Click **Save**.
6. Click the arrow buttons to move the attachments that you want to include in the email to the **Attachments Included** list.
7. Select or clear the following check boxes according to your needs:

Option	Description
Attach Tekla EPM data exchange file	When selected, the request information is converted to an XML file, which another Tekla EPM user can import to Tekla EPM. This can be useful if other parties in the project use Tekla EPM as well.
Show Company Logo (If Exists)	When selected, your company logo is visible in the request. Note that the **Show Company Logo (If Exists)** check box is only available if the **Attach PDF export of the RFI** check box is selected.
Include Impact Text	When selected, Tekla EPM includes a notice regarding the importance of the requested information and the delay that may be caused if the response is not sent on time. Note that the **Show Company Logo (If Exists)** check box is only available if the **Attach PDF export of the RFI** check box is selected.

8. If necessary, in the **Additional Pages** field, type the number of pages you want to add to the request for the attachments to be included.

   Note that the **Additional Pages** field is only available if the **Attach PDF export of the RFI** check box is selected.
9. In the **Author** field, type the name of the author.

   If you do not type a name in the **Author** field, Tekla EPM uses the name of your company instead.
10. Click **Email**.

See also

Save a request for information as a Microsoft Word document (page 584)

Import or export requests for information (page 583)

View, print, or export RFI reports

You can create reports based on the existing requests for information, or RFIs. For example, you can create a report containing all the overdue RFIs or the RFI details. You can then view, print, or export the created reports. Use the **Reports** command to create a report on all requests or requests that match specific filters, or use the **Reports - Selected** command to create a report on the requests that you select in the **Request For Information** dialog box.

Create an RFI report

1. In the **Request For Information** dialog box, click the **Request For Information** ribbon tab.
2. Do either of the following:

To	Do this
Create reports on all RFIs or specific types of RFIs	a. On the menu, select **Reports**. b. To only create RFI reports, at the bottom of the **Project Management Report Filters** dialog box, ensure that only the **RFIs** check box is selected. c. To only include specific types of requests in the reports, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**. d. In the **Filter** dialog box, do one of the following depending on the filter type: • Click the arrow buttons to move the request properties that you want to include in the report to the **Included** list. • Type the maximum and minimum values for the requests that you want to include. For example, you can define the earliest and latest date for the requests that you want to include. e. Click **OK**. To further limit the requests that are included in the reports, repeat steps b to d for all necessary filter types. f. Click **Make Report**.
Create reports on the currently selected RFIs	a. On the menu, select **Reports - Selected**.

3. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

View the RFI report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the RFI report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the RFI report

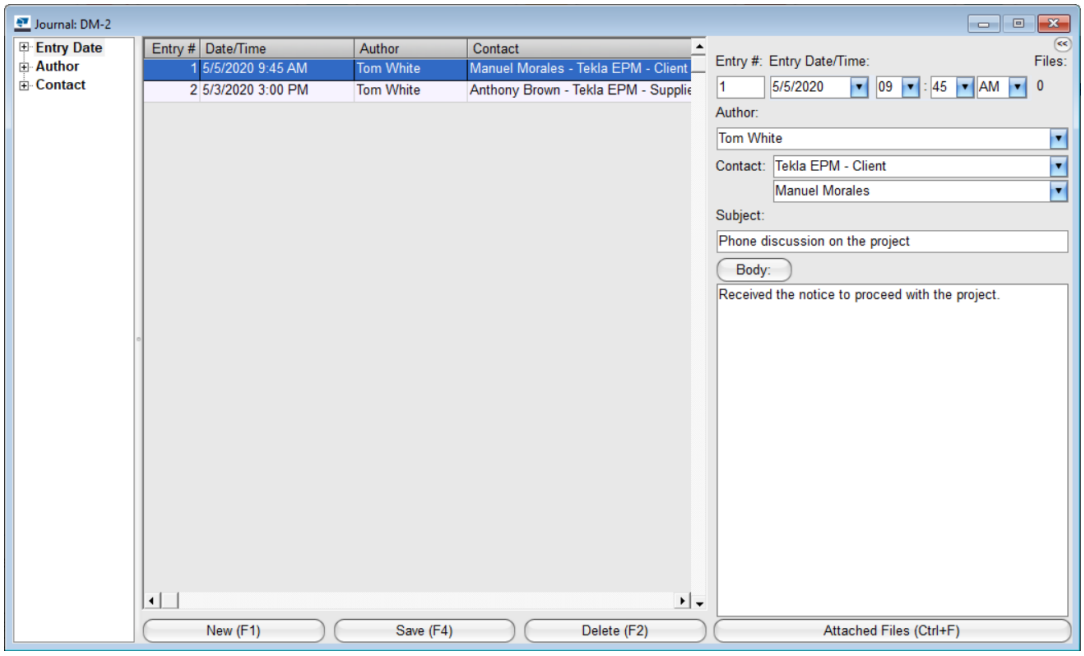
1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

Manage the project journal

The project journal allows you to keep a chronological record of the project. In the **Journal** dialog box, you can add journal entries regarding emails, telephone conversations, or any other project information that needs to be recorded. By adding journal entries, you can ensure that everyone in the project knows the relevant details about the project.

- To open the project journal, on the right side of the **Project** dialog box, click the **Journal Entries** button.

The **Journal** dialog box opens.



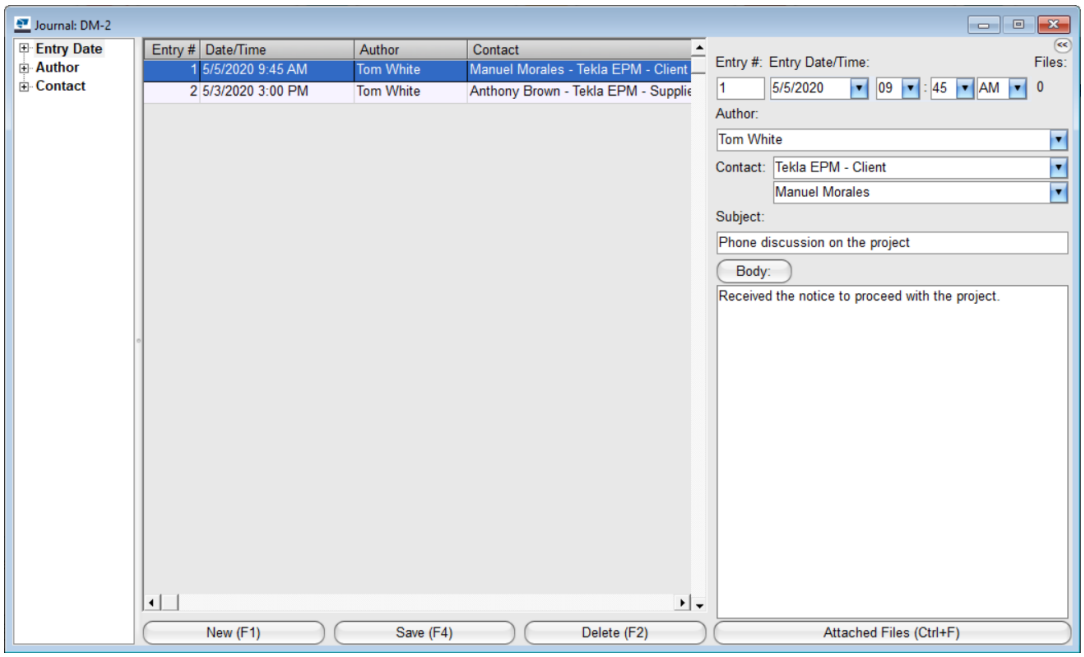
For more information, see the following links:

Add, modify, and delete journal entries (page 588)

View, print, and export project journal reports (page 592)

Add, modify, and delete journal entries

Use the **Journal** dialog box to manage and record journal entries related to the project. You can add new journal entries, attach files or emails to journal entries, modify existing journal entries, or delete journal entries.



Add a journal entry

1. In the **Journal** dialog box, click **New**.
2. Define the properties of the journal entry:

   The items that are marked with an asterisk (*) in the following table are mandatory information.

Option	Description
Entry # *	The number of the journal entry. Tekla EPM automatically populates the **Entry #** field with the next available entry number. If necessary, type a different number in the **Entry #** field.
Entry Date *	The date of the recorded event. By default, Tekla EPM suggests the current date. If necessary, click the arrow on the right side of the **Entry Date** field, and select a date in the calendar.
Entry Time *	The time of the recorded event. By default, Tekla EPM suggests the current time. If necessary, type another time in the **Entry Time** fields.

Option	Description
Author *	The creator of the journal entry. Click the arrow on the right side of the **Author** list, and select a user in the list. Note that only Tekla EPM users in your company are available in the list.
Contact	The project party related to the recorded event. For example, the contact person with whom you had a telephone conversation and their company. Note that only the companies that have been added for the project in the **Project Management** dialog box and their contact persons are available in the **Contact** lists. Click the arrow on the right side of the leftmost **Contact** list, and select the related company in the list. Click the arrow on the right side of the rightmost **Contact** list, and select the contact person in the list.
Subject *	The subject of the journal entry. Type the subject in the **Subject** field.
Body	The details of the journal entry. Type any relevant information in the **Body** field.

3. Click **Add**.
4. To attach a file to the new journal entry, do the following:
   a. Select the new journal entry.
   b. Click **Attached Files**.
   c. In the **Journal Entry Files** dialog box, click **New**.
   d. In the **Document Index - Add Document Reference** dialog box, add a file, a Microsoft Outlook email, or Microsoft Outlook email attachments.

      For more information, see Add document references (page 391).
   e. Click the arrow on the right side of the leftmost **Journal Entry** list, and select the journal entry to which you want to attach the file.
   f. Type a description for the attached file.
   g. Click **Add Document Reference**.

      Repeat steps c to g for to add all necessary attachments.
   h. In the **Journal Entry Files** dialog box, click **Save**.

i. To close the **Journal Entry Files** dialog box, click the **Close** button (**X**) in the upper-right corner.

Modify a journal entry

1. In the **Journal** dialog box, select the journal entry that you want to modify.
2. Modify the journal entry properties according to your needs:

Option	Description
Entry #	The number of the journal entry. Tekla EPM automatically populates the **Entry #** field with the next available entry number. If necessary, type a different number in the **Entry #** field.
Entry Date	The date of the recorded event. By default, Tekla EPM suggests the current date. If necessary, click the arrow on the right side of the **Entry Date** field, and select a date in the calendar.
Entry Time	The time of the recorded event. By default, Tekla EPM suggests the current time. If necessary, type another time in the **Entry Time** fields.
Author	The creator of the journal entry. Click the arrow on the right side of the **Author** list, and select a user in the list. Note that only Tekla EPM users in your company are available in the list.
Contact	The project party related to the recorded event. For example, the contact person with whom you had a telephone conversation and their company. Note that only the companies that have been added for the project in the **Project Management** dialog box and their contact persons are available in the **Contact** lists. Click the arrow on the right side of the leftmost **Contact** list, and select the related company in the list. Click the arrow on the right side of the rightmost **Contact** list, and select the contact person in the list.

Option	Description
Subject	The subject of the journal entry. Type the subject in the **Subject** field.
Body	The details of the journal entry. Type any relevant information in the **Body** field.

3. Click **Edit** to save the changes.
4. To modify the files that are attached to the journal entry, do the following:
   a. Select the journal entry whose attached files you want to modify.
   b. Click **Attached Files**.
   c. In the **Journal Entry Files** dialog box, select an attachment and modify its description according to your needs.
   d. Click **Save**.

      If necessary, you can also delete attached files by selecting them, clicking **Delete**, and clicking **Yes** to confirm.
   e. To close the **Journal Entry Files** dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete journal entries

1. In the **Journal** dialog box, select the journal entries that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Delete**.
3. To permanently delete the journal entries, click **Yes** in the confirmation dialog box.

View, print, and export project journal reports

You can create reports based on the existing journal entries. For example, you can create a report containing all journal entries, or the authors of journal entries. You can then view, print, or export the created reports. Use the **Reports** command to create a report on all journal entries or journal entries that match specific filters, or use the **Reports - Selected** command to create a report on the journal entries that are currently selected in the **Journal** dialog box.

Create a project journal report

1. In the **Journal** dialog box, click the **Journal** ribbon tab.
2. Do either of the following:

To	Do this
Create reports on all journal entries or specific types of journal entries	a. On the menu, select **Reports**. b. To only create journal reports, at the bottom of the **Project Management Report Filters** dialog box, ensure that only the **Journal Entries** check box is selected. c. To only include specific types of journal entries in the reports, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**. d. In the **Filter** dialog box, do one of the following depending on the filter type: • Click the arrow buttons to move the journal entry properties that you want to include in the report to the **Included** list. • Type the maximum and minimum values for the journal entries that you want to include. For example, define the earliest and latest date for the journal entries that you want to include. e. Click **OK**. To further limit the journal entries that are included in the reports, repeat steps b to d for all necessary filter types. f. Click **Make Report**.
Create reports on the currently selected journal entries	a. On the menu, select **Reports - Selected**.

3. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

View the journal report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the journal report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.

2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the journal report

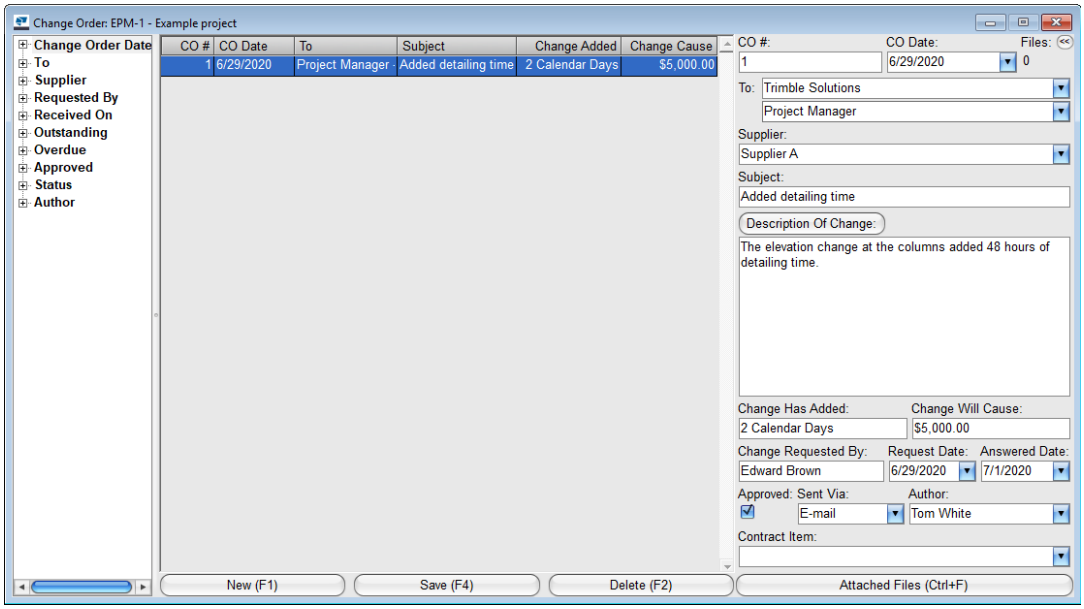
1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

Manage change orders

Change orders can be any changes made to the original contract that affect the project schedule and costs. You can manage the change orders related to the current project management project in the **Change Order** dialog box.

1. To open the **Change Orders** dialog box, do any of the following:
   - On the right side of the **Project** dialog box, click the **Change Orders** button.
   - On the **Summary** tab of the **Project** dialog box, click **+** in the upper-right corner of the **Change Orders** section, and select which change orders you want to see.

The **Change Order** dialog box opens.



For more information, see the following links:

Create, modify, and delete change orders (page 595)

View change orders (page 601)

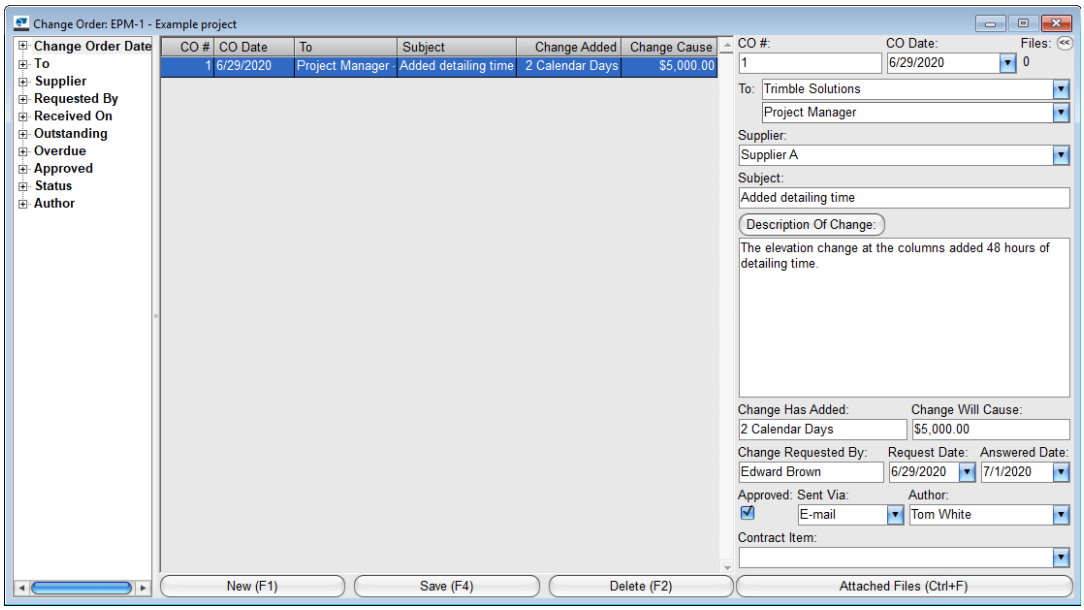
Print change orders (page 602)

View, print, or export change order reports (page 602)

Create, modify, and delete change orders

Use the **Change Order** dialog box to manage and record changes requested and made to the original contract. You can create new change order requests, attach files or emails to change order requests, modify existing change order requests, or delete change order requests.

NOTE The items in the **Change Order** dialog box are not change orders for contract purposes. Instead, the items represent the change order requests made regarding the project.



Create a change order

1. At the bottom of the **Change Order** dialog box, click **New**.
2. Define the properties of the change order.

   The items that are marked with an asterisk (*) in the following table are mandatory.

Option	Description
CO # *	The number of the change order. Tekla EPM automatically populates the **CO #** field with the next available number. You can change the number, if needed.
CO Date *	The date when the change order was sent. Click the arrow on the right side of the **CO Date** field, and select a date in the calendar.
To *	The recipient company and person of the change order. Click the arrow on the right side of the leftmost **To** list, and select the recipient company in the list. Click the arrow on the right side of the rightmost **To** list, and select the recipient in the list. Note that only the companies that have been added for the project in the **Project Edit** dialog box and their contact persons are available in the **To** lists.

Option	Description
Supplier	The supplier that is affected by the change order. Click the arrow on the right side of the **Supplier** list, and select a supplier in the list. Note that only the companies with the firm type **Supplier** that have been added for the project in the **Project Management** dialog box are available in the **Supplier** lists. Since the supplier is normally the fabricator, you may need to copy your company as a supplier in the project. For more information, see Manage companies in the project (page 556).
Subject *	The subject of the change order, visible in the change order document. Type the subject in the **Subject** field.
Description Of Change	The description of the change that should be made. Type a description in the **Description Of Change** field.
Change Has Added	The number of calendar days, work days, weeks, or months that the change has added to the project duration. The time entered here will be displayed in the project schedule. In the **Change Has Added** field on the left, type the desired number. Then, right-click the **Change Has Added** field, and select the unit of time in the list.
Change Will Cause	The total sum that making the change will add to the project costs or subtract from the project costs. Type the costs in the **Change Will Cause** field.
Change Requested By	The source that requested making the change. For example, this can be a party in the project, a document, or a response to an RFI. Type a value in the **Change Requested By** field.
Request Date	The date when the change was requested. Click the arrow on the right side of **Request Date** field, and select a date in the calendar.
Answered Date	The date when the supplier has replied to the change order. Click the arrow on the right side of **Answered Date** field, and select a date in the calendar.

Option	Description
Approved	When selected, the change order has been approved. Remember to select the **Approved** check box when the change order has been approved. When you do so, the change order is sent to **Contract & Invoicing**.
Sent Via *	The method with which the change order has been sent. The options available in the **Sent Via** list are set in the **Sent Via Maintenance** dialog box. Click the arrow on the right side of the **Sent Via** list, and select a sending method in the list.
Author *	The Tekla EPM user who created the change order. Click the arrow on the right side of the **Author** list, and select a user in the list. Only the Tekla EPM users in your company are available in the **Author** list.
Contract Item	The item in the project contract that the change order is linked to. For more information, see Add and modify contract information (page 658). The **Contract Item** field is not included in the **Change Orders** dialog box by default. You can add the **Contract Item** field by modifying the input fields for change orders. Click the arrow on the right side of **Contract Item** list, and select the contract item.

3. To attach files to the new change order, do the following:
   a. At the bottom of the dialog box, click **Attached Files**.
   b. In the **Change order** dialog box, click **New**.
   c. In the **Document Index - Add Document Reference** dialog box, add a file, a Microsoft Outlook email, or Microsoft Outlook email attachments.
   d. Click the arrow on the right side of the **Change Order** list, and select the change order to which you want to attach the file.
   e. Type a description for the attached file.
   f. Click **Add Document Reference**.

      Repeat steps c to g for all necessary attachments.
   g. Click **Save**.

h. To close the **Change order** dialog box, click the **Close** button (**X**) in the upper-right corner.

You can see the number of attached files in the upper-right corner of the **Change Order** dialog box.

4. Click **Save**.

Modify a change order

1. In the **Change Order** dialog box, select the change order that you want to modify.
2. Modify the properties of the change order:

Option	Description
CO #	The number of the change order. Tekla EPM automatically populates the **CO #** field with the next available number. You can change the number according to your needs.
CO Date	The date when the change order was sent. Click the arrow on the right side of the **CO Date** field, and select a date in the calendar.
To	The recipient company and person of the change order. Click the arrow on the right side of the leftmost **To** list, and select the recipient company in the list. Click the arrow on the right side of the rightmost **To** list, and select the recipient in the list. Note that only the companies that have been added for the project in the **Project Management** dialog box and their contact persons are available in the **To** lists.
Supplier	The supplier that is affected by the change order. Click the arrow on the right side of the **Supplier** list, and select a supplier in the list. Note that only the companies with the firm type **Supplier** that have been added for the project in the **Project Management** dialog box are available in the **Supplier** lists.
Subject	The subject of the change order, visible in the change order document. Type the subject in the **Subject** field.

Option	Description
Description Of Change	The description of the change that should be made. Type a description in the **Description Of Change** field.
Change Has Added	The number of calendar days, work days, weeks, or months that the change has added to the project duration. The time entered here will be displayed in the project schedule. In the **Change Has Added** field on the left, type the desired number. Then, click the arrow on the right side of the **Change Has Added** list, and select the unit of time in the list.
Change Will Cause	The total sum that making the change will add to the project costs or subtract from the project costs. Type the costs in the **Change Will Cause** field.
Change Requested By	The party that requested making the change. Type a name in the **Change Requested By** field.
Request Date	The date when the change was requested. Click the arrow on the right side of the **Request Date** field, and select a date in the calendar.
Answered Date	The date when the supplier has approved or rejected the change order. Click the arrow on the right side of the **Answered Date** field, and select a date in the calendar.
Approved	When selected, the change order has been approved. Remember to select the **Approved** check box when the change order has been approved, so that Tekla EPM will not mark the change order as overdue.
Sent Via	The method with which the change order has been sent. The options available in the **Sent Via** list are set in the **Sent Via Maintenance** dialog box. Click the arrow on the right side of the **Sent Via** list, and select a sending method in the list.

Option	Description
Author	The Tekla EPM user who created the change order. Click the arrow on the right side of the **Author** list, and select a user in the list. Only the Tekla EPM users in your company are available in the **Author** list.

3. To modify the files attached to the change order, do the following:
   a. Select the change order.
   b. At the bottom of the dialog box, click **Attached Files**.
   c. In the **Change order** dialog box, select an attachment and modify its description according to your needs.
   d. Click **Save** to save the changes.

      If necessary, you can also delete attached files by selecting them, clicking **Delete**, and clicking **Yes** to confirm.

      To attach new files, see Create a change order.
   e. To close the **Change order** dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete change orders

Note that deleting change orders is permanent and cannot be undone.

1. In the **Change Order** dialog box, select the change orders that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Delete**.
3. To permanently delete the change orders, click **Yes** in the confirmation dialog box.

View change orders

Use the **View Selected Change Orders** command to view the currently selected change orders in **Tekla EPM Report Viewer**.

1. In the **Change Order** dialog box, select the change orders that you want to view.

   To select multiple change orders, hold down **Ctrl**.

   To select a range of subsequent change orders, hold down **Shift**.
2. Click the **Change Orders** ribbon tab.
3. On the **File** menu, select **View Selected Change Orders**.

4. To display your company logo in the change order, in the **View Change Order** dialog box, select the **Show Company Logo (If Exists)** check box.

   To add a company logo, see Define and modify company information (page 63).

5. Click **View**.

The selected change orders open in **Tekla EPM Report Viewer**.

In the **Tekla EPM Report Viewer** window, you can send the change orders via email as either PDF files or Microsoft Excel worksheets, print the change orders, or export the change orders and save them in another file format.

See also

Print change orders (page 602)

View, print, or export change order reports (page 602)

Print change orders

Use the **Print Selected Change Orders** to print one or multiple change orders at one go.

1. In the **Change Order** dialog box, select the change orders that you want to print.

   To select multiple change orders, hold down **Ctrl**.

   To select a range of subsequent change orders, hold down **Shift**.

2. Click the **Change Orders** ribbon tab.
3. On the menu, select **Print Selected Change Orders**.
4. On the **Report Settings** tab of the **Print Change Order** dialog box, select the **Show Company Logo (If Exists)** check box to display your company logo in the change order.
5. On the **Printer Settings** tab, type the number of copies to be printed in the **Copies** field.
6. To set the printer, click **Change Printer**.
7. In the **Select Printer** dialog box, click a printer to select it.
8. Click **OK**.
9. In the **Print Change Order** dialog box, click **Print**.

See also

View, print, or export change order reports (page 602)

View, print, or export change order reports

You can create reports based on the existing change orders. For example, you can create a report of all change orders or a report on overdue change orders. You can then view, print, or export the created reports. Use the **Reports** command to create a report on all change orders or change orders that match specific filters, or use the **Reports - Selected** command to create a report on the change orders that are currently selected in the **Change Order** dialog box.

Create a change order report

1. In the **Change Order** dialog box, click the **Change Orders** ribbon tab.
2. Do either of the following:

To	Do this
Create reports on all change orders or specific types of change orders	a. On the menu, select **Reports**. b. To only create change order reports, at the bottom of the **Project Management Report Filters** dialog box, ensure that only the **Change Orders** check box is selected. c. To only include specific types of change orders in the reports, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**. d. In the **Filter** dialog box, do one of the following depending on the filter type: • Click the arrow buttons to move the change order properties that you want to include in the report to the **Included** list. • Type the maximum and minimum values for the change orders that you want to include. For example, define the earliest and latest dates for the change orders that you want to include. e. Click **OK**. To further limit the change orders that are included in the reports, repeat steps b to d for all necessary filter types. f. Click **Make Report**.
Create reports on the currently selected change orders	a. On the menu, select **Reports - Selected**.

3. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

View the change order report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the change order report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

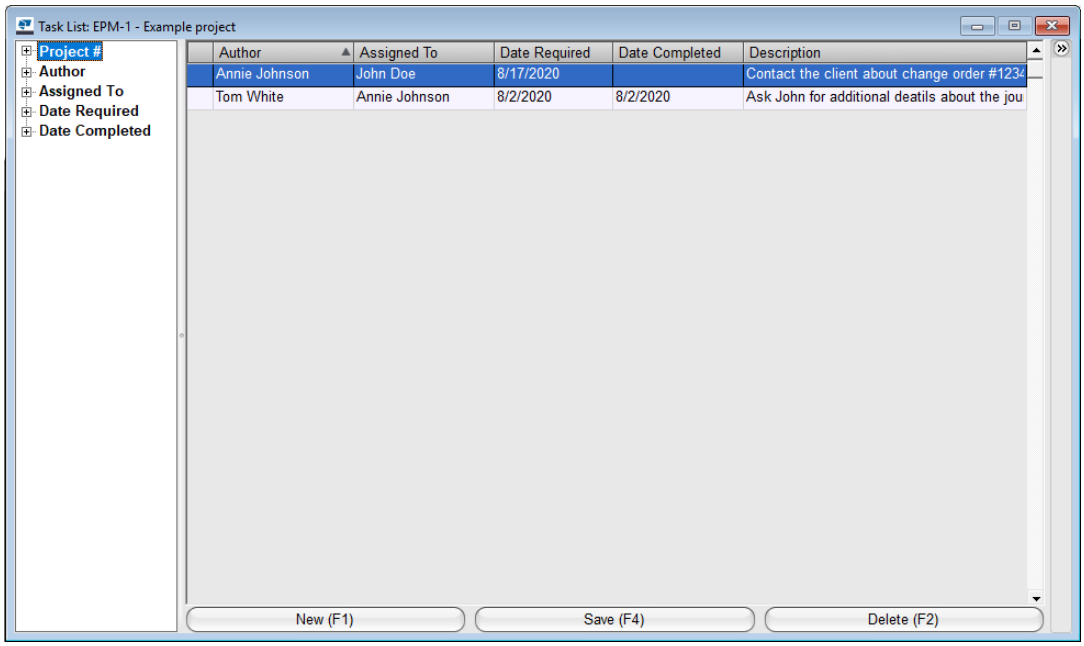
Export the change order report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

Manage the project task list

The task list items in the **Task List** dialog box serve as reminders for the user that they have been assigned project tasks. The items on your task list can also be assigned to other users. If you have unfinished tasks on your task list, the **Task List** dialog box opens automatically when you sign in to Tekla EPM. You can also access the **Task List** dialog box manually:

- Do either of the following:
  - On the right side of the **Project** dialog box, click the **Task List** button.
  - On the **Summary** tab of the **Project** dialog box, click **+** in the upper-right corner of the **Task List** section, and select which task list items you want to see.



For more information, see the following links:

Create, modify, and delete task list items (page 605)

View, print, and export task list reports (page 607)

Create, modify, and delete task list items

Use the **Task List** dialog box to create, modify, and delete task list items. You can add completion dates for tasks that have been completed, or re-assign tasks to other Tekla EPM users.

Create a task list item

1. In the **Task List** dialog box, click **New**.
2. Define the task list item properties.

   The items that are marked with an asterisk (*) in the following table are mandatory information.

Option	Description
Author	The Tekla EPM user that created the task list item. Click the arrow on the right side of the **Author** list, and select a user in the list.
Assigned To	The Tekla EPM user to whom the task list item is assigned. Click the arrow on the right side of the **Assigned To** list, and select a user in the list.

Option	Description
Date Required	The date by which the task list item should be completed. Click the arrow on the right side of the **Date Required** field, and select a date in the calendar.
Date Completed	The date when the task was completed. Click the arrow on the right side of the **Date Completed** field, and select a date in the calendar.
Description *	The description of the task list item. Type the task description in the **Description** field.

3. Click **Add**.

Modify a task list item

By modifying a task list item, you can change its properties. For example, add completion dates for tasks that have been completed.

1. In the **Task List** dialog box, select the task list item that you want to modify.
2. Modify the task list item properties:

Option	Description
Author	The Tekla EPM user that created the task list item. Click the arrow on the right side of the **Author** list, and select a user in the list.
Assigned To	The Tekla EPM user to whom the task list item is assigned. Click the arrow on the right side of the **Assigned To** list, and select a user in the list.
Date Required	The date by which the task list item should be completed. Click the arrow on the right side of the **Date Required** field, and select a date in the calendar.
Date Completed	The date when the task was completed. Click the arrow on the right side of the **Date Completed** field, and select a date in the calendar.
Description	The description of the task list item. Type the task description in the **Description** field.

3. Click **Edit** to save the changes.

Delete task list items

Note that deleting task list items is permanent and cannot be undone.

1. In the **Task List** dialog box, select the task list items that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click **Delete**.
3. To permanently delete the task list items, click **Yes** in the confirmation dialog box.

View, print, and export task list reports

Use the **Reports** command in the **Task List** menu to create a report out of the task list. You can decide to include all tasks list items in the current project, or only overdue or open task list items.

Create a task list report

1. In the **Task List** dialog box, click the **Task List** ribbon tab.
2. On the menu, select **Reports**.
3. To only create task list reports, at the bottom of the **Project Management Report Filters** dialog box, ensure that only the **Task List** check box is selected.
4. To only include specific types of task list items in the reports, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the task list item properties that you want to include in the report to the **Included** list.
   - Type the maximum and minimum values for the task list item that you want to include.
6. Click **OK**

   To further limit the task list items that are included in the reports, repeat steps 3 to 5 for all necessary filter types.

7. Click **Make Report**.
8. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

View, print, and export task list reports

Use the **Reports** command in the **Task List** menu to create a report out of the task list. You can decide to include all tasks list items in the current project, or only overdue or open task list items.

View the task list report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the task list report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the task list report

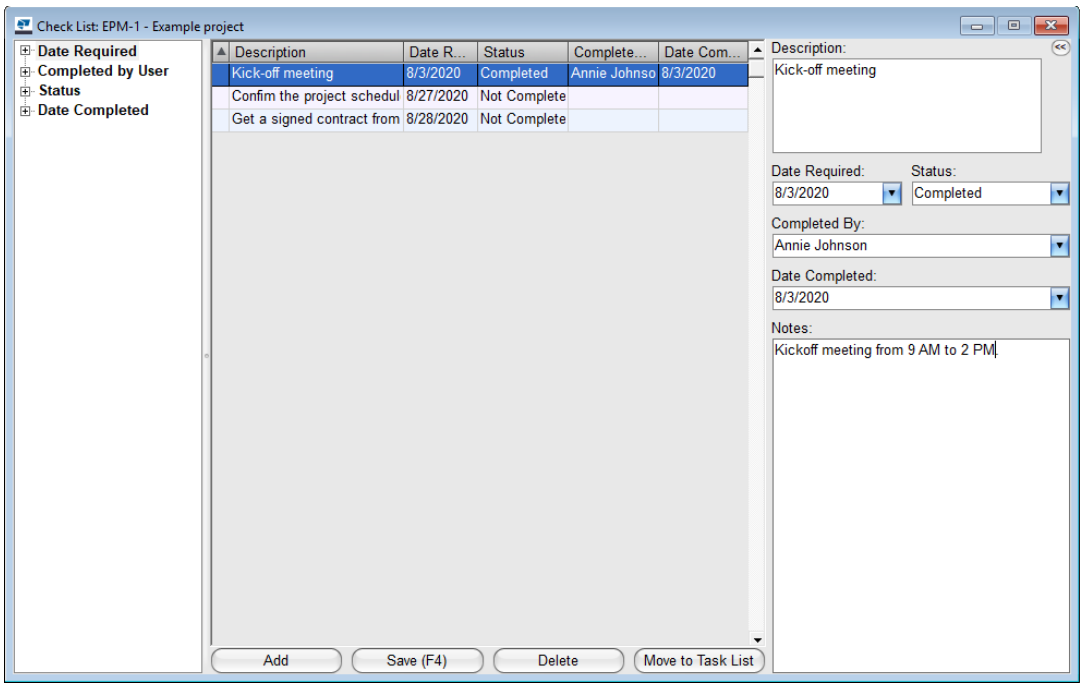
1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

Manage the project check list

Use the project check list to ensure that all steps in the current project are completed. In the **Check List** dialog box, you can add previously created steps to the project, or delete unnecessary steps.

- To access the project check list, do either of the following:
  - On the right side of the **Project** dialog box, click the **Check List** button.

- On the **Summary** tab of the **Project** dialog box, click **+** in the upper-right corner of the **Check List** section, and select which check list items you want to see.



For more information, see the following links:

Add check list items (page 609)

Modify a check list item (page 610)

Send check list items to the task list (page 610)

Delete check list items from a project (page 611)

View, print, or export check list reports (page 611)

Add check list items

Use the **Add Additional Check List Items** to add previously created check list items to the check list of the current project.

Note that to add new check list items, the items need to be created in the **Check List Item Maintenance** dialog box.

1. In the **Check List** dialog box, click the **Check List** ribbon tab.
2. On the menu, select **Add Additional Check List Items**.
3. In the **Add Check List Items** dialog box, click the arrow buttons to move the items that you want to include in the check list to the **Included** list.
4. Click **Add**.

The selected check list items are added to the **Check List** dialog box.

Now, you can modify the properties of the new check list items, such as its status and required date.

See also

Modify a check list item (page 610)

Delete check list items from a project (page 611)

Send check list items to the task list

If necessary, you can send items in the project check list to the task list of a Tekla EPM user that participates in the current project.

1. In the **Check List** dialog box, select the check list items that you want to send to the task list.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Check List** ribbon tab.
3. On the menu, select **Move Selected Check List Items to Task List**.
4. Click the arrow on the right side of the **Assign To** list in the **Move To Task List** and select to which user you want to assign the check list items.
5. Click **Move**.

The items are moved to the task list of the selected user.

The **Notes** fields of the items show that the items have been sent to the task list of the selected user.

See also

Manage the project task list (page 604)

Modify a check list item

You can modify the properties of a check list item according to your needs. For example, you might need to mark a check list item as completed, or modify the date by which the item should be completed.

1. In the **Check List** dialog box, select the check list item that you want to modify.
2. Modify the check list item properties:

Option	Description
Date Required	The date by which the check list item should be completed. Click the arrow on the right side of the **Date Required** field, and select a date in the calendar.
Status	The completion status of the check list item. The options are **Completed**, **Not Completed**, and **N/A** (not applicable). Click the arrow on the right side of the **Status** list, and select a status option in the list.
Completed By	The Tekla EPM user who completed the check list item. Click the arrow on the right side of the **Completed By** list, and select a user in the list.
Date Completed	The date when the check list item was completed. Click the arrow on the right side of the **Date Completed** field, and select a date in the calendar.
Notes	Any relevant notes about the check list item. Type any information in the **Notes** field.

3. Click **Save**.

See also

Add check list items (page 609)

Delete check list items from a project (page 611)

Delete check list items from a project

Use the **Delete Selected Check List Items** command to delete check list items that are not necessary for the current project.

1. In the **Check List** dialog box, select the check list items that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Check List** ribbon tab.
3. On the menu, select **Delete Selected Check List Items**.
4. To permanently delete the check list items, click **Yes** in the confirmation dialog box.

View, print, or export check list reports

Use the **Reports** command to create various check list reports. For example, you can create reports that show the statuses of the check list items or the dates when the check list items have been completed.

Create a check list report

1. In the **Check List** dialog box, click the **Check List** ribbon tab.
2. On the menu, select **Reports**.
3. To only create check list reports, at the bottom of the **Project Management Report Filters** dialog box, ensure that only the **Check List** check box is selected.
4. To only include specific types of check list items in the reports, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the check list item properties that you want to include in the report to the **Included** list.
   - Type the maximum and minimum values for the check list items that you want to include.

     For example, define the earliest and latest completion date for the check list items that you want to include.
6. Click **OK**

   To further limit the types of check list items that are included in the reports, repeat steps 3 to 5 for all necessary filter types.
7. Click **Make Report**.
8. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

View the check list report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the check list report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.

4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the check list report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

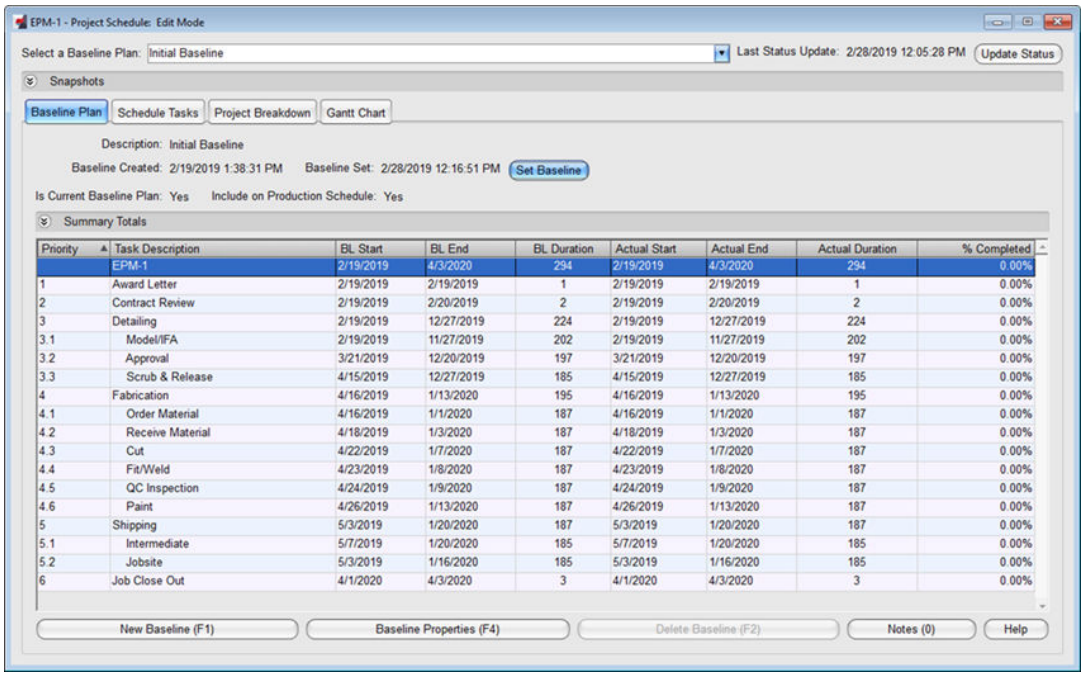
8.4 View and adjust the project schedule

In the **Project Schedule** dialog box, you can create, view, and modify the project schedule of the current project. Note that you can only access the **Project Schedule** dialog box from a production control job if you have linked the production control job to a project management job.

To access the **Project Schedule** dialog box, do one the following:

To	Do this
Access the project schedule from the **Project Management** module	• At the bottom of the **Project Management** dialog box, click **Project Schedule**.
Access the project schedule from the **Production Control** module	1. In the **Production Control** dialog box, click the **Production Control** ribbon tab. 2. On the menu, select **Project Schedule**.

The **Project Schedule** dialog box opens. The same dialog box is available in the **Project Management** module. Note that the **Schedule Tasks** dialog box opens at the same time as well.



Priority	Task Description	BL Start	BL End	BL Duration	Actual Start	Actual End	Actual Duration	% Completed
	EPM-1	2/19/2019	4/3/2020	294	2/19/2019	4/3/2020	294	0.00%
1	Award Letter	2/19/2019	2/19/2019	1	2/19/2019	2/19/2019	1	0.00%
2	Contract Review	2/19/2019	2/20/2019	2	2/19/2019	2/20/2019	2	0.00%
3	Detailing	2/19/2019	12/27/2019	224	2/19/2019	12/27/2019	224	0.00%
3.1	Model/IFA	2/19/2019	11/27/2019	202	2/19/2019	11/27/2019	202	0.00%
3.2	Approval	3/21/2019	12/20/2019	197	3/21/2019	12/20/2019	197	0.00%
3.3	Scrub & Release	4/15/2019	12/27/2019	185	4/15/2019	12/27/2019	185	0.00%
4	Fabrication	4/16/2019	1/13/2020	195	4/16/2019	1/13/2020	195	0.00%
4.1	Order Material	4/16/2019	1/1/2020	187	4/16/2019	1/1/2020	187	0.00%
4.2	Receive Material	4/18/2019	1/3/2020	187	4/18/2019	1/3/2020	187	0.00%
4.3	Cut	4/22/2019	1/7/2020	187	4/22/2019	1/7/2020	187	0.00%
4.4	Fit/Weld	4/23/2019	1/8/2020	187	4/23/2019	1/8/2020	187	0.00%
4.5	QC Inspection	4/24/2019	1/9/2020	187	4/24/2019	1/9/2020	187	0.00%
4.6	Paint	4/26/2019	1/13/2020	187	4/26/2019	1/13/2020	187	0.00%
5	Shipping	5/3/2019	1/20/2020	187	5/3/2019	1/20/2020	187	0.00%
5.1	Intermediate	5/7/2019	1/20/2020	185	5/7/2019	1/20/2020	185	0.00%
5.2	Jobsite	5/3/2019	1/16/2020	185	5/3/2019	1/16/2020	185	0.00%
6	Job Close Out	4/1/2020	4/3/2020	3	4/1/2020	4/3/2020	3	0.00%

The **Project Schedule** dialog box contains multiple tabs:

- On the **Baseline Plan** tab, you can set and modify the current project baseline.
- On the **Schedule Tasks** tab, you can add, modify, move, and delete tasks that are on the project schedule.
- On the **Project Breakdown** tab, you can divide a project into sub-tasks. Usually, this is done by sequence or lot number, but it can also be done by category, sub-category, or pay category.
- On the **Gantt Chart** tab, you can view and modify the dates and completion percentages of different tasks.

For more information, see the following links:

Switch edit mode on and off (page 615)

Create, modify, and delete baseline plans (page 615)

Add, modify, and delete schedule tasks (page 622)

Add, modify, and delete breakdown items (page 629)

Apply a schedule template (page 643)

View changes in the project schedule and add savepoints (page 620)

Update the project schedule (page 644)

Add, modify, and view time tracking information (page 645)

Export the project schedule to XML format (page 650)

Modify the Gantt chart (page 635)

Create a project schedule report (page 650)

Example: Create a project schedule (page 652)

Switch edit mode on and off

When working in the **Project Schedule** dialog box, you can only make changes when you have the edit mode on. The edit mode ensures that Tekla EPM users do not make conflicting changes if they work on the project schedule simultaneously. While one has the edit mode on, no other user can make changes to the project schedule of the same project. Other users can still view the schedule.

Any time that you try to make changes to a project schedule after the timeout time has been reached, a confirmation dialog box will open, asking if you want to enter edit mode.

You can also switch the edit mode on or off by using a keyboard shortcut. Do the following:

- To switch the edit mode on, press **Ctrl+E** on the keyboard.

The edit mode will stay on until you press **Ctrl+E** again or the timeout time is reached. The timeout ensures that a user does not lock out others from making changes to the project schedule for a long period of time.

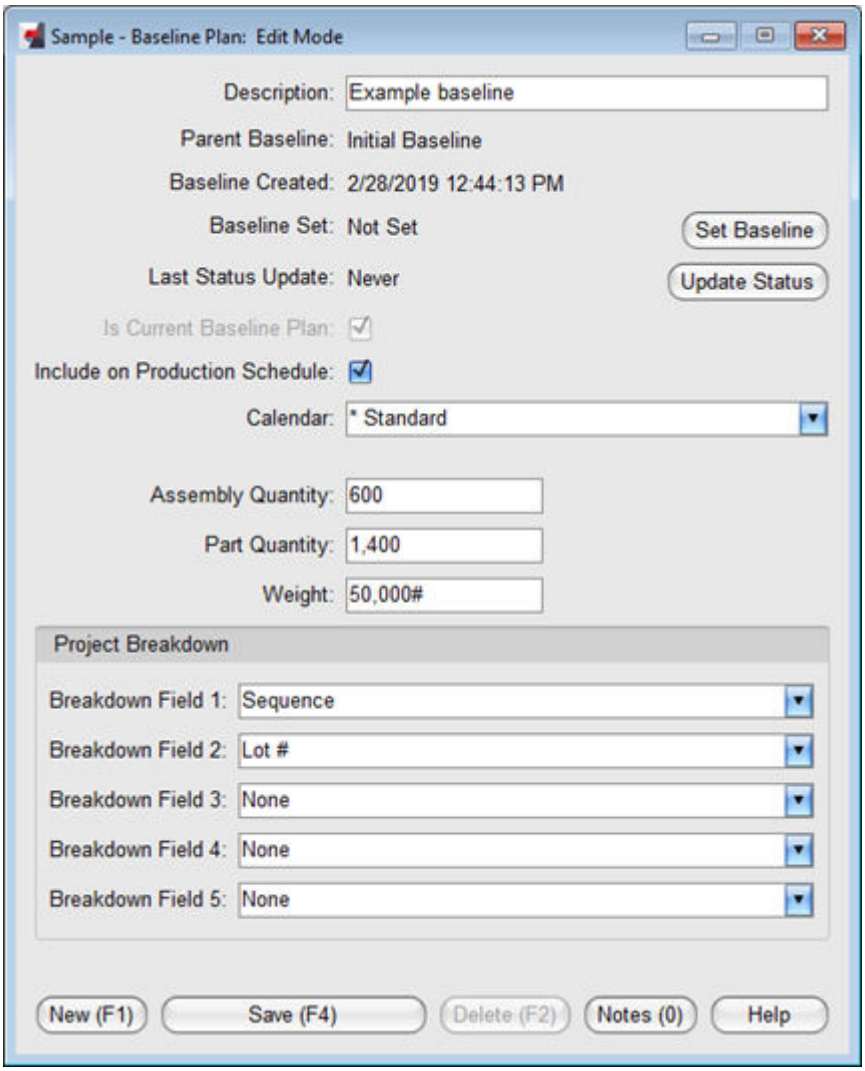
Create, modify, and delete baseline plans

A baseline plan is a listing of schedule tasks, dependencies, and estimated dates, that demonstrates the intent of a project. The actual progress is compared against the baseline plan. A project can have multiple baseline plans, so that you can explore different scenarios that show the effect that a change would have on the schedule. You can set any baseline plan as the current plan of the project at any time.

You cannot create, modify, or delete baselines if you are viewing a snapshot. For more information about snapshots, see View changes in the project schedule and add savepoints (page 620).

Create a baseline plan

1. In the **Project Schedule** dialog box, go to the **Baseline Plan** tab.
2. Click **New Baseline**.



3. In the **Description** field, type a description for the baseline plan.

   The first baseline plan will automatically be named as `Initial Baseline`, but you can modify the name according to your needs.

4. If you want to use the baseline plan as the current baseline plan, select the **Is Current Baseline Plan** check box.

5. If you want to assign resources to the baseline plan and include the baseline plan in the production schedule, select the **Include on Production Schedule** check box.

   If you do not want the baseline plan to be shown in the production schedule and resource capacity, clear the **Include on Production Schedule** check box. For example, this might be the case if the production schedule is created only for quoting.

6. Click **Add**.

   The baseline is created. You can now further modify its properties.

7. To select the calendar that determines the working days and non-working days in the project, click the arrow on the right side of the **Calendar** field and select a calendar in the list.

   To modify the available calendars, go to **Maintenance** --> **Project Management** --> **Schedule Calendars** .

8. Modify the remaining baseline properties according to your needs.

Option	Description
Assembly Quantity	The total number of assemblies in the project. This value is automatically updated when you update the status of the project schedule. Type the total number of assemblies in the **Assembly Quantity** field.
Part Quantity	The total number of parts in the project. This value is automatically updated when you update the status of the project schedule. Type the total number of parts in the **Part Quantity** field.
Weight	The total weight of the materials in the project. This value is automatically updated when you update the status of the project schedule. Type the total weight in the **Weight** field.

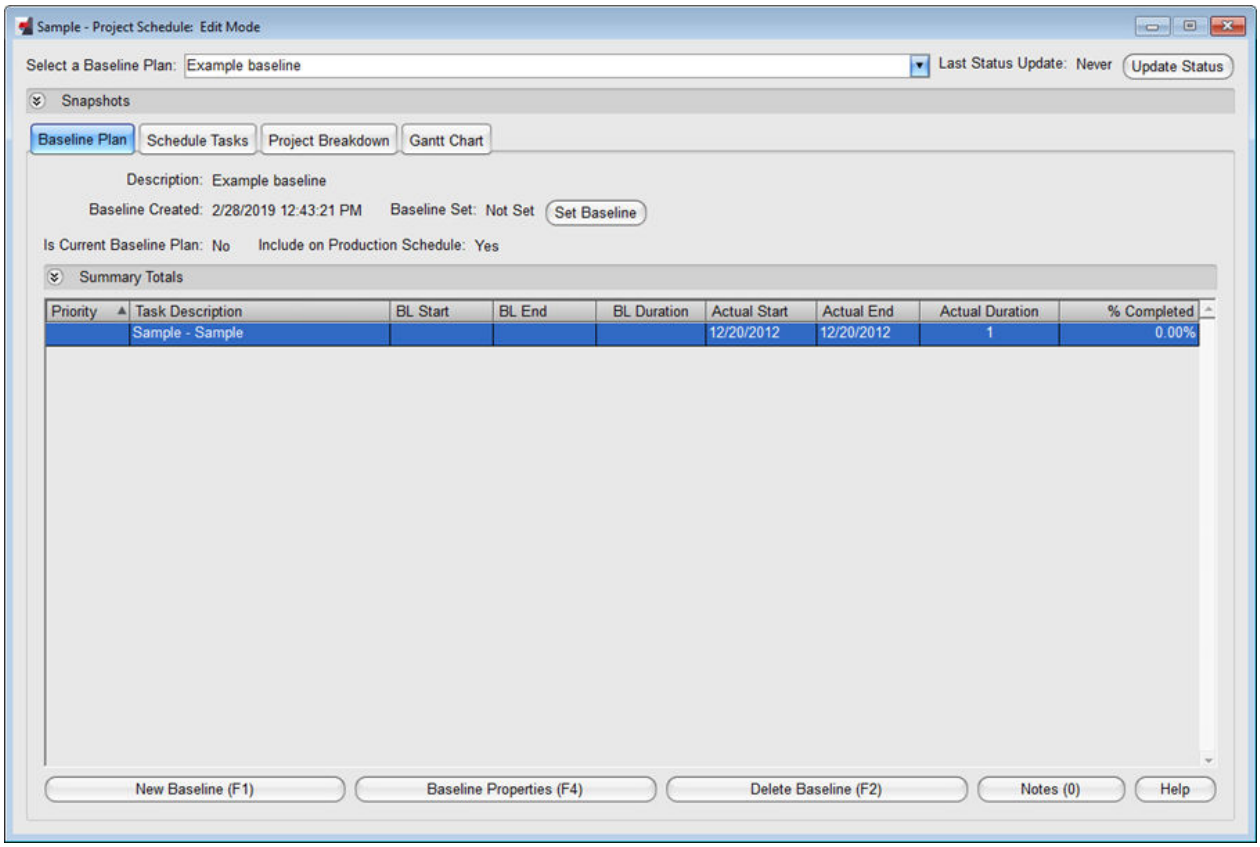
9. To define the available breakdown levels, click the arrows next to the breakdown fields in the **Project Breakdown** section of the dialog box.

   By default, two levels of breakdown items (sequences and lot numbers) are available. To make more levels available, select options in the **Breakdown Field 3**, **Breakdown Field 4**, and **Breakdown Field 5** lists. If you do not want a breakdown level to be available, select **None**.

   For example, to enable categories as the breakdown level below lots, select **Category** in the **Breakdown Field 3** list.

10. Click **Save**.

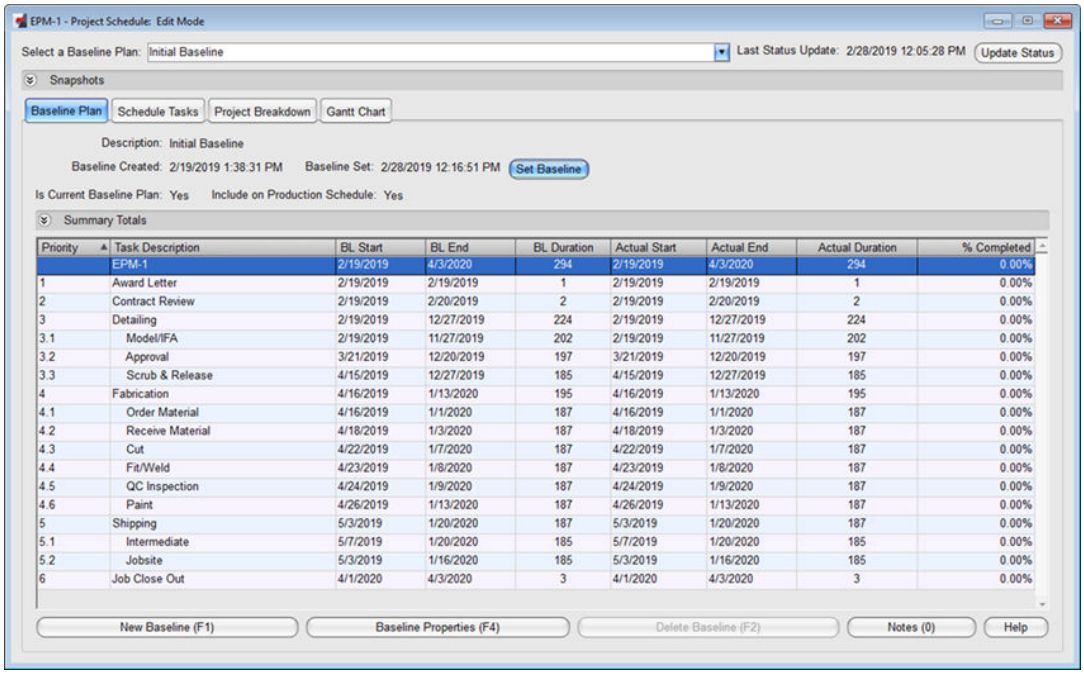
Copy the current schedule status to baseline columns



1. On the **Baseline Plan** tab, click **Set Baseline**.
2. In the confirmation dialog box, click **Yes** to set the baseline values.

The baseline is saved, and the baseline dates update in the blank columns.

Change the current baseline plan



Priority	Task Description	BL Start	BL End	BL Duration	Actual Start	Actual End	Actual Duration	% Completed
	EPM-1	2/19/2019	4/3/2020	294	2/19/2019	4/3/2020	294	0.00%
1	Award Letter	2/19/2019	2/19/2019	1	2/19/2019	2/19/2019	1	0.00%
2	Contract Review	2/19/2019	2/20/2019	2	2/19/2019	2/20/2019	2	0.00%
3	Detailing	2/19/2019	12/27/2019	224	2/19/2019	12/27/2019	224	0.00%
3.1	Model/IFA	2/19/2019	11/27/2019	202	2/19/2019	11/27/2019	202	0.00%
3.2	Approval	3/21/2019	12/20/2019	197	3/21/2019	12/20/2019	197	0.00%
3.3	Scrub & Release	4/15/2019	12/27/2019	185	4/15/2019	12/27/2019	185	0.00%
4	Fabrication	4/16/2019	1/13/2020	195	4/16/2019	1/13/2020	195	0.00%
4.1	Order Material	4/16/2019	1/1/2020	187	4/16/2019	1/1/2020	187	0.00%
4.2	Receive Material	4/18/2019	1/3/2020	187	4/18/2019	1/3/2020	187	0.00%
4.3	Cut	4/22/2019	1/7/2020	187	4/22/2019	1/7/2020	187	0.00%
4.4	Fit/Weld	4/23/2019	1/8/2020	187	4/23/2019	1/8/2020	187	0.00%
4.5	QC Inspection	4/24/2019	1/9/2020	187	4/24/2019	1/9/2020	187	0.00%
4.6	Paint	4/26/2019	1/13/2020	187	4/26/2019	1/13/2020	187	0.00%
5	Shipping	5/3/2019	1/20/2020	187	5/3/2019	1/20/2020	187	0.00%
5.1	Intermediate	5/7/2019	1/20/2020	185	5/7/2019	1/20/2020	185	0.00%
5.2	Jobsite	5/3/2019	1/16/2020	185	5/3/2019	1/16/2020	185	0.00%
6	Job Close Out	4/1/2020	4/3/2020	3	4/1/2020	4/3/2020	3	0.00%

- On the **Baseline Plan** tab, click the arrow on the right side of the **Select a Baseline Plan** field, and select the desired baseline in the list.

The new baseline plan is displayed in the **Project Schedule** dialog box.

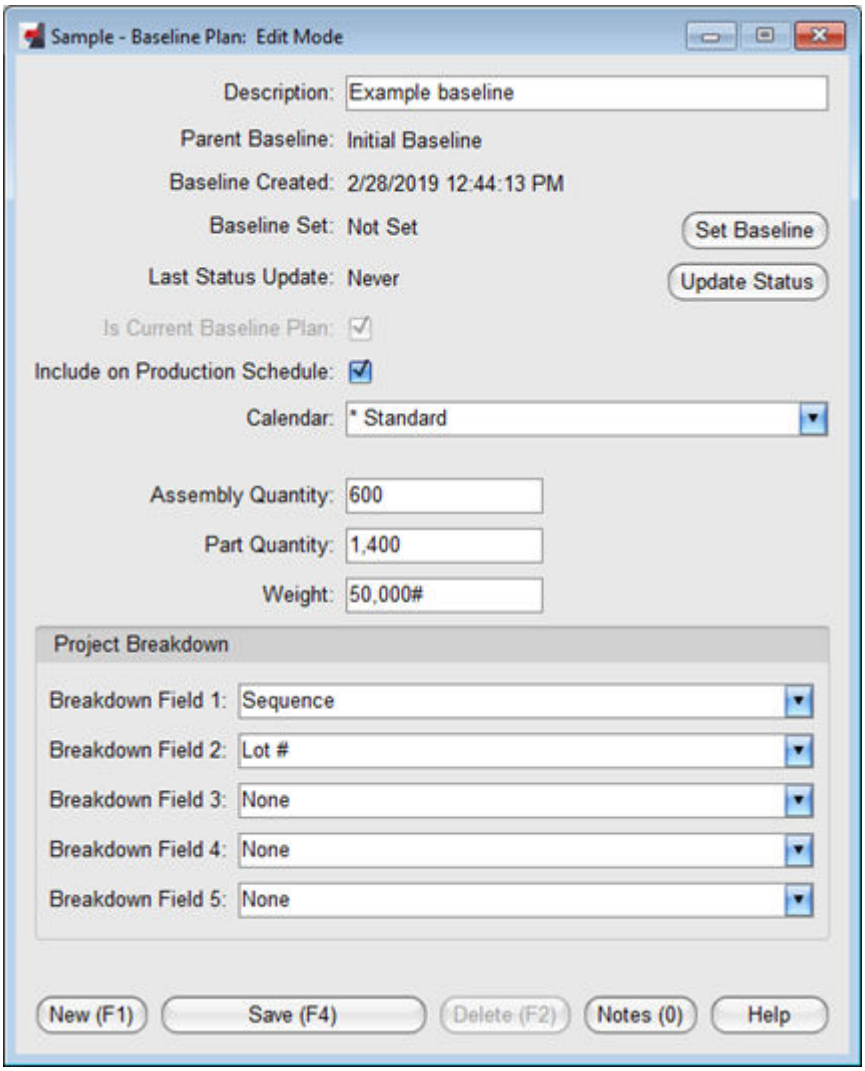
View the total values and breakdown information of the project

- To display the total values of the project, on the **Baseline Plan** tab, click the arrow on the left side of **Summary Totals**.
- To display the breakdown information of a task, select a task on **Baseline Plan** tab, and the click the arrow on the left side of **Breakdown Summary**.

  The number of breakdown items and the average assembly quantity, part quantity, and weight are displayed for the selected task.
- To select if actual total values, baseline total values, or both are displayed for the totals and the breakdown summary, click the arrow on the right side of the **Show Totals** list, and select an option in the list.

Modify a baseline plan

1. On the **Baseline Plan** tab, click **Baseline Properties**.
2. In the **Baseline Plan** dialog box, modify the baseline plan properties according to your needs.



For more information on the properties, see Create a baseline plan.

3. Click **Save** to save the changes.

Delete a baseline plan

Deleting a baseline plan is permanent and cannot be undone.

1. On the **Baseline Plan** tab, click the baseline plan that you want to delete.
2. Click **Delete Baseline**.
3. In the confirmation dialog box, click **Yes** to permanently delete the baseline.

View changes in the project schedule and add savepoints

Snapshots represent the baseline plan at previous points in time. Each time you make a change to the project schedule, Tekla EPM automatically takes a

snapshot. You can then use the snapshots to compare the project schedule at two different points in time and view the impacts of changing the schedule. You can also load existing snapshots to view the project schedule at a particular point in time. If you want to mark the snapshot as a particularly important point in time, you can record it as a savepoint.

1. Click the arrow on the left side of **Snapshots** to expand the **Snapshots** section.

   You can see the currently displayed snapshot after **Currently Viewing Snapshot**. If you are viewing the current project schedule, the value will be **[Current]**.

2. Do any of the following:

To	Do this
Load a snapshot	a. Click the arrow on the right side of the **Schedule Snapshot** field, and select a snapshot in the list. If you only want the list to display the savepoints that have been recorded, select the **Only Show Savepoints** check box. b. Click **Load Snapshot**. The **Project Schedule** dialog box displays the project schedule at the selected point in time. To view the current project schedule again, in the **Schedule Snapshot** list, select **[Current]**.
Record a savepoint	a. In the **Project Schedule** dialog box, make any changes. b. Click **Record Savepoint**. c. In the first confirmation dialog box, click **Yes** to save the changes you made. d. In the second confirmation dialog box, click **Yes** to confirm entering edit mode. When you are in the edit mode, other users cannot make conflicting changes to the project schedule. e. In the **Snapshot: Edit Mode** dialog box, type a description for the savepoint. f. Ensure that the **Is Savepoint** check box is selected. g. Click **Save**.

To	Do this
	h. In the third confirmation dialog box, click **Yes** to confirm entering edit mode. This way, no other user can make conflicting changes to the project schedule at the same time.

Add, modify, and delete schedule tasks

Schedule tasks are events that occur or actions that are taken during a project. In the **Schedule Tasks** dialog box, you can add, modify, and delete schedule tasks. Tasks can be organized into a hierarchy that contains main tasks and sub-tasks. In this case, the statuses of the main tasks are aggregated from the sub-tasks.

Add a task to the project schedule

1. In the **Project Schedule** dialog box, open the **Schedule Tasks** tab.
2. Click **New**.

   The **Schedule Tasks** dialog box opens. The tasks already in the schedule are displayed in the navigation tree on the left-hand pane.
3. Type a description for the new task.
4. Modify the task properties according to your needs:

   The available properties are:

Option	Description
Parent Task	If the task you are creating is a sub-task, for an existing task, you need to select the main task. Click the arrow on the right side of **Parent Task** field, and select a task in the list. If you are creating a top-level task, select **None**. Note that you cannot modify the task type, duration, or original estimate time of a main task if you add a sub-task.
Task Type	Specifies the behavior of the task on the **Gantt Chart** tab. The available task types are: • **Start/End**: an action to be performed over a period of time. Properties include the start date, end date, and duration. Start/end tasks can be directly re-sized an moved on the **Gantt Chart** tab.

Option	Description
	• **Summary**: takes the aggregate values from its sub-tasks. The start date of a summary task is automatically set to the earliest date of the sub-tasks. The end date is set to the latest sub-task end date, and the percent completed is aggregated based on the status summary method. Summary tasks cannot be re-sized on the **Gantt Chart** tab directly. However, the sub-tasks can be re-sized and moved, and the summary main task will re-sized and moved accordingly. • **Milestone**: an event in the schedule. For example, a project kickoff meeting can be a milestone task. The end date and the start date are always the same, and the duration is set to one day.
Sequence, **Lot #**, and other breakdown category check boxes	When selected, the task is divided into sub-tasks by the breakdown category. This means that you have to add the breakdown category for all items when adding them. Note that the project breakdown check boxes cannot be selected or cleared when the task has been added.
Apply Breakdown Links	When selected, the links set in the project schedule are added between sub-tasks. For example, any links set between sequences 1, 2, and 3 would be added. When cleared, the links set between sub-tasks are not added, even if they have been set in the project schedule.
Duration	The expected number of working days to complete a task. The duration can only be adjusted if the task type is set to **Start/End**. Type the number of days in the **Duration** field.
Original Estimate	The time originally estimated for the entire main task or a sub-task. The hours will automatically be distributed among the sub-tasks on the Gantt chart. Type the time in man hours in the **Original Estimate** field.

Option	Description
Status Link	The information that affects the status of the task when the project schedule is updated. The available options are: • **Drawings Approved**: the number of drawings with the **Approved** status. • **Material Purchased**: the production material that is linked to material that is either in stock or on order. • **Material Received**: the production material that is linked to material that is in stock. • **TFS**: the production material that has been cut. • **Production Completed**: the production material that has been assigned a route and has completed all stations in that route. • **Production Progress**: the production material that has been assigned a route and has completed some stations in that route. • **Station Progress**: the production material that has been assigned a route that includes the selected station and has completed that station. • **Shipping Destination Progress**: the production material that has been assigned a shipping route that includes the selected destination and has completed that destination. • **Shipping Completed**: the production material that has completed all assigned shipping destinations. Click the arrow on the right side of **Status Link** field, and select an option in the list.
Status Summary Method	The method that determines how the percentage completed of a main task will be calculated from the sub-tasks. Each option specifies the weight that is given to each sub-task in the calculation. The available options are: • **No Factor**: no weight is given to the individual sub-tasks. The percentage completed of the main task is an average of the sub-tasks. • **By Quantity**: the percentage completed is weighed by the quantity of each sub-task.

Option	Description
	• **By Weight**: the percentage completed is weighed by the weight of each sub-task. • **By Duration**: the percentage completed is weighed by the duration of each sub-task. Click the arrow on the right side of **Status Summary Method** field, and select a calculation method in the list.
Resource	An object with a time-based capacity to be added on a production schedule, and the resource by which station work will be executed. Linking a task from the project schedule to a resource connects the project and production schedules. Click the arrow on the right side of **Resource** list, and select a resource in the list.
Assigned To	The Tekla EPM user that who task is assigned to.

5. Click **Add**.
6. Select the new task in the navigation tree.
7. In the **Link Tasks** section of the dialog box, define dependencies between two tasks.

   By creating links, you can make the schedule cascade from one task to another.

   Note that:

   - A task cannot link to itself.
   - A link cannot be created between a task and one of its sub-tasks.
   - Duplicate links are not allowed. There can be only one link between a pair of tasks.
   - Link cycles are not allowed. For example, if a link is created from task 1 to task 2, a link cannot be created from task 2 to task 1.
   - When you use links, and the duration of an item changes, the positions of all linked items also changes. Do not link items that need to remain static, or are independent from other items in the schedule.

   Do any of the following:

To	Do this
Add a link that ends with the current given task	Note that if a previous snapshot is displayed instead of the current project schedule information, you cannot add a predecessor link. a. Click **New Predecessor Link**.

To	Do this
	b. Click the arrow on the right side of **Link From** list, and in the list, select the starting task of the link. c. Click the arrow on the right side of upper **Position** field, and in the list, select if the link originates from the start or end of the starting task. d. Click the arrow on the right side of lower **Position** field, and in the list, select if the link ends at the start or finish of the second task. e. In the **Minimum Interval** field, type the minimum number of working days between the two tasks. The minimum interval is enforced in the Gantt chart. The later task cannot be moved earlier in the Gantt chart than the value in the **Minimum Interval** field determines. f. Click **Add**. g. In the confirmation dialog box, click **Yes**. For example, to define that shipping must start when the fabrication is finished, select **Shipping** and set the link a follows: • **Link From**: **Fabrication** • Upper **Position**: **Finish** • Lower **Position**: **Start** • **Minimum Interval**: `0 days`
Add a link that begins with the current task	Note that if a previous snapshot is displayed instead of the current project schedule information, you cannot add a successor link. a. Click **New Successor Link**. b. Click the arrow on the right side of the upper **Position** field, and in the list, select if the link originates from the start or end of the starting task. c. Click the arrow on the right side of the **Link To** field, and in the list, select the task that is the ending point of the link. d. Click the arrow on the right side of the lower **Position** field, and in the list, select if the link ends at the start or finish of the second task.

