Oracle® Retail Macro Space Management

Fixture Studio User Guide
Release 13.2.3

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Oracle® Retail Macro Space Management Fixture Studio User Guide, Release 13.2.3

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Value-Added Reseller (VAR) Language

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Preface

This guide enables you to configure the Oracle Retail Space Management, along with the server-side components required for the application.

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Related Documents

For more information, see the following documents in the Oracle Retail Macro Space Management Release 13.2.3 documentation set:

- *Oracle Retail Macro Space Management Administration User Guide*
- *Oracle Retail Macro Space Management Administration Module Online Help*
- *Oracle Retail Macro Space Management Configuration User Guide*
- *Oracle Retail Macro Space Management Configuration Module Online Help*
- *Oracle Retail Macro space Management Data Importer User Guide*
- *Oracle Retail Macro space Management Data Importer Online Help*
- *Oracle Retail Macro Space Management Fixture Studio Online Help*
- *Oracle Retail Macro Space Management Product Studio User Guide*
- *Oracle Retail Macro Space Management Product Studio Online Help*
- *Oracle Retail Macro Space Management Store Planning User Guide*
- *Oracle Retail Macro Space Management Store Planning Online Help*

- *Oracle Retail Macro Space Management Report Designer User Guide*
- *Oracle Retail Macro Space Management Report Designer Online Help*
- *Oracle Retail Macro Space Management Release Notes*
- *Oracle Retail Macro Space Planning Install Guide*
- *Oracle Retail Macro Space Planning License Information*

For more information on In-Store Space Collaboration see the following documents in the Oracle Retail In-Store Space Collaboration Release 13.2.3 documentation set:

- *Oracle Retail In-Store Space Collaboration User's Guide*
- *Oracle Retail In-Store Space Collaboration Online Help*
- *Oracle Retail In-Store Space Collaboration Release Notes*

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

https://support.oracle.com

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 13.1) or a later patch release (for example, 13.1.2). If you are installing the base release and additional patch and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:
http://www.oracle.com/technology/documentation/oracle_retail.html

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Documentation should be available on this Web site within a month after a product release.

Conventions

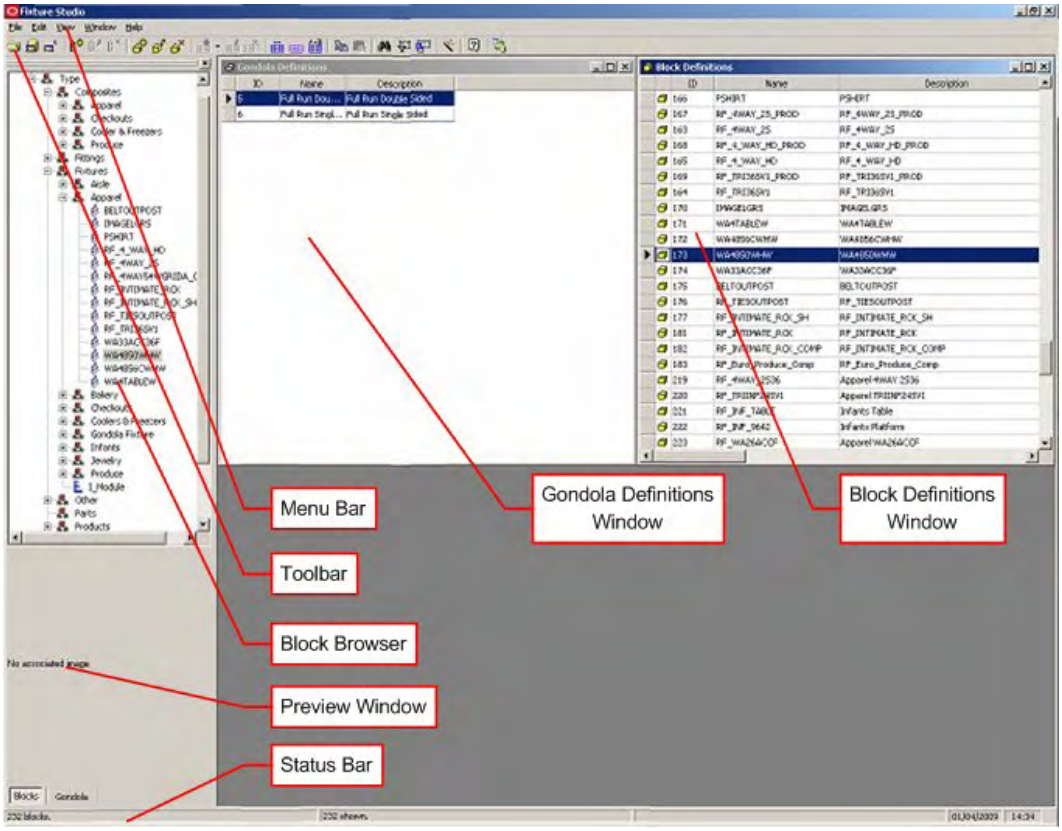
Navigate: This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement "the Window Name window opens."

```
This is a code sample
    It is used to display examples of code
```

1

Fixture Studio Components

The **Fixture Studio Window** has a number of parts.



The **Menu Bar** gives access to a number of pull down menus.

The **Toolbar** allows the selection of a number of options relative to fixture and gondola creation.

The **Block Browser** has a hierarchical tree of fixtures or gondolas depending on which tab is selected.

The **Preview Window** in the Object Browser gives a simplified image of the selected object.

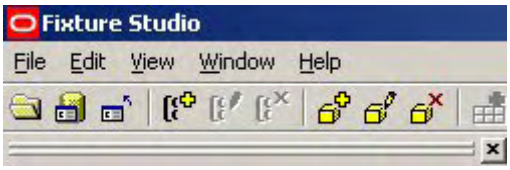
The **Status Bar** at the bottom of the screen gives information on the number objects selected, status of current action, etc.

The **Gondola Definitions Window** contains a list of all gondolas held in the central database.

The **Block Definitions Window** contains a list of all blocks (fixtures, fittings, etc) held in the central database.

Menu Options

The **Menu Bar** contains five options.



The **File** Pull down menu allows blocks to be read and saved. It also allows blocks to be loaded to and saved from the drawing. Finally, it allows the blocks themselves to be subjected to operations such as normalizing or producing 3DS files.

The **Edit** pull down menu allows block definitions to added, edited and deleted.

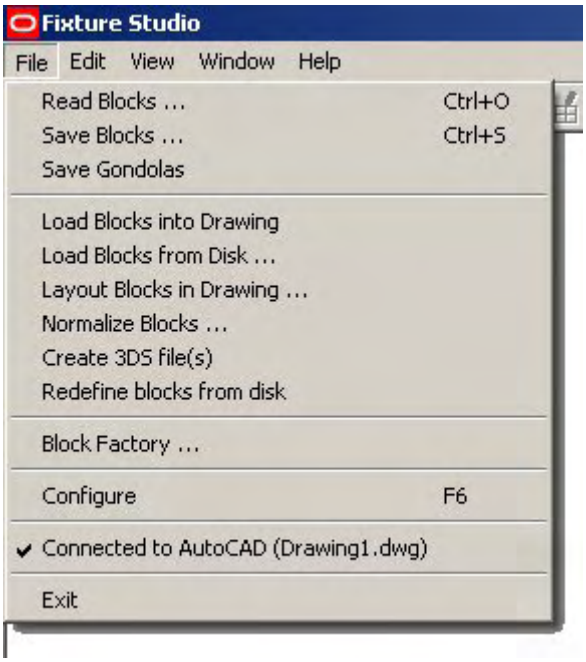
The **View** pull down menu allows the way block definitions display in Fixture Studio to be defined.

The **Window** pull down menu allows the user to specify the way the various windows and dialogue boxes display in Fixture Studio.

The **Help** pull down menu calls this Help Module and also allows the user to see system information for the computer the software is running on.

File Pull Down Menu

The **File Menu** has varying options concerned with reading and saving blocks, AutoCAD operations and connection to AutoCAD.



> **Note**: The Load Blocks into Drawing, Load Blocks From Disc, Laying Out Blocks, Normalize Blocks, Create 3DS Files and Redefine blocks from disc will be greyed out unless the Connect to AutoCAD option has been checked.

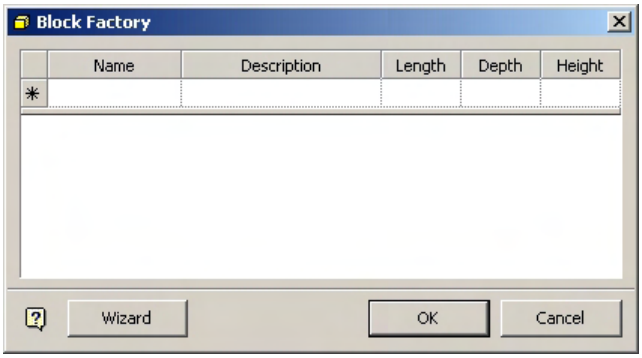
Read Blocks reads the details of all blocks from the central Macro Space Management database or the drawing into Fixture studio.

Save Blocks saves the details of all blocks back to the central Macro Space Management database from Fixture studio.

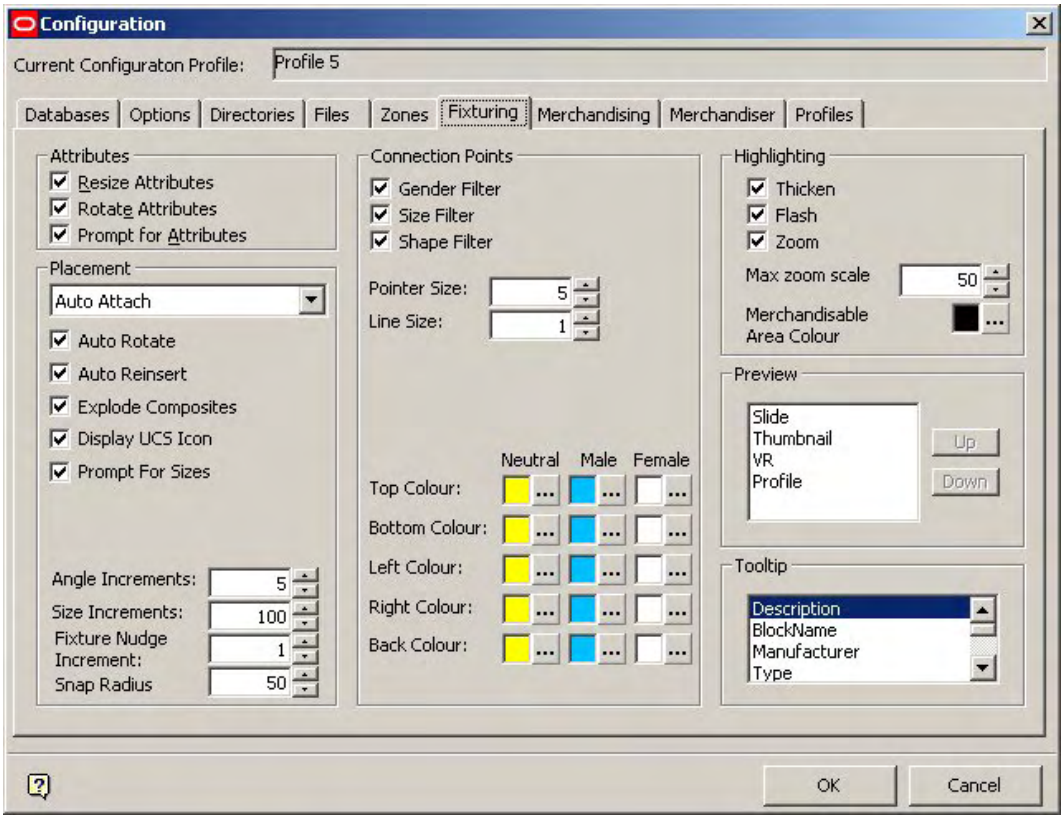
Save Gondolas saves the details of any newly created gondolas back to the central Macro Space Management database from Fixture studio.

Load Blocks into Drawing, Load Blocks From Disc, Laying Out Blocks, Normalize blocks Create 3DS Files and Redefine blocks from disc are discussed in more detail here

Block Factory is a wizard intended to assist in block creation. Clicking on Block Factory will bring up the Block Factory dialogue box.



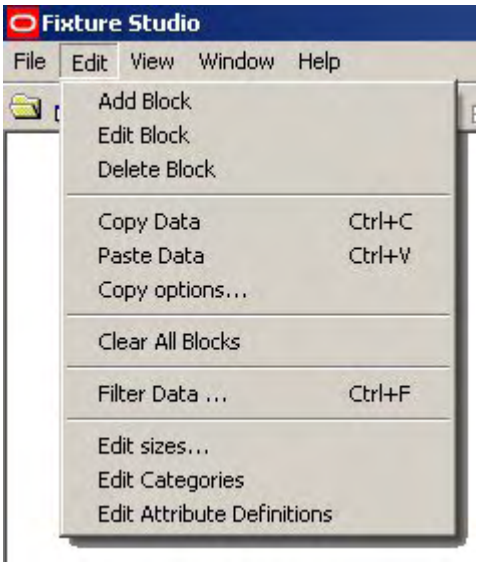
Configure brings up the Configuration Module. This can be used to change fundamental settings in Macro Space Management.



Connect to AutoCAD opens the AutoCAD environment (if not already open) and enables a number of block editing commands that cannot otherwise be used.

Edit Pull Down Menu

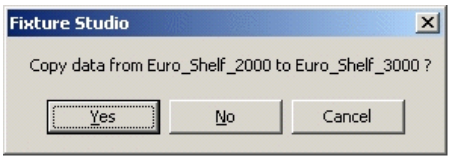
The **Edit Menu** has varying options concerned with editing block descriptions.



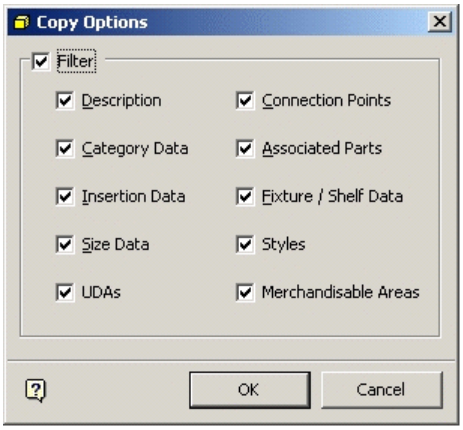
Add Block, **Edit Block** and **Delete Block** result in a block being added, or the selected block being either edited or deleted.

Copy Data and **Paste Data** allow information to be copied from one block to another, or copied into a block being added.

If data is going to be overwritten, a confirmatory warning will appear.

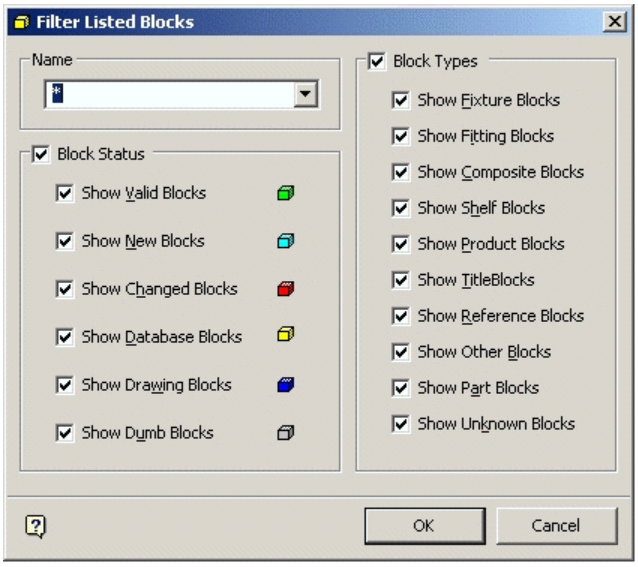


Copy brings up a dialogue box allowing the data being copied to be filtered.

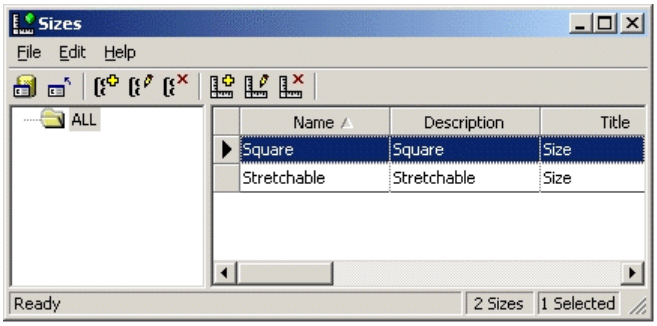


Clear all Blocks removes all blocks from the list of blocks currently loaded into Fixture Studio.

Filter Data brings up the Filter Listed blocks dialogue box.



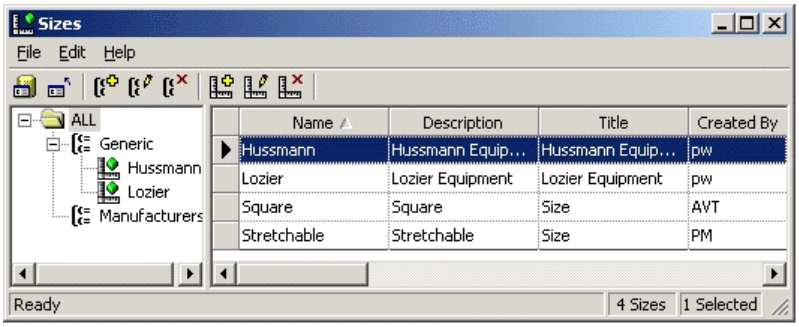
Edit Sizes brings up the Edit Sizes dialogue box.



Editing Sizes

Sizes are used to collect together a set of size rules.

When a block is associated with a size, it is associated with all the size rules. This allows multiple sizes to be assigned to a block.

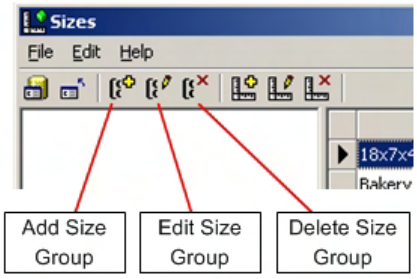


Note: If a Size is changed, all the blocks that reference that size will have their associated size rules changed.

Setting Up Size Groups

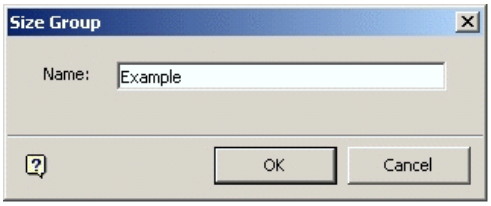
Size Group Classes are used to organize Size Groups into sub-divisions that make it easier to find the required Size Groups.

Size Group Classes thus have an administrative function, but do not directly affect the data stored in Size Groups.



Adding a Size Group is a function that allows a hierarchical tree to be built.

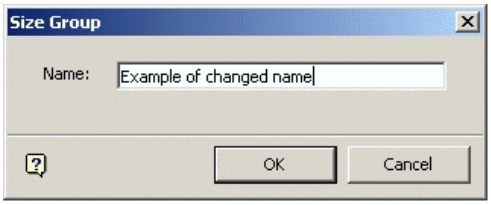
To add a Size Group highlight the node in the hierarchical tree to which the new Size Group is to be added and click on the Add a Size Group icon. The Size Group dialogue box will appear.



Type in the name of the required Size Group then click on OK. The Size Group will be added to the hierarchical tree.

Editing a Size Group

Size Group names can be edited. To do this, highlight the required Size Group and click on the edit a Size Group icon. The Size Group dialogue box will appear.



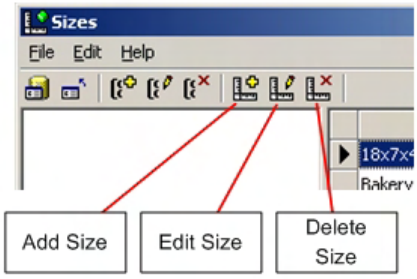
Change the name of the Size Group then click on OK. The Size Group will be amended in the hierarchical tree.

Deleting a Size Group

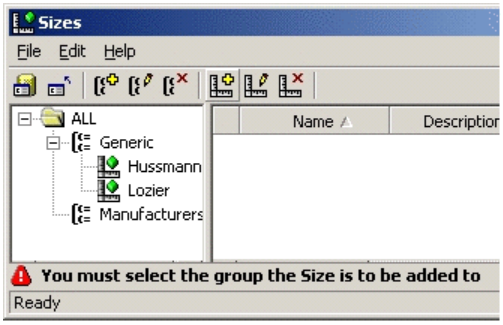
To delete a Size Group, highlight the group and click on the Delete a Size Group icon on the toolbar.

Adding a Size

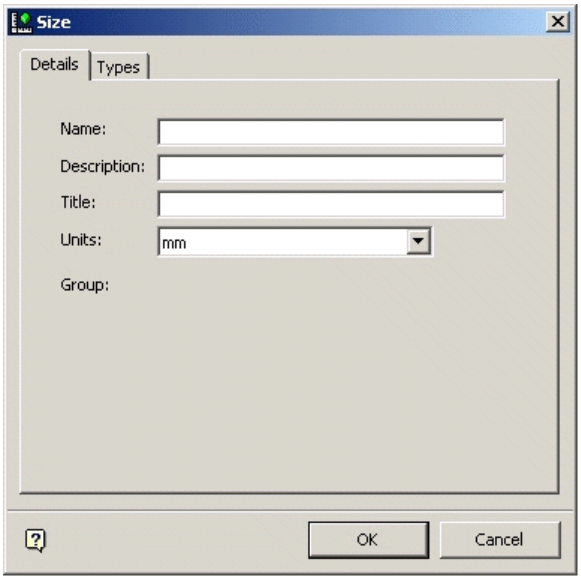
To **Add a Size** click on the Add a Size icon in the section of the toolbar concerned with Adding, Editing and Deleting Sizes.



When adding a Size, first select the Size Group it is to be added to by clicking on it. If this is not done, an error message will result.



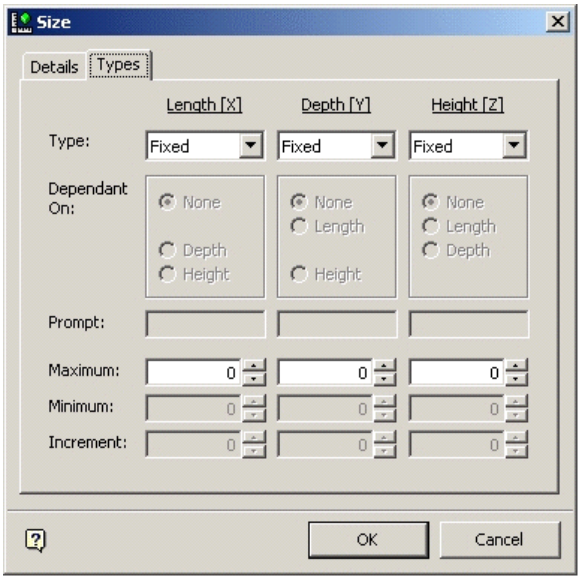
If a Size Group has been selected, the Size dialogue box will appear.



- While in the Details Tab, type in the Size name, an expanded Description and a Title.
- Also select the correct units for the Size.
- Click on OK to confirm and the Size Group will be added to the hierarchy.

Size Types

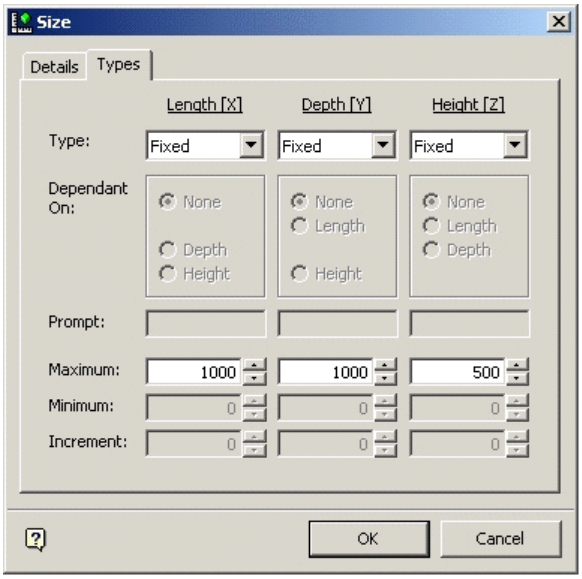
There are a number of options for setting size rules. These are selected from the Type drop down list



Options are:

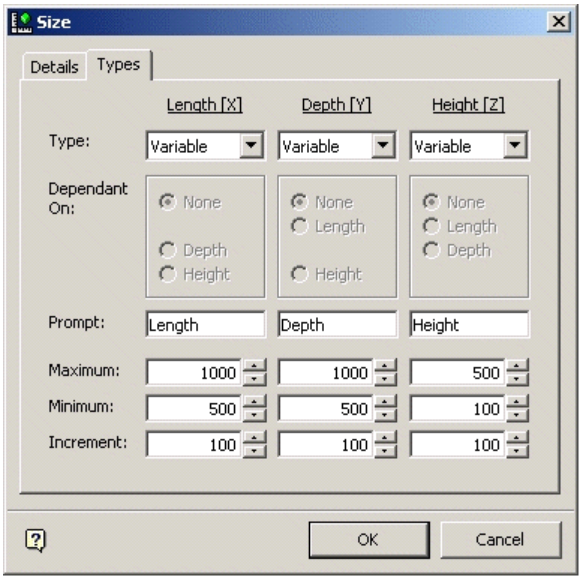
- Fixed.
- Variable
- Choice
- Match
- Delta
- Ratio
- Locked

Fixed Sizes



When setting fixed sizes, only a single dimension can be input for length, depth and height. All other options are grayed out.

Variable Sizes



Variable Size allows the user to set a number of discrete sizes that can be selected when the block is inserted into the AutoCAD or Virtual Reality environments.

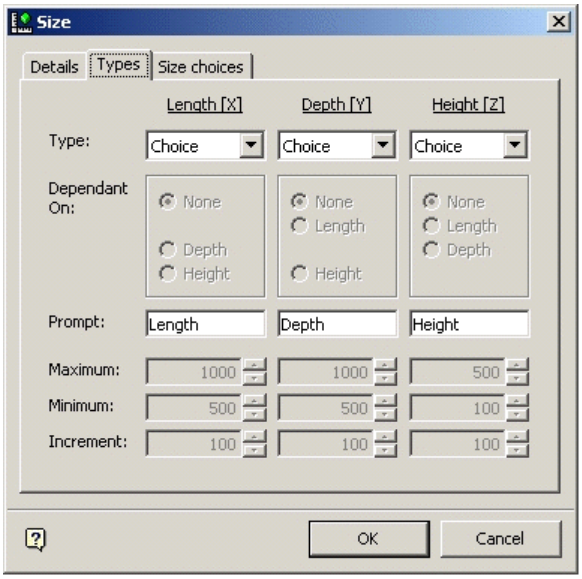
Prompt enables the user to type in a brief description of that dimension; for example length, Depth or Height.

The Maximum and Minimum dimensions can then be set: in the above example, the length has been defined as having a minimum of 500 mm and a maximum of 1000 mm.

The Increment can then be set to specify the change from one permissible dimension to another.

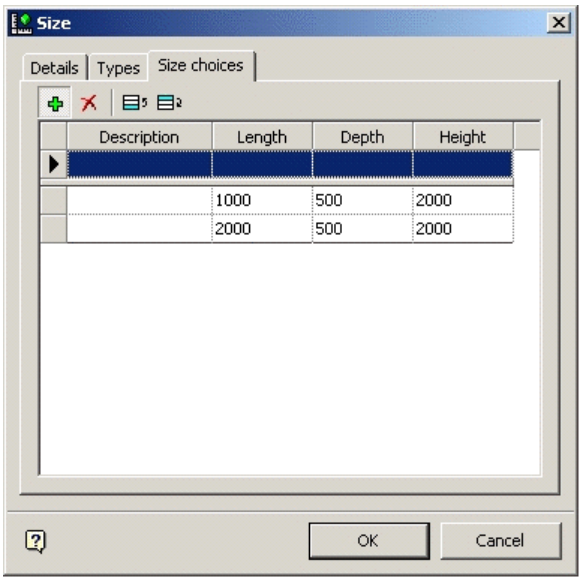
For the above example, the length has a minimum value of 500 mm and a maximum value of 1000 mm. Because the increment has been set to 100 mm, the user will be presented with options to set the length to 500, 600, 700, 800, 900 or 1000 mm when the block is inserted.

Choice allows the user to set in a number of predefined size options.



When this option is selected from the Type drop down menu an additional Size Choices Tab will appear.

The names entered in the prompt fields in the Types tab will appear in the Size Choices tab as the names of the dimensions.



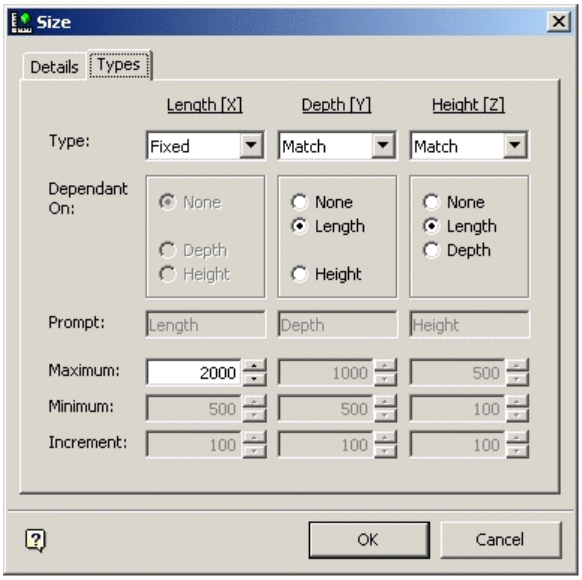
The actual dimensions can be added in the Size Choices Tab.

	Add New Choice
	Delete Selected Choice
	Move Choice Up
	Move Choice Down

The toolbar allows the user to add, delete and re-order the list of dimensions.

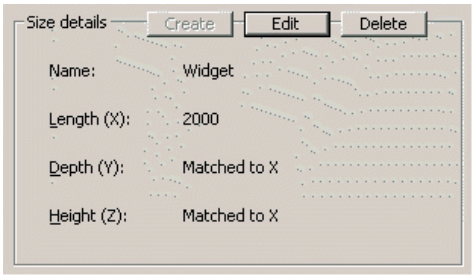
Match Sizes

Match Sizes enables the user to link one dimension to another.



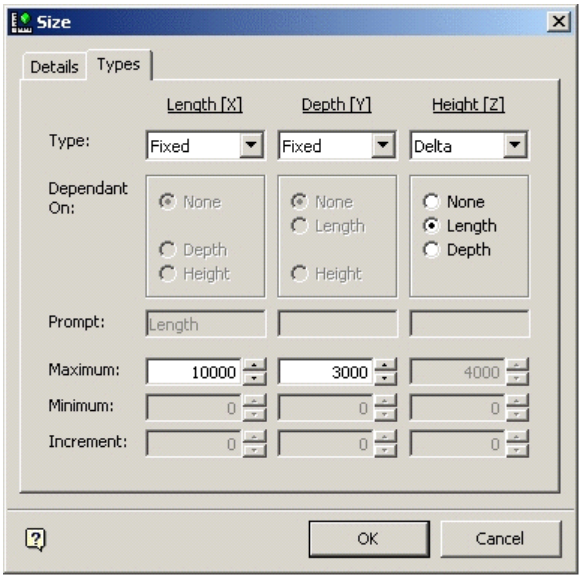
At least one dimension must be defined using another size option, for example Fixed.

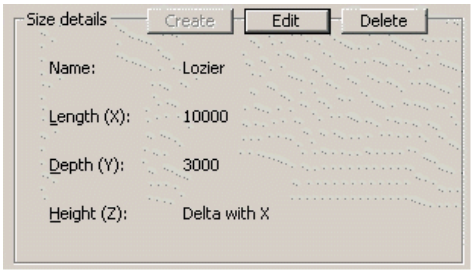
The other dimension(s) can be slaved to that specified dimension. For example if the length has been fixed at 2000 mm, then the depth and height can be specified as matching the length. This will result in a block where the length, depth and height all match.



Delta

Delta will allow a user to select another dimension and specify the current dimension to match that plus/minus a specified increment.

