

Managing Bills of Material

August 18, 2026

Understanding BOM Requirements and Material Demand

A **Bill of Material** (BOM) defines what is needed to provide a finished product or project deliverable. It converts the quantity you need to deliver into the quantities of individual materials, products, or subassemblies required to complete that work.

For example, if one finished product requires several component items, entering a demand for multiple finished products increases the required quantity for each component. This gives your team one place to see the total material demand before purchasing, production, or delivery work begins.

Use **BOM Preparation** and the **BOM Requirements** view to plan materials. The requirements view brings together:

Requirement detail	What it helps you check
Finished Product	Which final product or deliverable needs the material
Component	The individual material or subassembly required
Required Quantity	The total quantity needed to meet BOM demand
Available Quantity	What is currently available in Inventory
Allocated Quantity	What has already been committed to other work
Shortage Quantity	What still needs to be purchased, transferred, or produced
Required Date	When the component must be available
Project	The project connected to the requirement

A single component may appear in several BOMs, projects, or Orders. Pams keeps those requirements visible against the relevant finished product and Project so you can understand why a material is needed, not only how much is needed.

When **Shortage Quantity** is greater than zero, the requirement becomes a purchasing or replenishment decision. Your team can use the shortage to raise an **MRQ**, arrange a **PO**, move stock through a **Transfer Order**, or plan an **Assembly Order** where appropriate.

[SCREENSHOT: BOM Requirements view showing finished products, component materials, required quantities, available quantities, and shortages.]

BOM planning supports the project workflow you already use. For the wider sequence of project records and statuses, see [Managing Project Workflows](#).

Creating BOMs for Products and Project Deliverables

Create a BOM when you need Pams to calculate the materials required for a product, package, assembly, or project deliverable. Start from the relevant **Product** record or open **BOM Preparation**, then enter the finished product that the BOM will produce or support.

1. Open the finished **Product** and select the option to prepare its **Bill of Material**, or open **BOM Preparation** and begin the BOM entry.
2. Select the finished product in the **Product** or **Final Product** field. Confirm that you are working with the correct product before adding materials.
3. Enter the BOM quantity. This is the quantity of finished product that the component quantities are based on. Use the applicable **Unit** so that the basis is clear to everyone reviewing the BOM.
4. Add a component line for every required material, purchased item, or subassembly. For each line, select the **Item**, enter the **Quantity**, and confirm the **Unit**.
5. Where the BOM line provides an allowance for scrap or yield, enter the allowance that reflects the expected usable quantity. This ensures that the planned component requirement is realistic.
6. Set a **Required Date** for component lines when materials need to arrive before the final delivery or production date. Use the planned project or fulfillment timing as your reference.
7. Link the BOM to the relevant **Project** when the materials are needed for project work. If the requirement is tied to a customer commitment, connect it to the related **Orders** where available.
8. Review all component lines, then click **Save** or **Save and Close**.

Do not combine unrelated finished products in one BOM. A BOM should clearly show the components needed for one finished product or deliverable, making shortages and purchasing demand easier to trace.

[SCREENSHOT: Bill of Material entry showing Final Product, BOM quantity, component Item lines, Quantity, Unit, Required Date, and Project.]

Reviewing Required Materials and Stock Shortages

Review **BOM Requirements** regularly before placing POs, committing delivery dates, or starting project fulfillment. This view helps you identify material gaps early and separates immediate needs from items required later in the Project.

1. Open **BOM Requirements** from **BOM Preparation**.
2. Use the available filters to focus on a specific **Project**, finished **Product**, component **Item**, or **Required Date**. Start with the project or delivery period you are actively planning.
3. Check the values on each component line:
 - **Required Quantity** shows the quantity needed by the connected BOM demand.
 - **Available Quantity** shows the quantity currently available in Inventory.
 - **Allocated Quantity** shows quantity already committed to other requirements.
 - **Shortage Quantity** shows the remaining quantity that needs action.
4. Open or expand a component requirement when you need to understand its source. Review the linked BOM, parent or finished product, **Project**, or related fulfillment demand before changing quantities or raising procurement documents.
5. Sort or filter by **Required Date** to prioritize the materials needed first. Components with earlier required dates should be reviewed before items needed for later project milestones or deliveries.
6. Repeat the review for shared materials. A component that appears sufficient for one BOM may still be short when demand from other Projects is included.