To	Do this
	e. In the **Minimum Interval** field, type the minimum number of working days between the two tasks. The minimum interval is enforced in the Gantt chart. The later task cannot be moved earlier in the Gantt chart than the value in the **Minimum Interval** field determines. f. Click **Add**. g. In the confirmation dialog box, click **Yes**. For example, to define that shipping must start when the fabrication is finished, select **Fabrication** and set the link a follows: • Upper **Position**: **Finish** • **Link To**: **Shipping** • Lower **Position**: **Start** • **Minimum Interval**: `0 days`
View and modify link properties	a. Click **Link Properties**. b. Modify the starting task, ending task, the task positions, and interval according to your needs. c. Click **Save** to update the link properties.
Delete a link	a. Click a link in the list to select it. b. Click **Delete Link**. c. In the confirmation dialog box, click **Yes** to permanently delete the links.

8. To save the links, click **Save**.
9. If necessary, add notes about the task:
   a. In the navigation tree on the left-hand pane, click the task to which you want to add notes.
   b. At the bottom of the dialog box, click **Notes**.
   c. In the **Notes** dialog box, click **New**.
   d. Type any notes about the task.
   e. Click **Add**.
   f. In the confirmation dialog box, click **Yes**.

g. Click the **Close** button (**X**) to close the **Notes** dialog box.

Repeat the process for each task that you want to add.

Move a task earlier or later in the schedule

1. Select the task that you want to move.
2. Click the **Move Up** and **Move Down** buttons to move the task earlier or later.

Modify a task

1. In the navigation tree on the left-hand pane, click the task that you want to modify.
2. Modify the task properties and links according to your needs.

   For more information on the properties and links, see Add a link to the project schedule.
3. Click **Save** to save the changes.

Delete a task

1. In the navigation tree on the left-hand pane, click the task that you want to delete from the schedule.
2. Click **Delete Task**.
3. In the confirmation dialog box, click **Yes** to permanently delete the task.

Save schedule tasks as a schedule template

Schedule templates can contain all of the schedule items and attributes required for a typical setup. By saving a set of schedule tasks as a schedule template, you can apply the same schedule tasks in multiple jobs. The times and other details can be modified for each project, but the tasks, child tasks, and links remain the same.

1. In the **Schedule Tasks** dialog box, modify the schedule tasks to meet your needs.

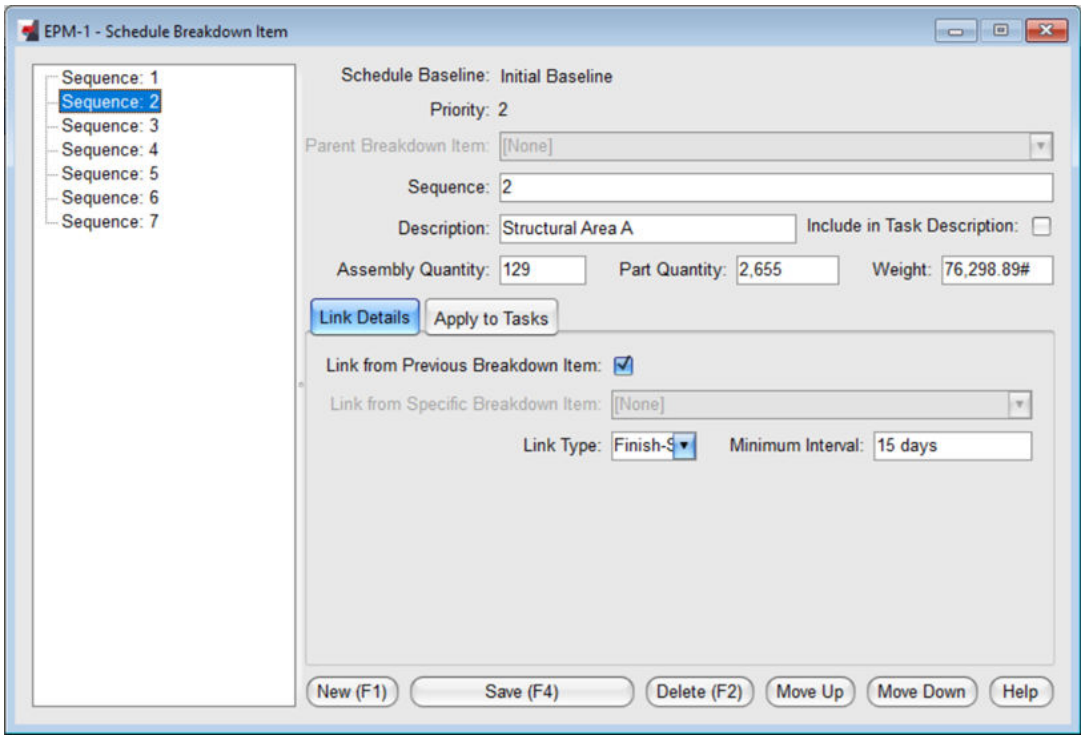
   For more information, see Add, modify, and delete schedule tasks (page 622).
2. Click the **Schedule Tasks** ribbon tab.
3. On the menu, select **Save As Template**.
4. Type a description for the template.
5. Click **OK** to save the template.

   A message opens, telling you that the template is saved.

6. Click **OK** to close the message.

Add, modify, and delete breakdown items

Schedule breakdown items allow you to divide a project into sub-tasks to schedule and track the completion of tasks. Sequences and lots are often used as breakdown items, so that tasks can be performed for each sequence and lot separately. You can add new breakdown items, modify existing ones, change the priorities of breakdown items, and delete any unnecessary breakdown items.



Add a new breakdown item

Note that if you cannot add new breakdown items if you are currently viewing a snapshot. For more information, see View changes in the project schedule and add savepoints (page 620)

1. On the **Project Breakdown** tab of the **Project Schedule** dialog box, click **New**.

2. In the **Schedule Breakdown Item** dialog box, define properties for the new breakdown item.

Option	Description
Parent Breakdown Item	If the breakdown item you are creating is a sub-item for another existing breakdown item, you need to select the main breakdown item. Click the arrow on the right side of **Parent Breakdown Item** field, and select a breakdown item in the list. If you are creating a top-level breakdown item, select **None**. Note that the main breakdown item cannot be changed after the breakdown item is added.
Sequence, **Lot #**, **Category**, **Sub-Category**, **Pay Category**	The breakdown value that associates the breakdown item with the relevant project data. Note that the breakdown value must match the project data exactly. For example, the sequence number in the **Sequence** field must be exactly the same as in the production control job. Otherwise, the project data cannot be updated properly. Type the breakdown value in the field.
Description	The description of the breakdown item. For example, `First floor beams and columns`. Type a description in the **Description** field.
Include in Task Description	When selected, the breakdown item description will be included in the task description in addition to the breakdown value. For example, if the description of sequence 6 is `Third Floor Beams`, and the **Include in Task Description** check box is selected, the description of the resulting task in the Gantt chart will be `Sequence: 6 - Third Floor Beams`. Instead, if the **Include in Task Description** check box is cleared, then the description of the task in the Gantt chart will be `Sequence: 6`.
Assembly Quantity	The total number of assemblies associated with the breakdown item. This value is automatically updated when you update the project schedule status. Type the total number of assemblies in the **Assembly Quantity** field.
Part Quantity	The total number of parts associated with the breakdown item. This value is automatically

Option	Description
	updated when you update the project schedule status. Type the total number of parts in the **Part Quantity** field.
Weight	The total material weight associated with the breakdown item. This value is automatically updated when you update the project schedule status. Type the total weight in the **Weight** field.

3. Click the **Apply to Tasks** tab to open it.
4. To select the schedule tasks to which the breakdown item is applied, do one of the following:
   - To apply the breakdown item to all schedule tasks, select the **All** check box.
   - To only apply the breakdown item to specific schedule task, click **Select**, use the arrow buttons to move the desired tasks to the **Included** list, and click **OK**.

   When you apply the breakdown item to a task, the task becomes a summary task with sub-tasks automatically created under it for each sub-item.
5. Do any of the following to determine which links will be applied between the sub-tasks:
   a. According to your needs, do one of the following:
      - To create a link from the previous breakdown item to the current one, select the **Link from Previous Breakdown Item** check box.

        The **Link from Previous Breakdown Item** cannot be selected if the current breakdown item is the first breakdown item or the first sub-item under a main breakdown item.
      - To create a link from any previous breakdown item with the same main breakdown item to the current one, click the arrow on the right side of the **Link from Specific Breakdown Item** field, and select a breakdown item in the list.

        Links will be created from the sub-task associated with that breakdown item.

   b. Click the arrow on the right side of the **Link Type** field and select a link type in the list.

      The options are:
      - **Start-Start**
      - **Finish-Start**

- **Start-Finish**
- **Finish-Finish**

c. In the **Minimum Interval** field, type the minimum number of working days between the two sub-tasks.

For example, to create a link from the start of a sequence to the start of a second sequence, the second sequence starting 5 working days after the previous one, you should set the link details as follows:

- **Link Type**: **Start-Start**
- **Minimum Interval**: `5 days`

6. Click **Add**.

The breakdown item and its link details are added to the project schedule. You can see the breakdown item in the navigation tree on the left side of the dialog box.

Modify a breakdown item

You cannot modify breakdown items if you are currently viewing a snapshot. For more information, see View changes in the project schedule and add savepoints (page 620).

1. On the **Project Breakdown** tab of the **Project Schedule** dialog box, click the breakdown item that you want to modify.
2. Click **Properties**.
3. Modify the properties of the breakdown item according to your needs:

Option	Description
Sequence, **Lot #**, **Category**, **Sub-Category**, **Pay Category**	The breakdown value that associates the breakdown item with the relevant project data. Note that the breakdown value must match the project data exactly. For example, the sequence number in the **Sequence** field must be exactly the same as in the production control job. Otherwise, the project data cannot be updated properly. Type the breakdown value in the field.
Description	The description of the breakdown item. For example, `First floor beams and columns`. Type a description in the **Description** field.
Include in Task Description	When selected, the breakdown item description will be included in the task description in addition to the breakdown value. For example, if the description of sequence 6 is `Third Floor Beams`, and the **Include in Task**

Option	Description
	Description check box is selected, the description of the resulting task in the Gantt chart will be `Sequence: 6 - Third Floor Beams`. Instead, if the **Include in Task Description** check box is cleared, then the description of the task in the Gantt chart will be `Sequence: 6`.
Assembly Quantity	The total number of assemblies associated with the breakdown item. This value is automatically updated when you update the project schedule status. Type the total number of assemblies in the **Assembly Quantity** field.
Part Quantity	The total number of parts associated with the breakdown item. This value is automatically updated when you update the project schedule status. Type the total number of parts in the **Part Quantity** field.
Weight	The total material weight associated with the breakdown item. This value is automatically updated when you update the project schedule status. Type the total weight in the **Weight** field.

4. Click the **Apply to Tasks** tab to open it.
5. To modify the schedule tasks to which the breakdown item is applied, do one of the following:
   - To apply the breakdown item to all schedule tasks, select the **All** check box.
   - To only apply the breakdown item to specific schedule task, click **Select**, use the arrow buttons to move the desired tasks to the **Included** list, and click **OK**.
6. Do the following to modify which links will be applied between the sub-tasks:
   a. Do one of the following:
      - To create a link from the previous breakdown item to the current one, select the **Link from Previous Breakdown Item** check box.

        The **Link from Previous Breakdown Item** cannot be selected if the current breakdown item is the first breakdown item or the first sub-item under a main breakdown item.
      - To create a link from any previous breakdown item with the same main breakdown item to the current one, click the arrow on the

right side of the **Link from Specific Breakdown Item** field, and select a breakdown item in the list.

Links will be created from the sub-task associated with that breakdown item.

b. Click the arrow on the right side of the **Link Type** field and select a link type in the list.

The options are:

- **Start-Start**
- **Finish-Start**
- **Start-Finish**
- **Finish-Finish**

c. In the **Minimum Interval** field, type the minimum number of working days between the two sub-tasks.

7. Click **Save** to update the breakdown item properties.

Change the priority of a breakdown item

Moving breakdown items up or down in the list changes their priority. If you move a breakdown item up, its priority is swapped with the previous breakdown item, whereas if you move a breakdown item down, its priority is swapped with the following breakdown item. For example, moving an item with the priority 1.3 up would change its priority to 1.2.

You cannot move breakdown items up or down if you are currently viewing a snapshot. For more information, see View changes in the project schedule and add savepoints (page 620).

1. On the **Project Breakdown** tab of the **Project Schedule** dialog box, click the breakdown item that you want to move.
2. Click the **Move Up** and **Move Down** buttons.
3. In the confirmation dialog box, click **Yes** to confirm moving the breakdown item.

Delete a breakdown item

Note that deleting a breakdown item is permanent and cannot be undone. All sub-items of the selected breakdown item are deleted as well.

You cannot delete a breakdown item if you are currently viewing a snapshot. For more information, see View changes in the project schedule and add savepoints (page 620).

1. On the **Project Breakdown** tab of the **Project Schedule** dialog box, click the breakdown item that you want to delete.
2. Click **Delete**.

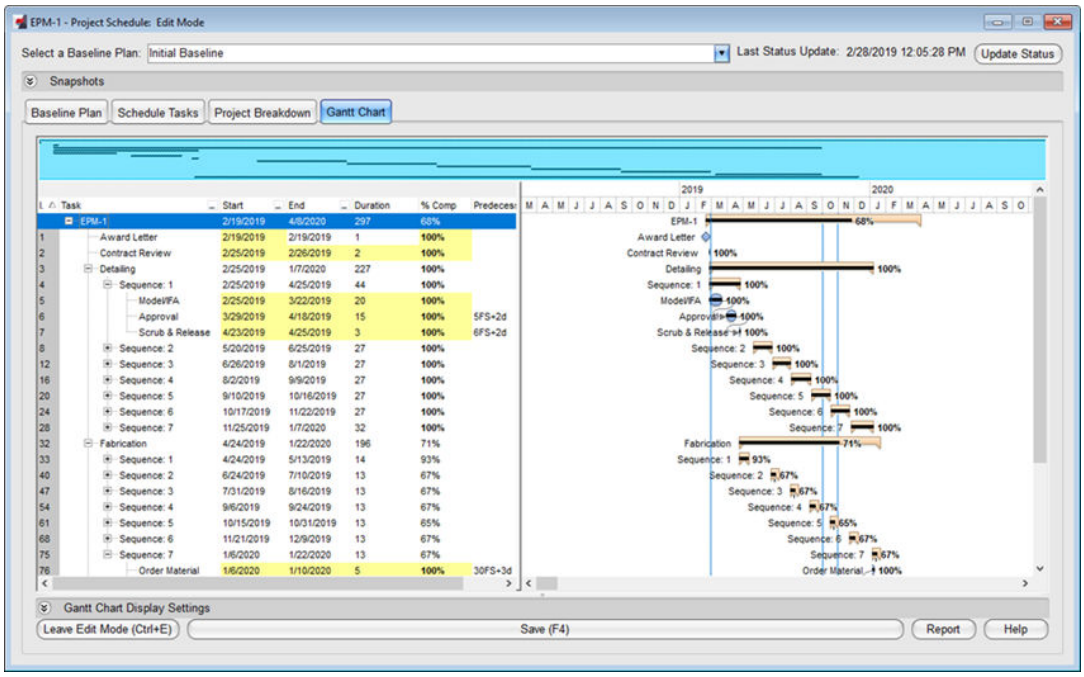
3. In the confirmation dialog box, click **Yes** to permanently delete the breakdown item.

Modify the Gantt chart

The chart on the **Gantt Chart** tab of the **Project Schedule** dialog box gives you a visual representation of the schedule. You can modify the view of the Gantt chart according to your needs by including and excluding items, and scaling the chart. You can also move the tasks in the Gantt chart to move them earlier or later in the project schedule.

To modify the Gantt chart, do the following:

1. In the **Project Schedule** dialog box, click the **Gantt Chart** tab to open it.
2. To enable modifying the information, click **Enter Edit Mode** in the lower-left corner, or press **Ctrl+E** on the keyboard.



In the Gantt chart, you can see the following information:

- The left side of the tab shows the properties of schedule tasks.
- The right side of the tab shows the schedule tasks visually as bars on the time line.

  The tasks look different and behave differently depending on their task type:

  - **Summary** tasks (or main tasks) are displayed as orange bars. A summary task cannot be re-sized directly. Instead, you can re-size and move the sub-tasks to change the duration or dates of the summary

task. When a summary task is moved earlier or later, the sub-tasks are moved by the same number of days.

  - **Start/End** tasks are displayed as blue bars. **Start/End** tasks can be re-sized and moved in the Gantt chart.
  - **Milestone** tasks are displayed as blue diamonds. Milestones can be moved in the Gantt chart, but they cannot be re-sized.

- Links between tasks are represented by arrows from the predecessor tasks to the successor tasks.
- Any cells that are highlighted with yellow can be modified.

Right-click anywhere in the Gantt chart to find shortcuts to more commands:

- **Goto Task** zooms to the beginning of the bar of the selected task.
- **Time Tracking Summary** opens the **Time Tracking Summary** dialog box. For more information, see Add, modify, and view time tracking information (page 645).
- **Time Tracking Detail** opens the **Time Tracking Detail** dialog box. For more information, see Add, modify, and view time tracking information (page 645).
- **Time Tracking Input** opens the **New Time Tracking Record** dialog box. For more information, see Add, modify, and view time tracking information (page 645).
- **Production Schedule** allows you to view the production schedule. For more information, see View the production schedule (page 767).
- **Date Filter** allows you to select a date range that you want to see in the Gantt chart. When you apply the filter, tasks that are at least partially within the entered date range will be visible.
- **Scale chart to** options: scale the Gantt chart to day, week, or month, according to your needs.
- **Show Links**/**Hide Links** shows or hides the links between tasks.
- **Show Overview**/**Hide Overview** shows or hides the overview section above the Gantt chart.
- **Expand All** expands all summary tasks so that all sub-tasks are visible.
- **Expand Summary** expands the task hierarchy so that all summary tasks are visible. Sub-tasks are not displayed.
- **Expand Level** expands the selected task and other tasks with the same main task.
- **Collapse All** collapses all summary tasks.
- **Save Image** allows you to save the Gantt chart as a single image file.

Modify the dates of tasks

1. Do one of the following:
   - Click the **Start** or **End** cell of the task, and select a date in the calendar.
   - Click the task bar, hold down the left mouse button, drag the task earlier or later in the schedule, and release the left mouse button.

   Note that:
   - If the task has one or more predecessor links, the bar cannot be moved earlier than the predecessor tasks and link intervals determine.
   - If the task has one or more successor links, when the task is moved later, the successor tasks will also be moved later, if that is necessary to maintain the link interval.

   Repeat this process for all tasks to move them in the correct locations.
2. Click **Save**.

Modify the duration of tasks

1. Do one of the following:
   - Click the **Duration** cell of the task and type a new value in the cell.
   - Move the mouse pointer over the beginning or the end of the task bar until a two-headed arrow appears, drag the start or end position of the bar earlier or later, and release the mouse button.

   Note that:
   - If the task has one or predecessor links, the bar cannot be changed to start earlier than the predecessor tasks and link intervals determine.
   - If the task has one or more successor links, when the task is changed to end earlier, any successor tasks will be moved earlier by the same number of days in order to keep their relative position the same.
   - If the task has one or more successor links, when the task is changed to end later, the successor tasks will be moved later, if that is necessary to maintain the link interval.
2. Click **Save**.

Modify task properties

On the left side of the Gantt chart, you can modify the task properties, such as the duration, completion percentage, or used resource.

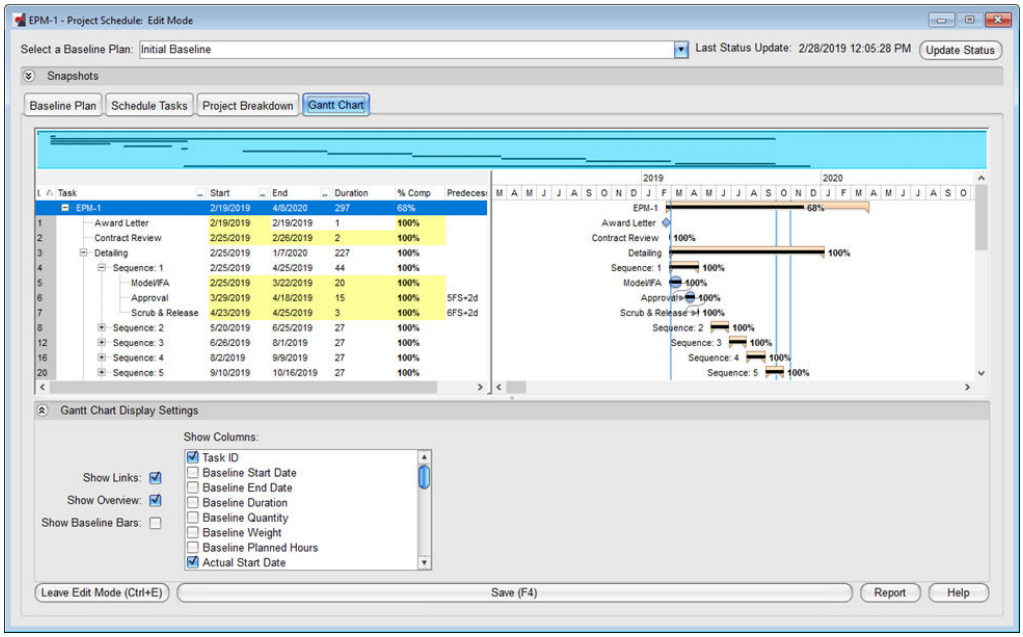
Note that only cells that are highlighted with yellow can be modified.

1. On the left side of the dialog box, click a cell of the task.
2. Modify the value in the cell according to your needs.

3. Click **Save** to update the project schedule.

Modify display settings

1. Click the arrow on the right side of **Gantt Chart Display Settings** to expand the display settings.



2. Modify the following options according to your needs:

Option	Description
Task ID	The unique identifier of the task in the project schedule.
Baseline Start Date, **Baseline End Date**	The start and end dates of the task when the baseline was set. If the baseline has not been set, the **BL Start** and **BL End** cells are blank.
Baseline Duration	The duration of the task when the baseline was set. If the baseline has not been set, the **BL Duration** cells are blank.
Baseline Quantity	The quantity of the task when the baseline was set. If the baseline has not been set, the **BL Quantity** cells are blank.
Baseline Weight	The weight of the task when the baseline was set. If the baseline has not been set, the **BL Weight** cells are blank.

Option	Description
Baseline Planned Hours	The total planned hours of the task when the baseline was set. If the baseline has not been set, the **BL Hours** cells are blank.
Actual Start Date	The actual start date of the task in the project schedule. To change the start date, click the arrow on the right side of the **Start** cell, and select a date in the calendar. When you change the start date, the task will move to the selected date in the Gantt chart. The duration of the task will remain the same, so the task will not be resized.
Actual End Date	The actual end date of the task in the project schedule. To change the end date, click the arrow on the right side of the **End** cell, and select a date in the calendar. When you change the end date, the duration of the task will change accordingly in the Gantt chart, and the task will be re-sized.
Actual Duration	The actual duration of the task in the project schedule. To change the duration, type a new value in the **Duration** cell. When you change the duration, the end task of the task will change accordingly in the Gantt chart, and the task will be re-sized.
Actual Quantity	The quantity related to the task in the bill of materials. This value is set when you update the project schedule (page 644).
Actual Weight	The weight related to the task in the bill of materials. This value is set when you update the project schedule (page 644).
Percent Completed	The percentage of the task that is completed. To change the percentage, click the **% Comp** cell and type a percentage in the cell. When you change the percentage, the percentage completed of the main tasks will automatically be

Option	Description
	updated based on the summary status method task setting. For more information, see Add, modify, and delete schedule tasks (page 622).
Original Estimate	The number of original estimate hours applied to the task. If the task is divided by sequences, lots, or other breakdown fields, the hours will be distributed to the resulting tasks on the Gantt Chart, weighed by duration. To adjust the original estimate hours, click the **Orig. EST** cell and type the number of hours in the field. When you adjust the original estimate hours, the adjusted number of hours will appear in italics in the Gantt Chart. The remaining hours will be redistributed among the tasks that have not been manually adjusted. You can return to the automatic distribution of hours by clearing the value in the **Orig. EST** cell.
Unreleased Hours	The number of original estimate hours that have not yet been released, calculated by the **Percent Released** value. For example, if the original estimate is 500 hours and the task is 20% released, the number of unreleased hours will be 400.
Planned Hours (**Base Hours**)	The planned hours that have been released. Tasks that have the **Status Link** option selected will have this field updated automatically when the project schedule status is updated (page 644). For more information, see Add, modify, and delete schedule tasks (page 622).
Adjustment Hours	Allows you to manually adjust the planned hours. To adjust the number of planned hours, click the **Adjustment** cell, and type a value.
Percent Released	The percentage of the original estimate hours that have been released and that appear in the **Base Hours** field. This field will update automatically when the planned hours are updated. For example, if the original estimate is 500 hours and the planned hours is updated to 100 hours, the percentage released is 20%. This will in turn update the unreleased hours to 400.

Option	Description
	Once all material associated with a task has been released, the percent released may need to be manually adjusted, so that no further unreleased hours are included in the total planned hours. Let's say that a task is broken out into 4 sequences and the original estimate is 2,000 hours. If all 4 sequence tasks have the same duration, each one will receive 500 of the original estimate hours. The drawings are submitted for sequence 1, and after the next status update, the planned hours are set to 100 hours, which will update the percent released to 20%. Since Tekla EPM does not know if all of sequence 1 has been received, the remaining unreleased hours will still be included in the total planned hours calculation. If everything has in fact been received for sequence 1, you can manually set the percent to 100%, so that no further unreleased hours will be included in the total planned hours. To adjust the percentage, click in the **% Released** cell, and type a percentage in the cell. When you manually adjust the released hours, the number will appear in italics. When you have manually adjusted the percentage released, the value will not be automatically adjusted according to any changes made to the planned hours. To return to the automatic calculated value, clear the value in the cell.
Total Planned Hours (**Plan Hours**)	The total number of the unreleased hours, planned hours, and adjustment hours for the task.
Linked Hours	The number of hours updated according to the **Status Link** option. For example, the **Production Progress**, **Production Completed**, and **Station Progress** options will update the linked **Linked Hours** with the hours entered in **Piece Tracking**. For more information, see Add, modify, and delete schedule tasks (page 622). To adjust the number of linked hours, click the **Linked Hours** cell, and type the number of hours.
Regular Hours	The regular hours associated with the task, entered in time tracking. For more information, see Add, modify, and view time tracking information (page 645).
Overtime Hours	The overtime and double overtime hours associated with the task, entered in time tracking.

Option	Description
	For more information, see Add, modify, and view time tracking information (page 645).
Total Hours	The total hours worked on the task, coming from either the linked hours or the regular and overtime hours from time tracking. To ensure that the time is not duplicated, the time tracking hours override the linked hours. If the number of either regular or overtime hours is greater than zero, the total hours will be set to the regular hours plus the overtime hours. If the number of both regular and overtime hours is zero, the total hours will be set to the linked hours.
Utilization Percent	The utilization percentage is calculated as the percentage of the total hours compared to the total planned hours. For example, if the number of total planned hours is 500 and the number of total hours is 200, the utilization percentage will be 40%. If the utilization percentage is over 5% greater than the percentage of the task completed, the utilization percentage will be highlighted in red. In this example, if the percent completed is 35% or less, the utilization percentage of 40% will be highlighted in red.
Assigned to User	The user who is responsible for the task. For more information, see Add, modify, and delete schedule tasks (page 622). To change the assigned user, click the arrow on the right side of the **Assigned To** cell and select a user in the list.
Resource	The resource that the task has been assigned to for production scheduling purposes. For more information, see Add, modify, and delete schedule tasks (page 622) andView the production schedule (page 767). To change the resource, click the arrow on the right side of the **Resource** cell and select a resource in the list.
Predecessors	The linked tasks that are immediate predecessors of the task.
Successors	The linked tasks that are immediate successors of the task.

Option	Description
Show Links	When selected, Tekla EPM shows task links as arrows in the Gantt chart.
Show Overview	When selected, Tekla EPM shows the overview section above the Gantt chart.
Show Baseline Bars	When selected, Tekla EPM shows the baseline dates as a yellow bar on the Gantt chart as set when the baseline was set. The baseline overlay bars will not be shown if: • The baseline has not been set. • The task has the same start and end dates as the baseline dates. • The task has been added after the baseline was set.

3. Click **Save** to update the Gantt chart.

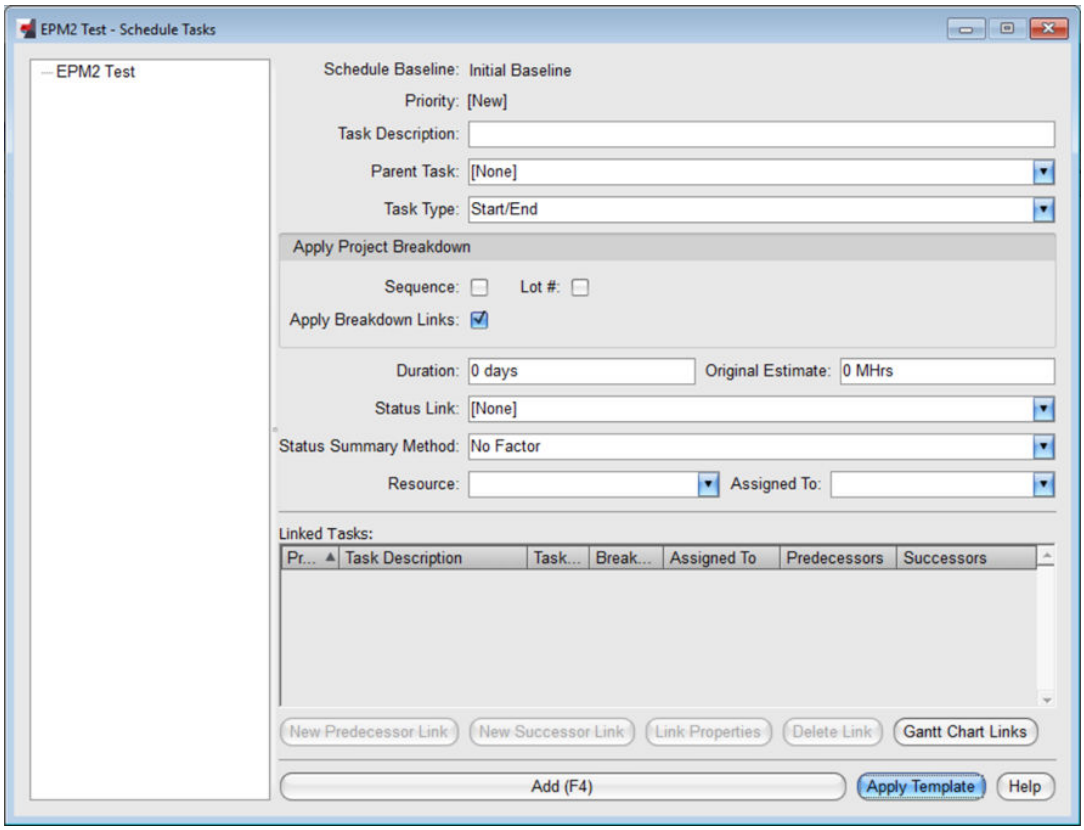
Print a Gantt chart report

You can create and print a report that is an exact copy of the Gantt chart. Note that all content that you have selected in the **Gantt Chart Display Settings** section will be visible in the report as well.

1. In the lower-right corner of the **Gantt Chart** tab, click **Report**.
2. In the **Print Review** dialog box, click **Setup...** and adjust the paper size, orientation, margins, and printer properties according to your needs.
3. Click **Print**.
4. When the report has been printed, click **Close** to close the **Print Review** dialog box.

Apply a schedule template

Schedule templates can contain all of the schedule items and attributes required for a typical setup. Existing schedules can be saved as templates, and then applied to a new job using the **Apply Template** button. The schedule can always be modified to fit the project requirements.



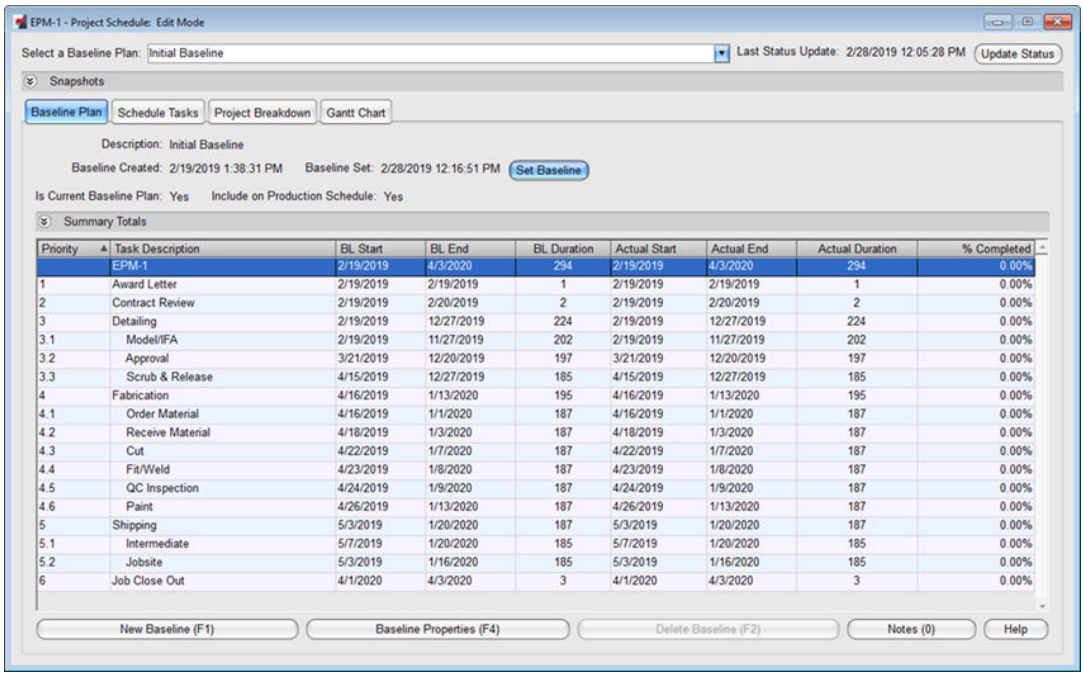
1. Open the **Schedule Tasks** dialog box.
2. In the lower-right corner, click **Apply Template**.
3. In the **Enter Value** dialog box, click the arrow on the right side of the field, and select the schedule template that you want to use.
4. Click **OK**.

   The schedule template is now applied to the project schedule.
5. Click the **Close** button (**X**) to close the **Schedule Tasks** dialog box.

Update the project schedule

When you update a project schedule, Tekla EPM collects all time and progress status information on the current project in **Production Control**, **Project Management**, and **Purchasing**. Once the update process is ready, all activity is updated to the chart on the **Gantt Chart** tab. For example, if drawings have been submitted and approved, the percentage completed for drawing submittal will be updated.

You can see the last time the project schedule was updated in the upper-right corner of the **Project Schedule** dialog box, after **Last Status Update**.



Priority	Task Description	BL Start	BL End	BL Duration	Actual Start	Actual End	Actual Duration	% Completed
	EPM-1	2/19/2019	4/3/2020	294	2/19/2019	4/3/2020	294	0.00%
1	Award Letter	2/19/2019	2/19/2019	1	2/19/2019	2/19/2019	1	0.00%
2	Contract Review	2/19/2019	2/20/2019	2	2/19/2019	2/20/2019	2	0.00%
3	Detailing	2/19/2019	12/27/2019	224	2/19/2019	12/27/2019	224	0.00%
3.1	Model/IFA	2/19/2019	11/27/2019	202	2/19/2019	11/27/2019	202	0.00%
3.2	Approval	3/21/2019	12/20/2019	197	3/21/2019	12/20/2019	197	0.00%
3.3	Scrub & Release	4/15/2019	12/27/2019	185	4/15/2019	12/27/2019	185	0.00%
4	Fabrication	4/16/2019	1/13/2020	195	4/16/2019	1/13/2020	195	0.00%
4.1	Order Material	4/16/2019	1/1/2020	187	4/16/2019	1/1/2020	187	0.00%
4.2	Receive Material	4/18/2019	1/3/2020	187	4/18/2019	1/3/2020	187	0.00%
4.3	Cut	4/22/2019	1/7/2020	187	4/22/2019	1/7/2020	187	0.00%
4.4	Fit/Weld	4/23/2019	1/8/2020	187	4/23/2019	1/8/2020	187	0.00%
4.5	QC Inspection	4/24/2019	1/9/2020	187	4/24/2019	1/9/2020	187	0.00%
4.6	Paint	4/26/2019	1/13/2020	187	4/26/2019	1/13/2020	187	0.00%
5	Shipping	5/3/2019	1/20/2020	187	5/3/2019	1/20/2020	187	0.00%
5.1	Intermediate	5/7/2019	1/20/2020	185	5/7/2019	1/20/2020	185	0.00%
5.2	Jobsite	5/3/2019	1/16/2020	185	5/3/2019	1/16/2020	185	0.00%
6	Job Close Out	4/1/2020	4/3/2020	3	4/1/2020	4/3/2020	3	0.00%

1. In the upper-right corner of the **Project Schedule** dialog box, click **Update Status**.

   The **Status Update** dialog box opens, displaying the progress of the update process.

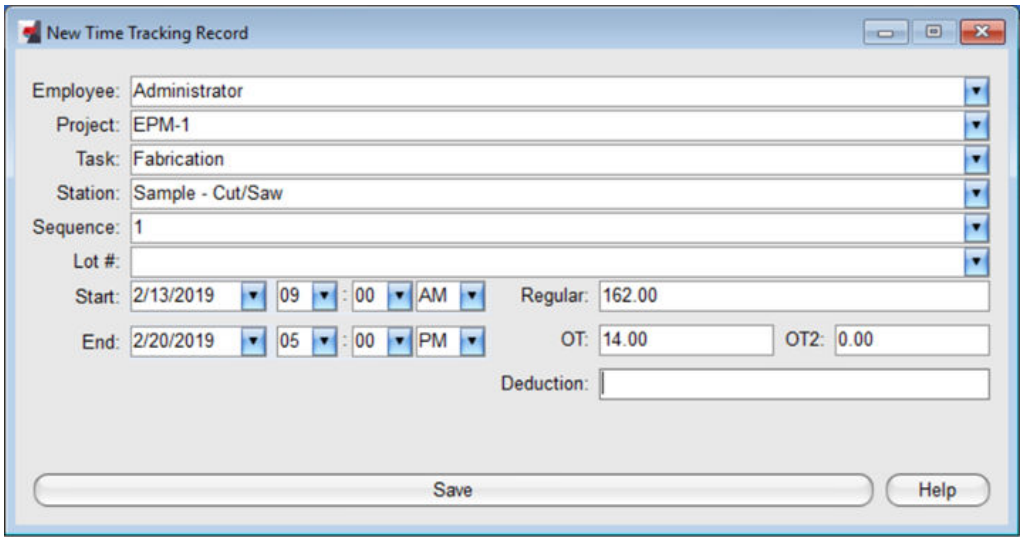
2. Once the update is completed, click the **Close** button (**X**) to close the **Status Update** dialog box.

Add, modify, and view time tracking information

Use the time tracking commands to add time tracking records to a project schedule, and to view and modify the existing time tracking records.

Add a time tracking record

1. In the **Project Schedule** dialog box, click the **Project Schedule** ribbon tab.
2. On the menu, select **Time Tracking Input**.



3. In the **New Time Tracking Record** dialog box, define the following properties:

Option	Description
Employee	The Tekla EPM user who is adding the record. Tekla EPM automatically uses the user that is logged in, but you can select another user as well. Note that the **Employee** field is optional. If you do not want the hours entered to be applied to a specific employee, you can leave the field blank. Click the arrow on the right side of **Employee** field, and select a user in the list.
Project	The project management job for which you are adding the time record. Click the arrow on the right side of **Project** field, and select a project management job in the list.
Task	The schedule task for which you are adding the time record. The **Task** field is optional. If you leave the field blank, the time record will be applied to the project as a whole. Click the arrow on the right side of **Task** field, and select a schedule task in the list.

Option	Description
Station	The station for which you are adding the time record. The **Station** field is optional. If you leave the field blank, the time record will be applied to the project as a whole. Click the arrow on the right side of **Station** field, and select a station in the list.
Sequence	The sequence for which you are adding the time record. The **Sequence** field is optional. If you leave the field blank, the time record will be applied to the project as a whole. Click the arrow on the right side of **Sequence** field, and select a sequence in the list.
Lot #	The lot for which you are adding the time record. The **Lot #** field is optional. If you leave the field blank, the time record will be applied to the project as a whole. Click the arrow on the right side of **Lot #** field, and select a lot number in the list.

4. Click the arrows on the right side of the **Start** and **End** fields, and select the start and end dates and times in the calendar.

   Tekla EPM automatically calculates the number of working hours. The calculation method that is used can be set in **Time Tracking Settings**.

5. If necessary, modify the working hours according to your needs:

   a. In the **Regular** field, type the time that will be logged as regular hours for the project, task, station, sequence, or lot.

   b. In the **OT** and **OT2** fields, type the time that will be logged as overtime and double overtime hours for the project, task, station, sequence, or lot.

   c. In the **Deduction** field, type the time used for unpaid activities, such as lunch. This time will not be logged against the project, task, station, sequence, or lot.

   If the start and end times and the hours that you added do not match, you can adjust the difference by double-clicking the field where you added hours. For example, if the difference between the start and end time is 2 hours and you enter 1.50 for regular hours, double-clicking the **OT** field will set its value to 0.50.

   If the total hours are less than the difference between the start and end time, the difference will automatically be added as deduction hours.

6. Click **Save**.

The record is added.

Note that Tekla EPM does not save the record if:

- Two time tracking records marked to the same Tekla EPM user overlap.
- A Tekla EPM user is selected and the total sum of regular, overtime, and double overtime hours is greater than the difference in the start and end time.

Modify, delete, or import time tracking records

1. In the **Project Schedule** dialog box, click the **Project Schedule** ribbon tab.
2. On the menu, select **Time Tracking Detail**.
3. In the **Time Tracking Filters** dialog box, click the arrows on the right side of the fields in the **Start Date** and **End Date** sections, and select the minimum and maximum start and end dates in the calendars.
4. To only view and modify specific time tracking records, click the available filtering buttons.
5. In the filter dialog box, click the arrow buttons to move the values that you want to include to the **Included** list.
6. Click **OK**.
7. Click **Apply Filter**.

   The **Time Tracking Detail** dialog box opens, displaying all previously created time tracking records.

   To only view records that match particular criteria, you can select items in the navigation tree on the left.
8. Do any of the following:

To	Do this
Modify a time tracking record	a. Click **Properties**. b. Modify the properties of the time tracking record. For more information, see Add a time tracking record. c. Click **Save** to update the time tracking record.
Import time tracking records	a. Click the **Time Tracking Detail** ribbon tab. b. On the menu, select **Import Time Tracking Records - Excel**. c. In the **Open** dialog box, browse to find the file that you want to import.

To	Do this
	d. Double-click the file. e. In the **Verify Excel Import Data** dialog box, verify the time tracking information. f. If you want to exclude a row in Microsoft Excel, hold down **Alt** and double-click a row. g. Click **OK**. h. In the **Import Field Map** dialog box, click an import field in the list. i. Select the corresponding field in the **Tekla EPM Field** list and click **Set Field Mapping**. j. Click **OK**. The import starts. k. When the import is completed, click **Open Import Log** and view the import details. l. Click the **Close** button (**X**) to close the import log and the **Import** dialog box.
Delete time tracking records	Note that deleting time tracking records is permanent and cannot be undone. a. In the **Time Tracking Detail** dialog box, click the time tracking records that you want to delete. To select multiple items, hold down **Ctrl**. To select a range of subsequent items, hold down **Shift**. b. Click the **Time Tracking Detail** ribbon tab. c. On the menu, select **Delete Selected Records**. d. In the first confirmation dialog box, click **Yes**. e. In the second confirmation dialog box, click **Yes** to permanently delete the tracking records.

View a time tracking summary

1. In the **Project Schedule** dialog box, click the **Project Schedule** ribbon tab.
2. On the menu, select **Time Tracking Summary**.
3. In the upper-left corner of the **Time Tracking Filters** dialog box, select the fields that you want to view in the time tracking summary.

   The selected fields will be columns in the summary.

4. Click the arrows on the right side of the fields in the **Start Date** and **End Date** sections, and select the minimum and maximum start and end dates in the calendars.
5. To only view and modify specific time tracking records, click the available filtering buttons.
6. In the filter dialog box, click the arrow buttons to move the values that you want to include to the **Included** list.
7. Click **OK**.
8. Click **Apply Filter**.

   A dialog box opens, displaying a summary of the time tracking records created.
9. View the time tracking information.
10. Do any of the following:
    - To create a new time tracking record, click **New**.

      For more information, see Add a time tracking record.
    - To access the **Time Tracking Detail** dialog box, click **Time Tracking Detail**.

      For more information, see Modify, delete, or import time tracking records.
    - To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Export the project schedule to XML format

You can export the project schedule and save it in the desired folder as an XML file. You can select from two XML options: either the option used in Primavera, or the option used in Microsoft Projects.

1. In the **Project Schedule** dialog box, click the **Project Schedule** ribbon tab.
2. On the menu, select **Export**, and then, select the preferred XML option.
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. Click **Save**.

The project schedule is saved in the selected location as an XML file.

Create a project schedule report

You can create different project schedule reports according to your needs. You can either view the completion percentage and duration of the schedule tasks, or compare the changes made to schedule tasks from one baseline plan to another.

1. In the **Project Schedule** dialog box, click the **Project Schedule** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. Click the arrow on the right side of the **Baseline Plan** field of the **Schedule Report** dialog box, and select the baseline plan that you want to use in the report.
4. If you wish, add a snapshot of the selected baseline plan to the report by clicking the arrow on the right side of the **Snapshot** field, and selecting a snapshot in the list.

   If you only want to select from snapshots marked as savepoints, select the **Only Show Savepoints** check box.
5. If you want to compare two different versions of the project schedule, do the following:
   a. Select the **Run Comparison Report** check box.
   b. Click the arrow on the right side of the lower **Baseline Plan** field, and select a baseline plan in the list.
   c. Click the arrow on the right side of the lower **Snapshot** list, and select a snapshot in the list.

      To be able to compare two versions of a project schedule, ensure that you select a different baseline plan and snapshot than in the lists above.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, click the report that you want to view, print, or export.

   For comparison, click the **Comparison Report** to view the tasks that have changed between the two baseline plans.
8. According to your needs, do any of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

To	Do this
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. In the confirmation dialog box, click **Yes** to confirm printing the report. d. In the **Select Printer** dialog box, click a printer to select it. e. Click **OK**.
Export the report	a. In the **Report Selection** dialog box, click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. Click **Save**. g. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. h. To open the file after exporting it, select the **Open Exported Document** check box. i. In the **Report Selection** dialog box, click **Export**.

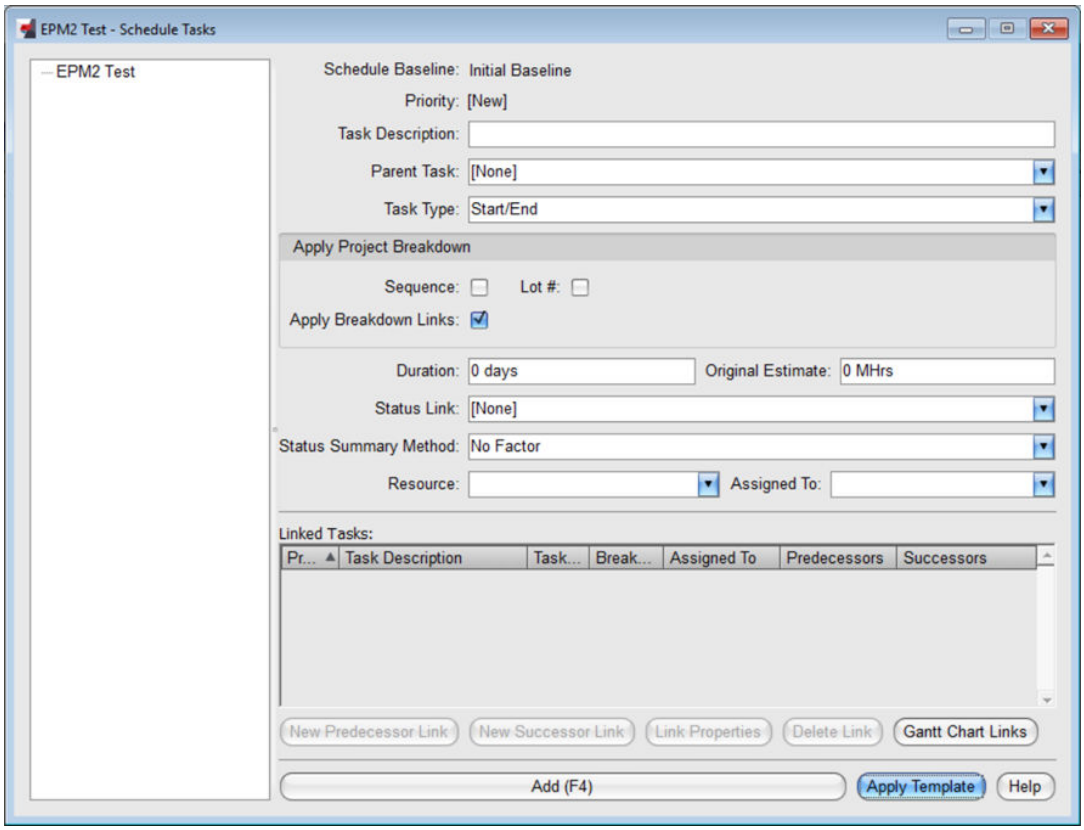
9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Example: Create a project schedule

The following steps provide an example workflow for creating a project schedule in the **Project Schedule** dialog box.

1. Apply a schedule template

Schedule templates can contain all of the schedule items and attributes required for a typical setup. Existing schedules can be saved as templates, and then applied to a new job using the **Apply Template** button. The schedule can always be modified to fit the project requirements.

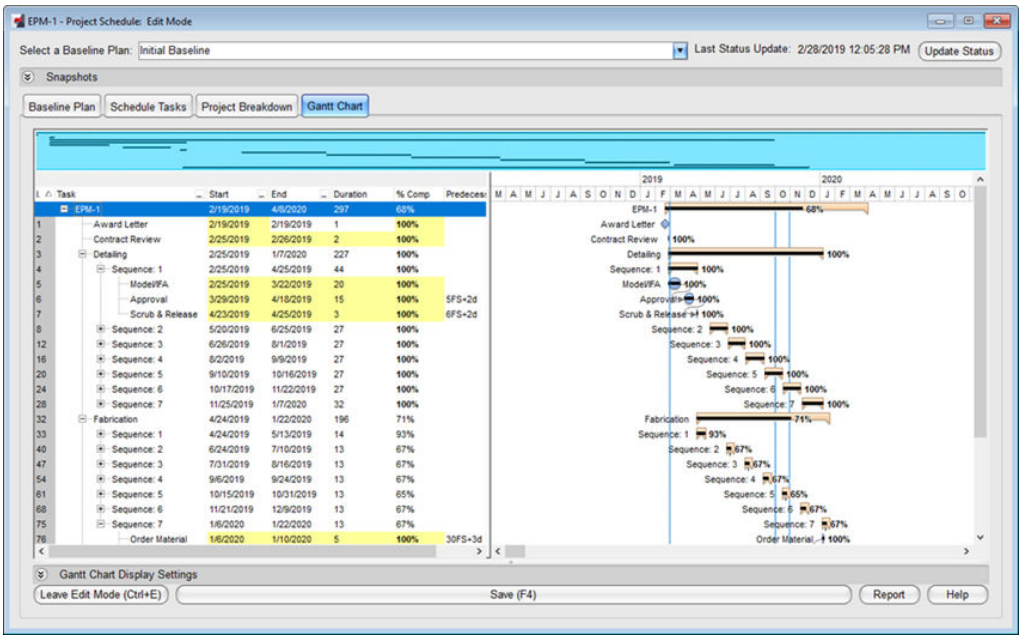


1. Open the **Schedule Tasks** dialog box.
2. In the lower-right corner, click **Apply Template**.
3. In the **Enter Value** dialog box, click the arrow on the right side of the field, and select the schedule template that you want to use.
4. Click **OK**.

   The schedule template is now applied to the project schedule.
5. Click the **Close** button (**X**) to close the **Schedule Tasks** dialog box.

2. Modify the schedule dates

1. Open the **Gantt Chart** tab.



2. Click **Enter Edit Mode**.

   Any information that is highlighted with yellow can be modified.

3. To modify what is shown in the chart, click the arrows on the left side of **Gantt Chart Display Settings** and select the check boxes for items that you want to show.

   For more information on the display settings, see Modify the Gantt chart (page 635).

4. Click **Save** to update the view.

   You can also modify if the chart displays time as days, weeks, or months. To do so, right-click anywhere in the chart, and select the suitable **Scale chart to** option.

5. To modify the dates of tasks in the chart, do one of the following:

   - Click the **Start** or **End** cell of the task, and select a date in the calendar.
   - Click a task, hold down the left mouse button, drag the task to the right location, and release the left mouse button.

   Repeat this process for all tasks to move them in the correct locations.

6. Click **Save**.

3. Set the baseline

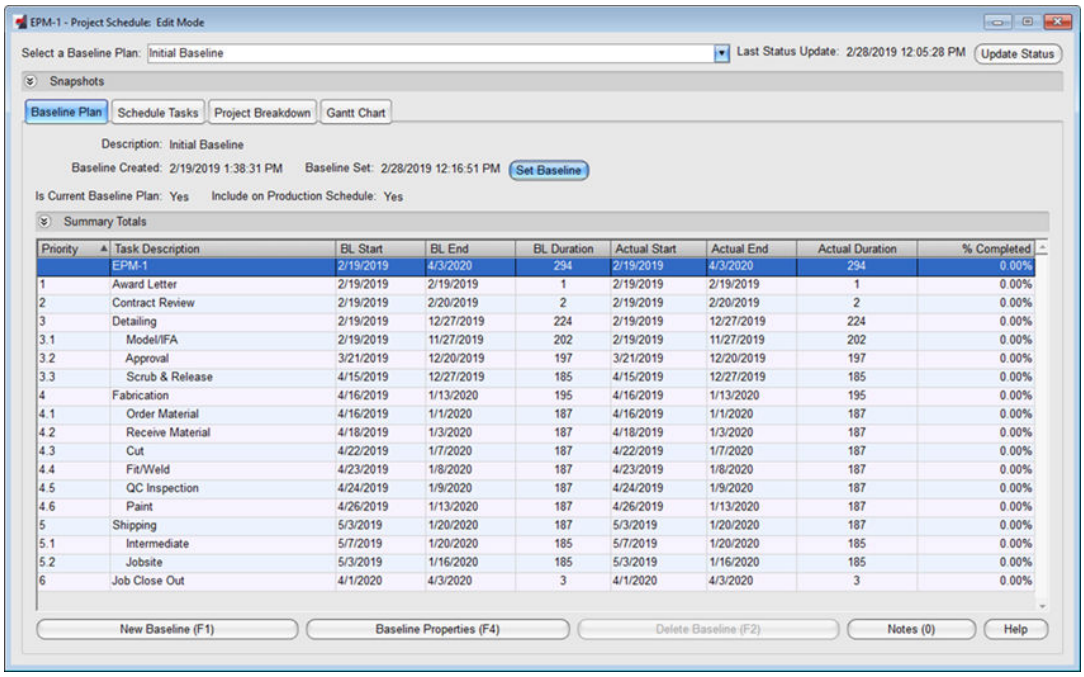
When tasks have been moved to the desired dates, you need to set the project baseline. You can later compare the baseline duration to the actual duration

during the project. The baseline also sends information to the production schedule.

If you have modified the dates on the **Gantt Chart** tab, you can set the baseline easily. Do the following:

1. Click the **Baseline Plan** tab to open it.
2. Click **Set Baseline**.
3. In the confirmation dialog box, click **Yes** to set the baseline values.

The baseline is saved, and the baseline dates update in the blank columns.



Priority	Task Description	BL Start	BL End	BL Duration	Actual Start	Actual End	Actual Duration	% Completed
	EPM-1	2/19/2019	4/3/2020	294	2/19/2019	4/3/2020	294	0.00%
1	Award Letter	2/19/2019	2/19/2019	1	2/19/2019	2/19/2019	1	0.00%
2	Contract Review	2/19/2019	2/20/2019	2	2/19/2019	2/20/2019	2	0.00%
3	Detailing	2/19/2019	12/27/2019	224	2/19/2019	12/27/2019	224	0.00%
3.1	Model/IFA	2/19/2019	11/27/2019	202	2/19/2019	11/27/2019	202	0.00%
3.2	Approval	3/21/2019	12/20/2019	197	3/21/2019	12/20/2019	197	0.00%
3.3	Scrub & Release	4/15/2019	12/27/2019	185	4/15/2019	12/27/2019	185	0.00%
4	Fabrication	4/16/2019	1/13/2020	195	4/16/2019	1/13/2020	195	0.00%
4.1	Order Material	4/16/2019	1/1/2020	187	4/16/2019	1/1/2020	187	0.00%
4.2	Receive Material	4/18/2019	1/3/2020	187	4/18/2019	1/3/2020	187	0.00%
4.3	Cut	4/22/2019	1/7/2020	187	4/22/2019	1/7/2020	187	0.00%
4.4	Fit/Weld	4/23/2019	1/8/2020	187	4/23/2019	1/8/2020	187	0.00%
4.5	QC Inspection	4/24/2019	1/9/2020	187	4/24/2019	1/9/2020	187	0.00%
4.6	Paint	4/26/2019	1/13/2020	187	4/26/2019	1/13/2020	187	0.00%
5	Shipping	5/3/2019	1/20/2020	187	5/3/2019	1/20/2020	187	0.00%
5.1	Intermediate	5/7/2019	1/20/2020	185	5/7/2019	1/20/2020	185	0.00%
5.2	Jobsite	5/3/2019	1/16/2020	185	5/3/2019	1/16/2020	185	0.00%
6	Job Close Out	4/1/2020	4/3/2020	3	4/1/2020	4/3/2020	3	0.00%

4. Add project breakdown information

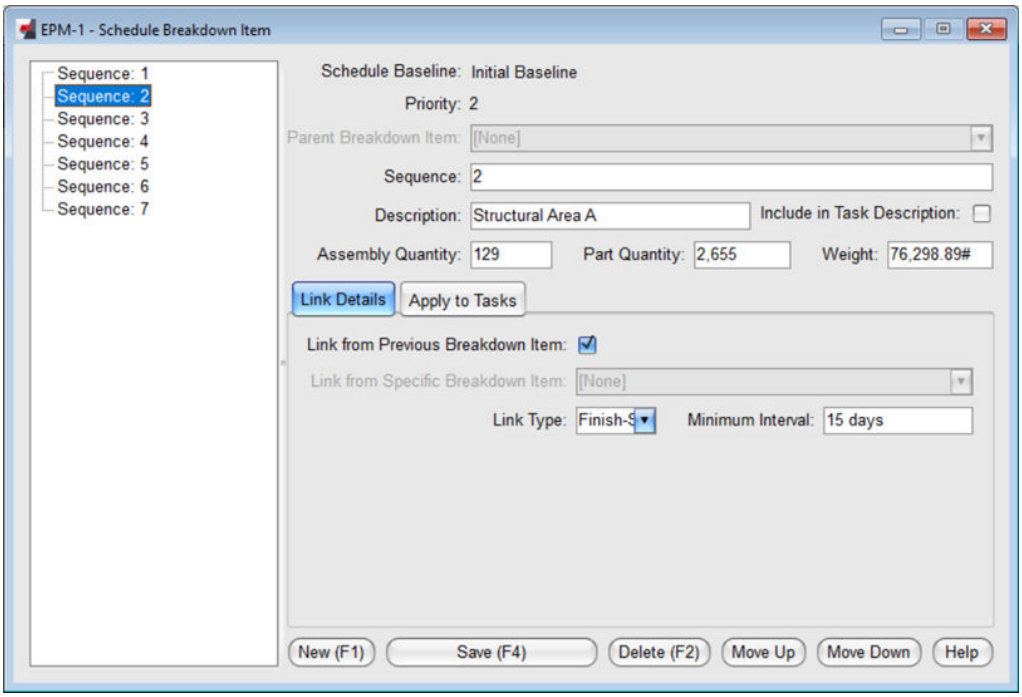
Use the **Project Breakdown** to divide a project into sub-tasks in order to schedule and track the completion of the task. For example, if your project has sequences and lot numbers, they should be added as breakdown items. You can also apply the breakdown items to the desired schedule tasks and link the breakdown items to each other.

For more information, see Add, modify, and delete breakdown items (page 629).

1. Open the **Project Breakdown** tab.
2. Click **New**.
3. In the **Schedule Breakdown Item** dialog box, enter the exact sequence number in the **Sequence** field.
4. If necessary, add a description or other information about the breakdown item.

5. Click **Add**.

   Repeat steps 2 to 5 for all sequences.



6. To add a lot, do the following:

   a. Click **New**.

   b. Click the arrow on the right side of the **Parent Breakdown Item** field, and select a sequence in the list.

   c. In the the **Lot #** field, type the exact lot number.

   d. Add a description or other information about the lot.

   e. Click **Add**.

   Repeat steps a to e for all necessary lots.

8.5 Define time tracking settings

In the **Time Tracking Settings** dialog box, you can define the settings that control adding and modifying time tracking records.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Time Tracking Settings**.
3. On the **Standard Fields** tab of the **Time Tracking Settings** dialog box, modify the included fields as follows:

a. If you want to display a field when adding a time tracking record and allow the user to type information to the field, select the **Show Field** check box next to the field.

b. If you want to make the field mandatory, select the **Required** check box.

   The user needs to type information in a required field in order to add a time tracking record.

c. To change the title of the field in the **New Time Tracking Record** dialog box, type a new name in the **Title** field.

Repeat steps a to c for all necessary fields.

4. On the **User Defined Fields** tab, define any custom fields as follows:

   a. If you want to display a field when adding a time tracking record and allow the user to type information to the field, select the **Show Field** check box next to the field.

   b. If you want to make the field mandatory, select the **Required** check box.

      The user needs to type information in a required field in order to add a time tracking record.

   c. To name the field, type a name in the **Title** field.

   Repeat steps a to c to create all necessary fields.

5. To enable adding a time tracking record without start and end time, on the **Input Settings** tab, select the **Allow date entry only (without time)** check box.

6. On the **Input Settings** tab, select how Tekla EPM calculates the time:

   - **Compute start time from end time and hours**: When you change the times of an input record, the start time is automatically calculated according to the end time and the total hours.
   - **Compute end time from start time and hours**: When you change the times of an input record, the end time is automatically calculated according to the start time and the total hours.
   - **Compute hours from start time and end time**: When you change the start or end time, the regular hours are automatically calculated.

   Note that you can select either **Compute start time from end time and hours** or **Compute end time from start time and hours**, not both.

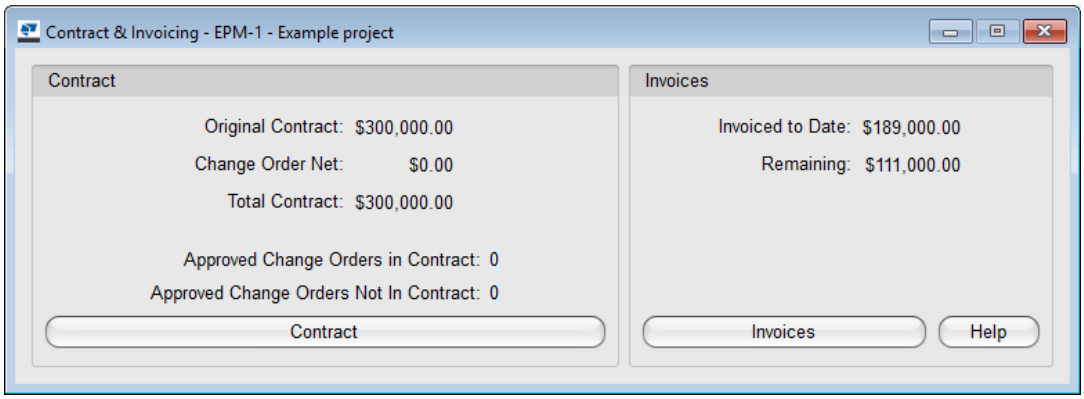
7. To save the time tracking settings, click **Save**.

8.6 Manage contract and invoicing information

In the **Contract & Invoicing** dialog box, you can view the current contract and invoice information, add new contract details and invoices, or modify contract and invoice information. The values set in **Contract & Invoicing** are used in the project schedule.

To access the contract and invoicing information:

- On the right side of the **Project** dialog box, click the **Contract & Invoicing** button.
- On the **Summary** tab of the **Project** dialog box, click **+** at the upper-right corner of the **Contract & Invoicing** section.



In the **Contract & Invoicing** dialog box, you can view the total sum of the contract, approved change orders included in the contract or not included in the contract, the sum that has been invoiced, and the sum that has not yet been invoiced.

For more information, see the following links:

Add and modify contract information (page 658)

Create and modify invoices (page 661)

Add and modify contract information

Use the **Contract Items** dialog box to add new contract items to either the original contract or a change order. Contract items represent parts of the contract, such as detailing or materials. You can also modify, move, or delete existing contract items. Furthermore, you can define and adjust the properties of the project contract.

To access the **Contract Items** dialog box, do the following:

- In the **Contract & Invoicing** dialog box, click **Contract**.

Add a contract item to the original contract

1. On the **Contract Items** tab of the **Contract Items** dialog box, click **New Contract Item**.
2. In the **Contract Item** dialog box, type a description for the contract item.

   The description is used in project management reports.
3. Click the arrow on the right side of the **Type** list and select **Original Contract**.
4. In the **Amount** field, type the costs of the contract item.
5. Click the arrow on the right side of the **Schedule Task** list, and select the project schedule task that you want to link to the new contract item.

   When you link a contract item to a schedule task, Tekla EPM automatically finds the completion percentage of the contract item from the project schedule. This allows you to automatically calculate the amount to be invoiced based on the completion percentage.
6. Type any additional notes about the contract item.
7. Click **Save**.

The new contract item is added to the list on the left-hand pane.

The **Contract & Invoicing** dialog box now shows the totals for the contract and the sum to be invoiced.

You can now create invoices for the contract item. For more information, see Create and modify invoices (page 661).

All invoices related to the contract item are displayed in the **Invoices** section, below the contract item properties.

Add a contract item to a change order

1. On the **Contract Items** tab of the **Contract Items** dialog box, click **New Contract Item**.
2. In the **Contract Item** dialog box, type a description for the contract item.

   The description is used in project management reports.
3. Click the arrow on the right side of the **Type** list and select **Change Order**.
4. Click the arrow on the right side of the **Schedule Task** list, and select the project schedule task that you want to link to the new contract item.

   When you link a contract item to a schedule task, Tekla EPM automatically finds the completion percentage of the contract item from the project schedule. This allows you to automatically calculate the amount to be invoiced based on the completion percentage.
5. Type any additional notes about the contract item.

6. Click **Save**.

   The new contract item is added to the list on the left-hand pane.

7. To define the costs of the contract item, go back to the **Project Management** dialog box, and click **Change Orders**.
8. In the **Change Orders** dialog box, select the change order that you want to link to the contract item.
9. Click the arrow on the right side of the **Contract Item** list, and select the new contract item.
10. Click **Edit** to save the changes.

When you return to the **Contract Item** dialog box, you can see that the costs of the selected change order are now used in the **Amount** field for the contract item. The selected change order is displayed in the **Change Orders** section, below the contract item properties.

The net amount of the change order will also be visible in the **Contract & Invoicing** dialog box.

Modify a contract item

1. On the left-hand pane of the **Contract Item** dialog box, select the contract item that you want to modify.
2. Modify the description, type, amount, schedule task, and notes according to your needs.
3. Click **Save** to update the contract item properties.

Move a contract item up or down

1. On the left-hand pane of the **Contract Item** dialog box, select the contract item that you want to move.
2. Click the **Move Up** and **Move Down** buttons to move the item to the desired position.

Delete a contract item

Deleting a contract item is permanent and cannot be undone.

Note that the contract items that have been invoiced cannot be deleted.

1. On the left-hand pane of the **Contract Item** dialog box, select the contract item that you want to delete.
2. Click **Delete**.
3. To permanently delete the contract item, click **Yes** in the confirmation dialog box.

Adjust the contract properties

1. In the **Contract Items** dialog box, click the **Other** tab to open it.
2. Adjust the contract properties:

Option	Description
Contract #	The contract number. The contract number is displayed in the standard **AIA G702** invoice form. Type the contract number in the **Contract #** field.
Contract For	A brief description of the contract, displayed in the standard **AIA G702** invoice form. Type a description in the **Contract For** field.
Retainage - Completed Work	The percentage of the invoiced completed work amount that is retained until the end of the project. The default value is 10%. Type a value in the **Retainage - Completed Work** field.
Stored Materials	The percentage of the invoiced stored materials amount that is retained until the end of the project. The default value is 10%. Type a value in the **Stored Materials** field.
Notes	Any additional notes or information about the contract.

3. Click **Save**.

   A message appears, telling you that the information has been saved.
4. Click **OK** to close the message.

Create and modify invoices

In the **Invoices** dialog box, you can create new invoices for contract items, modify or delete existing invoices, and create standard invoice documents or invoice reports.

To access the **Invoices** dialog box, do the following:

- In the **Contract & Invoicing** dialog box, click **Invoices**.

Create an invoice

1. In the **Invoices** dialog box, click **New Invoice**.
2. At the top of the **Invoices** dialog box, define the invoice properties:

Properties marked with an asterisk (*) are mandatory information.

Option	Description
Application # *	An identification number used to identify the invoice on the **AIA G702** and **AIA G703** reports. When creating a new invoice, the **Application #** field is automatically populated with the next available number. If necessary, type another number in the **Application #** field.
Invoice #	The invoice number used in your accounting software. Type the invoice number in the **Invoice #** field.
Date *	The date when the invoice was created. Click the arrow on the right side of the **Date** field, and select a date in the calendar.
Period Start *, **End **	Dates that determine the date range during which the worked that is billed on the invoice was completed. Click the arrows on the right side of the **Period Start** and **End** fields, and select the start and end dates in the calendars.
Retainage - Completed Work	The retainage percent applied to the completed work. Type a value in the **Retainage - Completed Work** field. Note that when you create the final invoice, the value needs to be set to `0%`, so that the retainage withheld from the previous invoices can be billed.
Stored Materials	The retainage percent applied to the stored materials. Type a value in the **Stored Materials** field. Note that when you create the final invoice, the value needs to be set to `0%`, so that the retainage withheld from the previous invoices can be billed.
Created By *	The Tekla EPM user who is creating the invoice. When creating a new invoice, the default user is the one that is currently logged in to Tekla EPM on the current workstation. If necessary, click the arrow on the right side of the **Created By** list and select another user.