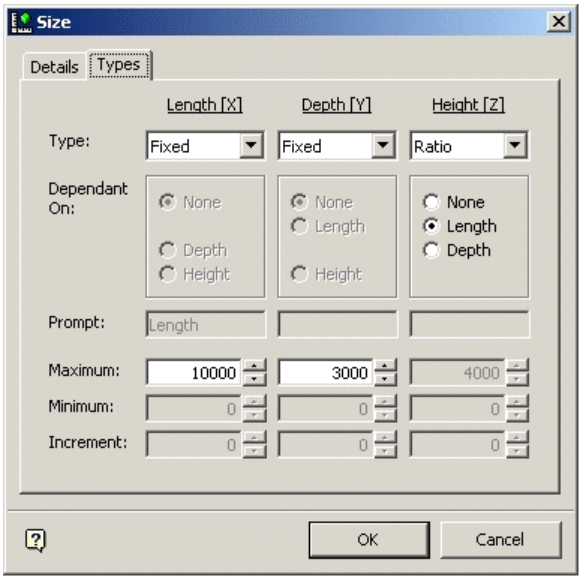


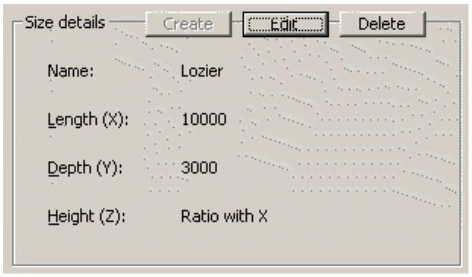


This functionality is not implemented in this release of Macro Space Management.

Ratio

Ratio will allow a user to select another dimension and specify the current dimension to be multiplied by a specific ratio.

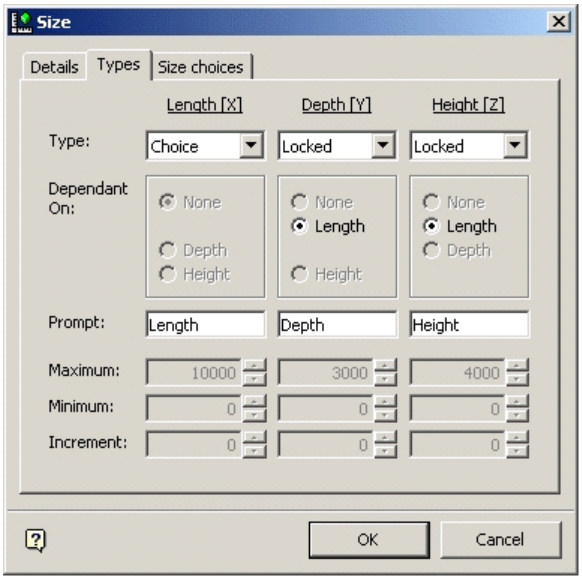




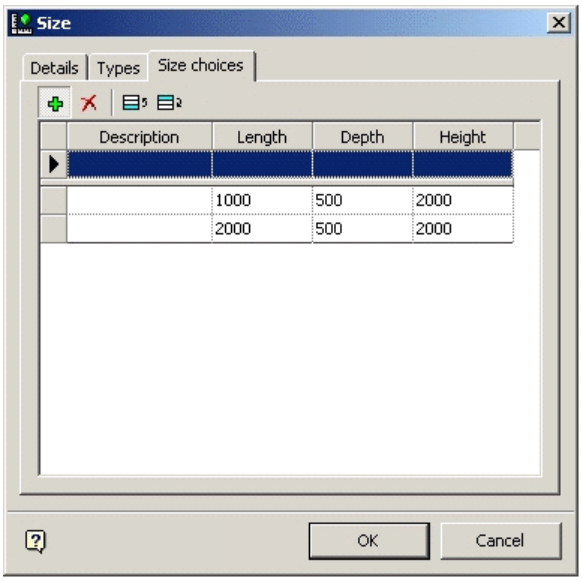
This functionality is not implemented in this release of Macro Space Management.

Locked

Locked sizes enable the choices visible to the user to be restricted to only one or two dimensions when the dialogue appears during insertion.

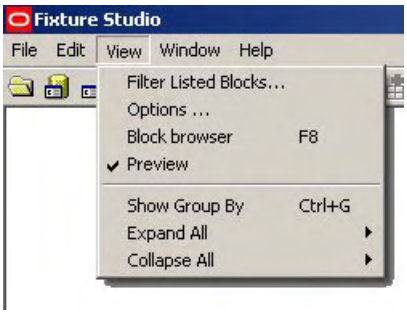


For this option to work, lists of dimensions must first have been input into the Size Choices tab.

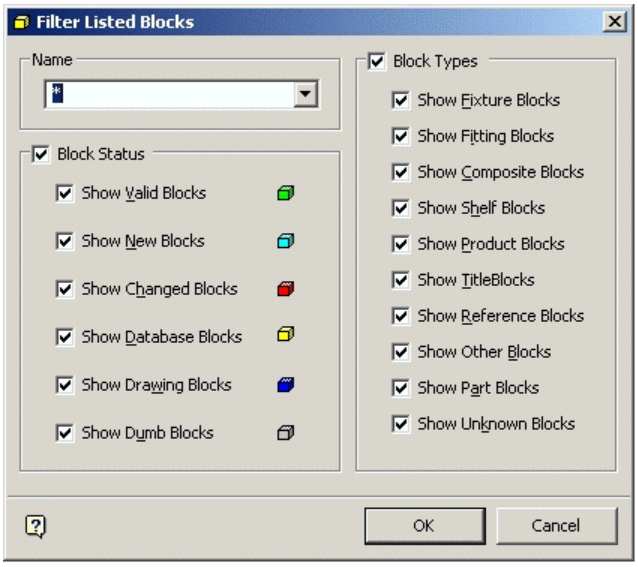


View Pull Down Menu

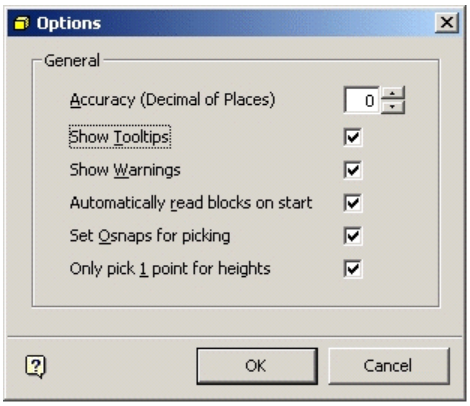
The **View Menu** has varying options concerned with filtering and viewing blocks.



Filter Listed Blocks brings up the Block Filter. This can be used to select specific classes of blocks.



Options brings up the Options dialogue box. This can be used to set some options determining how Fixture Studio Functions



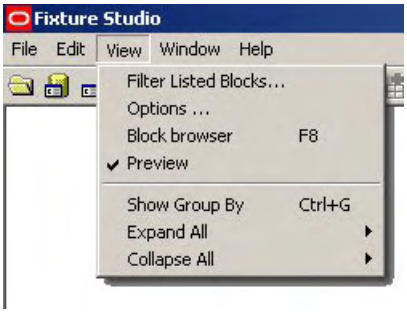
Block Browser toggles the Block Browser (Object Browser) on and off.

Checking or un-checking **Preview** toggles the preview window in the object browser on and off.

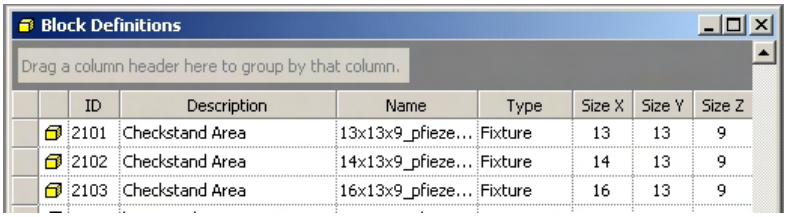
The remaining three options allow blocks or gondolas to be grouped.

Grouping Operations - Edit Menu

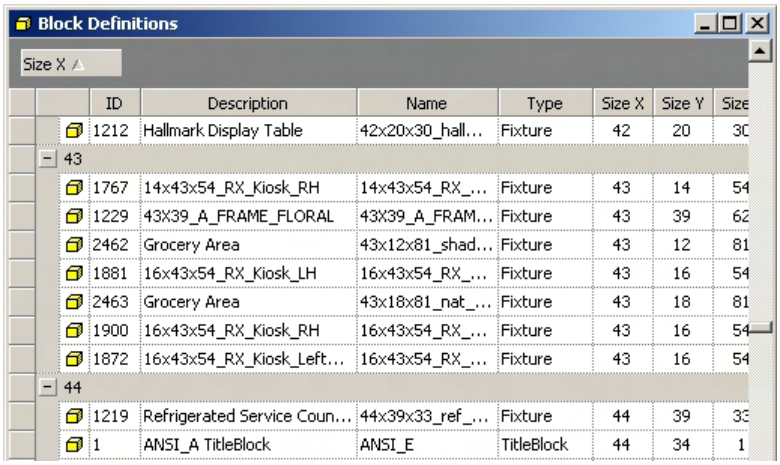
There are three options on the View Pull Down Menu that allow blocks with a common criteria to be grouped together, then the list expanded or collapsed.



Show Group By (<Ctrl> + G) brings up a box above the table of blocks descriptions titled 'Drag a column header here to group by that column'.



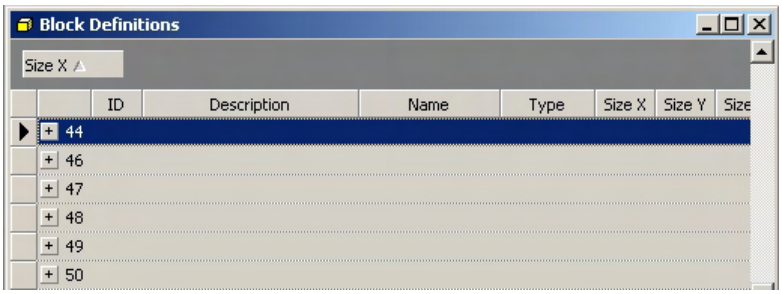
When this is done the list of blocks is sorted into groups specified by the header dragged into the box.



Clicking on the dragged column header will change the direction the data is sorted.

The grouped data can be **expanded** or **collapsed** using the options on the View pull down menu.

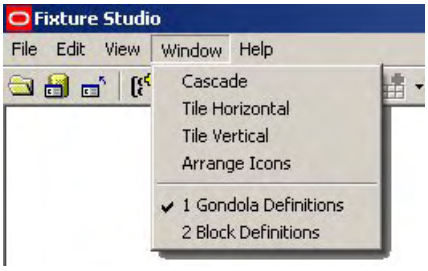
A collapsed view is as below.



Any individual section of grouped blocks can be expanded or collapsed by clicking on the '+' or '-' signs to the left of the section.

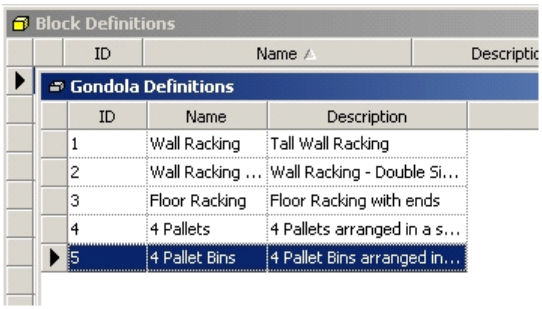
Window Pull Down Menu

The **Window Pull Down Menu** has two groups of options.

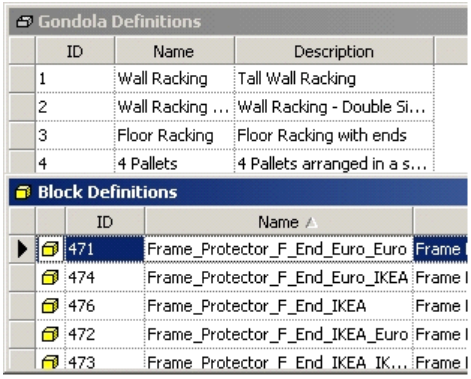


The first set of options arranges the active windows within Fixture Studio.

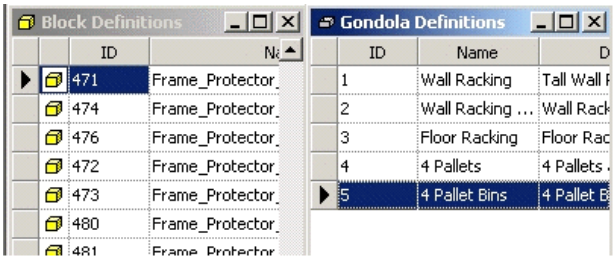
Cascade arranges them so they are stacked sequentially across the diagonal of the screen.



Tile Horizontal arranges then so they all share the available space horizontally.



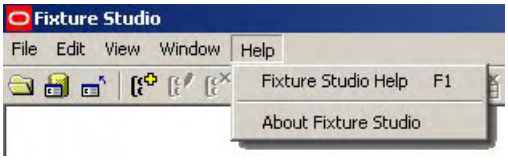
Tile Vertical arranges then so they all share the available space vertically.



The second set of options allows switching between those windows. Clicking on either **Gondola Definitions** or **Block Definitions** will cause that window to become active within Fixture Studio.

Help Pull Down Menu

The **Help Pull Down Menu** has two options.



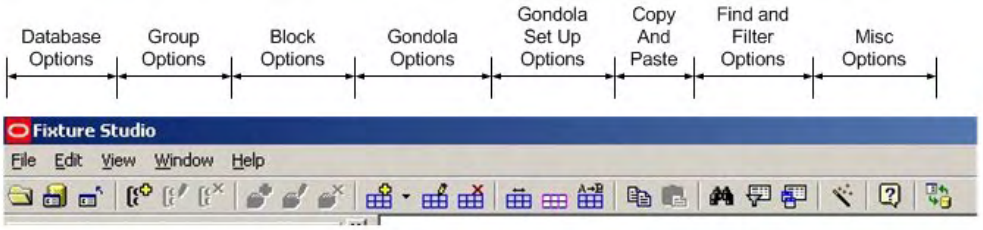
Clicking on **Block Details Help** (or pressing the F1 function key) will call this help module.

Clicking on **About Block Details** will bring up a dialogue box with information on the version of Fixture Studio the user has.

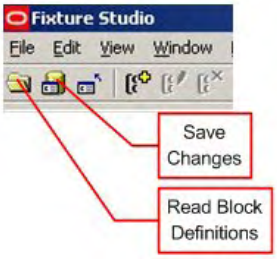
Toolbar

Options on the Toolbar

The **Toolbar** gives access to a series of Fixture Studio options (some of which are also available from the menu bar).



Reading Block Definitions



Read Block Definitions

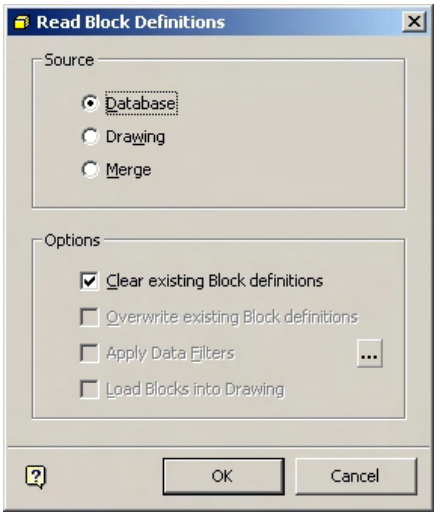
There are three possible ways of reading Block Definitions into Fixture Studio:

- Reading from the database
- Reading from the drawing
- Merging data from the database and active drawing

Reading from the database

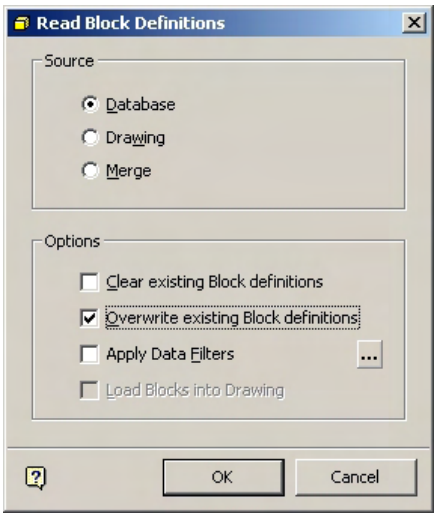
Reading from the database allows the user to clear existing block definitions, or to overwrite the definitions; with or without filtering data.

Clear existing Block definitions



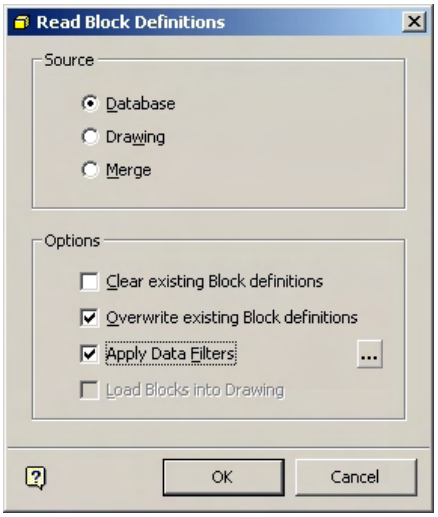
If this option is selected, all existing Block Definitions in Fixture Studio are deleted and new definitions read in from the central database.

Overwrite existing Block definitions

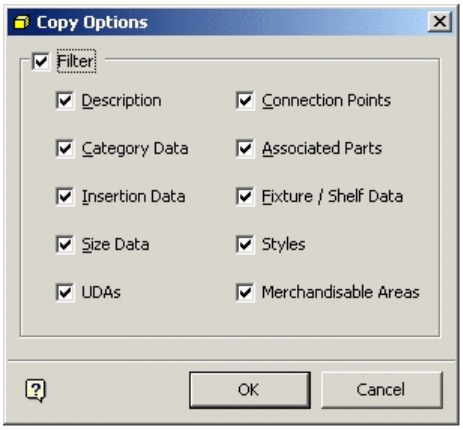


If this option is selected, any block definitions imported from the central database will overwrite the corresponding data in the Block definitions with similar names in Fixture Studio.

Overwrite existing Block definitions with Data Filters



If this option is selected, the filtered data from any block definitions imported from the central database will overwrite the corresponding data in the Block definitions with similar names in Fixture Studio.

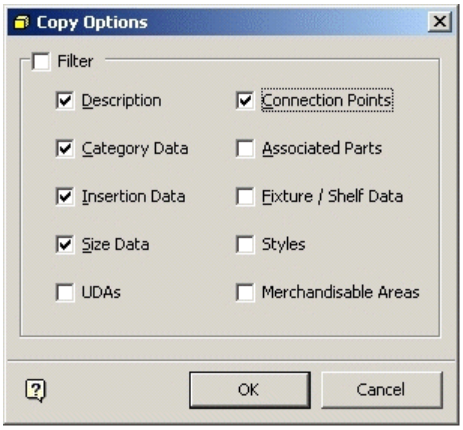


All data options from the central database can be filtered (unlike Block definitions imported from a drawing, where options are more limited).

Reading from the Drawing

Reading from the drawing is similar to reading from the database, in that existing Block definitions in Fixture Studio can be cleared or overwritten, with or without the use of filters.

The difference in reading from the drawing is that only the AutoCAD based information is imported (and filtered).



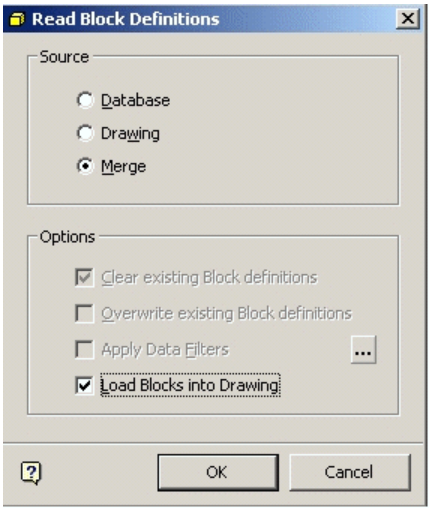
The information that can be read from the drawing is the Block Description, Category Data, Insertion Data, Size Data and Connection Points.

UDA's, Associated Parts, Fixture/Shelf Data, Styles and Merchandisable Areas are all information assigned in Macro Space Management. Block definitions imported into Fixture Studio from the drawing will lack this information.

> **Note**: If data has been imported from the drawing to overwrite existing data in Fixture Studio, exercise caution in saving this to the central database. It is possible that information on Styles, Merchandisable areas, etc, could be lost.

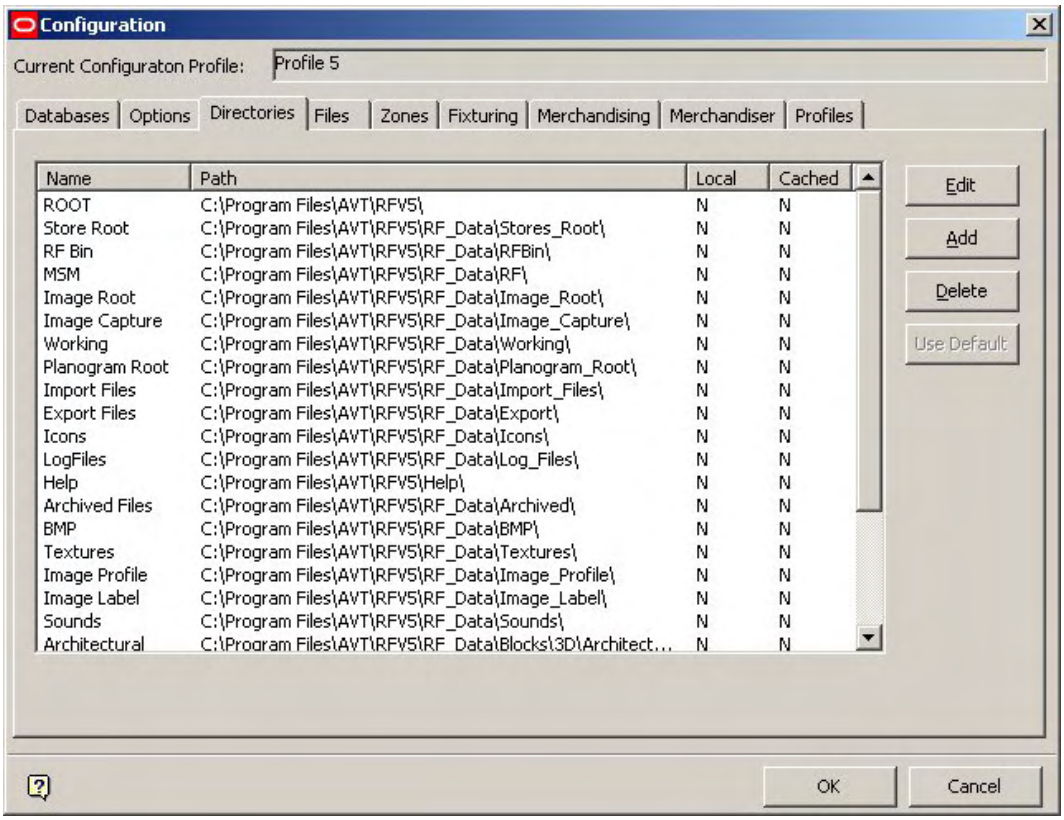
Merging Information

If information is merged, data is imported into Fixture Studio from both the active drawing and the central database.



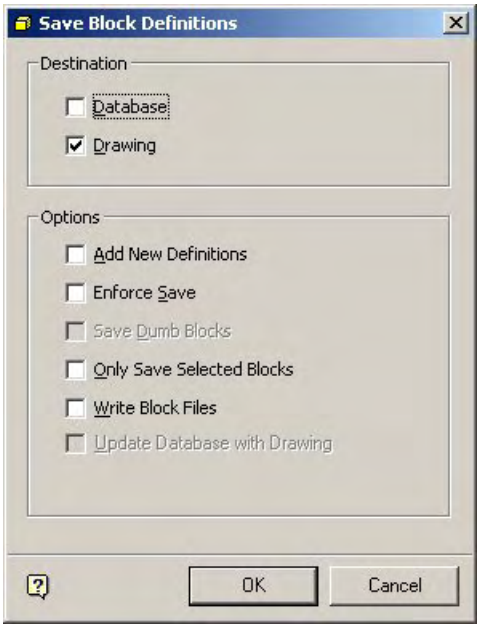
If data is merged and the Block definition for a specific block differs between the central database and the active drawing, priority is given to information from the central database.

If the Load Blocks into Drawing option is checked, all Blocks held in the directory specified in the Configuration Module will be loaded into the drawing. This is to ensure that the full complement of blocks is available from both the database and in the drawing.



Saving Block Definitions

Clicking on the **Save Changes Icon** brings up the Save Block Definitions dialogue box.



The Destination Frame enables the user to specify whether data is saved to the drawing or to the database.

Add New Definitions adds ALL definitions to the specified destination. This command should be used with caution as any block (including badly defined ones) will be saved to either the drawing or database.

Enforce Save saves all Block definitions currently loaded into Fixture Studio to the central database.

Save Dumb Blocks saves blocks without full information (for example insertion points) to the specified destination.

Only Save Selected Blocks saves only the Block definitions currently selected in Fixture Studio to the specified destination.

Write Block Files is only available when Save to Drawing is selected. It will write the information into the drawing as Wblocks (World Blocks).

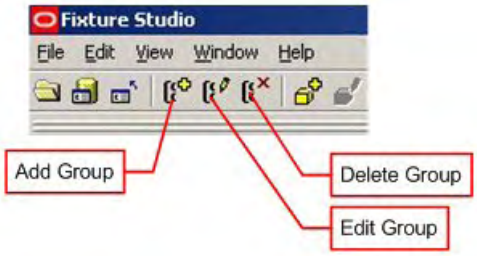
Update Database with Drawing is only available when the central database is selected as the destination.

> **Note**: DWG files are required for the Planner environment, 3DS files for Merchandiser. If 3DS files are not created, the graphics for fixtures, etc, will not display in Merchandiser.

Adding, Editing and Deleting Groups

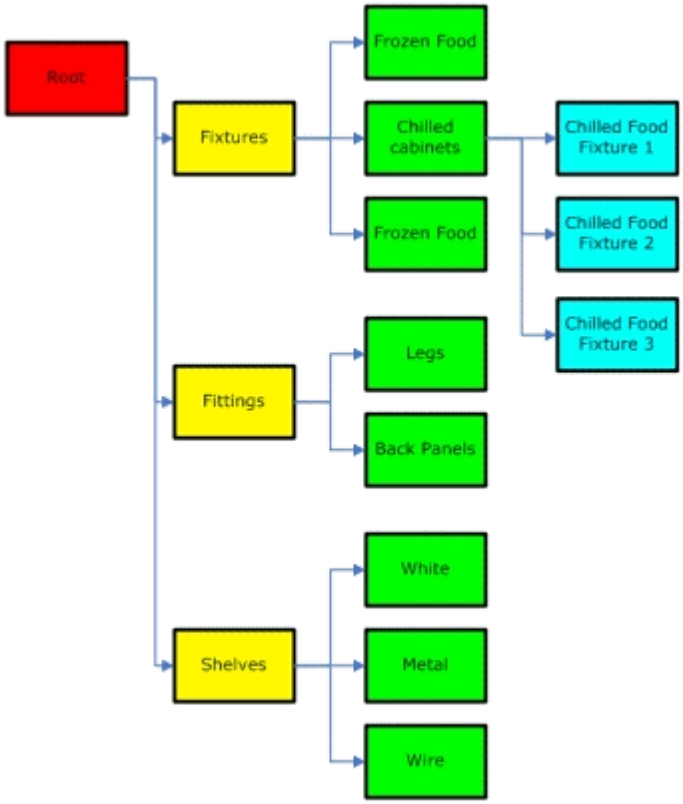
Groups are used to arrange Block and Gondola definitions into logical collections with the hierarchical tree visible in the Object Browser.

Groups can be Added, Edited and Deleted.



Overview of Groups

Groups are analogous to clusters in Store Manager – they are containers used to collect together Block definitions of similar characteristics.



Groups are arranged in a hierarchy emanating from a root. The hierarchy should be chosen such that it facilitates locating any desired Block Definition.

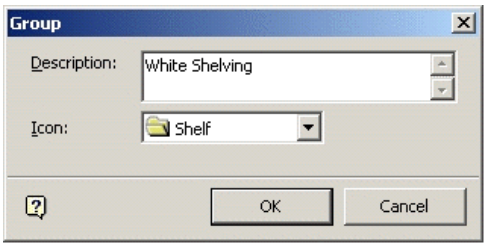
In the above example Block Definitions have been split into three broad classes; Fixtures, Fitting and Shelves.

Shelves then have been subdivided into White, Metal and Wire categories.

Block definitions can then be added to the appropriate Group – for example all the chilled food fixtures would be assigned to the Chilled Cabinets sub-group of the Fixtures Group.

Adding a Group

To add a group, highlight the parent group to which it is going to be added. Click on the Add Group Icon. The Group dialogue box will appear.

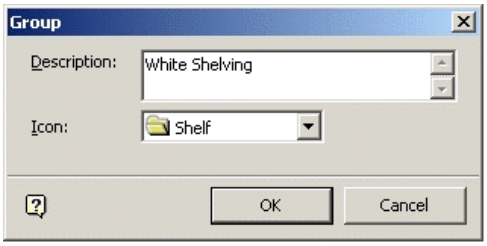


Enter a description and select an icon from the drop down list. Click on OK to conform.

The group to be added is a child of its selected parent group.

Edit Group

To edit a group, highlight the group which is to be edited. Click on the Edit Group Icon. The Group dialogue box will appear.



Edit the description if requited. It is also possible to select an alternative icon from the drop down list. Click on OK to conform.

The Group details will now be updated.

Delete Group

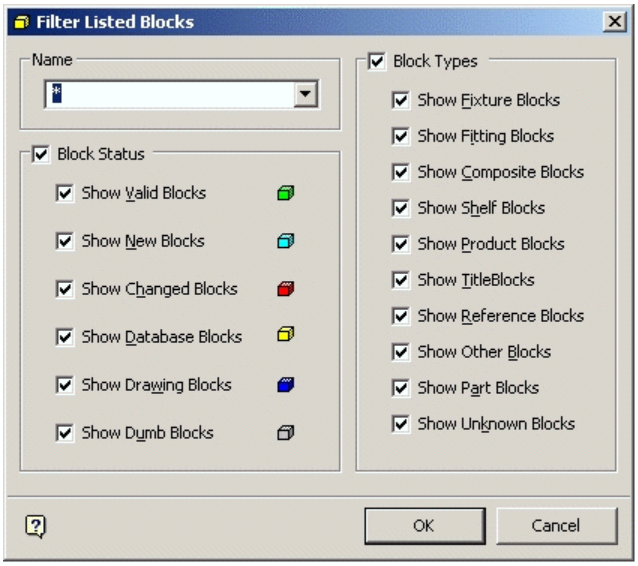
To delete a group, highlight the group to is to be deleted. Click on the Delete Group Icon.

If the Group to be deleted has child groups or block definitions, a warning dialogue will appear.

If there are no child objects, the group will be deleted without any requirement for confirmation.

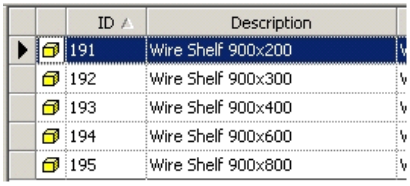
Filtering Blocks

The list of blocks showing in the Block Details dialogue box may be filtered.



Filtering by Name

Filtering by name only works on exact matches, although wildcards ('*' and '?') are allowed.



ID	Description
191	Wire Shelf 900x200
192	Wire Shelf 900x300
193	Wire Shelf 900x400
194	Wire Shelf 900x600
195	Wire Shelf 900x800

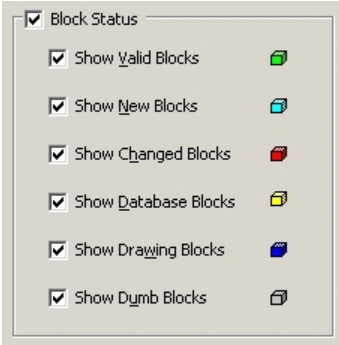
Search String	Result
Wire Shelf	Fail – no exact matches.
Wire Shelf*	All examples of blocks beginning Wire Shelf
Wire Shelf 900 x 200	Find that exact file name
Wire Shelf 900 x ???	Find all examples of blocks beginning Wire Shelf 900 x

Filtering by Block Status

The Block Status can be seen to the left of the Block Definitions Window.

	ID	Description	Name	Type
	385	Wire Shelf Round High 600	Wire-Shelf-Round-High-600	Part
	386	Wire Shelf Round High 600 HD ...	Wire-Shelf-Round-High-600-HD	Part
	387	Wire Basket 600x200	Wire-Basket-600x200	Shelf
	388	Wire Basket 600x300	Wire-Basket-600x300	Shelf
	389	Wire Basket 600x400	Wire-Basket-600x400	Shelf
	390	Wire Basket 600x600	Wire-Basket-600x600	Shelf
	391	Wire Basket 600x800	Wire-Basket-600x800	Shelf

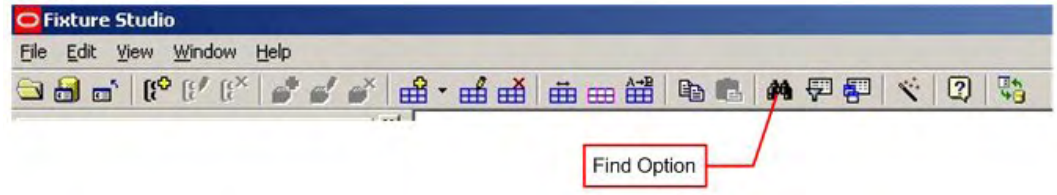
By using the Block Status frame it is possible to select blocks meeting specific criteria, such as new blocks, database blocks, drawing blocks, etc.