A shortage is not always an error. It may correctly show that stock is unavailable, reserved for another Project, or insufficient for the combined demand. Use the linked requirement details before deciding whether to purchase, transfer, or adjust the BOM.

[SCREENSHOT: Filtered BOM Requirements list for one Project, with Required Quantity, Available Quantity, Allocated Quantity, Shortage Quantity, and Required Date highlighted.]

Turning Shortages into Procurement Actions

Use BOM shortages as the starting point for purchasing and replenishment work. Before creating an action, confirm that the component line has a **Shortage Quantity** greater than zero and that its **Required Date** matches the Project or Orders commitment.

1. In **BOM Requirements**, filter the list to show component lines with an outstanding **Shortage Quantity**. Review the **Item**, shortage amount, **Project**, and **Required Date** on each selected line.
2. Group compatible shortages where the same material is needed for more than one BOM or Project. This can help your purchasing team request one combined quantity while retaining visibility of the individual requirements.
3. Create an **MRQ** for materials that need purchasing review or supplier Offers. Carry across the component item, required quantity, relevant **Sub-supplier** information where known, and the required timing.
4. Create a **PO** when the source, quantity, and commercial terms are confirmed. Check that the purchase quantity covers the shortage and that the expected receiving timing supports the required date.
5. If another Inventory location can provide the item, create or coordinate a **Transfer Order** instead of buying the material again.
6. If the component is made internally, use the relevant **Assembly Order** or production work to cover the shortage rather than creating a PO.
7. Return to the BOM requirement line and review its linked purchasing, transfer, or assembly references. Follow the item through the relevant status until it is received and available for the requirement.

A shortage remains operationally important until the required material is available for the intended Project. An MRQ or PO records planned action; it does not mean the material has been received. Continue tracking receiving and Inventory availability alongside the BOM requirement.

For guidance on the material request stage, see [Managing Material Requisitions](#). For supplier Offers and PO work, use [Managing Supplier Offers](#) and [Creating Purchase Orders](#).

Coordinating BOM Demand with Project Fulfillment

Use the **Project** filter and project reference on BOM requirements to keep materials tied to the work they support. This is especially important when the same component is used across multiple customer commitments, Projects, or finished products.

1. In **BOM Requirements**, select the relevant **Project** to view only its finished products and component demand.
2. Review each component's **Required Date** against the Project's planned delivery, fulfillment timing, and work milestones. Materials needed earlier should be

purchased, transferred, or assembled before later-stage components.

3. Identify components shared across several BOMs. Review the total **Required Quantity** across the affected records before raising an MRQ or PO so purchasing can combine demand where appropriate.
4. Keep each requirement linked to its own **Project** even when purchasing is consolidated. This preserves visibility of the material demand behind a combined purchase quantity.
5. When the Project scope changes, update the finished-product quantity or applicable BOM component lines. If the required Project demand has changed, review the revised quantities before creating additional MRQs or POs.
6. Return to **BOM Requirements** after saving changes. Check the updated **Required Quantity**, **Available Quantity**, **Allocated Quantity**, and **Shortage Quantity** before committing to any new purchase or transfer.
7. Use the date-based requirement view to identify whether a delayed material affects an immediate delivery or a later Project milestone. This helps the team focus follow-up on the shortages with the greatest effect on fulfillment.

Avoid treating Inventory as one undifferentiated pool of materials. A quantity may be physically in stock but already reflected in **Allocated Quantity** for another Project. The BOM requirement view helps you plan shared demand without losing control of project-level commitments.

Fixing Incorrect Requirements and Unresolved Shortages

When a BOM requirement looks incorrect, resolve the cause before creating another MRQ, PO, or Transfer Order. Incorrect quantities can lead to over-purchasing, missed delivery dates, or materials being assigned to the wrong Project.