Option	Description
Invoice To *	The company and contact person that will receive the invoice. Click the arrow on the right side of the leftmost **Invoice To** list and select the company. Click the arrow on the right side of the rightmost **Invoice To** list and select the contact person.
Notes	Any additional notes or information about the invoice. Type any information in the **Notes** field.

3. In the list in the middle of the **Invoices** dialog box, select the contract item for which you want to create the invoice.

   Note that the properties at the bottom of the dialog box change according to the selected contract item. If the contract item is linked to a schedule task, the **% Complete** field is populated automatically.

4. Do one of the following:

   - To apply the sum that is to be invoiced to the completed work according to the completion percentage, click **Apply to Completed Work**.
   - To apply the sum that is to be invoiced to the stored materials according to the completion percentage, click **Apply to Stored Materials**.
   - To manually determine the sum to be invoiced and apply it to the completed work or the stored materials, type the sum in either the **Current - Completed Work** field or the **Stored Materials** field.
   - To set the sum to the full amount remaining, double-click the **Current - Completed Work** field or the **Stored Materials** field.

   The next material in the list of contract items is selected.

   If necessary, to add the currently selected contract item to the invoice, repeat step 4.

5. Click **Save** to save the invoice.

Modify an invoice

1. In the **Invoices** dialog box, select the invoice that you want to modify.
2. Click **Properties**.

3. At the top of the **Invoices** dialog box, modify the invoice properties:

Option	Description
Application #	An identification number used to identify the invoice on the **AIA G702** and **AIA G703** reports. When creating a new invoice, the **Application #** field is automatically populated with the next available number. If necessary, type another number in the **Application #** field.
Invoice #	The invoice number used in your accounting software. Type the invoice number in the **Invoice #** field.
Date	The date when the invoice was created. Click the arrow on the right side of the **Date** field, and select a date in the calendar.
Period Start, **End**	Dates that determine the date range during which the work that is billed on the invoice was completed. Click the arrows on the right side of the **Period Start** and **End** fields, and select the start and end dates in the calendars.
Retainage - Completed Work	The retainage percent applied to the completed work. Type a value in the **Retainage - Completed Work** field. Note that when you create the final invoice, the value needs to be set to `0%`, so that the retainage withheld from the previous invoices can be billed.
Stored Materials	The retainage percent applied to the stored materials. Type a value in the **Stored Materials** field. Note that when you create the final invoice, the value needs to be set to `0%`, so that the retainage withheld from the previous invoices can be billed.
Created By	The Tekla EPM user who is creating the invoice. When creating a new invoice, the default user is the one that is currently logged in to Tekla EPM on the current workstation. If necessary, click the arrow on the right side of the **Created By** list and select another user.

Option	Description
Invoice To	The company and contact person that will receive the invoice. Click the arrow on the right side of the leftmost **Invoice To** list and select the company. Click the arrow on the right side of the rightmost **Invoice To** list and select the contact person.
Notes	Any additional notes or information about the invoice. Type any information in the **Notes** field.

4. If necessary, do either of the following:
   - To change if the invoiced amount is applied to the completed work or the stored materials, click either **Apply to Completed Work** or **Apply to Stored Materials**.
   - To manually change the amount to be invoiced, type a new value in the **Current - Completed Work** or the **Stored Materials** field.
5. Click **Save** to save the invoice.

Delete an invoice

Deleting an invoice is permanent and cannot be undone.

1. In the **Invoices** dialog box, select the invoice that you want to delete.
2. Click **Properties**.
3. In the lower-right corner of the **Invoices** dialog box, click **Delete**.
4. To permanently delete the invoice, click **Yes** in the confirmation dialog box.

View, print, or export invoice documents or invoice reports

1. In the **Invoices** dialog box, click the **Invoice** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. In the **Report Selection** dialog box, select the desired invoice report.

   The **AIA G702** and **AIA G703** reports are standard forms for creating invoices.

4. Do any of the following:

To	Do this
View the invoice document or invoice report	• In the **Report Selection** dialog box, click **View**. The selected report or document opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the invoice document or invoice report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. To confirm printing the document or report, click **Yes** in the confirmation dialog box. d. In the **Select Printer** dialog box, click a printer to select it. e. Click **OK**.
Export the invoice document or invoice report	a. In the **Report Selection** dialog box, click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Modify the file name according to your needs. e. Browse to the location where you want to save the exported file, and click **Save**. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. In the **Report Selection** dialog box, click **Export**.

5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

8.7 Import and export project management information

You can import drawing status information as an XML file, or export the production status to an XML file or to Trimble Connect.

See also

Import drawing status information (page 667)

Export the production status to Tekla Structures or Advance Steel (page 667)

Export the production status to SDS/2 (page 668)

Publish the production status to Trimble Connect (page 669)

Import drawing status information

Use the **Import** command to import drawing status from an XML file to Tekla EPM.

1. In the **Project Management** dialog box, click the **Project Management** ribbon tab.
2. On the menu, select **Import**.
3. In the **Open** dialog box, browse to find the XML file that you want to import.
4. Click the XML file to select it.
5. Click **Open**.
6. In the **Import Tekla EPM Exchange File** dialog box, view the import status.
7. When the import process is completed, click the **Close** button to close the **Import Tekla EPM Exchange File** dialog box.

Export the production status to Tekla Structures or Advance Steel

You can export the production status of the current job as an XML file to either Tekla Structures or Advance Steel.

1. Do one of the following:

Option	Description
Export the production status from the **Production Control** dialog box	a. In the **Production Control** dialog box, click the **Production Control** ribbon tab. b. On the menu, select **Export** --> **Export Production Status to XML - Tekla Structures**

Option	Description
	or **Export** --> **Export Production Status to XML - Advance Steel** .
Export the production status from the **Project Management** dialog box	a. In the **Project Management** dialog box, click the **Project Management** ribbon tab. b. On the menu, select **Data Exchange** --> **Export Production Status to XML - Tekla Structures** or **Data Exchange** --> **Export Production Status to XML - Advance Steel** .

2. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.

3. If necessary, change the file name.
4. Click **Save**.

The production status is saved in the selected location as an XML file.

See also

Export the production status to SDS/2 (page 668)

Export the production status to SDS/2

You can export the production status of the current job to SDS/2 as an XML file.

1. Do one of the following:

Option	Description
Export the production status from the **Production Control** dialog box	a. In the **Production Control** dialog box, click the **Production Control** ribbon tab. b. On the menu, select **Export** --> **Export Production Status to XML - SDS/2** .
Export the production status from the **Project Management** dialog box	a. In the **Project Management** dialog box, click the **Project Management** ribbon tab. b. On the menu, select **Data Exchange** --> **Export Production Status to XML - SDS/2** .

2. In the **SDS/2 Field Map** dialog box, define SDS/2 import settings as follows:
   a. Click **New Field**.
   b. In the **SDS/2 Object** list, select the SDS/2 object type.
   c. In the **SDS/2 Category** list, select a software solution for member properties.

d. In the **SDS/2 Field** list, select the field to which the information is exported in SDS/2.

e. In the **Tekla EPM Field** list, select the Tekla EPM field from which the information is exported to the selected SDS/2 field.

f. Click **New Field**.

Repeat steps a to f to match all necessary SDS/2 and Tekla EPM fields to each other.

If you want to save the SDS/2 import settings for later use, type a description for the settings in the **Description** field, and click **Save**.

3. Click **OK**.
4. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
5. If necessary, change the file name.
6. Click **Save**.

See also

Export the production status to Tekla Structures or Advance Steel (page 667)

Publish the production status to Trimble Connect

Use the **Publish Status to Trimble Connect** command to update the status of a production control job manually to Trimble Connect.

You can also create a **Publish to Trimble Connect** automated event (page 189) to update the production status to Trimble Connect automatically.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Export** --> **Publish Status to Trimble Connect** .

The production status is updated to Trimble Connect.

8.8 View, print, or export project management reports

You can create various reports containing information about the current project management job. For example, you can create a list of transmittals, a notice informing the recipient about overdue drawings, or a standard invoice.

Create a project management report

1. In the **Project Management** dialog box, click the **Project Management** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. To only include specific items in the report, in the **Project Management Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to include in the report to the **Included** list.
   - Type the maximum and minimum values for the items that you want to include in the report.
5. Click **OK**.
6. At the bottom of the **Project Management Report Filters** dialog box, select check boxes depending on which kind of reports you want to create.

   For example, to only create drawing reports, select the **Drawings** check box only.
7. Click **Make Report**.
8. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

View the report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

View, print, or export the project summary

Use the **Project Summary** command to view the project summary report of project management jobs that are linked to one or more of the following modules: **Production Control**, **Combining**, **Estimating**, and **Purchasing**.

By creating the project summary, you can:

- Compare the materials used in **Production Control** with the estimated materials and the pre-purchased materials in **Combining**.
- View the total values for purchased materials, materials moved from other jobs, and materials moved to scrap.
- View the current production status: see which materials are listed on a purchase order and have not yet been received, which materials are in stock but have not been processed, and which have been charged to the job and taken from stock.

Create a project summary report

1. In the lower-right corner of the **Project Management** dialog box, click **Project Summary**.
2. In the **Report Selection** dialog box, select the desired project summary report.

   The **Full Project Summary** report provides a snapshot of the current status of the project and the module components that are currently linked to each other. It contains:

   - A shape summary, which allows you to compare materials by shape. The job progress is displayed by weight and cost. All items entered into

the bill of materials in **Production Control** appear in the **Production Control** column.

- A purchase order summary, which shows all the purchase orders associated with the project management jobs.
- An inventory transfer summary, which shows materials transferred from a different job into the current project management job.
- The production and shipping status summary report, which shows the quantity of pieces that have been processed. The items are sorted by the route assigned in **Production Control**. The production and shipping status information is automatically updated when changes are made.

The project summary reports also have reports for all the breakdown areas, but these reports are not displayed by default. To customize the displayed reports, click **Edit Report Types** in the **Report Selection** dialog box.

View the project summary report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the project summary report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the project summary report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Browse to the location where you want to save the exported file, and click **Save**.
5. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.

6. To open the file after exporting it, select the **Open Exported Document** check box.
7. In the **Report Selection** dialog box, click **Export**.

9 Manage the fabrication process

The **Production Control** module handles the entire fabrication process: pulling the material from **Purchasing** and inventory cut lists, tracking the production in the shop, filing quality control reports, and shipping materials.

Before you start working in the **Production Control** module, remember to adjust the production control settings according to your needs. For more information, see Set up the Production Control module (page 675).

For more information, see the following links:

Set up the Production Control module (page 675)

Open the Production Control module (page 724)

Find a production control job (page 725)

Open and view a production control job (page 729)

Create a production control job (page 725)

Store document references for a production control job (page 733)

Filter information in the Production Control dialog box (page 731)

Add a production control item (page 776)

Modify a production control job (page 734)

Modify production control items (page 782)

Add piece tracking and load tracking information and loads to the current production control job (page 806)

Copy materials from one drawing to another (page 787)

Create, modify, and delete loads (page 800)

Track production by piece mark (page 805)

Take production control items from stock (page 796)

Combine materials in the Production Control module (page 788)

Import, view, or delete CNC files (page 774)

Review and adjust production control job information (page 740)

View all changes in a production control job (page 737)
View and adjust the project schedule (page 613)
View the production schedule (page 767)
Use Trimble Connect with a production control job (page 810)
View, print, and export job-specific production control reports (page 772)
Send production control items to purchasing (page 789)
Export production control information (page 820)
Finalize a production control job (page 821)

9.1 Set up the Production Control module

Before you start to manage the fabrication process in the **Production Control** module, we recommend that you take the time to customize the properties and items according to your needs. Once you have created and modified all necessary items and settings, working in the **Production Control** module is easier and more efficient.

When setting up the **Production Control** module, you can:

- Define the company standard settings used in the **Production Control** module.
- Modify the available display and input fields in the **Production Control** dialog box.
- Modify the menu setup of the **Production Control** menu and create shortcuts for menu items.
- Set up stations and routes for piece tracking.
- Enter information for piece tracking and loading trucks.
- View production status reports for either a single job or a group of jobs.
- View and print cut lists.
- View and print station summary reports and shipping lists.
- View and print different kinds of production control and purchasing reports for either a single job or a group of jobs.

For more information, see the following links:

Define company standard settings for Production Control (page 676)
Define critical length and width differences (page 691)
Create, modify, and delete stations (page 692)
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Define company standard settings for Production Control

In the **Company Standards** dialog box, you can create default settings that become the user standard that is used in each production control job. You can define settings regarding data input, material import settings, and reports. If necessary, you can also change the settings on a job by job basis.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Company Standards** .

   The **Company Standards** dialog box opens on the **General** tab.
3. Modify the company standard settings on the **General**, **Input Settings**, **Import Settings**, and **Report Settings** tabs according to your needs.
4. Click the buttons at the bottom of the **Company Standards** dialog box to further modify company standard settings.

NOTE Do not click **Save** until you have modified all necessary settings. Saving the settings closes the **Company Standards** dialog box.

Define general settings

- On the **General** tab, modify the following properties according to your needs:

Option	Description
Job # Increment	Allows you to select the default option for automatic job numbering. The options are: • **Increment from Last Job #**: When you create a new job, Tekla EPM uses the next available job number after the latest job number created.

Option	Description
	• **Increment from Largest Job #**: Tekla EPM uses the next available job number after the largest job number created. • **Don't Increment**: Automatic job numbering is not used. You can modify the job number when you create a new job.
Keep Job Selection Screen Open	When selected, the **Select Production Control Job** dialog box remains open after you have selected a production control job.
Open to Filter Selection	When selected, the **Production Control Filters** dialog box automatically opens when you open a production control job. In the **Production Control Filters** dialog box, you can set filters to only show the items that you want to see in the production control job. When you have set the filters, the job opens.
Job # Regular Expression	Allows the use of regular expressions to enforce a desired format for the job numbers.
When changes to PDC break links to combined INV material	Allows you to select how Tekla EPM handles situations where a material link is broken between **Production Control** and **Inventory** while importing a revised or modified bill of materials. Tekla EPM automatically unlinks all changed material. This prevents cutting materials to incorrect lengths. The options are: • **Prompt to Uncombine the Unlinked INV Material**: Tekla EPM asks the user if the materials should be immediately uncombined or not, which is the first step of automatically correcting cut lists. This is the default option. • **Always Uncombine the Unlinked INV Material**: Tekla EPM automatically uncombines the unlinked materials. • **Never Uncombine the Unlinked INV Material**: Tekla EPM does not uncombine the unlinked material, but leaves the combining result as is. Instead, the user should perform the necessary corrections manually. Click the arrow on the right side of **When changes to PDC break links to combined INV material**

Option	Description
	field, and click a suitable option in the list to select it.
TFS - Drop Job Reserve	Allows you to select how Tekla EPM handles drop material when a take from stock operation has been performed. Note that you can select a different option for an individual job, if necessary. The options are: • **Keep reserved for the TFS job**: Tekla EPM keeps all drop material saved for the job until you unreserve it manually. This is the default option. • **Prompt for the new job reserve**: in the in the **Cut Lists** dialog box, Tekla EPM asks you whether you want to reserve the drop material for a job. • **Prompt to unreserve**: Tekla EPM asks you whether you want to unreserve the drop material or not. • **Always unreserve**: Tekla EPM automatically unreserves all drop material and moves it to open inventory, immediately available for use. Scrap length materials go to inventory history.
Allow Cut List Grade Substitution	When selected, Tekla EPM can use inventory stock materials with another material grade in cut lists. Note that Tekla EPM only allows grade substitutions that have previously been set up in the **Shape / Grade / Size Maintenance** dialog box.
Warn when creating a cut list if parts are missing CNC files	When selected, Tekla EPM alerts you when saving a cut list that contains parts without CNC files.
Cut List Screens - Show Date/Time Changed	When selected, the **Cut Lists** dialog box shows the date and time when the cut lists were last changed.

Define input settings

On the **Input Settings** tab, select how Tekla EPM interprets and displays the information in the **Production Control** module, whether the information is from an imported bill of materials, or directly entered in the **Production Control** dialog box.

1. Click the **Input Settings** tab to open it.
2. Modify the following settings according to your needs:

Option	Description
Main Mark Input Type	Allows you to select the input format for main marks. Click the arrow on the right side of **Main Mark Input Type** field, and click a suitable option in the list to select it.
Piece Mark Input Type	Allows you to select the input format for piece marks. Click the arrow on the right side of **Piece Mark Input Type** field, and click a suitable option in the list to select it.
Drawing Number Input Type	Allows you to select the input format for drawing numbers. Note that the input format of drawing numbers in a production control job needs to match the input format set in the linked project management job. Otherwise, the drawings will not be available in the **Production Control** module or in Tekla EPM Go. Click the arrow on the right side of **Drawing Number Input Type** field, and click a suitable option in the list to select it. We recommend selecting the **Any Input - Logical Sort** option.
Sequence Input Type	Allows you to select the input format for sequences. Click the arrow on the right side of **Sequence Input Type** field, and click a suitable option in the list to select it.
Use Lot Numbers	When selected, you can divide a sequence or phase into subcategories within a production job by using lot numbers. It is highly recommended to select the **Use Lot Numbers** option. Note that selecting or clearing the **Use Lot Numbers** check box only applies to new production control jobs automatically. If necessary, the **Use Lot Numbers** check box can be manually selected or cleared for existing jobs as well.
Main Piece Case	Allows you to select if you want to use uppercase or lowercase letters, or both, for main mark

Option	Description
	numbers. This makes recognizing the main pieces easier. Click the arrow on the right side of **Main Piece Case** field, and click a suitable option in the list to select it.
Accessory Piece Case	Allows you to select if you want to use uppercase or lowercase letters, or both, for piece mark numbers. This makes recognizing the piece marks easier. Click the arrow on the right side of **Accessory Piece Case** field, and click a suitable option in the list to select it.
Main Member Instance Tracking	When selected, the history of each individual instance, or piece, within an item can be identified and tracked through all production steps. If you select the **Main Member Instance Tracking** check box, instance tracking will be activated for all new production control jobs. However, existing jobs will not be affected. You can still activate or deactivate the instance tracking of main piece marks for each production job individually.
Accessory Part Instance Tracking	When selected, the history of each individual instance, or piece, within an item can be identified and tracked through all production steps. If you select the **Accessory Part Instance Tracking** check box, instance tracking will be activated for all new production control jobs. However, existing jobs will not be affected. You can still activate or deactivate the instance tracking of piece mark items for each production job individually.
Piece Mark Force Same Info	When selected, the same information is forced to accessories with the same piece marks. Selecting the **Piece Mark Force Same Info** check box prevents adding or importing items with the same piece mark but different material information to the production control job. Note that the **Piece Mark Force Same Info** option is connected to the **Edit Line Item - Update accessories with the same piece mark** list. You cannot select an option in the **Edit Line Item - Update accessories with the same piece mark** unless the **Piece Mark Force Same Info** check box is selected.

Option	Description
Edit Line Item - Update accessories with the same piece mark	Allows you to select how Tekla EPM accessories with the same piece mark are updated when you make changes to a line item. The options are: • **Prompt to update the other line items**: Tekla EPM alerts the user that there are other accessories in the job that may need to be updated, and allows you to update the other accessories. This is the default option. • **Always update the other line items**: Tekla EPM automatically updates the other accessories to match the changes you made. • **Never update the other line items**: Tekla EPM never updates the other accessories to match the changes you made.
AutoCalc Drawing Number	When selected, Tekla EPM enters a drawing number into the drawing number field based on the main mark. This option works correctly if the first number of each shop detail drawing main piece is the drawing number. If the marking system that you use does not have the drawing number as the first number of the main mark, do not select the **AutoCalc Drawing Number** check box.
Default Finish	The default finish for items in production control jobs. The available finish options are set in the **Finish Maintenance** dialog box. You can change the finish for each main mark item in a production control job. The finish of the main mark item is also applied to all of the included accessories. Click the arrow on the right side of **Default Finish** field, and click a suitable default option in the list to select it.
Trailer Capacity	The trailer capacity weight used by default when shipping of fabricated material to the jobsite. The trailer capacity can be changed for individual loads, if needed. You can also modify the capacities of specific trailers in the **Load Tracking Settings** dialog box. Type the weight in pounds in the **Trailer Capacity** field.

Option	Description
Piece Tracking by Time	When selected, allows you to make piece tracking entries in that include the completion time, so that you can tell in which shift an item was completed. The completion time is also visible in piece tracking reports.

Define import settings

On the **Import Settings** tab, set the default settings used when importing a bill of materials into **Production Control**.

1. Click the **Import Settings** tab to open it.
2. Modify the following settings according to your needs:

Option	Description
When assembly has no part with a piece mark matching the main mark	Allows you to select how Tekla EPM applies comment lines in rare cases where a bill of materials is imported to **Production Control** and Tekla EPM cannot identify a main mark. The options are: • **Don't add a comment line as the main piece**: Tekla EPM never adds the comment line as the main piece. This is the default option because most often, the main mark item in the bill of materials is the largest single piece, whereas the piece marks are the items that attach to the main piece. • **Prompt to add a comment line as the main piece**: Tekla EPM asks you if you want to add a comment line as the main piece. This allows you to use the name of the item for main marks instead of the material size. • **Always add a comment line as the main piece**: Tekla EPM always adds a comment line as the main piece. This allows you to use the name of the item for main marks instead of the material size.
When there are validation errors	Allows you to select how Tekla EPM handles validation errors regarding shop detail drawings when a bill of materials is imported to **Production Control**. The options are: • **Continue the import without prompting the user**: Tekla EPM continues the import process without notifying you about the validation errors. However, you can view the validation

Option	Description
	errors in the import log. This is the default option, and it is useful when the user performing the import process does not need to know or make decisions on validation errors. • **Prompt the user to continue the import**: Tekla EPM asks you how the validation errors should be handled while continuing the import. • **Don't continue the import**: Tekla EPM stops the import immediately when a validation error is found. The user can then review the drawings for issues by themselves.
Use as Production Code	Allows you to select if you want to use assembly main marks, piece marks, drawing descriptions, assembly descriptions, reference numbers, or none of the above as product codes. Click the arrow on the right side of the **Use as Production Code** field, and select a suitable option in the list.
Use Piece Mark as Production Code	When selected, Tekla EPM automatically assigns piece marks as production codes. Note that if you select the **Use Piece Mark as Production Code** check box for a production control job, you also need to use piece marks as production codes in the estimating job that is linked to the production control job.
Prompt to confirm import fields	When selected, Tekla EPM asks you to confirm the import fields while importing a bill of material into **Production Control**. By selecting the **Prompt to confirm import fields** check box, you can exclude any fields whose values you do not want to import.
Show supplemental import file selection (KISS, CIS/2, BIF)	When selected, Tekla EPM allows you to import multiple supplementary files, such as bolt lists, from a detailing software.

Define report settings

1. Click the **Report Settings** tab to open it.
2. If you want to select whether to use net or gross weight of materials for each report, select the **Prompt for weight type (net/gross)** check box.

   The gross weight is the system weight as dimensioned in Tekla EPM, whereas the net weight is loaded from the CNC files added for items. If

CNC files have not been added for the items included in the report, the net weight cannot be used in the report. Instead, the gross weight is used.

3. If you want to create cut list reports that show each quantity of inventory listed separately, select the **Cut List - Prompt to split cutting details to a quantity of one** check box.

   If the **Cut List - Prompt to split cutting details to a quantity of one** check box is cleared, multiple inventory pieces with the same exact cutting details are shown as a single inventory item in reports.

4. If you want to split cutting details to the quantity of one by default, select the **Default** check box.

Define input and display units for Production Control

You can use either metric or imperial units for displaying and entering sizes, lengths, weights, and price. In addition, you can select how you want to enter the information for the length of the piece.

1. In the **Company Standards** dialog box, click the **Input/Display Units** button.
2. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.

3. Click **Save**.
4. Remember to click **Save** in the **Company Standards** dialog box to update the input and display units.

The **Company Standards** dialog box closes. The input and display units are saved for the **Production Control** module.

See also

Define company standard settings for Production Control (page 676)

Define combining optimizations for Production Control

You can define company-level settings for multing and plate nesting in the **Production Control** module. If necessary, you can also change the settings job by job.

1. In the **Company Standards** dialog box, click the **Combining Optimizations** button.
2. To use material grade substitutions with the optimization settings when performing a combining run, on the **General Settings** tab of the

Combining Setup dialog box, select the **Use Grade Substitutions** check box.

Grade substitutions must be set in the **Shape / Grade / Size Maintenance** dialog box. If the grade substitutions are not set, the material grades in the combining run and in the supplier pricing data set or the inventory need to match each other exactly.

3. If you want to only mult and nest material items that are in the same sequence onto a given stock item, select the **Combine Only Within Sequence** check box.

   Selecting the **Combine Only Within Sequence** check box might be useful in medium or big jobs. However, selecting the **Combine Only Within Sequence** check box is not recommended for small jobs.

4. Click the arrow buttons to move the optimization options that you want to use to the **Optimizations Included** list.

   The options are:

   - **Inventory Exact-Match (In Stock)**: Use this option for inventory items in stock that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Exact-Match (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Least-Scrap (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that will provide the least amount of scrap.
   - **Inventory Least-Scrap (In Stock)**: Use this option for inventory items in stock that will provide the least amount of scrap.
   - **Warehouse Least-Scrap**: Use this option to give preference to warehouse items that will provide the least amount of scrap. Warehouse items will only be used when they provide less scrap than the available inventory items.
   - **Warehouse Force Inventory**: Use this option to force the use of inventory regardless of the amount of scrap, no matter where it is located in the **Optimizations Included** list. This option is the opposite of **Warehouse Least-Scrap**.

     Note that you can only include **Warehouse Least-Scrap** or **Warehouse Force Inventory**, not both.

5. Use the **Move Up** and **Move Down** buttons to modify the order of the optimizations.

   The order is important while performing a combining run.

6. Click the **Mult Settings - Linear Material** tab to open it.
7. In **Multing Software**, select the multing software that you are using.

8. If you want to apply the material kerf settings defined in **Shape / Grade / Size Maintenance** to the combining as part of the cutting pattern, select the **Apply Kerf** check box.
9. Open the **Plate Nesting Settings** tab.
10. In the **Plate Nesting Software** list, click the plate nesting software that you are using to select it.
11. In the **Shear Cut Optimization** list, click a suitable shear cut option to select it.

    The selected option determines the plate allowance to be used with the combining:

    - Use **None** when cutting plate on a burn table.
    - Use **Shear Cut - First Cut Along Length** or **Shear Cut - First Cut Along Width** to alert Tekla EPM that the nesting needs to allow for that type of cut first. Then, the nesting will allow for all subsequent cuts to be made with that condition.
12. If necessary, select the **Apply Kerf** check box.

    For more details, see step 8.
13. If the material grain direction is unimportant and you want Tekla EPM to create the best possible optimization of a plate, select the **Rotate Plates for Best Fit** check box.
14. Click **Save**.
15. Remember to click **Save** in the **Company Standards** dialog box to update the combining optimizations.

Define suppliers for Production Control

You can define the desired suppliers, or pricing data sets, for angles, beams, plates, rods, tubes, and other material. This way, you can use material pricing from the selected supplier pricing data sets for each material group.

1. In the **Company Standards** dialog box, click the **Suppliers** button.
2. In the **Suppliers** dialog box, select suppliers for each material group in the available lists.
3. Click **OK**.
4. Remember to click **Save** in the **Company Standards** dialog box to update the supplier settings.

The **Company Standards** dialog box closes. The supplier settings are saved as company standards for the **Production Control** module.

See also

Define company standard settings for Production Control (page 676)

Define categories and sub-categories for Production Control

Categories are user-defined keywords that you can use for sorting, tracking, and reporting. Creating categories also helps you to quickly identify the items in your production control jobs. For example, you can categorize jobs by fabrication type. In addition to manually creating categories, you can choose to use existing categories used in Steel Erection Bid Wizard. To further filter items, you can also add sub-categories.

Add categories

Note that in addition to creating pre-defined categories in the **Company Categories** dialog box, you can also add categories to Tekla EPM by typing a new category name in the **Category** field when adding or modifying an item in a production control job.

Categories are considered a main breakdown item for project summaries and project schedules.

1. In the **Company Standards** dialog box, click the **Categories** button..
2. In the **Company Categories** dialog box, click **New**.
3. In the **Category** field, type a name for the category.
4. Click **Add**.

   The new category is added to the **Category** list.

   NOTE If you need to modify or delete a category, click a category to select it in the **Category** list and either:

   - Click **Edit**, change the category name, and click **Edit** again.
   - Click **Delete** and then, click **Yes** to confirm deleting the category.

5. In the **Company Standards** dialog box, click **Save** to update the sub-categories.

The **Company Standards** dialog box closes. The categories are saved for the **Production Control** module.

Add sub-categories

Note that in addition to creating pre-defined sub-categories in the **Company Categories** dialog box, you can also add sub-categories to Tekla EPM by typing a new sub-category name in the **Sub-Category** field when adding or modifying an item in a production control job.

Sub-categories are considered a main breakdown item for project summaries and project schedules.

1. In the **Company Standards** dialog box, click the **Sub-Categories** button.
2. In the **Company Sub-Categories** dialog box, click **New**.

3. In the **Sub-Category** field, type a name for the sub-category.
4. Click **Add**.

   The new sub-category is added to the **Sub-Category** list.

   Repeat steps 1 to 4 for all new sub-categories.

   NOTE If you need to modify or delete a sub-category, click a sub-category to select it in the **Sub-Category** list and either:

   - Click **Edit**, change the sub-category name, and click **Edit** again.
   - Click **Delete** and click **Yes** to confirm deleting the sub-category.

     You can also add multipliers for sub-categories in the **Estimating** module.

5. In the **Company Standards** dialog box, click **Save** to update the sub-categories.

The **Company Standards** dialog box closes. The sub-categories are saved for the **Production Control** module.

Define pay categories for Production Control

Create pay categories to assign unit costs to fabricated items per pound. You can use pay categories as report filters, so they can help you to sort information in reports. Tekla EPM also contains specific shipping reports that are designed to be used with pay categories.

Pay categories are considered a main breakdown item for project summaries and project schedules.

1. In the **Company Standards** dialog box, click the **Pay Categories** button.
2. In the **Pay Categories** dialog box, do any of the following according to your needs:

To	Do this
Create a new pay category	a. Click **New**. b. In the **Pay Category** field, type the pay category name. For example, `Beams`, `Columns`, or `Bracing`. c. Type a description for the pay category. For example, `Light`, `Medium`, or `Heavy`. d. In the **Lower Bound Unit Weight** field, type the lowest weight that is applicable to the pay category.

To	Do this
	e. In the **Unit Price** field, type a pricing per hundredweight that is applicable for the material type. f. Click **Add**.
Modify an existing pay category	a. In the list, click the pay category that you want to modify. b. Modify the pay category type, description, unit weight, and unit price according to your needs. c. Click **Edit** to save the changes.
Delete a pay category	Note that deleting a pay category is permanent and cannot be undone. a. In the list, click the pay category that you want to delete. b. Click **Delete**. c. In the confirmation dialog box, click **Yes** to permanently delete the pay category.

3. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
4. In the **Company Standards** dialog box, click **Save** to update the pay categories.

The **Company Standards** dialog box closes. The pay categories are available in the **Production Control** module.

See also

Define company standard settings for Production Control (page 676)

Define load tracking settings

In the **Load Tracking Settings** dialog box, you can manage which fields and options are available when adding loads in the **Load Tracking** dialog box.

Note that any changes made in the **Load Tracking Settings** dialog box are applied to both new and existing production control jobs.

To access the **Load Tracking Settings** dialog box, do the following:

- At the bottom of the **Company Standards** dialog box, click the **Load Tracking Settings** button.

The **Load Tracking Settings** dialog box opens. Click the tabs at the top of the dialog box to modify the visibility of different items in the **Load Tracking** dialog box.

Adjust trailer number settings

1. Click the **Trailer #** tab to open it.
2. If you want to allow adding a trailer number in the **Trailer #** field, select the **Show Field** check box.

   The **Trailer #** field will be available in the **Load Tracking** dialog box.
3. In the **Title** field, type the name that you want to use for the **Trailer #** field.
4. If you want the trailer number to be mandatory information, select the **Value Required** check box.

   The user cannot add a load without entering a trailer number.
5. To add trailer numbers that can be selected, do the following:
   a. If necessary, select the **Restrict to Preset List** check box.

      Selecting the **Restrict to Preset List** prevents the users from typing new values, and forces them to select a value in the list.

      Leaving the **Restrict to Preset List** check box unselected allows the users to type a new value or select a value in the list.
   b. To create a new value, click **New**.
   c. Type the value in the **Trailer #** field.
   d. Type the trailer capacity weight in the **Capacity** field.
   e. Click **Add**.

      Repeat steps b to e for all values that you want to add.

      You can also select an existing value in the list and use the **Edit** and **Delete** buttons to modify or delete the value.

Adjust the load tracking fields

The **Carrier**, **Load Category 1**, **Load Category 2**, **Load Category 3**, and **Shipped From** tabs each represent a user-defined field that you can add to the **Load Tracking** dialog box. The fields can be re-named and adjusted, so that you get all the necessary fields and options.

1. Click one of the previously mentioned tabs to open it.
2. If you want to show the field and allow adding information to it, select the **Show Field** check box.
3. In the **Title** field, type the name that you want to use for the field.
4. If you want the field to be mandatory, select the **Value Required** check box.

   When the **Value Required** check box is selected, the user cannot add a load without entering information in the field.
5. To add options that can be selected for the field, do the following:

a. If necessary, select the **Restrict to Preset List** check box.

   Selecting the **Restrict to Preset List** prevents the users from typing new values, and forces them to select an existing value.

   Leaving the **Restrict to Preset List** check box unselected allows the users to either type a new value or select an existing value.

b. To create a new value, click **New**.

c. Type the desired value in the related field.

d. Click **Add**.

   Repeat steps b to d for all values that you want to add.

   You can also select an existing value in the list and use the **Edit** and **Delete** buttons to modify or delete the value.

Adjust receiving date settings

1. Click the **Date Received** tab to open it.
2. If you want to allow selecting a receiving date in the **Date Received** list, select the **Show Field** check box.

   The **Date Received** list will be available in the **Load Tracking** dialog box.
3. In the **Title** field, type the name that you want to use for the **Date Received** field.

Close the Load Tracking dialog box

- Click **OK** at the bottom of the dialog box, or click the **Close** button (**X**) in the upper-right corner.

Define critical length and width differences

If any change to a production control item is greater than the inventory record linked to the production control item, the change is automatically considered critical and will break the link to the inventory item. If the change is less than the linked inventory record, you can allow the link to the inventory item to remain up to the critical length and width differences that you set in the **Purchasing Standards** dialog box.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Purchasing Standards** .
3. In the **Purchasing Standards** dialog box, enter the maximum acceptable width and length differences.

4. Click **Save**.

The maximum acceptable width and length differences are saved. These values are used in two types of situations:

Example 1: Comparing two bills of materials

At the beginning of a project, the steel detailer may send an advanced bill of materials to be imported to the **Combining** module. The materials in the bill of materials are then combined and purchased.

Later in the project, when the bill of materials is imported from the shop detail drawings to **Production Control**, you can compare the two lists for material differences. Tekla EPM will use the maximum values defined in the **Purchasing Standards** dialog box to recognize critical differences, and highlight them in red.

Example 2: Automatic linking of materials

When importing a revised bill of materials into an existing **Production Control** job, Tekla EPM uses the maximum values defined in the **Purchasing Standards** dialog box to determine which materials can be linked automatically. Tekla EPM stops the automatic process of linking materials if the differences exceed the maximum values.

Tekla EPM then alerts you that there are changes that have switched off the automatic linking of materials, so that the you can manually review the affected purchased items and make adjustments accordingly.

Manage stations and routes

Stations and routes define the steps that items in production go through in the fabrication process. You can create new routes and stations, or modify and delete the existing ones.

See also

Create, modify, and delete routes (page 695)

Create, modify, and delete stations (page 692)

Create, modify, and delete stations

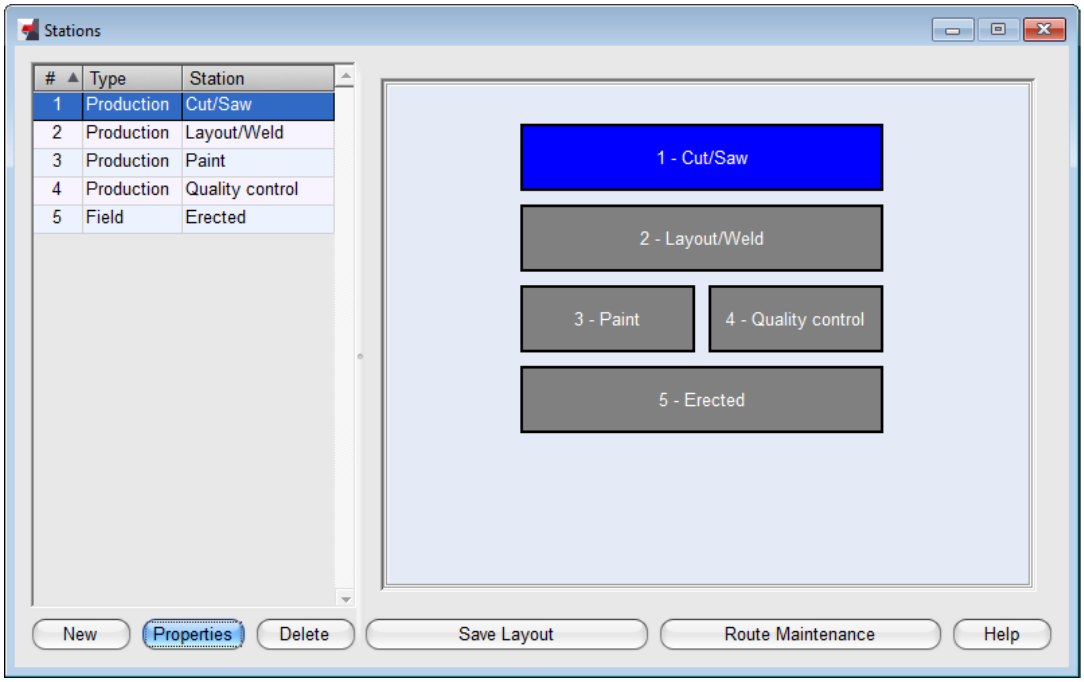
Production stations and routes define the steps that an item in production goes through in the fabrication process. Stations and routes are also used for tracking labor time, the date a station is completed, and the batch ID for parts to be fabricated in the job. In the **Stations** dialog box, you can create new stations, or modify or delete the existing ones. You can also change how the stations are displayed when creating routes.

To access the **Stations** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.

2. On the menu, select **Production Control** --> **Station and Route Setup** .

The **Stations** dialog box opens.



On the left-hand pane, you can view the existing stations.

On the right side of the dialog box, you can drag and drop the stations to change the layout that is used in the **Routes** dialog box.

Create a station

1. Click **New**.
2. In the **Station Details** dialog box, modify the automatically generated station number according to your needs.
3. Type a description for the new station.

   For example, `Iron worker`.
4. In the **Type** list, select if the station is a production station or a field station.

   Production stations are steps the production that happen within the shop, such as cutting. Field stations are steps that happen outside the shop, such as erecting.
5. To assign labor groups to the new station, do the following:
   a. Click the **Labor Group** tab to open it.
   b. Click the **Select Labor Groups** button.

c. In the **Select labor groups to associate with this station** dialog box, click the arrow buttons to move the desired labor groups to the **Included** list.

d. Click **OK**.

Assigning labor groups to a station can help you apply your own specific determinations for labor applications. When you assign labor groups to a station, Tekla EPM assigns all labor time from the assigned labor groups in the linked estimating job to the station.

For example, if the labor time for cutting includes bringing the material into the shop, labor groups **GetPc** (get piece) and **Move** can be assigned to the **Cut/Saw** station. In this case, Tekla EPM would gather the labor time for all these labor groups from the linked estimating job and use the labor time in the project schedule.

6. Click **Save**.

The **Station Details** dialog box closes. The new station is added to the list on the left-hand pane.

Note that the station has not yet been added to any routes. To do so, see Create, modify, and delete routes (page 695).

Modify the size and position of stations

1. On the right side of the dialog box, do any of the following:

To	Do this
Move a station to a new location	a. Click the station and hold down the left mouse button. b. Drag the mouse pointer to the location where you want to move the station. c. Release the left mouse button.
Resize a station	a. Hover the edge of a station. b. When a double-header arrow appears, hold down the left mouse button. c. Drag the mouse pointer to expand or reduce the station according to your needs. d. Release the left mouse button.

Repeat until the layout meets your needs.

2. Click **Save Layout**.

Modify a station

1. In the left-hand pane, click the station that you want to modify.
2. Click **Properties**.

3. Modify the station number and description according to your needs.
4. On the **Routes** tab, view the routes that contain the selected station.

   To modify the routes, double-click the desired route. For detailed instructions on modifying routes, see Create, modify, and delete routes (page 695).
5. To modify the labor groups assigned to the station, do the following:
   a. Click the **Labor Group** tab to open it.
   b. Click the **Select Labor Groups** button.
   c. In the **Select labor groups to associate with this station** dialog box, click the arrow buttons to move the desired labor groups to the **Included** list.
   d. Click **OK**.
6. Click **Save** to update the station properties.

Delete a station

Note that deleting a station is permanent and cannot be undone. If a station is used in a production control job or a route, it cannot be deleted.

1. In the left-hand pane, click the station that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the station.

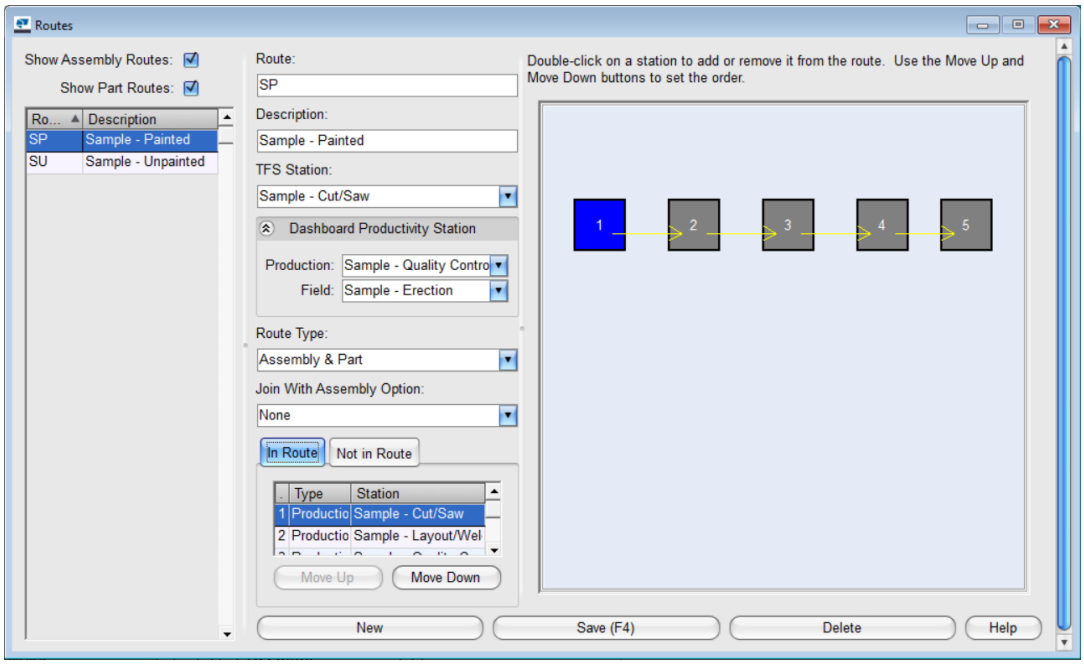
Create, modify, and delete routes

Production stations and routes define the steps that an item goes through in the fabrication process. Often, items with different finishes have different routes. In the **Routes** dialog box, you can create new routes, and modify or delete existing ones according to your needs.

Note that you need to create all necessary stations before you can add them to routes.

To access the **Routes** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Station and Route Setup** .
3. In the **Stations** dialog box, click **Route Maintenance**.



You can see the existing routes on the left-hand pane of the **Routes** dialog box.

On the right side of the dialog box, you can see all available stations. Yellow arrows show the order of the stations on the route.

Create a new route

1. Click **New**.
2. In the **Route** field, type an abbreviation for the route.

   For example, you can abbreviate the route for painted parts as `P`.
3. Type a description for the route.
4. Click the arrow on the right side of **TFS Station** list, and select the station that is used for cutting and charging materials to the production control job.

   In reports, this station is where the material cutting is completed and the drops are sent to their assigned location. This station will be marked as completed when you take the item from stock.
5. If you track production with the Tekla EPM Go dashboard, expand the **Dashboard Productivity Station** section, and select the stations after which the item is considered complete.

   If you have both production and field stations on the selected route, there are two lists: **Production** list for the station where the production is considered complete, and **Field** list for the station where the field work is considered complete.

6. In the **Route Type** list, select which items can be assigned to the route:
   - **Assembly**: only main marks, or assemblies, can be assigned to the route
   - **Part**: only part marks, or accessory parts, can be assigned to the route
   - **Assembly & Part**: both assemblies and accessories can be assigned to the route.
7. If you selected **Part** or **Assembly & Part** as the route type, in the **Join With Assembly Option** list, select when accessory parts should join the assembly to which they belong:
   - **Join with assembly for first station**: The accessory part follows the assembly route starting from the first station.

     Note that if the part route and the assembly route have the same first station, selecting **Join with assembly for first station** will mean that the accessory part goes through the same station twice.
   - **Join with assembly for...**: The accessory part joins the assembly route before this station. Select the station in the list below.
   - **Join with assembly after...**: The accessory part joins the assembly route after this station. Select the station in the list below.
   - **Join with assembly after TFS station**: The accessory part joins the assembly route after the station that you selected in the **TFS Station** list.
8. Select the included stations and adjust their order:
   - Click the **Not in Route** tab to see the stations that are not included in the route, and double-click all stations that you want to include in the order that they should appear in the route.
   - Open the **In Route** tab to see the stations that are included in the route.

     To move a station earlier or later in the route, select the station and click the **Move Up** and **Move Down** buttons.
9. Click **Add**.

The new route is now available for all production control jobs.

Modify a route

1. In the list on the left side of the **Routes** dialog box, select the route that you want to modify.
2. Modify the route abbreviation, description, TFS station, route type, or join with an assembly option.
3. To modify the included stations and their order, do the following:

- Click the **Not in Route** tab to see the stations that are not included in the route, and double-click all stations that you want to include in the order that they should appear in the route.
- Open the **In Route** tab to see the stations that are included in the route.

  To move a station earlier or later in the route, select the station and click the **Move Up** and **Move Down** buttons.

4. If you track production with the Tekla EPM Go dashboard, expand the **Dashboard Productivity Station** section, and select the stations after which the item is considered complete.

   If you have both production and field stations on the selected route, there are two lists: **Production** list for the station where the production is considered complete, and **Field** list for the station where the field work is considered complete.
5. Click **Save** to update the route.

Delete a route

Note that deleting a route is permanent and cannot be undone.

1. In the left-hand pane, select the route that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the selected route.

Manage production control jobs

In **Job Maintenance**, you can manage existing production control jobs in different ways. You can copy, export, and delete combining jobs, and set job groups and job statuses.

To access the **Job Maintenance** dialog box, do the following.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Job Maintenance** .
3. Select the jobs that you want to modify.
4. Select one of the available options:
   - **Delete**
   - **Copy**
   - **Export**
   - **Set Group Name**
   - **Set Job Status**

For more information, see the following links:

Delete production control jobs (page 699)

Copy a production control job (page 699)

Export production control jobs (page 699)

Set job groups for production control jobs (page 700)

Set job statuses for production control jobs (page 701)

Delete production control jobs

You can delete any unnecessary production control jobs. Export jobs before deleting them to make the jobs available for future reference.

1. In the **Production Control Job Maintenance** dialog box, select the jobs that you want to delete.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
2. At the bottom of the dialog box, click **Delete**.
3. To permanently delete the estimating job, click **Yes** in the confirmation dialog box.

See also

Export production control jobs (page 699)

Manage production control jobs (page 698)

Copy a production control job

You can copy an existing job to use it as the base of a new similar job. Copying an existing job makes creating the new job quicker, as you do not have to set all properties manually or create items one by one.

1. In the **Production Control Job Maintenance** dialog box, select the job that you want to copy..
2. At the bottom of the dialog box, click **Copy**.
3. Type a number for the new job.
4. Click **OK**.

See also

Manage production control jobs (page 698)

Export production control jobs

Export jobs before deleting them to make the jobs available for future reference.

We recommend that you create backup copies of jobs to recover deleted jobs. Users with administrator rights can recover deleted production control jobs. .

1. In the **Production Control Job Maintenance** dialog box, select the jobs that you want to export.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
2. At the bottom of the dialog box, click **Export**.
3. In the **Save As** dialog box, browse to the folder where you want to save the file.
4. Use the automatically generated name or type a new one.
5. Click **Save**.

If you have selected multiple jobs, repeat steps 3 to 5 for each job.

The selected production control job is saved as a Tekla EPM-specific type of KISS file. The exported KISS files contain load and piece tracking information that KISS files do not normally contain.

See also

Manage production control jobs (page 698)

Set job groups for production control jobs

Job groups allow you to identify and sort projects that are similar. For example, you can create job groups for commercial or industrial work, or by year. Assigning job groups to jobs makes it easier to sort a long list of jobs.

1. In the **Production Control Job Maintenance** dialog box, select the jobs for which you want to set job groups.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
2. At the bottom of the dialog box, click **Set Group Name**.
3. Select if you want to update the primary group or the secondary group.
4. Type a name for the group.
5. Click **OK**.

See also

Manage production control jobs (page 698)

Set job statuses for production control jobs

The job status determines if a job is still in progress (**Open**) or finished (**Closed**). By setting job statuses for production control jobs, you can view only the current production control jobs in the **Select Production Control Job** dialog box and in Tekla EPM Go. Any closed jobs will be hidden by default.

1. In the **Production Control Job Maintenance** dialog box, select the jobs whose status you want to change.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
2. At the bottom of the dialog box, click **Set Job Status**.
3. Select the new job status in the list.
4. Click **OK**.

Note that only open production control jobs are available in Tekla EPM Go.

See also

Manage production control jobs (page 698)

Open and view a production control job (page 729)

Modify a production control job (page 734)

Create, modify, and delete material finish options

In the **Finish Maintenance** dialog box, you can create, modify, or delete material finish options. You can also select the shipping routes used for each finish option.

To access the **Finish Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Finish Maintenance** .

Create a new finish option

1. Click **New**.
2. Type an abbreviation and a description for the new finish option.
3. If necessary, click the arrow on the right side of the **Shipping Route** list and select the shipping route that you want to use for production control items with the new finish option.

   Setting a shipping route for the finish is optional.

   For more information on shipping routes, see Create, modify, and delete global shipping routes (page 704).

4. Click **Add**.

Modify an existing finish option

1. Click the finish option that you want to modify to select it.
2. Modify the abbreviation, description, and shipping route according to your needs.
3. Click **Save**.

The properties of the finish option are updated.

Delete a finish option

Note that deleting a finish option is permanent and cannot be undone.

1. Click the finish option that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the finish option.

Create, modify, and delete global production codes

In the **Global Production Code Maintenance** dialog box, you can create, modify, and delete production codes that are available in all production control and estimating jobs. Production codes group similar items in estimating or production control jobs, so that Tekla EPM calculates the labor times based on the production code. This means that using production codes allows you to plan production more accurately.

Note that you can only adjust production codes in the **Global Production Code Maintenance** dialog box, not labor times. Tekla EPM automatically calculates the labor times for the items that have been assigned a production code.

We recommend that you assign matching production codes to parts in both **Estimating** and **Production Control**. This way, you can view the planned and executed labor times in the project schedule.

To access the **Global Production Code Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Global Production Code Maintenance** .

The **Global Production Code Maintenance** dialo box opens.

Create a production code

Note that you can only create production codes for the current estimating job in the **Production Codes** dialog box. Globally available production codes are created in **Global Production Code Maintenance**.

1. At the bottom of the dialog box, click **New**.
2. Name the production code and type a description.
3. Do any of the following:

To	Do this
Use the estimated labor times of items within the production code in **Production Control**	The man hours associated with the production codes are only used in **Production Control**. Production codes do not affect or apply labor to estimating items. The purpose of the man hours is to pull labor information from the estimate in the form of man hours per ton and labor percentages by labor group. • In the **Aggregate Units** list, select a calculation option.
Override the estimated labor time of items within the production code in **Production Control**	**NOTE** Manually overriding man hours applies an aggregate unit, man hours per ton, that can be applied to production control items. However, if the manual override is used, the labor information does not include labor group percentages. Therefore, the labor group percentages cannot be applied to any production control stations. Further, the information cannot be applied to tasks in the project schedule and to resources that feed information to the production schedule. Manually overriding man hours can also prevent you from comparing the linked production control job with the estimating job. a. Select the **Override Man Hours** check box. b. Type the labor time in the field on the right side of the check box. **TIP** To change the units, right-click in the field and select a suitable option in the context menu.

4. Click **Add**.

Modify a production code

1. Select the production code that you want to modify.
2. Modify the production code properties according to your needs.
3. Click **Save** to update the production code properties.

Delete a production code

1. Select the production code that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the production code.

Create, modify, and delete global shipping routes

In the **Shipping Route Maintenance** dialog box, you can create, modify, and delete shipping routes that are available for all production control jobs. Shipping routes can be used to send items within a job to multiple shipping destinations, including intermediate destinations, such as sending material to an external galvanizer. Items can only be shipped from their current location to the next assigned destination, not to the final destination. The initial location of all items is the shop location. If no shipping route is assigned for items, the items will be shipped from the shop to the jobsite. Items can either be returned to the shop and be added to another load with other material items, or shipped from the intermediate destination directly to the jobsite or next destination.

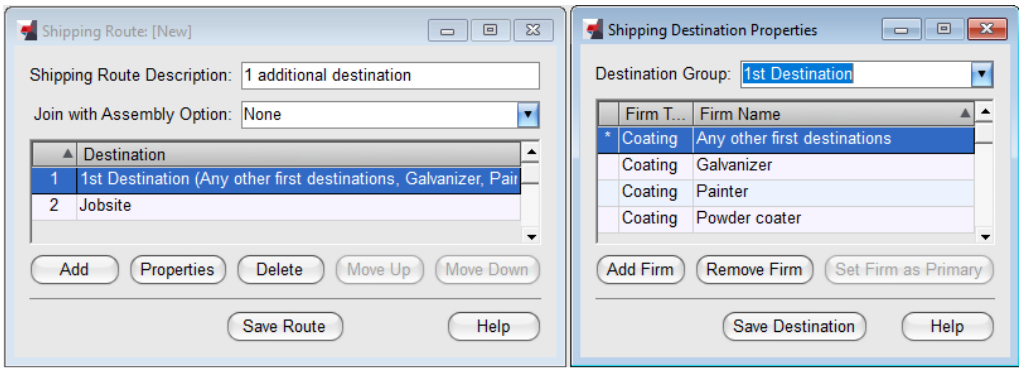
To access the **Shipping Route Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Global Shipping Route Maintenance** .

The **Shipping Route Maintenance** dialog box opens, displaying all existing shipping routes that can be used in production control jobs.

Create a shipping route

1. Click **New**.
2. In the **Shipping Route** dialog box, type a description for the new shipping route.



3. In the **Join with Assembly Option** list, select if and when the weight of an accessory part is included in the shipping weight of the assembly.

   The options are:

   - **None**: The weight of the accessory is not included in the shipping weight of the assembly. If the **Jobsite** destination is in the shipping route, select the **None** option.
   - **Join with assembly for first destination**: The weight of the accessory is joined to the shipping weight of the assembly for all of its destinations except for the first one.
   - **Join with assembly for...**: The weight of the accessory is included in the shipping weight of the assembly for the destination that you select in the **Join with Assembly For** list, and for any other destinations after that one.
   - **Join with assembly after...**: The weight of the accessory is included in the shipping weight of the assembly for all destinations after the destination you select in the **Join With Assembly After** list.

4. To adjust the destinations in the shipping route, do any of the following:

To	Do this
Add a new destination	a. Click **Add**. b. In the **Destination Group** field, do one of the following: • To create a new destination group, type a description for it in the **Destination Group** field. • To modify an existing destination group, click the arrow on the right side of the **Destination Group** and select a destination group. Destination groups provide a list of available destinations and are often best used by containing all the similar destinations in a single group. If shipping tickets are required

To	Do this
	from a destination back to the shop, it is recommended not to use the shop as an additional group because that location is already assigned a function, and using the shop as a group may cause confusion. Note that you cannot modify the firms in the **Jobsite** destination group. c. Modify the firms in the destination group according to your needs: • To add a firm, click **Add Firm**, select the firm type and firm name, and click **OK**. You can only select firms that are already saved in the **Address Book**. • To remove a firm from the destination, click the firm, click **Remove Firm**, and click **Yes** to confirm deleting the firm. • To set a firm as the primary firm, click the firm, and click **Set Firm as Primary**. The primary firm will have the remaining totals reported against it in production statuses, production control reports, and project summary reports. However, parts assigned to the shipping route can be shipped for any of the firms that you have added. d. Click **Save Destination**.
Modify a destination	a. In the **Destination** list, click the destination that you want to modify. b. Click **Properties**. c. Modify the firms of the destination according to your needs. d. Click **Save Destination** to update the destination.
Remove a destination from the shipping route	a. In the **Destination** list, click the destination that you want to remove from the shipping route. b. Click **Delete**.

To	Do this
	c. In the confirmation dialog box, click **Yes** to remove the destination from the shipping route.

Note that the shipping route can have any number of destinations, or no destinations at all. If the **Jobsite** destination is present, it is always the last destination on the shipping route. The **Jobsite** destination is the **Ship To** address defined for each production control job in the **Production Control Job Edit** dialog box.

5. To change the order of destinations in the shipping route, do the following:
   a. Click the destination that you want to move to an earlier or later position on the shipping route.
   b. Click the **Move Up** and **Move Down** buttons according to your needs.

      Repeat steps a to b for all destinations that you want to move.
6. Click **Save Route**.

The new shipping route is now available in all production control jobs.

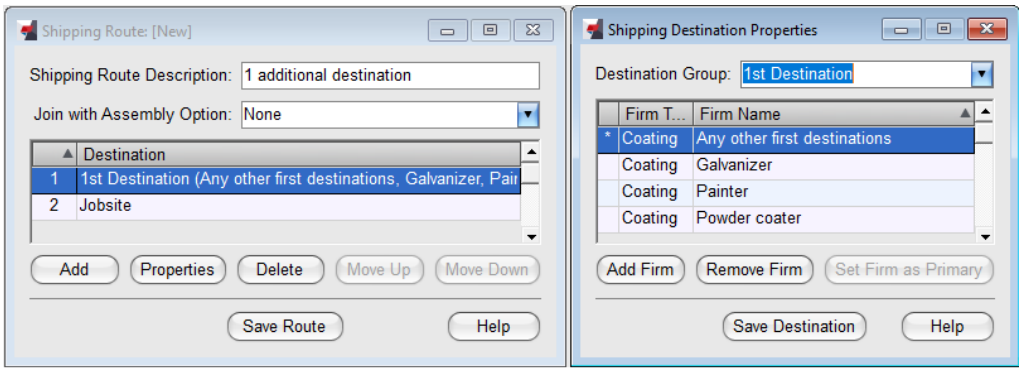
Copy a shipping route

Use the **Copy** command to create a new shipping route based on an existing one.

1. In the list, select the shipping route that you want to use as the basis of a new shipping route.
2. Click **Copy**.
3. In the **Shipping Route** dialog box, type a description for the new shipping route.
4. Modify the shipping route properties according to your needs.
5. Click **Save Route** to create the new shipping route.

Modify a shipping route

1. In the list, select the shipping route whose properties you want to modify.
2. Click **Properties**.



3. In the **Shipping Route** dialog box, modify the shipping route properties according to your needs.
4. Click **Save Route** to save the changes.

Delete a shipping route

Note that deleting a shipping route is permanent and cannot be undone.

1. In the list, select the shipping route that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the shipping route.

Add, modify, and delete top text items for shipping tickets

In the **Shipping Top Text Maintenance** dialog box, you can create standard memos, notes, or other text items to be added at the top of shipping tickets.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Shipping Top Text Maintenance** .

Create a top text item

1. At the bottom of the **Shipping Top Text Maintenance** dialog box, click **New**.
2. In the **Description** field, type a name for the top text item.
3. In the **Top Text** field, type the information to be added at the top of the shipping tickets.
4. Click **Add**.

Modify a top text item

1. In the **Shipping Top Text Maintenance** dialog box, select the top text item that you want to modify.
2. In the **Description** field, modify the item name according to your needs.
3. In the **Top Text** field, modify the top text according to your needs.
4. Click **Edit** to save the changes.

Delete a top text item

1. In the **Shipping Top Text Maintenance** dialog box, select the top text item that you want to delete.
2. Click **Delete**.
3. To permanently delete the top text item, click **Yes** in the confirmation dialog box.

Manage cut lists

Use the **Cut Lists** dialog box to create, modify, and delete cut lists for all existing production control jobs. You can also lock cut lists and create cut list reports in the **Cut Lists** dialog box.

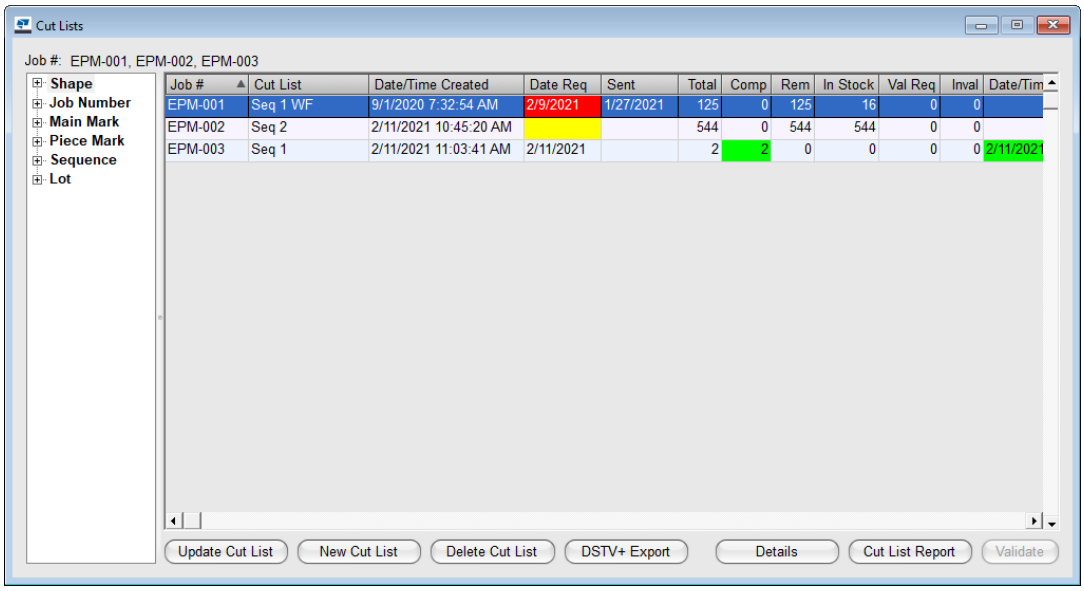
To access the **Cut Lists** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Cut Lists** .
3. In the **Select Production Control Jobs** dialog box, do either of the following:
   - Click the arrows on the right side of the **Job Group** lists and select the job groups whose cut lists you want to adjust.
   - Click the arrow buttons to move the jobs whose cut lists you want to adjust to the **Included** list.

     To select multiple items, hold down **Ctrl**.

     To select a range of subsequent items, hold down **Shift**.
4. Click **OK**.

The **Cut Lists** dialog box opens, displaying the cut lists related to the jobs that you selected.



The columns in cut lists can be highlighted with either green, yellow, or red:

- Status items highlighted in green are completed.
- Items highlighted with red or yellow need attention. For example, items highlighted in red can be past the assigned due date, whereas items highlighted with yellow may be missing information or need validation.

You can limit the visible cut lists by selecting a job, shape, main mark, piece mark, sequence, or lot by clicking options in the navigation tree on the left.

The combining result for which items have been purchased needs to be reviewed to verify that the saved cutting patterns are still valid. Items may need to be recombined. After recombining, the changes need to be saved to the current cut list.

Create a cut list

1. Click **New Cut List**.
2. In the **Enter Value** dialog box, click the arrow on the right side of the field, and select the production control job for which you want to create the cut list.

   The **Production Control Purchasing Report Filters** dialog box opens.
3. Select the items that you want to include in the cut list:

   When you are creating a new cut list, Tekla EPM by default filters the items in the new cut list so that only items that are not yet assigned to a cut list are included.

   a. In the **Production Control Purchasing Report Filters** dialog box, click **Reset** to reset the default filter.

b. To limit the items included in the cut list, select a filter type in the **Type** list, and click **Select**.

c. In the **Filter** dialog box, click the arrow buttons to move the items that you want to include to the **Included** list.

d. Click **OK**.

To further limit the items in the cut list, repeat substeps b to d or all necessary filter types.

4. Click **Make Report**.
5. In the **Report Progress** dialog box, click **Save To Cut List**.

   The new cut list is saved.
6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View the details of a cut list

1. Select the cut list whose details you want to view.
2. Click **Details**.

   The cut list details open in a new dialog box.
3. Do any of the following:

To	Do this
View the details of a cut list item	a. Click the cut list item whose details you want to view. b. Click **Details**. c. When you have viewed the item details, click the **Close** button (**X**) to close the item details.
Cut a cut list item	a. Click the cut list item that you want to cut. b. Click **Cut**. Note that the required materials need to be in stock. c. In the **Material used**, define properties for the used material. d. In the **Drop** section, define the drop properties. e. In the **Piece Tracking** section, define the user who cut the item, the hours used, and the batch ID.

To	Do this
	f. Click **TFS**. The item is taken from stock and cut according to the properties that you defined. The production control job is updated with the date/time stamp of the cut, and the **Status** column is highlighted with green.
Delete a cut list item	Note that deleting a cut list item is permanent and cannot be undone. a. Click the cut list item that you want to delete. b. Click **Delete**. c. In the confirmation dialog box, click **Yes** to permanently delete the cut list item.

Change the name or required date of a cut list

1. Select the cut list whose name or date you want to modify.
2. Click **Update Cut List**.
3. According to your needs, do any of the following:

To	Do this
Change the name of the cut list	a. In the menu, select **Set Description**. b. In the **Enter Value** dialog box, type a new name for the cut list. c. Click **OK**. The cut list name is updated in the **Cut List** column.
Change the required date of the cut list	a. In the menu, select **Set Date Required**. b. In the **Enter Value** dialog box, click the arrow on the right side of the field. c. Select the new required date in the calendar. d. Click **OK**. The required date is updated in the **Date Req** column.

Validate cut list items

When material changes occur, items in the **Val Req** column may be highlighted with yellow. This means that you need to verify that the items still work with the cutting details, or validate the cut list.

1. Double-click the cut list that contains items that need to be validated.
2. Select the items that you want to validate.
3. At the bottom of the dialog box, click **Validate**.

Tekla EPM validates the cut list.

If stock lengths no longer work with the combined parts, the items in the **Val Req** column are highlighted with red.

Re-validate cut list items

If the **Inval** column is highlighted with red, you need to re-validate cut list items.

Re-validating parts consists of uncombining the purchased materials and recombining them to correct the cutting details. Depending on the changes that have occurred, you may need to combine the items to a different or additional stock length of materials.

1. Double-click the cut list that contains items that need to be re-validated.
2. Select the items that you want to re-validate.
3. At the bottom of the dialog box, click **Re-Validate**.

Lock or unlock a cut list

- According to your needs, do one of the following:
  - To lock a cut list, select the cut list and click **Update Cut List** --> **Lock**.

    When a cut list is locked, its name in the **Cut List** column is highlighted with red.
  - To unlock a locked cut list, select the cut list and click **Update Cut List** --> **UnLock**.

Share or unshare a cut list

- To share a cut list to other users, select the cut list and click **Update Cut List** --> **Share**.
- To stop sharing a cut list to other users, select the cut list and click **Update Cut List** --> **Unshare**.

Export cut list to DSTV+

If you have enabled the DSTV+ integration, you can export cut list information as a `.zip` package of CNC files that follow the DSTV+ file standard.

1. Select the cut list that you want to export.
2. Click **DSTV+ Export**.
3. Browse to and select the folder where you want to export the files.
4. If necessary, change the file name.
5. Click **Save**. The cut list information is exported to the selected folder. You can see the export status in the **Status** dialog box.
6. To close the **Status** dialog box, click **OK**.

Next, you can extract the files from the `.zip` package and import the files to the relevant machine, so that the machine will know how to cut the related parts.

View, print, or export cut list reports

1. Select the cut lists for which you want to create reports.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Cut List Report**.
3. In the **Report Selection** dialog box, click the report that you want to view or print.
4. According to your needs, do any of the following:

To	Do this
View the cut list report	• In the **Report Selection** dialog box, click **View**. The selected reports opens in **Tekla EPM Report Viewer**.
Print the cut list report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No**

To	Do this
	Printer to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete a cut list

Deleting a cut list is permanent and cannot be undone.

1. In the list, click the cut list that you want to delete.
2. Click **Delete Cut List**.
3. In the confirmation dialog box, click **Yes** to permanently delete the cut list.

Add piece tracking and load tracking information and loads to production control jobs

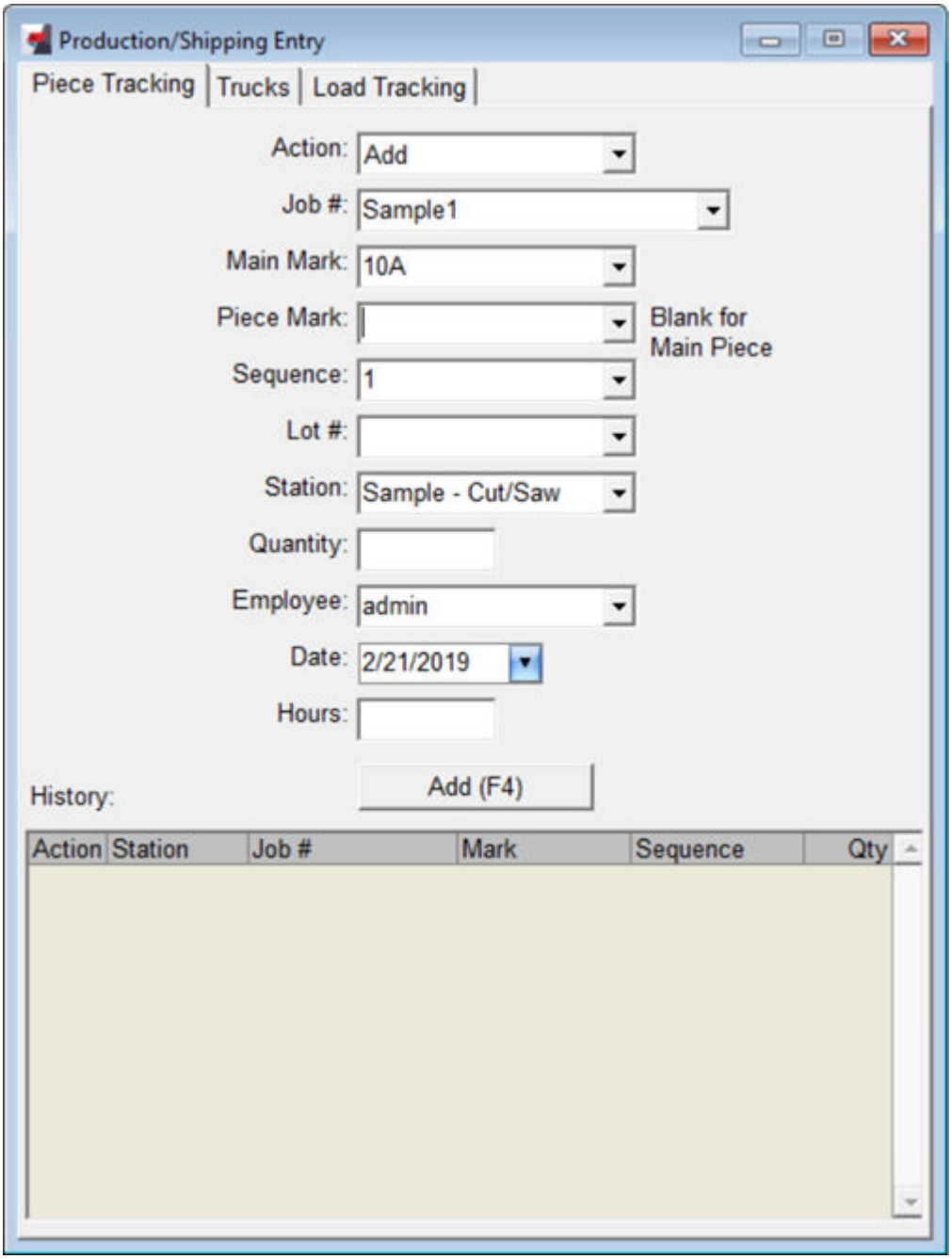
Use the **Production/Shipping Entry** dialog box to add information to any product control job in Tekla EPM. You can add piece tracking information and loads, ship and unship loads, and add piece marks to trucks.

