

Work Centres

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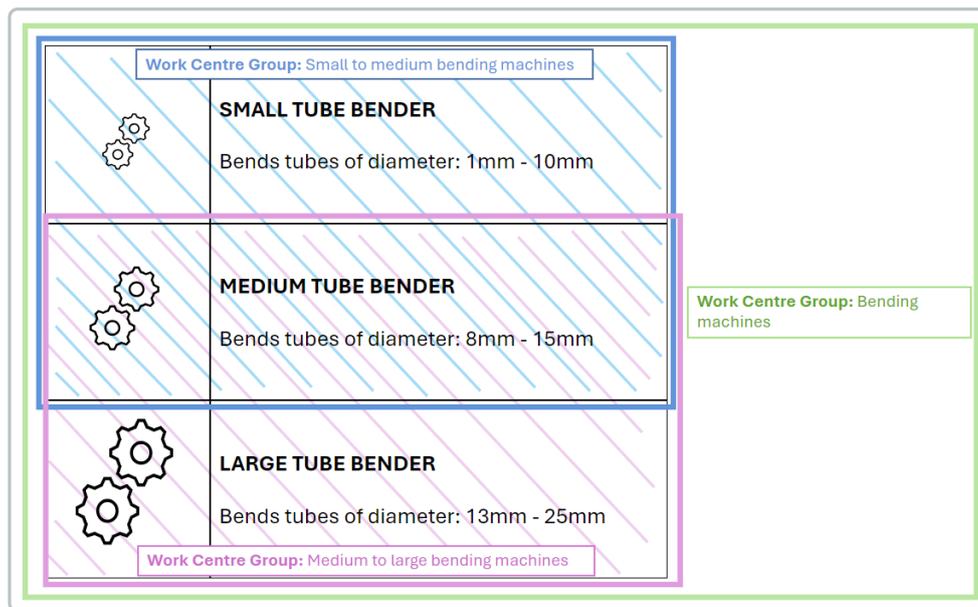
A Work Centre is a place where work takes place. Examples of work centres:

- A machine e.g., CNC robot, oven, lathe, mill.
- An assembly bench or area.
- An area on the floor where specific work takes place.

Work Centre Groups

Work centre groups define the set of work centres on which an operation may be performed. It is also used for filtering reports. Work centre groups that are controlled require additional permissions to edit.

Work centres to work centre groups is a many-to-many relationship. A work centre can be a member of any number of work centre groups and a work centre group can contain any number of work centres. The image demonstrates this many-to-many relationship.



Create a Work Centre Group

To create a work centre group:

1. Navigate to the **Work Centres** screen and click the **Manage Groups** button to display the **Work Centre Groups** screen. The screen is divided into two sections. The left-hand section shows work centre groups with buttons to create and manage them. The right-hand section shows which work centres are assigned and which are not assigned to the selected work centre group.
2. Click the **New** button to display the **New Work Centre Group** input screen.

New/Edit Work Centre Group input screen

The following properties can be defined:

Blue fields in the form are required and are flagged with an asterisk () in this document.*

- **Name***: Provide a name for the work centre group. Make sure the name is easily readable and unambiguous. Note that you cannot have a work centre and a work centre group with the same name. A suggestion is to suffix the group name with the word *Group*.
- **Controlled***: Define whether work centres belonging to this work centre group are controlled. Options: *Yes, No*. If you are intending to reference this work centre group in a controlled workflow, you must set the work centre group as controlled. This "locks down" the group, preventing anyone without the correct permissions changing it without that appropriate change control.
- **SUID**: Often work centre groups in MES will map to higher level 'Work Centres' or 'Resources' in ERP (as ERP typically does not go to the same level of detail as MES) – a SUID can create a direct reference between the MES and ERP for interfacing.

Where Used

Click the **Where Used** button to display where the selected work centre is used. It shows you which products, their workflow type versions and the version statuses that use the work centre.

If you change a work centre assignment to a work centre group, you will be affecting whether or not that work centre can be used to manufacture any products that reference the work centre group anywhere in their workflows (this is why some work centre groups are now controlled). Change management of work centre to work centre groups assignment can be aided by checking prior to any changes where a work centre is currently being used/referenced in workflows.

Revision History

Click the **Revision History** button to display the revision history of the selected work centre group.

Assignment Revision History

Click the **Assignment Revision History** button to display information such as who and when work centres were assigned.

Work Centre

A work centre is where work is carried out.

Create a Work Centre

1. Navigate to **Work Centres** and click the **New** button to display the **New Work Centre** input screen.
2. Complete the **New Work Centre** input screen.

New/Edit Work Centre input screen

The following properties can be defined:

Blue fields in the form are required and are flagged with an asterisk () in this document.*

- **Work Centre Group***: Select a work centre group. This will be the primary work centre group. At any time in the future, you can assign many work centre groups and change which is the default.
- **Asset Type***: Select an asset type.
- **Suid**
- **Name***: Unique name for the work centre. Note that you cannot have a work centre and a work centre group with the same name.
- **Description**: Description of the work centre.
- **Area***: Area that work centre belongs to. The area is part of a larger department. For more information, see [Departments, Areas and Teams](#).
- **Work Centre Cost Per Hour***: The default cost per hour assumed for overhead costs in standard costing. Default 0.00.