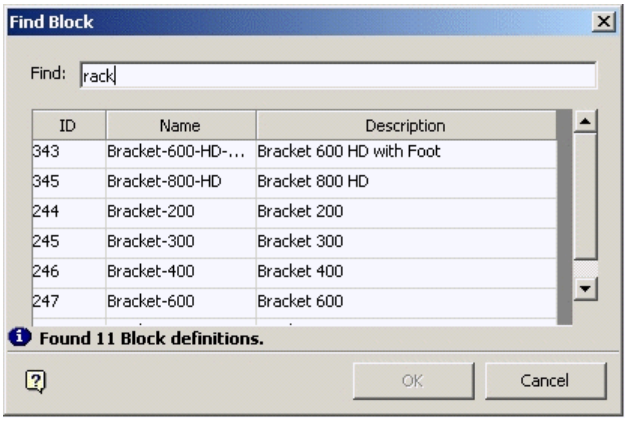


The status of each block is indicated by a color code.

Find Block Definitions

Clicking on the **Find Icon** on the toolbar will bring up the Find Block dialogue box.





To use the Find Option, type in the required search string into the Find box and press <Return>. A list of block definitions matching the search string will appear in the box below.

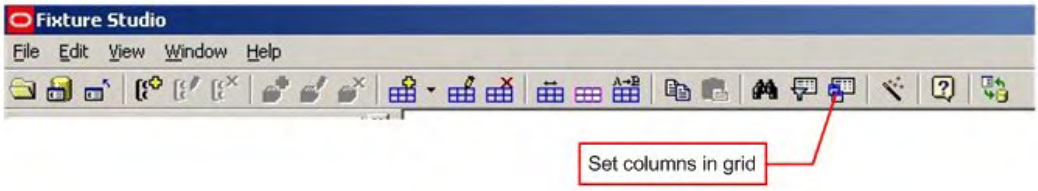
To display a block definition in the hierarchical tree in the Object Browser, highlight it in the list of block definitions and click on the OK button. The block definition in the Object Browser will be highlighted and the Find Block dialogue box will close.

Note: The search string will not allow wild cards such as '?' and '*'. The search string will match any block description with a comparable string in the ID, Name or Description fields. In the above example the search string rack has matched 11 instances of the name Bracket.

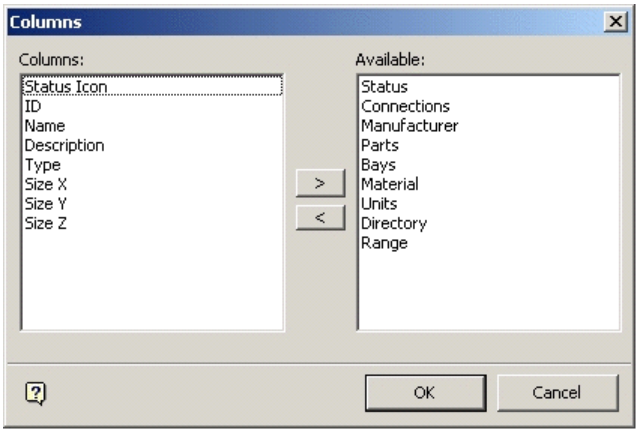
Setting Columns

The columns that display in the Block Definitions window can be configured by clicking on the Set Columns in Grid Icon in the toolbar.

Note: The columns displayed in the Gondola Definitions window cannot be configured.



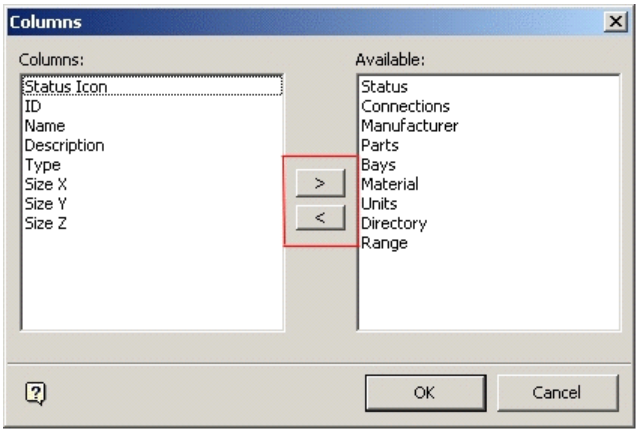
This will bring up the Columns dialogue box.



The Columns frame on the left contains a list of the columns that are currently displayed.

The Available Frame on the right contains a list of columns that are not being currently displayed.

The list of columns to be displayed can be modified by making use of the selection arrow in the middle of the dialogue box.



When the selection has been made, clicking on OK will result in the Block Definition table being rearranged accordingly.

	ID	Description	Name	Type	Size X	Size Y	Size Z
	238	Glass Shelf 900x200	Glass-Shelf-900…	Shelf	884	210	5
	239	Bar for Accessories 600	Bar-for-Acc-600	Shelf	600	50	100
	240	Bar for Accessories 900	Bar-for-Acc-900	Shelf	900	50	50
	241	Bar for Accessories for inside c…	Bar-for-Acc-Corner	Shelf	660	660	100
	242	Rod 3 Wire 300mm	Rod-3-Wire-300	Shelf	44	300	50

AutoCAD Operations from Fixture Studio

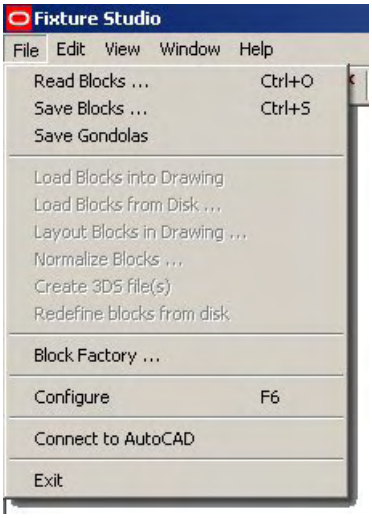
Load Blocks Into Drawing

The **Load Blocks into Drawing** command is used to take blocks from the list defined in Fixture Studio and transfer a copy to the currently active drawing in AutoCAD

There are four stages to this.

- Ensure that the Connect to AutoCAD option has been selected
- Select the required blocks in Fixture Studio
- Select the Load Blocks into Drawing option
- Select the Insert option in AutoCAD

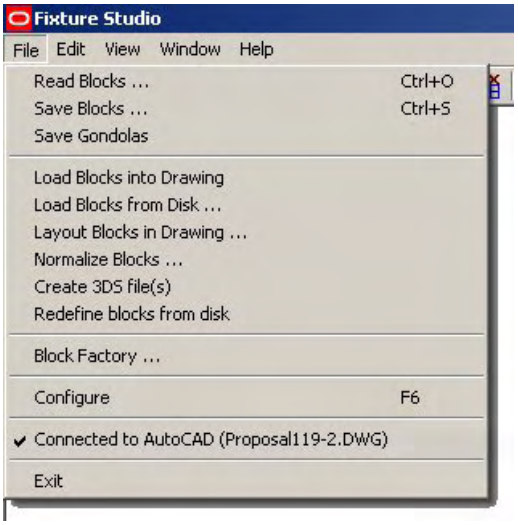
Connecting to AutoCAD



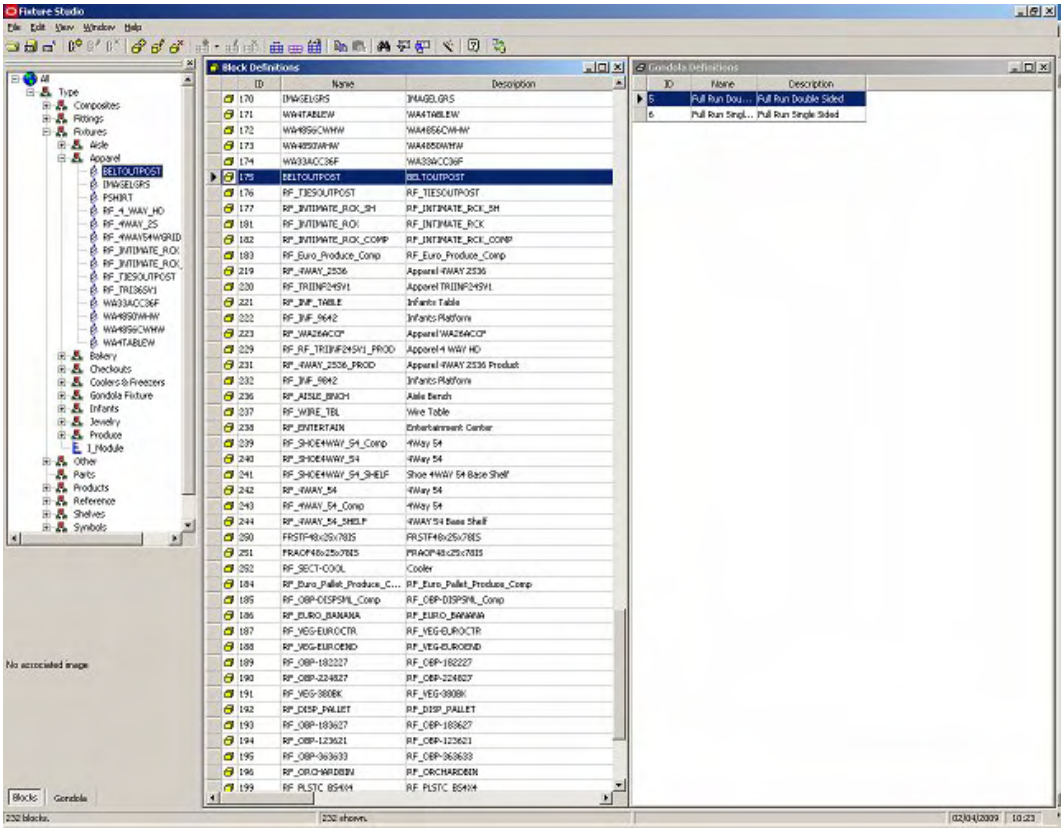
The Connect to AutoCAD option on the File Pull down Menu must be selected.

If the AutoCAD environment is not open, AutoCAD will be activated. If it is open, Fixture Studio will link to AutoCAD.

When AutoCAD is selected, the AutoCAD based option will change from being grayed out to available, and the Connect to AutoCAD option will have a tick by it.



Selecting the requited blocks can be done in two ways in Fixture Studio; from the hierarchical tree, or from the Block Definitions window.

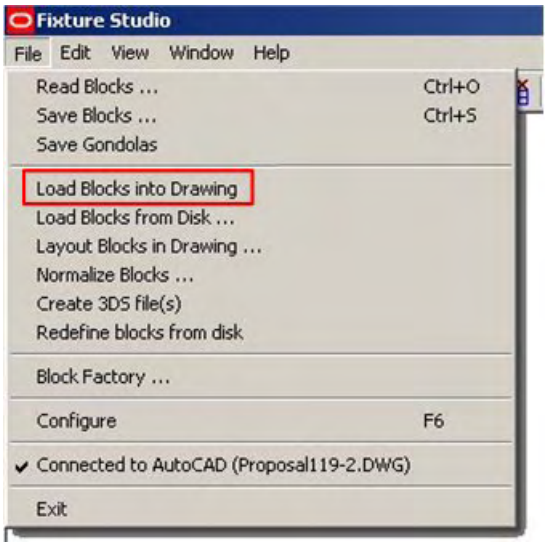


They can be selected from the hierarchical tree by left clicking on an individual block, or by holding down <Ctrl> and left clicking to make multiple selections.

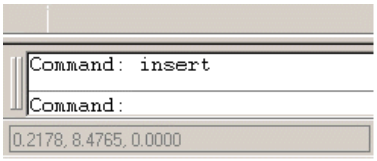
They can be selected from the Block Definitions window by left clicking on an individual block, or by holding down <Ctrl> or <Shift> and left clicking to make multiple selections.

Using the Load Blocks into Drawing option

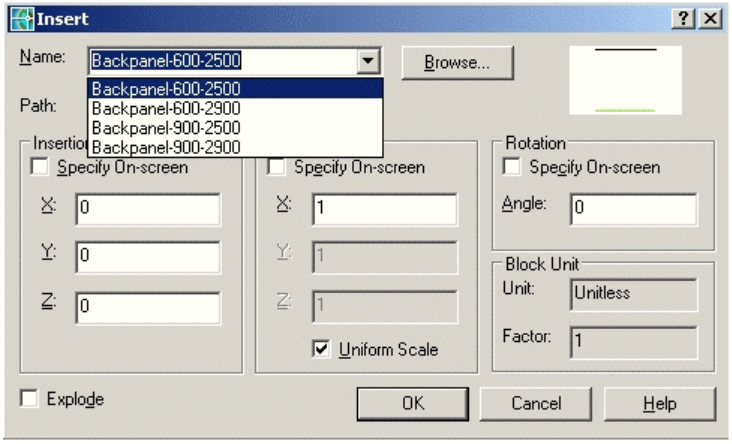
Using the Load Blocks into Drawing will transfer the block definitions into the AutoCAD drawing. They will not become visible until instances have been placed in the drawing.



When the block definitions have been transferred into the drawing, instances of that definition can be inserted into the drawing by typing Insert into the command line.



This will bring up the Insert dialogue box.



Block definitions can be selected using the Name drop down list.

After specifying the Insertion Point, Scale, Rotation Angle and whether or not the components of the block are to be exploded, clicking on OK will place an instance of the block definition in the drawing.

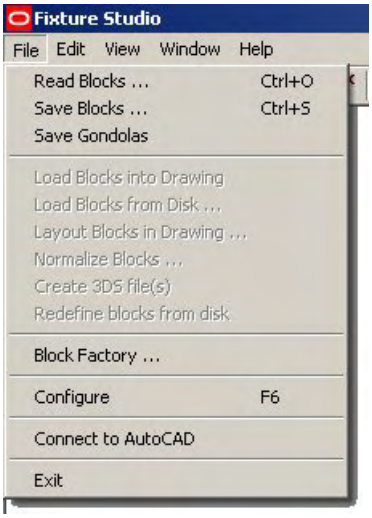
Load Blocks From Disc

Load Blocks from Disc enables the user to select blocks from a source outside of the Macro Space Management database and load them into the currently active AutoCAD drawing.

There are three stages to this.

- Ensure that the Connect to AutoCAD option has been selected
- Select the Load Blocks from Disk option
- Select the Insert option in AutoCAD

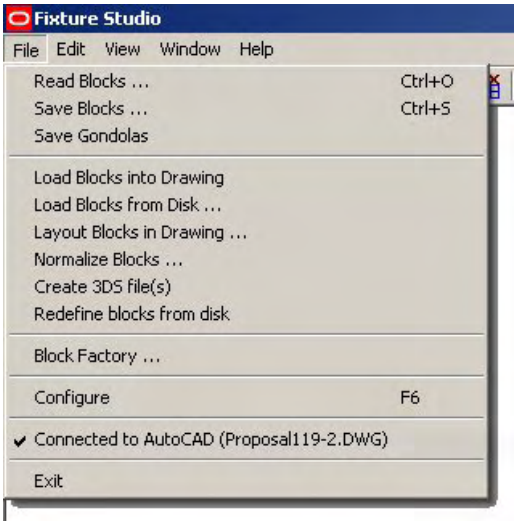
Connecting to AutoCAD



The Connect to AutoCAD option on the File Pull down Menu must be selected.

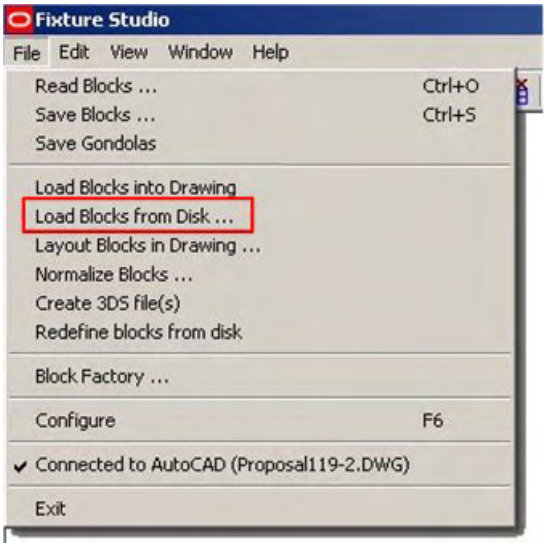
If the AutoCAD environment is not open, AutoCAD will be activated. If it is open, Fixture Studio will link to AutoCAD.

When AutoCAD is selected, the AutoCAD based option will change from being grayed out to available, and the Connect to AutoCAD option will have a tick by it.

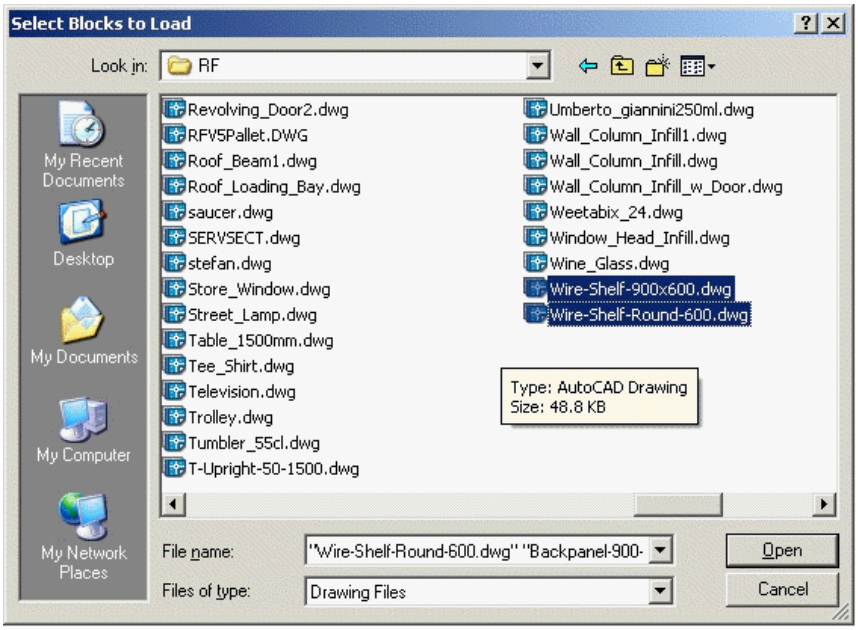


Using the Load Blocks From Disc option

Using the Load Blocks from Disc option will transfer the block definitions into the AutoCAD drawing. They will not become visible until instances have been placed in the drawing.

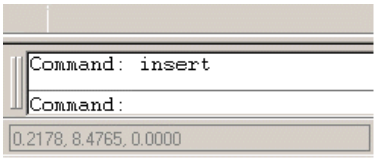


This will bring up Select blocks to Load dialogue box. Navigate to the required directory and highlight the required blocks. Click on Open to transfer the block definitions to the active AutoCAD drawing.

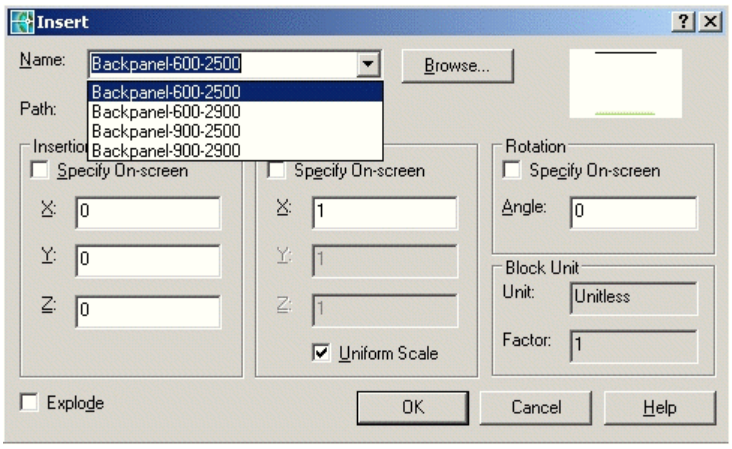


Using the Insert option in AutoCAD

When the block definitions have been transferred into the drawing, instances of that definition can be inserted into the drawing by typing *Insert* into the command line.



This will bring up the Insert dialogue box.



Block definitions can be selected using the Name drop down list.

After specifying the Insertion Point, Scale, Rotation Angle and whether or not the components of the block are to be exploded, clicking on OK will place an instance of the block definition in the drawing.

Laying Out Blocks

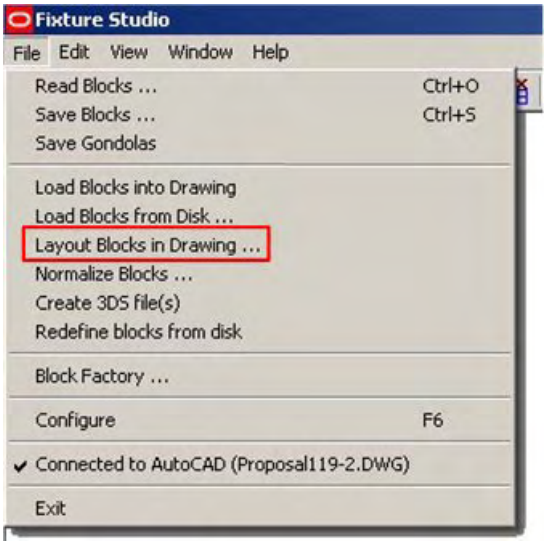
The **Laying Out Blocks** option takes blocks selected from the list of blocks in Fixture studio and lays them out in a grid in the currently active drawing in the AutoCAD environment

To activate this option select the required blocks in the Block Definitions window.

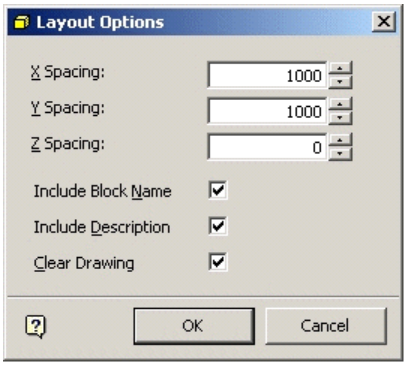
	ID	Description	Name	Type
	109	L Upright 50 H1150	L-Upright-50-1150	Fitting
	111	L Upright 50 H1500	L-Upright-50-1500	Fitting
	108	L Upright 50 H950	L-Upright-50-950	Fitting
	113	L Upright 70 H2500	L-Upright-70-2500	Fitting
▶	115	L Upright 70 H2900	L-Upright-70-2900	Fitting
	485	Mesh F Goods W930 D598 Flue	Mesh_F_Goods_W930_D598_Flue	Shelf
	486	Mesh F Goods W930 D748 B IKEA	Mesh_F_Goods_W930_D748_B_...	Shelf
	487	Mesh F Goods W930 D948 F IKEA	Mesh_F_Goods_W930_D948_F_...	Shelf

Click on the Laying out blocks option in the File pull down menu.

(The Connect to AutoCAD option on the File Pull down Menu must be selected).



This will bring up the Layout Options dialogue box.



The spacing between blocks can be specified by the X, Y and Z spacing.

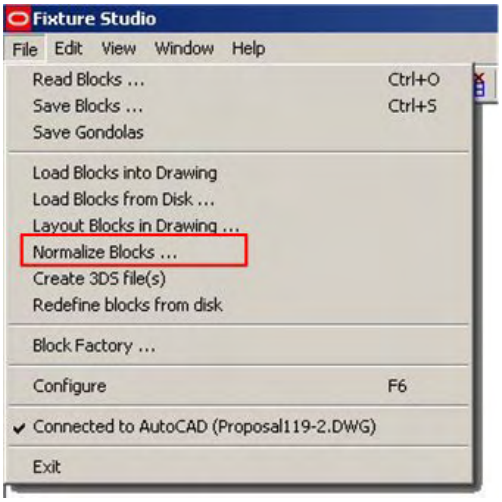
Ticking the appropriate check boxes will add the block name and/or description to each block when it is drawn the active drawing.

Ticking the Clear Drawing check box will clear all previous blocks from the drawing.

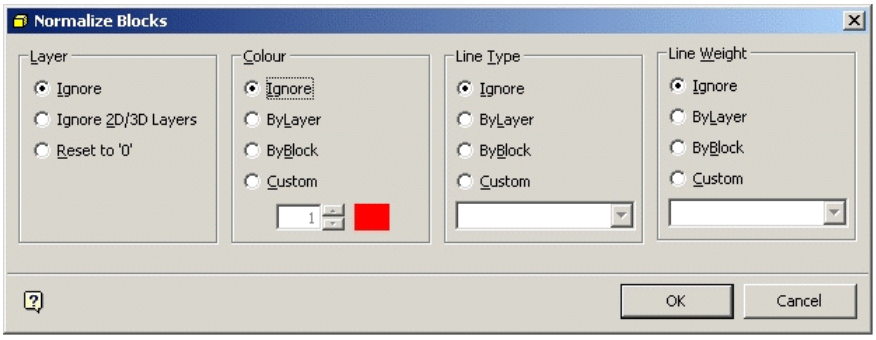
Normalize Blocks

The **Normalize Blocks** command is used to modify the AutoCAD properties of selected blocks. It is the equivalent of the AutoCAD Object Properties toolbar.

It is accessed from the File pull down menu and is only active when Fixture Studio is connected to AutoCAD.



The Normalize Blocks dialogue box enables any currently selected blocks to have their AutoCAD Layer, Color, Line Type and Line Weight changed.



Layer

If set to Ignore, layers will be unchanged.

If set to Ignore 2D/3D layers they will not be affected by any changes to other layers

If set to Reset to 0, all selected blocks will have their parent layer set to the default of 0.

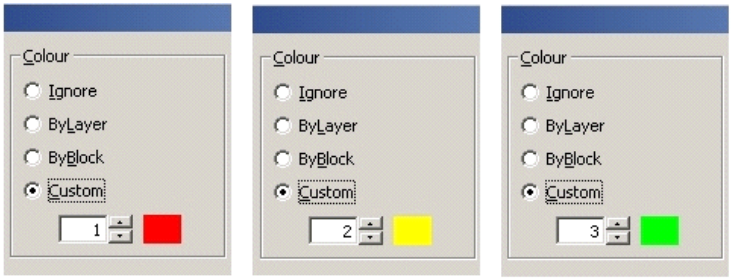
Color

If set to Ignore, line weights will be unchanged.

If set to By Layer, then the selected blocks will have their color set to the default color for the layer they are on.

If set to By Block, the selected blocks will have their settings changed to the default for the layer except when the blocks have previously had custom properties assigned.

If set to Custom, then the modified color for the selected blocks can be set by means of the spin control.



Line type

If set to Ignore, line types will be unchanged.

If set by ByLayer, the selected blocks will have their line type set to the default or the layer they are on.

If set to Byblock the selected blocks will have their settings changed to the default for the layer except when the blocks have previously had custom properties assigned.

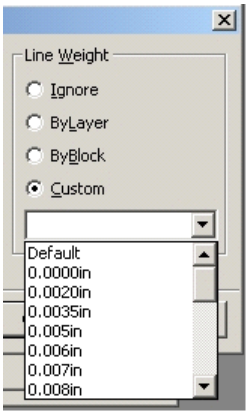
Line Weight

If set to Ignore, line weights will be unchanged.

If set By Layer line weights will be set to the default for that layer.

If set ByBlock, the selected blocks will have their settings changed to the default for the layer except when the blocks have previously had custom properties assigned.

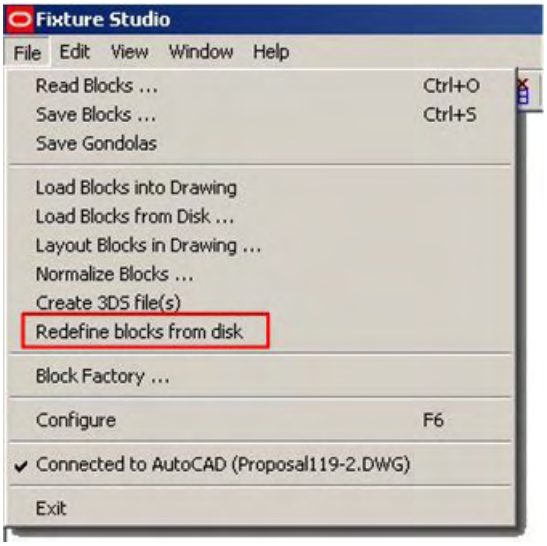
If set to a Custom level all selected blocks will be set to the line weight selected from the drop down list.

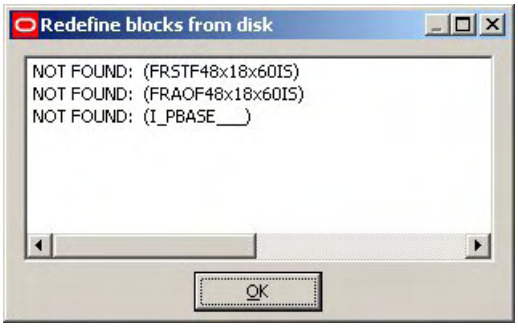


Redefine Blocks from Disc

Redefine Blocks from Disc allows the user to overwrite any blocks currently active in the Drawing with information stored on disc.

It is accessed from the File pull down menu and is only active when Fixture Studio is connected to AutoCAD.



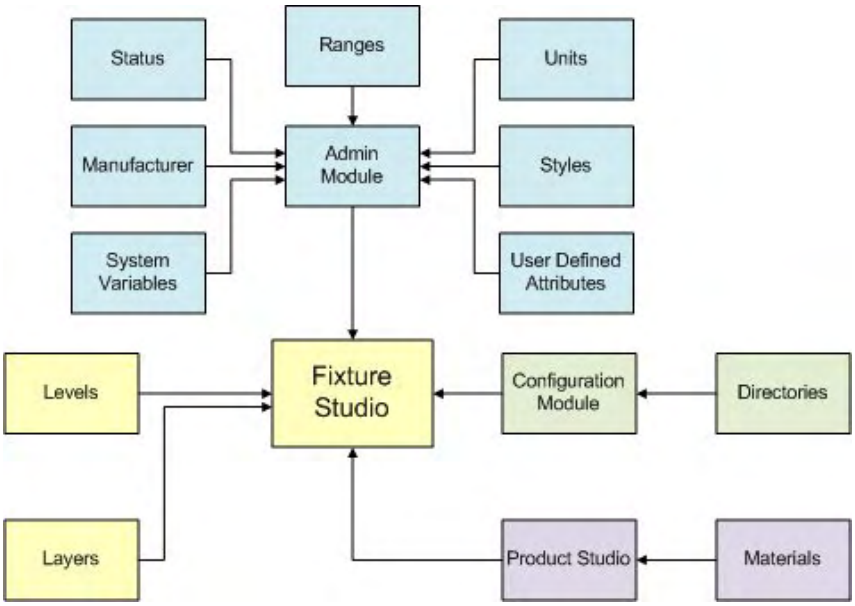


This command is useful when errors have been made in the drawing and it is desired to restore the blocks back to the state they were when last saved.

2

Relationships with Other Modules

The settings made within Fixture Studio are affected by and interact with settings made within other modules within Macro Space Management



Admin Module

The following can be configured within the Admin Module:

- List of Manufacturers.
- List of Ranges.
- Available status's
- List of possible Styles
- List of default units
- User Defined Attributes

Configuration Module

The following can be configured within the Configuration Module:

- Directory for graphics (dwg and 3DS) files

Layers

- List of aliased layers a block can be inserted on, and which connections are valid on. These can only be configured within Planner.

Levels

- List of available levels to insert an block on – only configurable within database

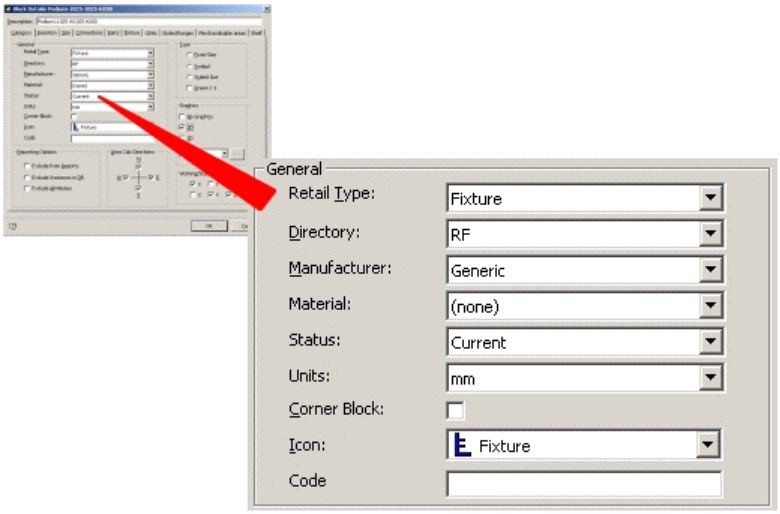
Product Studio

- List of available materials – this affects the appearance of the graphics.