Note that the **Production/Shipping Entry** dialog box only allows you to add one item at a time.

To open the **Production/Shipping Entry** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Production/Shipping Entry** .

   The **Production/Shipping Entry** dialog box opens on the **Piece Tracking** tab.



Add piece tracking information

1. In the **Action** list, click the action that you want to perform. You can add or delete items.
2. In the **Job #** list, click the production job for which you want to perform the action.
3. In the appropriate lists, select the main mark, piece mark, sequence, lot number, station, employee who is adding the information, and date.

   Note that the employee must be a Tekla EPM user.
4. In the **Quantity** field, enter the number of pieces being worked on.
5. In the **Hours** field, enter the man hours used for working on the item.
6. To perform the action, click **Add** or **Delete**.

The action is updated to the selected job. The action also appears in the **History** list at the bottom of the **Production/Shipping Entry** dialog box.

Add loads, ship loads, and unship loads

1. Click the **Trucks** tab to open it.
2. In the **Action** list, click the action that you want to perform.

   You can add or validate, ship, or unship trucks.
3. In the **Job #** list, click the production job for which you want to perform the action.
4. Select the load number, shipping date, and destination in the appropriate lists.
5. If necessary, click **View** to view the items assigned to the selected load.
6. If the load needs to be returned, select the **To Be Returned** check box.

   The load must be returned even if the materials will not be physically returned. Returning the loaded items allows the piece marks to be loaded onto a new shipping ticket that contains items delivered to the job site. This way, Tekla EPM can keep accurate records of when parts were received and shipped.
7. To perform the action, click **Add/Validate**, **Ship**, or **Un-Ship**.

   The action is updated to the selected production control job. The action also appears in the **History** list at the bottom of the **Production/Shipping Entry** dialog box.
8. If necessary, view the shipping ticket:
   a. Click **Shipping Ticket**.
   b. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

c. Do any of the following:

To	Do this
View the shipping ticket	• In the **Report Selection** dialog box, click **View**.
Print the shipping ticket	1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. 2. Click **Print**. 3. In the **Select Printer** dialog box, click a printer to select it. 4. Click **OK**.
Export the shipping ticket	1. In the **Report Selection** dialog box, click **Export**. 2. In the **Export Format** list, select an export format. 3. Click **Browse**. 4. Browse to the location where you want to save the exported file, and click **Save**. 5. Modify the file name according to your needs. 6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. 7. To open the file after exporting it, select the **Open Exported Document** check box. 8. In the **Report Selection** dialog box, click **Export**.

Add piece marks to trucks

1. Click the **Load Tracking** tab to open it.
2. In the **Action** list, click the action that you want to perform.

   You can add, delete, return, or unreturn items.
3. In the appropriate lists, select the main mark, piece mark, sequence, lot number, load number, and date.
4. If necessary, click **View** to view the items assigned to the selected load.
5. In the **Quantity** field, enter the number of pieces that are worked on.
6. Click **Add**, **Delete**, **Return**, or **Un-Return**.

   The action is updated to the selected production control job. The action also appears in the **History** list at the bottom of the **Production/Shipping Entry** dialog box.

7. If necessary, view the shipping ticket:
   a. Click **Shipping Ticket**.
   b. In the **Report Selection** dialog box, select the report that you want to view, print, or export.
   c. Do any of the following:

To	Do this
View the shipping ticket	• In the **Report Selection** dialog box, click **View**.
Print the shipping ticket	1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. 2. Click **Print**. 3. In the **Select Printer** dialog box, click a printer to select it. 4. Click **OK**.
Export the shipping ticket	1. In the **Report Selection** dialog box, click **Export**. 2. In the **Export Format** list, select an export format. 3. Click **Browse**. 4. Browse to the location where you want to save the exported file, and click **Save**. 5. Modify the file name according to your needs. 6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. 7. To open the file after exporting it, select the **Open Exported Document** check box. 8. In the **Report Selection** dialog box, click **Export**.

Review production statuses of jobs

Use the **Production Status** command to view the current production station of items in a single production control job or a group of jobs.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Production Status** .

3. In the left-hand pane of the **Production Status Filters** dialog box, select check boxes next the summary fields to include the related properties as columns in the summary of the production statuses.

   Selecting summary field check boxes can make it easier to view the overall production progress of multiple jobs.

4. To only view the status of specific types of items, select a filter type in the **Type** list, and click **Select**.

   For example, to only view particular jobs, select **Job #** and click **Select**.

5. In the **Filter** dialog box, do one of the following depending on the filter type:

   - Click the arrow buttons to move the items that you want to view to the **Included** list.
   - Type the maximum and minimum values for the items that you want to view.

6. Click **OK**.

   To further limit the visible items, repeat steps 3 to 5 for all necessary filter types.

7. At the bottom of the **Production Status Filters** dialog box, select check boxes next to the information that you want to show in the production status summary.

   You can select to show the TFS status, weight, gross weight, assembly weight, or gross assembly weight.

8. Click **OK** to view the production statuses of selected items.

The **Production Status** dialog box opens, displaying a summary of the production statuses of items in the selected production control jobs.

If necessary, you can export the production status summary to Microsoft Excel to save the production status information. Right-click in the display are of the **Production Status** dialog box, and in the context menu, select **Export to Excel**.

Create global production control reports

Global production control reports contain information from multiple production control jobs. You can create either purchasing reports or production reports.

See also

View or print purchasing reports (page 720)

View, print, or export production reports (page 722)

View or print purchasing reports

Use the **Purchasing Reports** dialog box to create purchasing reports involving all production control jobs.

Create a purchasing report

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Purchasing Reports** .
3. In the **Select Production Control Jobs** dialog box, click the arrow buttons to move the production control jobs that you want to include in the reports to the **Included** list.

   To select multiple jobs, hold down **Ctrl**.

   To select a range of subsequent jobs, hold down **Shift**.
4. Click **OK**.
5. To limit the items that are included in the reports, in the **Production Control Purchasing Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
6. In the **Filter** dialog box, do one of the following depending on the filter type:
   a. Click the arrow buttons to move the items whose heat documents you want to view to the **Included** list.
   b. Type the maximum and minimum values for the items whose heat documents you want to view.
7. Click **OK**.

   To further limit the items in the reports, repeat steps 5 to 7 for all necessary filter types.
8. Click the arrow on the right side of **Weight Type** field, and select the weight type that you want to use in the report.

   Note that the **Weight Type** list is only visible if you have selected it on the **Report Settings** tab of the **Company Standards** dialog box.

   The net weight option is only available if CNC files have been loaded for the items included in the report.
9. Click **Make Report**.
10. In the **Report Progress** dialog box, click the report that you want to view or print.

    To modify the visible reports, click the **Edit Report Types** button.

View the report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. In the **Select Printer** dialog box, click a printer to select it.
4. Click **OK**.
5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Save a cut list

1. Click **Save Cut List**.
2. In the **Job #** list, select the job.
3. In the **Cut List Description** field, either enter a description directly in the field, or click the arrow on the right side of the field to select an option in the list.
4. Click the arrow on the right side of the **Date Required** field, and click a date in the calendar to select it.
5. If you do not want anyone to make changes to the cut list, select the **Lock Cut List** check box.
6. Click **Save To Cut List**.

   Tekla EPM saves the cut list. You can view and modify the cut list in the selected production control job and in the Tekla EPM Go web application.
7. Click **OK** to close the **Message** dialog box.
8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View, print, or export production reports

Use the **Reports** command under **Maintenance** --> **Production Control** to create reports that include information from all or several production control jobs. The available reports include master shipping lists and station summaries.

To create production control reports, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Reports** .

3. In the **Select Production Control Jobs** dialog box, click the arrow buttons to move the jobs that you want to include in the reports to the **Included** list..
4. Click **OK**.
5. To only include specific types of items in the reports, in the **Production Control Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
6. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to include in the reports to the **Included** list.
   - Type the maximum and minimum values for the items that you want to include in the reports.
7. Click **OK**.
8. Click **Make Report**.
9. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

You can modify the visible report types by clicking **Edit Report Types**.

View a report

- In the **Report Selection** dialog box, click **View**.

The selected report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print a production report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. In the **Select Printer** dialog box, click a printer to select it.
4. Click **OK**.
5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Export a production report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.

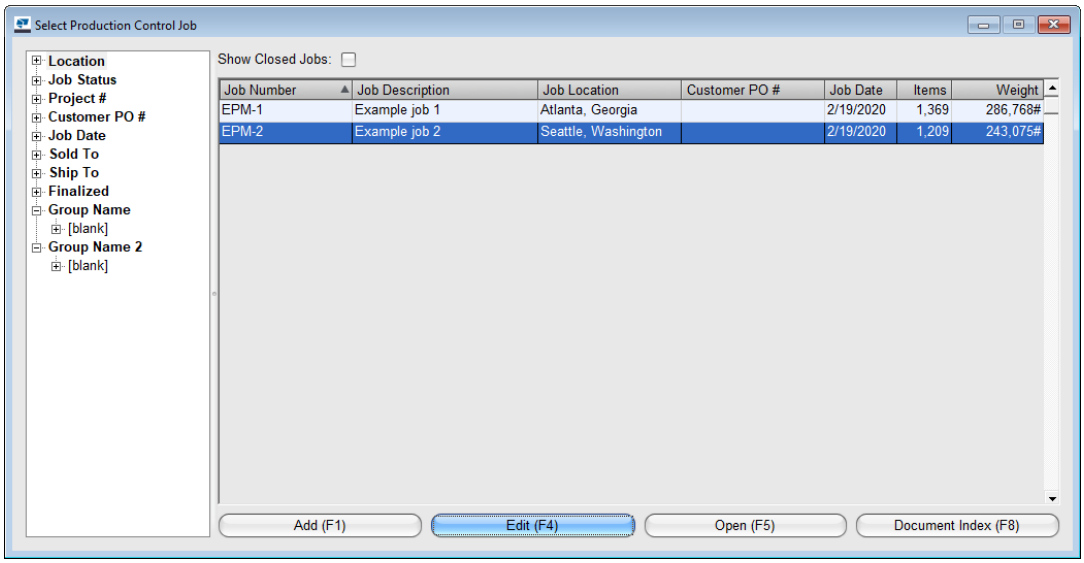
4. Browse to the location where you want to save the exported file, and click **Save**.
5. Modify the file name according to your needs.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. In the **Report Selection** dialog box, click **Export**.

9.2 Open the Production Control module

To open **Production Control**, do the following:

- At the top of the Tekla EPM window, click the **Production Control** button.

The **Select Production Control Job** dialog box opens. Next, you can create a new production control job, open or modify an existing job, or view and modify the documents attached to a job.



NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

See also

Find a production control job (page 725)

Create a production control job (page 725)

Open and view a production control job (page 729)

Store document references for a production control job (page 733)

Modify a production control job (page 734)

Find a production control job

Use the **Find Job** command to find the desired production control job among various other jobs in the **Select Production Control Job** dialog box.

1. In the **Select Production Control Job** dialog box, click the **Production Control** ribbon tab.
2. On the **File** menu, select **Find Job**.
3. In the **Enter Value** dialog box, either click the arrow on the right side of the field to select a job in the list, or type the job number directly in the field.
4. Click **OK**.

Tekla EPM selects the job in the **Select Production Control Job** dialog box. You can now modify or open it.

NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

See also

Open and view a production control job (page 729)

Modify a production control job (page 734)

Create a production control job

To create a new production control job, do the following:

1. At the bottom of the **Select Production Control Job** dialog box, click **Add**.
2. On the **General** tab of the **Production Control Job Edit** dialog box, type the job number.

   Note that the job number cannot be changed later. All other production job information can be modified later, if necessary.

3. On the **General** tab, adjust the following properties according to your needs:

Option	Description
Job Date	The date your company received the job. Tekla EPM automatically uses the current date. If necessary, change the date by clicking the arrow on the right side of the **Job Date** field and selecting a date in the calendar.
Shipping Date	The estimated shipping date of the job. Click the arrow on the right side of the **Shipping Date** field, and select a date in the calendar.
Job Description	The description of the job. Type a description in the **Job Description** field.
Job Location	The city or town of the production control job. Type the appropriate location in the **Job Location** field.
Job Status	Select if the job is still in progress (**Open**), or if the job has already been finished (**Closed**). You can filter the **Select Estimating Job** dialog box, so that only open jobs are shown.
ERP Job #	The accounting system job number. Typing the accounting system job number in the **ERP Job #** field allows you to link material items properly when you export information to the accounting system, such as Trimble Viewpoint.
Job Group	The first and second job groups that the current production control job belongs to. Click the arrow on the right side of **Job Group** fields and select existing job groups in the list, or type new job groups directly in the blank fields.
Comment	Comments on the job. The comments will be visible in production control reports. Type comments in the **Comment** field.
Shipping Comment	Comments on the shipping of the job. For example, you can add information on shipping restrictions.
Project Management Job	The project management job that is linked to the production control job. Selecting an project management job allows you to import useful

Option	Description
	information from the selected project management job. The related project management job needs to be linked to the production control job in order to access the drawings in the **Production Control** module. You can also load general information from the project management job to the production control job. Tekla EPM will fill the related fields on the **General** tab with information from the selected project management job, and load the addresses from the first company tab in the project management job on the **Sold To/Ship To** tab. To load information from a project management job, do the following: a. Click the arrow on the right side of **Project Management Job** field, and select the project management job in the list. b. Click **Load Info** on the right side of the **Project Management Job** field. c. At the bottom of the dialog box, click **Save**. d. To further modify the properties of the production control job, click the production control job to select it, and click **Edit**.
Estimate	The estimating job that is linked to the production control job. Selecting an estimating job allows you to apply the labor from the estimating job to the production control job. Click the arrow on the right side of **Estimate** field, and select the estimating job in the list. You can also load general information from the estimating job the production control job. Tekla EPM will fill the related fields on the **General** tab with information from the selected estimating job. To load information from an estimating job, do the following: a. Click **Load Info** on the right side of the **Estimate** field. b. At the bottom of the dialog box, click **Save**.

Option	Description
	c. To further modify the properties of the production control job, click the production control job to select it, and click **Edit**.

4. On the **Sold To/Ship To** tab, modify the client details:

   Note that only companies and contacts that have already been saved in the **Address Book** as **Client** can be selected.

   a. Click the arrow on the right side of **Sold To** field, and select the buyer in the list.

   b. Click the arrow on the right side of **Ship To** field, and select the receiver in the list.

   The contact information is automatically added to the blank fields, but you can still modify the details according to your needs.

5. On the **Input Settings** tab, adjust the input settings used in the job.

   For more information on the available input settings, see Define company standard settings for Production Control (page 676).

6. Click the buttons at the bottom of the **Production Control Job Edit** dialog box to adjust the combining optimizations, suppliers, input and display units, pay categories, and shipping routes used for the current job.

   For more information on the available settings, see the following links:

   - Define combining optimizations for Production Control (page 684)
   - Define suppliers for Production Control (page 686)
   - Define input and display units for Production Control (page 684)
   - Define pay categories for Production Control (page 688)
   - Create, modify, and delete global shipping routes (page 704)

7. Click **Save** to create the job.

The **Production Control Job Edit** dialog box closes. The production control job is added to the list in the **Select Production Control Job** dialog box.

Link a production control job to an estimating job and a project management job

By linking a production control job to an estimating job and a project management job, you can compare the estimated and actual working hours and material information.

1. At the top of the Tekla EPM window, click the **Production Control** button.
2. In the **Select Production Control Job** dialog box, select the production control job that you want to link to a project management job.
3. Click **Edit**.

4. In the **Production Control Job Edit** dialog box, click the arrow on the right side of the **Project Management Job** list and select the desired project management job.

   The project name and job number do not need to match.

5. To load general information from the selected project management job to the production control job, click **Load Info**.

   Tekla EPM fills the related fields on the **General** tab with information from the selected project management job, and loads the addresses from the first company tab in the project management job onto the **Sold To/Ship To** tab.

6. Click **Save**.

7. Re-open the **Production Control Job Edit** dialog box.

8. Click the arrow on the right side of the **Estimate** list and select the desired estimating job in the list.

   The job numbers do not need to match.

9. To load general information from the selected estimating job to the production control job, click **Load Info**.

   Tekla EPM fills the related fields on the **General** tab with information from the selected estimating job.

10. Click **Save**.

See also

Link a production control job to an estimating job and a project management job (page 728)

Open and view a production control job

To view or modify the items in an existing production control job, you need to open the job. Do the following:

1. In the **Select Production Control Job** dialog box, click the job that you want to open.

   NOTE Jobs whose statuses are set to **Closed** are not shown by default. To show closed jobs, select the **Show Closed Jobs** check box.

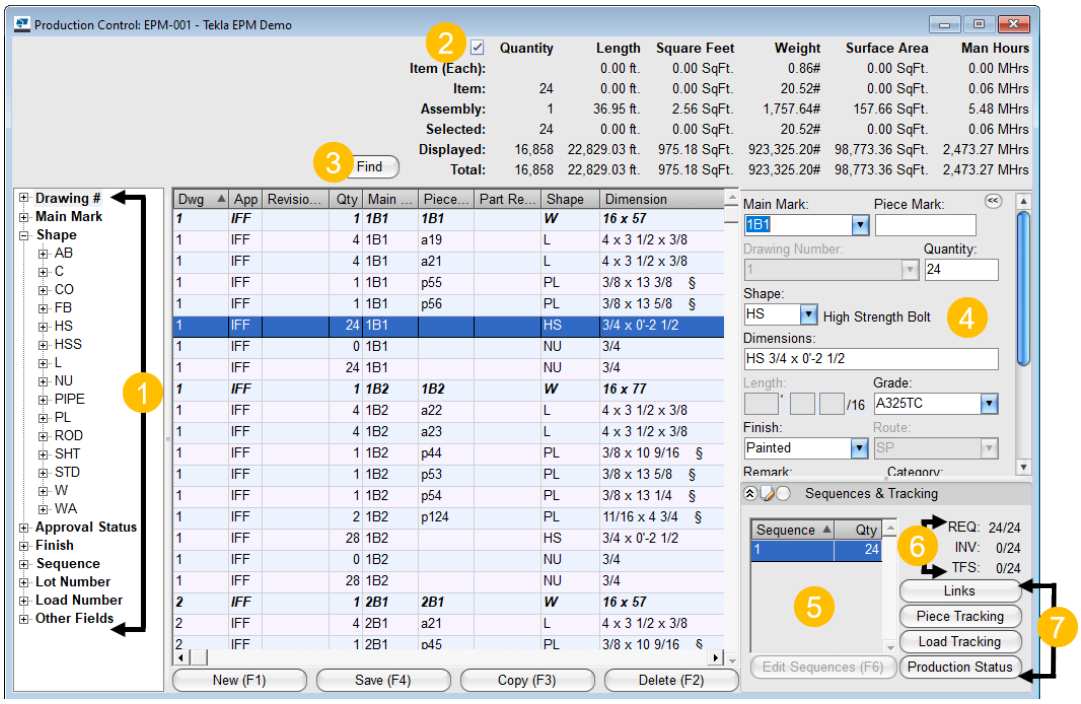
2. Double-click the job, or click **Open** at the bottom of the dialog box.

3. If the **Open to Filter Selection** check box has been selected in company standards, set filters in the **Production Control Filters** dialog box to only show the items that you want to see.

   For detailed instructions, see Filter information in the Production Control dialog box (page 731).

The **Production Control** dialog box opens.

View the elements in the dialog box in the following image:



(1)

The navigation tree allows you to view items by drawing number, shape, sequence, or load.

Click **+** to expand a category, and click a sub-category to only display items of that category.

(2)

By default, the summary shows the quantity, length, area, and weight of each item, the current item and assembly, the selected items, all items shown in the display area, and the entire job.

You can click the check box in the upper-left corner of the summary to select for which items you want to show the summary.

(3)

Use the **Find** button to find items of a specific shape, material grade, or material dimension, or a specific item in the production control job. For instructions, see Find production control items (page 732).

(4)

The input section allows you to modify the information of new or selected material items.

(5)

The **Sequence** section shows the sequences of the selected item, and the **Edit Sequences** button allows you to manage the sequences. For instructions, see Manage sequences (page 785).

(6)

Information grid: allows you to view the overall situation of the material item:

- **REQ**: The number of pieces that are on a requisition and have not yet been combined or purchased.
- **INV**: The number of pieces that have been combined in the production control job and are currently listed in a purchase order.
- **TFS**: The number of pieces that have been taken from stock and are being worked in the shop.

(7)

Links, **Piece Tracking**, **Loads**, and **Production Status** buttons allow you to view and manage the item's station summary and the loading situation, and view the production status and the linked material items in other modules. If multiple items are selected, the information of the last selected item is shown.

For instructions, see View material links (page 749), Track production by piece mark (page 805), Create, modify, and delete loads (page 800), and Review the production statuses of items (page 748).

See also

Filter information in the Production Control dialog box (page 731)

Filter information in the Production Control dialog box

In the **Production Control Filters** dialog box, you can set filters that determine which items are shown in a production control job. You can also save the filter settings for later use.

If the **Open to Filter Selection** check box has been selected in the **Production Control** company standard settings, the **Production Control Filters** dialog box opens automatically when you open a production control job.

If the **Open to Filter Selection** check box has not been selected, open the **Production Control Filters** dialog box as follows:

1. In an open production control job, click the **Production Control** ribbon tab.
2. On the menu, select **Filter**.

In the **Production Control Filters** dialog box, set filters as follows:

1. To filter the displayed items according to selected criteria, select a filter type in the **Type** list, and click **Select**.
2. In the **Filter** dialog box, click the arrow buttons to move the items that you want to display to the **Included** list.

3. Click **OK**.

   If you want to further filter the information displayed in the **Estimating** dialog box, repeat steps 1 to 3 for different items. Note that only items that match the items in the **Included** list will be available when setting more filters.

   If you want to clear all filter settings, click **Reset**.

4. To save commonly used filters, do the following:

   a. Click **Filter Types** in the lower-left corner.

   b. Click **New**.

   c. Type a description for the filter type.

   d. Create the filter settings.

      For more information, see steps 3 to 5.

   e. Click **Add**.

   f. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

      The newly created filter type is selected in the **Filter Types** list.

   g. To apply the filter type, click **Set**.

5. According to your needs, do one of the following:

   - To use the filter, click **Apply Filter**.
   - To use the filter in the job and save it until a new filter is set or the filter is cleared, click **Apply Filter & Save**.

     Note that the filter will remain in use even if you close and re-open the job. After you clear the filters, the filter settings cannot be used again.

The **Estimating Filters** dialog box closes, and the **Production Control** dialog box is filtered according to the settings you made.

To display all information in the **Production Control** dialog box again, click **Clear Filters** in the upper-left corner.

Find production control items

Use the **Find** button in to quickly find items in an open production control job. You can search for items by material shape, grade, and dimensions, or by page and item number.

1. In an open production control job, click **Find**.
2. Do one of the following:

To	Do this
Find all items that have a particular shape, grade, and dimensions	a. In the **Find** menu, select **Find Shape/Grade/Size**.

To	Do this
	b. In the **Find** dialog box, select the right shape, grade, and dimensions in the available lists. You can also start typing the shape, grade, or dimensions. Tekla EPM will suggest options that match what you have typed. c. Click **Find**. The **Find** dialog box closes. Only the items that match your search are now shown in the current production control job.
Find the right item on a particular page of the estimating job	a. In the **Find** menu, select **Find Item**. b. In the **Find** dialog box, select the main mark and piece mark in the available list. You can also start typing the main mark or piece mark. Tekla EPM will suggest options that match what you have typed. c. Click **Find**. The **Find** dialog box closes. Only the items that match your search are now shown in the **Estimating** dialog box.

See also

Manage production control items (page 776)

Store document references for a production control job

Document Index is where you can store documents for reference. When you store documents in **Document Index**, each user who has access to the production control job can view them, so it is easy to keep up-to-date on the production control job. You can save heat documents, mill certifications, and pricing quotes, as well as Microsoft Outlook emails, in **Document Index**.

To access **Document Index**, do the following:

1. In the **Select Production Control Job** dialog box, click to select the job whose document references you want to view or modify.

2. Click **Document Index**, or press **F8**.

The **Document Index** dialog box opens. Next, you can either modify the available folders for document references, or add, modify, delete, open, and email document reference files.

For more information, see the following links:

Manage document reference categories (page 389)

Add document references (page 391)

Open a document reference (page 394)

Modify a document reference (page 395)

Attach a document reference to an email (page 396)

Delete a document reference (page 396)

Modify a production control job

Use the **Edit** command in the **Select Production Control Job** dialog box to modify the properties of a production control job. You can also adjust the combining optimizations, suppliers, input and display units, pay categories, and shipping routes that are used for the job.

1. In the **Select Production Control Job** dialog box, click the job that you want to modify.
2. At the bottom of the dialog box, click **Edit**.
3. In the **Production Control Job Edit** dialog box, modify the production control job settings according to your needs.

   The available properties are:

Option	Description
Job Date	The date your company received the job. Tekla EPM automatically uses the current date. If necessary, change the date by clicking the arrow on the right side of the **Job Date** field and selecting a date in the calendar.
Shipping Date	The estimated shipping date of the job. Click the arrow on the right side of the **Shipping Date** field, and select a date in the calendar.
Job Description	The description of the job. Type a description in the **Job Description** field.

Option	Description
Job Location	The city or town of the production control job. Type the appropriate location in the **Job Location** field.
Job Status	Select if the job is still in progress (**Open**), or if the job has already been finished (**Closed**). You can filter the **Select Estimating Job** dialog box, so that only open jobs are shown.
ERP Job #	The accounting system job number. Typing the accounting system job number in the **ERP Job #** field allows you to link material items properly when you export information to the accounting system, such as Trimble Viewpoint.
Job Group	The first and second job groups that the current production control job belongs to. Click the arrow on the right side of **Job Group** fields and select existing job groups in the list, or type new job groups directly in the blank fields.
Comment	Comments on the job. The comments will be visible in production control reports. Type comments in the **Comment** field.
Shipping Comment	Comments on the shipping of the job. For example, you can add information on shipping restrictions.
Project Management Job	The project management job that is linked to the production control job. Selecting an project management job allows you to import useful information from the selected project management job. The related project management job needs to be linked to the production control job in order to access the drawings in the **Production Control** module. You can also load general information from the project management job to the production control job. Tekla EPM will fill the related fields on the **General** tab with information from the selected project management job, and load the addresses from the first company tab in the project management job on the **Sold To/Ship To** tab. To load information from a project management job, do the following:

Option	Description
	a. Click the arrow on the right side of **Project Management Job** field, and select the project management job in the list. b. Click **Load Info** on the right side of the **Project Management Job** field. c. At the bottom of the dialog box, click **Save**. d. To further modify the properties of the production control job, click the production control job to select it, and click **Edit**.
Estimate	The estimating job that is linked to the production control job. Selecting an estimating job allows you to apply the labor from the estimating job to the production control job. Click the arrow on the right side of **Estimate** field, and select the estimating job in the list. You can also load general information from the estimating job the production control job. Tekla EPM will fill the related fields on the **General** tab with information from the selected estimating job. To load information from an estimating job, do the following: a. Click **Load Info** on the right side of the **Estimate** field. b. At the bottom of the dialog box, click **Save**. c. To further modify the properties of the production control job, click the production control job to select it, and click **Edit**.

4. On the **Sold To/Ship To** tab, modify the client details:

   Note that only companies and contacts that have already been saved in the **Address Book** as **Client** can be selected.

   a. Click the arrow on the right side of **Sold To** field, and select the buyer in the list.

   b. Click the arrow on the right side of **Ship To** field, and select the receiver in the list.

   The contact information is automatically added to the fields, but you can still modify the details according to your needs.

5. On the **Input Settings** tab, adjust the input settings used in the job.

6. Click the buttons at the bottom of the **Production Control Job Edit** dialog box to adjust the combining optimizations, suppliers, input and display units, pay categories, and shipping routes used for the current job.

7. Click **Save** to update the job properties.

9.3 View production control job details

You can view multiple details regarding production control jobs, such as the changes made to the jobs, and the production statuses and inspection statuses of items. You can also view and adjust the project schedule and the production schedule, or create production reports.

See also

View all changes in a production control job (page 737)

Review and adjust production control job information (page 740)

View and adjust the project schedule (page 613)

View the production schedule (page 767)

View, print, and export job-specific production control reports (page 772)

View all changes in a production control job

Tekla EPM records every change made in the system. This is useful because you can view all changes made in the current production control job at once. You can then filter the information to see changes made by a particular user or on a particular date. If necessary, you can also print the list of changes.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **History of Changes** --> **List Of Changes** .
3. In the **List Of Changes Report Filters** dialog box, do any of the following:

To	Do this
Filter changes by user, revision number, category, sub-category, or pay category	a. Select the right filter type and click **Select**. b. Click the arrow buttons to move the values that you want to see in the list of changes to the **Included** list. c. Click **OK**.
Filter changes by date	a. Select the **Transaction Date** filter and click **Select**.

To	Do this
	b. Select the start (**Min**) and end (**Max**) dates in the calendar. You can also select the **Expression** check box for the dates. This way, you can select the base date and define how many days before or after are taken into account in the list of changes. c. Click **OK**.

4. Click **Make Report**.
5. In the **Report Selection** dialog box, do any of the following:

To	Do this
View the list of changes	• Click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the list of changes	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the list of changes	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs.

To	Do this
	f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

View all changes since importing the bill of materials (page 739)

View, print, and export job-specific production control reports (page 772)

View all changes since importing the bill of materials

Use the **History of Changes** command to view and review all changes that have been made in a production control job since a bill of materials has been imported.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **History of Changes** --> **History of Changes** .
3. In the **History of Changes** dialog box, select the items whose changes you want to view in the available lists

   To view all items, clear all text from the lists.
4. Click **OK**.
5. To only include changes of specific properties, click the arrow buttons to move the properties that you want to include to the **Included** list.
6. If necessary, filter the changes:

To	Do this
Filter changes by user	a. In the **Filters** section, click **Edit** on the right side of the **User** filter. b. Click the arrow buttons to move the users whose changes you want to view to the **Included** list. c. Click **OK**.

To	Do this
Filter changes by date	a. In the **Filters** section, click **Edit** on the right side of the **Date** filter. b. Select the start (**Min**) and end (**Max**) dates in the calendars. c. Click **OK**.

7. In the lower-left corner of the dialog box, select check boxes to indicate if you want to include changes related to sequences, piece tracking, or load tracking.
8. Click **View History of Changes**.

   The history of changes appears. The items in the dialog box are color-coded to show any changes that have been made:

   - Items highlighted with green have not been changed since they were imported.
   - Items highlighted with yellow have been changed since they were imported. The **Type** column shows how the items have changed.
9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

View all changes in a production control job (page 737)

View, print, and export job-specific production control reports (page 772)

Review and adjust production control job information

Use the **Review** commands to view and adjust information regarding the current production control job.

For more information, see the following links:

Manage job-specific cut lists (page 741)

Create, modify, and delete production codes used in a production control job (page 746)

Review the production statuses of items (page 748)

View material links (page 749)

Add, modify, and review inspection test records (page 749)

Review the inspection statuses of items (page 758)

Create, modify, and delete job-specific shipping routes (page 759)

View and adjust TFS details (page 763)

Compare the materials in a production control job and a combining job (page 766)

Compare the labor hours in a production control job and an estimating job (page 766)

Manage job-specific cut lists

Use the **Cut Lists** dialog box to create, modify, and delete cut lists for the current production control job. You can also lock cut lists, and create cut list reports in the **Cut Lists** dialog box.

To access the **Cut Lists** dialog box, do the following:

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Production Control** --> **Cut Lists** .

The **Cut Lists** dialog box opens, displaying all cut lists saved for the current job.

Items in cut lists can be highlighted with either green, yellow, or red:

- Status items highlighted in green are completed.
- Items highlighted with red or yellow need attention. For example, items highlighted in red can be past the assigned due date, whereas items highlighted with yellow may be missing information, or need validation.

You can limit the visible cut lists by selecting a shape, main mark, piece mark, sequence, or lot by clicking options in the navigation tree on the left.

The combining result for which items have been purchased needs to be reviewed to verify that the saved cutting patterns are still valid. Items may

need to be recombined. After recombining, the changes need to be saved to the current cut list.

Create a cut list

1. Click **New Cut List**.
2. In the **Enter Value** dialog box, click the arrow on the right side of the field, and select the production control job for which you want to create the cut list.

   The **Production Control Purchasing Report Filters** dialog box opens.
3. Select the items that you want to include in the cut list:

   When you are creating a new cut list, Tekla EPM by default filters the items in the new cut list so that only items that are not yet assigned to a cut list are included.

   a. In the **Production Control Purchasing Report Filters** dialog box, click **Reset** to reset the default filter.

   b. To limit the items included in the cut list, select a filter type in the **Type** list, and click **Select**.

   c. In the **Filter** dialog box, click the arrow buttons to move the items that you want to include to the **Included** list.

   d. Click **OK**.

   To further limit the items in the cut list, repeat substeps b to d or all necessary filter types.
4. Click **Make Report**.
5. In the **Report Progress** dialog box, click **Save To Cut List**.

   The new cut list is saved.
6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View the details of a cut list

1. Select the cut list whose details you want to view.
2. Click **Details**.

   The cut list details open in a new dialog box.
3. Do any of the following:

To	Do this
View the details of a cut list item	a. Click the cut list item whose details you want to view. b. Click **Details**.

To	Do this
	c. When you have viewed the item details, click the **Close** button (**X**) to close the item details.
Cut a cut list item	a. Click the cut list item that you want to cut. b. Click **Cut**. Note that the required materials need to be in stock. c. In the **Material used**, define properties for the used material. d. In the **Drop** section, define the drop properties. e. In the **Piece Tracking** section, define the user who cut the item, the hours used, and the batch ID. f. Click **TFS**. The item is taken from stock and cut according to the properties that you defined. The production control job is updated with the date/time stamp of the cut, and the **Status** column is highlighted with green.
Delete a cut list item	Note that deleting a cut list item is permanent and cannot be undone. a. Click the cut list item that you want to delete. b. Click **Delete**. c. In the confirmation dialog box, click **Yes** to permanently delete the cut list item.

Change the name or required date of a cut list

1. Select the cut list whose name or date you want to modify.
2. Click **Update Cut List**.
3. According to your needs, do any of the following:

To	Do this
Change the name of the cut list	a. In the menu, select **Set Description**. b. In the **Enter Value** dialog box, type a new name for the cut list. c. Click **OK**. The cut list name is updated in the **Cut List** column.

To	Do this
Change the required date of the cut list	a. In the menu, select **Set Date Required**. b. In the **Enter Value** dialog box, click the arrow on the right side of the field. c. Select the new required date in the calendar. d. Click **OK**. The required date is updated in the **Date Req** column.

Validate cut list items

When material changes occur, items in the **Val Req** column may be highlighted with yellow. This means that you need to verify that the items still work with the cutting details, or validate the cut list.

1. Double-click the cut list that contains items that need to be validated.
2. Select the items that you want to validate.
3. At the bottom of the dialog box, click **Validate**.

Tekla EPM validates the cut list.

If stock lengths no longer work with the combined parts, the items in the **Val Req** column are highlighted with red.

Re-validate cut list items

If the **Inval** column is highlighted with red, you need to re-validate cut list items.

Re-validating parts consists of uncombining the purchased materials and recombining them to correct the cutting details. Depending on the changes that have occurred, you may need to combine the items to a different or additional stock length of materials.

1. Double-click the cut list that contains items that need to be re-validated.
2. Select the items that you want to re-validate.
3. At the bottom of the dialog box, click **Re-Validate**.

Share or unshare a cut list

- To share a cut list to other users, select the cut list and click **Update Cut List** --> **Share**.
- To stop sharing a cut list to other users, select the cut list and click **Update Cut List** --> **Unshare**.

Export cut list to DSTV+

If you have enabled the DSTV+ integration, you can export cut list information as a `.zip` package of CNC files that follow the DSTV+ file standard.

1. Select the cut list that you want to export.
2. Click **DSTV+ Export**.
3. Browse to and select the folder where you want to export the files.
4. If necessary, change the file name.
5. Click **Save**. The cut list information is exported to the selected folder. You can see the export status in the **Status** dialog box.
6. To close the **Status** dialog box, click **OK**.

Next, you can extract the files from the `.zip` package and import the files to the relevant machine, so that the machine will know how to cut the related parts.

Lock or unlock a cut list

- According to your needs, do one of the following:
  - To lock a cut list, select the cut list and click **Update Cut List** --> **Lock**.

    When a cut list is locked, its name in the **Cut List** column is highlighted with red.
  - To unlock a locked cut list, select the cut list and click **Update Cut List** --> **UnLock**.

View, print, or export cut list reports

1. Select the cut lists for which you want to create reports.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click **Cut List Report**.
3. In the **Report Selection** dialog box, click the report that you want to view or print.
4. According to your needs, do any of the following:

To	Do this
View the cut list report	• In the **Report Selection** dialog box, click **View**. The selected reports opens in **Tekla EPM Report Viewer**.
Print the cut list report	a. In the **Report Selection** dialog box, change the number of the

To	Do this
	printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete a cut list

Deleting a cut list is permanent and cannot be undone.

1. In the list, click the cut list that you want to delete.
2. Click **Delete Cut List**.
3. In the confirmation dialog box, click **Yes** to permanently delete the cut list.

Create, modify, and delete production codes used in a production control job

In the **PDC Production Codes** dialog box, you can create new production codes for the production control job, or modify and delete existing production codes. You can override the estimated man hours and use aggregate units to calculate the planned labor time on a job. This labor time can then be used in production schedules and project schedules.

To assign production codes to material items, use the **Global Edit** command. For more information, see Modify multiple production control items (page 782).

Open the PDC Production Codes dialog box

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Review** --> **Production Codes** .

The **PDC Production Codes** dialog box opens.

Create a production code

1. Click **New**.
2. In the **Production Code** field, type an abbreviation for the production code.

   For example, you can use `B1` for beams or `C1` for columns.
3. Type a description for the production code.
4. If you want to use aggregate units for the planned hours instead of the original estimated hours, do the following:

   a. Select the **Override Man Hours** check box.

   b. Type the man hours in the field.

   c. To change the aggregate units used, right-click the field and select the suitable units in the context menu.

   The estimated hours are always created in the estimate. They are not overwritten by the production code properties.

   The planned hours that you define here are automatically used in the project schedule. However, if you link the production control to a matching estimate, the estimated hours are automatically used in the project schedule.
5. Click **Add**.

The new production code is added.

Modify a production code

1. Select the production code that you want to modify.

2. Modify the production code name, description, man hours, and aggregate units according to your needs.
3. Click **Save** to update the properties.

Delete a production code

Note that deleting a production code is permanent and cannot be undone.

1. Select the production code that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the production code.

Review the production statuses of items

In the **Production Status** dialog box, you can review the production statuses of main mark items in the current production control job.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Review** --> **Production Status** .
3. To only review the production statuses of particular items, in the **Production Status Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the values that you want to review to the **Included** list.
   - Type the maximum and minimum values for the items that you want to review.
5. Click **OK**.

   To further limit the items that you want to review, repeat steps 3 to 5 for all necessary filter types.
6. Click check boxes next to the item properties that you want to view in the left-hand pane and at the bottom of the dialog box.
7. If you do not want to view the production status of items without piece tracking or load tracking, select the **Exclude Accessories without Piece/ Load Tracking** check box.
8. Click **OK** to view the production statuses of the selected items.

The **Production Status** dialog box opens, displaying the production stations, field stations, and shipping conditions of items in the current production control job.

The information is color-coded:

- Completed stations and operations are highlighted with green. The completion date is also displayed.
- All work that is in progress is highlighted with yellow.
- If no progress has been made regarding the station or operation, items are highlighted with red.

Note that you can export the production status information as a Microsoft Excel worksheet. Right-click anywhere in the display area of the **Production Status** dialog box, and in the context menu, select **Export to Excel**.

View material links

The **Links** button in production control jobs allows you to view the properties of the requisition, inventory, and inventory history materials to which the selected production control items are linked.

1. Select items in the **Production Control** dialog box.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Links** button near the lower-right corner.

   The **Links** dialog box opens, showing a list of all the linked material items in other Tekla EPM modules.

3. To view one of the linked material items in its own location in Tekla EPM, select the item and click **Open** at the **Links** dialog box, or double-click the item.

See also

Review and adjust production control job information (page 740)

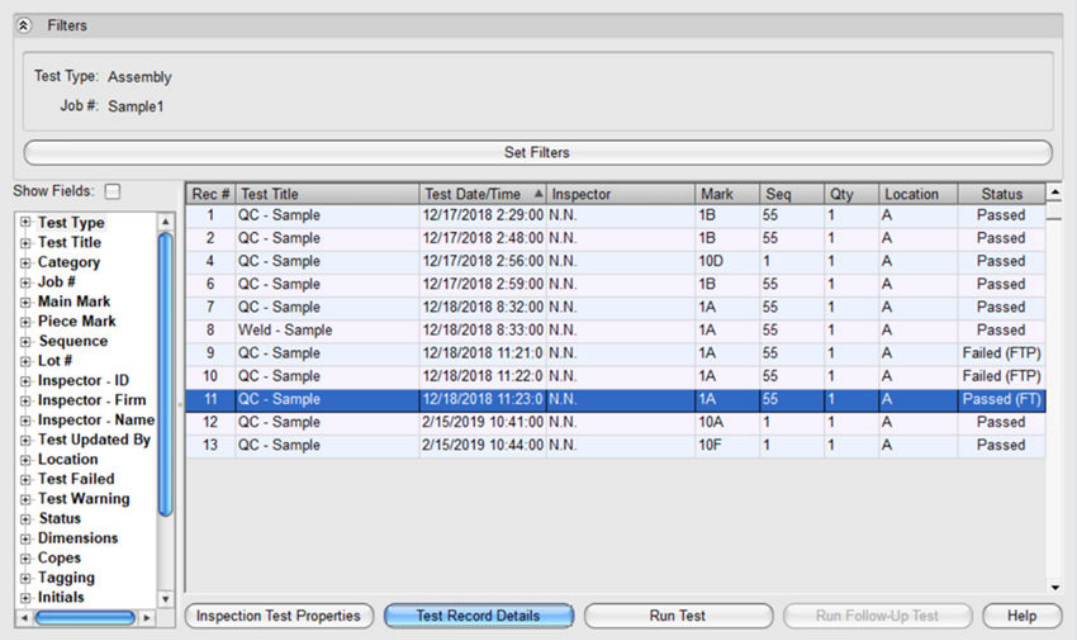
Add, modify, and review inspection test records

In the **Test Records** dialog box, you can run inspection tests and follow-up tests, or modify and view the existing inspection test records. You can also create reports that allow you to review if the inspection tests have been successful or not.

To access the **Test Records** dialog box, do the following:

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Review** --> **Inspection Test Records** .

The **Test Records** dialog box opens, displaying all existing inspection test records.



If you need to modify the setups of inspection tests, see Modify the setup of an inspection test (page 754).

Add a new inspection test record

1. At the bottom of the dialog box, click **Run Test**.
2. Click the arrow on the right side of the **Test Type**, **Category**, and **Test Title** fields, and select suitable options in the lists.

   The preloaded test types are:

   - **Assembly**: the test subject is an assembly or a part flagged for piece tracking in a production control job.
   - **Employee**: the test subject is a Tekla EPM user.
   - **Environmental**: a general test without a subject.
   - **Equipment**: a general test without a subject.
   - **Fitting**: a general test without a subject.
   - **General**: a general test without a subject.
   - **Load**: the test subject is a shipping load in a production control job.
   - **Part**: the test subject is a part in a production control job.
   - **Training**: a general test without a subject.
3. Click **OK**.
4. To determine the test subject, in the **Test Subject** section of the **New Inspection Test Record** dialog box, do the following:

a. Click the arrows on the right side of the available fields and select suitable options in the lists.

b. Type values in the fields.

5. Define the inspection test record properties by using the available lists and fields.

   The mandatory fields and lists depend on the test type that you selected.

6. If you want to save the same properties for the next records you add, select the **Carry Over** check box in the lower-left corner.

   Note that if you close the **New Inspection Test Record** dialog box, you can no longer use the properties of the latest inspection test record you added.

7. Click **Save**.

The new inspection test record is added to the **Test Records** dialog box.

Add, modify, and review inspection test records

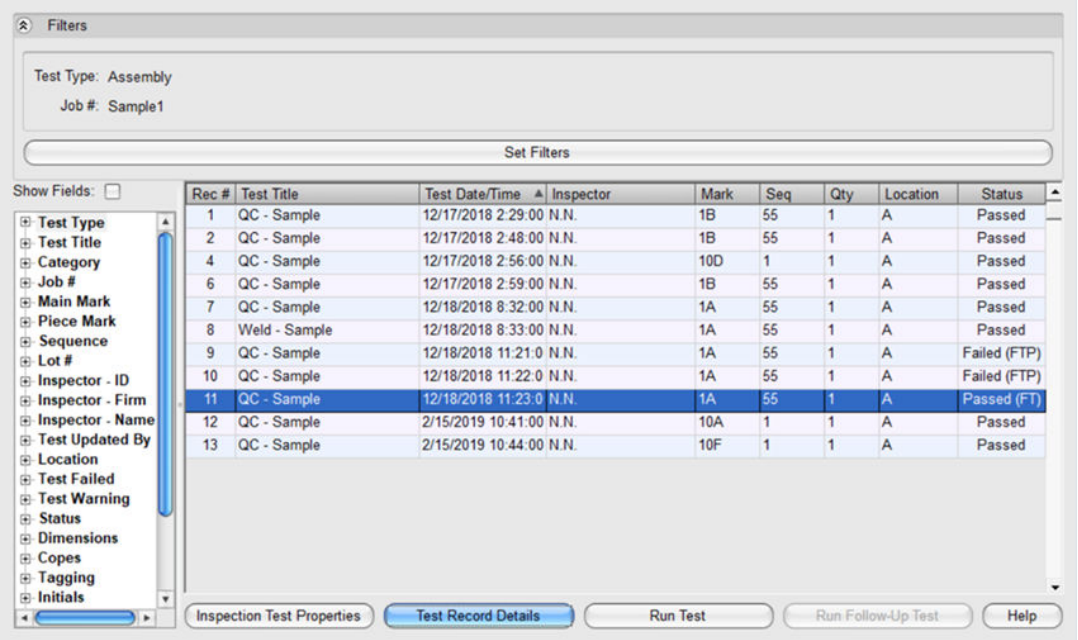
In the **Test Records** dialog box, you can run inspection tests and follow-up tests, or modify and view the existing inspection test records. You can also create reports that allow you to review if the inspection tests have been successful or not.

To access the **Test Records** dialog box, do the following:

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.

2. On the menu, select **Review** --> **Inspection Test Records** .

The **Test Records** dialog box opens, displaying all existing inspection test records.



If you need to modify the setups of inspection tests, see Modify the setup of an inspection test (page 754).

Filter inspection test records

1. At the top of the dialog box, click **Set Filters**.
2. In the **Test Record Filters** dialog box, do any of the following:
   - On the **Test Record** and **Test Subject** tabs, click the available filter buttons, and click the arrow buttons to move the values that you want to display to the **Included** list.
   - Click the **Test Date** button, click the arrows on the right side of the minimum and maximum date lists, and select dates in the calendars.

     If necessary, you can also create an expression for the date.
   - On the **Field Filters** tab, click **Add Field Filter**, and click the arrow buttons to move the fields that you want to display at the top of the **Test Records** dialog box to the **Included** list.
3. Click **OK**.
4. Click **Apply Filter**.

The **Test Records** dialog box now only displays the information that you selected.

Run a follow-up test

To record a follow-up test for a failed test record, do the following:

1. Click the inspection test record for which you want to add a follow-up test.

2. Click **Run Follow-Up Test**.
3. In the **New Inspection Test Record** dialog box, modify the test properties.
4. Click **Save**.

The follow-up test is added to the list in the **Test Records** dialog box.

Modify an inspection test record

1. Click the inspection test record that you want to modify in the list.
2. At the bottom of the dialog box, click **Inspection Test Properties**.
3. Modify the inspection test properties according to your needs.
4. Click **Save** to update the properties.

View, print, and export inspection test reports

You can create various reports based on inspection tests. You can check if the inspection tests have been successful and find the problems by creating reports by worker, parts, assemblies, sequence, location, test, categories and sub-categories.

1. In the **Test Records** dialog box, click the **Test Records** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. In the **Report Selection** dialog box, click the report that you want to create.
4. According to your needs, do any of the following:

Option	Description
View the report	• In the **Report Selection** dialog box, click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. Click **Print**. c. In the confirmation dialog box, click **Yes** to print the selected report. d. In the **Select Printer** dialog box, click a printer to select it. e. Click **OK**.

Option	Description
Export the report	a. In the **Report Selection** dialog box, click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. In the **Report Selection** dialog box, click **Export**.

5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Modify the setup of an inspection test

In the **Inspection Test Setup** dialog box, you can modify the testing requirements that the inspector will use for each test.

To access the **Inspection Test Setup** dialog box, do the following:

- At the bottom of the **Test Records** dialog box dialog box, click **Inspection Test Properties**.

To modify the testing requirements, do all of the following:

1. Modify the test properties

1. At the top of the **Inspection Test Setup** dialog box, modify the test properties according to your needs.
2. Click the arrow on the right side of **Test Type** field, and select the test type in the list. The preloaded test types are:
   - **Assembly**: the test subject is an assembly or a part flagged for piece tracking in a production control job.
   - **Employee**: the test subject is a Tekla EPM user.
   - **Environmental**: a general test without a subject.
   - **Equipment**: a general test without a subject.
   - **Fitting**: a general test without a subject.

- **General**: a general test without a subject.
- **Load**: the test subject is a shipping load in a production control job.
- **Part**: the test subject is a part in a production control job.
- **Training**: a general test without a subject.

3. Type a unique title for the test.

   The title is automatically copied to the **Category** field.

4. In the **Category** field, do one of the following:

   a. To create a new category, type the category name in the **Category** field.

   b. To use an existing category, click the arrow on the right side of the **Category** field, and select an existing category in the list.

   Categories are used to group similar tests together. For example, if you have several weld tests, you can set the category to **Weld** for all of the tests to make it easier to filter that group of tests.

5. Click the arrow on the right side of **Production Station** field, and select the production station that will be marked as completed when a successful or passed test record is added.

   Note that the **Production Station** option is only available if the test type is set to **Assembly**.

6. If you only want main members to be used as test subjects, select the **Main Members Only** check box.

   Note that the **Main Members Only** check box is only available if the test type is set to **Assembly**.

7. In the **Notes** field, type any instructions for performing the test, or other applicable notes.

   The text in the **Notes** field will be displayed when you add a new test record.

8. Click **Save Inspection Test** to save the test setup.

2. Add new fields

1. In the **Test Fields** section of the **Inspection Test Setup** dialog box, click **New Field**.
2. In the **Field Name** field of the **Inspection Test Field Setup** dialog box, type the field name used in the test definition.
3. In the **Title** field, type the title of the field used in the **New Inspection Test Record** dialog box.
4. In the **Abbreviation** field, type the text used in the column header of the **Test Records** dialog box.

5. In the **Notes** field, add any additional text or instructions regarding the field.
6. Click the arrow on the right side of **Field Type** field and select a suitable option:
   - **Boolean** and **Numeric** are test types that require you to set pass and fail criteria settings.
   - **Date**, **Text**, **Memo**, and **Drop-Down** are test information options that you can apply to the test types.
7. In the **Number of Instances** field, type the number of times the field will be presented to the user when running the test.
8. In the **Maximum Number of Instances** field, type the maximum number of times the field can be entered when running a test.

   If the value in **Maximum Number of Instances** is greater than the value in **Number of Instances**, the user will have the option of adding additional instances up to the maximum value.
9. If you only want the field to be used in follow-up test records, select the **Only for Follow-Up Test** check box.

   For example, you can add a field whose type is **Memo** with the **Only for Follow-Up Test** check box selected. This way, the inspector could type the corrective action that was required to fix the problem in the field.
10. Click the different field type tabs in the middle of the dialog box to modify their settings:
    a. On the **Boolean** tab, select if entering information in the field will indicate a failure or create a warning.
    b. On the **Numeric** tab, select the minimum and maximum values that may indicate a failure or create a warning, define the minimum and maximum number of decimal places, define a prefix or a suffix for the units of measure, and select if entering information in the field is mandatory.
    c. On the **Date** tab, select if entering information in the date field is mandatory.
    d. On the **Text** tab, select if entering information in the text field is mandatory.
    e. On the **Memo** tab, select if entering information in the memo field is mandatory.
    f. On the **Drop-Down** tab, select if the information is restricted to a list of pre-defined options, if you want to use an existing data set as available options, if the available options depend on another list, or if entering information in the field is mandatory.

       You can also add new options for the list, or modify or delete the available options.

11. Click **Save Field**.

The field is added to the inspection test.

Repeat the process to create all necessary fields.

3. Modify, move, or delete fields

- In the **Test Fields** section of the **Inspection Test Setup** dialog box, do any of the following according to your needs:

To	Do this
Modify an existing field	1. In the list, click the field that you want to modify. 2. Click **Properties**. 3. In the **Inspection Test Field Setup** dialog box, modify the field properties: a. In the **Field Name** field, modify the field name used in the test definition. b. In the **Title** field, modify the title of the field used in the **New Inspection Test Record** dialog box. c. In the field, type the text used in the column header of the **Test Records** dialog box. d. In the **Notes** field, modify any additional text or instructions regarding the field. 4. Click the arrow on the right side of **Field Type** field and select a suitable option: • **Boolean** and **Numeric** are test types that require you to set pass and fail criteria settings. • **Date**, **Text**, **Memo**, and **Drop-Down** are test information options that you can apply to the test types. 5. Click the different tabs in the middle of the dialog box, and adjust the settings according to your needs. 6. Click **Save Field**.
Move a field up or down	1. In the list, click the field whose position you want to change. 2. Click the **Move Up** and **Move Down** buttons to change the location of the field.

To	Do this
Delete a field from the test setup	Note that deleting a field from the test setup is permanent and cannot be undone. 1. In the list, click the field that you want to delete. 2. Click **Delete**. 3. In the confirmation dialog box, click **Yes** to permanently delete the field from the test setup.

4. Save the test and run a sample inspection test

When you have modified all necessary settings of the inspection test, save the test and run a sample test by adding a test record. You can later delete the sample test record.

1. Click **Save Inspection Test**.
2. In the **Test Records** dialog box, add a new test record by clicking **Run Test**.

   For more information on adding a test record, see Add, modify, and review inspection test records (page 749).
3. Ensure that the test works as intended.

   If the test does not work as intended, you can correct the errors by further modifying the setup.
4. Click **Save**.
5. To delete the sample test, do the following:
   a. Select the sample test in the list.
   b. Click **Test Record Details**.
   c. Click **Delete**.
   d. In the confirmation dialog box, click **Yes**.

Review the inspection statuses of items

In the **Inspection Status** dialog box, you can view inspection records. If necessary, you can also run inspection tests.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Review** --> **Inspection Status** .

   The **Inspection Status** dialog box opens, displaying a list of all main members or accessories that have piece tracking enabled in the current production control job. For main members, the **Weight Each** column

includes the weight of accessories that do not have piece tracking enabled.

If an item belongs to multiple sequences or lots, it will appear in the list once for each sequence/lot combination.

On the right side of the **Weight Each** column, there are columns for each category of inspection tests that have been run in the current job. The numbers in the cells of these columns indicate the number of tests that have been run. Follow-up tests count as one regardless of how many times they have been run.

Items highlighted with red have critical failures for which no follow-up tests have been run.

3. View the statuses of production control items.

   To find particular items, expand and click items in the navigation tree on the left-hand pane. You will only see items that match your selections.

4. If necessary, do one of the following:

   - To view all inspection test records, click the **Inspection Test Records** button at the bottom of the dialog box.
   - To add a new inspection test record, click **Run Test**.

   For more information on inspection test records, see Add, modify, and review inspection test records (page 749).

Create, modify, and delete job-specific shipping routes

Use the **Shipping Route Maintenance** dialog box to view and modify the shipping routes used for load tracking in the current production control job. You can also create new job-specific shipping routes or delete existing ones. Shipping routes can be used to send items within a job to multiple shipping destinations, including intermediate destinations, such as sending material to an external galvanizer. Items that are returned from one destination can then be shipped to another destination, if necessary.

Open the Shipping routes dialog box

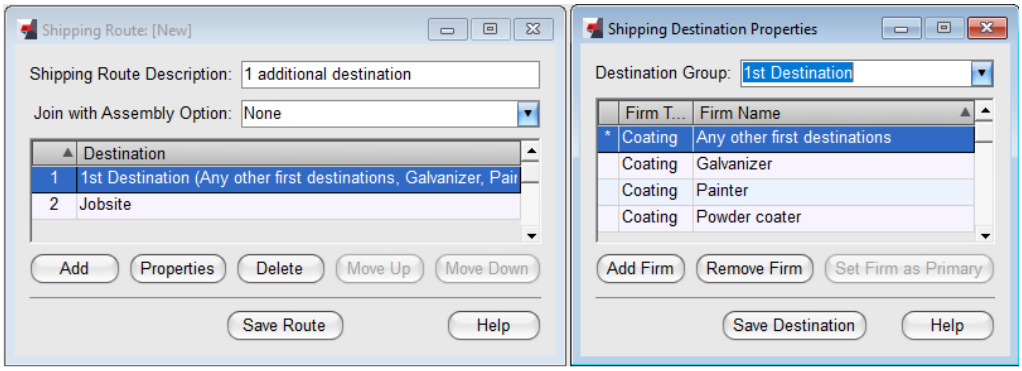
1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Review** --> **Shipping Routes** .

The **Shipping Route Maintenance** dialog box opens, displaying all shipping routes created for the current production control job.

Create a shipping route

1. Click **New**.

2. In the **Shipping Route** dialog box, type a description for the new shipping route.



3. In the **Join with Assembly Option** list, select if and when the weight of an accessory part is included in the shipping weight of the assembly.

   The options are:

   - **None**: The weight of the accessory is not included in the shipping weight of the assembly. If the **Jobsite** destination is in the shipping route, select the **None** option.
   - **Join with assembly for first destination**: The weight of the accessory is joined to the shipping weight of the assembly for all of its destinations except for the first one.
   - **Join with assembly for...**: The weight of the accessory is included in the shipping weight of the assembly for the destination that you select in the **Join with Assembly For** list, and for any other destinations after that one.
   - **Join with assembly after...**: The weight of the accessory is included in the shipping weight of the assembly for all destinations after the destination you select in the **Join With Assembly After** list.

4. To adjust the destinations in the shipping route, do any of the following:

To	Do this
Add a new destination	a. Click **Add**. b. In the **Destination Group** field, do one of the following: • To create a new destination group, type a description for it in the **Destination Group** field. • To modify an existing destination group, click the arrow on the right side of the

To	Do this
	Destination Group and select a destination group. Destination groups provide a list of available destinations and are often best used by containing all the similar destinations in a single group. If shipping tickets are required from a destination back to the shop, it is recommended not to use the shop as an additional group because that location is already assigned a function, and using the shop as a group may cause confusion. Note that you cannot modify the firms in the **Jobsite** destination group. c. Modify the firms in the destination group according to your needs: • To add a firm, click **Add Firm**, select the firm type and firm name, and click **OK**. You can only select firms that are already saved in the **Address Book**. • To remove a firm from the destination, click the firm, click **Remove Firm**, and click **Yes** to confirm deleting the firm. • To set a firm as the primary firm, click the firm, and click **Set Firm as Primary**. The primary firm will have the remaining totals reported against it in production statuses, production control reports, and project summary reports. However, parts assigned to the shipping route can be shipped for any of the firms that you have added. d. Click **Save Destination**.
Modify a destination	a. In the **Destination** list, click the destination that you want to modify. b. Click **Properties**. c. Modify the firms of the destination according to your needs. d. Click **Save Destination** to update the destination.
Remove a destination from the shipping route	a. In the **Destination** list, click the destination that you want to remove from the shipping route.

To	Do this
	b. Click **Delete**. c. In the confirmation dialog box, click **Yes** to remove the destination from the shipping route.

Note that the shipping route can have any number of destinations, or no destinations at all. If the **Jobsite** destination is present, it is always the last destination on the shipping route. The **Jobsite** destination is the **Ship To** address defined for each production control job in the **Production Control Job Edit** dialog box.

5. To change the order of destinations in the shipping route, do the following:
   a. Click the destination that you want to move to an earlier or later position on the shipping route.
   b. Click the **Move Up** and **Move Down** buttons according to your needs.

      Repeat steps a to b for all destinations that you want to move.
6. Click **Save Route**.

The shipping route is now available in the current production control job.

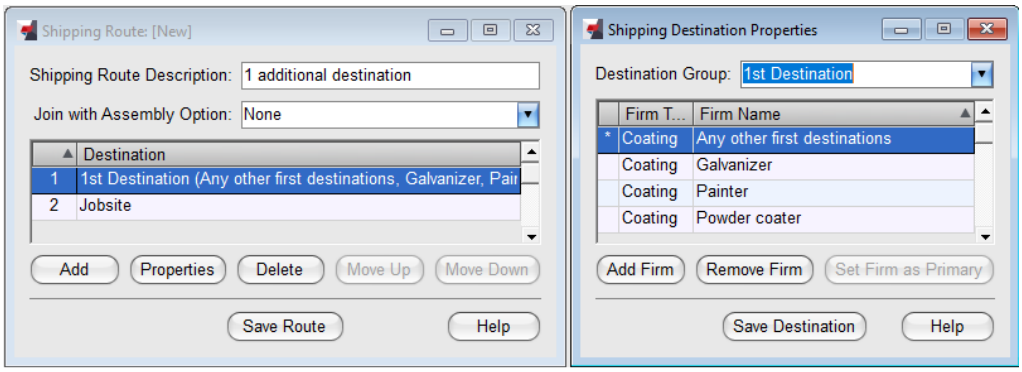
Copy a shipping route

Use the **Copy** command to create a new shipping route based on an existing one.

1. In the list, select the shipping route that you want to use as the basis of a new shipping route.
2. Click **Copy**.
3. In the **Shipping Route** dialog box, type a description for the new shipping route.
4. Modify the shipping route properties according to your needs.
5. Click **Save Route** to create the new shipping route.

Modify a shipping route

1. In the list, select the shipping route whose properties you want to modify.
2. Click **Properties**.



3. In the **Shipping Route** dialog box, modify the shipping route properties according to your needs.
4. Click **Save Route** to save the changes.

Delete a shipping route

Note that deleting a shipping route is permanent and cannot be undone.

Job-specific shipping routes cannot be deleted if any parts are assigned to them.

1. In the list, select the shipping route that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the shipping route.

View and adjust TFS details

Performing the TFS (take from stock) process tells Tekla EPM that materials have been cut. Use the **TFS Details** dialog box to view TFS reports, save heat documents attached to items, and reverse the TFS status of an item or a group of items.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Review** --> **TFS Details** .
3. To only view the TFS details of particular items, the **TFS Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   a. Click the arrow buttons to move the values that you want to view to the **Included** list.
   b. Enter the maximum and minimum values for items whose TFS details you want to view.
5. Click **OK**.

6. Click **Details**.

   The **TFS Details** dialog box opens, displaying all heat documents attached to the current job.

   When heat documents are attached, the number of the documents is displayed in the **Docs** column.

   The items in the **Docs** column that are highlighted with red have no heat documents attached.

7. In the **TFS Details** dialog box, do any of the following:

To	Do this
Update the information in the **TFS Details** dialog box	• Click **Refresh**.
View and attach documents to items	• Click **Open Document Index**. For more information on working in **Document Index**, see Store document references for a production control job (page 733).
Save attached documents into a folder	a. Do one of the following: • To save all documents attached to items in the **TFS Details** dialog box, click **Save Documents** --> **Save Documents - All** . • To save the documents attached to particular items, click the items for which you want to create reports, and click **Save Documents** --> **Save Documents - Selected** . b. Browse to and select the folder where you want to save the documents, or click **Make New Folder** to create a new one. c. Click **OK**. The attached documents are saved into the selected folder.
Print attached documents	a. Do one of the following: • To print all documents attached to items in the **TFS Details** details dialog box, click **Print Documents** --> **Print Documents - All** . • To print documents attached to particular items, click the items whose attached documents you want to print, and click **Print Documents** --> **Print Documents - Selected** .

To	Do this
	• In the **Select Printer** dialog box, click a printer to select it. • Click **OK**.
Create TFS reports	a. Do one of the following: • To create reports for all items in the **TFS Details** dialog box, click **Reports** --> **Reports - All** . • To create a report for particular items, click the items for which you want to create reports, and click **Reports** --> **Reports - Selected** . b. In the **Report Selection** dialog box, click the report that you want to view, print, or export. c. Do one of the following: • To view the report, click **View**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook. • To print the report, click **Print**, click a printer to select it, and click **OK**. • To export the report, click **Export**, modify the export properties, and click **Export**.
Reverse the TFS process	Reversing the TFS process returns the selected materials from inventory history to inventory. Note that the materials will be returned as cut lengths, not the original stock lengths. a. Click the materials whose TFS process you want to reverse. To select multiple items, hold down **Ctrl**. To select a range of subsequent items, hold down **Shift**. b. In the first confirmation dialog box, click **Yes** to remove any record of the TFS process from the selected materials. c. In the second confirmation dialog box, click **Yes** to return the selected materials in inventory history as cut lengths. d. Type the number of materials to be returned to inventory.

To	Do this
	e. Click **Reverse**. The materials are returned to inventory and removed from the **TFS Details** dialog box.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Compare the materials in a production control job and a combining job

Use the **Compare to Combining Job** command to view if there are differences between the production control job materials and a pre-purchased material list in the **Combining** module.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Review** --> **Compare to Combining Job** .
3. In the **Select Combining Job** dialog box, double-click the combining job that you want to use in the comparison.

   The **Compare to Combining Job** opens, displaying the similarities and differences between the production control job and the combining job.

   Matching items in the production control job and the combining job are highlighted with green.

   Items that do not match in the combining job and the production control job are highlighted with red.
4. Review the comparison results.

   To only view particular items, modify the values at the top of the dialog box and click **Process** to update the displayed items.
5. To view the comparison results as a report, click **View Report**.

   The comparison report opens in **Tekla EPM Report Viewer**.

   You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

See also

Compare the labor hours in a production control job and an estimating job (page 766)

Compare the labor hours in a production control job and an estimating job

Use the **Compare to Estimating Job** command to view if there are differences in the labor hours recorded in the current production control job and the labor hours listed in an estimating job.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Review** --> **Compare to Estimating Job** .
3. In the **Select Estimating Job** dialog box, double-click the estimating job that you want to use in the comparison.

   The **Compare to Estimate** dialog box opens, displaying the labor hours.

   The labor hours of the estimate are displayed on the left sorted by labor group.

   The labor hours of the production control job are displayed on the right sorted by production control station.

   The totals appear at the bottom of the dialog box.
4. Review the comparison results.
5. To view the comparison results as a report, click **View Report**.

   The comparison report opens in **Tekla EPM Report Viewer**.

   You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

View the production schedule

Use the **Production Schedule** dialog box to view the projected hours for jobs by week. The hours are loaded from the project schedule.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Production Schedule**.
3. In the **Production Schedule Filters** dialog box, filter the production schedule information according to your needs:

   a. Click the arrows on the right side of the **Start** and **End** fields, and select suitable start and end dates in the calendars.

      The default time between the start and end dates is three months.

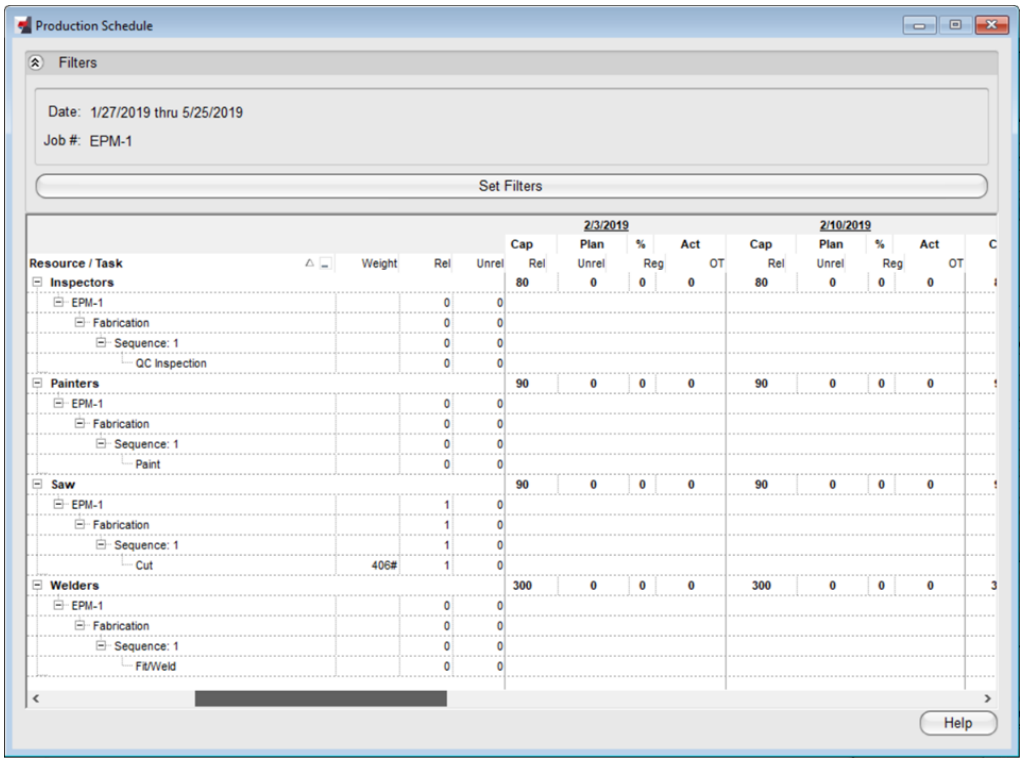
   b. Click the arrow on the right side of the **Scale** field, and in the list, select if you want to view the information by day, week, or month.

c. To only include particular resources in the production schedule, click **Resource**, and click the arrow buttons to move the resources that you want to include to the **Included** list.

d. To only include particular jobs in the production schedule, click **Job #**, click the arrow buttons to move the jobs that you want to include to the **Included** list.