You can work out the standard cost of making a product in MES -M. This can be calculated as the *std time for each operation * cost per hour for the work centre(s) linked to the operation.*

- **Labour Cost Per Hour***: The default cost per person per hour assumed for labour costs in standard costing. Default 0.00.
- **Work Pattern***: Used for Rough-Cut Capacity Planning (RCCP) when modelling available capacity minutes assumptions.
- **Capacity***: This is a planning parameter. It does not control the shopfloor. This is the number of units of capacity that this work centre can provide. This is referenced against the capacity utilisation specified in a related operational node. Default: 1. Typically this number equates to the number of concurrent jobs that the machine can run (assuming capacity utilisation of 1 in the operational nodes), but may be used to represent capacity as it relates to size of the work centre (e.g., oven volume compared against volume used for the specific product in the operational node). It is used for Finite Capacity Planning comparing the units of capacity available against the operation node capacity used within a product workflow. For examples:
 - A machine that can only do one job capacity usually would be 1 and operation usage would also be 1.
 - A machine that can do 3 jobs at the same time, the capacity might be 3 and the operation usage would be 1.
 - A furnace that has the capacity of 30m³, the corresponding usage might be 1 m³ for one product and 3 m³ for another.
- **Planned Efficiency***: You can use this field to assume < 100% efficiency when planning. The value should be a decimal number (i.e., put 0.9 to record 90%). If value is set to < 1, planned op duration will increase.
- **Shift Constraint***: Used to constrain when the work centre is available from a planning perspective. Options:
 - **None** (default): Work centre is not constrained – common for physical equipment which is always there (note that it is possible to also constrain related ops in a secondary way (secondary resource) in APS, e.g., by available people to run it).
 - **On/Off**: Work centre is either fully available (on shift) or fully unavailable (off shift) from an APS perspective.
 - **Qty Adjust**: More common for labour based work centres - on a day shift you might have a team of 5 working and on a night shift you might have a team of 2. You want to adjust your capacity in APS accordingly.



Note

The shifts for these constraints are configured in APS and are not set by the work pattern in this UI.

- **Create Device**: If you intend this work centre to have a dedicated device, this can shortcut the device set up process, creating a device for this work centre in the background when you create the work centre.
- **Allow Concurrent Work***: Allows more than one job to be planned/booked onto the work centre at one time. Default: *No*.
- **Can Run Unattended***: Allows the operator to book off a job but leave the work centre in a running state. Default: *No*. For example, the operator can load up an oven then go away and do something else while the items are cooking.
- **Asset Tracking***: Primarily aimed at machine type work centres and allows for tracking of Overall Equipment Effectiveness (OEE) and inclusion in any asset tracking reports and dashboards. Default: *No*.
- **Active***: Sometimes work centres can become obsolete when replaced by newer improved models. In this case you can never delete a work centre as there will be historical data against it. Deactivating a work centre removes it from current tracking reports to help keep the system tidy. Default: *Yes*.

Assign a Work Centre to Devices

To assign a work centre group to devices:

1. Navigate to the **Work Centres** page and select a work centre.
2. Click the **Devices** button to display the **Work Centre Devices** popup.
3. Select one or more devices, and click the **Assign** button to assign them to the selected work centre. Multi-select using the shift or control keys is supported.

Assign Work Centres to Work Centre Groups

To assign a work centre to a work centre group:

1. Navigate to the **Work Centres** screen and click the **Manage Groups** button to display the **Work Centre Groups** screen.
2. Select a **Work Centre Group** in the left-hand section of the screen. The right-hand section of the screen displays all work centres, with the ones linked to the selected work centre group, listed at the top.
3. Select one or more work centres and click the **Assign** button to assign them to the selected work centre group. Multi-select using the shift or control keys is supported.

Assign/Unassign a Work Centre to Multiple Devices

You may wish for a work centre to be visible from more than one device on the shopfloor. This can be configured from the work centre screen.

1. Click the **Devices** button on the **Work Centres** screen to display the **Work Centre Devices** pop-up.
2. Select a device and click the **Assign** button.
3. To unassign a device, select an assigned device and click the **Unassign** button.

Sequence Work Centres

Work centres in a work centre group can be sequenced for planning. The sequence defines planning priority order for work scheduled to work centres within a work centre group.

1. Navigate to the **Work Centres** screen and click the **Manage Groups** button to display the **Work Centre Groups** screen.
2. Select the work centre group you want to manage.
3. Click the **Sequence** button to display the **Sequence Work Centres** screen.
4. Select a work centre and click the **Edit Sequence** button and provide the sequence that you want the workstation to be scheduled.

Work Centre Locations

You may choose to dynamically restrict stock to only be consumed from an associated work centre location. For example, a food manufacturer where you only want to consume (esp. backflush) materials staged specifically to the line you are working on.

In some ERPs the location of stock on the shopfloor may be important from a transaction perspective. For example, in SAP, available stock needs to be generated in a specific virtual location before it is 'moved' to a real location – you may want to model this in MES-M by locating the work centre in the virtual location so the inventory generated in MES-M is in the right place for a completion transaction interface.

You may also want to clearly segregate stock on the shopfloor versus stock in the warehouse for planning, so you may want to link work centres to the shopfloor location.

Assign Locations to Work Centres

1. Navigate to the **Work Centres** page and click the **Locations** button.
2. In the **Locations** pop-up, select the locations you want to assign to the workstation and click the **Assign** button.
3. To unassign a location, select an assigned location and click the **Unassign** button.

Copy a Work Centre

When a work centre is copied, it will have the same properties as the original. You can choose a work centre group for the copied work centre.

To copy a work centre:

1. Navigate to the **Work Centres** page, select a work centre from the list, and click the **Copy** button to display the **Copy Work Centre** input screen.
2. Complete the **Copy Work Centre** input screen.

Copy Work Centre input screen

The following properties can be defined:

Blue fields in the form are required and are flagged with an asterisk () in this document.*

- **Target Group***: Select the work centre group that the copied work centre will belong to.
 - **SUID**
 - **Name***: Name of the new work centre.
 - **Description**: Description of the new work centre.
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