The Admin Module

Configuring the List of Manufacturers

The **List of Manufacturers** is used in the General Frame of the Categories tab in Block Definitions.



The List of Manufacturers can be configured using the Manufacturers option on the General menu in the Admin Module.

This brings up the Manufacturers dialogue box.

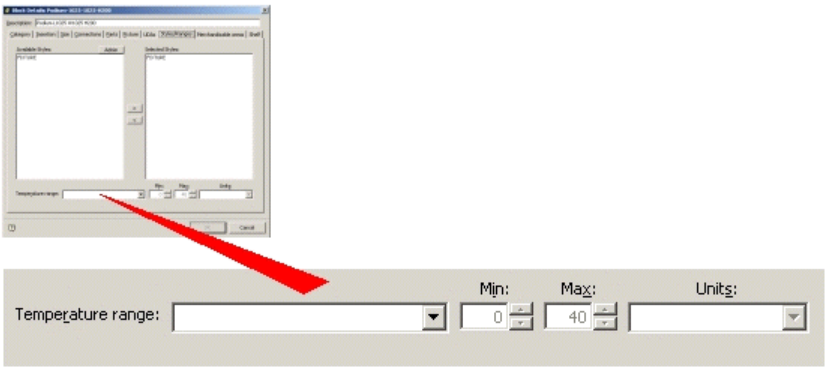
This enables a list of manufacturers to be built up and edited.

The list is primarily used for reporting purposes.

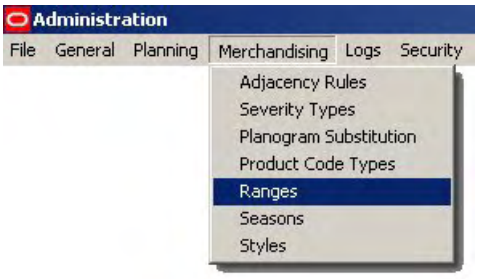
Note: For more information consult the Admin Module Help File - please be aware that access to the Admin Module is only available to users with Administrator's privileges.

Configuring the List of Ranges

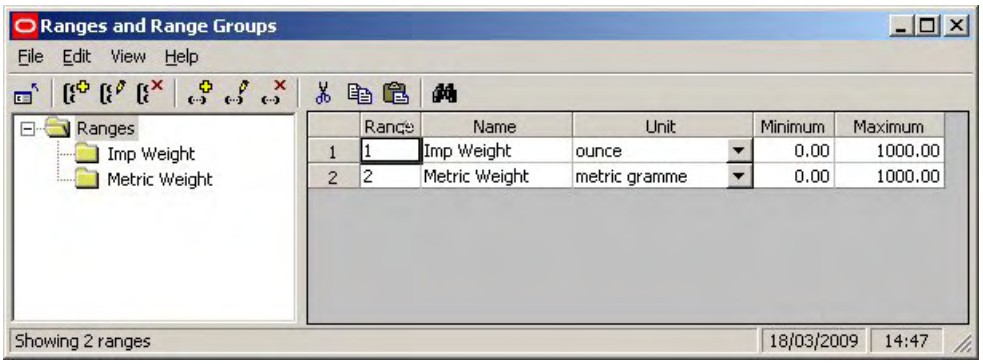
The **List of Ranges** is used in the General Frame of the Categories tab in Block Definitions.



The List of Ranges can be configured using the Ranges option on the Edit Pull down menu in the Admin Module.



This brings up the Ranges and Range Groups dialogue box.

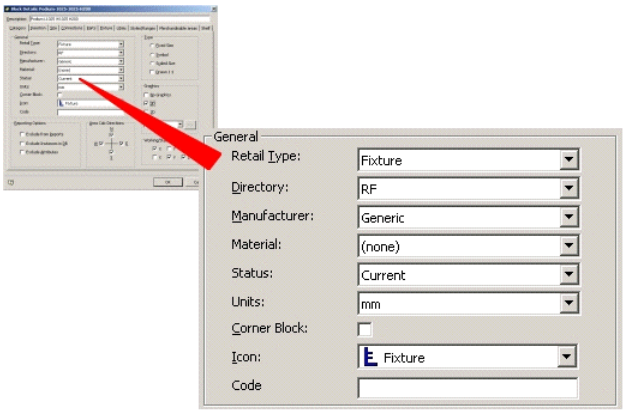


This functionality is not implemented in this release of Macro Space Management.

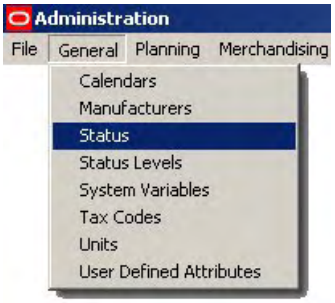
Note: For more information, consult the Admin Module Help File - please be aware that access to the Admin Module is only available to users with Administrator's privileges.

Configuring the Available Status's

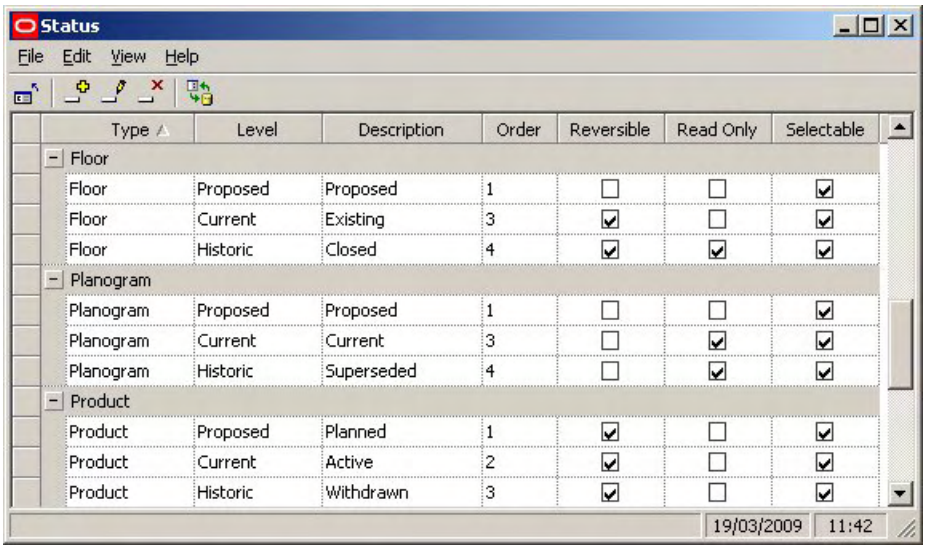
The **List of Statuses** is used in the General Frame of the Categories tab in Block Definitions.



The List of Statuses can be configured using the Status option on the General menu in the Admin Module.



This brings up the Status dialogue box.



The Statuses available for blocks can be added, edited and deleted.

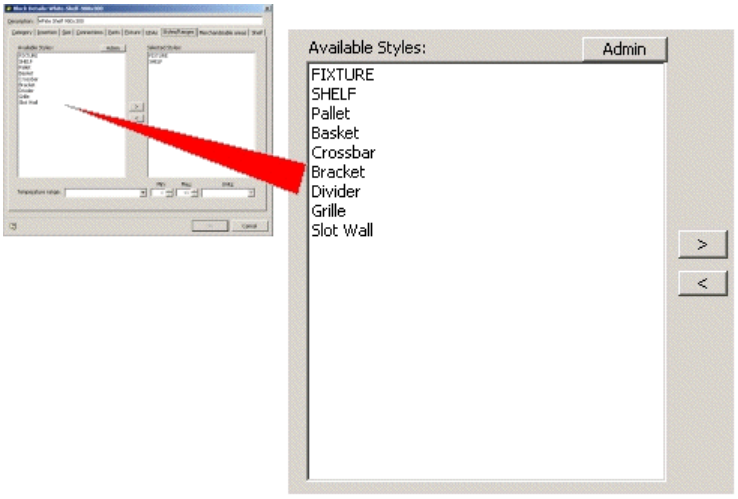
Their order can also be configured. Changes can be defined as reversible or irreversible and files can be set to read only status when that status is reached.

Finally, statuses can be set to be selectable or not selectable. Selectable statuses can be selected manually. Non-selectable statuses change automatically when other actions are carried out.

> **Note**: For more information, consult the Admin Module Help File - please be aware that access to the Admin Module is only available to users with Administrator's privileges.

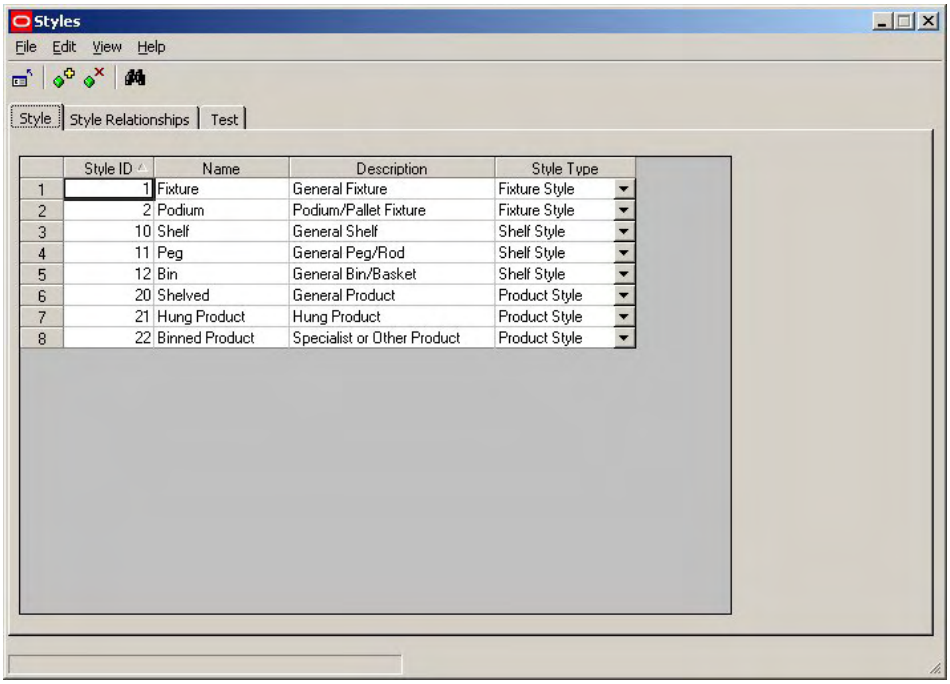
Configuring the List of Styles

The **List of Styles** is used in the Available Styles Frame of the Styles/Ranges tab in Block Definitions.



The List of Styles can be configured using the Styles option on the Edit Pull down menu of the Admin Module.

This brings up the Styles dialogue box.



Styles can be added, edited and deleted in the Styles tab.

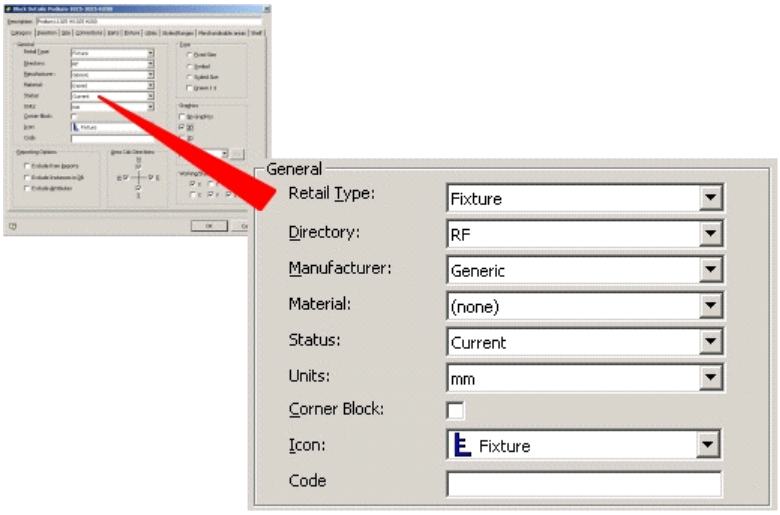
The relationships between the varying types of styles can be defined in the Style Relationships Tab.

The Test Tab allows users to conform the requisite Style Relationships have been defined.

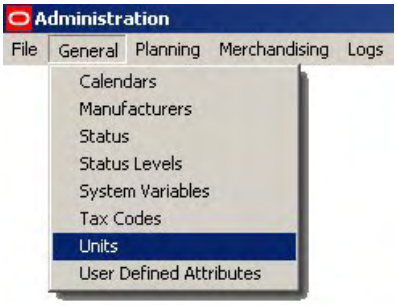
> **Note**: For more information, consult the Admin Module Help File - please be aware that access to the Admin Module is only available to users with Administrator's privileges.

Configuring the Default Units

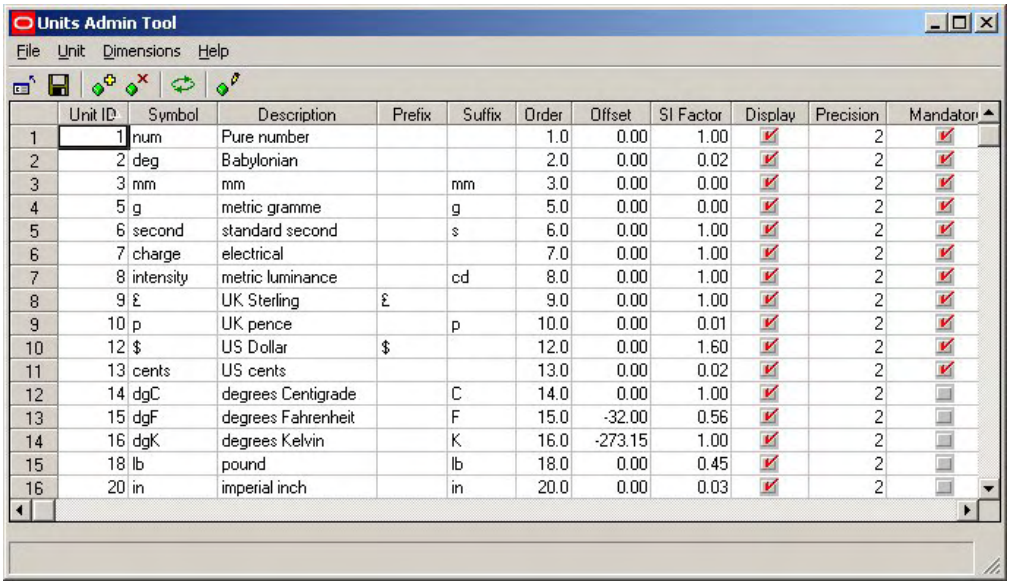
The **List of Units** is used in the General Frame of the Categories tab in Block Definitions.



The List of Units can be configured using the Units option on the Edit Pull down menu in the Admin Module.



This brings up the Units Admin Tool dialogue box.



	Unit ID	Symbol	Description	Prefix	Suffix	Order	Offset	SI Factor	Display	Precision	Mandator
1	1	num	Pure number			1.0	0.00	1.00	☑	2	☑
2	2	deg	Babylonian			2.0	0.00	0.02	☑	2	☑
3	3	mm	mm		mm	3.0	0.00	0.00	☑	2	☑
4	5	g	metric gramme		g	5.0	0.00	0.00	☑	2	☑
5	6	second	standard second		s	6.0	0.00	1.00	☑	2	☑
6	7	charge	electrical			7.0	0.00	1.00	☑	2	☑
7	8	intensity	metric luminance		cd	8.0	0.00	1.00	☑	2	☑
8	9	£	UK Sterling	£		9.0	0.00	1.00	☑	2	☑
9	10	p	UK pence		p	10.0	0.00	0.01	☑	2	☑
10	12	$	US Dollar	$		12.0	0.00	1.60	☑	2	☑
11	13	cents	US cents			13.0	0.00	0.02	☑	2	☑
12	14	dgC	degrees Centigrade		C	14.0	0.00	1.00	☑	2	☐
13	15	dgF	degrees Fahrenheit		F	15.0	-32.00	0.56	☑	2	☐
14	16	dgK	degrees Kelvin		K	16.0	-273.15	1.00	☑	2	☐
15	18	lb	pound		lb	18.0	0.00	0.45	☑	2	☐
16	20	in	imperial inch		in	20.0	0.00	0.03	☑	2	☐

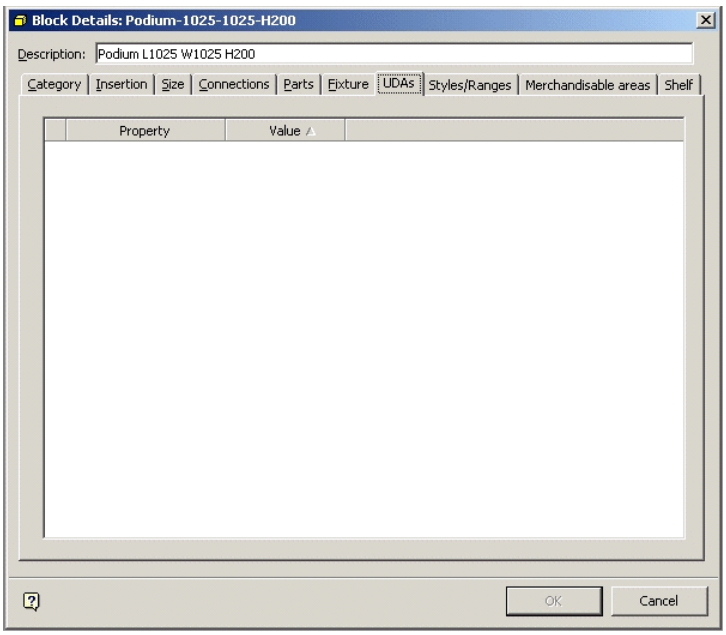
This allows units to be added, edited or deleted.

It also allows other settings to be specified; for example whether use of that unit is mandatory.

> **Note**: For more information consult the Admin Module Help File - please be aware that access to the Admin Module is only available to users with Administrator's privileges.

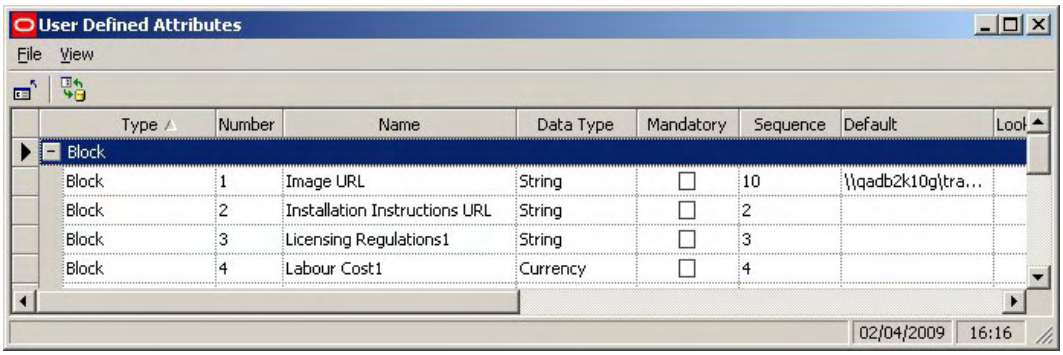
Configuring User Defined Attributes

The List of **User Defined Attributes** is used in the UDA's tab in Block Definitions.



The List of User Defined Attributes (UDA's) can be configured using the User Defined Attribute option on the Edit Pull down menu of the Admin Module.

This brings up the User Defined Attributes dialogue box.



This allows User Defined attributes to be added, edited and deleted.

> **Note**: For more information, consult the Admin Module Help File - please be aware that access to the Admin Module is only available to users with Administrator's privileges.

System Variables

System Variables can be configured within the Admin Module.

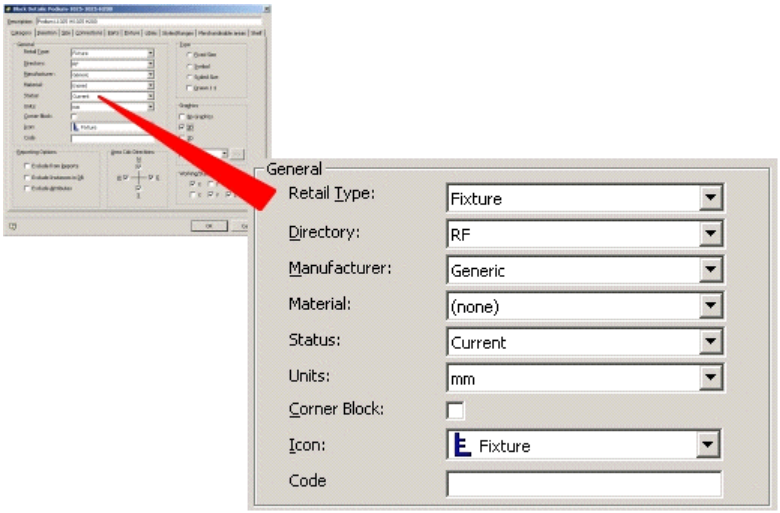
There are presently no System Variables that affect the operation of Fixture Studio.

> **Note:** For more information, consult the Admin Module Help File - please be aware that access to the Admin Module is only available to users with Administrator's privileges.

The Configuration Module

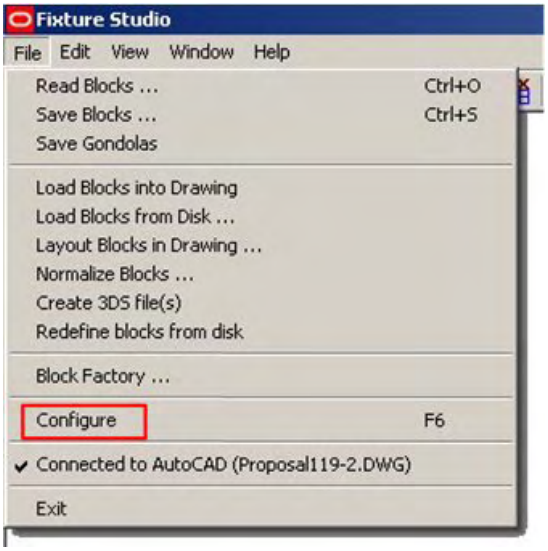
Configuring Directories

The **Directory used** is in the General Frame of the Categories tab in Block Definitions.

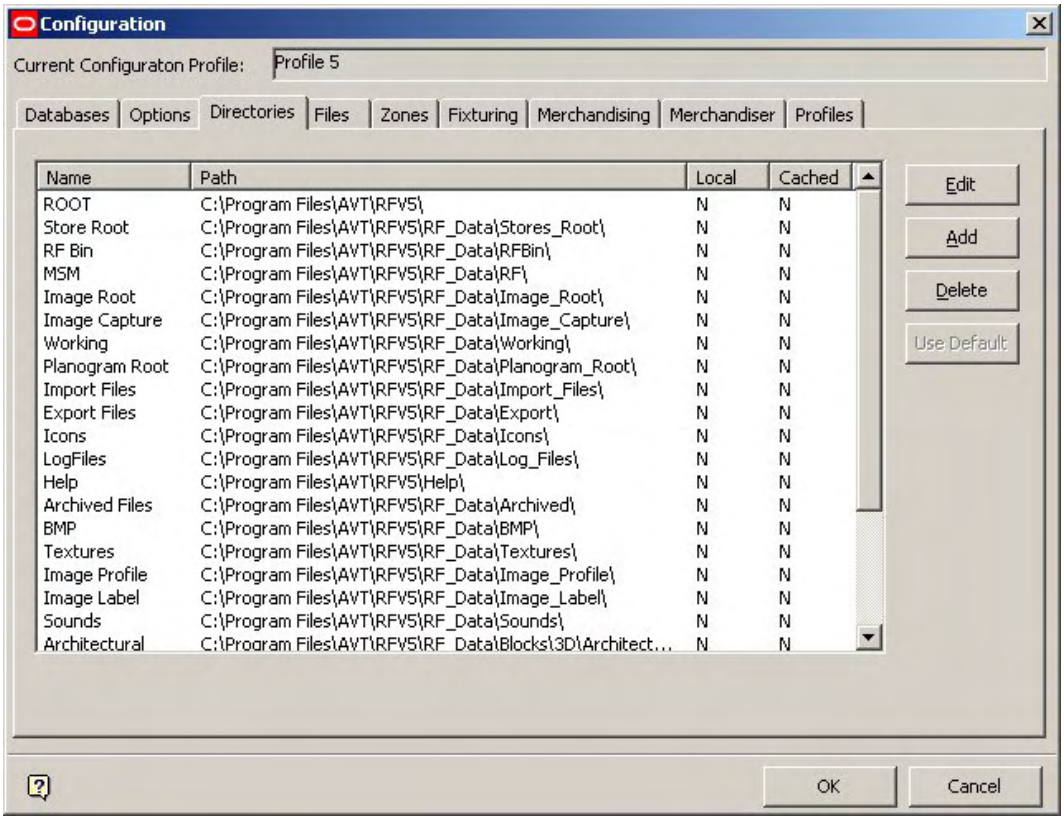


This determines the directory where Macro Space Management looks for the graphics associated with the corresponding block definitions.

The Configuration Module can be accessed from the File pull down menu.



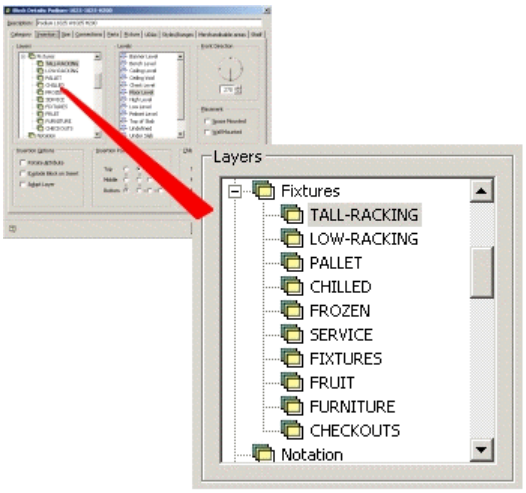
This calls the configuration Module. Directory paths can be set in the Directories Tab.



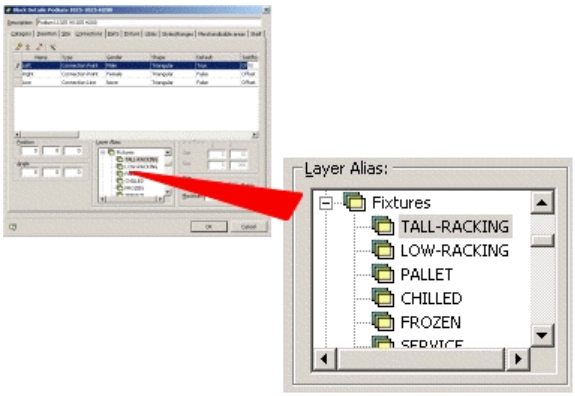
Layers

Configuring Layers

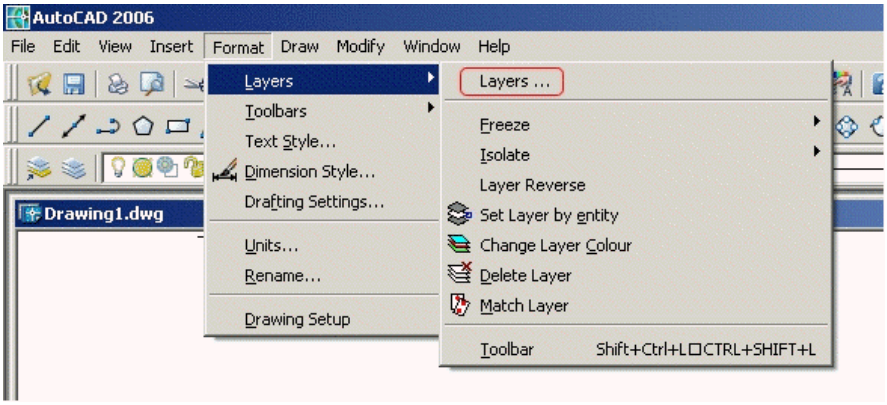
The **List of Layers** is used in the Layers frame of the Insertion tab in Block Definitions.



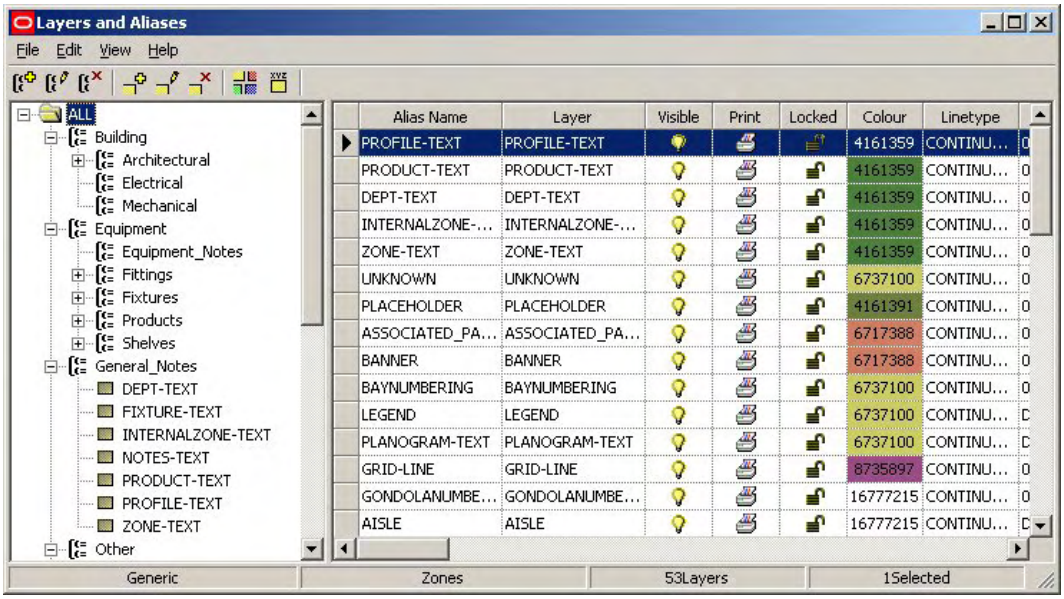
It is also used in the Layer Alias frame of the Connections tab in Block Definitions.



The List of Layer Aliases can be configured using the Layers > Layers option on the Format pull down menu of the CAD environment.



This brings up the Layers and aliases dialogue box.



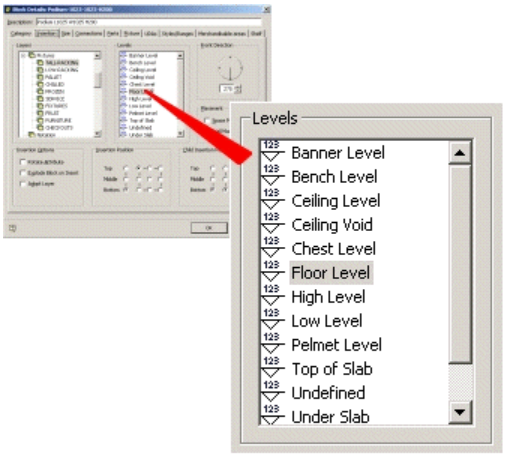
This can be used to configure Layers and Layer Aliases.

> **Note**: If users are unsure of the effects of modifying the Layers and Layer Aliases, they are advised to contact Oracle's Technical Support Team.

Levels

Configuring Levels

The **List of Levels** is used in the Insertion tab in Block Definitions.



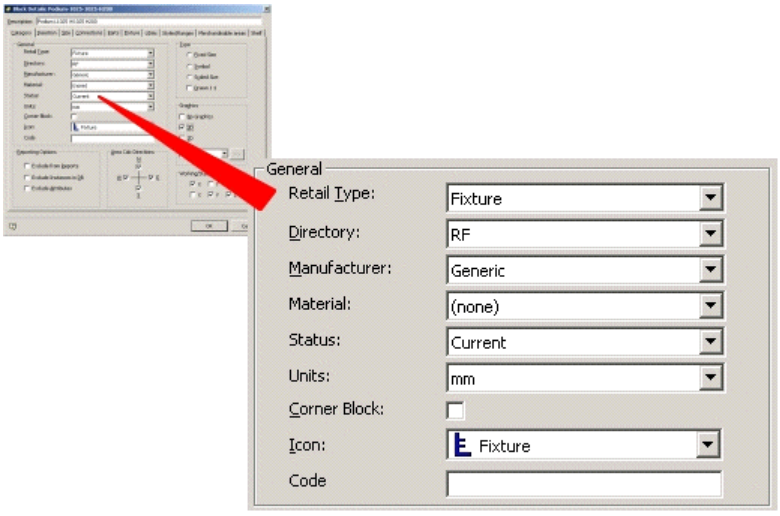
The list of levels is configured directly in the central Macro Space Planning database.