4. Click **Apply Filter**.

   The **Production Schedule** dialog box opens.



- On the left side, you can see the resources and any tasks assigned to them. For each task assigned to a resource, the production schedule shows the regular and overtime hours, the percentage completed, and start and end dates. This information consists of the schedule task in the project schedule and the production status information. To update the information, click **Update Status** in the **Project Schedule** dialog box.

- In the middle, you can view the default capacities of the resources and the time for those resources by tasks. The default capacity for each resource is displayed at the top in bold. Any hours highlighted with red indicate that the station is over capacity. If necessary, you can modify the resource capacity in the **Resource Maintenance** dialog box.

  Below the resource, you can see the released and unreleased hours of each task, and the regular and overtime hours. This information reflects the information in the **Resource Maintenance** dialog box. To

update the information, click **Update Status** in the **Project Schedule** dialog box.

- On the right side, the sections represent a block of time by the scale that you selected in step 3. The columns on the top display the capacity, the hours planned against the resource, the percentage of the capacity that is planned, and the actual hours used.

5. If necessary, do any of the following:

To	Do this
Change the filters or scale of the production schedule	Do either of the following: • To change the filters that you set in step 3, click the **Set Filters** button and modify the filters according to your needs. Then, click **Apply Filter**. • Click on the right side of the **Resource / Task** column. Then, select the resources and tasks that you want to see in the production schedule, or type the resource or the task that you want to see in the **Filter For** field.
View more or fewer details about a resource or a task	• On the left side of the dialog box, click **+** or **-** on the left side of a resource or task. When you click **+**, the task or the resource expands, so that you can see the task or resource details by the set project breakdown categories. When you click **-**, the task or the resource collapses and the details are hidden.
Collapse or expand all tasks	a. Right-click anywhere in the production schedule. b. In the context menu, select **Collapse All** or **Expand All**.
Modify a task	a. Double-click a task at the lowest level of the hierarchy. b. In the **Task Schedule** dialog box, do any of the following: • To change the start or end date of the task, click **Set** on the right side of the start or end date, select a new date in the calendar, and click **OK**. • To move a task forward or backward in the production schedule, click **Move**, select an option in the menu, and click **Yes** to confirm the changes.

To	Do this
	• To modify the equally divided working hours, click **Manually Schedule**, type the number of manually scheduled hours, and click **OK**.
Print the current production schedule	a. Right-click anywhere in the production schedule. b. In the context menu, select **Report**. The production schedule opens in the **Print Preview** dialog box. c. Adjust the printing settings according to your needs, and click **Print**.

See also

Modify resource capacity (page 770)

Modify resource capacity

In the **Resource Maintenance** dialog box, you create, modify, and delete resources used in the production schedule and the project schedule. You can view and modify the applicable working hours per day, week, or month.

Open the Resource Maintenance dialog box

1. In the **Production Schedule** dialog box, click the **Production Schedule** ribbon tab.
2. On the menu, select **Resource Maintenance**.

Add a resource

You can add resources in a variety of ways. It may be useful to have one resource for the shop, or one for each of the several bays or shop sites. Another task, like detailing, can have its own resource as well.

The capacity for each resource is entered by day and summarized by week or by month.

When a task in the project schedule is assigned to a resource, the resource is added to the production schedule with the same start and end dates. Planned hours for the task are then distributed equally among the days in that duration. You can change the distribution and allocation of the planned hours manually.

1. Click **New**.
2. Type a description for the resource.
3. Click the arrow on the right side of the **Calendar** field and select a suitable schedule calendar in the list.

4. In the **Default Capacity** field, type the number of hours available to this resource during a standard working day.
5. Click the arrow on the right side of **Fixed Date** field and select the date after which adjustments to the schedule no longer affect the new resource.

   For example, if the fixed date is set to Friday, any adjustments to the schedule on the next Thursday will not affect it.
6. Click **Add**.

Modify a resource

1. In the list, select the resource that you want to modify.
2. Modify the description, calendar, default capacity, and fixed date according to your needs.
3. In the **Resource Utilization** section, filter which capacity and utilization information is displayed:
   a. To modify the time range, click the arrows on the right side of the start and end dates and select suitable dates.
   b. Click the arrow on the right side of **Scale** field, and select if you want to view the capacity and utilization information by day, week, or month. When the scale is set to by week or month, the date displayed for each record is by default the beginning date of each period. This settings can be changed in **Project Company Standards**.
   c. To update the view, click **Reload**.
   d. If you want to open the production schedule for the selected resource, click **View**.
4. To adjust the capacity of a date period, do the following:
   a. In the **Resource Utilization** section, double-click a date.
   b. In the **Resource Capacity** dialog box, select a date period.

      To select multiple items, hold down **Ctrl**.

      To select a range of subsequent items, hold down **Shift**.
   c. Type a new value in the **Capacity** field.

      If necessary, you can restore the default hours by clicking the **Default** button.
   d. To update the capacity of all selected date periods, click **Update Selected**.
   e. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
5. In the **Resource Maintenance** dialog box, click **Save** to save the changes.

Delete a resource

Deleting a resource is permanent and cannot be undone.

1. In the list, select the resource that you want to delete.
2. Click **Delete**.
3. In the confirmation dialog box, click **Yes** to permanently delete the resource.

View, print, and export job-specific production control reports

You can create various reports based on the information of the current production control job, including cut lists, bills of materials, and master load lists. Then, you can either view the report in **Tekla EPM Report Viewer** and email it, print the report, or export the report to another file format.

Note that before creating a cut list, the materials need to be loaded into a purchase order.

Create a report

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.
3. To only include specific types of items in the report, in the **Production Control Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to include in the report to the **Included** list.

     To select multiple items, hold down **Ctrl**.

     To select a range of subsequent items, hold down **Shift**.
   - Type the maximum and minimum values for the items that you want to include in the report.
5. Click **OK**.

   To further limit the items included in the report, repeat steps 3 to 5 for all necessary filter types.
6. To include the full assemblies of all included parts in the report, select the **Include Full Assembly of Filtered Parts** check box.

7. Click the arrow on the right side of **Weight Type** field, and select the weight type that you want to use in the report.

   Note that the **Weight Type** list is only visible if you have selected it on the **Report Settings** tab of the **Company Standards** dialog box.
8. Click **Make Report**.
9. In the **Report Selection** dialog box, click the report that you want to view, print, or export.

View the report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. In the confirmation dialog box, click **Yes**.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK** to print the report.
6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Export the report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Modify the file name according to your needs.
5. Browse to the location where you want to save the exported file, and click **Save**.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.

8. In the **Report Selection** dialog box, click **Export**.

   The report is saved in the selected export format.

9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

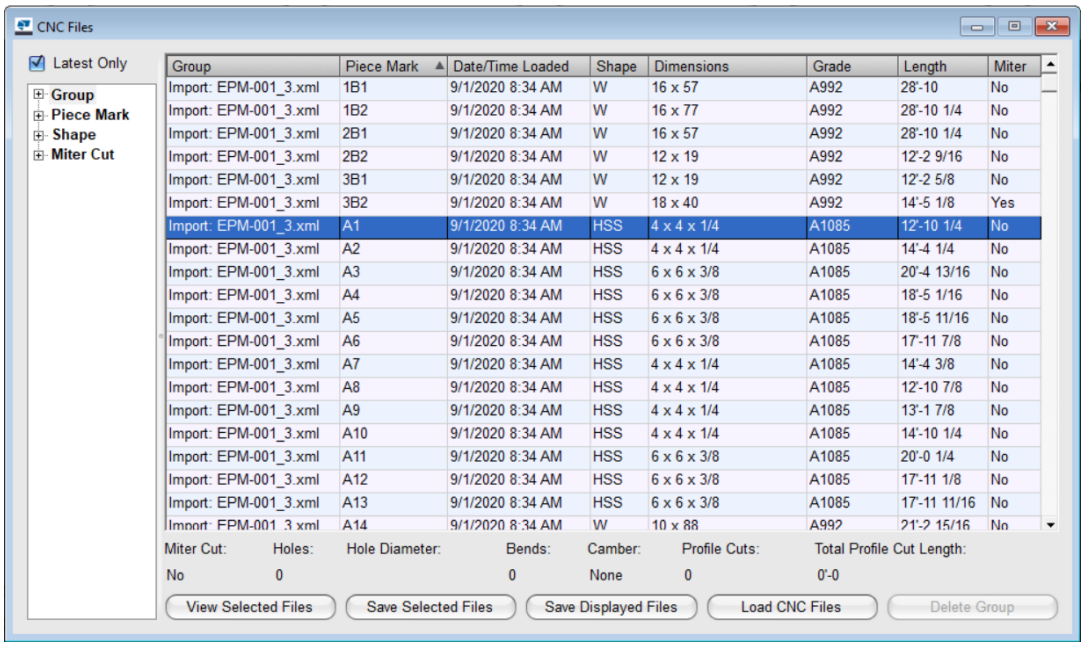
Import, view, or delete CNC files

In the **CNC Files** dialog box, you can import CNC files to Tekla EPM, and view or delete the previously loaded CNC files that are associated with the current production control job.

To access the **CNC Files** dialog box, do the following:

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **CNC Files**.

The **CNC Files** dialog box opens.



Note that:

- By default, only the latest versions of all CNC files are shown. If you want to show all versions of CNC files, clear the **Latest Only** check box in the upper-left corner.
- You can use the navigation tree on the left side of the dialog box to only show particular CNC files. Click **+** on the left side of any category to expand the category and select a sub-category, or expand the sub-category to further limit which files are shown. Only files that match the selected value are shown.

Import CNC files

1. At the bottom of the dialog box, click **Load CNC Files**.
2. In the **Import** dialog box, click **...** to set the folder from which CNC files are imported.
3. Browse to and select the folder.
4. Click **OK**.
5. Type the file extension used for CNC files in the selected folder.
6. Click **OK** to import the CNC files.
7. In the **Enter Value** dialog box, type a name for the group of CNC files, and click **OK**.

   Tekla EPM imports all CNC files from the folder that you selected.
8. Review the import results and click **Close**.

View CNC files

1. Select the CNC files that you want to view in the list.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. At the bottom of the dialog box, click **View Selected Files**.

Note that Windows may ask you to select the application with which you want to open the CNC files.

Save CNC files to another location

To save CNC files from Tekla EPM to your computer or a shared drive:

1. Do any of the following:
   - To select which CNC files you want to save, select the files and click **Save Selected Files**.

     To select multiple items, hold down **Ctrl**.

     To select a range of subsequent items, hold down **Shift**.
   - To save all files currently shown in the **CNC Files** dialog box, click **Save Displayed Files**.
2. In the **Browse for Folder** dialog box, browse to and select the folder where you want to save the files.

3. Click **OK**.

The CNC files are saved in the selected folder.

Delete CNC files

Deleting a group of CNC files from Tekla EPM is permanent and cannot be undone. Note that all files imported from the same folder are deleted at once.

1. Select any CNC file that belongs to the group that you want to delete.
2. At the bottom of the dialog box, click **Delete Group**.
3. In the confirmation dialog box, click **Yes** to permanently delete the selected CNC files.

9.4 Manage production control items

You can manage production control items in many ways. add new production control items, modify existing production control items, copy material items from one drawing to another, take production control items from stock, combine items, or send items to a purchase order or a requisition.

For more information, see the following links:

Add a production control item (page 776)

Modify production control items (page 782)

Copy materials from one drawing to another (page 787)

Take production control items from stock (page 796)

Combine materials in the Production Control module (page 788)

Send production control items to purchasing (page 789)

Add a production control item

To add an item to a production control job, do the following:

1. At the bottom of the **Production Control** dialog box, click **New**.
2. Define the item properties.

NOTE The input fields and their order depend on the settings that you have made in **Production Control Maintenance**.

The properties marked with an asterisk (*) in the following table are mandatory information.

Option	Description
Main Mark *	The main mark of the item. The main mark is the number of the main member to which accessory items can be attached. If an item has an identical main mark and piece marks, Tekla EPM considers the item a main member. Either click the arrow on the right side of the **Main Mark** field and select an existing main mark in the list, or type the name of the new main mark in the field. You can enter a maximum of 25 characters, depending on the **Mark Input Type** option that you have selected in the **Company Standards** dialog box.
Piece Mark *	The piece mark of the item. Piece marks are used for the accessory items that are attached to a main member. Type the name of the piece mark in the **Piece Mark** field. You can enter a maximum of 25 characters, depending on the **Mark Input Type** option that you have selected in the **Company Standards** dialog box.
Approval Status	The approval status of the item. The available approval statuses are set in the **Approval Status** dialog box that you can access via **Maintenance** --> **Production Control** --> **Approval Status Maintenance** - Click the arrow on the right side of the **Approval Status** field, and select an approval status in the list.
Drawing Number	A property that is used as the drawing number and the drawing name. You

Option	Description
	can use the main mark as the drawing number. Either click the arrow on the right side of the **Drawing Number** field and select an existing drawing number in the list, or type a new drawing number in the field.
Quantity *	The number of pieces to be added. Type the number of pieces in the **Quantity** field.
Shape *	The material shape of each piece.
Dimensions *	The material dimension, or material size, of each piece. Click the **Dimensions** field to select an available material dimension, and double-click the desired dimension in the list. **TIP** You can also use a custom material dimension. Note that the dimension is not automatically added to the material database. To use a custom dimension, do the following: a. Click in the **Dimensions** field. b. Click **Add Size**. c. Define the dimension properties. d. Click **Save**. You can now select the dimension and use it.
Grade *	The material grade of each piece. The default grade of the selected shape is set in the **Shape / Grade / Size Maintenance** dialog box. Click the arrow on the right side of the **Grade** field and select a material grade in the list.

Option	Description
Length	The length of each piece. Type the length in the **Length** fields.
Finish	The finish type of the item. The default options are **Painted**, **Unpainted**, and **Galvanized**. Click the arrow on the right side of the **Finish** field and select a material finish in the list.
Route	The item route defines the stations that the item goes through in the fabrication process. The available route options are set in the **Routes** dialog box. Click the arrow on the right side of the **Route** field and select a route in the list.
Remark	Any comments that you want to add about the item. Type any comments in the **Remark** field.
Category, **Sub-Category**	A class used for sorting items in a production control job. You can filter the information in the **Production Control** dialog box by category or sub-category. For example, you can create categories based on the shop where the item is created. The available categories and sub-categories are set in the **Company Categories** and **Company Sub-Categories** dialog boxes. Click the arrow on the right side of the **Category** or **Sub-Category** field and select an existing category, or type a new category in the field.
Pay Category	The pay category assigned to the item. Pay categories can be used to assign unit costs to fabricated items per pound. The available pay categories are set in the **Pay Categories** dialog box that

Option	Description
	you can access via the **Company Standards** dialog box.
Piece Tracking	When selected, an accessory piece within an item can be tracked by piece mark. Main marks, or assemblies, are tracked by default. For more information on piece tracking, see Track production by piece mark (page 805).
Shipping Route	The shipping route assigned to the item. Shipping routes can be used to send items within a job to multiple shipping destinations, including intermediate destinations, such as sending material to an external galvanizer. The available shipping routes are set in **Shipping Route Maintenance**. For more information, see Create, modify, and delete global shipping routes (page 704). Click the arrow on the right side of the **Shipping Route** field and select a shipping route in the list.
Load Tracking	When selected, an accessory item can be tracked by load and are viewed in shipping reports. Main marks, or assemblies, are tracked by default. For more information on load tracking, see Create, modify, and delete loads (page 800).
Prod. Code	The production code applied to the item. Production codes group items so that you can apply man hour per ton and per labor group percentages to items in the linked production control job. The production code can be used to color-code or filter items in Trimble Connect. For more information, see Use Trimble Connect with an estimating job (page 435).

Option	Description
	Production codes group similar items together within jobs. Click the arrow on the right side of the **Prod. Code** field and select a production code in the list.
Instance Tr	When selected, instance tracking can be used for the item. This allows you to see more details about the item. Selecting the **Instance Tr** check box may be useful in, for example, nuclear jobs.
Reference Number	A reference number that links items in inventory or purchasing to the production control job. The reference number can be different depending on the case: • If an item is sent from **Production Control** to **Purchasing** or **Inventory**, Tekla EPM creates a copy of the record, and the item is linked to include the reference number. • If an item is sent to purchasing from an advanced bill of material, the system mark number or a combination of the page number and the item number in the combining job (for example, 1-30) becomes the reference number. • If the item is sent to purchasing later in the process, the reference number is the mark or piece mark number. However, if the reference number has been assigned in the production control job, that reference number is maintained in the inventory as well. Type the reference number in the **Reference Number** field. You can enter a maximum of 255 characters.

3. Click **Add**.

The new item is added to the list in the **Production Control** dialog box.

See also

Modify production control items (page 782)

Modify production control items

You can modify the properties of production control items either one by one or as a group.

For more information, see the following links:

Modify a single production control item (page 782)

Modify multiple production control items (page 782)

Modify the selected production control items (page 783)

Adjust sequences (page 784)

Modify a single production control item

You can modify a single production control item directly in the **Production Control** dialog box.

1. In the **Production Control** dialog box, select the item that you want to modify.
2. On the right side of the dialog box, modify the item properties.

   For example, change the quantity, enable load tracking, or select a new shipping route. For more information on the available properties, see Add a production control item (page 776).
3. Click **Edit** to save the changes.

See also

Modify multiple production control items (page 782)

Modify the selected production control items (page 783)

Adjust sequences (page 784)

Modify multiple production control items

Use the **Global Edit** command to modify the properties of multiple production control items at one go.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Modify Data** --> **Global Edit** .

3. To only update the properties of particular items, in the **Production Control Global Edit Filters** dialog box, set filters:
   a. Select a filter type in the **Type**
   b. In the **Filter** dialog box, do one of the following depending on the filter type:
      - Click the arrow buttons to move the items that you want to modify to the **Included** list.

        Type the maximum and minimum values for the items that you want to modify.
   c. Click **OK**.

      Repeat substeps to set all necessary filers.
4. At the bottom of the **Production Control Global Edit Filters** dialog box, click **OK**.
5. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.
6. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.
7. Click **Update** to update the selected properties of the filtered production control items.

See also

Modify the selected production control items (page 783)

Modify the selected production control items

Use the **Global Edit Selected** command to modify the properties of the selected production control items.

1. In the **Production Control** dialog box, click the items that you want to modify to select them.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Production Control** ribbon tab.
3. On the menu, select **Modify Data** --> **Global Edit Selected** .

4. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

5. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

6. Click **Update** to update the properties of the selected production control items.

See also

Modify multiple production control items (page 782)

Adjust sequences

Using sequences and lots is a useful way to group, control, filter, and report on items. Sequences and lots are also the most commonly used breakdown items in project schedules. In **Production Control**, you can add items to different sequences, and modify or update the sequences of items. You can also filter the information in the **Production Control** dialog box by sequence.

For more information, see the following links:

Set and update sequences (page 784)

Manage sequences (page 785)

Remove all items from a sequence (page 786)

Add multiple items to a sequence (page 786)

Remove multiple items from sequences (page 787)

Set and update sequences

Use the **Set Sequences** command to set and update the sequences of main mark items in a production control job. Note that you should set sequences before combining materials for purchase.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Modify Data** --> **Set Sequences** .
3. In the **Set Sequences** dialog box, click the arrow buttons to move the items that you want to add to the same sequence to the right side of the dialog box.
4. If you only want to add a specific number of pieces to the sequence, select the item on the right side of the dialog box and type a new value in the **Quantity to Update** field.

5. Select the **Update Sequence** check box and type the new sequence number in the **New Sequence** field.
6. If you want to update the lot number as well, select the **Update Lot #** check box and type the new lot number in the **New Lot #** field.
7. Click **Update Sequences**.
8. In the confirmation dialog box, click **Yes** to confirm setting the sequences.

   The sequences are set.

   Repeat steps 3 to 8 for all items whose sequences you want to set.
9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Manage sequences

You can add individual material items to a sequence, or remove some or all pieces of a material from a sequence.

1. In the **Production Control** dialog box, select the main member item whose sequences you want to modify.
2. In the lower-right corner of the dialog box, click **Edit Sequences**.
3. In the **Sequences** dialog box, do one of the following according to your needs:

To	Do this
Add the item to a sequence	a. In the **Sequence Items** section of the dialog box, do one of the following: • To add the item to an existing sequence, click the arrow on the right side of the **Sequence** field and select a sequence in the list. • To add the item to a new sequence, type the number of the new sequence in **Sequence** field. b. In the **Quantity** field, type the number of pieces that you want to add to the sequence. c. Click **Sequence**.
Remove the item from a sequence	a. In the **Unsequence Items** section of the dialog box, type the number of pieces to remove from the sequence in the **Quantity** field.

To	Do this
	b. Click **Unsequence**. c. In the confirmation dialog box, click **Yes** to remove the pieces from the sequence.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Remove all items from a sequence

Use the **Unsequence All** command to remove all pieces of a material item from a sequence.

1. In the **Production Control** dialog box, select an item that has been assigned to the sequence.
2. At the lower-right corner of the dialog box, click **Edit Sequences**.
3. In the **Sequences** dialog box, click **Unsequence All**.
4. In the confirmation dialog box, click **Yes** to remove all the sequenced items from the sequence.

See also

Remove multiple items from sequences (page 787)

Add multiple items to a sequence

Use the **Sequence All Selected** to add mulitple selected production control items to a sequence. Note that you can only use the **Sequence All Selected** command if the items have not yet been added to another sequence.

1. In the **Production Control** dialog box, select the items that you want to add to a sequence.
2. Click the **Production Control** ribbon tab.
3. On the **File** menu, select **Modify Data** --> **Sequence All Selected** .
4. In the **Sequence All** dialog box, do one of the following:
   - To add the items to an existing sequence, click the arrow on the right side of the **Sequence** field, and select a sequence in the list.
   - To add the items to a new sequence, type a new sequence number in the **Sequence** field.
5. Click **Sequence All**.

The items are added to the selected sequence.

See also

Remove all items from a sequence (page 786)

Remove multiple items from sequences (page 787)

Remove multiple items from sequences

Use the **Unsequence All Selected** command to quickly remove the selected production control items from sequences. Once the items have been removed from the original sequences, you can add them to new sequences according to your needs.

1. In the **Production Control** dialog box, select the items that you want to remove from sequences.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Production Control** ribbon tab.
3. On the menu, select **Modify Data** --> **Unsequence All Selected** .
4. In the confirmation dialog box, click **Yes** to unsequence the selected items.

See also

Set and update sequences (page 784)

Remove all items from a sequence (page 786)

Copy materials from one drawing to another

Use the **Copy Drawing** command to copy materials from one drawing into another drawing.

1. In the **Production Control** dialog box, click the item whose drawing you want to copy.
2. Click the **Production Control** ribbon tab.
3. On the menu, select **Modify Data** --> **Copy Drawing** .
4. In the **Copy Drawing** dialog box, type a number for the new drawing.
5. Click **OK**.
6. Review the new mark numbers and change them according to your needs:
   a. In the list, select the mark that you want to change.
   b. Type a new mark number.

   Repeat steps a to b for all mark numbers that you want to adjust.

7. Click **Copy**.

The **Copy Drawing** dialog box closes. The items in the original drawing are copied to the new drawing.

Combine materials in the Production Control module

Use the **Combine** command to mult and nest materials in the **Production Control** dialog box. You can then save and review the combining results.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Combine**.

   The **Select Combining Run** dialog box opens. When you are performing the first combining run for a combining job, the list in the dialog box is empty.
3. Click a desired combining option to select it.

   The options are:

   - **Mult**: combines linear items, like beams and angles.
   - **Nest**: combines items that have area, like plates or gratings.
   - **Mult & Nest**: combines all items.

   The **Combining Run Filters** dialog box opens.

   NOTE Filtering items is optional, so you can skip steps 4 to 7 if you do not want to filter out items from the combining run.

4. To only combine specific types of items, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:

   a. Click the arrow buttons to move the items that you want to combine to the **Included** list.

   b. Type the maximum and minimum values for the items that you want to combine.
6. Click **OK**.

   Repeat steps 4 to 5 for each filter type that you want to set.
7. To ensure that you are using the correct settings, click the **Optimizations**, **INV Filter**, and **Suppliers** buttons.

   If necessary, you can modify the settings.
8. To be able to save the results of the combining run, ensure that the **Use PDC/PO Links** check box is selected.

9. To combine the materials, click the button at the bottom of the **Combining Run Filters** dialog box, or press **F4**.

- Piece mark items included with the selected stock lengths are displayed at the lower-left section of the dialog box.
- Combining results are shown in both the display area and in the summary grid at the lower-right section of the dialog box.
- The material cost represents the pricing of the materials in the pricing database that was used in the combining run.

TIP You can save the combining run results in multiple ways:

- To save the entire combining run for comparing it with another one, click **Save Combining Run** at the bottom of the **Combining Run Results** dialog box.
- To save particular results, use the navigation tree on the left to only view necessary results,and click **Save Displayed Results & Close** at the bottom of the **Combining Run Results** dialog box.
- To save selected results, click the results that you want to save and click the **Combining Run** ribbon tab. Then, select **Save Selected Results**,

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See also

Rename a combining run (page 253)

Compare combining runs (page 261)

View combining run filter settings (page 253)

Modify run-specific pricing information (page 254)

Recombine all items (page 258)

Recombine items of a shape (page 258)

Recombine items of a material grade (page 259)

Recombine a material dimension (page 260)

Update combining information and recombine all items (page 260)

Export materials for combining (page 78)

Send production control items to purchasing

Use the **Purchasing** commands to send production control items to the **Purchasing** module. You can send material items into requisitions or purchase orders, link materials to requisitions or purchase orders, take materials from stock in order to charge them to a job, create reports, and finalize the production control job.

For more information, see the following links:

Load all production control items into a requisition (page 791)

Load all production control items into a purchase order (page 790)

Load the selected production control items into a requisition (page 792)

Load the selected production control items into a purchase order (page 792)

Link materials in Production Control to Purchasing (page 793)

Unlink materials between Production Control and Purchasing (page 794)

Verify material links between Production Control and Purchasing (page 794)

Check purchase orders for received materials (page 795)

Take production control items from stock (page 796)

Finalize a production control job (page 821)

Load all production control items into a purchase order

Use the **Load Material Into Purchase Order** command to load all materials in a production control job into a purchase order.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **Load Material Into Purchase Order** .
3. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.
4. In the **Purchasing Import Filters**, do one of the following:

To	Do this
Load all items	• Click **Import**.
Filter out items that you do not want to load	a. On the left side of the dialog box, select a filter type in the **Type** list, and click **Select**. b. Click **Select**. c. Click the arrow buttons to move the items that you want to load to the requisition to the **Included** list. The items on the **Not Included** side will not be sent to purchasing. d. Repeat the process for different filter types until you have filtered out all unnecessary items. e. Click **Import**.

5. Click **OK** to close the **Import Items** dialog box. the **Production Control** dialog box.

Materials are loaded into the selected purchase order. To view and use the purchase order, go to the **Purchasing** module and open the **Purchase Orders** tab.

See also

Load the selected production control items into a purchase order (page 792)

Load all production control items into a requisition

Use the **Load Material Into Requisition** command to load all material items in a production control job into a requisition.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **Load Material Into Requisition** .
3. In the **Select Requisition** dialog box, select a requisition and click **OK**.

   If necessary, you can also create a new requisition and load the items into it.
4. In the **Purchasing Import Filters**, do one of the following:

To	Do this
Load all items	• Click **Import**.
Filter out items that you do not want to load	a. On the left side of the dialog box, select a filter type in the **Type** list, and click **Select**. b. Click **Select**. c. Click the arrow buttons to move the items that you want to load to the requisition to the **Included** list. The items on the **Not Included** side will not be sent to purchasing. d. Repeat the process for different filter types until you have filtered out all unnecessary items. e. Click **Import**.

5. Click **OK** to close the **Import Items** dialog box. the **Production Control** dialog box.

Materials are sent to the selected requisition. To view and use the requisition, open the **Purchasing** module and go to the **Requisitions** tab.

See also

Load the selected production control items into a requisition (page 792)

Load the selected production control items into a purchase order

Use the **Load Selected Material Into Purchase Order** command to select the material items in a production control job that you want to load into a purchase order.

1. In the **Production Control** dialog box, select the items that you want to load.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. On the menu, select **Purchasing** --> **Load Selected Material Into Purchase Order** .

3. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.

4. Click **OK** to close the **Import Items** dialog box. the **Production Control** dialog box.

Materials are loaded into the selected purchase order. To view and use the purchase order, go to the **Purchasing** module and open the **Purchase Orders** tab.

Load the selected production control items into a requisition

Use the **Load Selected Material Into Requisition** command to select the materials in a production control job that you want to load into a requisition.

1. In the **Production Control** dialog box, select the items that you want to load.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Production Control** ribbon tab.

3. On the menu, select **Purchasing** --> **Load Selected Material Into Requisition** .

4. In the **Select Requisition** dialog box, select a requisition and click **OK**.

   If necessary, you can also create a new requisition and load the items into it.

5. If you only want to send the items in specific sequences or lots into the requisition, in the **Purchasing Import Filters** dialog box, select a filter type in the **Type** list, and click **Select**.

6. In the **Filter** dialog box, click the arrow buttons to move the sequences and lots whose items you want to load into the requisition to the **Included** list.
7. Click **OK** to close the **Import Items** dialog box. the **Production Control** dialog box.

Materials are sent to the selected requisition. To view and use the requisition, open the **Purchasing** module and go to the **Requisitions** tab.

See also

Load all production control items into a requisition (page 791)

Link materials in Production Control to Purchasing

Use the **Link Job** command to link materials in **Production Control** to pre-purchased advanced bill materials. Tekla EPM uses reference numbers to match the materials across modules. Any unlinked materials, such as loose pieces, will be loaded into a requisition or a purchase order to be purchased.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **Link Job** .
3. To limit which materials are linked, in the **Link Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   a. Click the arrow buttons to move the items whose heat documents you want to view to the **Included** list.
   b. Type the maximum and minimum values for the items whose heat documents you want to view.
5. Click **OK**.
6. If necessary, select the **If updating a cut list item, exclude from being cut** check box.

   By selecting the check box, you can ensure that Tekla EPM does not invalidate the entire cut list when an item in the cut list is updated. Updated items will be saved in the inventory to be processed later.
7. Click **Link**.
8. In the **Link Items** dialog box, click if you want to load material information to a requisition or a purchase order.
9. Click the desired requisition or purchase order.
10. Click **OK** to load the materials.
11. Click **OK** to close the **Link Items** dialog box.

See also

Unlink materials between Production Control and Purchasing (page 794)

Verify material links between Production Control and Purchasing (page 794)

Unlink materials between Production Control and Purchasing

Use the **Un-Link Job** command to unlink materials between **Production Control** and **Purchasing** when you need to manually manage the materials.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **Un-Link Job** .
3. To only unlink specific types of materials, in the **Un-Link Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   a. Click the arrow buttons to move the items whose heat documents you want to view to the **Included** list.
   b. Type the maximum and minimum values for the items whose heat documents you want to view.
5. Click **OK**.
6. Click **Un-Link**.
7. In the **Un-Link Items** dialog box, review the un-linking results.
8. Click **OK** to close the dialog box.

See also

Link materials in Production Control to Purchasing (page 793)

Verify material links between Production Control and Purchasing

Use the **Verify Links** command to verify that all material in **Production Control** is currently linked to purchasing. Using the **Verify Links** command is a quick way to verify that the material links between **Production Control**, **Requisitions**, and **Inventory** are maintained. For example, using this command can be useful when importing revised drawings.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **Verify Links** .
3. In the **Verify Links** dialog box, check that all material items are linked to purchasing.
4. Click **OK** to close the dialog box.

See also

Link materials in Production Control to Purchasing (page 793)

Unlink materials between Production Control and Purchasing (page 794)

Check purchase orders for received materials

Use the **Check Material For TFS** and **Check Selected Material For TFS** commands to check purchase orders for received materials that will be used for production control items.

Check purchase orders for all materials

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **TFS** --> **Check Material For TFS** .
3. To only take specific materials from stock, in the **TFS Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the values that you want to take from stock to the **Included** list.
   - Type the maximum and minimum values for the items that you want to take from stock.
5. Click **OK**.
6. Click **TFS**.
7. In the **TFS** dialog box, review the information and do any of the following:
   - Click **Close** to close the dialog box.
   - Click **Reports** and view or print TFS reports according to your needs.

     For more information on viewing and printing reports, see View, print, and export job-specific production control reports (page 772).

Check purchase orders for selected materials

1. In the **Production Control** dialog box, click the items whose availability you want to check.
2. Click the **Production Control** ribbon tab.
3. On the menu, select **Purchasing** --> **TFS** --> **Check Selected Material For TFS** .
4. In the **TFS Filters** dialog box, click **TFS**.
5. In the **TFS** dialog box, review the information and do one of the following:
   - Click **Close** to close the dialog box.

- Click **Reports** and view or print TFS reports according to your needs.

  For more information on viewing and printing reports, see View, print, and export job-specific production control reports (page 772).

Take production control items from stock

Use the **TFS** and **TFS - Selected** commands to take purchased material items from the inventory and charge the purchased items to the current production control job.

If you only want to take one item from stock, see Take a single cut list item from stock (page 797).

Take all items from stock

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **TFS** --> **TFS** .
3. To only take specific types of items from stock, in the **TFS Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the values that you want to take from stock to the **Included** list.
   - Type the maximum and minimum values for the items that you want to take from stock.
5. Click **OK**.
6. Click **TFS**.
7. In the **Enter Value** dialog box, click the arrow on the right side of the field, and select a date in the calendar.
8. Click **OK** to check which items are linked and which items are actually available to be taken from stock.
9. To confirm taking all of the remaining items from stock, click **Yes** in the confirmation dialog box.
10. In the **TFS** dialog box, review the information and do one of the following:
    a. To close the dialog box, click **Close**.
    b. To view or print TFS reports, click **Reports**. For more information on viewing and printing reports, see View, print, and export job-specific production control reports (page 772).

Take the selected items from stock

Use the **TFS - Selected** command to only take selected items from stock in a production control job. The purchased items will be taken from the inventory, and the cost of the selected items will be charged to the current production control job.

1. In the **Production Control** dialog box, click the items that you want to take from stock to select them.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Production Control** ribbon tab.
3. On the menu, select **Purchasing** --> **TFS** --> **TFS - Selected** .
4. To select the sequence and lot of the items that you want to take from stock, in the **TFS Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, click the arrow buttons to move the sequences or lots whose items you want to take from stock to the **Included** list.
6. Click **OK**.
7. In the **TFS Filters** dialog box, click **TFS**.
8. In the **Enter Value** dialog box, click the arrow on the right side of the field, and select a date in the calendar.
9. Click **OK** to take the material from stock.
10. If you have selected multiple items, click **Yes** in the confirmation dialog box to take the items from stock.
11. In the **TFS** dialog box, review the information and do one of the following:
    a. To close the dialog box, click **Close**.
    b. To view or print TFS reports, click **Reports**. For more information on viewing and printing reports, see View, print, and export job-specific production control reports (page 772).

Take a single cut list item from stock

Use the **TFS Entry** command to take a single cut list item from stock. Tekla EPM will then process the cut list item and charge the purchased materials to the job. Note that the necessary materials need to be received in the purchase order before you can take them from stock.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **TFS Entry**.
3. To filter which items are shown:

a. In the **Production Control Purchasing Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.

b. In the **Filter** dialog box, click the arrow buttons to move the items that you want to see to the **Included** list.

c. Click **OK**.

Repeat steps a to c to set all of the necessary filters.

4. Click **Make Report**.
5. In the **TFS Entry**, select the desired cut list in the **Cut List Serial #** list.

   Only the items on the selected cut list are shown in the list below.

   Note that if any changes are made to the cut list, its serial number will no longer be valid.

   If you want to check the details of the selected cut list using reports, you can click **Reports** in the upper-right corner.
6. In the list of items, select the item that you want to take from stock.
7. Click **TFS**.
8. In the **Cut Lists** dialog box, define the cut list properties and add drop lengths according to your needs.
9. Click **TFS** to take the selected item from stock.

The item is removed from the inventory and charged to the current production control job.

See also

Take production control items from stock (page 796)

View or print job-specific purchasing reports

You can create purchasing reports for a particular production control job.

Create job-specific purchasing report

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **Reports** .
3. To limit the items that are included in the reports, in the **Production Control Purchasing Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the values that you want to include in the reports to the **Included** list.

- Enter the maximum and minimum values for items that you want to include in the reports.

5. Click **OK**.

   To further limit the items in the reports, repeat steps 5 to 7 for all necessary filter types.

6. Click **Make Report**.
7. In the **Report Progress** dialog box, click the report that you want to view or print.

View the purchasing report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the purchasing report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. In the **Select Printer** dialog box, click a printer to select it.
4. Click **OK**.
5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Save a cut list

1. Click **Save Cut List**.
2. In the **Job #** list, select the job.
3. In the **Cut List Description** field, either enter a description directly in the field, or click the arrow on the right side of the field to select an option in the list.
4. Click the arrow on the right side of the **Date Required** field, and click a date in the calendar to select it.
5. If you do not want anyone to make changes to the cut list, click the **Lock Cut List** check box to select it.
6. Click **Save To Cut List**.

   Tekla EPM saves the cut list. You can use it in the selected production control job and with Remote Link.

7. Click **OK** to close the **Message** dialog box.

8. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

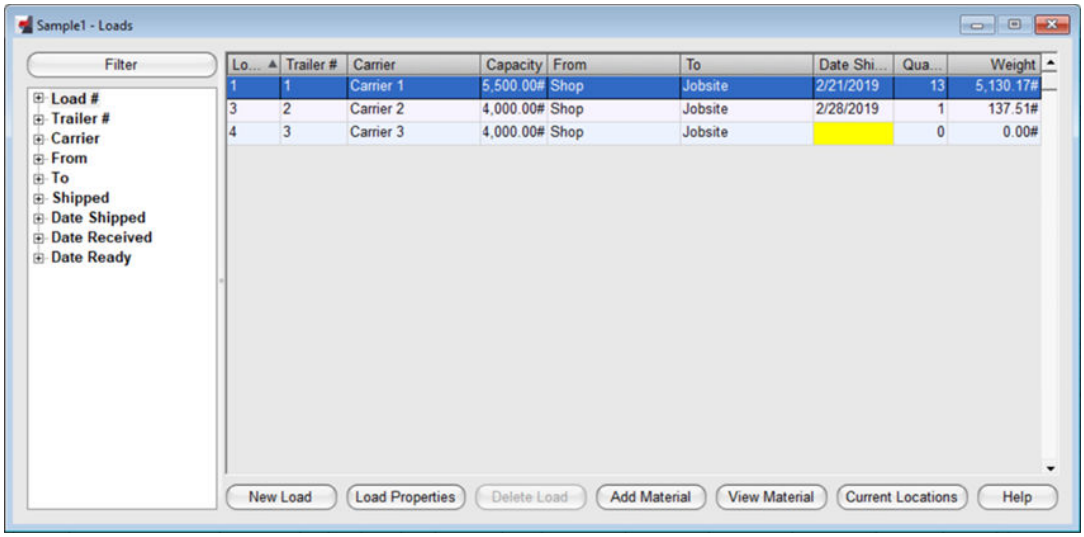
9.5 Create, modify, and delete loads

In the **Loads** dialog box, you can create new truck loads for the current production control job, assign materials to loads, and select shipping routes. You can also modify and delete existing loads according to your needs.

Note that items and main marks can be shipped to multiple destinations.

To access the **Loads** dialog box, do the following:

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Load Tracking**.



Add a new load

1. Click **New Load**.
2. On the **Details** tab of the **Load Properties** dialog box, modify the load properties.

NOTE The available field are set in the **Load Tracking Settings** dialog box. There may be additional fields that are not listed in the

following table. For more information, see Define load tracking settings (page 689).

Option	Description
From	The initial location of the load. The available locations are set in **Shipping Route Maintenance**. Click the arrow on the right side of **From** field and select an option in the list.
Destination Group	The available destinations for the load. The available destinations are set in **Shipping Route Maintenance**. Click the arrow on the right side of **Destination Group** field and select a destination in the list.
Load #	The number of the load. If necessary, type a new number in the **Load #** field.
Trailer #	The trailer number. The available trailers are set in the **Load Tracking Settings** dialog box. Click the arrow on the right side of **Destination Group** field and select an option in the list, or type the trailer number directly in the **Trailer #** field.
Carrier	The carrier of the load. The available carriers are set in the **Load Tracking Settings** dialog box. Click the arrow on the right side of **Carrier** field and select an option in the **Carrier** list, or type a carrier name directly in the field.
Capacity	The weight capacity. Tekla EPM automatically adds the information according to your other selections on the **Details** tab.

3. On the **Top Text** tab, add top text to shipping tickets.
4. Click **Save**.

The load is added to the list in the **Loads** dialog box. Next, you need to add materials to the load.

Pre-assign or add materials to a load

Note that only material that is available in the **From** location of the load and is assigned to the next destination group can be added to a load.

Material items can also be pre-assigned to loads without actually loading the items.

1. In the list, click the load to which you want to add material.
2. Click **Add Material**.
3. In the **Loads - Add Material** dialog box, click the arrow buttons to move the materials that you want to load to the **Included** list.
4. To only add some pieces of the item to the load, select a material in the **Included** list and type the number of pieces to be loaded in the **Qty** field.
5. If necessary, modify the load number and loading date.
6. If you only want to pre-assign material items to the selected load and not actually load the items, clear the **Load on Assign** check box in the lower-left corner.
7. Click **Add Material**.

Ship a load

The loads that do not have a shipping date are highlighted in yellow in the **Loads** dialog box. To ship a load, do the following:

1. In the list, click the load that you want to ship.
2. Click **Load Properties**.
3. Click **Ship**.

   If you accidentally ship a load, you can cancel the shipping by clicking **Un-Ship**.
4. In the **Enter Value** dialog box, click the arrow on the right side of the blank field, and select the shipping date in the calendar.
5. Click **OK**.
6. If necessary, add the receiving date by clicking the arrow on the right side of the **Date Received** field, and select the receiving date in the calendar.
7. If you want to create a shipping ticket, do the following:
   a. Click the **Shipping Ticket** button.
   b. In the **Report Selection** dialog box, click a shipping ticket report to select it.
   c. View, print, or export the report according to your needs.

      For detailed instructions, see View, print, and export job-specific production control reports (page 772).
8. Click **Save**.
9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Modify a load

1. In the list, click the load that you want to modify.
2. Click **Load Properties**.
3. On the **Details** tab of the **Load Properties** dialog box, modify the load properties according to your needs.
4. On the **Top Text** tab, modify the top text of shipping tickets according to your needs.
5. On the **Material** tab, modify the materials in the load.
   - To add new material to the load, click **Add**.

     For more information, see Add materials to a load.
   - To remove a material item from the load, click the material item, click **Remove**, and click **Yes** to confirm.
   - To load a material item, click **Load**.
6. On the **Loaded** tab, unload any material items fr by clicking **Unload**, and then, clicking **Yes** to confirm.
7. If necessary, on the **Additional** tab, add additional items to the load:

   For example, a box of bolts can be added as an additional item.

   a. Click **Additional on Load**.

   b. Click **New**.

   c. Type the description, quantity, weight per item, and the total weight.

   d. Add any additional notes.

   e. Click **Add**.

      Repeat steps a to e for all additional items that you need to add.
8. To change the shipping status of the load, click **Ship** or **Un-Ship** at the bottom of the dialog box.

   When shipping a load, select the shipping date and click **OK**.
9. Click **Save** to update the load properties.

View the materials on a load

1. In the list, click the load whose assigned materials you want to view.
2. Click **View Material**.
3. In the **Loads - Material** dialog box, review the assigned materials and their shipping date.
4. Click the **Close** button (**X**) to close the **Loads - Material** dialog box.

View current load locations

1. At the bottom of the dialog box, click **Current Locations**.
2. In the **Loads - Material Location** dialog box, view the current location of each material item in existing loads.
3. Click the **Close** button (**X**) to close the **Loads - Material Location** dialog box.

Delete a load

Note that deleting a load is permanent and cannot be undone.

1. In the list, click the load that you want to delete.
2. Click **Delete Load**.
3. In the confirmation dialog box, click **Yes** to permanently delete the load.

Add production control items to loads

Use the **Load All Selected** command to add the selected production control materials to a truck load.

1. In the **Production Control** dialog box, click the items that you want to load to select them.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Production Control** ribbon tab.
3. On the menu, select **Modify Data** --> **Load All Selected** .
4. In the **Loads - Add Material** dialog box, click the arrow buttons to move the items that you want to load to the **Included** list.
5. If you only want to load a particular number of pieces, select the item in the **Included** list and type the number of pieces to be loaded in the **Qty** field.
6. Click the arrow on the right side of **Load #** field and click the load to which you want to add the items.

   Note that you can only select loads that have already been added in the **Loads** dialog box. For more information on adding loads, see Create, modify, and delete loads (page 800).

   The total capacity and weight of the load is displayed at the bottom of the **Loads - Add Material** dialog box.

7. If necessary, click the arrow on the right side of the **Date Loaded** field, and select another loading date in the calendar.
8. Click **Add Material**.

The items are added to the selected load. The items will be marked as loaded in the **Loads** dialog box.

9.6 Track production by piece mark

In the **Piece Tracking** dialog box, you can add tracking information by piece mark. You can record the stations that the piece mark has completed, the date, and the man hours used. Piece tracking records can also be added if the station is set as the TFS station in a route or assigned to an inspection.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Piece Tracking**.
3. To record information for completed items, in the **Station Summary** dialog box, click **Add Completed**.
4. In the **Station - Add Completed** dialog box, click the arrow on the right side of the **Station** list, and select a station in the list.
5. Click the arrow buttons to move the items that have completed the selected station to the **Included** list.
6. Click the arrow on the right side of the **Completed By** list and select the user that is adding the piece tracking information.
7. Click the arrow on the right side of the **Date** field and select the completion date in the calendar.
8. Type the number of working hours used, and select if the working hours are calculated by piece or as a total.
9. If necessary, type the batch ID of the selected items in the **Batch ID** field. For example, you can type the name of the employee who is adding the piece tracking information.
10. To review the inspection test records of the items before completing stations, click the **Inspection** button. For more information, see Add, modify, and review inspection test records (page 749).
11. Click **Add Material** to save the piece tracking information.
12. To close the **Station Summary** dialog box, click the **Close** button (**X**) in the upper-right corner.

You can view the piece tracking information by creating a **Production Status** dialog box. For more information, see Review the production statuses of items (page 748).

You can also view piece tracking information by viewing any report with the word **Station** or **Stations** in the title. For more information, see View, print, and export job-specific production control reports (page 772).

Add piece tracking and load tracking information and loads to the current production control job

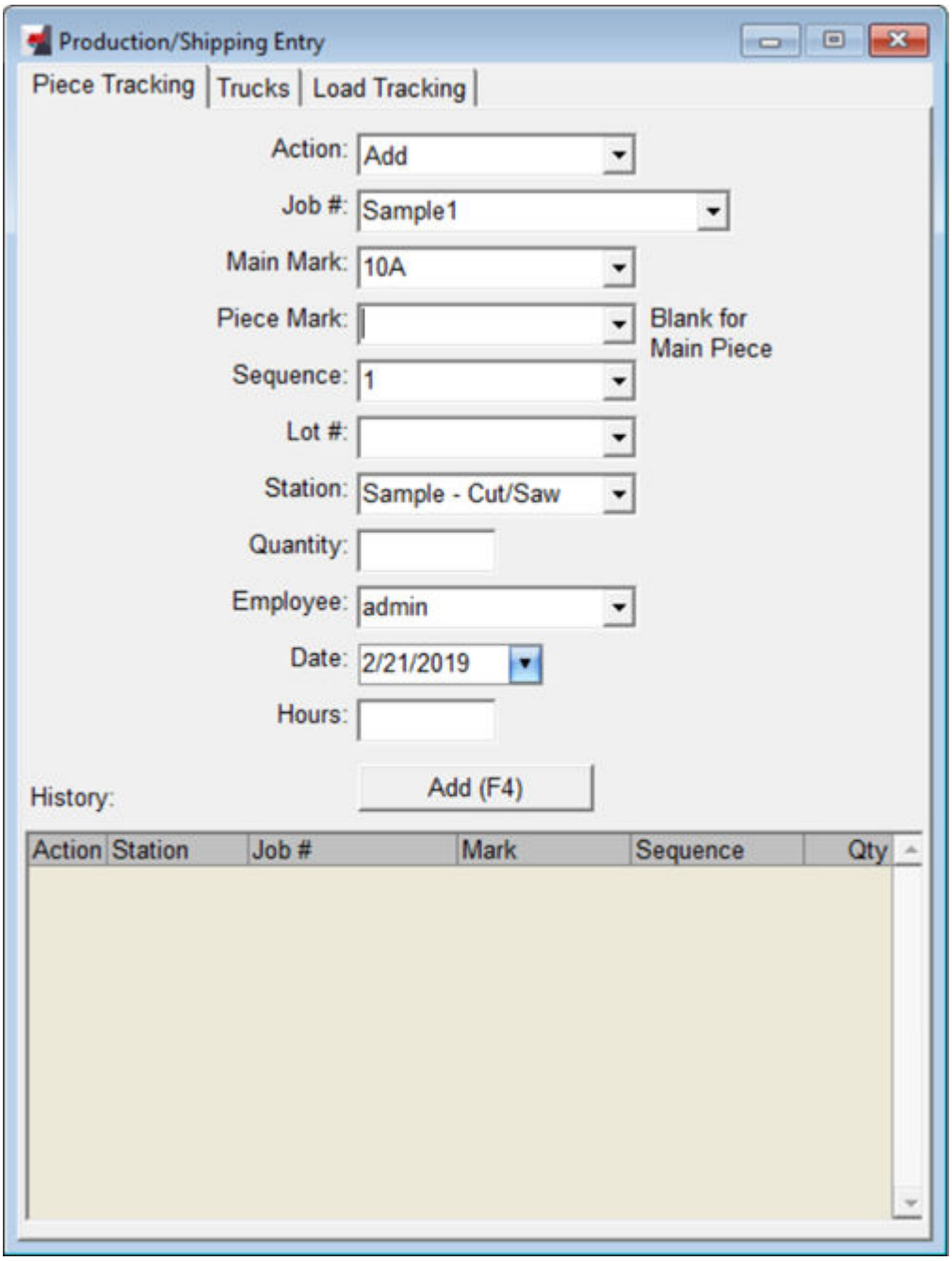
Use the **Production/Shipping Entry** dialog box to add information to the current product control job. You can add piece tracking information and loads, ship and unship loads, and add piece marks to trucks.

Note that the **Production/Shipping Entry** dialog box only allows you to add one item at a time.

To open the **Production/Shipping Entry** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Production Control** --> **Production/Shipping Entry** .

   The **Production/Shipping Entry** dialog box opens on the **Piece Tracking** tab.



Add piece tracking information

1. In the **Action** list, click the action that you want to perform. You can add or delete items.
2. In the **Job #** list, click the production job for which you want to perform the action.

3. In the appropriate lists, select the main mark, piece mark, sequence, lot number, station, employee who is adding the information, and date.

   Note that the employee must be a Tekla EPM user.

4. In the **Quantity** field, enter the number of pieces being worked on.
5. In the **Hours** field, enter the man hours used for working on the item.
6. To perform the action, click **Add** or **Delete**.

The action is updated to the selected job. The action also appears in the **History** list at the bottom of the **Production/Shipping Entry** dialog box.

Add loads, ship loads, and unship loads

1. Click the **Trucks** tab to open it.
2. In the **Action** list, click the action that you want to perform.

   You can add or validate, ship, or unship trucks.

3. In the **Job #** list, click the production job for which you want to perform the action.
4. Select the load number, shipping date, and destination in the appropriate lists.
5. If necessary, click **View** to view the items assigned to the selected load.
6. If the load needs to be returned, select the **To Be Returned** check box.

   The load must be returned even if the materials will not be physically returned. Returning the loaded items allows the piece marks to be loaded onto a new shipping ticket that contains items delivered to the job site. This way, Tekla EPM can keep accurate records of when parts were received and shipped.

7. To perform the action, click **Add/Validate**, **Ship**, or **Un-Ship**.

   The action is updated to the selected production control job. The action also appears in the **History** list at the bottom of the **Production/Shipping Entry** dialog box.

8. If necessary, view the shipping ticket:
   a. Click **Shipping Ticket**.
   b. In the **Report Selection** dialog box, select the report that you want to view, print, or export.
   c. Do any of the following:

To	Do this
View the shipping ticket	• In the **Report Selection** dialog box, click **View**.

To	Do this
Print the shipping ticket	1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. 2. Click **Print**. 3. In the **Select Printer** dialog box, click a printer to select it. 4. Click **OK**.
Export the shipping ticket	1. In the **Report Selection** dialog box, click **Export**. 2. In the **Export Format** list, select an export format. 3. Click **Browse**. 4. Browse to the location where you want to save the exported file, and click **Save**. 5. Modify the file name according to your needs. 6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. 7. To open the file after exporting it, select the **Open Exported Document** check box. 8. In the **Report Selection** dialog box, click **Export**.

Add piece marks to trucks

1. Click the **Load Tracking** tab to open it.
2. In the **Action** list, click the action that you want to perform.

   You can add, delete, return, or unreturn items.
3. In the appropriate lists, select the main mark, piece mark, sequence, lot number, load number, and date.
4. If necessary, click **View** to view the items assigned to the selected load.
5. In the **Quantity** field, enter the number of pieces that are worked on.
6. Click **Add**, **Delete**, **Return**, or **Un-Return**.

   The action is updated to the selected production control job. The action also appears in the **History** list at the bottom of the **Production/Shipping Entry** dialog box.
7. If necessary, view the shipping ticket:
   a. Click **Shipping Ticket**.

b. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

c. Do any of the following:

To	Do this
View the shipping ticket	• In the **Report Selection** dialog box, click **View**.
Print the shipping ticket	1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. 2. Click **Print**. 3. In the **Select Printer** dialog box, click a printer to select it. 4. Click **OK**.
Export the shipping ticket	1. In the **Report Selection** dialog box, click **Export**. 2. In the **Export Format** list, select an export format. 3. Click **Browse**. 4. Browse to the location where you want to save the exported file, and click **Save**. 5. Modify the file name according to your needs. 6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. 7. To open the file after exporting it, select the **Open Exported Document** check box. 8. In the **Report Selection** dialog box, click **Export**.

9.7 Use Trimble Connect with a production control job

You can view the production control job information in an IFC model using Trimble Connect. You can interact with the model in several ways: by sharing the production status of items to Trimble Connect, color-coding items in the IFC model, or selecting items in the IFC model or in the production control jobs.

We recommend that you start the production control job by importing an XML file from Tekla Structures. The XML file includes GUIDs, unique identifiers that

match the identifiers in the IFC model. The necessary IFC settings for Tekla Structures plugin can be downloaded from Tekla Warehouse.

Before you can view the job information in Trimble Connect, your Tekla EPM administrator needs to set up the Trimble Connect integration settings.

See also

Link a production control job to Trimble Connect (page 811)

Color-code production control items in the IFC model (page 813)

Select the same items in the production control job and in the IFC model (page 814)

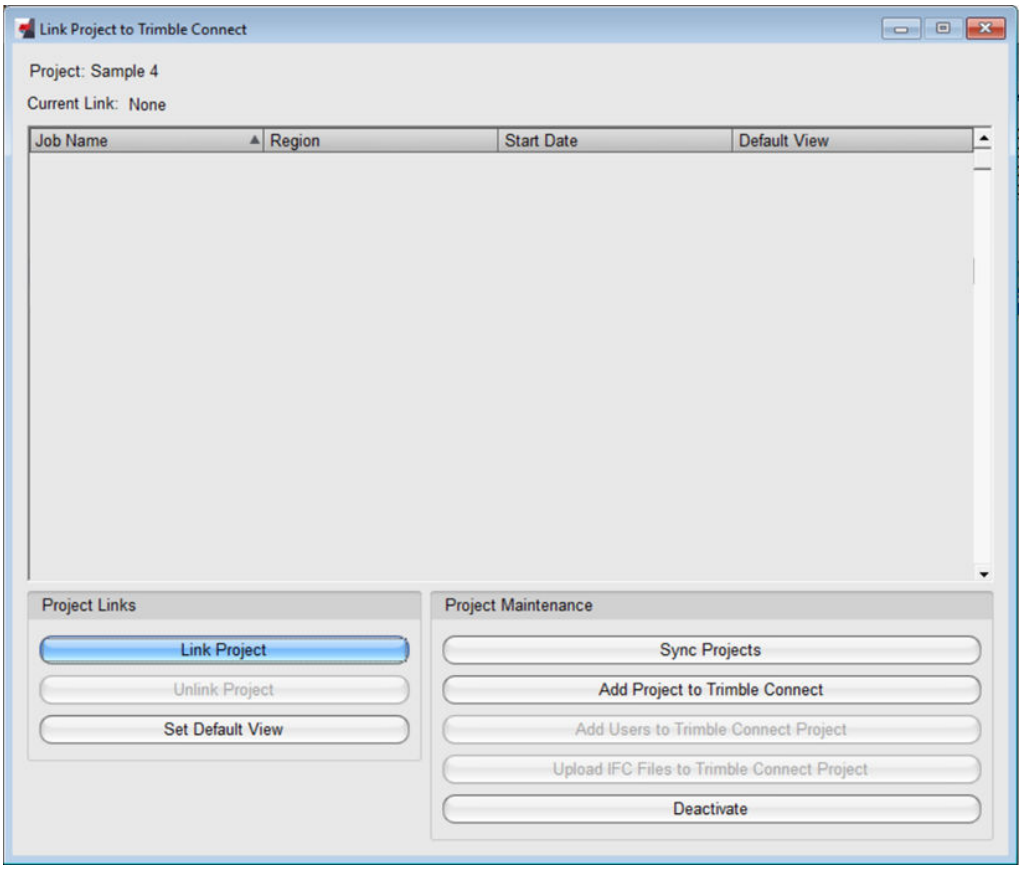
Link a production control job to Trimble Connect

Before you can view the production control job information in Trimble Connect for Windows, you need to link the job to a Trimble Connect project. You can either link the job to an existing project or create a new project.

Note that if a production control job is linked to a project management job, the Trimble Connect project is managed through the project management job. In this case, you need to link the project management job to Trimble Connect. The link is then applied to any linked production control and estimating jobs. The Trimble Connect project cannot be modified when you access it through the production control job.

1. In the **Production Control** dialog box, right-click anywhere in the display area.
2. In the context menu, click **Model Interface**.

   A message appears, telling you that the current job is not linked to a Trimble Connect project.
3. Click **OK** to close the message.



4. In the **Link Project to Trimble Connect** dialog box, do one of the following:

To	Do this
Link the job to an existing Trimble Connect project	a. To display the available Trimble Connect projects, click **Sync Projects**. b. Select the desired project, and click **Link Project**.
Create a new Trimble Connect project and link the job to it	a. Click **Add Project to Trimble Connect**. b. In the **Add Users to Project** dialog box, click the arrow buttons to move the users that participate in the project to the **Included** list. c. Click **OK**. Tekla EPM creates a Trimble Connect project with the same name and information as the current job. d. In the **Status** dialog box, review the creation process of the Trimble Connect project. A message appears, telling you that the project has been created successfully.

To	Do this
	e. Click **OK** to close the message. f. In Trimble Connect for Windows, press the **Back** button to exit the empty 3D view. g. In the **Explorer** side pane on the left, click the **Add File** button. h. In the **Add Files** dialog box, browse to find the IFC model. i. Select the IFC model and click **Open**. The IFC model is imported to Trimble Connect for Windows.

The production control job and Trimble Connect project are now linked.

To unlink a production control job from the Trimble Connect project:

1. In the **Select Production Control Job** dialog box, select the job that you want to unlink.
2. At the bottom of the dialog box, click **Edit**.
3. In the **Production Control Job Edit** dialog box, click **Link** on the right side of the **Trimble Connect Project** field.
4. In the **Link Project to Trimble Connect** dialog box, click **Unlink project**.
5. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.
6. In the **Production Control Job Edit** dialog box, click **Save**.

See also

Use Trimble Connect with a production control job (page 810)

Color-code production control items in the IFC model (page 813)

Select the same items in the production control job and in the IFC model (page 814)

Color-code production control items in the IFC model

To color-code items in the IFC model according to their properties, use the **Colorize** command in the **Model Viewer Interface** dialog box. For example, you can color-code items according to their production status or sequence. You can also set filters to only color-code particular items in the model. By using a filter, for example, you could first filter the items by their sequence, and then color-code the items in that sequence by their production status.

1. In the **Production Control** dialog box, right-click anywhere in the display area.

2. In the context menu, click **Model Interface**.
3. If necessary, in the **Model Viewer Interface** dialog box, filter the items that you want to color-code:
   a. Click **Set Filters**.
   b. In the **Estimating Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
   c. In the **Filter** dialog box, do one of the following depending on the filter type:
      - Click the arrow buttons to move the items that you want to display in the model to the **Included** list.
      - Type the maximum and minimum values for the items that you want to display in the model.
   d. Click **OK**.

      Repeat steps b to d for all filter types that you want to set.
   e. Click **Apply Filter**.
4. Click the arrow on the right side of the **Colorize By** list and select a property in the list.
5. Click **Colorize**.

The items in the IFC model are color-coded according to the selected property.

To revert to the original colors in the IFC model, click **Reset** in the **Model Viewer Interface** dialog box.

See also

Select the same items in the production control job and in the IFC model (page 814)

Select the same items in the production control job and in the IFC model

When you have linked a production control job to Trimble Connect, you can select an item that is selected in one of the software simultaneously in the other one. Do the following:

1. In the **Production Control** dialog box, right-click anywhere in the display area.
2. In the context menu, do one of the following:
   - To select the item that is selected in the production control job also in the IFC model, select **Select in Model**.
   - To select the item that is selected in the IFC model also in the production control job, select **Select from Model**.

See also

Color-code production control items in the IFC model (page 813)

Visualize jobs with Trimble Connect Organizer and Trimble Connect Content Browser

You can use Trimble Connect Organizer to visualize and group items on your estimating jobs and production control jobs. You can select which fields in Tekla EPM you want to use to categorize model objects that correspond to your Tekla EPM items in the related IFC model, and highlight or color-code model objects according to different criteria.

Prerequisites of using Trimble Connect Organizer:

- You need to have a Trimble Connect Business Premium license.
- Your estimating job and production control job need to be linked through the **Project Management** module.

  Note that your estimating job and production control job do not necessarily need to be linked to the same Trimble Connect project.
- The jobs need to be linked to a Trimble Connect project.

Set up item categories for Trimble Connect Organizer

You can now set up the categories that you want to use in Trimble Connect Organizer. The categories determine which criteria you can use to highlight and color-code items in the linked estimating and production control jobs.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Integration Settings** --> **Trimble Connect Organizer**.
3. In the **Trimble Connect Organizer Tree Mappings** dialog box, create the necessary item categories:
   a. Click **New**.
   b. In the **Field Type** list, select if you want to use a field from the estimating job or the production control job.
   c. In the **Tekla EPM Field** list, select the field that you want to use as an item category in Trimble Connect Organizer.
   d. In the **Organizer Tree Name**, type a name that Trimble Connect Organizer will use for the item category.

      We recommend that you use clear names to ensure that you know where the information in the category comes from. For example, if a

category contains the shapes in the estimating job, you could name the category `Tekla EPM Estimating - Shape`.

e. Click **Add**.

For example, you can create a category for production sequences in the linked production control job. All sequences within the linked production control job will be shown under this category, and you can highlight individual sequences in the 3D model view.

Repeat steps a to e to create all necessary field mappings.

4. To close the **Trimble Connect Organizer Tree Mappings** dialog box, click the **Close** button (**X**) in the upper-right corner.

Publish job information manually to Trimble Connect Organizer

- To upload job information to Trimble Connect Organizer:

From	Do this
An estimating job	1. Open the estimating job. 2. Click the **Estimating** ribbon tab. 3. On the menu, select **Publish to Trimble Connect Organizer**.
A production control job	1. Open the production control job. 2. Click the **Production Control** ribbon tab. 3. On the menu, select **Export** --> **Publish to Trimble Connect Organizer**.

The item information is uploaded to Trimble Connect Organizer, and will be visible in the Organizer side pane in Trimble Connect for Browser.

You can also create an automated event that uploads the item information to Trimble Connect Organizer automatically as often as you want.

Highlight selected items in Trimble Connect Organizer

1. To open Trimble Connect for Browser:
   - Go to https://3d.connect.trimble.com/.
   - Click **Trimble Connect** in the upper-right corner of Tekla EPM Go.
2. Double-click the Trimble Connect project that is linked to the desired estimating and production control jobs.

   The Trimble Connect project opens in the Trimble Connect 3D viewer.

3. To open the Organizer side pane, click  **Organizer** in the Trimble Connect side pane.

4. In the Organizer side pane, expand the necessary categories and select the categories whose items you want to highlight.

   To select more than one category at a time, hold down **Ctrl** when selecting categories.

   For example, you can select the labor code **B - Bolted Clips On Both Ends** and sequence **1** to highlight and zoom to all items with labor code B that belong to the production sequence 1.

Color-code items with Trimble Connect Content Browser

1. In the Trimble Connect side pane, click **Data Table**.
2. To configure what information is shown in Content Browser:

   a. At the top of the Content Browser pane, click the **Columns** button.

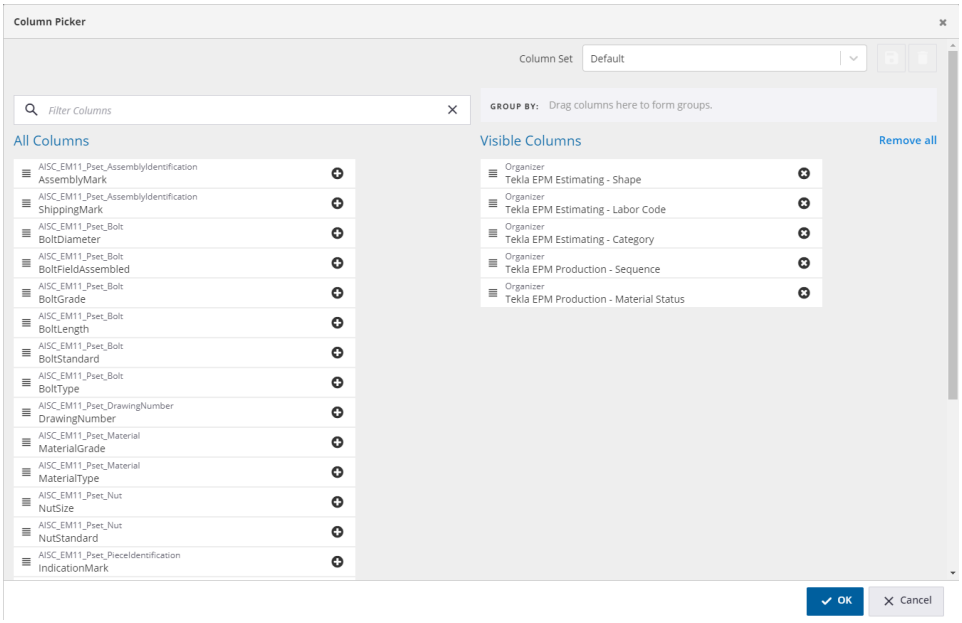
   b. If necessary, remove the current columns by clicking **Remove All** on the right side of the **Visible Columns** list.

   c. Find a column that you want to show in the Content Browser pane by scrolling the **All Columns** list, or by typing a search word in the **Filter Columns** field.

   d. Select the column.

   e. Hold down the left mouse button, drag the column to the **Visible Columns** list, and release the left mouse button.

   Repeat steps c to e for all columns that you want to show.



   f. To save your changes, click **OK** at the bottom of **Column Picker**.

3. To set how the items are grouped in the 3D model:

   a. Select a column in Content Browser and hold down the left mouse button.

   b. Drag the column to the **Group by** box, and release the left mouse button.

The column name appears in the **Group by** box, and the objects are sorted according to the selected criterion. By default, groups and objects are shown in alphabetical order.

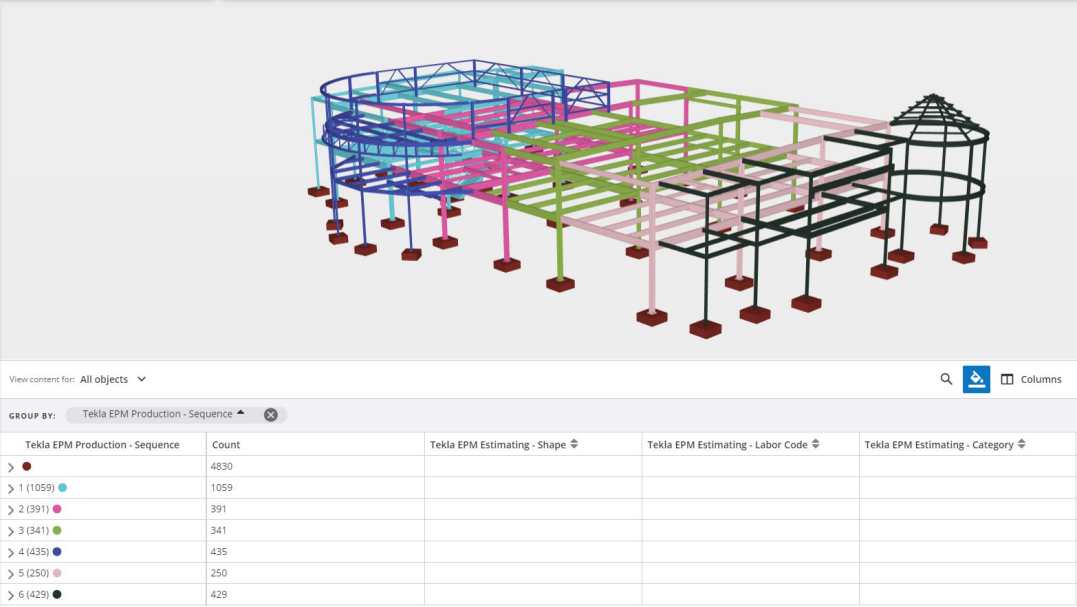
You can also drag another column to the **Group by** box. In this case, the objects are sorted to both of the selected criteria.

If you want to reverse the order of the objects, click the column name in the **Group by** box.

4. To color-code the items in the 3D view, at the top of Content Browser, click **Colorize**.

The objects on all rows of Content Browser are color-coded in the 3D view. The color that is used for each row is shown on the right side of the row title.

In the following image, you can see items grouped and color-coded by production sequence.



9.8 Export production control information

You can export production control information, including the production status, to multiple file formats. You can save the current production control job as a KISS or CIS/2 file, export the production status to an XML file, or push the production status to Trimble Connect.