1. Open the requirement line with the unexpected demand and review its linked **Bill of Material**, finished product, and **Project**.
2. If **Required Quantity** is too high, check the BOM quantity first. Then review every component line for the correct **Quantity** and **Unit**. Confirm that the same component has not been added more than once.
3. If a component has a scrap or yield allowance, review the entered value. An incorrect allowance can increase the required component quantity beyond what the Project needs.
4. If a shortage remains after a PO has been placed, check the linked purchasing document and confirm whether the item has been received. A PO alone does not

increase **Available Quantity**.

5. If materials have been received but the shortage remains, verify that the receipt is recorded in the intended Inventory location and is included in **Available Quantity** for the requirement.
6. If a Project has no expected material demand, verify that the BOM, finished product, and related **Orders** or fulfillment record are connected to the intended **Project**.
7. If the **Required Date** is later than the material is actually needed, review the finished-product delivery timing, component lead time, and the **Required Date** on the BOM requirement line. Save the corrected dates, then check the requirement list again.

Use the requirement's linked records to correct the source of the issue rather than manually compensating with extra purchasing. A corrected BOM and Project demand will provide a more reliable view of future shortages.

[SCREENSHOT: BOM requirement detail with links to the Bill of Material, finished product, Project, purchasing documents, quantities, and Required Date.]

Overview

In Pams, a **BOM** is the material plan behind a finished product, package, assembly, or Project deliverable. It connects the quantity you intend to fulfill with the individual components needed to complete that work. The resulting **BOM Requirements** view gives purchasing, project, and Inventory teams a shared picture of demand.

Use BOMs to answer practical operational questions:

- Which materials are required for this Project?
- How much of each component is needed?
- What is already available in Inventory?
- What quantity is allocated to other work?
- Which items have a **Shortage Quantity**?
- When must each component be received, transferred, or assembled?
- Which **MRQs**, **POs**, **Transfer Orders**, or **Assembly Orders** are linked to the requirement?

The BOM process supports the project procurement and delivery cycle. A BOM creates a clear material requirement; an **MRQ** begins the request for materials; RFQs and supplier Offers support commercial selection; a **PO** confirms the purchase;

receiving adds materials to Inventory; and the available materials can then support delivery or project fulfillment.

Keep BOMs focused on the components actually required for the finished product or deliverable. Link them to the correct **Project** and, where applicable, the related **Orders**. This makes shortages traceable and avoids combining unrelated material demand.

The values in **BOM Requirements** should guide decisions, not replace review. Before acting on a shortage, open the requirement and confirm its finished product, Project, required date, and linked procurement status. This helps avoid duplicate purchasing when stock is allocated elsewhere or when an existing PO is still awaiting receipt.

Prerequisites

Before working with BOMs and BOM requirements, make sure the records that define the material demand are available in Pams. BOM planning is most useful when Products, Projects, Inventory, and procurement records are kept current.

Prepare the following:

- A finished **Product** or **Final Product** for the item, package, assembly, or deliverable you need to fulfill.
- Component **Products** or **Items** for every material and subassembly that belongs in the BOM.
- Correct **Unit** values for finished products and components so quantities are interpreted consistently.
- An active **Project** when material demand must be tracked against project work, milestones, or planned delivery.
- A related **Orders** when the BOM is supporting a specific customer commitment.
- Current Inventory information so **Available Quantity** and **Allocated Quantity** provide a useful view of what can support the BOM.
- Relevant **Sub-suppliers** when shortages will progress to an MRQ, RFQ, or PO.
- Planned delivery, fulfillment, or Project dates so you can set meaningful **Required Date** values.

If Products need to be created or corrected before building a BOM, use [Managing Product Records](#). If the work is already organized as a Project, use the workflow established in [Managing Project Workflows](#) before linking material requirements.

After BOM requirements are in place and shortages are being addressed, continue with [Tracking Project Job Costs](#) to review the direct costs connected to the Project.