If additional levels are required, please contact Oracle's Technical Support Team for further assistance.

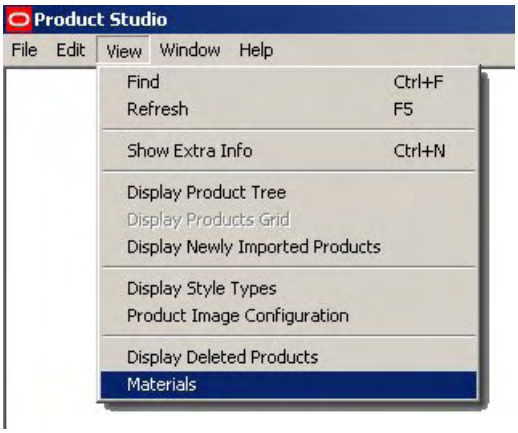
Product Studio

Configuring the List of Materials

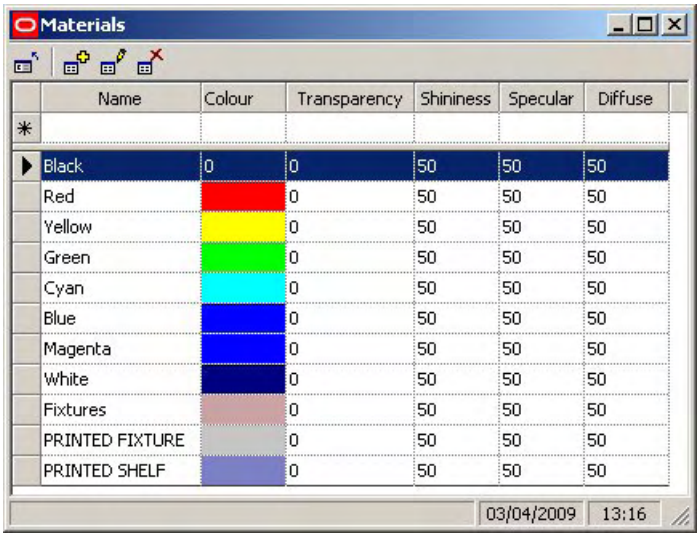
The **List of Materials** is used in the General Frame of the Category tab in Block Definitions.



The List of Materials can be configured using the Materials option on the View Pull down menu of Product Studio.



This brings up the Materials dialogue box.



This can be used to add edit and delete options determining the surface appearance of graphics blocks inserted into the Merchandiser environment.

It has no effect on how graphics display in the Planner environment.

3

Getting the Basics Right

About Fixture Studio Basics

> **Note**: Please take time to consider how Fixture Studio should be set up before starting to implement it. The way it is configured may have a significant effect on the efficiency with which Macro Space Management operates.

Once Fixture Studio is set up, it is difficult to make changes to its configuration.

Time spent considering the optimum way to set up Fixture Studio will be repaid many times over when fixtures and gondolas are used in the Planner and Merchandiser environments.

There are a number of things to consider before beginning to set up Fixture Studio. These are:

Use of Directory Structure

Depending on the size of the retail organization there may be hundred, thousands or even tens of thousands of fixtures.

The graphics for these fixtures are stored in directories. Consider carefully the number of directories you need. With only a limited number of fixtures, one directory may be sufficient. With tens of thousands of fixtures, it may be more logical to create a number of directories. More Info

Use of Naming Conventions

Naming conventions have two purposes.

Firstly, it can make it easier to identify the required block from a long list of available blocks. Secondly, and more importantly, it will affect the ease of defining gondolas.

Without a good naming convention, you may need to define hundreds of gondolas.

With a good naming convention you may only need to define ten or twenty gondolas. More Info

Setting up Logical Hierarchies

Fixtures and Gondolas are stored in hierarchies (a bit like the windows folders system).

Setting up logical hierarchies will make it easier to maintain the Fixtures and Gondolas within Fixture Studio. It will also make it easier for users to select fixtures and gondolas in Planner and Merchandiser. More Info

Using Stretchable Fixtures

Stretchable Fixtures are fixtures that can be placed in the drawing, then configured to a range of preset sizes.

Using stretchable fixtures reduces the number of fixtures required.

However, if stretchable fixtures are used, it will not be possible to produce accurate reports on what fixtures and fittings are present in stores. More Info

About Connections

Connections determine which items of equipment can be connected to which other items of equipment.

Having a simple and consistent scheme for connections will make it easier to define those connections. More Info

> **Note**: Styles also influence what items of equipment can be attached to what.

About Styles

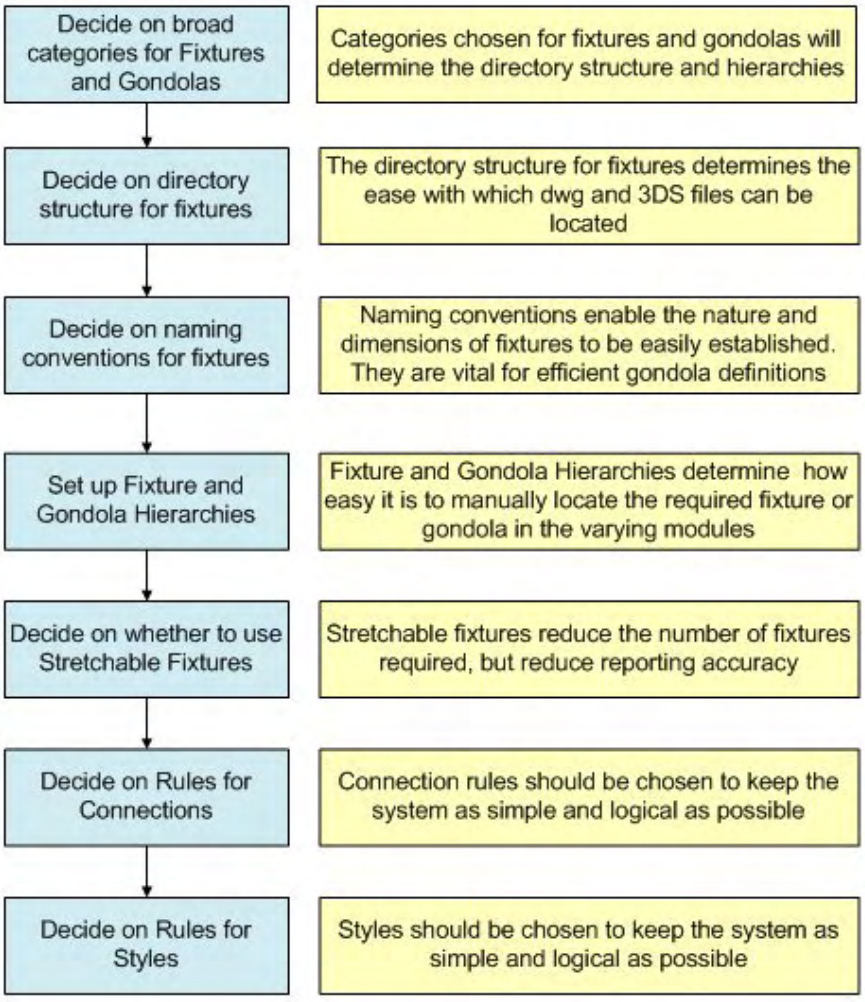
Styles determine which items of equipment can be placed on each other, and which styles of product can be placed on what items of equipment.

> **Note**: Connections also influence what items of equipment can be attached to what.

Having a logical list of styles and style relationships aids placement.

Summary of Fixture Studio Basics

The general flow for deciding on how Fixture Studio can be set up is as follows:



Deciding on Classifications for Fixtures

About Categories for Fixtures

For a large retail organization, there may be many thousands of fixtures and fittings. These could be assembled into many hundreds of types of gondola.

Before any start is made setting up fixtures and gondolas within Fixture Studio, some thought must be given to how all this information is organized.

Unless it is arranged in a simple and logical manner, considerable time will be wasted later trying to find specific fixtures or gondolas, or trying to attach one pieces of equipment to another when the styles are incompatible.

It is recommended that a table on the lines of the following be produced as a basis for deciding how Fixture Studio is to be configured.

Equipment Category	Equipment Sub-Division	Connections to	Style Relationships with
Hussmann	Primary ▪ Legs (6) ▪ Backpanels (20) ▪ Slatwalls (12)	▪ Other Primary Hussmann Equipment ▪ Secondary Hussmann Equipment ▪ Some items of Primary Generic Equipment	▪ Other Primary Hussmann Equipment ▪ Secondary Hussmann Equipment ▪ Product Display Styles
	Secondary ▪ Open Shelves (30) ▪ Wire Shelves (16) ▪ Hanging Bars (6) ▪ Lateral Rods (4)	▪ Primary Hussmann Equipment ▪ Other Secondary Hussmann Equipment ▪ Tertiary Hussmann Equipment	▪ Primary Hussmann Equipment ▪ Other Secondary Hussmann Equipment ▪ Product Display Styles
	Tertiary ▪ Dividers (2) ▪ Grilles (4)	▪ Secondary Hussmann Equipment	▪ N/A
Lozier	Primary etc	N/A	N/A
	Secondary etc	N/A	N/A
	Tertiary etc	N/A	N/A
Generic	Primary etc	N/A	N/A
	Secondary etc	N/A	N/A
	Tertiary etc	N/A	N/A

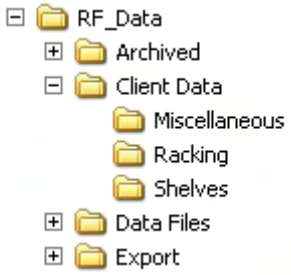
Directory Structures

> **Note**: Directories will mainly be used by people within Fixture Studio to store graphics and to select the graphics for editing or deletion. Too few directories will result in each directory containing hundreds of graphics files. Too many directories will make it difficult to remember which directories the graphics are in. It is recommended users list out the total number of graphics that are expected to be used within Macro Space Management, together with suggested classes they fall into. The number of fixtures that fall into each suggested class can then be estimated. This can be seen as the bracketed figures in the suggested table.
>
> **Note:** When classes have been selected that contain a sensible number of fixtures, the directory structure can then be set up accordingly.

Depending on the size of the retail organization there may be hundred, thousands or even tens of thousands of fixtures.

The graphics for these fixtures are stored in directories. Consider carefully the number of directories you need. With only a limited number of fixtures, one directory may be sufficient. With tens of thousands of fixtures, it may be more logical to create a number of directories.

In this example some sub directories have been set up in the folder where the Macro Space Management directories are stored.



Client data serves as a parent directory. Three sub-directories called Miscellaneous, Racking and Shelves serve to hold the graphics for those classes of fixtures.

> **Note:** Each fixture will normally have two classes of graphics associated: .dwf files for display in the Planner environment and .3DS files for display in Merchandiser.

The directories that the graphics have been assigned to need to have to have their paths specified in the Directories Tab in the Configuration Module. More Info

Setting up Directory Structures

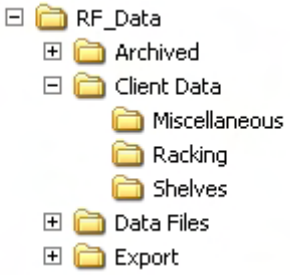
Directory Structures need to be set up before fixtures can be imported into them.

This is done in two stages:

- Create the required directories using Windows Explorer.
- Set up the required links in the Configuration Module.

Create the required directories using Windows Explorer

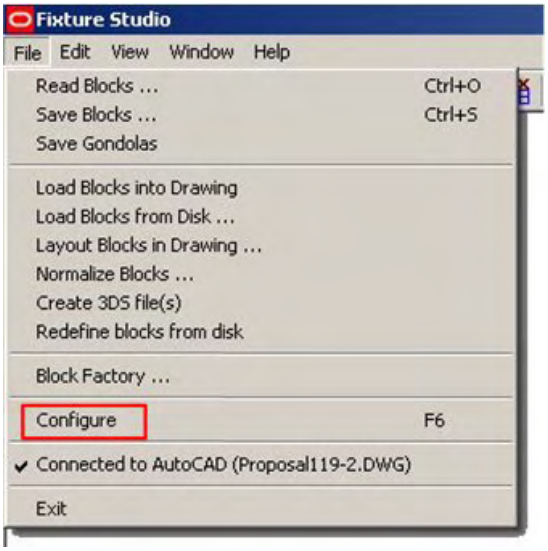
Using Windows Explorer, navigate to where the Macro Space Management data files are held. Create the required directories.



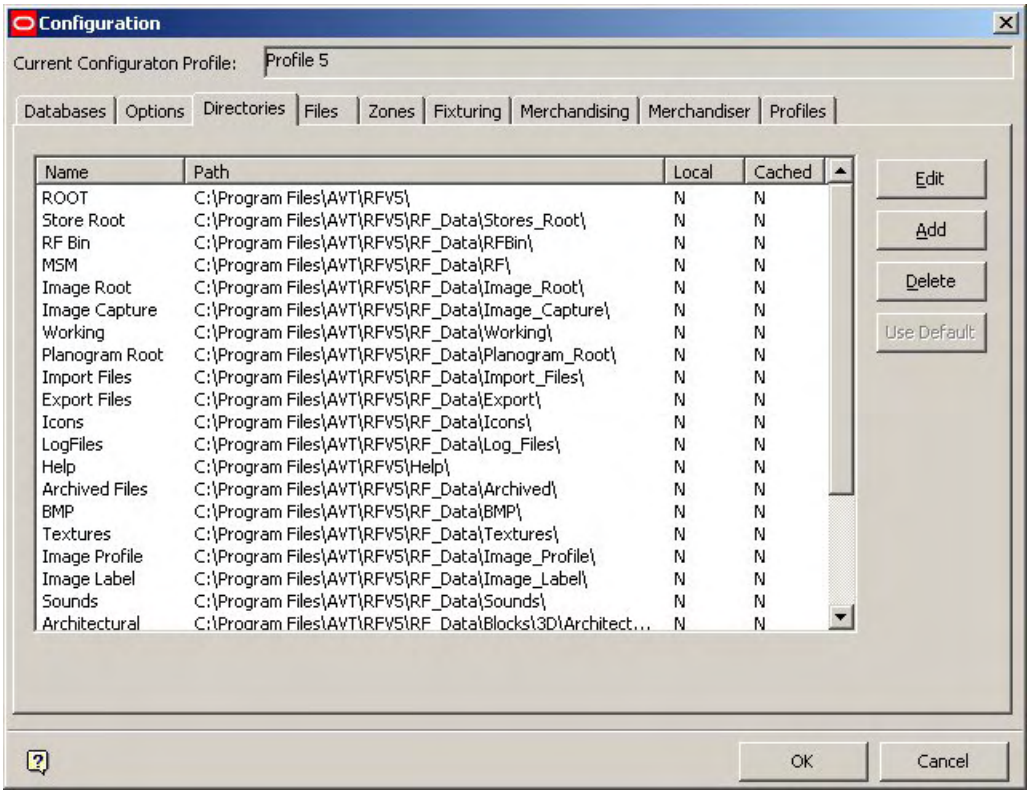
Note: You may require the appropriate permissions from your Systems Administrator to carry this out.

Set up the required links in the Configuration Module

Open the Configuration Module by selecting the Configure option from the File pull down menu.



Select the Directories Tab.



Using the Add button will allow paths to the directories made using Windows Explorer to be added.

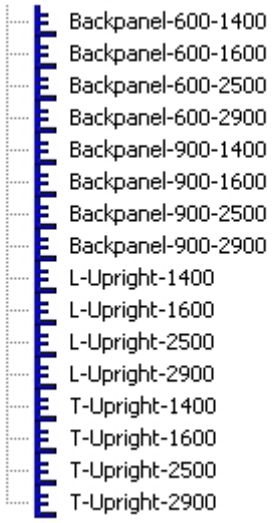
Naming Conventions

> **Note**: Naming conventions are vital to the efficient operation of Macro Space Management. They must be decided upon before any blocks are imported into Fixture Studio. Lack of a naming convention will make it more difficult to locate the require fixture blocks. Lack of a naming convention will result in users spending large amounts of time creating dozens (if not hundreds) of gondolas that could have been defined far more efficiently using a naming convention.

A naming convention is a pre-thought out and logical way of assigning block names.

If we give blocks names like Widget-187567 and Gizmo-ADRTYN, it is not obvious what the blocks or, or what their dimensions are.

With a well thought out naming convention, things are far simpler.



In the above example, we can see we have three types of block; Backpanels, L shaped uprights and T shaped uprights.

We can also see that the backpanels have widths of 600 and 900 mm, and that they have heights of 1400, 1600, 2500 and 2900 mm.

Similarly we can see that both the L and T shaped uprights come in four heights; 1400, 1600, 2500 and 2900 mm.

Widget-187567 might well be a backpanel of width 600 mm and height 2500 mm, but we cannot tell this from the block name.

Naming Conventions

Naming conventions are of the general form:

Prefix-parameter-parameter-parameter-suffix

These can be any combination of numbers and letters, together with several separating characters.

The separating characters can be either a '–', '_' or an 'x', so each of the naming conventions below are equally valid:

- Prefix-Parameter-Parameter-Parameter-Suffix
- Prefix-ParameterxParameterxParameter-Suffix
- Prefix_ParameterxParameterxParameterxSuffix

However, the use of naming conventions must be consistent.

Naming blocks with a mixture of '–', '_' or 'x' will lead to errors.

For example we will have problems if we name blocks as in the example below:

- Backpanel-600-1400
- Backpanel-600x1600

This is because Macro Space Management expects to find the same separating character for blocks within a naming convention.

When the program draws a gondola, if it expects to see:

Prefix-Width-Height

And some of the blocks are named:

Prefix-WidthxHeight

It will find blocks with name like Backpanel-600-1400 because these are in the expected form.

It will fail to find blocks with names like Prefix-widthxheight because there is an 'x' present where Macro Space Management expected to find a '–'.

Similarly we must avoid misspellings:

If we name a block Backpanal-600-1400 rather than Backpanel-600-1400, Macro Space Management will fail to find the block because we have misspelt Backpanel.

> **Note:** Always check naming conventions for errors. If you have made an error when naming the block, Macro Space Management will not find it when drawing the gondola.

Examples of Naming Conventions

The **examples below** are all valid examples of naming conventions:

Prefix-Size

- Leg-1500
- Leg-2000
- Leg-2500

Prefix-WidthxHeight

- Backpanel-600x1500
- Backpanel-900x1500
- Backpanel-1200x1500

Prefix-Width-Depth-Height

- FreezerUnit-600-800-300
- FreezerUnit-600-800-400
- FreezerUnit-600-1000-500

Prefix-Width-Depth-Height-Suffix

- FreezerUnit-600-800-300-Lozier
- FreezerUnit-600-800-400-Lozier
- FreezerUnit-600-1000-500-Lozier
- FreezerUnit-600-800-300-Hoffmann
- FreezerUnit-600-800-500-Hoffmann
- FreezerUnit-600-1000-500-Hoffman

Prefix-Size

- Podium-Small
- Podium-Medium
- Podium-Large

In general naming conventions should be specified such that the block name provides all the information required. If we take the example of a naming convention of the form:

Prefix-Width-Depth-Height-Suffix

Block names of the form allow us to define gondolas so that at the time of addition into the Planner or Merchandiser environments we can choose the:

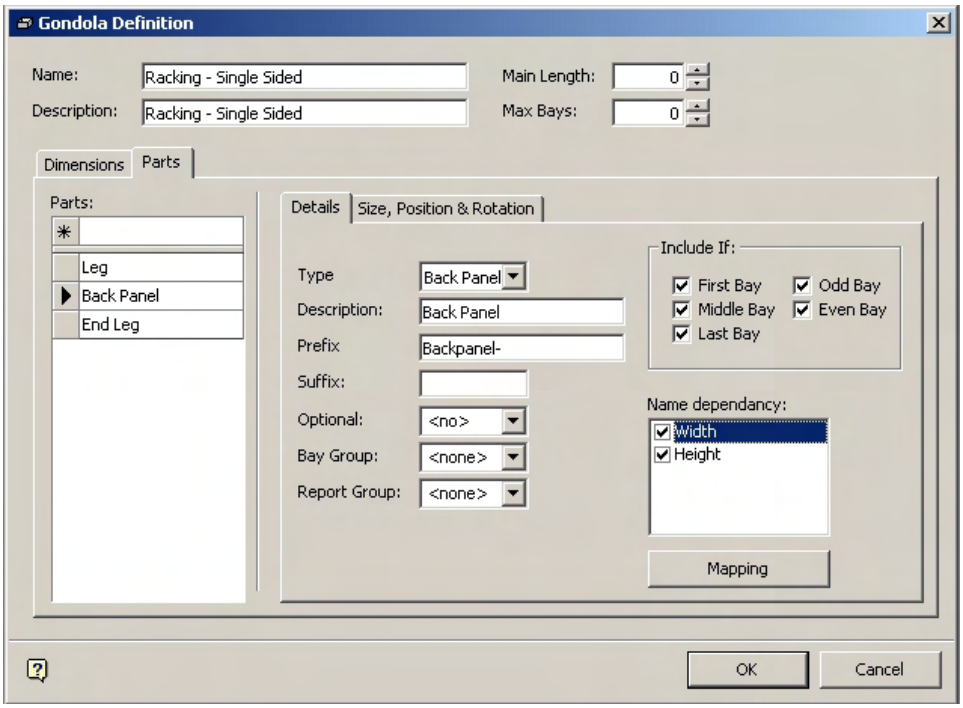
- Specific type – for example Freezer Units
- Specific width – for example 600, 800 and 1000 mm
- Specific depth – for example 800, 1000 and 1200 mm

- Specific height – for example 400, 500 and 600 mm
- Manufacturer – for example Lozier

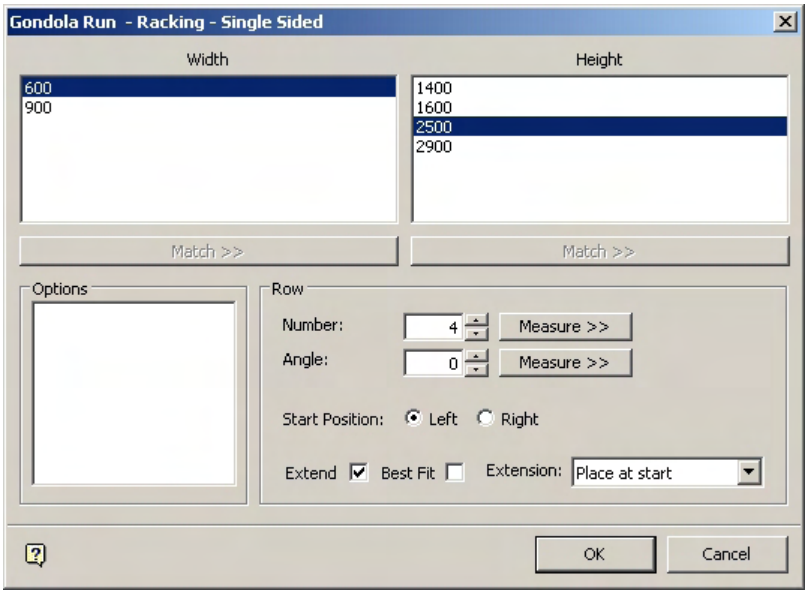
> **Note:** One well thought out gondola definition could allow us to place dozens of different variants of that gondola in Planner or Merchandiser.

Gondolas and Naming Conventions

If **naming conventions** are assigned to Fixture blocks, then these blocks can be automatically be selected by including the correct options during Gondola definition.



When the gondola is placed in Planner or Merchandiser, a list of dimensions (and sometimes options) will be available in the Add Gondola dialogue box.



In the above example a gondola can be placed with any combination of two widths and four heights (eight combinations in all).

> **Note:** In the above example, a width of 600 mm and a height of 2500 mm have been selected. When the gondola is created in the drawing, it will be done using by reconstructing the required block name based on information in the gondola definition. For example, the software would use a backpanel with a name of Backpanel-600-2500. If we had chosen dimensions of 900 mm and 1400 mm, the software would use a backpanel with a name of Backpanel-900-1400.

If naming conventions were not used when defining this gondola, eight separate gondolas would have to have been designed in Fixture Studio.

> **Note:** Using gondola definitions in this way only works if a consistent naming convention has been used for the blocks that will be used to draw the gondolas. This means that blocks must be imported into Fixture Studio using a good naming convention from the start. If a good naming convention is not used, then users will end up with an inefficient way of defining gondolas, and consequent loss of time when planning gondolas in store plans

Fixture and Gondola Hierarchies

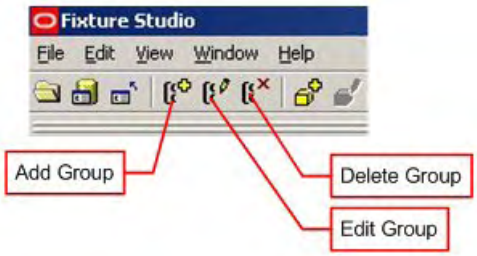
> **Note:** Well designed hierarchies make it easier to find fixtures and gondolas, both in Fixture Studio and in Planner and Merchandiser. Well designed hierarchies also make it easier to see which items of equipment have compatible connections and styles. Consider how your users will want Groups of objects organized, then design an appropriate hierarchy.

Groups are a way of arranging collections of fixture or gondola definitions into a logical arrangement. Each group holds a logical class of objects.

For example, one group could be created to hold all gondola descriptions for freezer units, another for chilled goods units and another for food and vegetable units.

This facilitates finding the required gondola when it is desired to edit it, or to place it in a store layout in both Planner and Merchandiser.

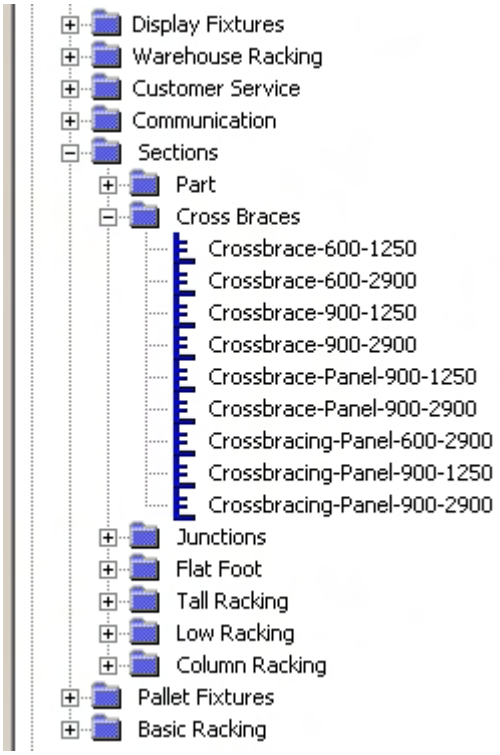
Groups can be added, edited or deleted using the Grouping icons on the Toolbar.



If the user is in the Blocks Tab, Fixture Groups can be added, edited or deleted from the Fixture hierarchy.

If the user is in the Gondola Tab, Gondola Groups can be added, edited or deleted from the Gondola hierarchy.
Individual fixtures and gondolas can then be associated with the appropriate group

The resultant hierarchical tree appears in the object browser in Fixture Studio. Note how we can readily find the required object.



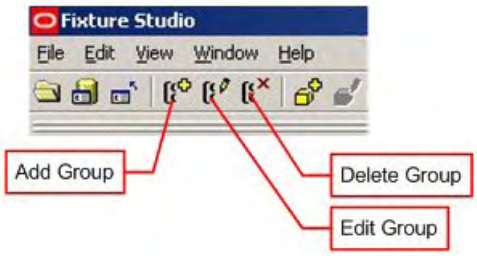
(The same hierarchy also appears in the Object Browser in Planner and in Merchandiser).

Note: Naming conventions have made it easy to identify the nature of each fixture.

Adding, Editing and Deleting Groups

Groups are used to arrange Block and Gondola definitions into logical collections with the hierarchical tree visible in the Object Browser.

Groups can be Added, Edited and Deleted.



Overview of Groups

Groups are analogous to clusters in Store Manager – they are containers used to collect together Fixture or Gondola definitions of similar characteristics.

Groups are arranged in a hierarchy emanating from a root. The hierarchy should be chosen such that it facilitates locating any desired Fixture or Gondola.

In the above example Gondolas have been split into three broad classes; Food, Clothing and Electrical

Each of the Groups has then been further subdivided.

Gondola definitions can then be added to the appropriate Group – for example all the chilled cabinet gondolas would be assigned to the Chilled Cabinets sub-group of the Food Group.

Adding a Group

To add a group, highlight the parent group to which it is going to be added. Click on the Add Group Icon. The Group dialogue box will appear.

Enter a description and select an icon from the drop down list. Click on OK to conform.

The group to be added is a child of its selected parent group.

Edit Group

To add a group, highlight the group which is to be edited. Click on the Edit Group Icon. The Group dialogue box will appear.

Edit the description if requited. It is also possible to select an alternative icon from the drop down list. Click on OK to conform.

The Group details will now be updated.

Delete Group

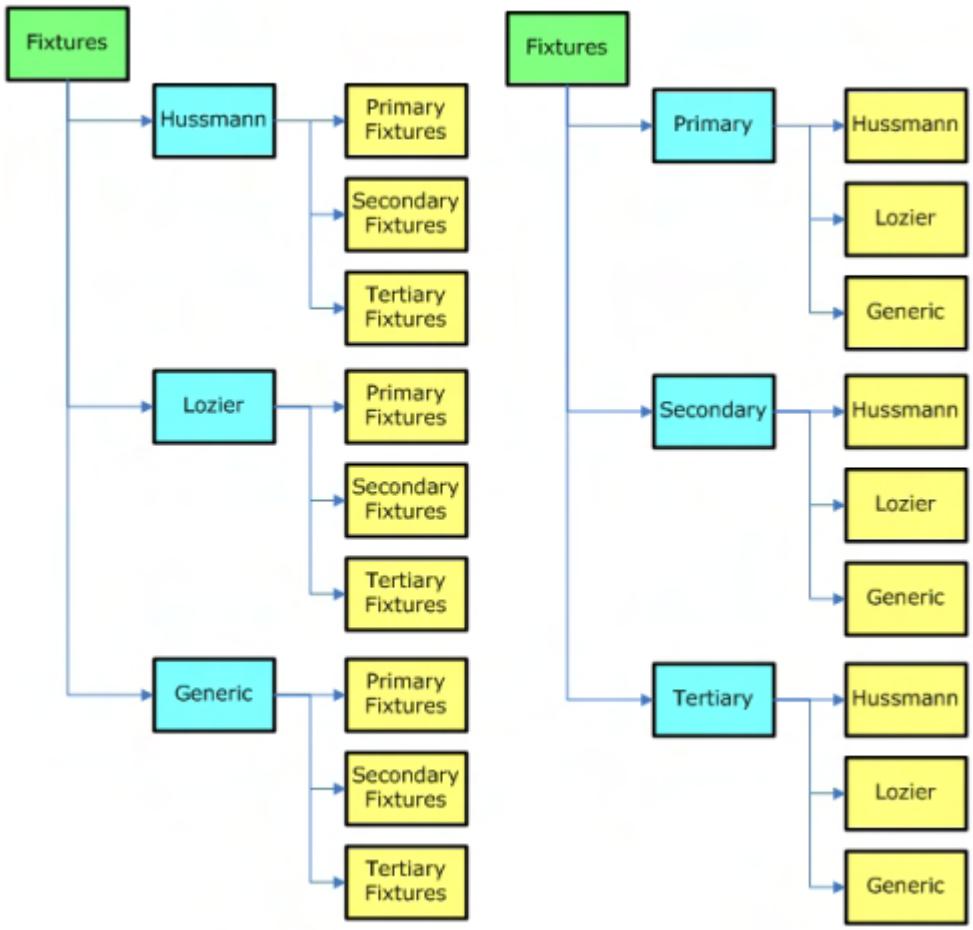
To delete a group, highlight the group to be deleted and click on the Delete Group Icon.

If the Group to be deleted has child groups or block definitions, a warning dialogue will appear.

If there are no child objects, the group will be deleted without any requirement for confirmation.

Examples of Hierarchies

Hierarchies can be set up in several ways. One example is manufacturer based: another equipment based. Examples of both are shown below.



When setting up hierarchies, the user must not only consider the logical groupings of fixtures and gondolas, but also how connections and styles are assigned.

Laying out the equipment in a store layout in either Planner or Merchandiser is much facilitated if all items in a group have similar connections and styles assigned and those connections and styles are compatible with other groups.

For example, the Hussman Primary Fixtures Group would be expected to have connections and styles compatible with the Hussmann Secondary Fixtures Group.

Stretchable Fixtures

Note: Use stretchable fixtures if you do not want accurate reports on what equipment is present in stores. Do not use stretchable fixtures if you want accurate reports on equipment.

Stretchable Fixtures

Stretchable fixtures are a special feature of Macro Space Management that allow those fixtures to take up a range of permitted sizes.

Placing stretchable fixtures reduces the number of fixtures required as the same fixture could be placed in (for example) 600 mm, 700 mm and 800 mm widths.