For more information, see the following links:

Export a production control job to Kiss (page 820)

Export the production control job to a CIS/2 model (page 821)

Export the production status to Tekla Structures or Advance Steel (page 667)

Export the production status to SDS/2 (page 668)

Publish the production status to Trimble Connect (page 669)

Export a production control job to Kiss

To save the current production control job as a KISS file, do the following:

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Export** --> **Export to KISS** .
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.

4. If necessary, change the file name.
5. Click **Save**.

The file is saved to the selected location as a KISS file.

Export the production control job to a CIS/2 model

Use the **Export to CIS/2 Model** command to export a production control job to CIS/2 file. Note that the **Export to CIS/2 Model** command is only available if the production control job has originally been imported from a CIS/2 file.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Export** --> **Export to CIS/2 Model** .
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. Click **Save**.

   A message appears, showing the location where the CIS/2 file was saved.

9.9 Finalize a production control job

Use the **Finalize** command to prevent any further changes to a production control job. After finalizing the production control job, you can no longer send material to purchasing. The requisitioned items assigned to the job will be deleted, and inventory items reserved for the job will be unreserved. Note that finalizing a job is irreversible and cannot be undone.

1. In the **Production Control** dialog box, click the **Production Control** ribbon tab.
2. On the menu, select **Purchasing** --> **Finalize** .
3. If you are sure that you want to finalize the job, inthe **Finalize Job** dialog box, click **Finalize**.

10 Manage requisitions and purchase orders

In the **Purchasing** module, you can create two types of jobs: requisitions and purchase orders. Requisitions list the required materials for multiple jobs, whereas purchase orders represent the individual orders that you make from vendors.

Before you start creating requisitions and purchase orders in the **Purchasing** module, remember to adjust the settings of the **Purchasing** module according to your needs.

For more information, see the following links:

Set up the Purchasing module (page 822)

Create and manage requisitions (page 842)

Create and manage purchase orders (page 875)

10.1 Set up the Purchasing module

The **Purchasing** module in Tekla EPM consists of two parts: requisitions and purchase orders. Before starting to use **Purchasing**, we recommend that you adjust the requisition and purchase order properties to meet the needs of your company.

For more information, see the following links:

Define the requisition settings (page 822)

Define the purchase order settings (page 829)

Create, modify, or delete cost codes (page 841)

Define the requisition settings

Before you start to use the **Purchasing** module, you need to separately define the default settings and options used for requisitions and purchase orders.

For more information, see the following links:

Define company standard settings for requisitions (page 823)

View, print, or export global requisition reports (page 827)

Manage requisitions (page 828)

Define company standard settings for requisitions

In the **Requisition Company Standards** dialog box, you can create default settings that become the company standard settings used in all future requisitions. If necessary, you can change the settings for each individual requisition.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Requisitions** --> **Company Standards** .
3. In the **Requisition Company Standards** dialog box, adjust the settings according to your needs:

Option	Description
Requisition # Increment	Allows you to select the default option for automatic numbering of requisitions. The options are: • **Increment from Last Requisition #**: When you create a new requisition, Tekla EPM uses the next available number after the latest requisition number created. • **Increment from Largest Requisition #**: Tekla EPM uses the next available number after the largest requisition number created. • **Don't Increment**: Automatic numbering is not used. You can modify the requisition number when you create a new requisition.
Item Increment	Sets the auto-increment for item numbers. The auto-increment allows the items to be added in the list according to your needs, without having to renumber the other items in the requisition. For example, if items should be numbered as 10, 20, 30, ..., the input increment should be set to 10.

Option	Description
	If the auto-increment of the item numbers is not necessary, type `1` in the **Item Increment** field.
Keep Purchasing Selection Screen Open	When selected, the **Select Requisition/Purchase Order** dialog box stays open after a requisition has been opened. Otherwise, the **Select Requisition/ Purchase Order** dialog box will close when you open a requisition.
Job # Regular Expression	Allows the use of regular expressions to create the requisition number. For more detailed instructions on the job number regular expressions, click **Regular Expression Help**.

4. Click **Save**.

The changes you made are saved. You can further modify the company standards by clicking the **Input/Display Units**, **Combining Optimizations**, and **Suppliers** buttons.

See also

Define default input and display units for requisitions (page 824)

Define combining optimizations for requisitions (page 824)

Define suppliers for requisitions (page 826)

Define default input and display units for requisitions

You can use either metric or imperial units for displaying and entering sizes, lengths, weights, and prices in requisitions. In addition, you can select how you want to enter the data for the length of the piece.

1. In the **Requisition Company Standards** dialog box, click the **Input/ Display Units** button.
2. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.
3. Click **OK**.
4. Remember to click **Save** in the **Requisition Company Standards** dialog box to update the input and display units.

When the settings are saved, the **Requisition Company Standards** dialog box closes.

Define combining optimizations for requisitions

You can define company-level settings for multing and plate nesting for new requisitions. If necessary, the combining optimizations can be adjusted for each individual requisition.

1. At the bottom of the **Requisition Company Standards** dialog box, click **Combining Optimizations**.
2. To use material grade substitutions with the optimization settings when performing a combining run, on the **General Settings** tab of the **Combining Setup** dialog box, select the **Use Grade Substitutions** check box.

   Grade substitutions must be set in the **Shape / Grade / Size Maintenance** dialog box. If the grade substitutions are not set, the material grades in the combining run and in the supplier pricing data set or the inventory need to match each other exactly.
3. If you only want to mult and nest materials that are in the same sequence, select the **Combine Only Within Sequence** check box.

   Selecting the **Combine Only Within Sequence** check box might be useful in medium or big jobs, but we do not recommend selecting it for small jobs.
4. Click the arrow buttons to move the optimization options that you want to use to the **Optimizations Included** list.

   The options are:

   - **Inventory Exact-Match (In Stock)**: Use this option for inventory items in stock that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Exact-Match (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Least-Scrap (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that will provide the least amount of scrap.
   - **Inventory Least-Scrap (In Stock)**: Use this option for inventory items in stock that will provide the least amount of scrap.
   - **Warehouse Least-Scrap**: Use this option to give preference to warehouse items that will provide the least amount of scrap. Warehouse items will only be used when they provide less scrap than the available inventory items.
   - **Warehouse Force Inventory**: Use this option to force the use of inventory regardless of the amount of scrap, no matter where it is

located in the **Optimizations Included** list. This option is the opposite of **Warehouse Least-Scrap**.

Note that you can only include **Warehouse Least-Scrap** or **Warehouse Force Inventory**, not both.

5. Use the **Move Up** and **Move Down** buttons to modify the order of the optimizations.

   The order is important while performing a combining run.

6. Click the **Mult Settings - Linear Material** tab to open it.
7. In **Multing Software**, select the multing software that you are using.
8. If you want to apply the material kerf settings defined in **Shape / Grade / Size Maintenance** to the combining as part of the cutting pattern, select the **Apply Kerf** check box.
9. Open the **Plate Nesting Settings** tab.
10. In the **Plate Nesting Software** list, click the plate nesting software that you are using to select it.
11. In the **Shear Cut Optimization** list, click a suitable shear cut option to select it.

    The selected option determines the plate allowance to be used with the combining:

    - Use **None** when cutting plate on a burn table.
    - Use **Shear Cut - First Cut Along Length** or **Shear Cut - First Cut Along Width** to alert Tekla EPM that the nesting needs to allow for that type of cut first. Then, the nesting will allow for all subsequent cuts to be made with that condition.

12. If the material grain direction is unimportant and you want Tekla EPM to create the best possible optimization of a plate, select the **Rotate Plates for Best Fit** check box.
13. If necessary, select the **Apply Kerf** check box.

    See step 8.

14. Click **Save**.
15. Remember to click **Save** in the **Requisition Company Standards** dialog box to update the combining optimizations.

When the settings are saved, the **Requisition Company Standards** dialog box closes.

Define suppliers for requisitions

You can define the desired suppliers, or pricing data sets, for angles, beams, plates, rods, tubes, and other material. This way, you can use material pricing from the selected supplier pricing data sets for each material group.

1. In the **Requisition Company Standards** dialog box, click the **Suppliers** button.
2. In the **Suppliers** dialog box, select suppliers for each material group in the available lists.
3. Click **OK**.
4. Remember to click **Save** in the **Requisition Company Standards** dialog box to update the supplier settings.

When the settings are saved, the **Requisition Company Standards** dialog box closes.

View, print, or export global requisition reports

Use the **Reports** command under **Maintenance** --> **Requisitions** to create reports that include information from all or several requisitions jobs. The available reports include requests for pricing and various lists of requisitions. You can then either view or print a report, or export a report and save it in another file format.

To create requisition reports, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Requisitions** --> **Reports** .
3. To only include specific requisitions in the reports, in the **Requisition Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the requisition properties that you want to include in the reports to the **Included** list.
   - Type the maximum and minimum values for the requisition properties that you want to include in the reports.
5. Click **OK**.

   To further limit the requisitions included in the reports, repeat steps 3 to 5 for all filter types.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

   To change the reports that are displayed in the **Report Selection** dialog box, click **Edit Report Types**.

According to your needs, see any of the following instructions:

View the requisition report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the requisition report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the selected report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the requisition report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Modify the file name according to your needs.
5. Browse to the location where you want to save the exported file, and click **Save**.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. In the **Report Selection** dialog box, click **Export**.

Manage requisitions

In **Job Maintenance**, you can delete or copy existing requisitions.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Requisitions** --> **Requisition Maintenance** .
3. In the **Job Maintenance** dialog box, select any of the available options:
   - **Copy**
   - **Delete**

See also

Copy a requisition (page 829)

Delete requisitions (page 829)

Delete requisitions

You can delete unnecessary requisitions at any time in **Job Maintenance**.

1. In the **Job Maintenance** dialog box, select the requisitions that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. At the bottom of the dialog box, click **Delete**.
3. To delete the requisition, click **Yes** in the confirmation dialog box.

Copy a requisition

You can copy a requisition to use it as the base of a new similar requisition. Copying a requisition makes creating the new requisition quicker, as you do not have to set all properties manually or create items one by one.

1. In the **Job Maintenance** dialog box, select the requisition that you want to copy.
2. Click **Copy**.
3. Type a number for the new job.
4. Click **OK.**
5. Define new job numbers for the jobs whose items are sent to the original requisition:

   a. In the **New Job #** field, type a new number for the job.

   b. Click **Set** to save the new job number.

   Repeat steps a to b for all necessary jobs.

Define the purchase order settings

Before you start to use the **Purchasing** module, you need to separately define the default settings and options used for requisitions and purchase orders.

For more information, see the following links:

Define company standard settings for purchase orders (page 831)

View, print, or export global receiving reports (page 834)

Add, modify, or delete purchase order types (page 836)

Add, modify, and delete shipping methods for purchase orders (page 837)

Add, modify, or delete payment terms for purchase orders (page 839)

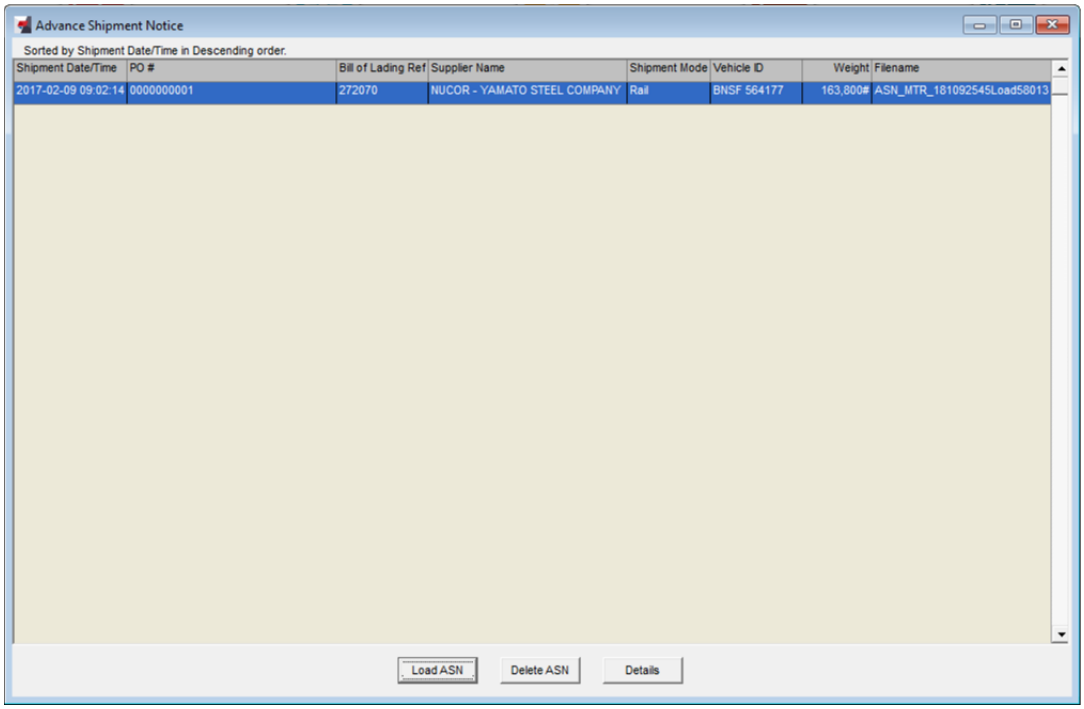
Add, modify, or delete top text items (page 840)

Import, view, or delete advance shipment notices

In the **Advance Shipment Notice** dialog box, you can import advance shipment notices from XML files to Tekla EPM. You can also view the shipment details of an advance shipment notice, or delete any unnecessary advance shipment notices.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Purchase Orders** --> **Advance Shipment Notices** .

The **Advance Shipment Notice** dialog box opens.



Import an advance shipment notice

1. At the bottom of the **Advance Shipment Notice** dialog box, click **Load ASN**.
2. In the **Open** dialog box, browse to find the XML file that you want to import.
3. Select the file and click **Open**.

   If the order number in the XML file does not match any existing purchase orders, the **Enter Value** dialog box opens.
4. Click the arrow on the right side of the list, and select the purchase order to which you want to import the XML file.

5. Click **OK**.
6. In the **Load Advance Shipment Notice** dialog box, view the progress of the import process.
7. When the import is completed, click **Close** at the bottom of the dialog box.

The advance shipment notice has now been imported for the selected purchase order. If necessary, you can view the details of the advance shipment notice.

View the details of an advance shipment notice

1. In the **Advance Shipment Notice** dialog box, select the advance shipment notice whose details you want to view.
2. Click **Details**.
3. View the advance shipment notice.

   Click the various tabs and buttons to show different details about the advance shipment notice.
4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Delete an advance shipment notice

Note that deleting an advance shipment notice is permanent and cannot be undone. This means that you need to re-import the XML file to view the advance shipment notice again.

1. In the **Advance Shipment Notice** dialog box, select the advance shipment notice that you want to delete.
2. Click **Delete ASN**.
3. To permanently delete the advance shipment notice, click **Yes** in the confirmation dialog box.

Define company standard settings for purchase orders

In the **Purchase Order Company Standards** dialog box, you can create the default settings that become the company standard settings, and the units used in all new purchase orders. If necessary, you can change the settings for each individual purchase order.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Purchase Orders** --> **Company Standards** .

3. On the **General** tab of the **Purchase Order Company Standards** dialog box, adjust the settings according to your needs:

Option	Description
P.O. # Increment	Allows you to select the default option for automatic numbering of purchase orders. The options are: • **Increment from Last P.O. #**: When you create a new purchase order, Tekla EPM uses the next available number after the latest purchase order number created. • **Increment from Largest P.O. #**: Tekla EPM uses the next available number after the largest purchase order number created. • **Don't Increment**: Automatic numbering is not used.
'Purchase Order' Text	Allows you to replace the word 'Purchase order' in Tekla EPM with an alternative text. The alternative text will be used wherever 'Purchase order' is currently used in Tekla EPM. Note that you need to close and re-open Tekla EPM to update the purchase order text. Type the desired text in the **'Purchase Order' Text** field.
'P.O.' Text	Allows you to replace the abbreviation 'P.O.' in Tekla EPM with an alternative text. The alternative text will be used wherever 'P.O.' is currently used in Tekla EPM. Note that you need to close and re-open Tekla EPM to update the P.O. text. Type the desired text in the **'P.O.' Text** field.
Item Increment	Sets the auto-increment for item numbers. The auto-increment allows the items to be added in the list according to your needs, without having to renumber the other items in the requisition. For example, if items should be numbered as 10, 20, 30, ..., the input increment should be set to 10. If auto-increment of item numbers is not necessary, type `1` in the **Item Increment** field.
Keep Purchasing Selection Screen Open	When selected, the **Select Requisition/Purchase Order** dialog box stays open after a purchase order has been opened. Otherwise, the **Select**

Option	Description
	Requisition/Purchase Order dialog box will close when you open a purchase order.
Generate Barcode Images	When selected, Tekla EPM generates the necessary barcode images for the **Barcode Checklist** report. Note that you only need to select the **Generate Barcode Images** check box if you are using a customized version of the **Barcode Checklist** report designed with Crystal Reports. If you are using another version of the **Barcode Checklist** report, the barcodes are automatically generated as a part of the report, whether or not the **Generate Barcode Images** check box is selected.
QuickBooks - Export PO Summary Only	When selected, purchase order items are exported as a whole without any line item details.
P.O. # Regular Expression	Allows the use of regular expressions to create the purchase order number. For more detailed instructions on job number regular expressions, click **Regular Expression Help**.

4. On the **Receiving** tab, select the check boxes next to the properties that you want to define when receiving material items.
5. On the **Default Remarks** tab, do any of the following to define the remarks added for all new purchase orders by default.
   - Type the necessary remarks in the available fields.
   - Click the arrow buttons on the right side of the available fields and select previously set remarks.

   For more information about managing remarks, see Add, modify, or delete purchase order remarks (page 840).
6. On the **Default Top Text** tab, do any of the following to define the top text added for all new purchase orders by default:
   - Type a name for the top text item in the **Description** field, and type any necessary information in the **Top Text** field.
   - Click the arrow button on the right side of the **Description** list, and select a previously set top text item.

   For more information about managing top text items, Add, modify, or delete top text items (page 840).
7. To adjust the input and display units used for purchase orders, click the **Input/Display Units** button.

8. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.

9. Click **OK**.

10. In the **Purchase Order Company Standards** dialog box, click **Save** to update the settings.

11. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

View, print, or export global receiving reports

Use the **Receiving Reports** command to create receiving reports that contain information from all or various purchase orders. You can then view or print the reports, or export the reports and save them in another file format. For example, you can create a purchase order summary, or a receiving list.

To create receiving reports, do the following:

1. Click the **Maintenance** ribbon tab.

2. On the menu, select **Purchase Orders** --> **Receiving Reports** .

3. To only include particular purchase orders in the reports, in the **Purchase Order Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.

4. In the **Filter** dialog box, do one of the following depending on the filter type:

   - Click the arrow buttons to move the purchase order properties that you want to include in the report to the **Included** list.
   - Type the maximum and minimum values for the purchase orders that you want to include in the report.

5. Click **OK**.

   To further limit the properties of purchase orders that are included in reports, repeat steps 3 to 5 for all necessary filter types.

6. To save commonly used filters, do the following:

   a. Click **Filter Types** in the lower-left corner.

   b. Click **New**.

   c. Type a description for the filter type.

   d. Create the filter settings.

      For more information, see steps 3 to 5.

   e. Click **Add**.

f. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

   The newly created filter type is selected in the **Filter Types** list.

g. To apply the filter type, click **Set**.

Note that if you save a filter type in the **Purchase Order Report Filters** dialog box, the saved filter type will also be available as a filter in the **PO #** dialog box for all purchase orders.

7. Click **Make Report**.
8. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

   Note that all available receiving reports are not displayed by default. You can customize the reports that are displayed in the **Report Selection** dialog box by clicking **Edit Report Types**.
9. If you want to include the company logo and vendor code in the report, select the **Show Company Logo** and **Show Vendor Code** check boxes.

   When the check boxes are cleared, the information is not included in the report.

According to your needs, see any of the following instructions:

View the report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the selected report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.

4. Modify the file name according to your needs.
5. Browse to the location where you want to save the exported file, and click **Save**.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. In the **Report Selection** dialog box, click **Export**.

Add, modify, or delete purchase order types

In the **PO Type Maintenance** dialog box, you can create new purchase order types that meet the needs of your company. For example, recurring purchase orders can have their own purchase order type. You can also select the default purchase order type, modify existing purchase order types, and delete unnecessary purchase order types.

To access the **PO Type Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Purchase Orders** --> **PO Type Maintenance** .

The **PO Type Maintenance** dialog box opens.

According to your needs, see any of the following instructions:

Create a purchase order type

1. At the bottom of the **PO Type Maintenance** dialog box, click **New**.
2. Type a description for the purchase order type.
3. Click **Add**.

Set a purchase order type as default

1. In the **PO Type Maintenance** dialog box, select the desired purchase order type.
2. Click **Set as Default**.
3. To confirm setting the selected purchase order type as the default option, click **Yes** in the confirmation dialog box.

Modify a purchase order type

1. In the **PO Type Maintenance** dialog box, select the purchase order type that you want to modify.
2. Modify the description according to your needs.
3. Click **Edit** to save the changes.

Delete a purchase order type

Note that deleting a purchase order type is permanent and cannot be undone.

1. In the **PO Type Maintenance** dialog box, select the purchase order type that you want to delete.
2. Click **Delete**.
3. To permanently delete the purchase order type, click **Yes** in the confirmation dialog box.

Add, modify, and delete shipping methods for purchase orders

In the **Shipping Method Maintenance** dialog box, you can add, modify, and delete shipping method options that are available for the purchase orders created in **Purchasing**. You can also select which shipping method you want to use as the default option.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Purchase Orders** --> **Shipping Method Maintenance** .
3. In the **Purchase Order Payment Term Maintenance** dialog box, do any of the following according to your needs:

To	Do this
Add a new shipping method	a. Click **New**. b. In the **Description** field, describe the new shipping method. c. Click **Add** to save the new shipping method and add it to the list.
Set a default shipping method	a. Select the desired shipping method. b. Click **Set as Default**. c. To confirm using the selected shipping method as the default option, click **Yes** in the confirmation dialog box. The default shipping method is marked with an asterisk (*). The same shipping method will be used by default in the **Purchasing** module.
Modify a shipping method	a. Select the shipping method that you want to modify. b. Modify the description. c. Click **Edit** to save the changes.
Delete a shipping method	a. Select a shipping method in the list. b. Click **Delete**.

To	Do this
	c. To permanently delete the shipping method, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Add, modify, or delete FOB shipping destinations

In the **Purchase Order FOB Maintenance** dialog box, you can create, modify, and delete FOB (Free on Board) shipping destinations. You can also set a default FOB shipping destination. The destinations set in the **Purchase Order FOB Maintenance** dialog box are available for all purchase orders.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Purchase Orders** --> **FOB Maintenance** .

The **Purchase Order FOB Maintenance** dialog box opens.

According to your needs, see any of the following instructions:

Create a FOB shipping destination

1. At the bottom of the **Purchase Order FOB Maintenance** dialog box, click **New**.
2. Type a description for the shipping destination.
3. Click **Add**.

Set the default FOB shipping destination

The current FOB shipping method is marked with an asterisk (*). To change the default option, do the following:

1. In the **Purchase Order FOB Maintenance** dialog box, select the desired shipping destination.
2. Click **Set as Default**.
3. To confirm setting the selected shipping destination as the default option, click **Yes** in the confirmation dialog box.

The new FOB shipping method is marked with an asterisk (*).

Modify a FOB shipping destination

1. In the **Purchase Order FOB Maintenance** dialog box, select the shipping destination that you want to modify.
2. Modify the description according to your needs.
3. Click **Edit** to save the changes.

Delete a FOB shipping destination

Note that deleting a FOB shipping destination is permanent and cannot be undone.

1. In the **Purchase Order FOB Maintenance** dialog box, select the shipping destination that you want to delete.
2. Click **Delete**.
3. To permanently delete the shipping destination, click **Yes** in the confirmation dialog box.

Add, modify, or delete payment terms for purchase orders

You can add, modify, or delete the payment term options that are available for all purchase orders created in **Purchasing**. In addition, you can set the default payment term that will be used for all future purchase orders by default.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Purchasing** --> **Payment Term Maintenance** .
3. In the **Purchase Order Payment Term Maintenance** dialog box, do any of the following according to your needs:

To	Do this
Add a new payment term	a. Click **New**. b. In the **Description** field, type a description for the payment term. c. If necessary, in the **Discount** field, type a discount percentage for the payment term. d. Click **Add** to save the new payment term and add it to the list.
Set a default payment term	a. Select a payment term in the list. b. Click **Set as Default**. c. To confirm using the selected payment term as the default option, click **Yes** in the confirmation dialog box. The default payment term is marked with an asterisk (*). The same payment term will be used by default for all future purchase orders.
Modify a payment term	a. Select a payment term in the list. b. Modify the description and the discount percentage according to your needs. c. Click **Edit** to save the changes.
Delete a payment term	a. Select a payment term in the list.

To	Do this
	b. Click **Delete**. c. To permanently delete the payment term, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Add, modify, or delete purchase order remarks

In the **Purchase Order Remark Maintenance** dialog box, you can create remarks for purchase orders. You can also modify existing remarks or delete any unnecessary remarks. The remarks set in the **Purchase Order Remark Maintenance** dialog box are available for all purchase orders that you create or modify.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Purchase Orders** --> **Remark Maintenance** .

The **Purchase Order Remark Maintenance** dialog box opens.

According to your needs, see any of the following instructions:

Create a remark

1. At the bottom of the **Purchase Order Remark Maintenance** dialog box, click **New**.
2. In the **Description** field, type the remark.

   For example, `MTRs required`.
3. Click **Add**.

Modify a remark

1. In the **Purchase Order Remark Maintenance** dialog box, select the remark that you want to modify.
2. In the **Description** field, modify the text according to your needs.
3. Click **Edit** to save the changes.

Delete a remark

1. In the **Purchase Order Remark Maintenance** dialog box, select the remark that you want to delete.
2. Click **Delete**.
3. To permanently delete the remark, click **Yes** in the confirmation dialog box.

Add, modify, or delete top text items

Top text items are pieces of text that can be added at the top of purchase orders. In the **Purchase Order Top Text Maintenance** dialog box, you can add new top text items, or modify and delete existing top text items.

1. Click the **Maintenance** ribbon tab.
2. On the menu, select **Purchase Orders** --> **Top Text Maintenance** .

The **Purchase Order Top Text Maintenance** dialog box opens.

The top text items created in the **Purchase Order Top Text Maintenance** can be set as default options that are added for all nex purchase orders. For more information, see Define company standard settings for purchase orders (page 831).

Create a top text item

1. At the bottom of the **Purchase Order Top Text Maintenance** dialog box, click **New**.
2. In the **Description** field, type a name for the top text item.
3. In the **Top Text** field, type the information to be added at the top of the purchase orders.
4. Click **Add**.

Modify a top text item

1. In the **Purchase Order Top Text Maintenance** dialog box, select the top text item that you want to modify.
2. In the **Description** field, modify the item name according to your needs.
3. In the **Top Text** field, modify the top text according to your needs.
4. Click **Edit** to save the changes.

Delete a top text item

1. In the **Purchase Order Top Text Maintenance** dialog box, select the top text item that you want to delete.
2. Click **Delete**.
3. To permanently delete the top text item, click **Yes** in the confirmation dialog box.

Create, modify, or delete cost codes

You can use cost codes to keep track of specific costs and set them to match your accounting system. In the **Cost Code Maintenance** dialog box, you can create cost codes that are available for items in all requisitions and purchase

orders. You can also modify the existing cost codes, and delete unnecessary ones.

To access the **Cost Code Maintenance** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.
2. On the menu, select either **Requisitions** --> **Cost Codes** or **Purchase Orders** --> **Cost Codes** .

The **Cost Code Maintenance** dialog box opens.

According to your needs, see any of the following instructions:

Create a cost code

1. At the bottom of the **Cost Code Maintenance** dialog box, click **New**.
2. Type an abbreviation for the cost code.
3. Type a description for the cost code.

   For example, `Structural fabrication`.
4. Click **Add**.

Modify a cost code

1. In the **Cost Code Maintenance** dialog box, select the cost code that you want to modify.
2. Modify the abbreviation and description according to your needs.
3. Click **Edit** to save the changes.

Delete a cost code

Note that deleting a cost code is permanent and cannot be undone. After deleting the cost code, you cannot use the cost code for requisition items.

1. In the **Cost Code Maintenance** dialog box, select the cost code that you want to delete.
2. Click **Delete**.
3. To permanently delete the cost code, click **Yes** in the confirmation dialog box.

10.2 Create and manage requisitions

On the **Requisitions** part of the **Purchasing** module, you can create and modify requisitions and material items within them. The purpose of creating requisitions is having a list of the required materials for multiple jobs, so that

you can optimize the use of similar materials. By creating requisitions, you can quote the required materials from vendors and attach the material items to purchase orders or existing inventory.

Requisitions also hold a copy of the production control record that is attached to the stock materials. You can manually move the records to and from stock items.

You can use and organize requisitions in different ways according to your needs. To illustrate, you can either use a single requisition for all required materials, or create separate requisitions for each phase and material type in each job.

We recommend that you plan the numbering of requisitions carefully to help you organize the requisitions in the future.

In requisitions, you can:

- Combine all or selected material items.
- Load material items into a purchase order.
- View the purchase history or change history of the requisition.
- Update the pricing information.
- Create an export requests for pricing.
- Import pricing information for requisitions.
- Create requisition reports.

For more information, see the following links:

Create a requisition (page 844)

Open a requisition (page 846)

Modify a requisition (page 848)

Store document references for a requisition (page 849)

Add a requisition item (page 850)

Copy a requisition item (page 854)

Modify requisition items (page 854)

Delete requisition items (page 859)

View the pricing history of a requisition item (page 859)

View all changes in a requisition (page 861)

Load requisition items into a purchase order (page 862)

Export a request for pricing (page 864)

Import pricing information to a requisition (page 866)

Update pricing information (page 869)

Combine items in the Requisition # dialog box (page 871)

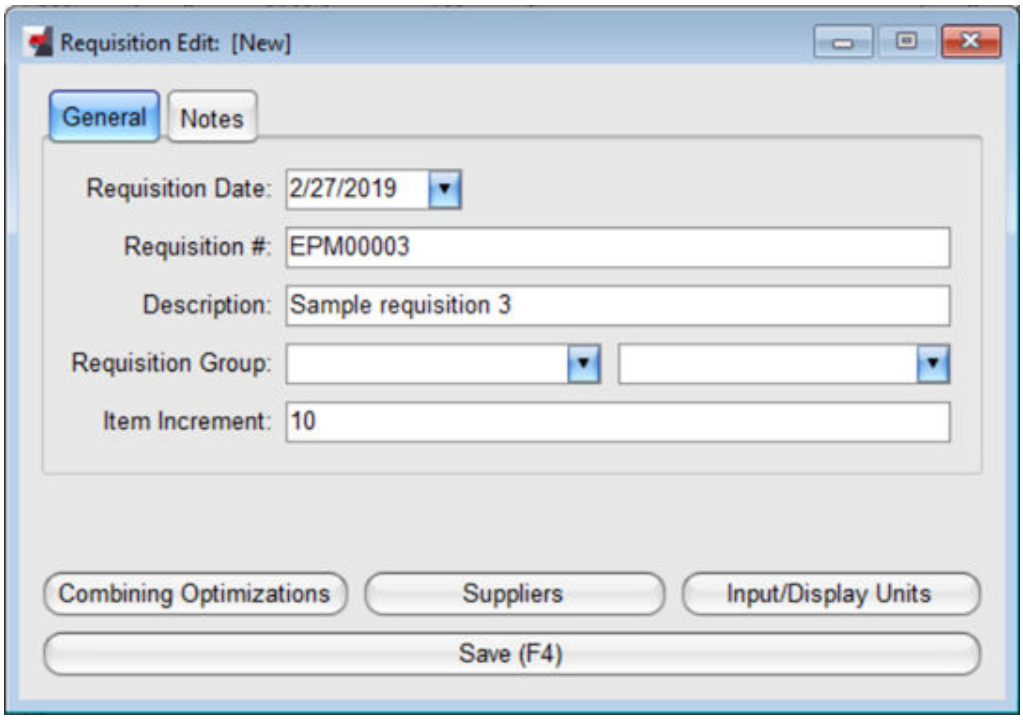
View, print, or export requisition-specific reports (page 873)

Delete requisitions (page 875)

Create a requisition

To create a new requisition where you can load and store material items, do the following:

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Requisitions** tab.
3. Click **Add**.



4. On the **General** tab of the **Requisition Edit** dialog box, do either of the following to define the requisition number.
   - Type the desired requisition number in the **Requisition #** field.
   - To use the next available number from a prefix as the requisition number, type the desired prefix, double-click the **Requisition #** field, and click **Yes** to confirm using the prefix.

     For example, you can use a related job number as the prefix.

   We recommend that you plan the numbering of requisitions carefully to help you organize the requisitions in the future. The requisition number cannot be changed later. All other requisition information can be modified later, if necessary.

5. Define the remaining requisition properties.

   The properties marked with an asterisk (*) are mandatory information.

Option	Description
Requisition Date *	The date of the requisition. Tekla EPM automatically uses the current date. To change the date, do one of the following: • Type the date in the **Requisition Date** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Requisition Date** field and select a date in the calendar.
Description	Any description of the requisition. Type a description in the **Description** field.
Requisition Group	The groups where the requisition belongs to. Setting requisition groups for the requisition helps you to sort requisitions in the **Select Requisition/ Purchase Order** dialog box. To set requisition groups, do one of the following: • Type new requisition group names in the **Requisition Group** fields. • Click the arrows on the right side of the **Requisition Group** fields, and select existing requisition groups in the lists.
Item Increment	Sets the auto-increment for item numbers in the requisition. The auto-increment allows the items to be added in the list according to your needs, without having to renumber the other items in the requisition. For example, if items should be numbered as 10, 20, 30, ..., the input increment should be set to 10. If the auto-increment of item numbers is not necessary, type `1` in the **Item Increment** field.

6. On the **Notes** tab, type any notes about the requisition.
7. Click the buttons at the bottom of the **Requisition Edit** dialog box to adjust the combining optimizations, suppliers, and input and display units.

   For more information, see:

   - Define combining optimizations for requisitions (page 824)

- Define suppliers for requisitions (page 826)
- Define default input and display units for requisitions (page 824)

8. Click **Save** to create the requisition.

The **Requisition Edit** dialog box closes. The new requisition is added to the **Select Requisition/Purchase Order** dialog box.

See also

Open a requisition (page 846)

Modify a requisition (page 848)

Store document references for a requisition (page 849)

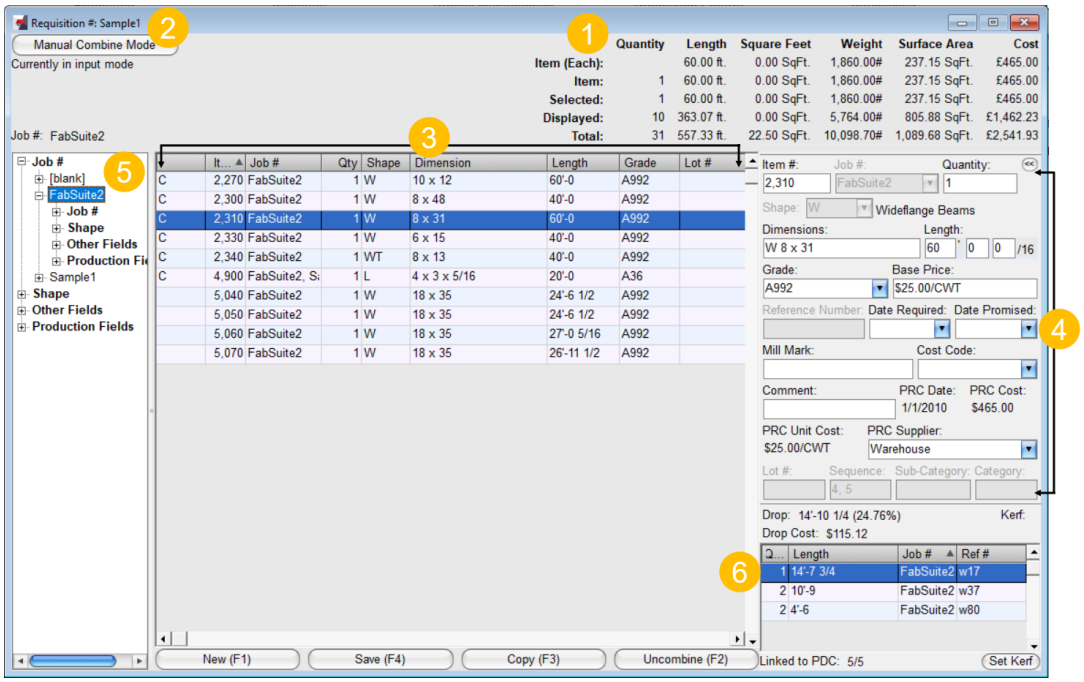
Delete requisitions (page 875)

Open a requisition

To view and modify the material items in a requisition, you need to open the requisition:

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Requisitions** tab.
3. Select the requisition that you want to open.
4. Do one of the following:
   - At the bottom of the dialog box, click **Open**.
   - Double-click the selected requisition.

The **Requisition #** dialog box opens. View the components of the dialog box in the following image:



(1) The summary grid: shows the number of requisition items, their length, square feet, weight, surface area, and cost for items for a single item, the selected items, the displayed items, and the entire requisition.

(2) The mode switch button: the **Requisition #** dialog box has two modes: the input mode and the manual combine mode. In the input mode, you can add material items and modify them. In the manual combine mode, you can add stock material items, and combine specific material items manually.

To change the mode, click the button in the upper-left corner.

(3) The display area: shows all material items in the requisition.

The visible columns and details can be modified in the **Edit Display Fields** dialog box.

Note that a C in the leftmost column indicates that the material items have been combined.

(4) The input area: allows you to add properties for new material items and modify properties of the existing material items.

When you select an item in the display area, its properties automatically populate the input fields.

The visible columns and details can be modified in the **Edit Input Fields** dialog box.

(5) The navigation tree: allows you to only view specific items in the requisition.

Click **+** to expand and select options in the navigation tree. When you select an option, only material items that match the selected properties are displayed in the display area.

For example, you can expand **Shape** and select **HSS** to only display hollow structural sections.

(6) Combining information grid: shows the pieces combined to the item that is selected in the display area.

Note that you can see the number of pieces linked to **Production Control** in the lower-right corner of the dialog box.

Modify a requisition

You can modify all properties of a requisition at any time, except for the requisition number.

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Requisitions** tab.
3. Select the requisition that you want to modify.
4. Click **Edit**.
5. On the **General** tab of the **Requisition Edit** dialog box, modify the requisition properties according to your needs.

   The properties marked with an asterisk (*) are mandatory information.

Option	Description
Requisition Date *	The date of the requisition. Tekla EPM automatically uses the current date. To change the date, do one of the following: • Type the date in the **Requisition Date** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Requisition Date** field and select a date in the calendar.
Description	Any description of the requisition. Type a description in the **Description** field.

Option	Description
Requisition Group	The groups where the requisition belongs to. Setting requisition groups for the requisition helps you to sort requisitions in the **Select Requisition/ Purchase Order** dialog box. To set requisition groups, do one of the following: • Type new requisition group names in the **Requisition Group** fields. • Click the arrows on the right side of the **Requisition Group** fields, and select existing requisition groups in the lists.
Item Increment	Sets the auto-increment for item numbers in the requisition. The auto-increment allows the items to be added in the list according to your needs, without having to renumber the other items in the requisition. For example, if items should be numbered as 10, 20, 30, ..., the input increment should be set to 10. If the auto-increment of item numbers is not necessary, type `1` in the **Item Increment** field.

6. On the **Notes** tab, modify the notes about the requisition.
7. Click the buttons at the bottom of the **Requisition Edit** dialog box to adjust the combining optimizations, suppliers, and input and display units.

   For more information, see:

   - Define combining optimizations for requisitions (page 824)
   - Define suppliers for requisitions (page 826)
   - Define default input and display units for requisitions (page 824)
8. Click **Save** to update the requisition.

The **Requisition Edit** dialog box closes.

See also

Open a requisition (page 846)

Store document references for a requisition (page 849)

Delete requisitions (page 875)

Store document references for a requisition

Document Index is where you can store documents for reference. When you store documents in **Document Index**, each user that has access to the requisition can view them, so it is easy to keep up to date on the requisition status. You can save any documents, such as pricing quotes from vendors, and Microsoft Outlook emails in **Document Index**.

To access **Document Index**, do the following:

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Requisitions** tab.
3. Select the requisition for which you want to add document references.
4. Click **Doc Ind**.

The **Document Index** dialog box opens. Next, you can either modify the available folders for document references, or add, modify, delete, open, and email document reference files.

See also

Manage document reference categories (page 389)

Open a document reference (page 394)

Add document references (page 391)

Modify a document reference (page 395)

Attach a document reference to an email (page 396)

Delete a document reference (page 396)

Add a requisition item

Most items are added to requisitions by loading the material items from combining, estimating, or production control jobs to requisitions. You can also add new items to an open requisition manually.

1. In the **Requisition #** dialog box, click **New**.
2. Define the item properties.

NOTE The visible input fields and their order can be modified in the **Input Fields** dialog box that you can access via **Maintenance** --> **Requisitions** --> **Edit Input Fields** .

The properties marked with an asterisk (*) in the following table are mandatory information.

Option	Description
Item # *	The number of the requisition item. The **Item #** is automatically populated with the next available item number, but you can modify the item number according to your needs. If necessary, type a new item number in the **Item #** field.
Job #	The number of the production control job to which the material item is reserved. Type the job number in the **Job #** field.
Quantity *	The number of pieces to be added. Use the numeric keypad in the quantity field to add, multiply, divide, or subtract numbers to adjust the quantity.
Shape *	The material shape of each piece. Either click the arrow on the right side of the **Shape** field to select the shape, or type the shape indicator in the field (for example, HSS).
Grade *	The material grade of each piece. Either click the arrow on the right side of the **Grade** list to select the grade, or type the grade indicator in the field.
Dimensions *	The material dimension, or material size, of each piece. Click the **Dimensions** field to select an available material dimension, and double-click the desired dimension in the list. **TIP** You can also use a custom material dimension. Note that the dimension is not automatically added to the material database. To use a custom dimension, do the following: a. Click in the **Dimensions** field. b. Click **Add Size**. c. Define the dimension properties.

Option	Description
	d. Click **Save**. You can now select the dimension and use it.
Length	The length of each piece. Default length input settings are set in **Company Standards**, but you can modify them for each job.
Base Price	The base price of the material item. We recommend that you use base prices to create more detailed reports. Type the base price in the **Base Price** field. To change the base price units and convert the current price to the selected units, right-click the **Base Price** field, and select an appropriate option in the context menu.
Reference Number	The reference number that links the item to a production control job. The reference number can be different depending on the case: • If an item is sent from **Production Control** to **Purchasing** or **Inventory**, Tekla EPM creates a copy of the record, and the item is linked to include the reference number. • If an item is sent to purchasing from an advance bill of materials, the reference number is either the eventual mark number of the item, or the page number along with the item number. • If the item is sent to purchasing later in the process, the reference number is the mark or piece mark number.
Date Required	The date when the material item is due. Entering the required date can be useful when creating reports. Do one of the following: • Type the date in the **Date Required** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Date Required** field and select the date in the calendar.

Option	Description
Date Promised	The date when the supplier has promised to deliver the material item. The **Date Promised** can be useful in reports. Do one of the following: • Type the date in the **Date Promised** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Date Promised** field and select the date in the calendar.
Mill Mark	Any extra information about the item that the mill has given you. Type any information in the **Mill Mark** field.
Cost Code	The cost code assigned to the item. Click the arrow on the right side of the **Cost Code** list, and select a cost code in the list. For more information about cost codes, see Create, modify, or delete cost codes (page 841).
Comment	Any comments that you want to add about the material item. Type the comments in the **Comment** field.
PRC Supplier	The supplier whose pricing the item uses. To change the supplier, click the arrow on the right side of the **PRC Supplier** list and select the supplier in the list.
Lot #	The lot identification number of the material item. Type the lot number in the **Lot #** field.
Sequence	The sequence number assigned to the item. Type the sequence number in the **Sequence** field.
Category, **Sub-Category**	A keyword used for sorting items in the **Requisition #** dialog box. Categories and sub-categories can be used for filtering information in the **Requisition #** dialog box. Type the desired keywords in the **Category** and **Sub-Category** fields.
Purchasing Notes	A longer description of the item. The **Purchasing Notes** field can be useful for adding specifications for buyout items.

3. Click **Add**.

The new requisition item is added at the bottom of the requisition.

Note that if you added the new item while in the manual combine mode, the item will belong to stock materials. The material items added in the manual combine mode are marked with a C in the leftmost column.

See also

Copy a requisition item (page 854)

Modify a single requisition item (page 854)

Delete requisition items (page 859)

Copy a requisition item

You can copy a requisition item and use it as the basis of a similar item. By copying items, you can save time and avoid entering the same information multiple times in a requisition.

1. In the **Requisition #** dialog box, select the item that you want to copy.
2. At the bottom of the dialog box, click **Copy**.

   A copy of the item appears at the bottom of the requisition.
3. Adjust the properties of the new item according to your needs.
4. Click **Edit** to save the changes.

See also

Modify a single requisition item (page 854)

Modify requisition items

You can either modify items in requisitions one by one, or use the different **Global Edit** commands to modify multiple items at one go.

For more information, see the following links:

Modify a single requisition item (page 854)

Modify multiple requisition items (page 855)

Modify the selected requisition items (page 856)

Modify the shape, grade, dimensions, or length of multiple requisition items (page 857)

Modify the shape, grade, dimensions, or length of the selected requisition items (page 858)

Modify a single requisition item

You can modify the properties of requisition items one by one in the **Requisition #** dialog box.

1. In the **Requisition #** dialog box, select the material item that you want to modify.
2. On the right side of the dialog box, modify the properties of the item according to your needs.

   For example, you can change the base price of the item or assign a cost code to the item.
3. Click **Save** to update the item properties.

See also

Modify multiple requisition items (page 855)

Modify the selected requisition items (page 856)

Modify the shape, grade, dimensions, or length of multiple requisition items (page 857)

Modify the shape, grade, dimensions, or length of the selected requisition items (page 858)

Modify multiple requisition items

Use the **Global Edit** command to modify the properties of all or multiple requisition items at one go. This way, you can save time, as you do not need to change the properties of each item individually.

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Global Edit** --> **Global Edit** .
3. To only modify specific types of items, in the **Requisition Global Edit Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to modify to the **Included** list.
   - Type the maximum and minimum values for the items that you want to modify.
5. Click **OK**.

   To further limit the item types that you want to modify, repeat steps 3 to 5 for all necessary filter types.

6. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

7. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

8. Click **Update**.

9. To confirm changing the properties of multiple items, click **Yes** in the confirmation dialog box.

The changes you made to the item properties are updated to the **Requisition #** dialog box.

See also

Modify a single requisition item (page 854)

Modify the selected requisition items (page 856)

Modify the shape, grade, dimensions, or length of multiple requisition items (page 857)

Modify the shape, grade, dimensions, or length of the selected requisition items (page 858)

Modify the selected requisition items

Use the **Global Edit Selected** command to modify the properties of the selected items in the requisition. This way, you can save time, as you do not need to change the properties of each item individually.

1. In the **Requisition #** dialog box, select the items that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Requisition** ribbon tab.

3. On the menu, select **Global Edit** --> **Global Edit Selected** .

4. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

5. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

6. Click **Update**.

The properties of the selected items are updated to the **Requisition #** dialog box.

See also

Modify a single requisition item (page 854)

Modify multiple requisition items (page 855)

Modify the shape, grade, dimensions, or length of multiple requisition items (page 857)

Modify the shape, grade, dimensions, or length of the selected requisition items (page 858)

Modify the shape, grade, dimensions, or length of multiple requisition items

Use the **Global Edit By Shape** command to modify the shape, grade, dimensions, or length of all or multiple items in the **Requisition #** dialog box.

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Global Edit** --> **Global Edit By Shape** .
3. In the **Shape** list at the top of the **Requisition Global Edit Filters** dialog box, select the shape.
4. To only modify specific types of items, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to modify to the **Included** list.
   - Type the maximum and minimum values for the items that you want to modify.
6. Click **OK**.

   To further limit the items that you want to modify, repeat steps 4 to 6 for all necessary filter types.
7. Click **OK**.
8. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

9. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

10. Click **Update**.

11. To confirm changing the properties of multiple items, click **Yes** in the confirmation dialog box.

The properties of the selected items are updated to the **Requisition #** dialog box.

See also

Modify a single requisition item (page 854)

Modify multiple requisition items (page 855)

Modify the selected requisition items (page 856)

Modify the shape, grade, dimensions, or length of the selected requisition items (page 858)

Modify the shape, grade, dimensions, or length of the selected requisition items

Use the **Global Edit Selected By Shape** command to modify the material shape, grade, dimensions, or length of the selected items in an requisition.

1. In the **Requisition #** dialog box, select the items that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Requisition** ribbon tab.

3. On the menu, select **Global Edit** --> **Global Edit Selected By Shape** .

4. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

5. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

6. Click **Update**.

The properties of the selected items are updated to the **Requisition #** dialog box.

All other reference information of the items remains unchanged.

See also

Modify a single requisition item (page 854)

Modify multiple requisition items (page 855)

Modify the selected requisition items (page 856)

Modify the shape, grade, dimensions, or length of multiple requisition items (page 857)

Delete requisition items

You can delete any unnecessary items from the requisition. Note that deleting requisition items is permanent and cannot be undone.

You can still see the deleted items in the list of changes. For more information, see View all changes in a requisition (page 861).

1. In the **Requisition #** dialog box, select the requisition items that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

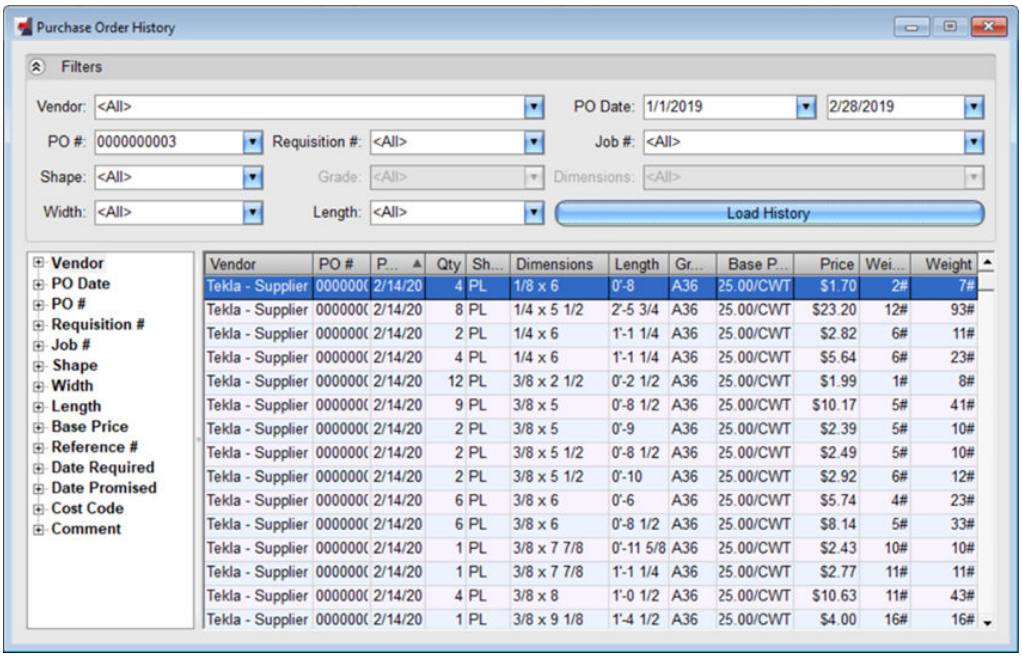
   Note that if the requisition item that you want to delete has been combined, you first need to uncombine the item by clicking **Uncombine**. The **Delete** button appears when the item has been uncombined.
2. At the bottom of the dialog box, click **Delete**.
3. To permanently delete the requisition items, click **Yes** in the confirmation dialog box.

View the pricing history of a requisition item

Use the **Purchase History** command to view the pricing history of a material item. You can filter the purchase history by various options, such as the vendor, the requisition number, or the length.

1. In the **Requisition #** dialog box, select the material item whose pricing history you want to view.
2. Click the **Requisition** ribbon tab.
3. On the menu, select **Purchase History**.

The **Purchase Order History** dialog box opens.



The top section of the dialog box allows you to filter the pricing history information, whereas the bottom section shows the pricing history of the material item.

4. If necessary, filter the pricing history by clicking arrows on the right side of the different filter lists and selecting filtering options in the lists.
5. To update the pricing history to match the filters you set, click **Load History**.
6. If you want to save the pricing history as a Microsoft Excel worksheet, do the following:
   a. Right-click anywhere in the display area of the **Purchase Order History** dialog box.
   b. In the context menu, select **Export to Excel**.
   c. In the **Save As** dialog box, browse to the folder where you want to save the file.
   d. If necessary, change the file name.
   e. Click **Save**.

   If necessary, you can customize the layout of the **Purchase Order History** dialog box to include only the when exporting the pricing history. For more information, see Customize the layout of a dialog box (page 214).
7. To close the **Purchase Order History** dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

View all changes in a requisition (page 861)

Update pricing information (page 869)

View all changes in a requisition

Tekla EPM records every change made in the system. This is useful because you can view all changes made in the current requisition at once. You can filter the information to see changes made by a particular user, or on a particular date. You can also print the list of changes.

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **List Of Changes**.
3. In the **List Of Changes Report Filters** dialog box, do any of the following:

To	Do this
Filter changes by user	a. Select the **User** filter type and click **Select**. b. Click the arrow buttons to move the users whose changes you want to view to the **Included** list. c. Click **OK**.
Filter changes by date	a. Select the **Transaction Date** filter type and click **Select**. b. Do one of the following: • Enter the start (**Minimum**) and end (**Maximum**) dates. • Select the **Expression** check box for the start or end date. Then, select the base date and select how many more or less days will be taken into account. c. Click **OK**.

4. Click **Make Report**.
5. In the **Report Selection** dialog box, do one of the following:

To	Do this
View the list of changes	• Click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the list of changes	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the list of changes	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Load requisition items into a purchase order

Use the **Load Material Into Purchase Order** and **Load Selected Material Into Purchase Order** commands to load material items from a requisition to a purchase order. Use the **Load Material Into Purchase Order** command to

load all requisition items into a purchase order, or use the **Load Selected Material Into Purchase Order** command to select the items in a requisition that are loaded into a purchase order. When you load material items into a purchase order, the items become available in the inventory.

According to your needs, see any of the following instructions:

Load all items into a purchase order

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Load Material Into Purchase Order**.
3. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.
4. To only load specific types of items to the purchase order, in the **Purchasing Import Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the properties of the items that you want to load to the purchase order to the **Included** list.
   - Type the maximum and minimum values for the items that you want to load to the purchase order.
6. Click **OK**.

   To further limit which items are loaded to the purchase order, repeat steps 4 to 6 for all necessary filter types.
7. Click **Import**.
8. Click **OK** to close the **Import Items** dialog box.

The material items are loaded to the selected purchase order, so they are no longer visible in the **Requisition #** dialog box.

Load selected items into a purchase order

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Load Selected Material Into Purchase Order**.
3. In the **Select Purchase Order** dialog box, select a purchase order and click **OK**.

   If necessary, you can also create a new purchase order and load the items into it.

4. In the **Enter Value** dialog box, type the quantity of pieces that you want to load to the purchase order.
5. Click **OK**.
6. Click **OK** to close the **Import Items** dialog box.

Export a request for pricing

A request for pricing allows you to get pricing from multiple suppliers. Use the **Export Request for Pricing** commands to save a request for pricing as an Microsoft Excel worksheet or a steelXML file and send it to suppliers. You can also attach the request for pricing to an email and send it to a supplier using Microsoft Outlook. Once you receive responses, you can import the suppliers' pricing information to Tekla EPM.

According to your needs, see any of the following instructions:

Save a request for pricing as a Microsoft Excel worksheet

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Export Request for Pricing** --> **Export to Excel** .
3. In the **Save As** dialog box, browse to the folder where you want to save the file.

   By default, Tekla EPM saves the file to the **Export** folder.
4. If necessary, change the file name.
5. Click **Save**.

To modify the request for pricing in Microsoft Excel, see Modify pricing information in Microsoft Excel (page 866).

Email a request for pricing as a Microsoft Excel worksheet

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Export Request for Pricing** --> **Email Excel** .
3. In the **Select Contact** dialog box, select the supplier, supplier code, and contact person.

   Only companies whose type is set to **Supplier** and their contacts that are saved in the **Address Book** are available.

   Defining the information in the **Select Contact** dialog box is optional. You can also define the information directly in the email when it is created.
4. In the **Email** field, type the email address of the contact person.

5. Click **OK**.

   Microsoft Outlook opens. The Microsoft Excel worksheet is attached to a new email.

6. Modify the email according to your needs.
7. Send the email.

Save or email a request for pricing as an steelXML file

The **Export to steelXML** command works specifically with the steelXML software. Use the **Export to steelXML** command to submit requests for pricing to suppliers, so that the suppliers can give you prices that are specific to the material information in the current requisition.

NOTE All items in the current requisition are included in the steelXML file that is exported. If you need to submit some of the items to different suppliers, you need to move those items to a different requisition.

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Export Request for Pricing** --> **Export to steelXML** .
3. In the **Export Pricing** dialog box, select the supplier, supplier code, contact person, and the contact person's email address.

   Only companies whose type is set to **Supplier** and their contacts that are saved in the **Address Book** are available.

   Selecting options in the **Export Pricing** dialog box is optional.

4. If you want the supplier to combine the items on their available inventory and provide the nesting results in the returned pricing, select the **Request Nested Results** check box.

   If you have already combined the items within the requisition or if you are ordering the items cut to length by the supplier, do not to select the **Request Nested Results** check box.

5. According to your needs, do one of the following:

To	Do this
Save the steelXML file	a. Click **Export**. b. In the **Save As** dialog box, browse to the folder where you want to save the file. By default, Tekla EPM saves the file to the **Export** folder. c. If necessary, change the file name. d. Click **Save**. You can later send the steelXML file to suppliers using your email service, if necessary.

To	Do this
Send the steelXML file by email	a. In the **Email** field, type the email address of the contact person. b. Select the **Attach to Email** check box. c. Click **Export**. Microsoft Outlook opens. The steelXML file is attached to a new email. d. Modify the email according to your needs. e. Send the email.

After the supplier has processed the file in steelXML and sent the file back to you, you can import the steelXML results back to Tekla EPM. For detailed instructions, see Import pricing information to a requisition (page 866).

Modify pricing information in Microsoft Excel

When you have saved or received a request for pricing as a Microsoft Excel worksheet, you can modify the pricing in Microsoft Excel. After making the changes, you or your client can import the pricing information back to Tekla EPM.

1. In Microsoft Excel, type the prices for items in the **Base Price** column.

   To import the pricing information correctly, type the prices in the following format: `currency price/unit`. For example, `$56.99/CWT`.

   You only need to define the base prices of items. Tekla EPM calculates the total price during the import.
2. If necessary, type the total prices for items in the **Total Price** field.
3. Save the Microsoft Excel worksheet.

See also

Export a request for pricing (page 864)

Import pricing information to a requisition (page 866)

Import pricing information to a requisition

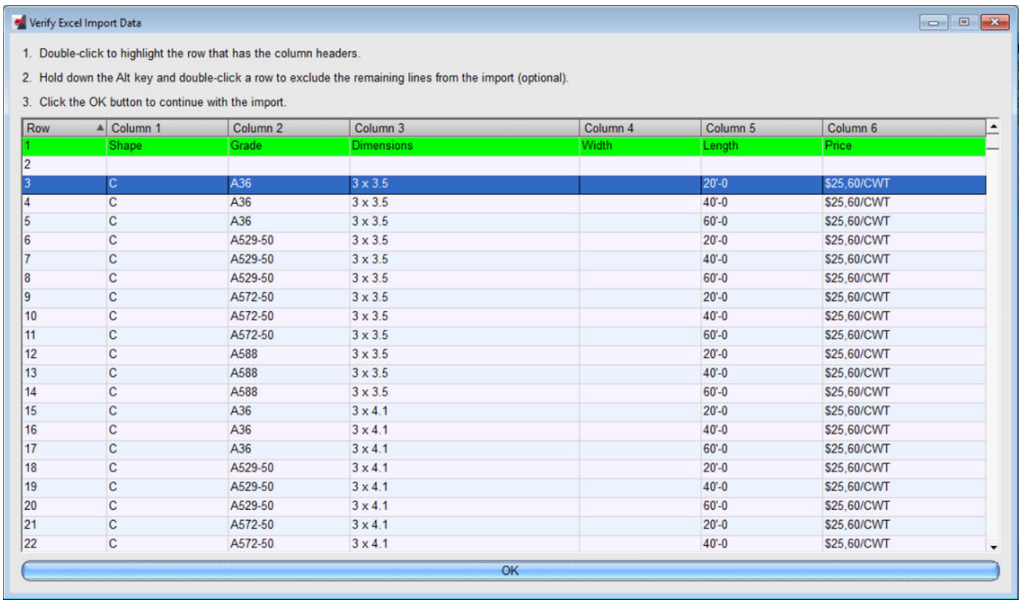
Use the **Import Requisition Pricing** commands to import the pricing information that you want to use in the current requisition from a steelXML file or a Microsoft Excel worksheet. You can also import pricing from an email

attachment that is either a Microsoft Excel worksheet or a steelXML file. New pricing information can be imported multiple times, if necessary.

Note that if you want to re-use the imported pricing information later, you also need to update the pricing information to a pricing database. For more information, see Update pricing information (page 869).

Import pricing information from an Excel worksheet

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Import Requisition Pricing** --> **Import Pricing From Excel File** .
3. In the **Open** dialog box, browse to find the worksheet from which you want to import the pricing information.
4. Select the worksheet, and click **Open**.
5. In the **Verify Excel Import Data** dialog box, verify that the information is correct.

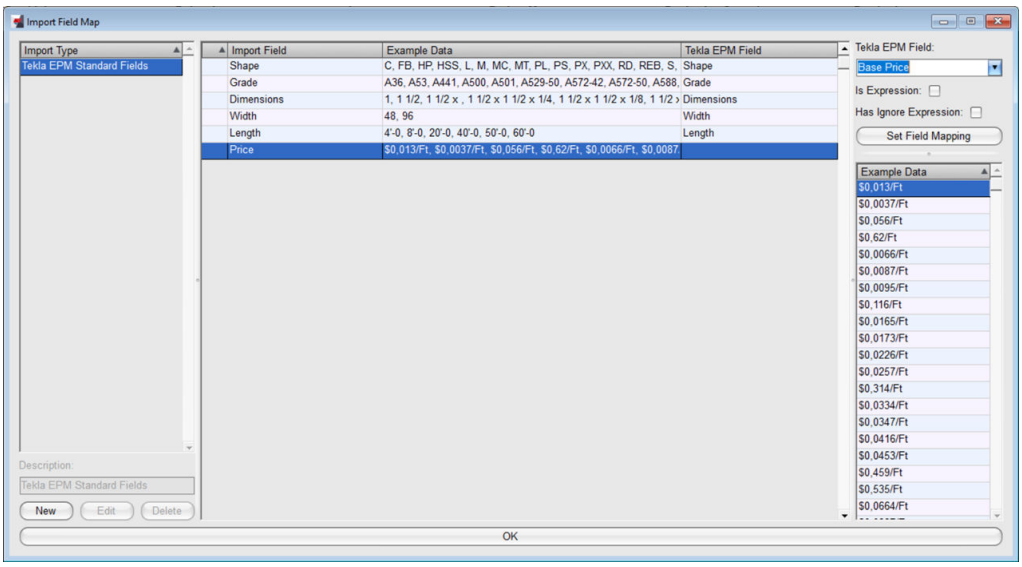


Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
1	Shape	Grade	Dimensions	Width	Length	Price
2						
3	C	A36	3 x 3.5		20'-0	$25,60/CWT
4	C	A36	3 x 3.5		40'-0	$25,60/CWT
5	C	A36	3 x 3.5		60'-0	$25,60/CWT
6	C	A529-50	3 x 3.5		20'-0	$25,60/CWT
7	C	A529-50	3 x 3.5		40'-0	$25,60/CWT
8	C	A529-50	3 x 3.5		60'-0	$25,60/CWT
9	C	A572-50	3 x 3.5		20'-0	$25,60/CWT
10	C	A572-50	3 x 3.5		40'-0	$25,60/CWT
11	C	A572-50	3 x 3.5		60'-0	$25,60/CWT
12	C	A588	3 x 3.5		20'-0	$25,60/CWT
13	C	A588	3 x 3.5		40'-0	$25,60/CWT
14	C	A588	3 x 3.5		60'-0	$25,60/CWT
15	C	A36	3 x 4.1		20'-0	$25,60/CWT
16	C	A36	3 x 4.1		40'-0	$25,60/CWT
17	C	A36	3 x 4.1		60'-0	$25,60/CWT
18	C	A529-50	3 x 4.1		20'-0	$25,60/CWT
19	C	A529-50	3 x 4.1		40'-0	$25,60/CWT
20	C	A529-50	3 x 4.1		60'-0	$25,60/CWT
21	C	A572-50	3 x 4.1		20'-0	$25,60/CWT
22	C	A572-50	3 x 4.1		40'-0	$25,60/CWT

If you want to exclude information on particular rows from being imported, you can double-click the rows.

6. Click **OK**.

The **Import Field Map** dialog box opens. In the dialog box, the headings of the Excel worksheet need to be mapped to the Tekla EPM standard field headings.



7. If the values of an item in the **Import Field** and **Tekla EPM Field** columns do not match or are not correct, do the following:
   a. Select the unmatched **Import Field** value.
   b. On the right side of the dialog box, select a suitable field in the **Tekla EPM Field** list.
   c. Click **Set Field Mapping**.
8. When you have mapped all fields together, click **OK** to continue.
9. In the **Import** dialog box, view the status of the import process.

   To view the import process as a text file, you can click **Open Import Log**.
10. To close the **Import** dialog box, click the **Close** button (**X**) in the upper-right corner.

Import pricing information from an XML file

When you have received the steelXML results from a supplier, you can import them to Tekla EPM.

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Import Requisition Pricing** --> **Import Pricing From steelXML File** .
3. In the **Open** dialog box, browse to find the file from which you want to import the pricing information.
4. Select the file, and click **Open**.

5. In the **Import** dialog box, view the status of the import process.

   To view the import process as a text file, you can click **Open Import Log**.

6. To close the **Import** dialog box, click the **Close** button (**X**) in the upper-right corner.

Import pricing information from an email attachment

Note that you can only import pricing information from email attachments if you are using Microsoft Outlook.

1. In Microsoft Outlook, select the email whose attachments you want to import.
2. In the **Import** dialog box, view the status of the import process.

   To view the import process as a text file, you can click **Open Import Log**.

3. To close the **Import** dialog box, click the **Close** button (**X**) in the upper-right corner.

Update pricing information

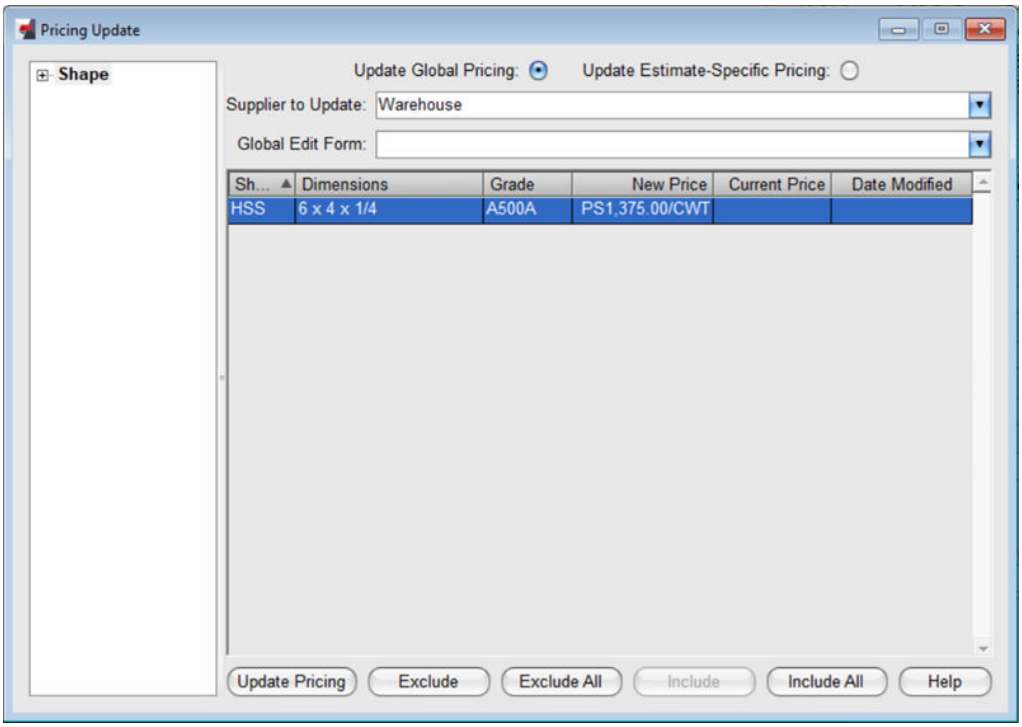
Use the **Update Pricing Maintenance** command to update the pricing of material items in a requisition to pricing maintenance as well. This way, the pricing that you set in the requisition can be re-used in the future. You can update the pricing information to either the global pricing or the estimate-specific pricing.

1. In the **Requisition #** dialog box, select the material items whose current pricing information you want to update.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. On the menu, select **Update Pricing Maintenance**.



3. In the **Pricing Update** dialog box, do one of the following:

To	Do this
Update pricing to the global pricing	a. At the top of the dialog box, select the **Update Global Pricing** option. b. Click the arrow on the right side of the **Supplier to Update** list and select the supplier whose pricing information you want to update.
Update pricing to the estimate-specific pricing	a. At the top of the dialog box, select the **Update Estimate-Specific Pricing** option. b. Click the arrow on the right side of the **Estimate to Update** list and select the estimate whose pricing information you want to update.

4. If you want to update the pricing of all material items within a previously created global edit form, click the arrow on the right side of the **Global Edit Form** list, and select the global edit form that you want to use.
5. Do one of the following to exclude items from being updated to the pricing database:
   - Select an item whose pricing information you do not want to update, and click **Exclude**.

- To exclude all items, click **Exclude All**.

  You can re-include the excluded items by clicking the **Include** and **Include All** buttons.

6. Click **Update Pricing**.
7. To confirm updating the pricing information, click **Yes** in the confirmation dialog box.

The pricing information is updated to the selected location, and the **Pricing Update** dialog box closes.

If the material shape, grade, or dimension does not exist in the pricing maintenance database, it is added to the database when you update the pricing.

See also

View the pricing history of a requisition item (page 859)

Combine items in the Requisition # dialog box

Use the **Combine** command to mult and nest requisition items. Combining requisition items creates a list of materials that you can later send out for pricing.

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Combine**.

   The **Select Combining Run** dialog box opens. When you are performing the first combining run for a combining job, the list in the dialog box is empty.
3. Click a desired combining option to select it.