Reporting

It is possible to generate reports on what equipment is present in one or more stores.

If a stretchable backpanel has been used in 600, 700 and 800 mm widths, the report will only show the present of the stretchable backpanel.

If 600 mm, 700 mm and 800 mm wide backpanels have been individually placed, it is possible to generate an accurate report on how many of each width of backpanel is present in a store.

Connections

> **Note**: Connection set-ups should be kept as simple as possible with regard to connecting together equipment in the correct alignment and Ensuring non compatible equipment cannot be connected. Connections should also be used in conjunction with styles.

Connections are used to determine what items of equipment can connect to what items of equipment.

For one item of equipment to connect to another the following must be true.

	Requirement	Optional or Mandatory
Gender	The connection points must have compatible genders	This requirement can be disabled in the Configuration Module
Shape	The connection points must have the same shape	This requirement can be disabled in the Configuration Module
Size	The connection points must have compatible sizes	This requirement can be disabled in the Configuration Module

If any of these criteria are not true, then a connection cannot be made.

In addition, if the details of the connections are not correctly specified relative to each other, equipment may connect together in unintended alignments.

It is suggested the use of connection parameters is planned beforehand.

> Note: Connections can be made easier to use by means of well planned hierarchies. For example, all equipment in the Lozier group would be expected to have connections designed to be compatible.

Planning the use of Connections

The following guidelines are recommended for planning the systematic use of connections.

Connection Names

Connections should be assigned logical names such as Peg or Slatwall. This enables their purpose to be seen at a glance.

Gender

Permissible Values	Comment
Male, Female, Neutral.	Male connects with female. Neutral connects with itself and both male and female.

Specify conventions such as male and female connections always point in opposite directions when defined.

This means when two items of equipment are inserted in Merchandiser next to each other and facing the same way, the male and female connections will always mate when selected for joining.

Also use logical conventions such as pegs, hanging rods, etc, always have male connection gender, and the holes or slots they fit into have female gender.

Shape

Permissible Values	Comment
None, Rectangle, Circle, Oval, Triangle, Hexagonal.	Specific shapes will only connect with themselves and None.

Assign the shapes to equipment by function - for example assign connections of shape Rectangle to Legs, Slatwalls and Backpanels and connections of shape Circle to Pegs, Hanging Rods, etc.

This will mean that Slatwalls and Backpanels can only connect to Legs and not (say) Pallets. Similarly, it will mean that Pegs can only connect to the appropriate connections on the Backpanel.

(Equipment that has to connect to multiple types of equipment can be assigned shape None).

Size

Permissible Values	Comment
Minimum size 0, maximum size 1000.	Two items of equipment must have overlapping connection sizes to connect.

Connection sizes can be assigned according to purpose. An example of such a scheme is:

Size	Purpose
11 - 15	Floor mounted (primary) equipment
6 - 10	Shelves and other secondary equipment
0 - 5	Dividers, grilles and other tertiary equipment

That means connection types intended to let floor mounted equipment only join to each other can be assigned one size range.

Shelves can be assigned another size range of connection types that will only let them connect to the equivalently sized connections on primary fixtures such as backpanels and slatwalls.

Dividers and grilles can be assigned another size range of connection types that will only let them connect to the equivalently sized connections on secondary fixtures such as shelves.

If the size ranges are correctly assigned then although the gender and shape of a connection might be compatible, equipment will be prevented from joining inappropriately - for example a divider will only place on a shelf.

> **Note:** These connection requirements can always be overridden by turning off the filters in the Fixtures Tab of the Configuration Module.
>
> **Note:** As well as Connections, Styles can be used to determine what item of equipment can be connected to what. If it is intended to join one item of equipment to another, both the Styles and the Connections must be compatible with that aim.

Styles

> **Note:** Styles and Style Relationships should be kept as simple as possible with regard to making sure equipment connects together in a compatible manner and Ensuring the correct display style goes onto shelves, pegs, etc. Styles should also be used in conjunction with connections.

Styles are used to determine what is compatible with what.

For example, the assigned fixture and shelf styles determine whether a shelf object can be placed on a specific item of equipment or not.

For example styles will allow pegs to be placed in pegboards, but not on open shelves.

Similarly the assigned product style determines whether the product can be placed on for example a shelf.

Product of Pegged style can be constrained to only place on pegs, while products of Boxed Style can be constrained to only place on wire, open and heavy duty shelves.

> **Note:** Styles can be made easier to use by means of well planned hierarchies. For example, all equipment in the Lozier group would be expected to have styles designed to be compatible.

Planning the use of Styles

In planning the use of Fixture and Shelf Styles, an effort must be made to keep the number of styles to the minimum possible.

This is because for Style Relationships:

- Each shelf object that goes onto a fixture has to have a compatible style relationship with that fixture.
- Each product that goes onto a fixture has to have a compatible style relationship with that fixture.

- Each product that goes onto a shelf object has to have a compatible style relationship with that shelf object.

If there are large numbers of Fixture, Shelf and Product Styles, it will make it difficult to set up and maintain the list of style relationships.

For example, it is best to avoid manufacturer specific shelf styles unless there are actual reasons for doing so.

Thus it is better to have a 'General Shelf' style rather than 'Hussman Shelf', 'Lozier Shelf' and 'Franklin Shelf' as having three separate shelf styles means three times as many style relationships need to be set up.

Note: As well as Styles, Connections can be used to determine what item of equipment can be connected to what. If it is intended to join one item of equipment to another, both the Styles and the Connections must be compatible with that aim.

4

About Blocks

Naming Conventions

Gondola creation relies on a **convention for block naming**. Accordingly blocks should be named in a systematic manner.

	ID	Description	Name	Type
	125	Backpanel 600 H1150	Backpanel-600-1150	Fixture
	127	Backpanel 600 H1500	Backpanel-600-1500	Fixture
	128	Backpanel 600 H1600	Backpanel-600-1600	Fixture
	129	Backpanel 600 H2500	Backpanel-600-2500	Fixture
	130	Backpanel 600 H2900	Backpanel-600-2900	Fixture
	124	Backpanel 600 H950	Backpanel-600-950	Fixture
	132	Backpanel 900 H1150	Backpanel-900-1150	Fixture
	133	Backpanel 900 H1400	Backpanel-900-1400	Fixture
	134	Backpanel 900 H1500	Backpanel-900-1500	Fixture
	135	Backpanel 900 H1600	Backpanel-900-1600	Fixture
	136	Backpanel 900 H2500	Backpanel-900-2500	Fixture
	137	Backpanel 900 H2900	Backpanel-900-2900	Fixture

Naming conventions are often of the general form Block Type-dimension-dimension-dimension.

In the above example, the convention is Backpanel-width-height.

- Backpanel-600-1150 is a backpanel 600 mm wide x 1150 mm high.
- Backpanel-600-1500 is a backpanel 600 mm wide x 1500 mm high.

> **Note:** Components for gondolas will be selected using these name conventions, so it is important that a consistent scheme is used when creating blocks. If this scheme is not consistent, it may not be possible to select the required blocks for creating gondolas. Block names can also include suffixes, for example -HD and -HD-Foot.

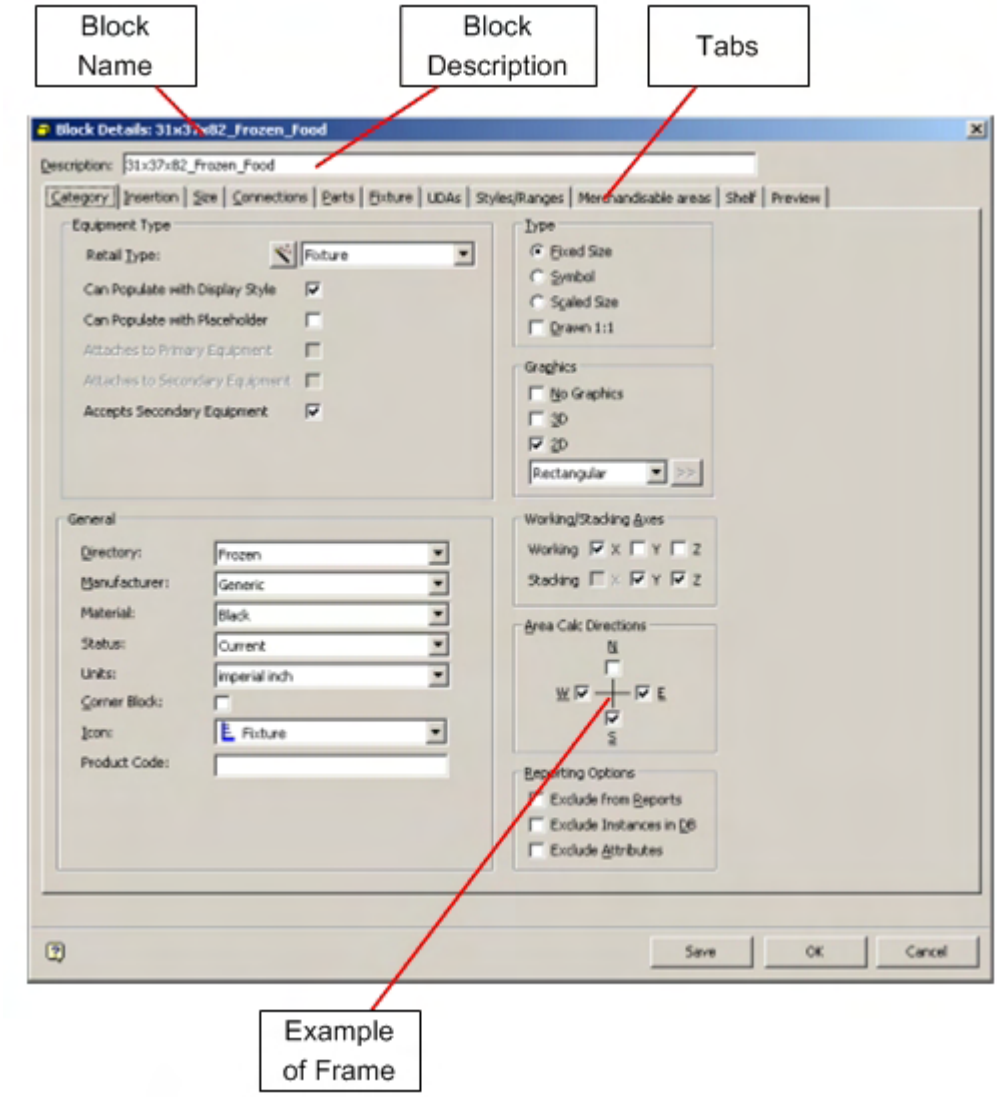
	ID	Description	Name	Type
	405	Plant Shelf 600x600	Steel-Shelf-600x600	Shelf
	406	Plant Shelf 600x600 HD	Steel-Shelf-600x600-HD	Shelf
	407	Plant Shelf 600x600 HD with Foot	Steel-Shelf-600x600-HD-Foot	Shelf
	408	Plant Shelf 600x800	Steel-Shelf-600x800	Shelf
	409	Plant Shelf 600x800 HD	Steel-Shelf-600x800-HD	Shelf
	410	Plant Shelf 600x800 HD with Foot	Steel-Shelf-600x800-HD-Foot	Shelf

Suffixes can be used to further restrict the list of available blocks for a specific gondola.

Overview of Block Details Dialog Box

The **Block Details dialogue box** allows the user to give the Wblock (World Block) created in Planner the intelligent properties needed by Macro Space Management to carry out the full range of its fixturing, merchandising and reporting functions.

Data added to Block Details is stored in the central Macro Space Management database.



The Block Name at the top of the dialogue box must correspond to that of the AutoCAD Wblock it is associated with.

If they do not correspond, the Macro Space Management block cannot be placed in the CAD or Virtual Reality environments.

The Block Description allows the user to enter a more comprehensive description of the block.

The Tabs allow the user to switch between various categories of Macro Space Management Block information. There are eleven tabs in total:

- Category
- Insertion
- Size
- Connections
- Parts
- Fixture
- UDA's (User Defined Attributes)
- Styles/Ranges

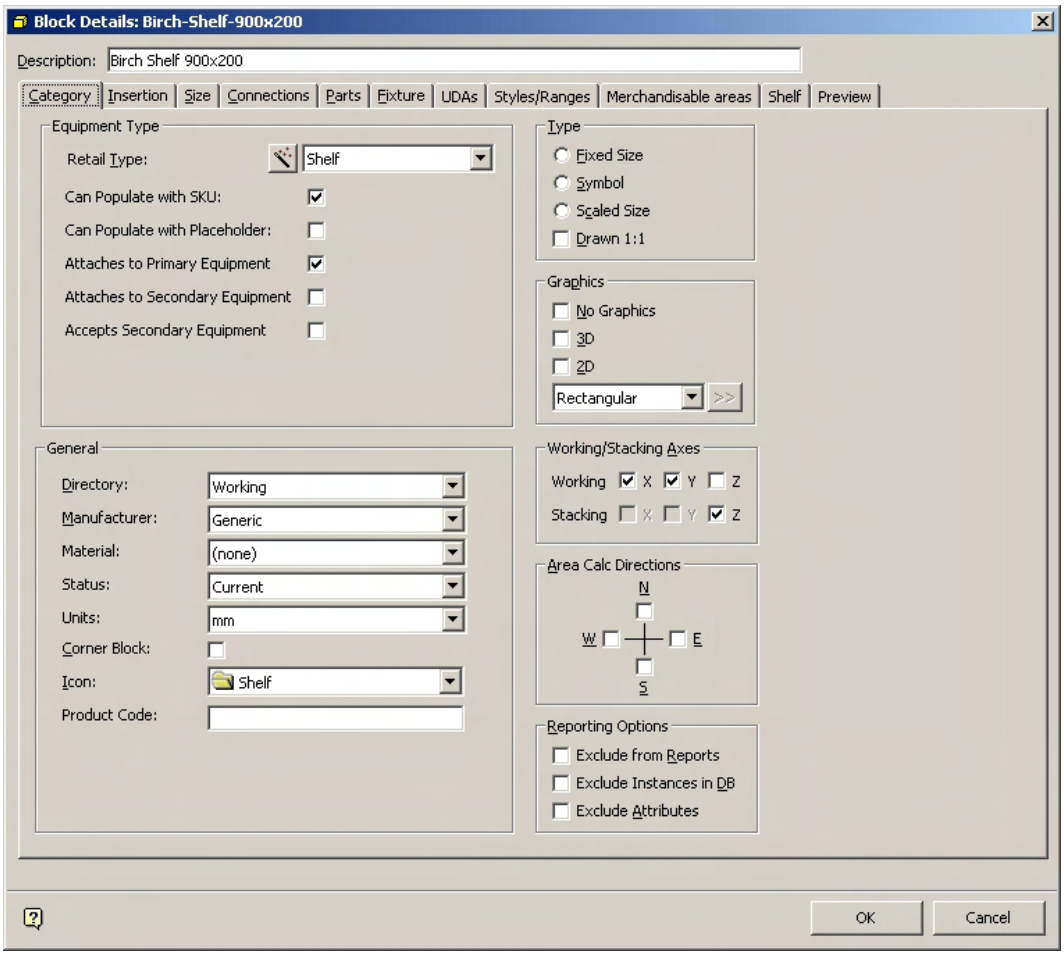
- Merchandisable Areas
- Shelves
- Preview

Each tab is split into a series of frames. Each frame deals with one aspect of the information on that tab.

Tabs

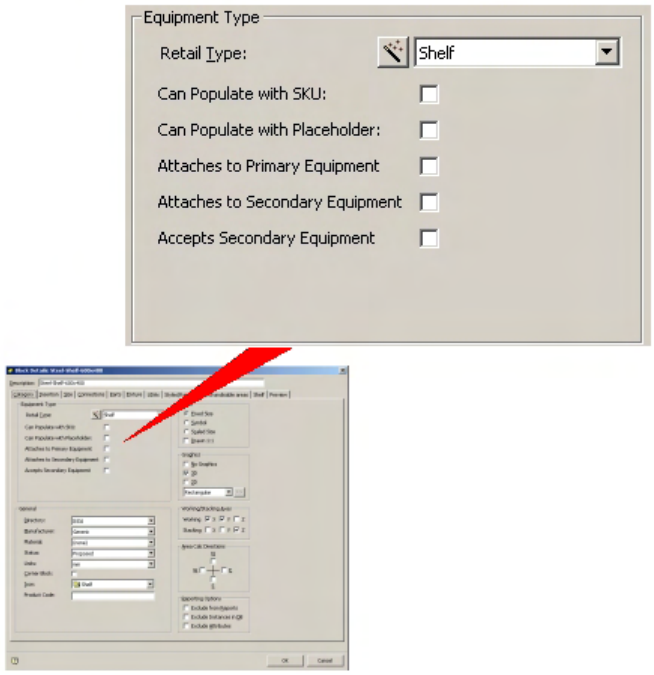
Category Tab

The **Category Tab** is used to set general parameters for the block being defined.



The Equipment Type Frame

The **Equipment Type Frame** can be used to specify basic parameters for the object.



Retail Type can be set from a drop down list.

Can Populate with SKU determines whether products can be placed at the display level on this object.

Can Populate with Placeholder determines whether placeholders (representing a class of product) can be placed on this object.

Attaches to Primary Equipment allows the object to attach to primary equipment (equipment that stands on the floor).

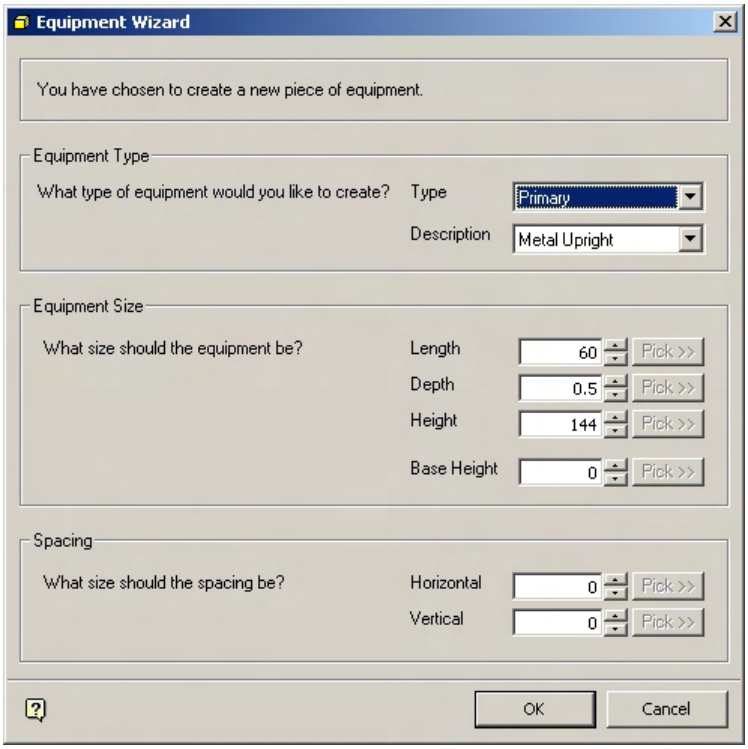
Attaches to Secondary Equipment allows the object to attach to secondary equipment (for example shelves).

Accepts Secondary Equipment allows the object to accept secondary equipment (for example shelves and rods).

> **Note:** Some of this data can also be set with the Wizard.

The Equipment Wizard

The **Equipment Wizard** allows the user to define certain basic parameters from drop down menus etc.



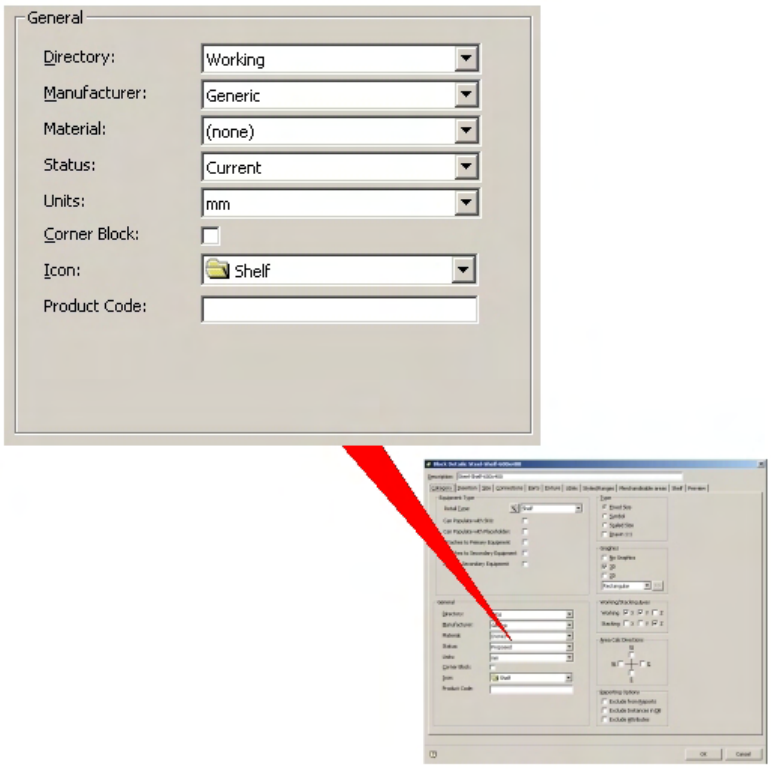
Equipment Type and **Description** can be selected from drop down lists.

Equipment Size, **Depth**, **Height**, and **Base Height** can be set using the spin controls.

Spacing is used for equipment like slatwalls and pegboards. It is used to set the spacing of slats or pegs.

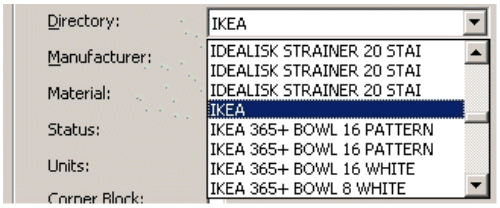
The General Frame

The **General Frame** enables the user to set a series of options concerning the general properties of the block.

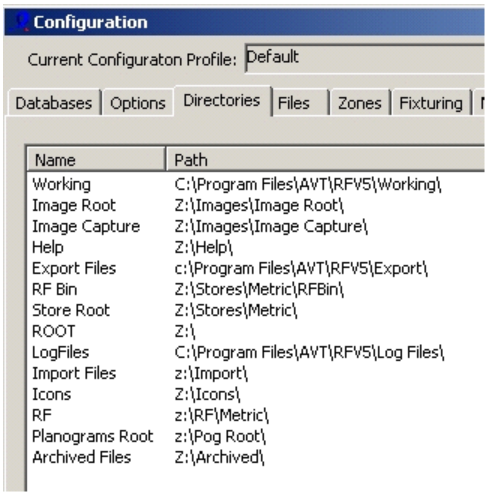


Directory

The Directory specifies the sub-directory in which the block details are stored. This can be selected from a drop down list.



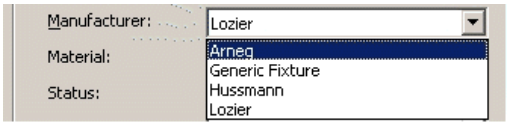
The directory name should be the same as specified in the Directories Tab of the Configuration Module.



Note: Each implementation of Macro Space Management will vary slightly in directory structure.

Manufacturer

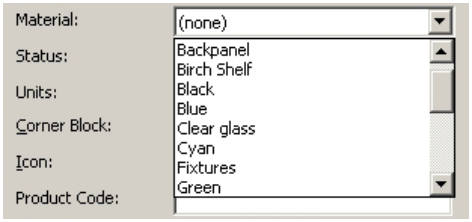
The Manufacturer can be selected from a drop down list.



This list is configured in the Admin Module (Edit > Manufacturers).

Material

The Material can be selected from a drop down list.

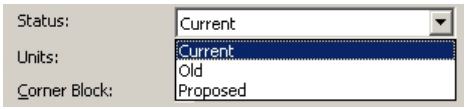


This is particularly significant in the Virtual Reality environment as the material affects the visual appearance of the block.

This list is configured in Product Studio (View > Materials).

Status

The Status can be selected from a drop down list.



This list is configured in the Admin Module (Edit > status).

Depending on implementation, the status may affect the way the blocks display in the various hierarchical trees they appear in.

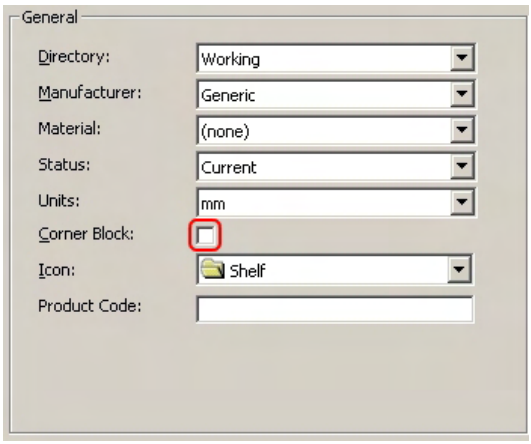
Units

The Units the drawing is dimensioned in can be selected from a drop down list.

Care should be taken to select a consistent system of units for equipment. Selecting Inches for some types of equipment and Millimeters for other types could result in strange effects when they are inserted into the same drawing or Virtual Reality environment.

This list is configured in the Admin Module (Edit > Units).

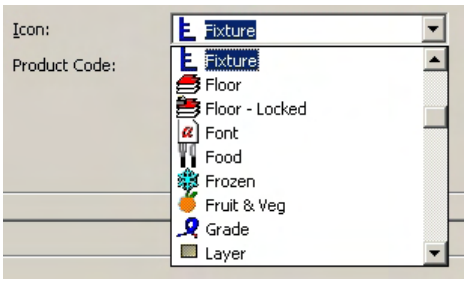
Corner Block



Specifying a block as a Corner Block restricts options for populating and carrying out area calculations.

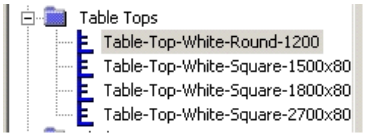
Icon

The Icon for the block can be selected from a drop down list.



This list can only be customized by Oracle.

The selected Icon will then appear against the Block Definition in the various hierarchical trees.



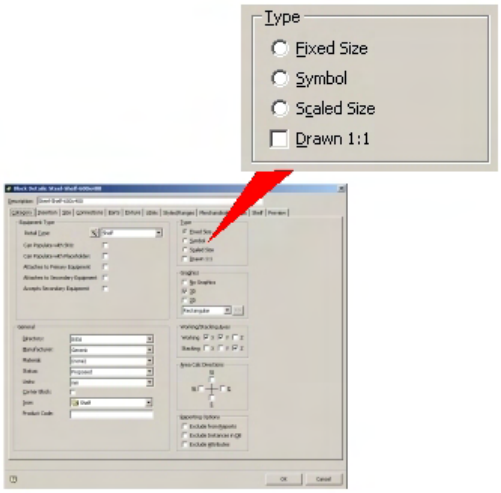
Code

The code is entered by the user. An example would be a manufacturer's product code. It is used for reporting purposes.

It is used for reporting purposes.

The Type Frame

The **Type Frame** specifies how the block is to be drawn in the AutoCAD drawing or Virtual Reality environment.



Fixed Size blocks are always drawn at a constant scale. This is how most blocks will be designated as it means they change in scale as the drawing scale is changed.

Symbol is used to indicate blocks that indicate information on the drawing. An example might be a directional arrow. Symbols remain a standard size, irrespective of the scale of the drawing.

Because symbols need to be visible, they are generally drawn at a 50:1 scale and appear at this size in the drawing.

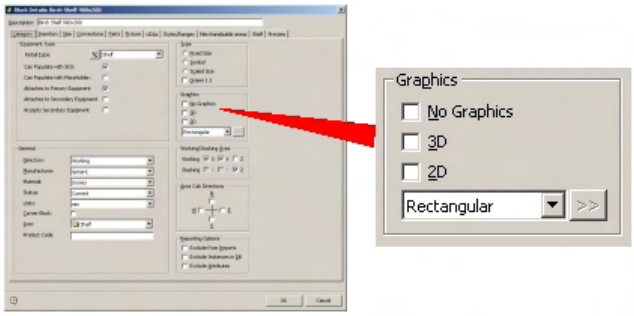
Scaled size is a feature from earlier versions of Macro Space Management and has been included for compatibility with older versions. It is not now generally used.

Fixed Size, Symbol and Scaled Size are mutually exclusive. Only one can be selected at a time via the associated radio buttons.

Drawn 1:1 is only applicable to blocks designated as symbol blocks. If they have been drawn to anything other than a 50:1 scale, they will be drawn at 50:1 in the drawing, unless Drawn 1:1 is checked. If this option is enabled, the symbol block will be drawn at its original scaled size (for example 100:1).

The Graphics Frame

The **Graphics Frame** specifies what sort of graphics are drawn in the AutoCAD environment.



No Graphics is an option that can be used for blocks that are not visually displayed.

An example would be an associated block (such as a bolt or castor) which doesn't need to have graphics, but can still be included in reports.

The **3D** and **2D** checkboxes determine which AutoCAD layer the object is to be drawn on. A 2D block will be placed on a different layer to a 3D block.

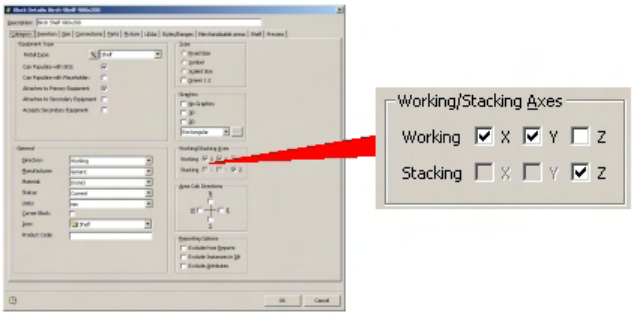
> **Note**: If an object has only been drawn in 2D, it will still be drawn on the 3D layer if this checkbox is ticked. However, it will still only be viewable in 2 dimensions.

Furthermore, if the block is to be created using Block Factory, then the 2D or 3D settings will determine the actual graphics that are created.

The Working/Stacking Axes Frame

The **Working and Stacking Axes** determine how products align and stack respectively on shelves in the Virtual Reality environment.

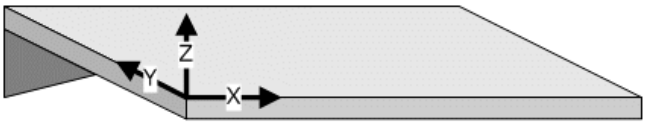
They do not affect product placement in the Planner environment as products are represented by placeholders.



Working Axis

The Working Axis defines the directions products can be aligned on.

If a Working Axis is checked, it also allows stacking in that axis.



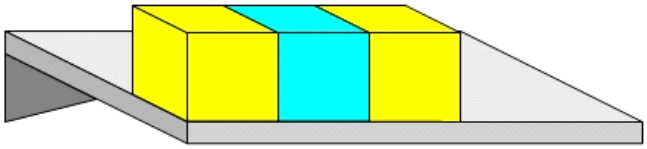
- If the X axis is checked, products may be aligned along the length of the block.
- If the Y axis is checked, products may be aligned over the depth of the block.
- If the Z axis is checked, products may be aligned relative to the height above the block.

The working axes selected have to be appropriate to the equipment.

- For pegs the Y working axis has to be enabled, as product has to be aligned along the length of the peg.
- For peg boards the X and Z working axes have to be enabled as products have to be aligned in a vertical place.
- For chest freezers the X and Y working axes have to be enabled as product has to be aligned over the bed of the unit.

> **Note**: If only some of the working axes are checked, then not all the alignment commands will be enabled in Merchandiser.

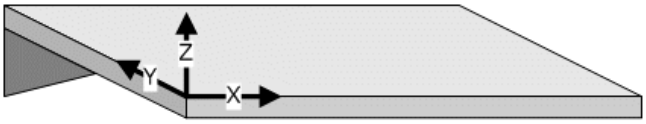
In the example shelf below, only the X Working Axis has been enabled. Product can therefore be aligned along the length of the shelf, but not relative to its depth and height.



Stacking Axis

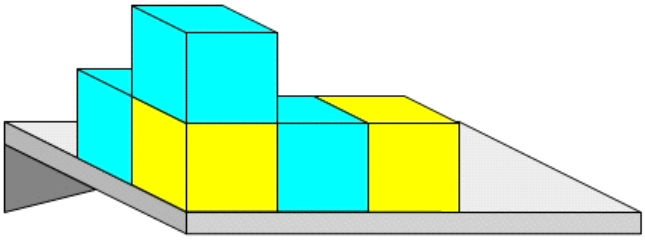
The Stacking Axis determines the directions products can be stacked in.

If only some of the Working Axes have been checked, the Stacking Axes can be used to allow product to be stacked in more directions than they can be aligned.



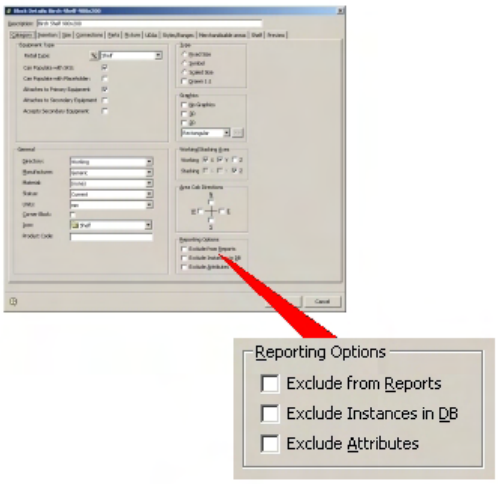
- If the X axis is checked, products may be stacked along the length of the block.
- If the Y axis is checked, products may be stacked down the depth of the block.
- If the Z axis is checked, products may be stacked vertically.

In the example shelf below, stacking has been enabled in the X, Y and Z planes, allowing product to be stacked in both horizontal and the vertical directions.



The Reporting Options Frame

The **Reporting Options Frame** allows the user to specify whether the Block Definition should be excluded from reports or the central database.



Not all blocks need be included in a report, for example Title Blocks and some symbols such as directional arrows. It may also be that is no need to store instances of a certain type of block in a database, for example Reference blocks, so there will not a record in the Fixtures table to represent the block.

Exclude from Reports is a check box allowing the Block Definition to be excluded from Macro Space Management's reports.

Exclude Instances in DB is a check box allowing the user to exclude information from the drawing being stored in the database during a save.

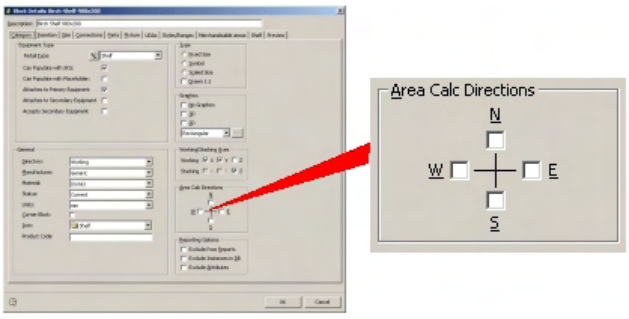
> **Note**: If you exclude instances of a block from the database, then it will also be ignored when rebuilding the drawing from the database.

Exclude Attributes would allow certain attributes of the Block Definition to be excluded from being stored in the central database.

This option is not enabled in this implementation of Macro Space Management.

The Area Calculation Directions Frame

The **Area Calculations Direction Frame** is used to set the directions that the area calculation function uses when establishing the area apportioned to the object.



Area calculation works by "feeling" out from the object in the specified directions. The check boxes that are ticked should be appropriate to the function of the object.

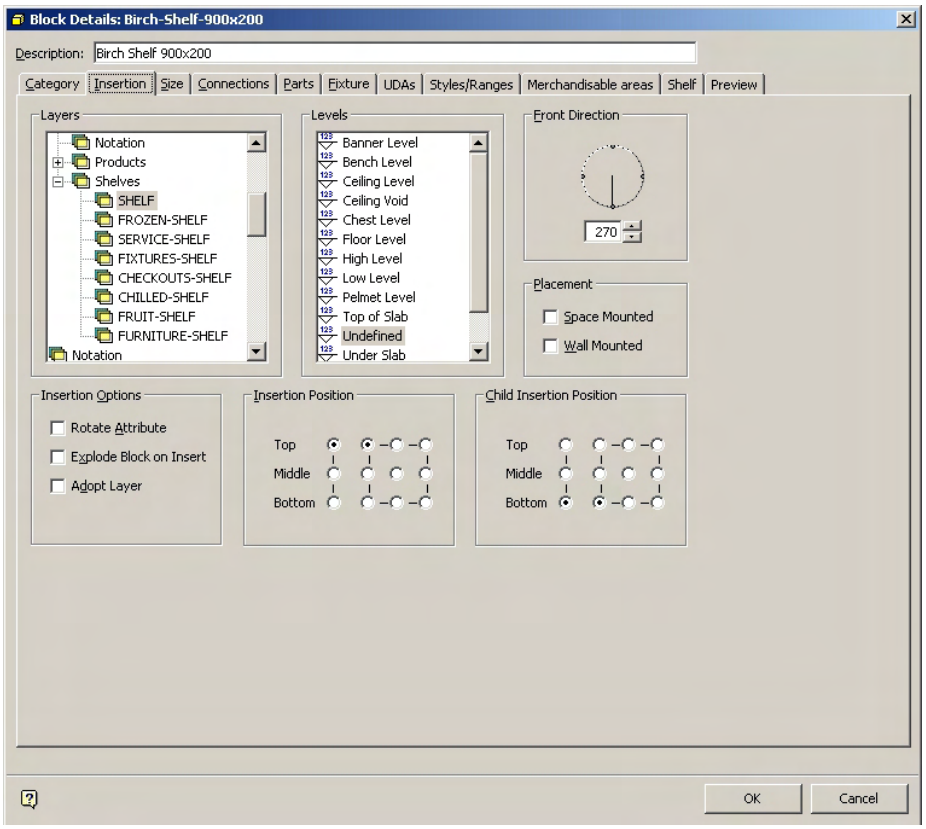
For instance, there would be no point in testing for other fixtures behind a wall bay, so only the front and two sides would be selected. Conversely, a table or pallet would

probably be placed away from other fixtures, so it would be appropriate to feel out in all directions.

> **Note**: The direction of the Front of the fixture is set in the Insertion tab. The check boxes ticked should take this into account.

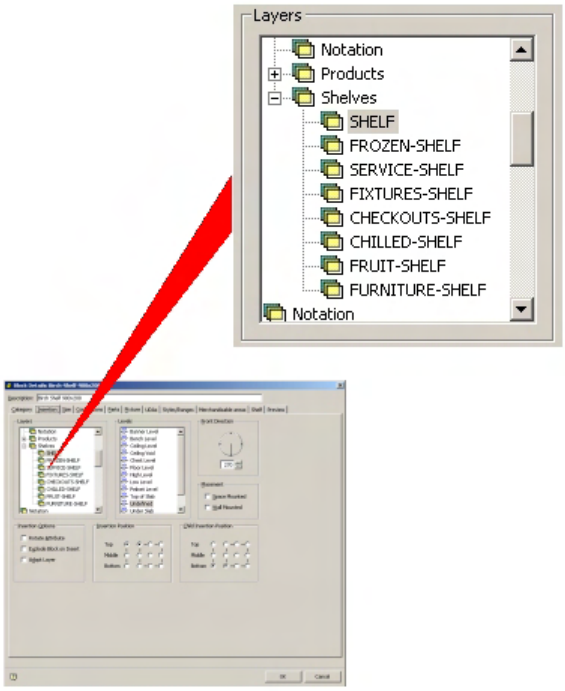
Insertion Tab

The **Insertion Tab** is used to specify a number of details affecting how the block is inserted into the drawing.



The Layers Frame

The **Layers Frame** specifies the Layer on which the Block Definition will be inserted when placed in the drawing or Virtual Reality environment.

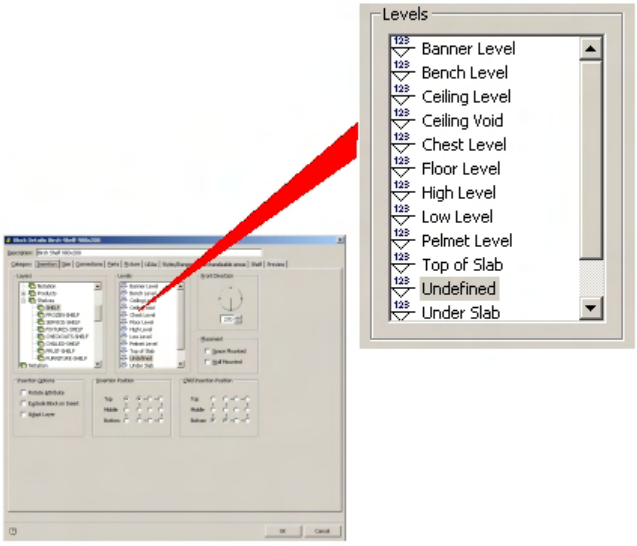


Selecting the correct layer is important as it will affect how the equipment behaves within the Planner and Merchandiser environments.

> **Note**: Selecting a layer controls how objects display in Merchandiser via the Layers dialogue box. Layers selected should be consistent with the purpose of the block.

The Levels Frame

The **Levels Frame** determines what level the Block is inserted in the drawing.



Each level represents a physical height at which equipment can be inserted in the drawing. The level chosen should be compatible with the purpose of the equipment.

Equipment would normally be inserted at Floor level, while Lights would normally be inserted at High Level which is 100 mm below Ceiling Level.

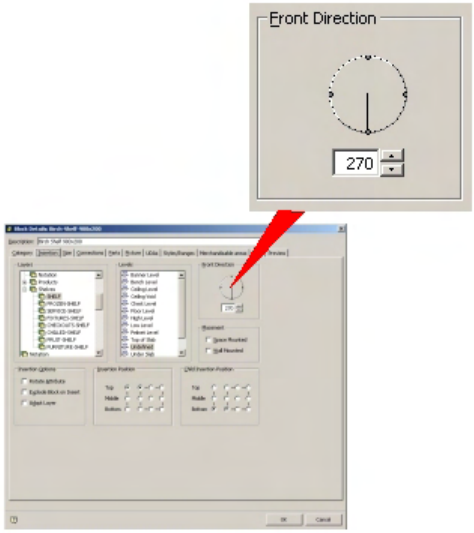
An example of current settings is given below.

Level ID	Level Description	Default Elevation	Relative to Level
0	Undefined	0	Floor
1	Top of Slab	0	Floor
3	Floor Level	0	Floor
4	Ceiling Level	13000	Floor
5	Under Slab	0	Floor
6	Low Level	75	Floor
8	Bench Level	1200	Floor
9	Chest Level	1500	Floor
10	High Level	-100	Ceiling Level
12	Ceiling Void	200	Ceiling Level
13	Pelmet Level	1750	Floor
14	Banner Level	-1500	Ceiling Level
99	User Defined	0	Undefined

Note: Levels are not currently directly configurable by the user. They can however be imported via the Data Import module. Contact **Oracle** for further information.

The Front Direction Frame

The **Front Direction** represents the direction which the front of the fixture (the side the customer views) is first orientated when the item of equipment is first placed in the drawing.

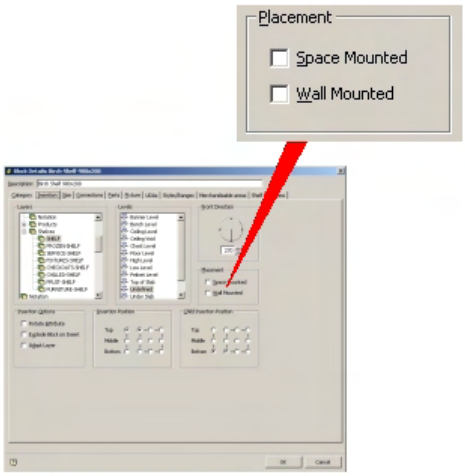


The orientation of the Front Direction of the equipment can then be changed by rotating the equipment when it has been inserted.

> **Note**: When assigning block details, it is strongly recommended that all blocks be initially defined with the same Front Direction. If front directions vary from block to block, this will lead to confusion when blocks are inserted in the drawing or formed into gondolas.
>
> **Note**: The front direction is normally set at 270 degrees relative to the Planner coordinate system – this defines 0 degrees as 'west'.

The Placement Frame

The **Placement Frame** enables two forms of mounting options to be specified.

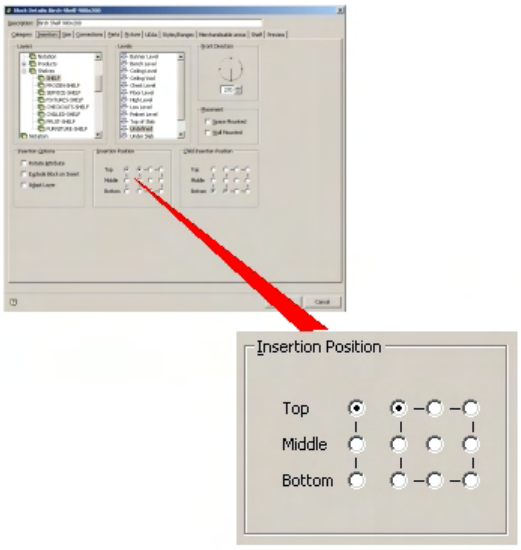


Space Mounted means this block can be inserted into any floor space.

Wall Mounted means this block can be attached to a wall on insertion.

The Insertion Position Frame

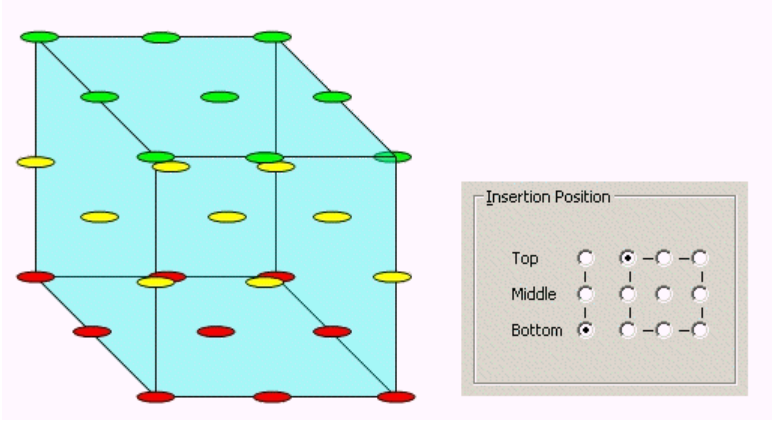
The **Insertion Position** is a position specified within Macro Space Management that matches the insertion position created when the associated graphic for the block was drawing in AutoCAD (or some other graphics program).



Note: The Insertion Position specified within Macro Space Management is passive – changing the Insertion Position does not change the position of the graphical insertion position created when the graphic was drawn.

It is important that the Macro Space Management insertion point matches the insertion point already defined in the graphic. If they do not match, then the graphic will be inserted into the AutoCAD and Merchandiser environments at an incorrect position.

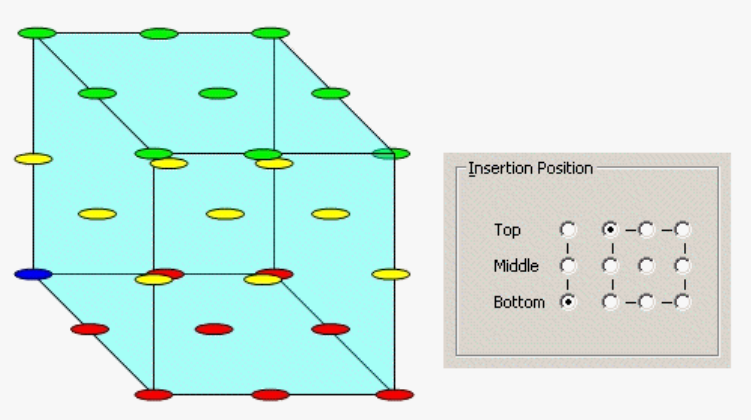
This in turn will result in problems with adjacency calculations, placing of associated equipment and products, etc.



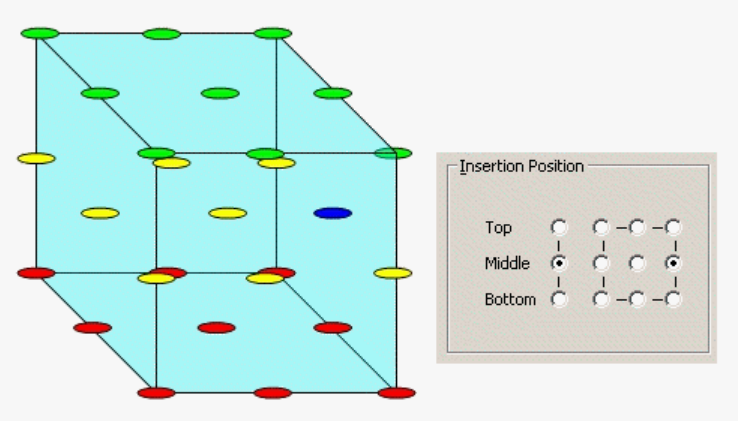
There are twenty seven possible insertion positions, aligned in three layers: top, (green circles), middle (yellow circles) and bottom (red circles). The layer can be selected by clicking on the appropriate radio button.

Each layer contains nine possible insertion points ranging from left rear to front right. The required option can be selected by clicking on the appropriate radio button.

Note: A consistent convention should be adopted for the position of the insertion point. If all blocks are drawn using this convention, then the potential for misalignment is sharply reduced.



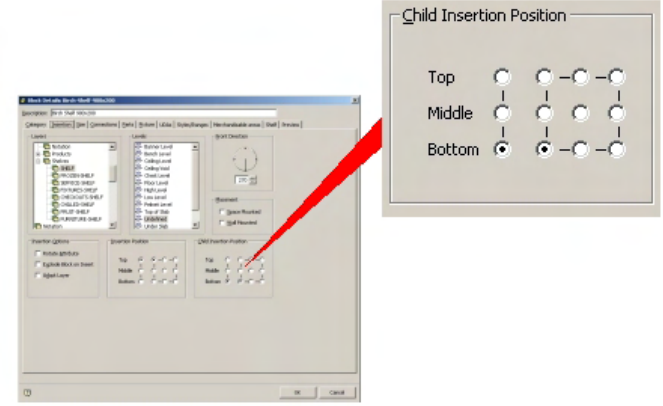
Note: In the above example, the insertion position (blue circle) is bottom, left, rear.



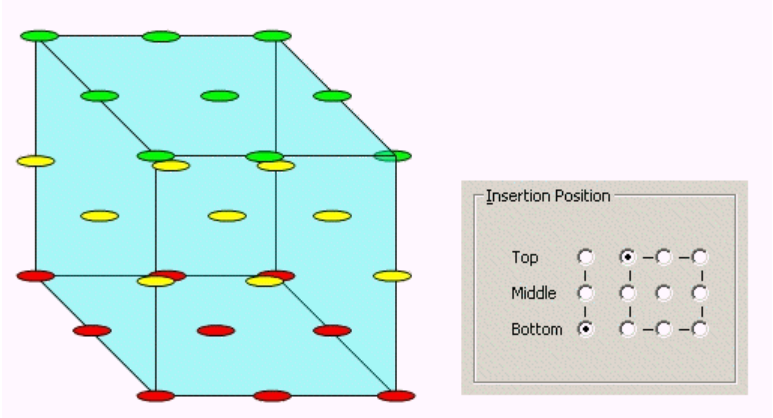
Note: In the above example, the insertion position (blue circle) is middle, right, center.

The Child Insertion Position Frame

The **Child Insertion Position Frame** enables the Child Insertion Position to be specified.

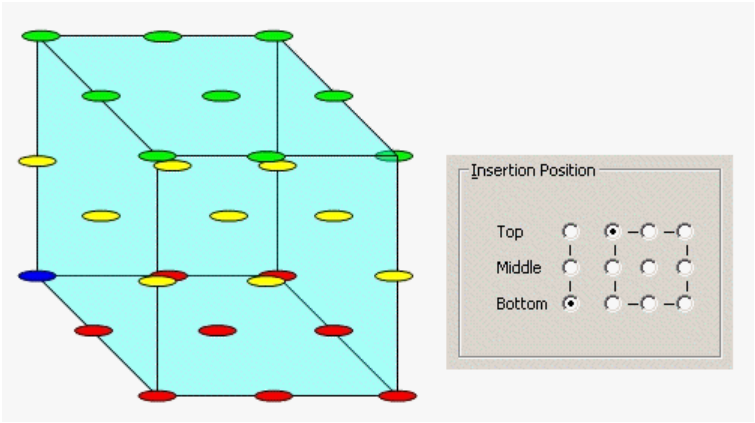


The Child Insertion Position is the datum point from which merchandise is inserted onto the object.

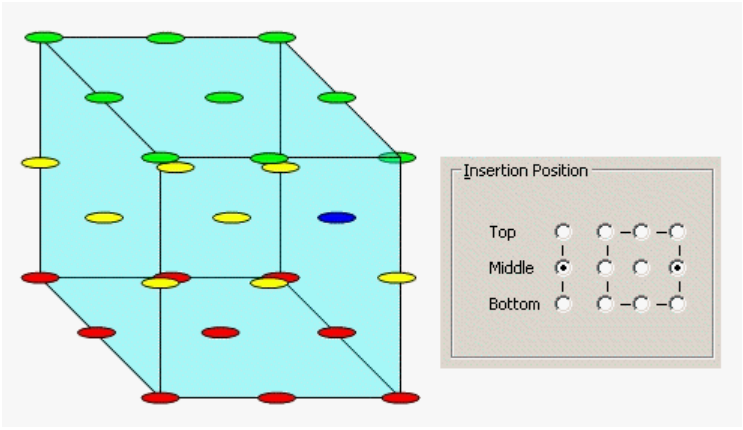


There are twenty seven possible insertion positions, aligned in three layers: top, (green circles), middle (yellow circles) and bottom (red circles). The layer can be selected by clicking on the appropriate radio button.

Each layer contains nine possible insertion points ranging from left rear to front right. The required option can be selected by clicking on the appropriate radio button.



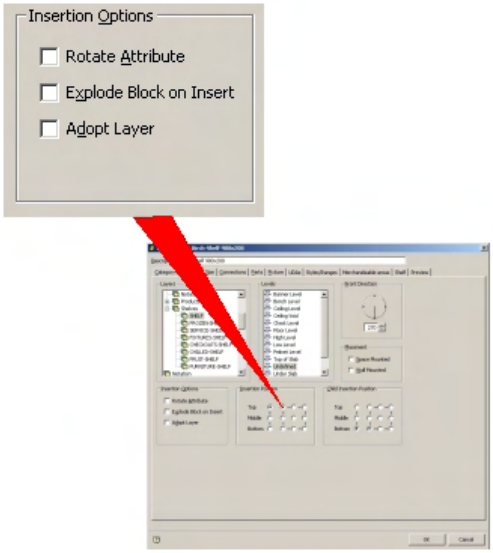
Note: In the above example, the insertion position (blue circle) is bottom, left, rear.



Note: In the above example, the insertion position (blue circle) is middle, right, center.

The Insertion Options Frame

The **Insertion Options Frame** specifies how the block will behave on being inserted into the AutoCAD environment.



Rotate Attribute, when enabled, ensures any non-constant attributes on the block will be rotated so they are upright and readable.

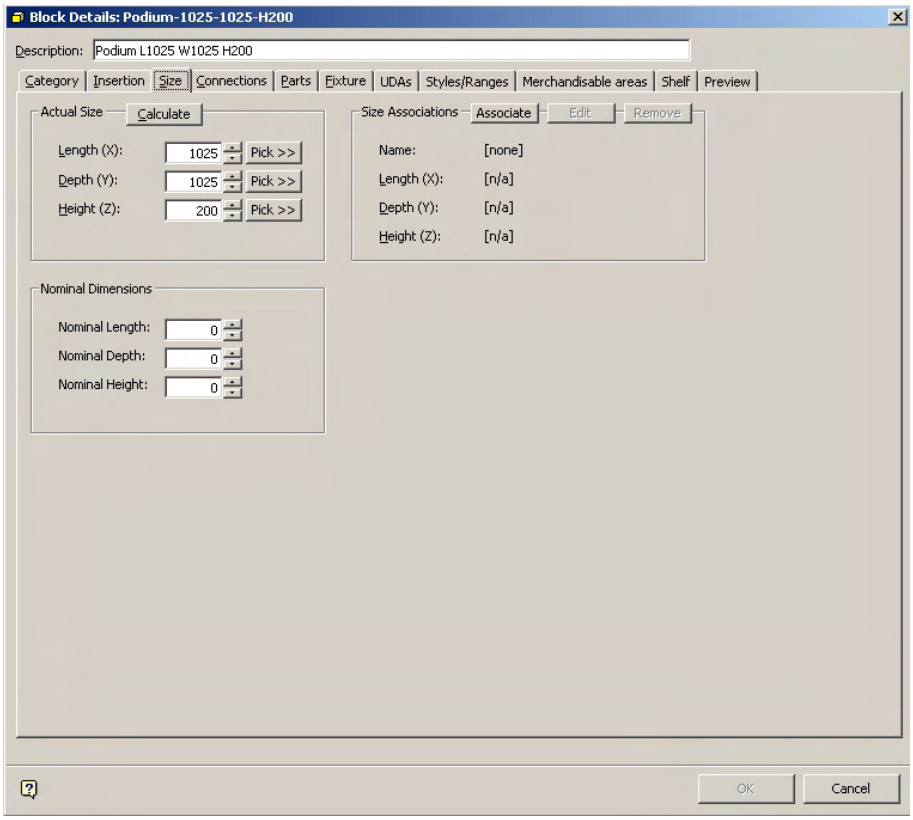
An example might be a text tag associated with a block. If the block is inserted in an orientation where the text would otherwise not be readable, the text will be rotated so it becomes visible.

The **Explode Block on Insert** option, when enabled, results in the block exploding into its constituent parts on insertion, so they can be manipulated separately.

Adopt Layer is no longer in use and has been included so as to be compatible with earlier versions of Macro Space Management.

Size Tab

The **Size Tab** is used to specify the maximum length, width and height of a fixture.



It contains three frames.

Actual size is the maximum dimensions of the block

Size details contain information on the ranges of permissible sizes.

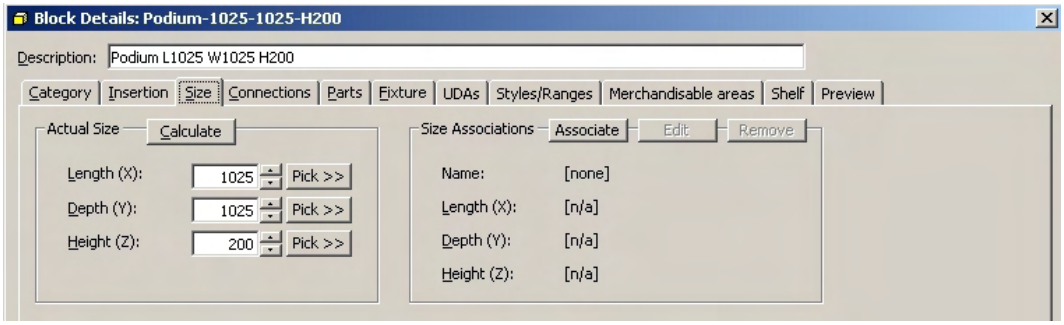
Nominal Dimensions are the volume the fixture will occupy once all equipment has been added to it.

Overview of Block Sizes

Blocks fall into two main types when sizes are concerned.

Some blocks have a single, fixed set of dimensions assigned, and can only be placed into drawings with a single length, width and height.

Other blocks belong to a size type and have size rules applied. This means when they are placed into a drawing, the required length, width and height can be selected from a predefined list.



Blocks with a single fixed set of dimensions have those dimensions specified in the Actual Size frame. Most blocks are currently of this type.

Blocks where size rules (and corresponding multiple dimensions) apply, have additional information assigned in the Size Details frame.

Overview of Size Groups and Size Rules

Size Group

A Size Group allows sizes to be collected into similar within a hierarchical tree of sizes.

Size

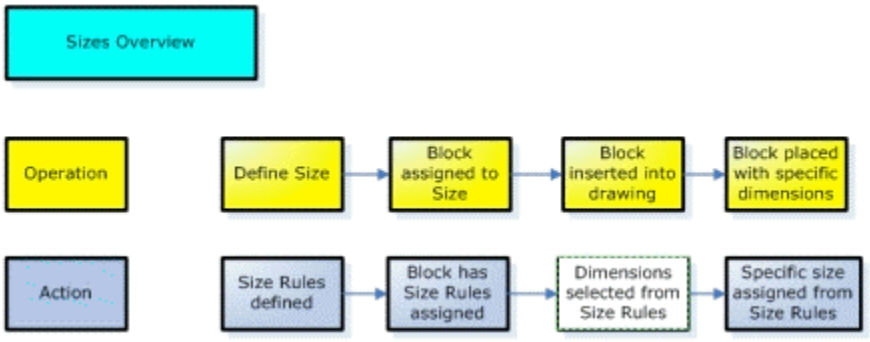
A Size contains definitions of all permissible dimensions that can be assigned to a block.

Size Rules

Size rules are the settings or combinations of settings that determine the definitions of dimensions permitted when assigned to a block.

Overview

Blocks that are assigned multiple possible dimensions conform to size rules.



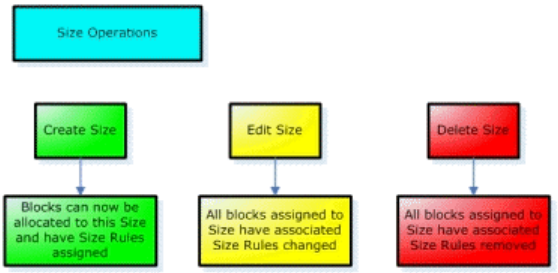
A Size is a set of definitions (size rules) as to what sets of dimensions are allowed for a block that has been assigned to that size group.

When any Block is assigned to a size, it inherits the set of size rules associated with that size group.

When the Block is inserted into the drawing, a dialogue will appear showing the dimensions permitted by the size rules.

A specific set of dimensions can be selected from those available, and the block is inserted into the drawing (or Virtual Reality environment) with those dimensions.

Size Operations

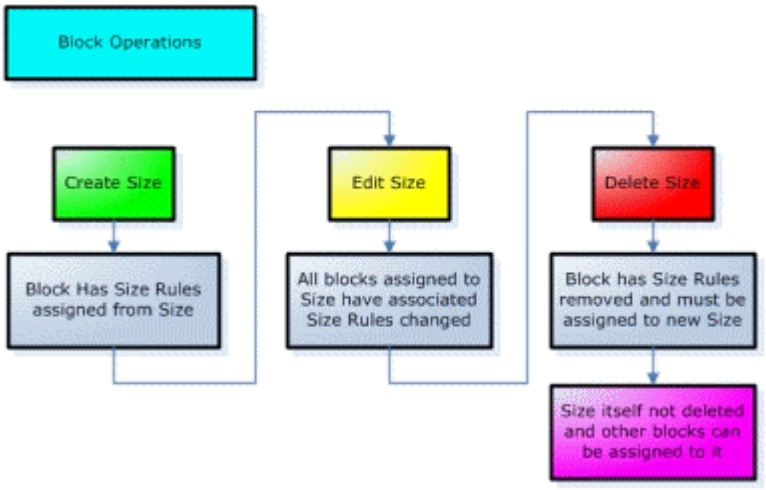


Sizes can be created. This means that a set of size rules is defined and stored within a named size group.

Sizes can be edited. The existing set of size rules is changed to a newly defined set. In the process, any blocks that reference the Size Group being edited will have their size rules changed to the edited version.

Sizes can be deleted. When a Size is deleted all blocks that reference that Size will have their associated size rules removed and will require assigning to an alternative size group so that their size rules can be redefined.

Block Operations



Various operations can be carried out to assign blocks to Sizes.

Create Size results in a block being associated with a Size. The block may either be associated with an existing size group, or a new size group can be defined.

Edit Size results in the Size associated with that block being edited.

> **Note**: It is the Size that is being edited, and not the Block Definition. Changes made to the Size will affect ALL blocks that reference that Size, and not just the block that is having its definitions set.

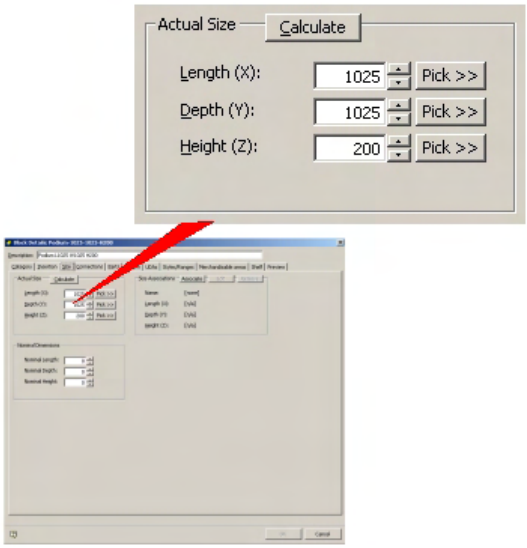
Delete Size removes the Block Definition currently references.

It does not delete the Size itself, but just removes the link between Size and Block definition.

Note: Use of Sizes in this manner is implemented in In-Store Space Collaboration, but is not yet fully implemented in Macro Space Management.

The Actual Size Frame

The **Actual Size Frame** specifies the default size for the block. If no details are entered in the associated Size Details Frame, the Actual Size Frame specifies the only permissible set of dimensions that can be used.