   The options are:

   - **Mult**: combines linear items, like beams and angles.
   - **Nest**: combines items that have area, like plates or gratings.
   - **Mult & Nest**: combines all items.

   The **Combining Run Filters** dialog box opens.

   NOTE Filtering items is optional, so you can skip steps 4 to 7 if you do not want to filter out items from the combining run.

4. To only combine specific types of materials, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:

- Click the arrow buttons to move the items that you want to combine to the **Included** list.
- Type the maximum and minimum values for the items that you want to combine.

6. Click **OK** to apply the filter.

   Repeat steps 4 to 6 for each filter type that you want to set.

7. To ensure that you are using the correct settings, click the **Optimizations**, **INV Filter**, and **Suppliers** buttons.

   If necessary, you can modify the settings.

8. To combine the materials, click the button at the bottom of the **Combining Run Filters** dialog box, or press **F4**.

- Piece mark items included with the selected stock lengths are displayed at the lower-left section of the dialog box.
- Combining results are shown in both the display area and in the summary grid at the lower-right section of the dialog box.
- The material cost represents the pricing of the materials in the pricing database that was used in the combining run.

To save the combining run, click one of the following:

- **Save Combining Run**: saves the combining run as a snapshot that you can later view by selecting it in the **Select Combining Run** dialog box. No cut lists are generated.
- **Save Displayed Results & Close**: completes the requisition combining run, saves the displayed combining run results, and returns to the **Requisition #** dialog box.

The material items that were combined to existing inventory items are removed from the requisition and disappear from the **Requisition #** dialog box. The items that were combined to the supplier materials remain in the requisition until you send the items to a purchase order.

See also

Combine requisition items manually (page 872)

Export materials for combining (page 78)

Combine requisition items manually

To combine the selected material lengths manually, you need to activate the manual combine mode. You can then select pieces to combine them into a specific material length, or uncombine pieces from a material length.

Note that you can only manually combine items that have been created manually or by copying existing items in the manual combine mode. These

items are marked with a C in the leftmost column of the **Requisition #** dialog box.

1. In the upper-left corner of the **Requisition #** dialog box, click **Manual Combine Mode**.

   The manual combine mode is activated.

2. Select the material item to which you want to combine new items.
3. At the bottom of the dialog box, click **Add Items**.

   The **Add Item** dialog box opens. You can see all available uncombined materials that can be combined into the selected length.

   Tekla EPM notifies you if there are no materials available to be combined. In this case, you need to uncombine some previously combined material items by selecting the items and clicking the **Uncombine** button at the bottom of the **Requisition #** dialog box.

4. In the **Add Item** dialog box, click an uncombined item to select it.
5. If necessary, modify the quantity of inventory items that you are combining materials to.

   If the quantity is greater than 1, the materials should be multiples of that quantity in order to be displayed and selected in the **Add Item** dialog box.

6. To allow material grade substitutions, select the **Use Grade Substitutions** check box.
7. Click **Add**.

The selected uncombined pieces are now combined into the selected material item.

To return to input mode, click **Input Mode** in the upper-left corner of the **Requisition #** dialog box.

See also

Combine items in the Requisition # dialog box (page 871)

View, print, or export requisition-specific reports

You can create various reports based on the current requisition. After creating a report, you can view or print the report, or export the report and save it in another file format.

To create requisition reports, do the following:

1. In the **Requisition #** dialog box, click the **Requisition** ribbon tab.
2. On the menu, select **Reports**, or press **Ctrl+R** on the keyboard.

3. To only include specific item types in the reports, in the **Requisition Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the item properties that you want to include in the reports to the **Included** list.
   - Type the maximum and minimum values for the item properties that you want to include in the reports.
5. Click **OK**.

   To further limit the requisitions included in the reports, repeat steps 3 to 5 for all filter types.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

According to your needs, see any of the following instructions:

View the report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the selected report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.

4. Modify the file name according to your needs.
5. Browse to the location where you want to save the exported file, and click **Save**.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. In the **Report Selection** dialog box, click **Export**.

Delete requisitions

You can delete unnecessary requisitions in the **Select Requisition/Purchase Order** dialog box.

NOTE When you delete a requisition, all material items in the requisition are also deleted.

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Requisitions** tab.
3. Select the requisitions that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
4. At the bottom of the dialog box, click **Delete**.
5. To permanently delete the requisitions, click **Yes** in the confirmation dialog box.

10.3 Create and manage purchase orders

On the **Purchase Orders** part of the **Purchasing** module, you can create and modify purchase orders and material items within the purchase orders.

We recommend that you plan the numbering of purchase orders carefully to help you organize the purchase orders in the future.

You can also:

- Receive and un-receive materials.
- Filter the information displayed in the purchase order.
- Approve a purchase order, so that no further changes can be made.
- Finalize material items, so that no changes can be made to the items.

- Un-finalize items to allow making changes to them again.
- Copy material items to another purchase order.
- View the pricing history of a material item.
- View the transaction history of a purchase order.
- View the heat documents attached to material items.
- View all changes made to a purchase order.
- Create purchase order reports and receiving reports, and view, print, or export the created reports.
- Export purchase order information to a selected accounting software.

All material items on purchase orders are also visible in the inventory as items that are on order.

For more information, see the following links:

Create a purchase order (page 877)

Open a purchase order (page 881)

Modify a purchase order (page 883)

Store document references for a purchase order (page 887)

Filter information in the PO # dialog box (page 887)

Add a purchase order item (page 888)

Copy a purchase order item (page 892)

Copy material items to another purchase order (page 893)

Modify purchase order items (page 893)

Receive purchase order items (page 898)

View heat documents attached to purchase order items (page 904)

Send purchase order items to a requisition (page 906)

Finalize purchase order items (page 908)

Delete purchase order items (page 909)

View all changes in a purchase order (page 910)

View the transaction history of a purchase order (page 912)

View the pricing history of a material item (page 906)

View, print, or export purchase orders and purchase order reports (page 914)

View, print, or export job-specific receiving reports (page 916)

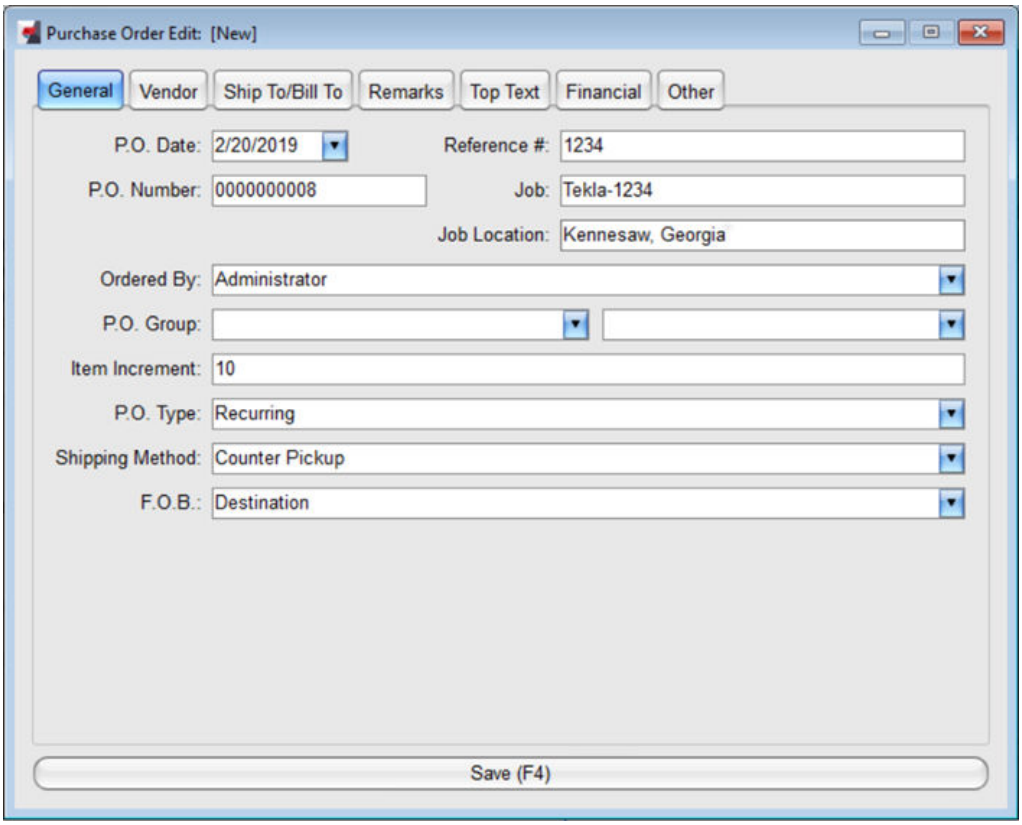
Approve a purchase order (page 922)

Delete purchase orders (page 923)

Create a purchase order

To create a new purchase order where material items can be stored, do the following:

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Purchase Orders** tab.
3. Click **Add**.



4. On the **General** tab of the **Purchase Order Edit** dialog box, type the purchase order number.

   We recommend that you plan the numbering of purchase orders carefully to help you organize the purchase orders in the future. The purchase order number cannot be changed later. All other purchase order information can be modified later, if necessary.

5. Define the remaining general properties.

The properties marked with an asterisk (*) are mandatory information.

Option	Description
P.O. Date *	The date of the purchase order. Tekla EPM automatically uses the current date. To change the date, do one of the following: • Type the date in the **P.O. Date** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **P.O. Date** field and select a date in the calendar.
Reference #	Type any reference number related to the purchase order in the **Reference #** field.
Job	Type any job number related to the purchase order in the **Job** field.
Job Location	Type any job location related to the purchase order in the **Job Location** field.
Ordered By	The Tekla EPM user in your company that created the purchase order. Click the arrow on the right side of the **Ordered By** list, and select a user in the list.
P.O. Group	The groups where the purchase order belongs to. Setting purchase order groups for the purchase order helps you to sort purchase orders in the **Select Requisition/Purchase Order** dialog box. To set purchase order groups, do one of the following: • Type new purchase order group names in the **P.O. Group** fields. • Click the arrows on the right side of the **P.O. Group** fields, and select existing purchase order groups in the lists.
Item Increment	Sets the auto-increment for item numbers in the purchase order. The auto-increment allows the items to be added in the list according to your needs, without you having to renumber the other items in the purchase order. For example, if items should be numbered as 10, 20, 30, ..., the input increment should be set to 10. If auto-increment of item numbers is not necessary, type `1` in the **Item Increment** field.

Option	Description
P.O. Type	The type of the purchase order. The available options are set in **PO Type Maintenance**. For more information, see Add, modify, or delete purchase order types (page 836). Click the arrow on the right side of the **P.O. Type** list and select a type in the list.
Shipping Method	The shipping method of the purchase order. The available options are set in **Purchase Order Shipping Method Maintenance**. For more information, see Add, modify, and delete shipping methods for purchase orders (page 837). Click the arrow on the right side of the **Shipping Method** list and select a method in the list.
F.O.B.	The free on board shipping destination applied to the purchase order. The available options are set in **Purchase Order FOB Maintenance**. For more information, see Add, modify, or delete FOB shipping destinations (page 838).

6. On the **Vendor** tab, select the vendor, the address, the contact person, and the person with whom the purchase order has been confirmed.

   Note that only companies that are saved in the **Address Book** with the firm type **Supplier** and their contact persons can be selected.

7. If you have added additional currencies to Tekla EPM, select the currency and exchange rate date for the purchase order.

8. On the **Ship To/Bill To** tab, select the correct shipping and billing addresses of your company.

   Note that only companies that are saved in the **Address Book** with the **Client** or **My Company** company types can be selected.

   If necessary, you can modify the information on the **Ship To/Bill To** tab manually.

9. If necessary, click the arrows on the right side of the **Inventory Location** and **Secondary Location** fields to define the inventory location of the purchase order items.

10. On the **Remarks** tab, do either of the following:

    - Click the arrows on the right side of the blank fields and select previously created remarks in the lists.
    - Type remarks in the blank fields.

You can add up to four remarks. The available remark options are set in the **Purchase Order Remark Maintenance** dialog box. For more information, see Add, modify, or delete purchase order remarks (page 840).

You can also set default remarks that are added for all new purchase orders in the **Purchase Order Company Standards** dialog box. For more information, see Define company standard settings for purchase orders (page 831).

11. On the **Top Text** tab, to define which information you want to add at the top of the purchase order, do either of the following:

    - Click the arrow on the right side of the **Description** field, and select a previously created top text item in the list.

      The **Top Text** field is automatically populated.

    - Type any necessary information in the **Top Text** field.

      Note that any text you type manually in the **Top Text** is not saved, so it cannot be re-used.

    You can create top text items in the **Purchase Order Top Text Maintenance** dialog box. For more information, see Add, modify, or delete top text items (page 840).

    You can also set default top text items that are added for all new purchase orders in the **Purchase Order Company Standards** dialog box. For more information, see Define company standard settings for purchase orders (page 831).

12. On the **Financial** tab, define the freight and adjustment costs, the payment terms, and the discount percentage used in the purchase order.

    The available payment term options are set in the **Purchase Order Payment Term Maintenance** dialog box. For more information, see Add, modify, or delete payment terms for purchase orders (page 839).

    Note that the adjustment costs can also be negative.

13. If necessary, apply tax rates to the purchase order as follows:

    a. On the **Financial** tab, click **Tax Rates**.

    b. In the **Select Tax Rates** dialog box, click the arrow buttons to move the tax rates that you want to apply to the purchase order to the **Included** list.

    c. Click **OK**.

    You can create any necessary tax rates and tax groups by clicking the **Maintenance** ribbon tab and selecting **Tax Rates** in the menu.

14. On the **Other** tab, add any applicable information to the blank fields.

    For example, you can add information about the maximum lift or the unload instructions.

15. If necessary, click the **Input/Display Units** button to adjust the units used in the purchase order.

    For more information, see Define company standard settings for purchase orders (page 831).

16. Click **Save** to create the purchase order.

The **Purchase Order Edit** dialog box closes, and the new purchase order is added to the **Select Requisition/Purchase Order** dialog box.

See also

Open a purchase order (page 881)

Modify a purchase order (page 883)

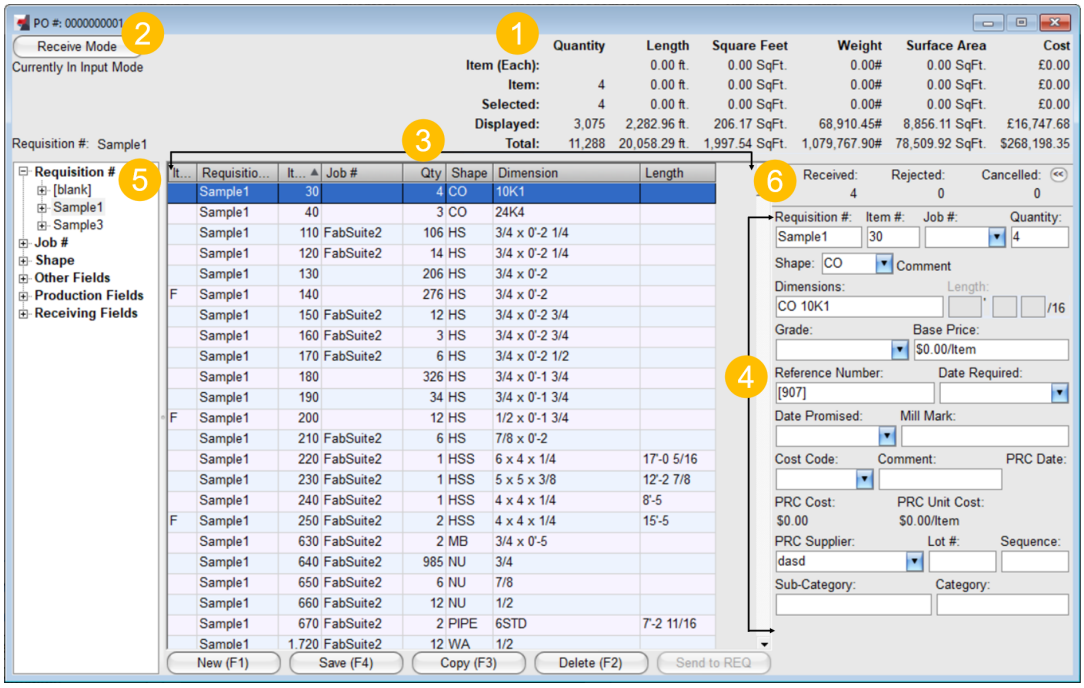
Delete purchase orders (page 923)

Open a purchase order

To view and modify the material items in a purchase order, you need to open the purchase order.

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Purchase Orders** tab.
3. Select the purchase order that you want to open.
4. Do one of the following:
   - At the bottom of the dialog box, click **Open**.
   - Double-click the selected purchase order.

The **PO #** dialog box opens:



(1) The summary grid: shows the following information number of purchase order items, their length, square feet, weight, surface area, and cost for items. These properties are shown for:

- a single piece of the selected item
- the selected items
- the currently displayed items
- the entire purchase order

(2) The mode switch button: the **PO #** dialog box has two modes: the input mode and the receive mode. In the input mode, you can add new material items and modify the existing ones. In the receive mode, you can mark material items as received or rejected.

To change the mode, click the button in the upper-left corner.

(3) The display area: shows all material items in the purchase order.

The visible columns and details are set in the **Display Fields** dialog box. ou can access the **Display Fields** dialog box via **Maintenance** --> **Purchase Orders** --> **Edit Display Fields** .

You can also modify the visible columns and the dialog box layout by right-clicking in the display area and selecting **Customize grid** in the context menu.

Note that a C in the leftmost column indicates that the material items have been combined.

(4) The input area: allows you to add properties for new material items and modify properties of existing material items. You can mark material items as received, rejected, or canceled.

When you select an item in the display area, its properties automatically populate the input fields.

The visible columns and details are set in the **Input Fields** dialog box. You can access the **Input Fields** dialog box via **Maintenance** --> **Purchase Orders** --> **Edit Input Fields** .

(5) The navigation tree: allows you to only view specific items in the purchase order.

Click **+** to expand and select options in the navigation tree. When you select an option, only material items that match the selected properties are displayed in the display area.

For example, you can expand **Shape** and select **HSS** to only display hollow structural sections.

(6) Quantities received, rejected, and canceled: shows the material order information of the item selected in the display area. You can view the quantity of pieces that have been received, rejected, and canceled.

Modify a purchase order

You can modify all properties of a purchase order at any time, except for the purchase order number.

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Purchase Orders** tab.
3. Select the purchase order that you want to modify.
4. Click **Edit**.
5. On the **General** tab of the **Purchase Order Edit** dialog box, modify the general properties.

   The properties marked with an asterisk (*) are mandatory information.

Option	Description
P.O. Date *	The date of the purchase order. Tekla EPM automatically uses the current date. To change the date, do one of the following: • Type the date in the **P.O. Date** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY.

Option	Description
	• Click the arrow on the right side of the **P.O. Date** field and select a date in the calendar.
Reference #	Type any reference number related to the purchase order in the **Reference #** field.
Job	Type any job number related to the purchase order in the **Job** field.
Job Location	Type any job location related to the purchase order in the **Job Location** field.
Ordered By	The Tekla EPM user in your company that created the purchase order. Click the arrow on the right side of the **Ordered By** list, and select a user in the list.
P.O. Group	The groups where the purchase order belongs to. Setting purchase order groups for the purchase order helps you to sort purchase orders in the **Select Requisition/Purchase Order** dialog box. To set purchase order groups, do one of the following: • Type new purchase order group names in the **P.O. Group** fields. • Click the arrows on the right side of the **P.O. Group** fields, and select existing purchase order groups in the lists.
Item Increment	Sets the auto-increment for item numbers in the purchase order. The auto-increment allows the items to be added in the list according to your needs, without you having to renumber the other items in the purchase order. For example, if items should be numbered as 10, 20, 30, ..., the input increment should be set to 10. If auto-increment of item numbers is not necessary, type `1` in the **Item Increment** field.
P.O. Type	The type of the purchase order. The available options are set in **PO Type Maintenance**. For more information, see Add, modify, or delete purchase order types (page 836). Click the arrow on the right side of the **P.O. Type** list and select a type in the list.

Option	Description
Shipping Method	The shipping method of the purchase order. The available options are set in **Purchase Order Shipping Method Maintenance**. For more information, see Add, modify, and delete shipping methods for purchase orders (page 837). Click the arrow on the right side of the **Shipping Method** list and select a method in the list.
F.O.B.	The free on board shipping destination applied to the purchase order. The available options are set in **Purchase Order FOB Maintenance**. For more information, see Add, modify, or delete FOB shipping destinations (page 838).

6. On the **Vendor** tab, select the vendor, the address, the contact person, and the person with whom the purchase order has been confirmed.

   Note that only companies that are saved in the **Address Book** with the firm type **Supplier** and their contact persons can be selected.

7. If you have added additional currencies to Tekla EPM, select the currency and exchange rate date for the purchase order.

8. On the **Ship To/Bill To** tab, modify the shipping and billing addresses of your company.

   Note that only companies that are saved in the **Address Book** with the **Client** or **My Company** company types can be selected.

   If necessary, you can modify the information on the **Ship To/Bill To** tab manually.

9. If necessary, click the arrows on the right side of the **Inventory Location** and **Secondary Location** fields to define the inventory location of the purchase order items.

10. On the **Remarks** tab, do either of the following:

    - Modify the remarks by typing in the fields.
    - Click the arrows on the right side of the fields and select previously created remarks in the lists.

    You can add up to four remarks. The available remark options are set in the **Purchase Order Remark Maintenance** dialog box. For more information, see Add, modify, or delete purchase order remarks (page 840).

11. On the **Top Text** tab, to modify the information that you want to add at the top of the purchase order, do either of the following:

- Click the arrow on the right side of the **Description** field, and select a previously created top text item in the list.

  The **Top Text** field is automatically populated.

- Type any necessary information in the **Top Text** field.

  Note that any text you type manually in the **Top Text** is not saved, so it cannot be re-used.

You can create top text items in the **Purchase Order Top Text Maintenance** dialog box. For more information, see Add, modify, or delete top text items (page 840).

You can also set default top text items that are added for all new purchase orders in the **Purchase Order Company Standards** dialog box. For more information, see Define company standard settings for purchase orders (page 831).

12. On the **Financial** tab, modify the freight and adjustment costs, the payment terms, and the discount percentage used in the purchase order.

    The available payment term options are set in the **Purchase Order Payment Term Maintenance** dialog box. For more information, see Add, modify, or delete payment terms for purchase orders (page 839).

    Note that the adjustment costs can also be negative.

13. If necessary, modify the tax rates applied to the purchase order as follows:

    a. On the **Financial** tab, click **Tax Rates**.

    b. In the **Select Tax Rates** dialog box, click the arrow buttons to move the tax rates that you want to apply to the purchase order to the **Included** list.

    c. Click **OK**.

14. On the **Other** tab, modify the information to the blank fields.

    For example, you can add information about the maximum lift or the unload instructions.

15. If necessary, click the **Input/Display Units** button to adjust the units used in the purchase order.

    For more information, see Define company standard settings for purchase orders (page 831).

16. Click **Save** to update the purchase order.

See also

Create a purchase order (page 877)

Open a purchase order (page 881)

Store document references for a purchase order (page 887)

Delete purchase orders (page 923)

Store document references for a purchase order

Document Index is where you can store documents for reference. When you store documents in **Document Index**, each user that has access to the purchase order can view them, so it is easy to keep up to date on the purchase order status. You can save any documents, such as packing slips and heat documents, and Microsoft Outlook emails in **Document Index**.

NOTE You should always save heat documents in the **Heat Documents** category in **Document Index**. The **Heat Documents** category differs from other document categories in that it maintains a link to the heat document for all items that share the same supplier, purchase order number, and heat number.

To access **Document Index**, do the following:

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Purchase Orders** tab.
3. Select the purchase order for which you want to add document references.
4. Click **Doc Ind**.

The **Document Index** dialog box opens. Next, you can either modify the available folders for document references, or add, modify, delete, open, and email document reference files.

See also

Manage document reference categories (page 389)

Open a document reference (page 394)

Add document references (page 391)

Modify a document reference (page 395)

Attach a document reference to an email (page 396)

Delete a document reference (page 396)

Filter information in the PO # dialog box

Use the **Filter** command to create filters that are commonly used in the **PO #** dialog box. For example, you can create filters to only display the items that have been received. You can also save the filters for later use.

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.

2. On the menu, select **Filter**.
3. To filter the displayed items according to selected criteria, in the **Purchase Order Filters** dialog box, select a filter type in the **Type** list, and click **Select**.

   Note that if you have saved a filter in the **Purchase Order Report Filters** dialog box when creating global receiving reports, the saved filter will also be available as a filter in the **PO #** dialog box for all purchase orders.
4. In the **Filter** dialog box, click the arrow buttons to move the items that you want to display to the **Included** list.
5. Click **OK**.

   If you want to further filter the information displayed in the **PO #** dialog box, repeat steps 3 to 5 for different items.

   If you want to clear all filter settings, click **Reset**.
6. To save commonly used filters, do the following:
   a. Click **Filter Types** in the lower-left corner.
   b. Click **New**.
   c. Type a description for the filter type.
   d. Create the filter settings.

      For more information, see steps 3 to 5.
   e. Click **Add**.
   f. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

      The newly created filter type is selected in the **Filter Types** list.
   g. To apply the filter type, click **Set**.
7. According to your needs, do one of the following:
   - To use the filter, click **Apply Filter**.
   - To use the filter in the job and save it until a new filter is set or the filter is cleared, click **Apply Filter & Save**.

     Note that the filter will remain in use even if you close and re-open the job. After you clear the filters, the filter settings cannot be used again.

The **Purchase Order Filters** dialog box closes, and the **PO #** dialog box is filtered according to the filter you applied.

TIP To display all information in the **PO #** dialog box again, click **Clear Filters** at the top of the **PO #** dialog box.

Add a purchase order item

Most items are added to purchase orders by loading the material items from combining, estimating, or production control jobs to purchase orders. You can also add new items to an open purchase order manually.

Note that all material items on purchase orders are also inventory items.

1. In the **PO #** dialog box, click **New**.
2. Define the item properties.

   NOTE The visible input fields and their order are set in the **Input Fields** dialog box. To access the dialog box, go to **Maintenance** --> **Purchase Orders** --> **Edit Input Fields** .

   The properties marked with an asterisk (*) in the following table are mandatory information.

Option	Description
Requisition #	The number of the requisition from which the item was loaded to the purchase order, or the requisition which the item can be sent back to, if necessary. Type the requisition number in the **Requisition #** field.
Item # *	The number of the purchase item. The **Item #** is automatically populated with the next available item number, but you can modify the item number according to your needs. If necessary, type a new item number in the **Item #** field.
Job #	The number of the production control job the material item is reserved to. Type the job number in the **Job #** field.
Quantity *	The number of pieces to be added. Use the numeric keypad in the quantity field to add, multiply, divide, or subtract numbers to adjust the quantity.
Shape *	The material shape of each piece. Either click the arrow on the right side of the **Shape** field to select the shape, or type the shape indicator in the field (for example, HSS).

Option	Description
Grade *	The material grade of each piece. Either click the arrow on the right side of the **Grade** list to select the grade, or type the grade indicator in the field.
Dimensions *	The material dimension, or material size, of each piece. Click the **Dimensions** field to select an available material dimension, and double-click the desired dimension in the list. **TIP** You can also use a custom material dimension. Note that the dimension is not automatically added to the material database. To use a custom dimension, do the following: a. Click in the **Dimensions** field. b. Click **Add Size**. c. Define the dimension properties. d. Click **Save**. You can now select the dimension and use it.
Length	The length of each piece. Default length input settings are set in **Company Standards**, but you can modify them for each job.
Base Price	The base price of the material item. We recommend that you use base prices to create more detailed reports. Type the base price in the **Base Price** field. To change the base price units and convert the current price to the selected units, right-click the **Base Price** field, and select an appropriate option in the context menu.
Reference Number	The reference number that links the item to a production control job. The reference number can be different depending on the case: • If an item is sent from **Production Control** to **Purchasing** or **Inventory**, Tekla EPM creates a copy of the record, and the item is linked to include the reference number.

Option	Description
	• If an item is sent to purchasing from an advance bill of materials, the reference number is either the eventual mark number of the item, or the page number along with the item number. • If the item is sent to purchasing later in the process, the reference number is the mark or piece mark number.
Date Required	The date when the material item is due. Entering the required date can be useful when creating reports. Do one of the following: • Type the date in the **Date Required** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Date Required** field and select the date in the calendar.
Date Promised	The date when the supplier has promised to deliver the material item. The **Date Promised** can be useful in reports. Do one of the following: • Type the date in the **Date Promised** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Date Promised** field and select the date in the calendar.
Mill Mark	The mill mark that identifies the mill that produced the steel. The mill mark usually consists of 4 letters that are rolled into the material. Type the mill mark in the **Mill Mark** field.
Cost Code	The cost code assigned to the item. Click the arrow on the right side of the **Cost Code** list, and select a cost code in the list.
Comment	Any comments that you want to add about the material item. Type the comments in the **Comment** field.

Option	Description
PRC Supplier	The supplier warehouse whose pricing the item uses. To change the supplier, click the arrow on the right side of the **PRC Supplier** list and select the supplier in the list. The **PRC Unit Cost**, **PRC Cost**, and **PRC Date** fields are updated to show details about the pricing of the selected pricing supplier.
Lot #	The lot identification number of the material item. The **Lot #** field is automatically populated by the linked items in **Production Control**.
Sequence	The sequence number assigned to the item. The **Sequence** field is automatically populated by the linked items in **Production Control**.
Category, **Sub-Category**	A keyword used for sorting items in the **PO #** dialog box. Categories and sub-categories can be used for filtering information in the **PO #** dialog box. The **Category** and **Sub-Category** fields are automatically populated by the linked items in **Production Control**.
Purchasing Notes	A longer description of the item. The **Purchasing Notes** field can be useful for adding specifications for buyout items.

3. Click **Add**.

The new material item is added at the end of the purchase order.

See also

Copy a purchase order item (page 892)

Modify purchase order items (page 893)

Receive purchase order items (page 898)

Send purchase order items to a requisition (page 906)

Finalize purchase order items (page 908)

Delete purchase order items (page 909)

Copy a purchase order item

You can copy a purchase order item and use it as the basis of a similar item. By copying items, you can save time and avoid entering the same information multiple times in a purchase order.

1. In the **PO #** dialog box, select the item that you want to copy.
2. At the bottom of the dialog box, click **Copy**.

   A copy of the item appears at the bottom of the purchase order.
3. Adjust the properties of the new item according to your needs.
4. Click **Edit** to save the changes.

Copy material items to another purchase order

Use the **Copy Selected to Another Purchase Order** command to copy a group of material items from one purchase order to another. When material items are copied, the original items still remain in the current purchase order.

1. In the **PO #** dialog box, select the items that you want to copy.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. Click the **Purchase Order** ribbon tab.
3. On the menu, select **Copy Selected to Another Purchase Order**.
4. In the **Select Purchase Order** dialog box, select the purchase order to which you want to copy the items.

   You can also create a new purchase order and copy the items to the new purchase order. For more information, see Create a purchase order (page 877).
5. Click **OK**.

The material items are copied to the selected purchase order.

See also

Copy a purchase order item (page 892)

Modify purchase order items

You can either modify items in purchase orders one by one, or use the different **Global Edit** commands to modify multiple items at one go.

For more information, see the following links:

Modify a single purchase order item (page 894)

Modify multiple purchase order items (page 894)

Modify the selected purchase order items (page 895)

Modify the shape, grade, dimensions, or length of multiple purchase order items (page 896)

Modify the shape, grade, dimensions, or length of the selected purchase order items (page 897)

Modify a single purchase order item

You can modify the properties of purchase order items one by one in the **PO #** dialog box.

1. In the **PO #** dialog box, select the material item that you want to modify.
2. On the right side of the dialog box, modify the properties of the item according to your needs.

   For example, you can change the base price of the item or assign a cost code to the item.
3. Click **Save** to update the item properties.

See also

Modify multiple purchase order items (page 894)

Modify the selected purchase order items (page 895)

Modify the shape, grade, dimensions, or length of multiple purchase order items (page 896)

Modify the shape, grade, dimensions, or length of the selected purchase order items (page 897)

Modify multiple purchase order items

Use the **Global Edit** command to modify the properties of all or multiple purchase order items at one go. This way, you can save time, as you do not need to change the properties of each item individually.

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **Global Edit** --> **Global Edit** .
3. To only modify specific types of items, in the **Purchase Order Global Edit Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to modify to the **Included** list.
   - Type the maximum and minimum values for the items that you want to modify.

5. Click **OK**.

   To further limit the item types that you want to modify, repeat steps 2 to 5 for all necessary filter types.

6. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

7. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

8. Click **Update**.

9. To confirm changing the properties of multiple items, click **Yes** in the confirmation dialog box.

The changes you made to the item properties are updated to the **PO #** dialog box.

See also

Modify a single purchase order item (page 894)

Modify the selected purchase order items (page 895)

Modify the shape, grade, dimensions, or length of multiple purchase order items (page 896)

Modify the shape, grade, dimensions, or length of the selected purchase order items (page 897)

Modify the selected purchase order items

Use the **Global Edit Selected** command to modify the properties of the selected items in the purchase order. This way, you can save time, as you do not need to change the properties of each item individually.

1. In the **PO #** dialog box, select the items that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Purchase Order** ribbon tab.

3. On the menu, select **Global Edit** --> **Global Edit Selected** .

4. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

5. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

6. Click **Update**.

The properties of the selected items are updated to the **PO #** dialog box.

See also

Modify a single purchase order item (page 894)

Modify multiple purchase order items (page 894)

Modify the shape, grade, dimensions, or length of multiple purchase order items (page 896)

Modify the shape, grade, dimensions, or length of the selected purchase order items (page 897)

Modify the shape, grade, dimensions, or length of multiple purchase order items

Use the **Global Edit By Shape** command to modify the shape, grade, dimensions, or length of all or multiple items in the dialog **PO #** box.

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **Global Edit** --> **Global Edit By Shape** .
3. In the **Shape** list at the top of the **Purchase Order Global Edit Filters** dialog box, select the shape.
4. To only modify specific types of items, select a filter type in the **Type** list, and click **Select**.
5. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the items that you want to modify to the **Included** list.
   - Type the maximum and minimum values for the items that you want to modify.
6. Click **OK**.

   To further limit the items that you want to modify, repeat steps 4 to 6 for all necessary filter types.
7. Click **OK**.
8. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

9. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

10. Click **Update**.

11. To confirm changing the properties of multiple items, click **Yes** in the confirmation dialog box.

The selected item properties are updated to the **PO #** dialog box.

See also

Modify a single purchase order item (page 894)

Modify multiple purchase order items (page 894)

Modify the selected purchase order items (page 895)

Modify the shape, grade, dimensions, or length of the selected purchase order items (page 897)

Modify the shape, grade, dimensions, or length of the selected purchase order items

Use the **Global Edit Selected By Shape** command to modify the material shape, grade, dimensions, or length of the selected items in a purchase order.

1. In the **PO #** dialog box, select the items that you want to modify.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Purchase Order** ribbon tab.

3. On the menu, select **Global Edit** --> **Global Edit Selected By Shape** .

4. Modify the selected properties in the **Global Edit** dialog box according to your needs.

   For example, you can change the category of the items by selecting an option in the **Category** list, or type a comment for the items.

5. In the **Global Edit** dialog box, select check boxes next to the properties that you want to update.

   You can also use the **Un-check All** and **Check Changed Fields** buttons to quickly clear or select check boxes.

6. Click **Update**.

The properties of the selected items are updated to the **PO #** dialog box.

All other reference information of the items remains unchanged.

See also

Modify a single purchase order item (page 894)

Modify multiple purchase order items (page 894)

Modify the selected purchase order items (page 895)

Modify the shape, grade, dimensions, or length of multiple purchase order items (page 896)

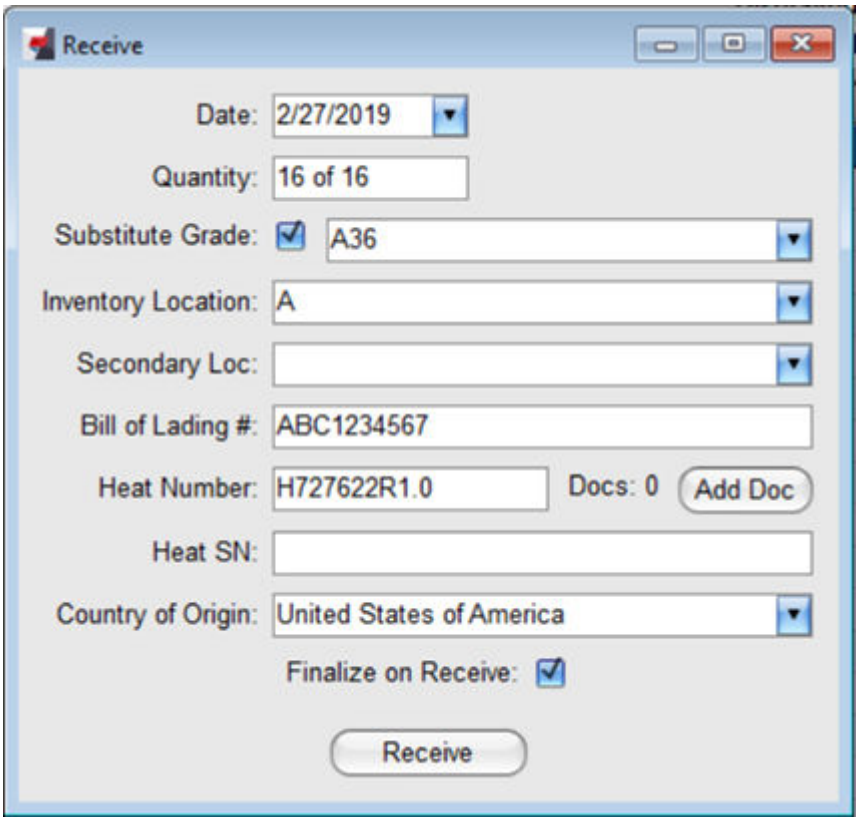
Receive purchase order items

You should mark all purchase order items that have been delivered as received in the **PO #** dialog box. You can receive material items with or without attaching heat documents or mill certifications to the items. Use the **Receive** command to select the items that you want to receive and attach heat documents to the items, or the **Receive Displayed** command to receive all items currently displayed in the **PO #** dialog box without attaching heat documents.

Receive specific items and attach heat documents

1. In the upper-left corner of the **PO #** dialog box, ensure that you are in the receive mode.

   If not, click the **Receive Mode** button to activate the receive mode.
2. Select the items that you want to receive.
3. At the bottom of the dialog box, click **Receive**.



4. In the **Receive** dialog box, define the properties of the received items.

   Note that the available fields in the **Receive** dialog box are set on the **Receiving** tab of the **Purchase Order Company Standards** dialog box.

Option	Description
Date	The date when the items were received. Tekla EPM automatically uses the current date. To change the date, do one of the following: • Type the date in the **Date** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Date** field and select a date in the calendar.
Quantity	The quantity of the pieces that are received. If multiple items are received at once, the **Quantity** field is unavailable and all pieces of the items are received at once. Type the quantity of the pieces in the **Quantity** field.
Substitute Grade	When selected, you can select a substitute grade for the purchase order item. When cleared, Tekla

Option	Description
	EPM always uses the original grade of the item instead of a substitute grade. If necessary, select the **Substitute Grade** check box, and click the arrow on the right side of the related field to select the substitute grade.
Inventory Location	The inventory location of the material items. Click the arrow on the right side of the **Location** field and select a location in the list, or type a new location in the **Location** field.
Secondary Loc	The secondary inventory location of the material items. Click the arrow on the right side of the **Secondary Loc** field and select a location in the list, or type a new secondary location in the **Secondary Loc** field. For example, you can use secondary locations to represent different inventory sites.
Bill of Lading #	The bill of lading number or the shipment number that the material items were received on. Type the number in the **B/L #** field.
Heat Number	The heat number of the material items. Type the heat number in the **Heat #** field. Note that you need to type a heat number for a material item before attaching documents to it in **Document Index**.
Heat SN	A property that ensures that heat numbers are not duplicated. However, duplications are extremely rare, so using the **Heat SN** field is optional. If necessary, type a value in the **Heat SN** field.
Country of Origin	The country of origin of the material items. Click the arrow on the right side of the **Country** field, and select a country in the list.
Finalize on Receive	When selected, the received material items are finalized when you receive them. This means that you cannot make further changes to the items. If material items are received but not finalized, the item quantity changes to zero to update the inventory records.

5. If necessary, you can attach heat documents to the items. Do the following:
   a. On the right side of the **Heat Number** dialog box, click **Add Doc**.

b. Do any of the following:

- In the **Document Index - Add Document Reference** dialog box, click **Add File**.
- Drag and drop the heat document to the **Document Index - Add Document Reference** dialog box.

  If you drag and drop the heat document to the **Document Index - Add Document Reference** dialog box, skip steps c and d.

c. In the **Open** dialog box, browse to find the document that you want to add, and select the document.

d. Click **Open**.

   If you want to add more documents with the same settings, click **Add Additional File** and repeat steps 4 to 6 for each document.

e. In the **Add File** dialog box, select the company and contact that provided you with the document in the **File Source** lists.

f. According to your needs, do one of the following:

- To compress multiple documents into one archive, select the **Compress Files into a Single Archive** option.
- To leave the documents you added uncompressed, select the **Leave Files Uncompressed** option.

g. According to your needs, do one of the following:

- To move the original document to the selected folder, select the **Move File** option.
- To copy the document to the selected folder but leave the original untouched, select the **Copy File (Leave Original)** option.

h. Type a description for the documents you added.

i. Click **Add File**.

j. Type a description for the entire document reference.

   This description applies to all documents, emails, and email attachments that you add.

k. Click **Add Document Reference**.

l. To close the **Document Index - Add Document Reference** dialog box, click the **Close** button (**X**) in the upper-right corner.

6. In the **Receive** dialog box, click **Receive**.

The selected items are marked as received and have the selected heat documents attached to them.

Receive all displayed items without attaching heat documents

Note that any applied filters affect which items are displayed in the **PO #** dialog box. For more information, see Filter information in the PO # dialog box (page 887).

1. In the upper-left corner of the **PO #** dialog box, ensure that you are in the receive mode.

   If not, click the **Receive Mode** button to activate the receive mode.

2. At the bottom of the dialog box, click **Receive Displayed**.

3. In the **Receive** dialog box, define the properties of the received items.

   Note that the available fields in the **Receive** dialog box are set on the **Receiving** tab of the **Purchase Order Company Standards** dialog box.

Option	Description
Date	The date when the items were received. Tekla EPM automatically uses the current date. To change the date, do one of the following: • Type the date in the **Date** field. The acceptable formats are YYYY/MM/DD, YY/MM/DD, MM/DD/YYYY, and MM/DD/YY. • Click the arrow on the right side of the **Date** field and select a date in the calendar.
Quantity	The quantity of the pieces that are received. If multiple items are received at once, the **Quantity** field is unavailable and all pieces of the items are received at once. Type the quantity of the pieces in the **Quantity** field.
Substitute Grade	When selected, you can select a substitute grade for the purchase order item. When cleared, Tekla EPM always uses the original grade of the item instead of a substitute grade. If necessary, select the **Substitute Grade** check box, and click the arrow on the right side of the related field to select the substitute grade.
Inventory Location	The inventory location of the material items. Click the arrow on the right side of the **Location** field and select a location in the list, or type a new location in the **Location** field.

Option	Description
Secondary Loc	The secondary inventory location of the material items. Click the arrow on the right side of the **Secondary Loc** field and select a location in the list, or type a new secondary location in the **Secondary Loc** field. For example, you can use secondary locations to represent different inventory sites.
Bill of Lading #	The bill of lading number or the shipment number that the material items were received on. Type the number in the **B/L #** field.
Heat Number	The heat number of the material items. Type the heat number in the **Heat #** field. Note that you need to type a heat number for a material item before attaching documents to it in **Document Index**.
Heat SN	A property that ensures that heat numbers are not duplicated. However, duplications are extremely rare, so using the **Heat SN** field is optional. If necessary, type a value in the **Heat SN** field.
Country of Origin	The country of origin of the material items. Click the arrow on the right side of the **Country** field, and select a country in the list.
Finalize on Receive	When selected, the received material items are finalized when you receive them. This means that you cannot make further changes to the items.

4. Click **Receive**.

All items that are currently displayed in the **PO #** dialog box are marked as received.

Unreceive purchase order items

Use the **Un-Receive** command to cancel receiving any items that you have accidentally marked as received.

Note that only items that have been marked as received can be unreceived.

1. In the upper-left corner of the **PO #** dialog box, ensure that you are in the receive mode.

   If not, click the **Receive Mode** button to activate the receive mode.
2. Select the purchase order item that you want to unreceive.
3. Click the **Purchase Order** ribbon tab.

4. On the menu, select **Un-Receive**.
5. In the **Un-Receive** dialog box, type the quantity of items that you want to unreceive.
6. Click **Un-Receive**.

See also

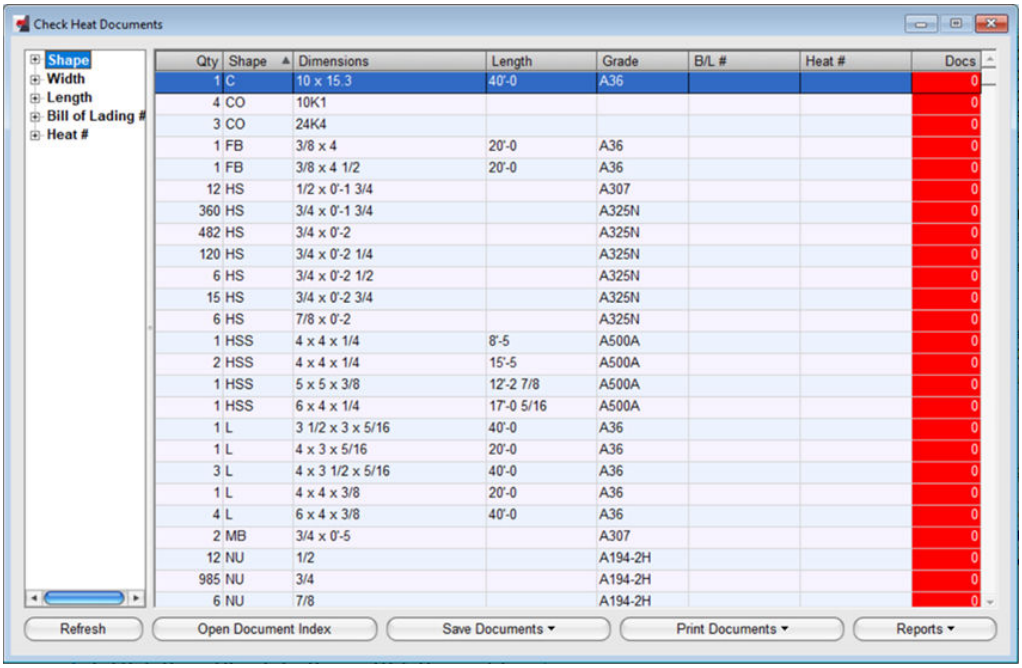
Receive purchase order items (page 898)

View heat documents attached to purchase order items

Use the **Check Heat Documents** command to view the heat documents attached to the purchase order items. You can also save or print the available heat documents, or create reports on the items that have or do not have heat documents attached to them.

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **Check Heat Documents**.

   The **Check Heat Documents** dialog box opens.



Qty	Shape	Dimensions	Length	Grade	B/L #	Heat #	Docs
1	C	10 x 15.3	40'-0	A36			0
4	CO	10K1					0
3	CO	24K4					0
1	FB	3/8 x 4	20'-0	A36			0
1	FB	3/8 x 4 1/2	20'-0	A36			0
12	HS	1/2 x 0'-1 3/4		A307			0
360	HS	3/4 x 0'-1 3/4		A325N			0
482	HS	3/4 x 0'-2		A325N			0
120	HS	3/4 x 0'-2 1/4		A325N			0
6	HS	3/4 x 0'-2 1/2		A325N			0
15	HS	3/4 x 0'-2 3/4		A325N			0
6	HS	7/8 x 0'-2		A325N			0
1	HSS	4 x 4 x 1/4	8'-5	A500A			0
2	HSS	4 x 4 x 1/4	15'-5	A500A			0
1	HSS	5 x 5 x 3/8	12'-2 7/8	A500A			0
1	HSS	6 x 4 x 1/4	17'-0 5/16	A500A			0
1	L	3 1/2 x 3 x 5/16	40'-0	A36			0
1	L	4 x 3 x 5/16	20'-0	A36			0
3	L	4 x 3 1/2 x 5/16	40'-0	A36			0
1	L	4 x 4 x 3/8	20'-0	A36			0
4	L	6 x 4 x 3/8	40'-0	A36			0
2	MB	3/4 x 0'-5		A307			0
12	NU	1/2		A194-2H			0
985	NU	3/4		A194-2H			0
6	NU	7/8		A194-2H			0

   Note that if the purchase order items do not have heat documents attached to them, the **Docs** column is highlighted with red.

3. In the **Check Heat Documents** dialog box, do any of the following:

To	Do this
Update heat document information	• Click **Refresh**. Any new or modified information is updated.
Add, modify, and delete heat documents in **Document Index**	a. Click **Open Document Index**. **Document Index** opens. For more information, see Store document references for the inventory (page 455).
Save heat documents	a. Do one of the following: • To only save particular heat documents, click the item whose documents you want to save, and click **Save Documents** --> **Save Documents - Selected** . • To save all available heat documents, click **Save Documents** --> **Save Documents - All** . b. In the **Browse For Folder** dialog box, browse to an empty folder where you want to save the heat document information. c. Click **OK**. A report of the heat documents opens.
Print heat documents	a. Do one of the following: • To only print particular heat documents, click the items whose documents you want to print, and click **Print Documents** --> **Print Documents - Selected** . • To print all available heat documents, click **Print Documents** --> **Print Documents - All** . b. In the **Select Printer** dialog box, click a printer to select it. c. Click **OK**. All or the selected heat documents are printed.
Create reports	a. Do one of the following: • To create a report only containing particular items, click the items to select them, and click **Reports** --> **Reports - Selected** . • To create a report containing all items, click **Reports** --> **Reports - All** .

To	Do this
	b. In the **Report Selection** dialog box, click the report that you want to create. c. Do one of the following: • To view the report, click **View**. • To print the report, change the number of copies by clicking the **+** and **-** buttons, and click **Print**. • To export the report, click **Export**, modify the export format, file name, and location, and click **Export** again.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

Store document references for a purchase order (page 887)

Send purchase order items to a requisition

Use the **Send to REQ** command to send purchase order items back to requisitions. Note that only items that have not yet been received can be sent back to a requisition. The items need to have the correct requisition numbers defined in their **Requisition #** fields, so that Tekla EPM knows which requisition it should be returned to.

1. In the **PO #** dialog box, select the material items that you want to send back to a requisition.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. At the bottom of the dialog box, click **Send to REQ**.
3. To confirm returning the items to the requisition, click **Yes** in the confirmation dialog box.

The selected items are returned to the requisition. These items are no longer displayed in the **PO #** dialog box.

See also

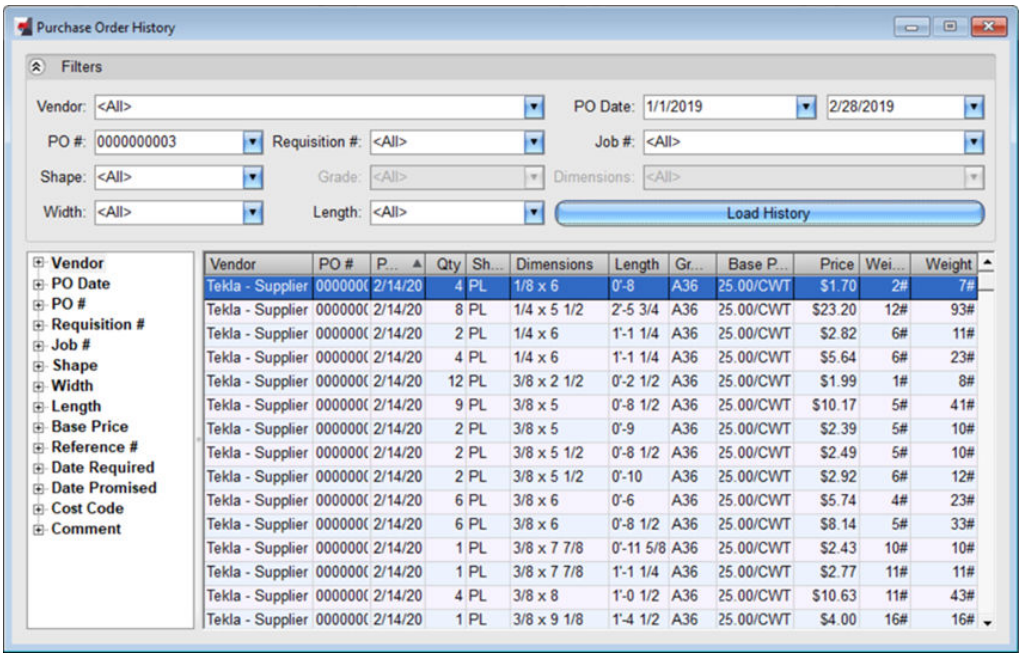
Load requisition items into a purchase order (page 862)

View the pricing history of a material item

Use the **Purchase History** command to view the pricing history of a material item. You can filter the purchase history by various options, such as the vendor, the requisition number, or the length.

1. In the **PO #** dialog box, select the item whose pricing history you want to view.
2. Click the **Purchase Order** ribbon tab.
3. On the menu, select **Purchase History**.

   The **Purchase Order History** dialog box opens.



   The top section of the dialog box allows you to filter the pricing history information, whereas the bottom section shows the pricing history of the material item.

4. If necessary, filter the pricing history by clicking arrows on the right side of the different filter lists and selecting filtering options in the lists.
5. To update the pricing history to match the filters you set, click **Load History**.
6. If you want to save the pricing history as a Microsoft Excel worksheet, do the following:
   a. Right-click anywhere in the display area of the **Purchase Order History** dialog box.
   b. In the context menu, select **Export to Excel**.
   c. In the **Save As** dialog box, browse to the folder where you want to save the file.

d. If necessary, change the file name.

e. Click **Save**.

If necessary, you can customize the layout of the **Purchase Order History** dialog box to include only the when exporting the pricing history. For more information, see Customize the layout of a dialog box (page 214).

7. To close the **Purchase Order History** dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

View all changes in a purchase order (page 910)

Finalize purchase order items

Use the **Finalize Selected Items** and **Finalize Displayed Items** commands to finalize purchase order items, so that no further can changes can be made to the items. The **Finalize Selected Items** command finalizes the material items that are currently selected in the **PO #** dialog box. The **Finalize Displayed Items** finalizes the material items that are currently filtered to be shown in the **PO #** dialog box.

If material items are received but not finalized, the item quantity changes to zero to update the inventory records. When the purchase order items are finalized, the link between the purchase order and the inventory is irreversibly broken. Even if the items are later unfinalized, they are no longer linked to the inventory.

Finalize the selected purchase order items

1. In the **PO #** dialog box, select the items that you want to finalize.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.

2. Click the **Purchase Order** ribbon tab.
3. On the menu, select **Finalize Selected Items**.
4. To confirm finalizing the items, click **Yes** in the confirmation dialog box.

The selected items are finalized.

Note that the letter `F` appears in the leftmost column of the **PO #** dialog box to indicate that the items are finalized.

If you need to make changes to finalized material items, you can unfinalize the items. For more information Unfinalize purchase order items (page 909).

Finalize all displayed purchase order items

To change which items are displayed in the **PO #** dialog box, see Filter information in the PO # dialog box (page 887).

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **Finalize Displayed Items**.
3. To confirm finalizing the items, click **Yes** in the confirmation dialog box.

The displayed items are finalized.

Note that the letter `F` appears in the leftmost column of the **PO #** dialog box to indicate that the items are finalized.

If you need to make changes to finalized material items, you can unfinalize the items. For more information Unfinalize purchase order items (page 909).

Unfinalize purchase order items

Use the **Un-Finalize** command to cancel finalizing purchase order items, so that you can make any necessary changes to the items.

Note that when purchase order items are finalized, the link between the purchase order and the inventory is irreversibly broken. Even if you unfinalize the items, they are no longer linked to the inventory.

1. In the upper-left corner of the **PO #** dialog box, ensure that you are in the receive mode.

   If not, click the **Receive Mode** button to activate the receive mode.
2. Select the items that you want to unfinalize.
3. On the **File** menu, select **Un-Finalize**.
4. To confirm unfinalizing the items, click **Yes** in the confirmation dialog box.

The selected items are unfinalized.

Note that the letter `F` has disappeared from the leftmost column of each item in the **PO #** dialog box.

You can now make changes to the items according to your needs.

See also

Finalize purchase order items (page 908)

Delete purchase order items

You can delete unnecessary purchase order items at any point. Note that deleting items from a purchase is permanent and cannot be undone.

You can still see the deleted items in the list of changes and in the transaction history. For more information, see View all changes in a purchase order (page 910) and View the transaction history of a purchase order (page 912).

1. In the **PO #** dialog box, select the items that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
2. At the bottom of the dialog box, click **Delete**.
3. To permanently delete the items, click **Yes** in the confirmation dialog box.

The items are deleted from the purchase order.

View all changes in a purchase order

Tekla EPM records every change made in the system. This is useful because you can view all changes made in the current purchase order at once. You can filter the information to see changes made by a particular user, or on a particular date. You can also print the list of changes.

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **List Of Changes**.
3. In the **List Of Changes Report Filters** dialog box, do any of the following:

To	Do this
Filter changes by user	a. Select the **User** filter type and click **Select**. b. Click the arrow buttons to move the users whose changes you want to view to the **Included** list. c. Click **OK**.
Filter changes by date	a. Select the **Transaction Date** filter type and click **Select**. b. Do one of the following: • Enter the start (**Minimum**) and end (**Maximum**) dates. • Select the **Expression** check box for the start or end date. Then, select the base date and select how many more or

To	Do this
	less days will be taken into account. c. Click **OK**.

4. Click **Make Report**.
5. In the **Report Selection** dialog box, do one of the following:

To	Do this
View the list of changes	• Click **View**. The report opens in **Tekla EPM Report Viewer**. You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.
Print the list of changes	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the list of changes	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

See also

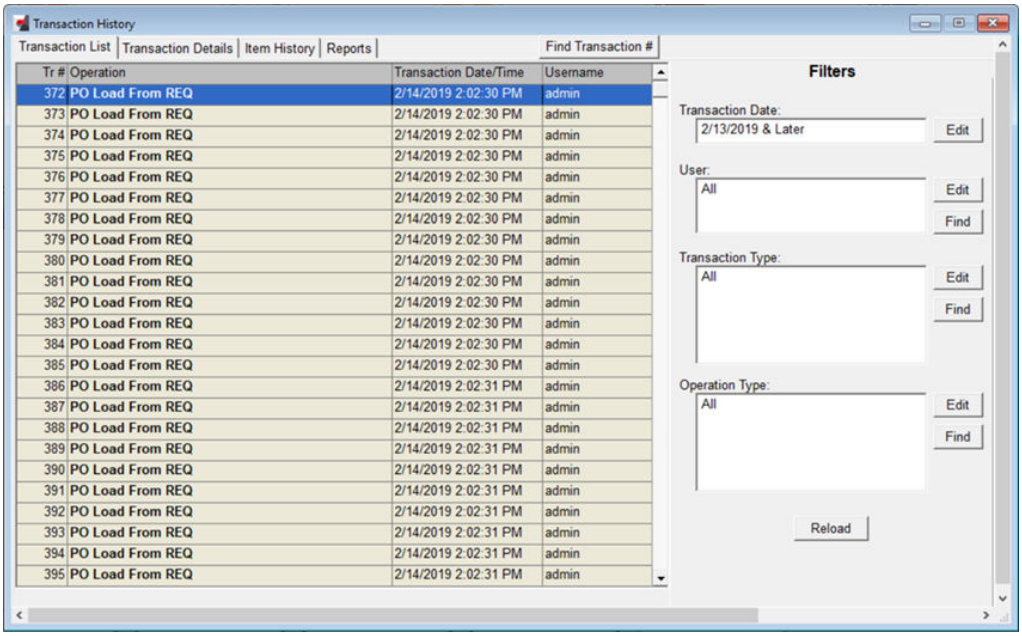
View the pricing history of a material item (page 906)

View the transaction history of a purchase order

Use the **Transaction History** dialog box to view all transactions in a purchase order. You can also view further transaction details and item history, and view or print different transaction history reports.

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **Transaction History**.

   The **Transaction History** dialog box opens on the **Transaction List** tab.



3. To filter the displayed transactions, use the fields in the **Estimating Filters** section of the dialog box:
   a. Click **Edit** next to a filtering option.

      The available filtering criteria are the transaction date, the name of the user that made the transaction, the transaction type, and the operation type.

   b. Do one of the following:
      - For transaction date, enter the start and end dates to define a range within which the transactions have taken place.
      - For user, transaction type, and operation type, use the arrow buttons to move the desired items to the **Included** list.

c. Click **OK**.

   To view all transactions again, click **Reload**.

4. To view more information about a transaction, do the following:
   a. Click to select the transaction on the **Transaction List** tab.
   b. Click the **Transaction Details** tab to view the details of the selected transaction.
   c. Click the **Item History** tab to view the item history of the selected transaction.

Find a transaction by transaction number

1. On the **Transaction List** tab, click **Find Transaction #**.
2. Enter the transaction number in the field.
3. Click **OK**.

The transaction with the selected transaction number is selected on the **Transaction List** tab.

Create transaction history reports

1. Click the **Transaction History** ribbon tab.
2. On the menu, select **Reports**.
3. To only include specific items in the transaction history report, select a filter type in the **Type** list, and click **Select**.
4. Do one of the following:
   - For dates, select the start and end dates in the calendar to define a range within which the transactions have taken place.

     You can also select the **Expression** check box to create expressions that allow you to set the base date and the number of days before or after that date.
   - For other filter types, use the arrow buttons to move the desired items to the **Included** list.
5. Click **OK**.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, select the report that you want to view or print.

8. Do any of the following:

To	Do this
View the report	• In the **Report Selection** dialog box, click **View**.
Print the report	a. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons. b. If necessary, click **Select Printer**, select which device you want to use for printing, and click **OK**. You can also select **Default Printer** to always use the default printer with this report, or **No Printer** to reset the current printer. c. Click **Print**. d. Click **Yes**.
Export the report	a. Click **Export**. b. In the **Export Format** list, select an export format. c. Click **Browse**. d. Browse to the location where you want to save the exported file, and click **Save**. e. Modify the file name according to your needs. f. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box. g. To open the file after exporting it, select the **Open Exported Document** check box. h. Click **Export**.

View, print, or export purchase orders and purchase order reports

Use the **Reports** command to view, print, or the export purchase order, or to create reports based on the current purchase order. For example, you can

create a list of the items on the purchase order or a material receiving checklist. You can then view or print the reports, or export the reports to save them in another file format.

To create purchase order reports, do the following:

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **Reports**.
3. In the **Report Selection** dialog box, select the report that you want to view, print, or export.

   To customize the reports that are displayed in the **Report Selection** dialog box, click the **Edit Report Types**.
4. If you want to include the company logo and vendor code in the report, select the **Show Company Logo** and **Show Vendor Code** check boxes.

   When the check boxes are cleared, the information is not included in the report.

According to your needs, see any of the following instructions:

View the report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the selected report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Modify the file name according to your needs.

5. Browse to the location where you want to save the exported file, and click **Save**.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. In the **Report Selection** dialog box, click **Export**.

View, print, or export job-specific receiving reports

Use the **Receiving Reports** command to create receiving reports that contain information from the current purchase order. You can then view or print the reports, or export the reports and save them in another file format. For example, you can create a purchase order summary, a barcode checklist, or a receiving list.

To create receiving reports, do the following:

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **Receiving Reports**.
3. To only include particular purchase orders in the reports, in the **Purchase Order Report Filters** dialog box, select a filter type in the **Type** list, and click **Select**.
4. In the **Filter** dialog box, do one of the following depending on the filter type:
   - Click the arrow buttons to move the purchase order properties that you want to include in the report to the **Included** list.
   - Type the maximum and minimum values for the purchase orders that you want to include in the report.
5. Click **OK**.

   To further limit which properties the purchase orders in the reports should match, repeat steps 3 to 5 for all necessary filter types.
6. Click **Make Report**.
7. In the **Report Selection** dialog box, select the report that you want to view, print, or export.
8. If you want to include the company logo and vendor code in the report, select the **Show Company Logo** and **Show Vendor Code** check boxes.

   When the check boxes are cleared, the information is not included in the report.

According to your needs, see any of the following instructions:

View the report

- In the **Report Selection** dialog box, click **View**.

The report opens in **Tekla EPM Report Viewer**.

You can use the **Email Excel** and **Email PDF** buttons at the top of the **Tekla EPM Report Viewer** window to email the report via Microsoft Outlook.

Print the report

1. In the **Report Selection** dialog box, change the number of the printed copies by clicking the **+** and **-** buttons.
2. Click **Print**.
3. To confirm printing the selected report, click **Yes** in the confirmation dialog box.
4. In the **Select Printer** dialog box, click a printer to select it.
5. Click **OK**.

Export the report

1. In the **Report Selection** dialog box, click **Export**.
2. In the **Export Format** list, select an export format.
3. Click **Browse**.
4. Modify the file name according to your needs.
5. Browse to the location where you want to save the exported file, and click **Save**.
6. To attach the exported file to a Microsoft Outlook email and send it to a recipient, select the **Attach to Email** check box.
7. To open the file after exporting it, select the **Open Exported Document** check box.
8. In the **Report Selection** dialog box, click **Export**.

Export purchase orders

You can export the items on your purchase orders to Trimble Viewpoint, Timberline, or Sage 300 CRE accounting solutions. This way, you can avoid entering PO information in multiple software

Export the selected purchase orders to Viewpoint

You can export purchase orders to both Trimble Viewpoint Vista and Trimble Viewpoint Spectrum.

Before you export the purchase order, ensure that:

- The company code of the vendor in the Tekla EPM **Address Book** matches the vendor in Trimble Viewpoint
- The job number of the Tekla EPM purchase order matches the job number in Trimble Viewpoint
- The **Cost Code** field in Tekla EPM purchase orders is mapped to the phase in Trimble Viewpoint purchase orders.

1. Do any of the following:
   a. At the top of the Tekla EPM window, click the **Purchasing** button.
   b. On the **Maintenance** menu, select **Integrations** --> **Trimble Viewpoint**. Then, click **Export** on the **Purchase Orders** tab.
2. In the **Select Requisition/Purchase Order** dialog box, select the purchase orders that you want to export.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
3. Click the **Purchasing** ribbon tab.
4. On the menu, select **Export Purchase Orders** --> **Trimble Viewpoint - Selected**.
5. Click **Yes** to confirm exporting the selected purchase orders.
6. If you have selected the **Prompt on export** check boxes for any properties in the **Trimble Viewpoint Integration** dialog box, ensure that the values are correct, and click **OK**.
7. In the **Save As** dialog box, browse to the folder where you want to save the exported purchase orders.

   By default, Tekla EPM saves the purchase orders in the `Export` folder.
8. If necessary, change the file name.
9. Click **Save**.

The exported purchase orders are saved as a `.txt` file in the folder that you selected.

You can then import the `.txt` file to any Trimble Viewpoint solution according to your needs.

Export purchase orders with receiving transactions to Viewpoint

You can export purchase orders to both Trimble Viewpoint Vista and Trimble Viewpoint Spectrum.

Before you export the purchase order, ensure that:

- The company code of the vendor in the Tekla EPM **Address Book** matches the vendor in Trimble Viewpoint
- The job number of the Tekla EPM purchase order matches the job number in Trimble Viewpoint
- The **Cost Code** field in Tekla EPM purchase orders is mapped to the phase in Trimble Viewpoint purchase orders.

1. Do any of the following:
   a. At the top of the Tekla EPM window, click the **Purchasing** button.
   b. On the **Maintenance** menu, select **Integrations** --> **Trimble Viewpoint**. Then, click **Export** on the **Receiving** tab.
2. In the **Select Requisition/Purchase Order** dialog box, select the purchase orders that you want to export.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
3. Click the **Purchasing** ribbon tab.
4. On the menu, select **Export Purchase Orders** --> **Trimble Viewpoint - Receiving**.
5. In the **Save As** dialog box, browse to the folder where you want to save the exported purchase orders.

   By default, Tekla EPM saves the purchase orders in the **Export** folder.
6. If necessary, change the file name.
7. Click **Save**.

The exported purchase orders are saved as a `.csv` file in the folder that you selected.

NOTE To avoid errors, do not open an exported `.csv` file with Microsoft Excel. If you do so, the formatting of information changes, and the `.csv` file will fail to import to Trimble Viewpoint products.

Export purchase orders to Timberline or Sage 300 CRE

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. If you only want to export particular purchase orders, select them in the **Select Requisition/Purchase Order** dialog box.

To select multiple items, hold down **Ctrl**.

To select a range of subsequent items, hold down **Shift**.

3. Click the **Purchasing** ribbon tab.
4. On the menu, select **Export Purchase Orders** --> **Timberline / Sage 300 CRE** .
5. In the **Export Purchase Orders to Timberline** dialog box, define how you want to import the items:

Option	Description
Export Received Items Only	When selected, only items that have been received in the inventory are exported. When cleared, all items are exported. You can define the range of dates between which the exported items have been received. To do so, enter the dates in the **Date Received Minimum** and **Maximum** fields.
Export Selected Purchase Orders Only	When selected, only items in the purchase orders that are selected in the **Select Requisition/ Purchase Order** dialog box are exported. When cleared, items in all purchase orders are exported.
Date Received Minimum	The earliest receiving date of the items that are exported. Note that this option is only available if the **Export Received Items Only** check box is selected.
Maximum	The latest receiving date of the items that are exported. Note that this option is only available if the **Export Received Items Only** check box is selected.
Re-Export	When selected, any purchase orders that have been previously exported are ignored in the export. This ensures that the same purchase orders are not exported multiple times.
Date Format	Allows you to select the date forma of the exported file.
Job # Export Option	Defines how the job number is shown in the exported file. You can select to: • Leave the job number unchanged and use the original job number. • Replace any digits after the first 4 digits with zeros.

Option	Description
	• Use both the job number and the existing sequence numbers.
Replace Job # if Cost Code Matches	When selected, the job number is replaced by a piece of text that you define, if the job number matches the cost code defined in the **Cost Code** list. When cleared, the job number is never replaced by any text when the job is exported.
Cost Code	The cost code that the job number needs to match to be replaced. The replacement text is defined in the **Job # Replacement** field.
Job # Replacement	The text with which you to replace the job number.
Sort Lines	Allows you to select how items are sorted in the exported file. The options are: • **Item Details**: the items are sorted by their properties. This is the default option. • **Item # Only**: the items are sorted by item number.
Split Lines based on	Allows you to select how items are split on different lines in the exported file. The options are: • **Item Details Only**: Items with similar properties are considered the same item, and therefore, the items are placed on the same line. • **Item Details and Comments**: Items that have different information in the **Comment** field are considered different items, and therefore, the items are split on different lines.
Include Grade in Description	When selected, the material grade is included in the material description.
Export Filename	The location where the exported file is saved and the name of the exported file. To modify the export location and the file name: a. Click the **...** button on the right side of the **Export Filename** field. b. In the **Open** dialog box, browse to the folder where you want to save the file. c. If necessary, change the file name. d. Click **Open**.

6. Click **Export Purchase Orders**.

The exported text file is saved in the folder that you selected.

Approve a purchase order

Approving a purchase order allows you to lock the purchase order, so that no further changes can be made. If necessary, the order can still be unlocked to allow making changes again.

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the menu, select **Approve Purchase Order**.
3. To confirm approving and locking the purchase order, click **Yes** in the confirmation dialog box.

The text at the top of the **PO #** dialog box now shows that the purchase order has been approved and locked, and the name of the user who approved and locked the purchase order.

Note that purchase orders are also locked if you export them.

See also

Unlock a purchase order (page 922)

Finalize purchase order items (page 908)

Unfinalize purchase order items (page 909)

Unlock a purchase order

Use the **Revoke Purchase Order Approval** command to unlock the purchase order to allow making changes to the purchase order.

1. In the **PO #** dialog box, click the **Purchase Order** ribbon tab.
2. On the **File** menu, select **Revoke Purchase Order Approval**.
3. To confirm revoking the purchase order approval, click **Yes** in the first confirmation dialog box.
4. To unlock the purchase order, click **Yes** in the second confirmation dialog box.

The purchase order is now unlocked. Users with access to the purchase order can make any necessary changes to the purchase order.

See also

Approve a purchase order (page 922)

Finalize purchase order items (page 908)

Unfinalize purchase order items (page 909)

Delete purchase orders

You can delete old and unnecessary purchase orders at any time. What happens to the material items within the purchase order depends on their receiving status.

Before deleting a purchase order, note that:

- Any material items in the purchase order that have not been received are deleted when the purchase order is deleted.
- Any received material items in the purchase order remain in the inventory, but are no longer linked to the deleted purchase order. These items behave like finalized items. For more information, see Finalize purchase order items (page 908).

You can still see the deleted items , even though the purchase order is deleted.

1. At the top of the Tekla EPM window, click the **Purchasing** button.
2. In the **Select Requisition/Purchase Order** dialog box, ensure that you are on the **Purchase Orders** tab.
3. Select the purchase orders that you want to delete.

   To select multiple items, hold down **Ctrl**.

   To select a range of subsequent items, hold down **Shift**.
4. Click **Delete**.
5. To permanently delete the purchase orders, click **Yes** in the confirmation dialog box.

The selected purchase orders are deleted.

11 Create and manage customer orders

Use the **Order Entry** module to directly sell material from your inventory. In **Order Entry**, you can create and manage customer orders, quotes, invoices, payments, credits, deliveries, and returns.

NOTE Before you start working in the **Order Entry** module, remember to set up the module (page 925).

The basic workflow in the **Order Entry** module is as follows:

1. Do one of the following:
   - Create a quote or a quick quote for the customer, and once it gets accepted, convert it into an order.
   - Create an order.
2. Add details for the order.
3. Combine and allocate the material items in the order.
4. If necessary, add charges or order-specific credit for the customer.
5. Add invoices and deliveries.
6. If necessary, add returns.

See also

Set up the Order Entry module (page 925)

Open the Order Entry module (page 941)

Filter the order entry information (page 942)

Create a quote or an order (page 943)

Modify a quote or an order (page 954)

Convert a quote into an order (page 955)

Convert an order back into a quote (page 955)

Delete a quote (page 956)
Add an invoice (page 956)
Add a payment (page 958)
Add a credit (page 958)
Add a delivery (page 959)
Add a return (page 960)
Create order or quote reports (page 960)

11.1 Set up the Order Entry module

In **Order Entry Maintenance**, you can create and modify the settings used when working in the **Order Entry** module. For example, you can modify the company standard settings, invoice categories, shipping methods, and payment terms.

Remember to also set up the necessary tax rates and tax groups before you start working in the **Order Entry** module.

For more information, see the following links:

Define company standard settings for Order Entry (page 925)
Create, modify, and delete charge processes (page 931)
Create, modify, and delete invoice categories (page 933)
Create, modify, and delete order and quote categories (page 934)
Create, modify, and delete price groups (page 935)
Create, modify, and delete payment methods (page 936)
Add, modify, and delete payment terms for customer orders (page 937)
Add, modify, and delete shipping methods for customer orders (page 939)
Create, modify, and delete territory options (page 940)

Define company standard settings for Order Entry

You can define default settings that become the company-level standard settings used in each new order entry job. In company standard settings, you can set default price groups and price levels, credit limits, backdating settings, and QuickBooks tax codes.

To access the **Company Standards** dialog box, do the following:

1. Click the **Maintenance** ribbon tab.

2. In the menu, select **Order Entry** --> **Company Standards** .

Now, you can manage the different company-level standard settings on the different tabs of the **Company Standards** dialog box.

Remember to also set the combining optimizations, suppliers, and input and display units that are used in the **Order Entry** module by default. For more information, see:

- Define combining optimizations for Order Entry (page 929)
- Define input and display units for Order Entry (page 929)
- Define suppliers for Order Entry (page 931)

According to your needs, see any of the following instructions:

Define general order entry settings

1. Open the **General** tab.
2. Adjust the following options according to your needs:

Option	Description
New Customer - Default Tax Group	The default tax group applied for new order entry taxable items. The tax group can be changed job by job.
Restrict to Inventory Location	When selected, Tekla EPM limits the available stock material selection to a specific inventory location. Select the desired inventory location in the list on the right side of the field. Inventory locations can be set and reset in the **Inventory** module.
Allow Delivery of Un-Invoiced Material	When selected, Tekla EPM allows delivering materials before invoicing. **NOTE** You need to select the **Allow Delivery of Un-Invoiced Material** option to view and use delivery tickets before invoicing.
Allow Invoicing of Material Not Delivered	When selected, Tekla EPM allows creating invoices for materials before they are delivered.
Keep Order Selection Screen Open	When selected, the order selection dialog box stays open after a job has been selected.
Selection Screen - Default number of days to view	The number of days for which orders remain in the **Order Selection** dialog box. This setting allows you to filter out older orders. To always display all orders, type 0.

Option	Description
Order # Increment	The default option for automatic order numbering. New orders are numbered according to the selected option. However, you can modify the order number according to your needs each time you create a new order.
Item Increment	The numbering system for items listed in an order. Using the default auto-increment of 10 allows items to be added in the list according to your needs, without having to renumber the other items in the job.
Quote # Regular Expression and **Order # Regular Expression**	Optional expressions used for pattern matching.
New Material - Default Price	The default material cost applied to new quotes and orders. The options are: • **No Default**: no default price is set. • **Replacement Cost**: the price defined in **Pricing Maintenance** is used. • **Inventory Average**: the inventory average price is used. • **Inventory High**: the highest inventory price is used.
Order - Automatically Allocate Inventory	When selected, Tekla EPM automatically uses material items in the inventory for quotes and orders.

NOTE Do not click **Save** until you have modified all necessary settings. Saving the settings closes the **Company Standards** dialog box.

Define price level settings

1. Open the **Price Levels** tab.
2. In the **Number of Price Levels** field, type the number of levels of pricing that you want to use.
3. In the **Default Price Group** list, select the price group to be used by default for new orders.
4. In the **Default Price Level** list, select the price level to be used by default for new orders.

For more information on defining the pricing groups and pricing levels used in **Order Entry**, see Add, modify, and delete price groups (page 935).

NOTE Do not click **Save** until you have modified all necessary settings. Saving the settings closes the **Company Standards** dialog box.

Set credit limit settings

1. Open the **Credit Limit** tab.
2. In the **New Customer - Default Credit Limit** field, type the default credit limit for new customers.

   If you do not want to set a credit limit, type 0.
3. Select how Tekla EPM will react when a customer has exceeded their credit limit.

   The options are:

   - **Allow without warning**: Tekla EPM allows creating new orders without warning
   - **Allow with warning**: Tekla EPM allows creating new orders, but a pop-up warning is displayed
   - **Allow with credit limit override**: Tekla EPM allows new orders when you override the customer's credit limit
   - **Don't allow**: Tekla EPM does not allow any new orders for customers that have exceeded their credit limit

NOTE Do not click **Save** until you have modified all necessary settings. Saving the settings closes the **Company Standards** dialog box.

Define backdating settings

If you want to mark payments and other order entry activities as created on a previous date, you can allow back-dating for the activities.

1. Open the **Back-Dating** tab.
2. Click to select the check boxes for each option for which you want to allow back-dating order activity.

   If you do not want to allow backdating, do not select any check boxes.

NOTE Do not click **Save** until you have modified all necessary settings. Saving the settings closes the **Company Standards** dialog box.

Define QuickBooks sale tax codes

If you have connected the QuickBooks accounting software with Tekla EPM, you can define the sales tax codes that are used when exporting invoices from Tekla EPM to QuickBooks.

Note that you need to have exactly the same tax codes in both software.

1. Open the **QuickBooks** tab.
2. Type in the sales tax codes used for taxable and non-taxable items.

NOTE Do not click **Save** until you have modified all necessary settings. Saving the settings closes the **Company Standards** dialog box.

Define input and display units for Order Entry

You can define the input and display units used in the **Order Entry** module.

1. At the bottom of the **Company Standards** dialog box, click **Input/Display Units**.
2. In the **Input/Display Units** dialog box, select the units and the length input types in the available lists.

   Note that there are multiple options depending on the required precision and the desired input method.
3. Click **OK**.
4. Remember to click **Save** in the **Company Standards** dialog box to update the input and display units.

See also

Define company standard settings for Order Entry (page 925)

Define combining optimizations for Order Entry

You can define company-level settings for multing and plate nesting in the **Order Entry** module. These settings define which combining methods are utilized and in which order. You can combine, save, and compare various combining run options until the desired result is achieved.

1. At the bottom of the **Company Standards** dialog box, click **Combining Setup**.
2. To use material grade substitutions with the optimization settings when performing a combining run, on the **General Settings** tab of the **Combining Setup** dialog box, select the **Use Grade Substitutions** check box.

   Grade substitutions must be set in the **Shape / Grade / Size Maintenance** dialog box. If the grade substitutions are not set, the

material grades in the combining run and in the supplier pricing data set or the inventory need to match each other exactly.

3. Click the arrow buttons to move the optimization options that you want to use to the **Optimizations Included** list.

   The options are:

   - **Inventory Exact-Match (In Stock)**: Use this option for inventory items in stock that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Exact-Match (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that are an exact match without the use of kerf or clamp allowance.
   - **Inventory Least-Scrap (On Order)**: Use this option for inventory items that are on purchase orders and have not yet been received and that will provide the least amount of scrap.
   - **Inventory Least-Scrap (In Stock)**: Use this option for inventory items in stock that will provide the least amount of scrap.
   - **Warehouse Least-Scrap**: Use this option to give preference to warehouse items that will provide the least amount of scrap. Warehouse items will only be used when they provide less scrap than the available inventory items.
   - **Warehouse Force Inventory**: Use this option to force the use of inventory regardless of the amount of scrap, no matter where it is located in the **Optimizations Included** list. This option is the opposite of **Warehouse Least-Scrap**.

     Note that you can only include **Warehouse Least-Scrap** or **Warehouse Force Inventory**, not both.

4. Use the **Move Up** and **Move Down** buttons to modify the order of the optimizations.

   The order is important while performing a combining run.

5. Open the **Plate Nesting Settings** tab.

6. In the **Shear Cut Optimization** list, click a suitable shear cut option to select it.

   The selected option determines the plate allowance to be used with the combining:

   - Use **None** when cutting plate on a burn table.
   - Use **Shear Cut - First Cut Along Length** or **Shear Cut - First Cut Along Width** to alert Tekla EPM that the nesting needs to allow for that type of cut first. Then, the nesting will allow for all subsequent cuts to be made with that condition.

7. If the material grain direction is unimportant and you want Tekla EPM to create the best possible optimization of a plate, select the **Rotate Plates for Best Fit** check box.
8. Click **Save**.
9. Remember to click **Save** in the **Company Standards** dialog box to save the combining optimizations.

See also

Define company standard settings for Order Entry (page 925)

Define suppliers for Order Entry

You can define the desired suppliers, or pricing data sets, for angles, beams, plates, rods, tubes, and other material. This way, you can use material pricing from the selected supplier pricing data sets for each material group.

1. In the **Company Standards** dialog box, click the **Suppliers** button.
2. In the **Suppliers** dialog box, select suppliers for each material group in the available lists.
3. Click **OK**.
4. Remember to click **Save** in the **Company Standards** dialog box to update the supplier settings.

See also

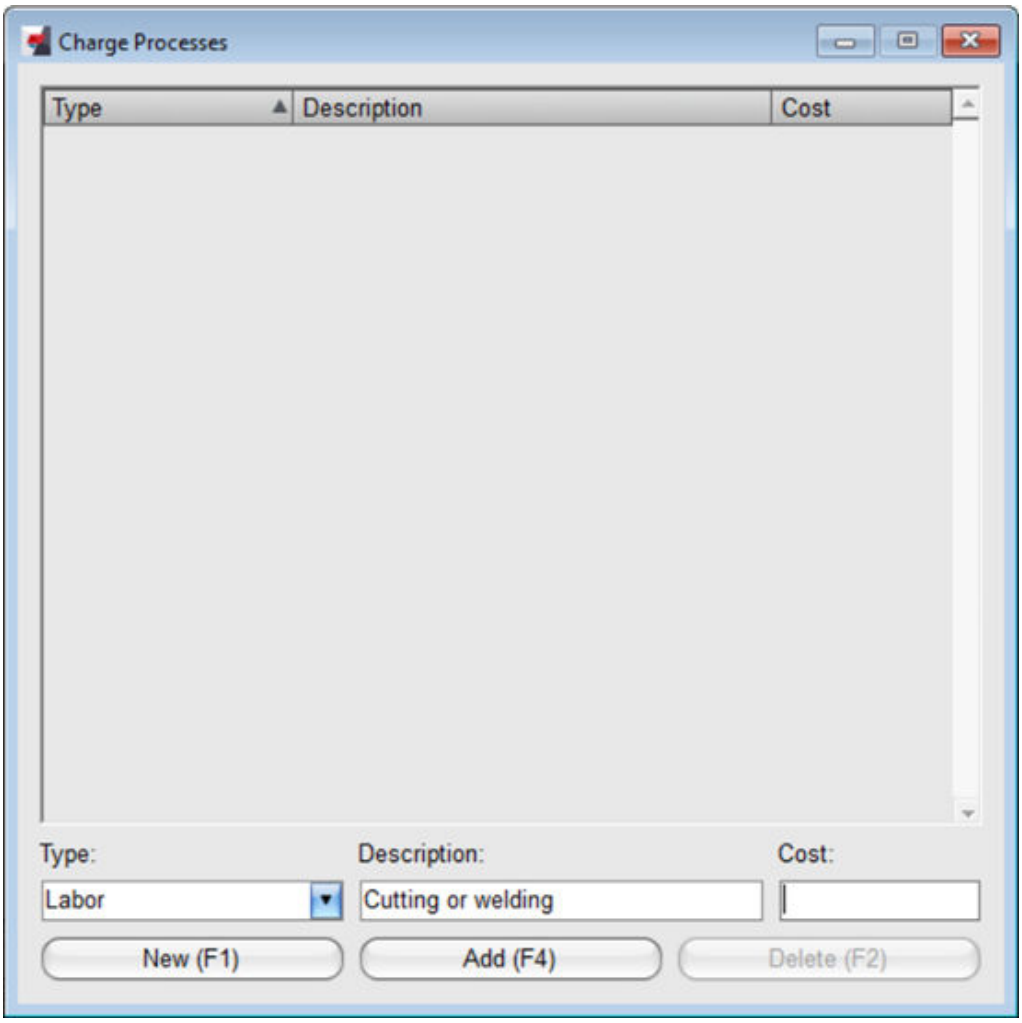
Define company standard settings for Order Entry (page 925)

Create, modify, and delete charge processes

While working in **Order Entry**, you should use different charge processes depending on whether you are charging the customer for material, labor, or both. The charge processes, standard charges, and applicable costs are defined in **Charge Process Maintenance**.

NOTE While working on quotes and orders in the **Order Entry** module, you can only change the price per item, not the type or description. This means that you can enter the base costs in the **Charge Processes** dialog box and change them according to your needs.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Order Entry** --> **Charge Process Maintenance** .



3. In the **Charge Processes** dialog box, do any of the following:

To	Do this
Add a new charge process	a. Click **New**. b. In the **Type** list, select a suitable option. The options are **Material**, **Labor**, and **Miscellaneous**. Use the **Miscellaneous** option when the charge applies to both material and labor. c. In the **Description** field, type a description for the charge process. For example, if the **Type** is **Labor**, the description can be `Cutting` or `Welding`. The description will appear in the **Process** column in **Order Entry**. d. In the **Cost** field, type the price per item.

To	Do this
	e. Click **Add** to save the new charge process and add it to the list.
Modify a charge process	a. Select a charge process in the list. b. Modify the type, description, and cost according to your needs. c. Click **Edit** to save the changes.
Delete a charge process	a. Select a charge process in the list. b. Click **Delete**. c. To permanently delete the charge process, click **Yes**in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Create, modify, and delete invoice categories

In the **Invoice Category Maintenance** dialog box, you can create a list of standard invoice categories used for customer orders. The categories that you define are available when creating invoices in the **Order Entry** module.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Order Entry** --> **Invoice Category Maintenance**.
3. In the **Invoice Categories** dialog box, do any of the following according to your needs:

To	Do this
Add a new invoice category	a. Click **New**. b. In the **Category** field, type a name for the invoice category. c. In the **Description** field, type a description for the invoice category. d. Click **Add** to save the new invoice category and add it to the list.
Modify an invoice category	a. Select the invoice category that you want to modify. b. Modify the name and description of the invoice category. c. Click **Save** to save the changes.
Delete an invoice category	a. Select the invoice category that you want to delete.

To	Do this
	b. Click **Delete**. c. To permanently delete the invoice category, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Create, modify, and delete order and quote categories

In the **Order Category Maintenance** dialog box, you can create a list of standard categories for orders and quotes. For example, you can create separate order categories for walk-in customers and regular customers. The categories that you define are available in the **Order** dialog box for both quotes and orders.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Order Entry** --> **Order Category Maintenance**.
3. In the **Order Categories** dialog box, do any of the following according to your needs:

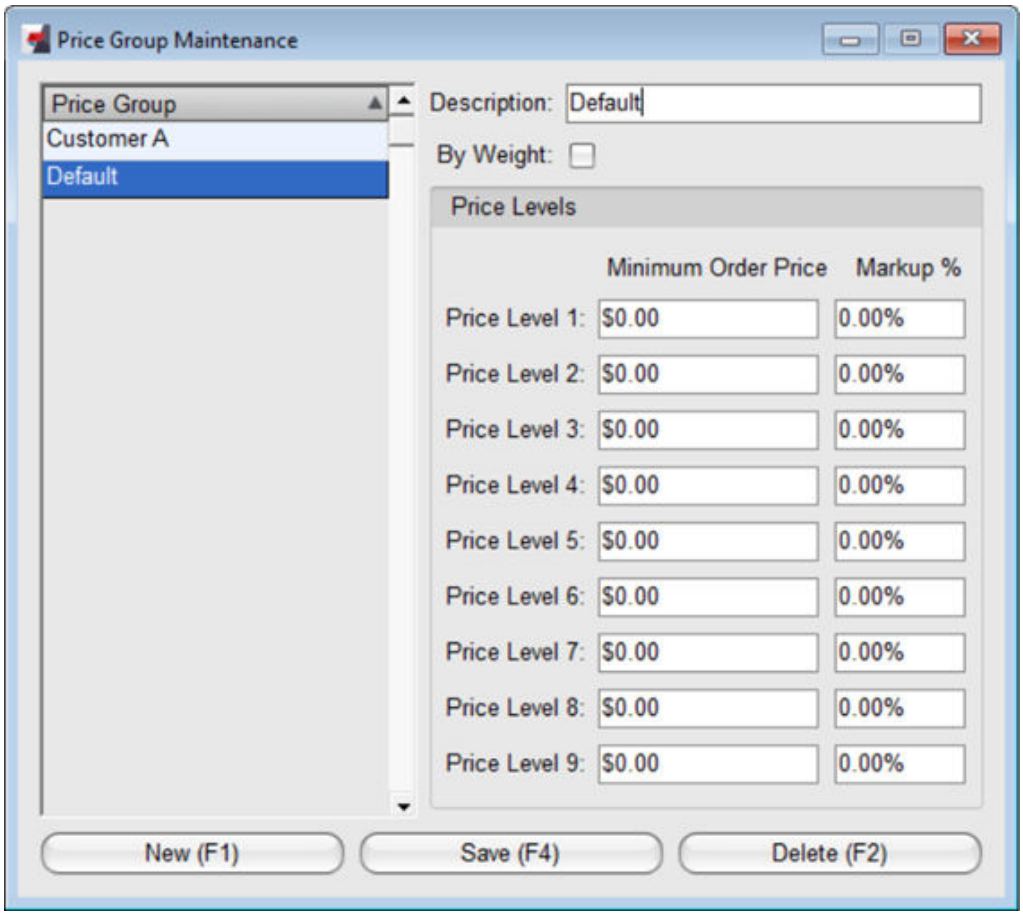
To	Do this
Add a category	a. Click **New**. b. In the **Category** field, type a name for the category. c. In the **Description** field, type a description for the category. d. Click **Add** to save the new category and add it to the list.
Modify an order category	a. Select the order category that you want to modify. b. Modify the name and description of the selected order category. c. Click **Save** to save the changes.
Delete a category	a. Select the category that you want to delete the list. b. Click **Delete**. c. To permanently delete the category, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Create, modify, and delete price groups

You can add, modify, and delete price groups that are available in the **Order Entry** module. You can also define different price levels within price groups. Price levels determine the level of markup that your company gets from each order. Note that you can use any price level with any price group.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Order Entry** --> **Price Group Maintenance** .



3. In the **Price Group Maintenance** dialog box, do any of the following according your needs:

To	Do this
Add a price group	a. Click **New**. b. In the **Description** field, type a description for the price group.

To	Do this
	c. To add price levels to the price group, type the desired minimum order prices and markup percentages in the available fields. The minimum order prices and markups are used for recovering costs and small orders. As orders get larger, the amortization of costs may set off the need for larger markups and allow smaller minimum order prices. d. Click **Add** to save the price group and add it to the list.
Modify a price group	a. Select the price group that you want to modify. b. Modify the description and price levels according to your needs. c. Click **Save** to save the changes.
Delete a price group	a. Select the price group that you want to delete. b. Click **Delete**. c. To permanently delete the price group, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Create, modify, and delete payment methods

You can add, modify, and delete payment method options available for new payments in the **Order Entry** module. You can also select which payment method you want to use as the default option used for new orders.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Order Entry** --> **Payment Method Maintenance**.
3. In the **Payment Method Maintenance** dialog box, do any of the following according to your needs:

To	Do this
Add a new payment method	a. Click **New**. b. In the **Description** field, type a description for the payment method. For example, `Cash`. c. Click **Add**. The new payment method is saved and added to the list.

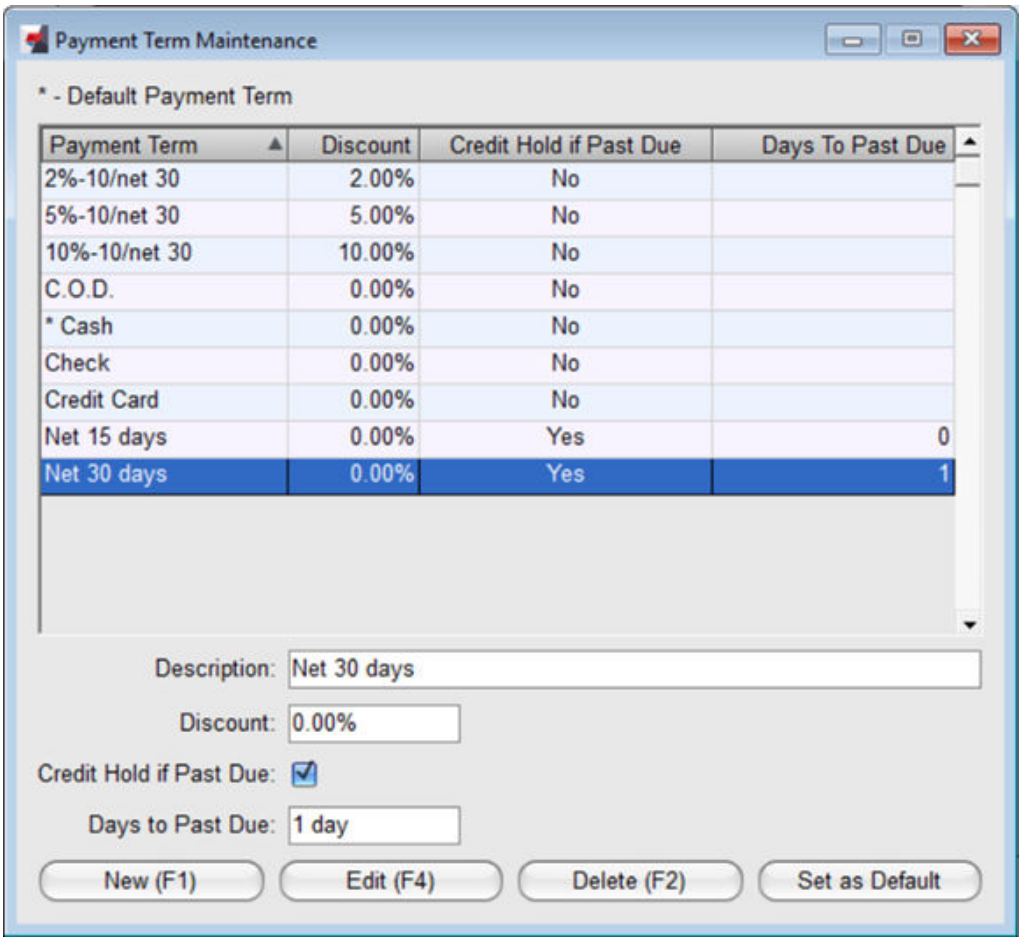
To	Do this
Set a payment method as default	a. Select the payment method that you want to set as the default option. b. Click **Set as Default**. c. To confirm using the selected payment method as the default option, click **Yes**. The default payment method is marked with an asterisk (*). This payment method will be used by default for new orders.
Modify a payment method	a. Select the payment method that you want to modify. b. Modify the description of the payment method. c. Click **Edit** to save the changes.
Delete a payment method	a. Select the payment method that you want to delete. b. Click **Delete**. c. To permanently delete payment method, click **Yes**.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Add, modify, and delete payment terms for customer orders

You can add, modify, or delete the payment term options that are available for all customer orders created in **Order Entry**. In addition, you can set the default payment term that will be used for new customer orders.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Order Entry** --> **Payment Term Maintenance** .



3. In the **Payment Term Maintenance** dialog box, do any of the following according to your needs:

To	Do this
Add a new payment term	a. Click **New**. b. In the **Description** field, type a description for the payment term. c. If necessary, in the **Discount** field, type a discount percentage for the payment term. d. If you want to freeze a customer's credit when an invoice is past the due date, select the **Credit Hold if Past Due** check box. e. In the **Days to Past Due** field, type the number of days that an invoice can be past due date before the customer's credit is frozen. f. Click **Add** to save the new payment term and add it to the list.

To	Do this
Set a default payment term	a. Select the payment term that you want to set as the default option. b. Click **Set as Default**. c. To confirm using the selected payment term as the default option, click **Yes** in the confirmation dialog box. The default payment term is marked with an asterisk (*). This payment term will be used by default for new customer orders.
Modify a payment term	a. Select the payment term that you want to modify. b. Modify the payment term properties according to your needs. c. Click **Edit** to save the changes.
Delete a payment term	a. Select the payment term that you want to delete. b. Click **Delete**. c. To permanently delete the payment term, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Add, modify, and delete shipping methods for customer orders

In the **Shipping Method Maintenance** dialog box, you can add, modify, and delete shipping method options that are available for the customer orders created in **Order Entry**. You can also select which shipping method you want to use as the default option.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Order Entry** --> **Shipping Method Maintenance** .
3. In the **Shipping Method Maintenance** dialog box, do any of the following according to your needs:

To	Do this
Add a shipping method	a. Click **New**. b. In the **Description** field, type a description for the new shipping method.

To	Do this
	c. Click **Add** to save the new shipping method and add it to the list.
Set a default shipping method	a. Select a shipping method in the list. b. Click **Set as Default**. c. To confirm using the selected shipping method as the default option, click **Yes** in the confirmation dialog box. The default shipping method is marked with an asterisk (*). This shipping method is used by default in the **Order Entry** module.
Modify a shipping method	a. Select a shipping method in the list. b. Modify the information in the **Description** field. c. Click **Edit** to save the changes.
Delete a shipping method	a. Select a shipping method in the list. b. Click **Delete**. c. To permanently delete the shipping method, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

Create, modify, and delete territory options

In **Territory Maintenance**, you can add, modify, and delete territory options that are available for defining order information.

1. Click the **Maintenance** ribbon tab.
2. In the menu, select **Order Entry** --> **Territory Maintenance**.
3. In the **Territories** dialog box, do any of the following according to your needs:

To	Do this
Create a new territory	a. Click **New**. b. In the **Territory** field, type a name for the territory. c. In the **Description** field, type a description for the territory. d. Click **Add** to save the new territory and add it to the list.

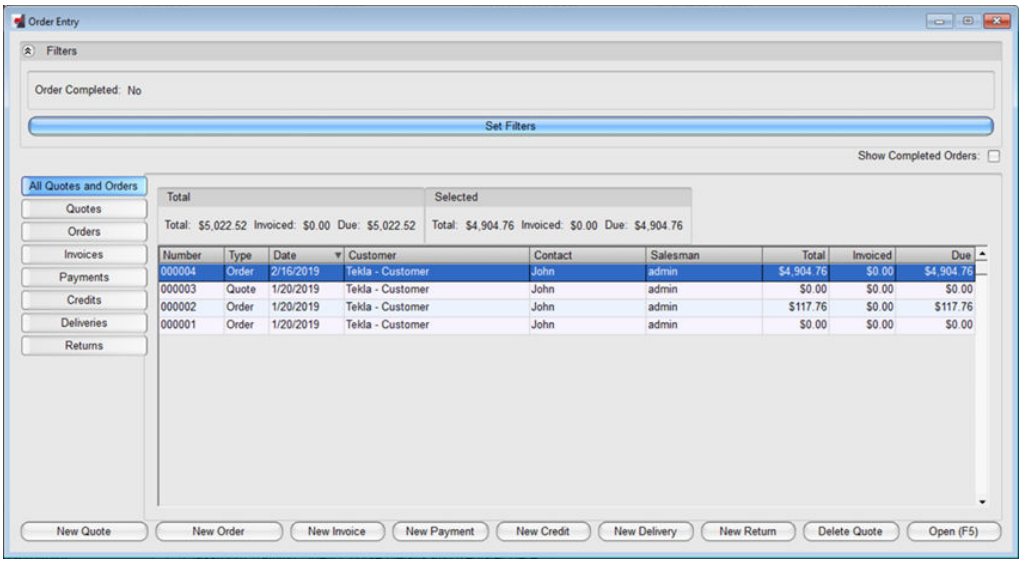
To	Do this
Modify a territory	a. Select the territory that you want to modify. b. Modify the name and description of the territory according to your needs. c. Click **Save** to save the changes.
Delete a territory	a. Select the territory that you want to delete. b. Click **Delete**. c. To permanently delete the territory, click **Yes** in the confirmation dialog box.

4. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

11.2 Open the Order Entry module

In the **Order Entry** module, you can create, modify, and delete orders, quotes, invoices, payments, credits, deliveries, and returns. To open the **Order Entry**, do the following:

1. In the upper-right corner of the Tekla EPM window, click the **Order Entry** icon.

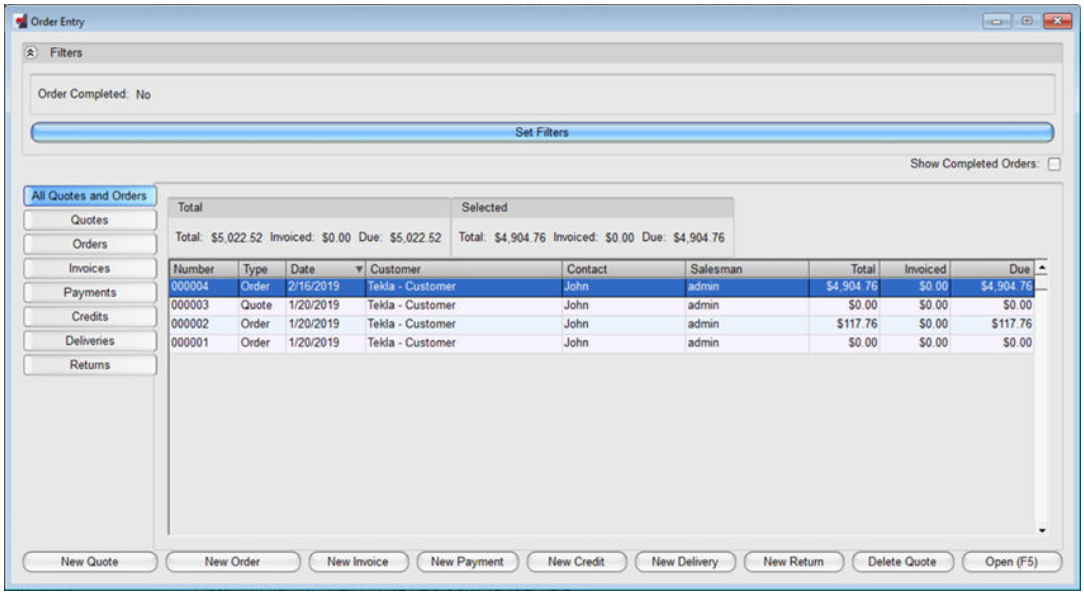


The **Order Entry** dialog box appears. You can view the existing quotes, orders, invoices, payments, credits, deliveries, and returns.

By default, the orders and quotes are visible for 30 days after their creation. However, you can change this setting in the dialog box (page 925) or use filters to view older quotes and orders (page 942).

11.3 Filter the order entry information

You can select which orders and quotes you want to see in the **Order Entry** dialog box. For example, you may want to view older orders that are hidden in the initial view of the **Order Entry** dialog box.



1. At the top of the **Order Entry** dialog box, click the arrow button on the left side of **Filters**.

   The **Filters** section expands.

   If you want to see all orders created in the **Order Entry** module including the completed orders, select the **Show Completed Orders** check box on the right side of the **Order Entry** dialog box.

2. To apply a new filter, click **Set Filters**.

   The **Order Filters** dialog box opens.

3. Depending on what you want to filter out, click one of the available filter buttons.

4. Click the arrow buttons to move the items that you want to display to the **Included** list.

5. Click **OK**.

6. Click **Apply Filter**.

The orders and quotes displayed in the **Order Entry** dialog box are updated to match the filters you set.

To clear the applied filters, close and re-open the **Order Entry** dialog box.

11.4 Manage quotes and orders

You can create and manage both quotes and order in the **Order Entry** module. The difference between quotes and orders is that you can add invoices to orders, and send the materials on the orders to purchase orders. Quotes are simply estimates that a customer can accept or reject, so they cannot be invoiced.

See also

Create a quote or an order (page 943)

Modify a quote or an order (page 954)

Convert a quote into an order (page 955)

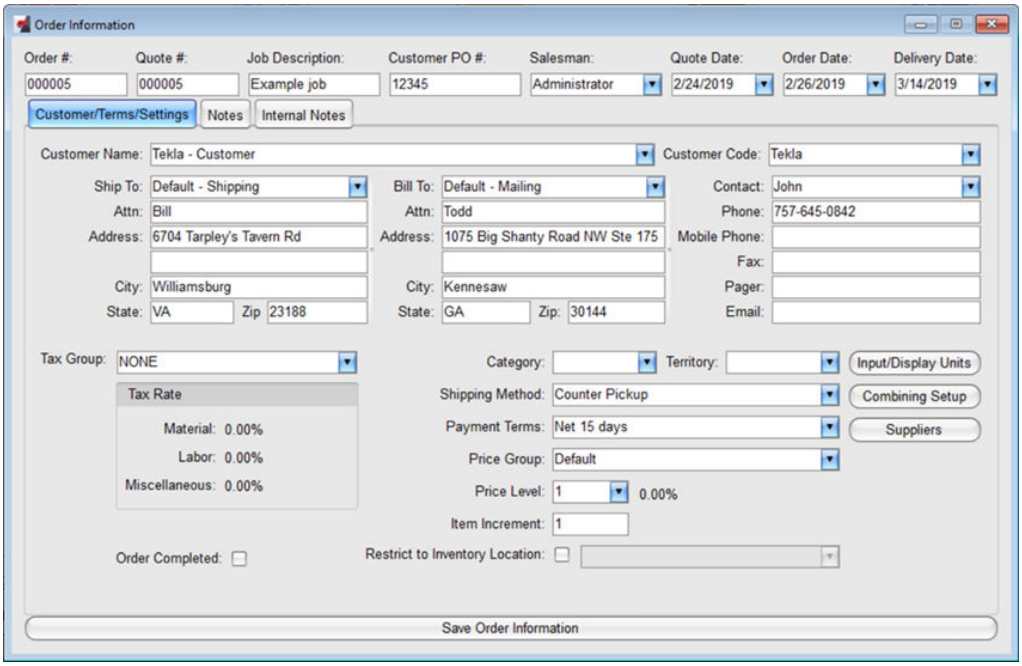
Convert an order back into a quote (page 955)

Delete a quote (page 956)

Create a quote or an order

Quotes and orders are created in the exact same way. Orders can be invoiced and their materials can be sent to purchase orders, whereas quotes are simply price estimates that the customer can accept or decline. Alternatively, you can also create quotes in the **Inventory** module.

1. At the bottom of the **Order Entry** dialog box, click **New Quote** or **New Order**.



2. If necessary, modify the quote or order number at the top of the **Order Information** dialog box.
3. Enter a job description and the eventual customer purchase order number.
4. In the **Salesman** list, select the salesman.

   All users listed in the **Administration** dialog box are available in the **Salesman** list.
5. Select the quote or order date and the delivery date.
6. In the **Customer Name** list on the **Customer/Terms/Settings** tab, select a company.

   All companies in the address book whose firm type is **Customer** are available in the list. When you select the company, the default shipping and billing addresses and the customer code are automatically added to the dialog box. If necessary, you can select an alternative shipping or billing address in the appropriate lists.
7. In the **Contact** list, select a contact person associated with the customer company.

   TIP You can also add a contact person into the address book in the current dialog box. Type a new name in the **Contact** field and click the **Add** button that has appeared on the right side of the field. Then, enter the contact information for the new contact person.
8. Select the tax group, order category, territory, shipping method, payment terms, price group, and price level in the appropriate lists.
9. In the **Item Increment** field, type a value used for numbering materials in the quote or order.

   Using the default auto-increment of 10 allows items to be added in the list according to your needs, without having to renumber the other items in the job.
10. To limit the available stock material selection to a certain inventory location, select the **Restrict to Inventory Location** check box, and select the inventory location in the list.
11. If necessary, you can click the buttons on the right to modify the input and display units (page 929), combining optimizations (page 929), and suppliers (page 931) of the current quote or order.
12. Go to the **Notes** tab to add notes regarding the quote or order.

    The notes will appear in quote and order reports.
13. Go to the **Internal Notes** tab to add private notes regarding the quote or order.

14. At the bottom of the dialog box, click **Save Quote Information** or **Save Order Information**.

The quote or order is created and added to the **Order Entry** dialog box. You can modify all properties later, if necessary.

The **Details** dialog box opens. You can add quote or order details regarding, for example, materials, charges, and discounts.

See also

Add quote or order details (page 945)

Create a quick quote (page 954)

Copy quote or order information (page 953)

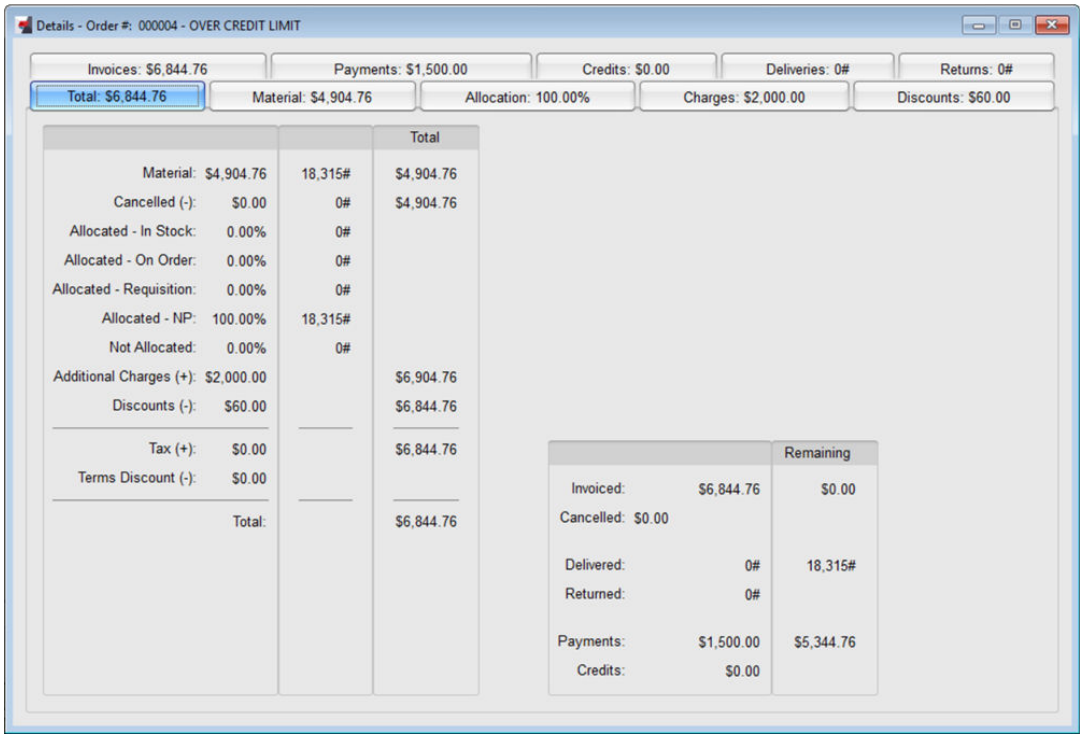
Add quote or order details

Once you have created a quote or an order, you need to add details for it. This includes adding materials to be delivered to the customer, creating additional charges, and adding the necessary discounts. For orders, you can also add invoices, payments, credit, deliveries, and returns.

To access the **Details** dialog box, do one of the following:

- In the **Quote** dialog box, click **Quote Details**.
- In the **Order** dialog box, click **Order Details**.

The **Details** dialog box opens on the **Total** tab, where all quote or order details and job activity are shown.



See also

Add an invoice (page 956)

Add a payment (page 958)

Add a credit (page 958)

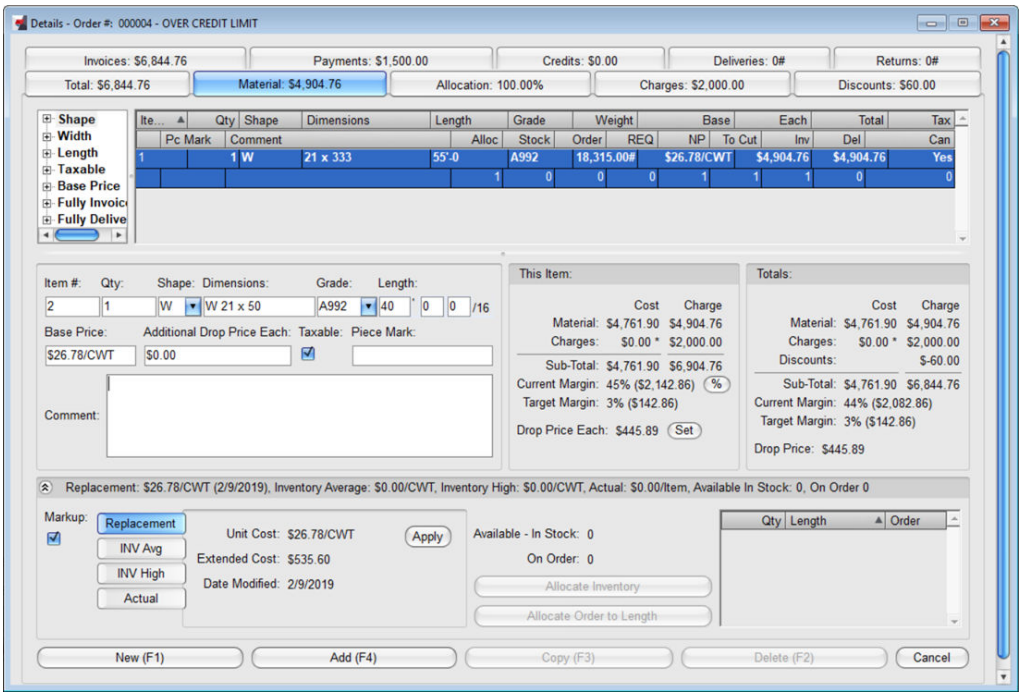
Add a delivery (page 959)

Add a return (page 960)

Add and combine materials

Note that even though you can allocate the material items on a quote, the material items on the quote are actually combined only when you convert the quote into an order. When a quote is converted into an order, the the allocated material items of the quote are automatically reflected to the order.

1. Open the **Material** tab.



2. To add materials to the list, click **New**.
3. Define the properties of the new material according to your needs:
   a. Enter the item number, quantity, length, base price, and additional drop price per item.
   b. In the **Shape**, **Dimensions** and **Grade** lists, select the desired options.
   c. If the item is taxable, select the **Taxable** check box.
   d. If necessary, type a piece mark for the material.

      Adding piece marks can be useful if drawings are available.

e. If necessary, enter any comments regarding the part you are adding.

   The comments will be visible in both the material list and reports.

f. To apply markup for the available costs, select the **Markup** check box.

   Note that you do not need to select the **Markup** check box is you want to use the replacement cost as markup.

g. Select the desired pricing option, and click **Apply**.

h. To confirm the markup, click **Yes** in the confirmation dialog box.

4. Click **Add**.

   Repeat steps 2 to 4 to add all necessary materials.

   Note that as you add materials to the order or quote, the **Material** tab is updated to show the total cost of the material.

5. To allocate the items, do any of the following:

To	Do this
Automatically combine the material items and move them to allocation	a. Click the **Order Entry** ribbon tab. b. On the menu, select **Quick Combine**. When you select **Quick Combine**, the combining is performed according to the combining optimizations set for **Order Entry**. If you want to manually modify the combining setup, select **Combine** instead. When Tekla EPM has finished the combining process, the **Combining Run Results** dialog box opens. c. Review the combining results to make sure that they are satisfactory, and click **Save Combining Run**. d. To close the **Combining Run Results** dialog box, click the **Close** button (**X**) in the upper-right corner.
Allocate a material item from the inventory	Material items can be allocated from the inventory if there is an exact match for the items in stock. If there is no exact match for the material item in the inventory, you need to send the item to a purchase order. For more information, see Send materials to a purchase order (page 952). a. Select the desired material item.

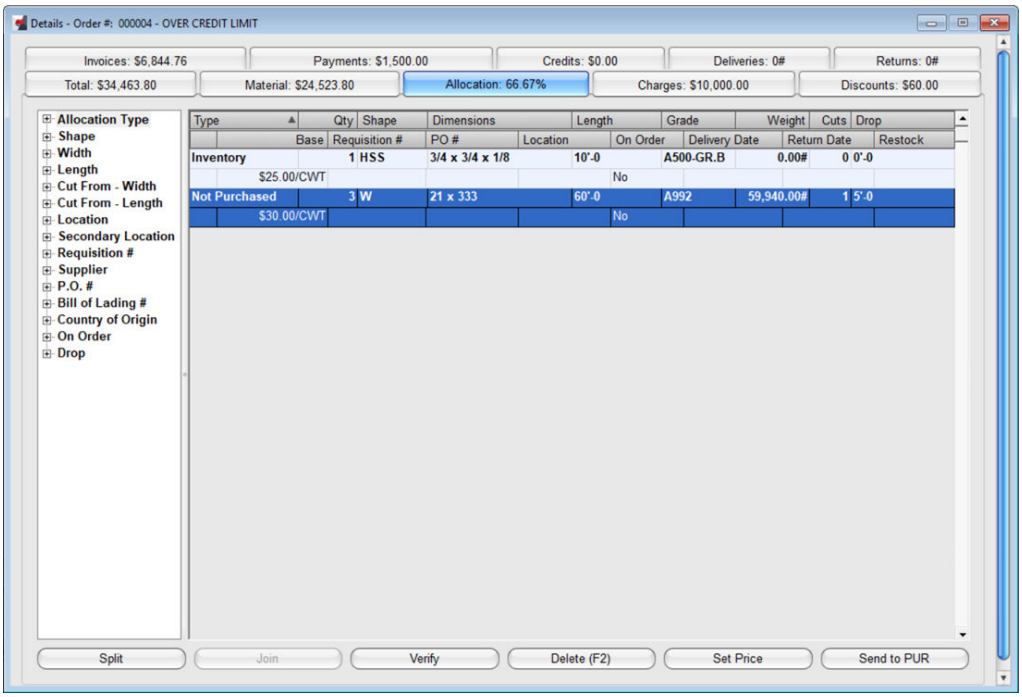
To	Do this
	b. In the list in the lower-right corner of the dialog box, select an inventory item that matches the selected material item. c. Click **Allocate Inventory**. d. To confirm allocating the material item from the inventory, click **Yes** in the confirmation dialog box.
Allocate a material item as an order to length item	a. Select the desired material item. b. At the bottom of the dialog box, click **Allocate Order to Length**. c. To confirm allocating material item as an order to length item, click **Yes** in the confirmation dialog box.

As you combine or allocate materials, the **Allocation** tab is updated to show the percentage of materials that has been allocated.

6. To set the additional drop price per piece, select the item and click the **Set** button in the **This Item** section of the dialog box.
7. To manually set the markup for the current margin, click the **%** button and select an option in the context menu.

Modify the properties of allocated materials

1. Open the **Allocation** tab.



The allocated material items and the restock lengths are displayed.

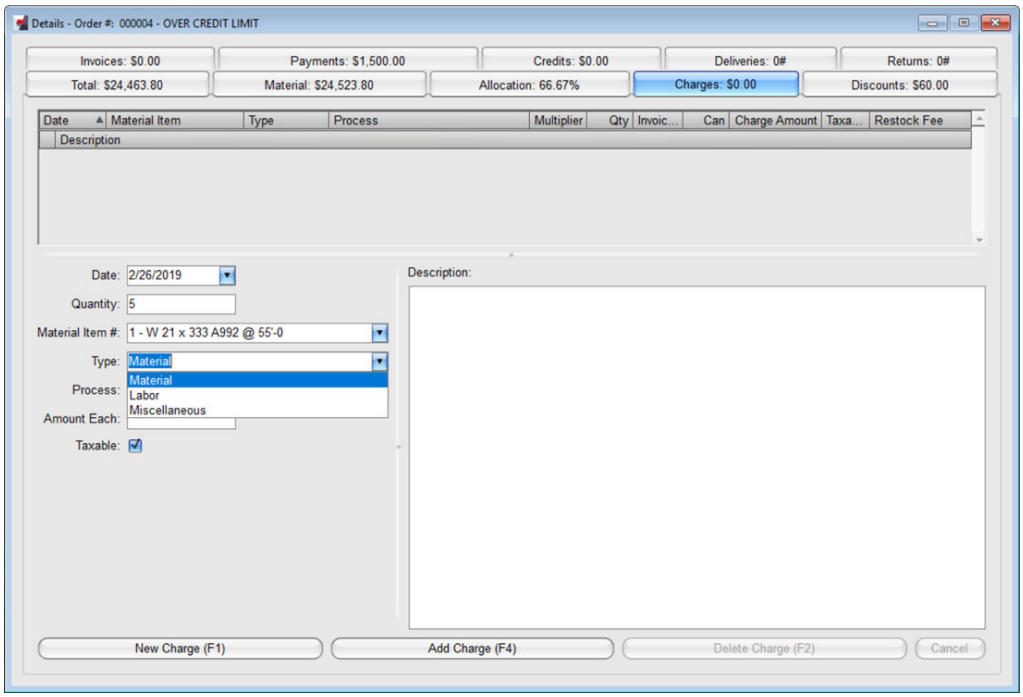
2. Do any of the following according to your needs:

To	Do this
Split an allocated material record	Use the **Split** command to separate a certain quantity of pieces from an allocation record, so that you can handle it differently from other material. For example, you can set a different price for the separated quantity. a. Select the material record that you want to split. b. Click **Split**. c. In the **Enter Value** dialog box, type the quantity that you want to separate. d. Click **OK**. The split quantity is added to the list of allocated material records.
Join allocated material records	The **Join** command is used to re-join a split allocation record. Note that if you have made changes to one of the split records, you cannot join the records back together unless you change the properties back.

To	Do this
	a. Select the material items that you want to join. To select multiple items, hold down **Ctrl**. To select a range of subsequent items, hold down **Shift**. b. Click **Join**. The split material records are joined back together.
Ensure that the allocated materials are available in the inventory	• Click **Verify**.
Delete an allocated material record to re-combine them	a. Select the material record that you want to delete. b. Click **Delete**. c. To confirm deleting the materials from the **Allocation** tab, click **Yes** in the confirmation dialog box. You can now re-combine the items on the **Material** tab.
Set price for an allocated material record	a. Select the material record whose price you want to modify. b. Click **Set Price**. c. In the **Enter Value** dialog box, define a new price for the material item. d. Click **OK**.
Send an allocated material record to purchasing	See Send material items to purchasing (page 952).

Add charges

1. Open the **Charges** tab.



2. At the bottom of the dialog box, click **New Charge**.
3. Select a date for the new charge.
4. Enter the quantity of charges.
5. If necessary, select the material item to which the new charge is applied.

   Note that selecting the material item is optional. You can cancel any charges for which you have not selected a material item.
6. Select the type of charge and the charge process.

   The available charge processes are defined in **Charge Process Maintenance**. For more information, see Create charge processes (page 931).
7. Enter the amount of money per charge.

   The amount will be multiplied by the quantity of charges.
8. If necessary, click to select the **Taxable** check box.
9. Click **Add Charge**.

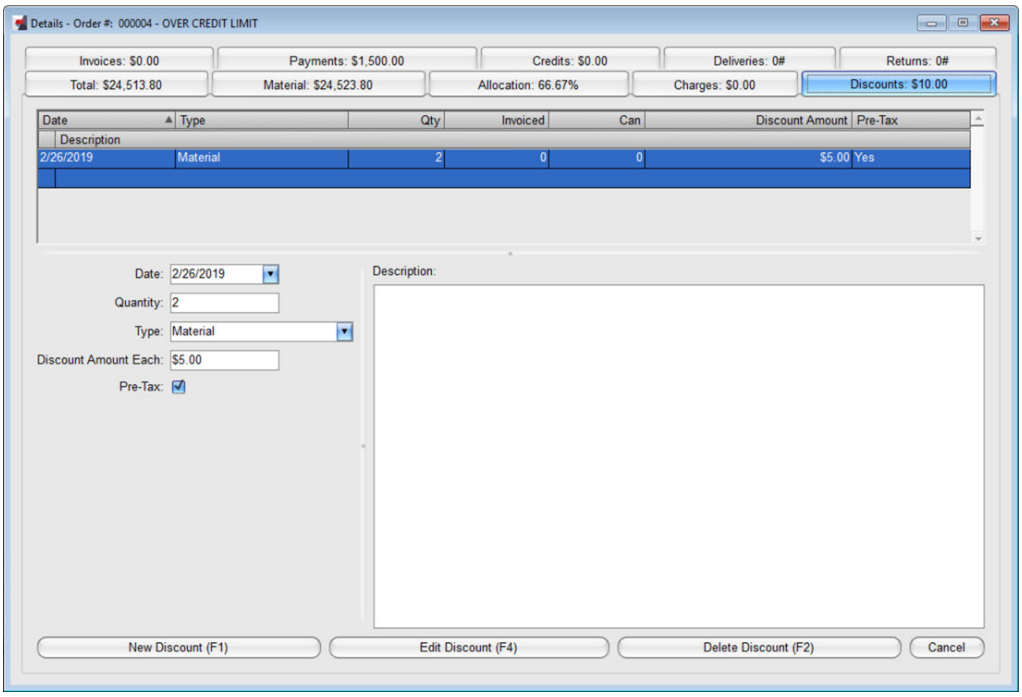
   The charge is added for the material item and will be visible in the total sum of the quote or order.

NOTE To modify or delete the existing charges, click to select the charge and click either **Edit Charge** or **Delete Charge**.

Add discounts

If necessary, you can create discounts for an individual quote or order.

1. Open the **Discounts** tab.



2. At the bottom of the dialog box, click **New Discount**.
3. Select a date for the new discount.
4. Enter the quantity of discounts.
5. Select the charge type to which the discount is applied.

   The options are **Material**, **Labor**, and **Miscellaneous**.
6. Enter the amount of money per discount.

   The amount will be multiplied by the quantity of discounts.
7. If the discounts will be considered before the deduction of taxes, select the **Pre-Tax** check box.
8. Click **Add Discount**.

   The discount is added for the charge type and will be visible in the total sum of the quote or order.

Send material items to purchasing

Use the **Send to PUR** command to send material items on customer orders to the **Purchasing** module. If you want to create invoices for materials that are not allocated in the inventory, send the materials to a purchase order. If you need to request quotes for materials, you should send the materials to a requisition.

Note that materials that are on a quote cannot be sent to a purchase order.

1. Open the order and click **Order Details**.

2. In the **Details** dialog box, open the **Allocation** tab.
3. Select the material item that you want to send to purchasing.

   Note that only material items whose type is **Not Purchased** can be sent to purchasing.
4. At the bottom right corner of the dialog box, click **Send to PUR**.

   A dialog box opens, asking if you want to send the material to a requisition or a purchase order.
5. Select either **Requisitions** or **Purchase Orders**.
6. Double-click the purchase order or requisition to which you want to send the material.

The materials are sent to the selected requisition or purchase order.

You can view and modify the requisition or purchase order in the **Purchasing** module. If you have create an invoice for the materials in the **Order Entry** module.

See also

Add quote or order details (page 945)

Add an invoice (page 956)

Copy quote or order information

Once you have existing quotes and orders in the **Order Entry** dialog box, you can use them as the basis of new quotes and orders. You can then further modify the quote or order details according to the customer's needs. This can be useful when a customer makes an order that is similar to a previous one.

1. In the **Order Entry** dialog box, select the quote or order that you want to use as the basis of the new quote or order.
2. Click the **Order Entry** ribbon tab.
3. On the menu, select **Copy Quote/Order**.
4. To confirm copying information from the selected quote or order, click **Yes** in the confirmation dialog box.
5. Adjust the quote or order information and details according to your needs.
6. At the bottom of the dialog box, click **Save Quote Information** or **Save Order Information**.

See also

Create a quote or an order (page 943)

Add quote or order details (page 945)

Create a quick quote

Quick quotes allow you to quickly enter line items for a quote or an order. You can then either save the line items to an existing quote or order, or create a new quote or order containing the line items.

You can also create quick quotes in the **Inventory** module by clicking the **Inventory** ribbon tab and selecting **Order Entry** --> **Quick Quote** .

1. In the **Order Entry** dialog box, click the **Order Entry** ribbon tab.
2. On the menu, select **Quick Quote**.
3. In the **Quick Quote** dialog box, select the customer and contact.
4. Determine the quantity of items, the shape, dimensions, grade, length, and the base price.

   Once you have selected the shape, grade, and dimension, you can select the item from existing inventory items.
5. If the item is taxable, select the **Taxable** check box.
6. To apply markup to the item you created, select the **Markup** check box.
7. Do one of the following:
   - To save the item to an existing quote or order, click **Save to Quote/ Order**, and double-click the desired quote or order.
   - To create a new quote or order, click **Save to New Quote** or **Save to New Order**, and enter the quote or order information and details.

See also

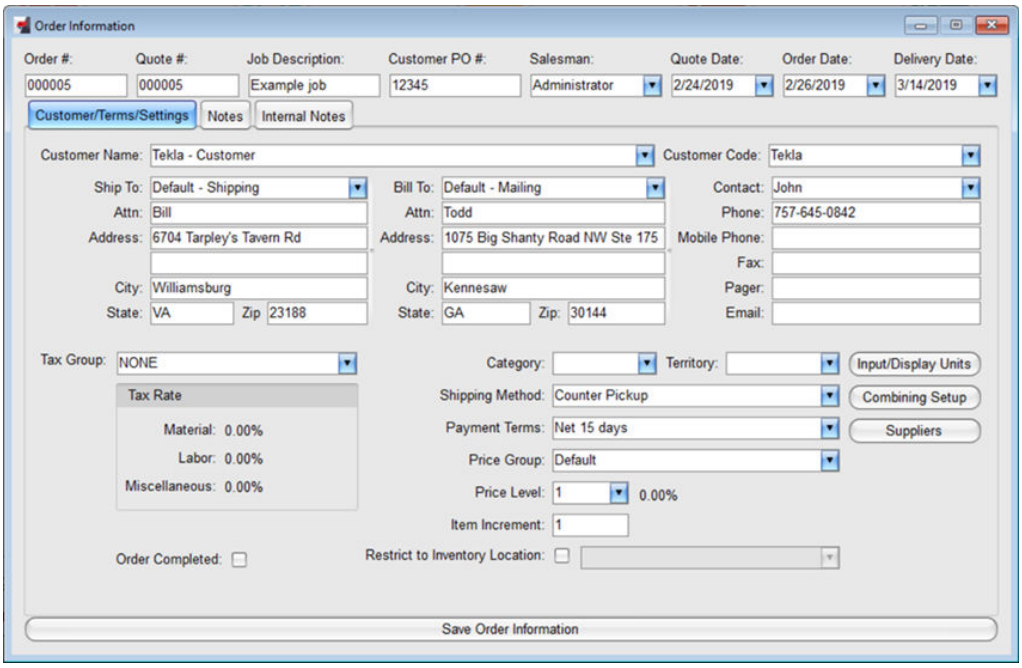
Add quote or order details (page 945)

Create a quote or an order (page 943)

Modify a quote or an order

You can modify all order and quote properties afterwards. For example, you may need to change the customer information, the quote or job number, the tax group and rate used, and the input and display units used.

1. In the **Order Entry** dialog box, select the order or quote and click **Open**.



2. Modify the customer information, tax groups, notes, and other information according to your needs.
3. To save the changes, click **Save Quote Information** or **Save Order Information**.

Convert a quote into an order

Converting quotes into orders is necessary in order to send materials to purchase orders, add invoices for them, and add credit payments.

1. In the **Order Entry** dialog box, select the quote and click **Open**.
2. In the lower-right corner of the **Quote** dialog box, click **Convert to Order**.
3. To confirm converting the quote into an order, click **Yes** in the confirmation dialog box.

The quote is converted into an order, and it will no longer appear in the list of quotes. Note that the dialog box name changes into **Order**.

See also

Convert an order back into a quote (page 955)

Modify a quote or an order (page 954)

Convert an order back into a quote

In Tekla EPM, you cannot delete orders. However, you can convert an order back into a quote and delete the quote. To convert the order into a quote, do the following:

1. In the **Order Entry** dialog box, click to select the order and click **Open**.
2. In the lower-right corner of the **Order** dialog box, click **Convert to Quote**.
3. To confirm converting the order back into a quote, click **Yes** in the confirmation dialog box.

The order is converted back into a quote, and it will no longer appear in the list of orders. Note that the name of the dialog box changes into **Quote**.

See also

Modify a quote or an order (page 954)

Delete a quote

You can delete rejected and unnecessary quotes from the **Order Entry** dialog box.

NOTE Orders cannot be deleted. To delete an order, you first need to convert the order into a quote. For more information, see Convert an order back into a quote (page 955).

---

1. In the **Order Entry** dialog box, select a quote.
2. At the bottom of the dialog box, click **Delete Quote**.
3. To permanently delete the selected quote, click **Yes** in the confirmation dialog box.

11.5 Add an invoice

After you have created a customer order and allocated the material items on the order, you can create invoices for the order. Tekla EPM then allows you to view the created invoice as a report, print it, and send it to the customer.

1. Do one of the following:
   - At the bottom of the **Order Entry** dialog box, click **New Invoice**, and double-click the order for which you want to add the invoice.
   - In the **Details** dialog box, go to the **Invoices** tab, and click **New Invoice**.

2. In the **New Invoice** dialog box, select the invoice date and invoice category.

   The available invoice categories are created in the **Invoice Categories** dialog box that you can access via **Maintenance** --> **Order Entry** --> **Invoice Category Maintenance** .

3. On the **Material** tab, select whether you want to invoice all material or the material that is in stock.

   TIP If you want to invoice only a certain quantity of materials, type the quantity in the **Invoice Qty** field.

4. On the **Charges** and **Discounts** tabs, select which charges and discounts are applied to the current invoice.
5. If necessary, type notes for the invoice.

   The notes will be visible in the invoice.

6. Click **Add Invoice**.

   If you typed a value in the **Deliver Qty** field, Tekla EPM asks you to confirm the delivery and materials.

7. In the confirmation dialog box, click **Yes**.
8. In the **Report Selection** dialog box, double-click **Invoice** to view the invoice that you just created.

After creating the invoice, you can send it to the customer via Microsoft Outlook email. To do so, click **Email Excel** or **Email PDF** in the upper-right corner of the **Tekla EPM Report Viewer**.

You can also export the invoice to an external accounting software, if necessary. For more information, see Export invoices to accounting software (page 957).

Export invoices to accounting software

If you have connected an accounting software with Tekla EPM, you can export any invoices created in the **Order Entry** module to the accounting software. By exporting the invoices to your accounting software, you can make sure that all invoices are found in the same location. Invoices can be exported to either QuickBooks, Timberline, or Peachtree.

1. On the left side of the **Order Entry** dialog box, click **Invoices**. The **Order Entry** dialog box only shows the existing invoices.
2. If you only want to export certain invoices, select them in the **Order Entry** dialog box.
3. Click the **Order Entry** ribbon tab.

4. On the menu, select **Export**, and select a suitable export option. You can export either all invoices visible in the **Order Entry** dialog box or the invoices that you have selected.
5. If you are exporting the invoices to Timberline or Peachtree, enter the necessary details. For example, you may need to define the job name or the date format.
6. Click **Export**.

The invoices are exported to the selected accounting software.

11.6 Add a payment

Once you receive a payment from a customer, remember to add the payment for their order in the **Order Entry** module. When you record the payments to Tekla EPM, it is easier for all Tekla EPM users to stay up to date on customer orders.

1. Do one of the following:
   - In the **Order Entry** dialog box, click **New PaymentNew Payment**, and double-click the order for which you want to add the payment.
   - In the **Details** dialog box, go to the **Payments** tab, and click **New Payment**.
2. Select the payment date and payment method.
3. Enter the amount paid by the customer.

   You can see the remaining amounts to be invoiced and paid on the right side of the dialog box.
4. If necessary, add notes for the payment.

   The notes will be visible in the **Payment Details** report.
5. Click **Add Payment**.

The **Report Selection** dialog box opens. If you want to view the payment information, double-click **Payment Details**.

See also

Add an invoice (page 956)

11.7 Add a credit

If necessary, you can add an additional credit for the customer regarding a specific customer order. Order-specific credits can be added regardless of the customer's credit limit.

1. Do one of the following:
   - In the **Order Entry** dialog box, click **New Credit**, and double-click the order for which you want to add the credit.
   - In the **Details** dialog box, go to the **Credits** tab, and click **New Credit**.
2. Select the credit date and credit method.
3. Enter the amount of credit that you want to add for the customer.
4. If necessary, add notes on the credit.
5. Click **Add Credit**.

   Depending on the credit limit of the customer and the payments that are due, confirmation dialogs may open.
6. If necessary, confirm that you want to add the current credit.

The credit is added for the customer, and the **Report Selection** dialog box opens.

If you want to view the credit information, double-click **Payment Details** and review the payment detail report.

11.8 Add a delivery

You can create deliveries for both quotes and orders. In order to create a delivery, you need to determine the delivery date, quantity to deliver, shipping method, and receiver.

1. At the bottom of the **Order Entry** dialog box, click **New Delivery**.
   - In the **Order Entry** dialog box, click **New Delivery**, and double-click the order for which you want to add the delivery.
   - In the **Details** dialog box, go to the **Deliveries** tab, and click **New Delivery**.
2. In the **Delivery Date** list, select a date.
3. Do one of the following:
   - To deliver a certain quantity of material, in **Qty to Deliver**, type the quantity.
   - To deliver all material in stock, click **Deliver All - In Stock**.
4. Select a shipping method for the delivery.
5. In the **Received By** field, type the name of the receiver.
6. If necessary, add delivery notes.
7. At the bottom of the dialog box, click **Add Delivery**.

8. To continue, click **Yes** in the confirmation dialog box.

   The **Report** dialog box opens, and the delivery information is added to the selected quote or order.

9. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

11.9 Add a return

If the customer returns some or all of the delivered materials in a customer order, we recommend that you add a return. By recording the return in Tekla EPM, you can ensure that the stock information is up to date and that other Tekla EPM users are also aware of the return.

1. Do one of the following:
   - At the bottom of the **Order Entry** dialog box, click **New Return**, and double-click the order for which you want to add a return.
   - In the **Details** dialog box, go to the **Returns** tab, and click **New Return**.
2. Select the return date.
3. Enter the quantity of material to return and the restock and replace information.
4. In the **Returned By** field, type the name of the returner.
5. If necessary, add notes about the return.
6. At the bottom of the dialog box, click **Add Return**.
7. In the **Report Selection** dialog box, do one of the following:
   - View or print the return report.
   - To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

The new return is added for the selected quote or order.

11.10 Create order or quote reports

You can create an order and quote report, view it, and email or print it for the customer.

NOTE The **Report Selection** dialog box automatically shows only the reports for the section of **Order Entry** dialog box in which you are working. To

see a list of all reports, click **Edit Report Types** and move all reports to the **Included** list.

1. In the **Order Entry** dialog box, select a quote or an order.
2. Click the **Order Entry** ribbon tab.
3. On the menu, select **Reports**.
4. In the **Report Selection** dialog box, select a report.
5. According to your needs, do any of the following:

To	Do this
View the report	• At the bottom of the dialog box, click **View**. The report opens in the **Tekla EPM Report Viewer**. You can print, export, and email reports also in the **Tekla EPM Report Viewer** dialog box.
Print the report	a. Use the **+** and **-** signs to modify the print quantity. b. If necessary, modify the printer options on the right side of the dialog box. c. At the bottom of the dialog box, click **Print**. d. Select the printer that you want to use. e. Click **OK**.
Export the report	a. At the bottom of the dialog box, click **Export**. The **Export Options** dialog box opens. b. Select the export file format in the list. c. To change the pre-defined file location and name, click **Browse**, make the changes, and click **Save**. d. To email the exported file to a customer or other person via Microsoft Outlook, select the **Attach to Email** check box. e. To open the exported file after the export, select the **Open Exported Document** check box. f. Click **Export**.

6. To close the dialog box, click the **Close** button (**X**) in the upper-right corner.

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