For the Calculate and Pick options to work, the drawing must be loaded into the active AutoCAD drawing using the Load Blocks into Drawing command from the File pull down menu.

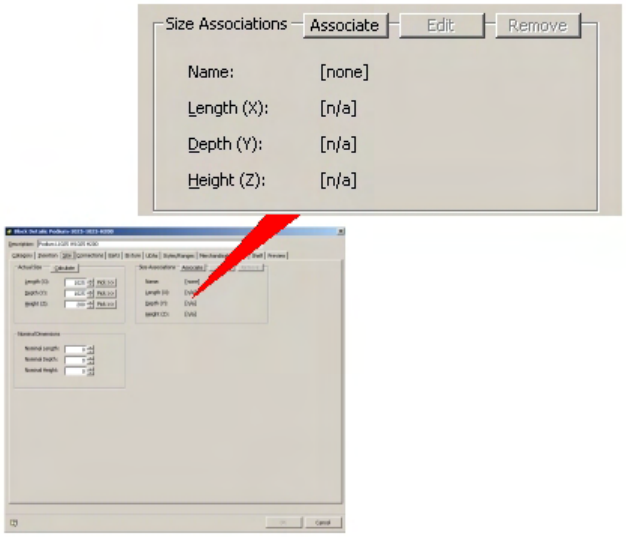
Clicking on the **Calculate** button will then result in the maximum dimensions being returned to Fixture Studio.

Alternatively, with the object open in the active AutoCAD drawing, click on the **Pick** button. Switch to the AutoCAD drawing and click on the required offset point. The selected coordinates will be transferred to Fixture Studio.

Tip: The Calculate and Pick buttons will only be active if Fixture Studio is connected to Planner and the block being edited is inserted into the currently active drawing.

The Size Associations Frame

The **Size Associations** frame is used to allocate blocks to specific Size Groups.

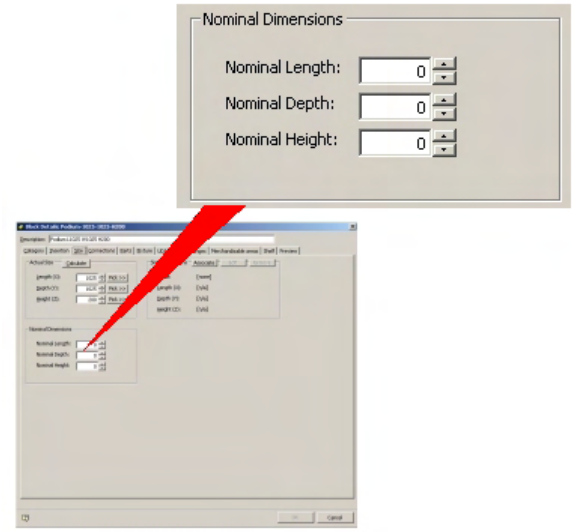


A Size Group contains details of the size rules that govern the dimensions for a Block Definition.

Size Groups can be configured in a number of ways.

The Nominal Dimensions Frame

The **Nominal Dimensions frame** is used to associate a set of nominal dimensions to a fixture.



Nominal dimensions are primarily used for primary fixtures, where attached secondary equipment will substantially increase the volume.

For example, consider a backpanel 600 mm long, 1900 mm high and 5 mm deep. If this backpanel has shelves attached, it will eventually occupy a significantly larger space.

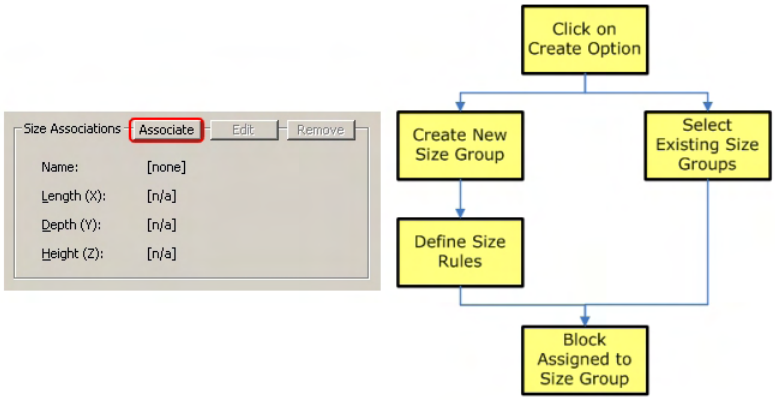
It could therefore be assigned nominal dimensions of 600 mm long, 1900 mm wide and 300 mm deep to allow for the eventual shelves.

> **Tip**: Any product or placeholders put onto a fixture with nominal dimensions will occupy a volume that corresponds to the larger of the Actual and Nominal Sizes.

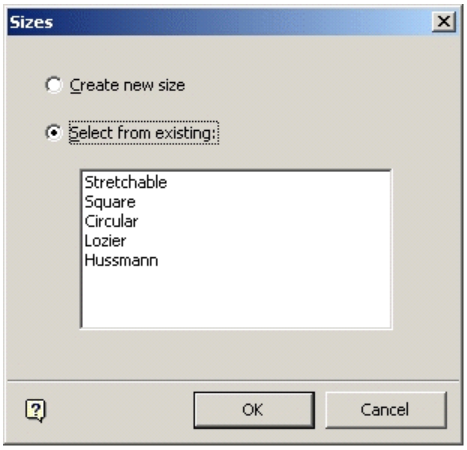
Size Details Frame

Creating Association to Size Group

When a block can be assigned multiple dimensions, it needs to be associated with a Size Group. The block will then adopt the size rules associated with that Size Group and hence will have a range of permissible dimensions assigned to it.



The process is started by clicking on the Create Option. This brings up the Sizes dialogue box.



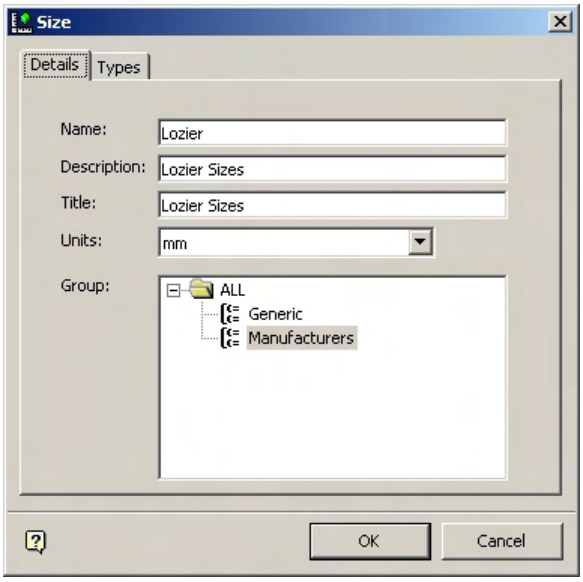
This gives two options, *Create new size* or *Select from existing*. These are selected by using the appropriate radio button.

> **Note**: Size Groups can have varying purposes: Stretchable could describe the size rules for fixtures that are to be made stretchable and Square or Circular could describe fixtures that must preserve that class of dimensions.

Similarly, Lozier or Hussmann could describe sets of dimensions specific to those manufacturers.

Create New Size

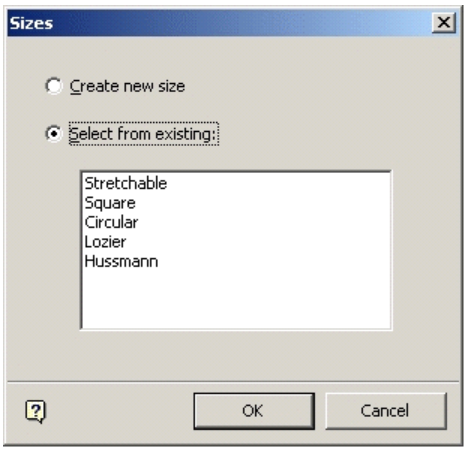
Selecting this option brings up the Sizes dialogue box.



This can be configured to set the size rules.

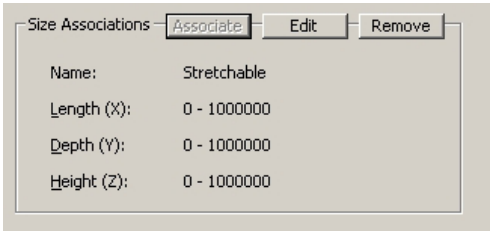
Select from Existing

Select from Existing associates the block being defined with an existing set of size rules.



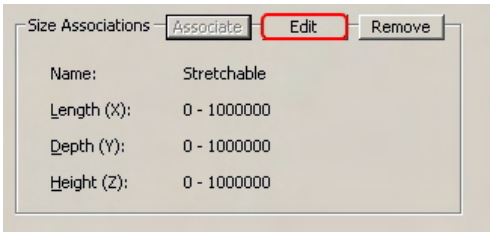
Selected Sizes

When the required Size Group has either been Created or Selected and the OK button clicked, the associated size rules will be assigned to the block definition and will appear in the Size Associations frame.

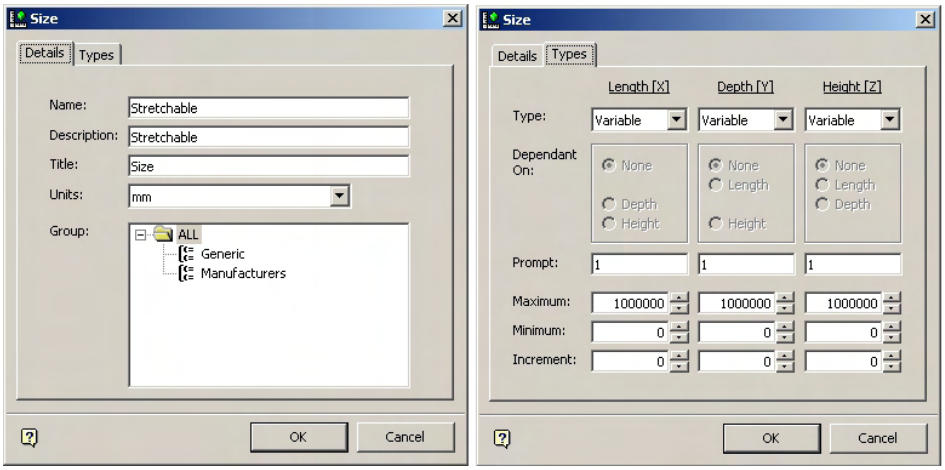


Editing Size Group

Clicking on the **Edit** button enables the user to Edit the Size Group details.



This brings up the Size dialogue box so that the size rules can be changed.

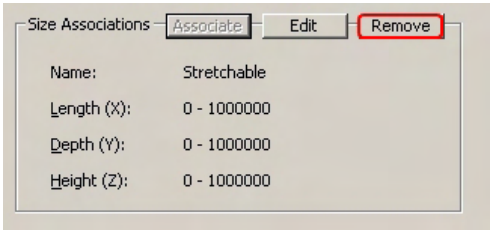


Note: This operation edits the size rules, not the dimensions for the block being defined.

Editing the size rules will affect ALL blocks currently associated with that set of size rules.

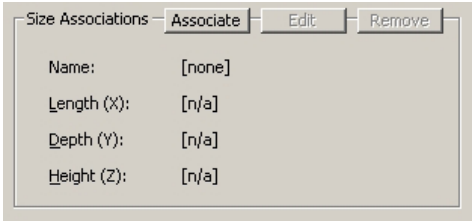
Removing Size Group Association

Removing a Size Group association can be achieved by clicking on the Remove button.



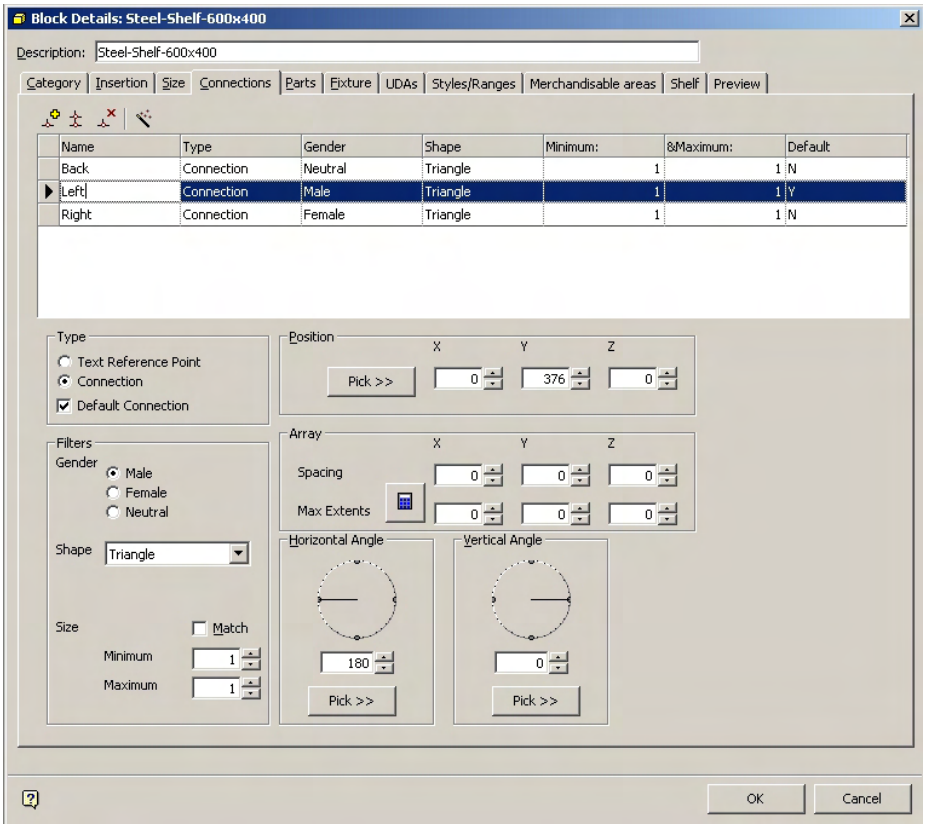
This removes the link to the size group (and its associated size rules) but it does not delete the Size Group itself.

The Size details frame will then show that no Size Group has been associated with this particular block.



Connections Tab

The **Connections Tab** lets the user specify the connection options for Macro Space Management blocks.



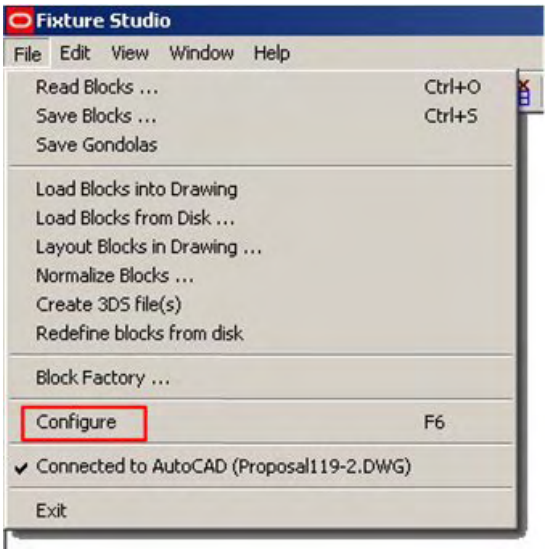
A small Toolbar at the top lets users Add, Copy and Delete connections, while the Wizard on the toolbar allows the user to add three basic connections.

The Connections List below lists all current connections for the Macro Space Management Block.

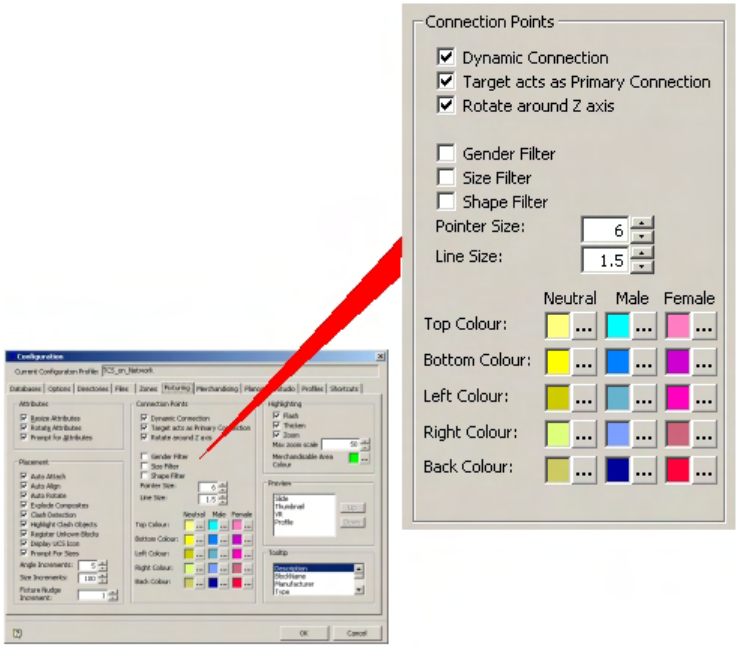
The Connections Tab and the Configuration Module

Settings in the Configuration Module can affect how connection points appear in Fixture Studio

Access the Configuration Module by selecting the Configure Option in the file pull down menu.



Within the Configuration module, select the Fixturing Tab. The Connection Points frame can then be used to change their appearance.



Pointer Size and **Line Size** affect the appearance of the connection points as displayed.

Colors for Neutral, Male and Female connection points can also be set.

A series of check boxes allow users to configure some aspects of how connection points operate:

Dynamic Connection is for future functionality and is not enabled in this release.

Target Acts as Primary Connection is for future functionality and is not enabled in this release.

Rotate around Z Axis is for future functionality and is not enabled in this release.

Gender Filter determines whether connection genders are taken into account when deciding if connections are compatible.

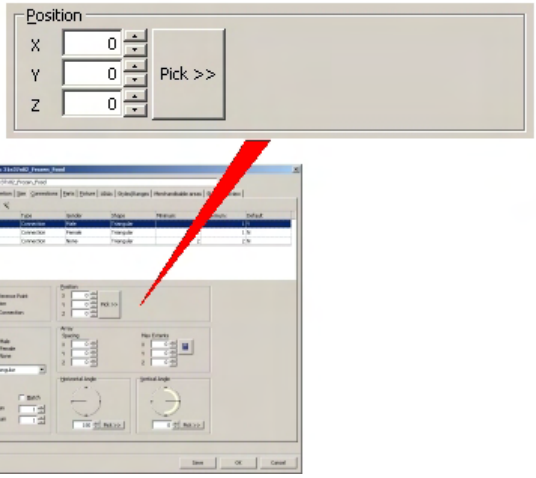
Size Filter determines whether connection sizes are taken into account when deciding if connections are compatible.

Shape Filter options determine whether connection shapes are taken into account when deciding if connections are compatible.

These settings are local and will not affect other users of Macro Space Management.

The Position Frame

The **Position Frame** is used to set the origin of the connection point.



Pick can be used if Fixture Studio is connected to Planner and the block has been loaded into the active drawing. (See Options on File pull down menu).

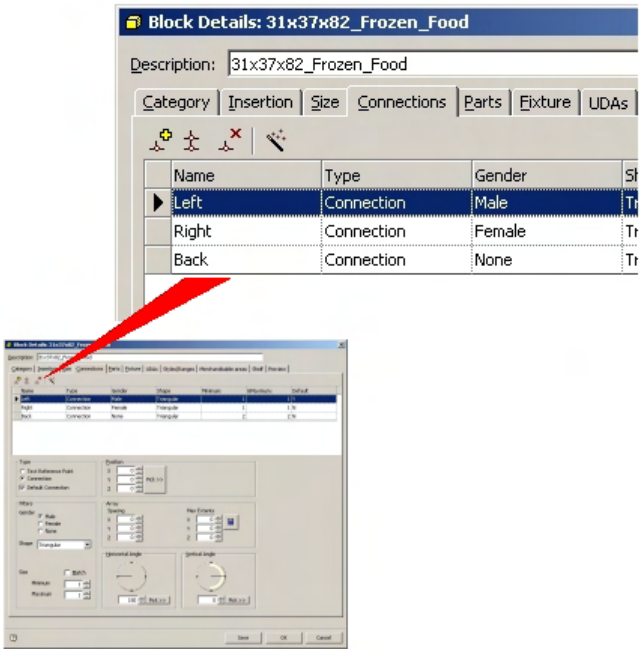
Alternatively, the position of the connection point can be entered as a series of X, Y and Z coordinates relative to the insertion point of the fixture.

> **Tip**: The position of the connection points can be checked by using the Preview tab

The Connections Toolbar

The **Connections Toolbar** is found to the upper left of the Connections Tab.

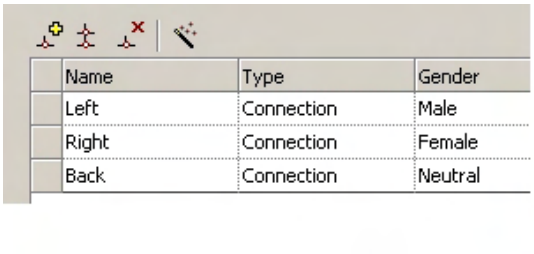
It allows users to Add, Copy and Delete Connections. It also allows the user to invoke the Connections Wizard.

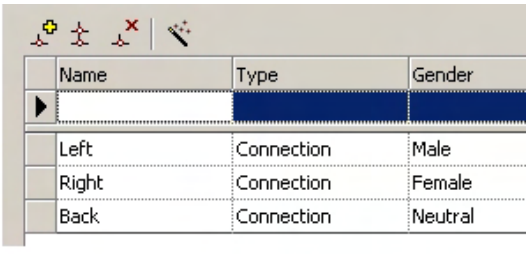


	Add a Connection
	Copy a Connection
	Delete a Connection
	Connection Point Wizard

Add a Connection

Clicking on the Add a Connection icon causes a line to be added to the Connections List ready for further details of the connection to be added.

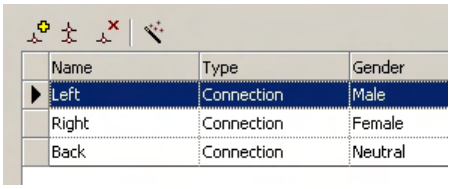




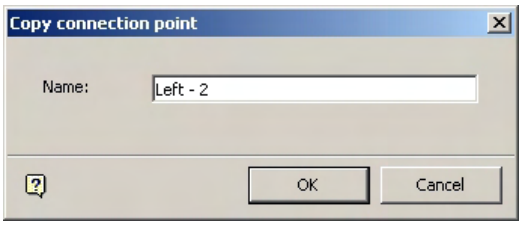
See the information on Connection Lists for how to configure the connection.

Copy a Connection

Clicking on the Copy a Connection icon causes a line to be copied again to the Connections List mirroring details of the connection to be added.

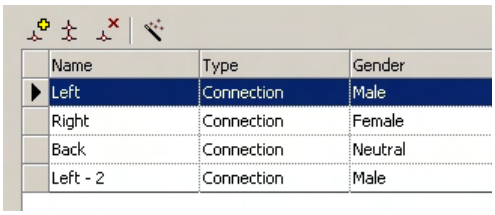


Before clicking the Copy icon, select the connection to be copied. Clicking on the icon will bring up the connection naming dialogue box.



Edit the name to one suitable for the new connection. In the example To be copied has been edited to Copied.

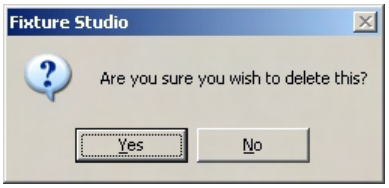
On clicking OK, a duplicate connection will be added, save for the changed name.



Delete a Connection

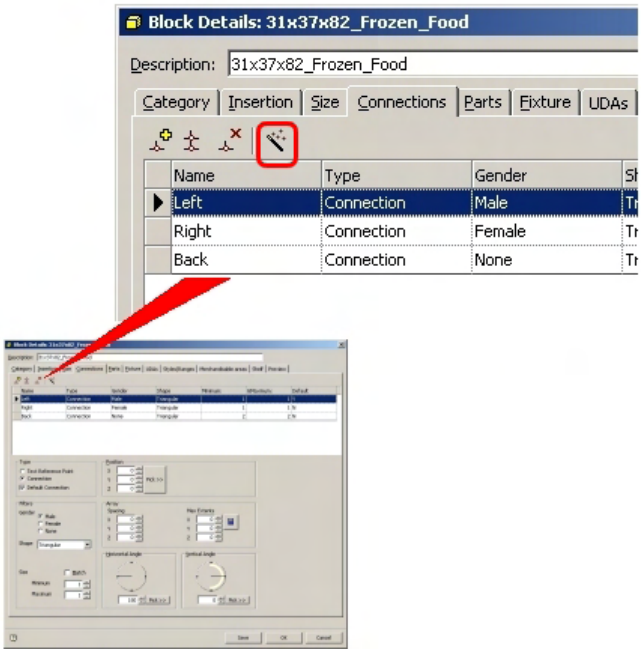
To delete a connection, highlight the connection to be deleted and click on the Delete icon.

The User will be asked to confirm deletion.



The Connections Wizard

The **Connections Wizard** can be invoked from the Wizard icon in the toolbar in the Connections Tab.



This will bring up the Connections Wizard dialogue box.

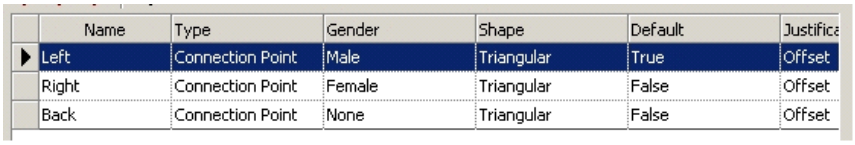
- Checking the Add connection on Left checkbox will add a Connection on the left.
- Checking the Add connection on Right checkbox will add a Connection on the right.
- Checking the Add connection at Back checkbox will add a Connection at the back.

The left connection is male and the right female so that fixtures can only attach when they are facing the same way. The left connection is additionally set to be the default.

The Back connection has no gender, so it will attach to any other connection.

Checking the Clear Existing Blocks checkbox will remove any existing connections.

On clicking OK on the Wizard, the selected default connections will be added.

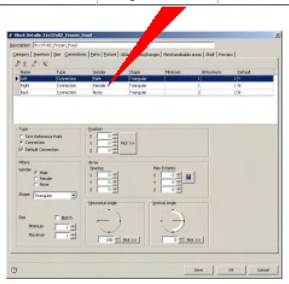


The Connections List

The **Connections List** is a list of all defined connections for the selected Macro Space Management block.

In addition, many of the characteristics of the connection can be configured by means of selecting a connection, then changing the appropriate options within the Connections tab.

Name	Type	Gender	Shape	Minimum:	&Maximum:	Default
Left	Connection	Male	Triangular	1	1	Y
Right	Connection	Female	Triangular	1	1	N
Back	Connection	None	Triangular	2	2	N

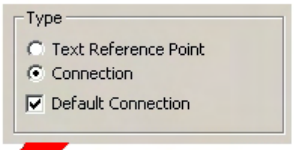


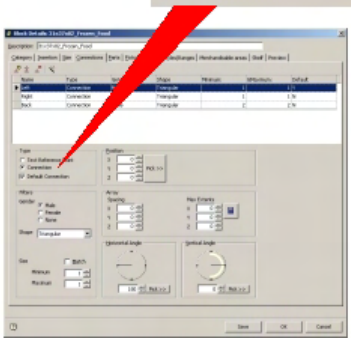
Name

The Connection Name is user editable and can be changed just by typing in the new name.

Type

The Connection Type is changed by means of the buttons in the Type frame.





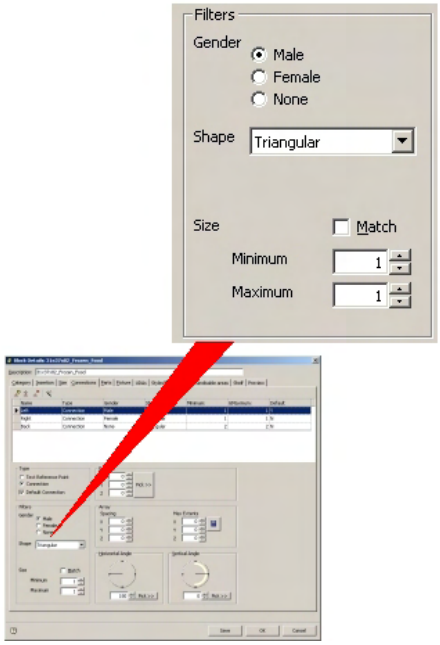
A Text Reference Point is used to specify the location for annotation to justify to.

A Connection is used to indicate how fixtures join.

They can be selected by means of the radio button.

Gender, Shape and Size

Gender, Shape and Size are set using the Filters frame.

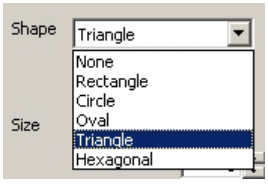


The gender of a connection determines whether that connection is compatible with another. There are three genders; male, female and neutral. They are selected from by means of the radio button.

	Can connect with	
Male	Female	Neutral
Female	Male	Neutral
Neutral	Any other connection	

Shape

The Shape of a point connection can be specified from a drop down list.



They connect as follows:

	Can connect with	
None	Any other connection shape	
Rectangle	Rectangle	None
Circle	Circle	None
Oval	Oval	None
Triangle	Triangle	None
Hexagonal	None	None

> **Tip**: The shape of a connection point is a theoretical concept used to make it easier to remember what connects to what - i.e. fixtures with 'Oval' connection points can only connect to other fixtures with 'Oval' connection points. When displayed in the preview tab, all connection points will appear visually as triangles.

The list of shapes available can only be defined by Oracle. They are stored in the directory and cannot be displayed if not present in that directory.

> **Tip**: Use this feature to ensure that equipment specific to one manufacturer can only connect to other equipment from that manufacturer. For example assign Rectangular shapes to Lozier equipment and Oval shapes to Hussmann equipment. The two types of equipment will not then be able to connect to each other.

Size

A maximum and minimum size for the connection can be set using the spin controls.

A pair of connection points must have compatible sizes to connect together.

If the Match checkbox is ticked, then the connections must have identical maximum and minimum sizes. If they are not identical, the connections will not mate.

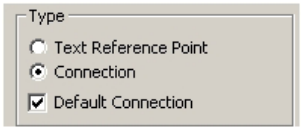
If the Match check box is not ticked, then the connections must have overlapping size ranges. If they are not overlapping, the connections will not mate.

	Connection 1	Connection 2	
Size Range	0 - 50	25 - 75	Compatible
Size Range	0- 25	50 - 75	Incompatible

Default

The Default Connection is the connection selected when an object with multiple connection points is offered up to be attached to a piece of equipment. It is specified from a drop down list.

It is set from the Type frame.

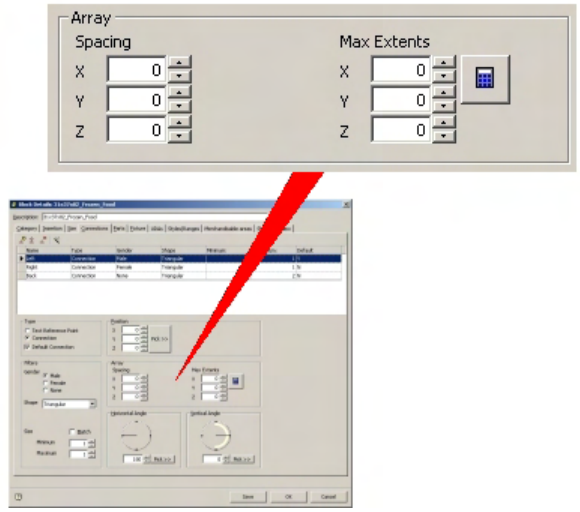


For example, if the left (male) connection point is set to be the default, the object will only connect to other connection points of female and no gender.

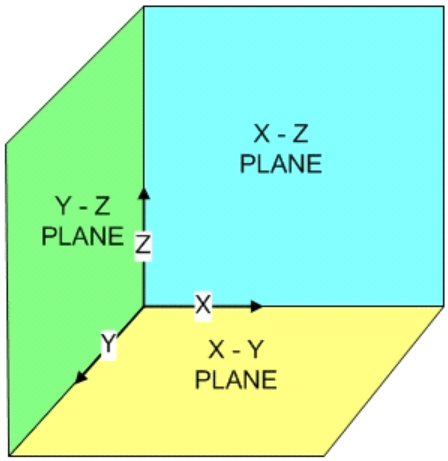
> **Note**: Exercise caution when using connection lines and planes as the default.

The Array Frame

The **Array Frame** is used when it is desired to produce a connection line, plane or box.



In setting up arrays of connection points, the user needs to understand the available planes, of which there are three:



The X, Z plane for example matches the plane of a backpanel, slatwall or pegboard.

Spacing

This specifies the distance between points. If set to 20, there will be 20 mm (or inches) between points

> **Tip**: If set to 0, a connection line will be drawn. This allows attachment at any point along the line, rather than at specific connection points.

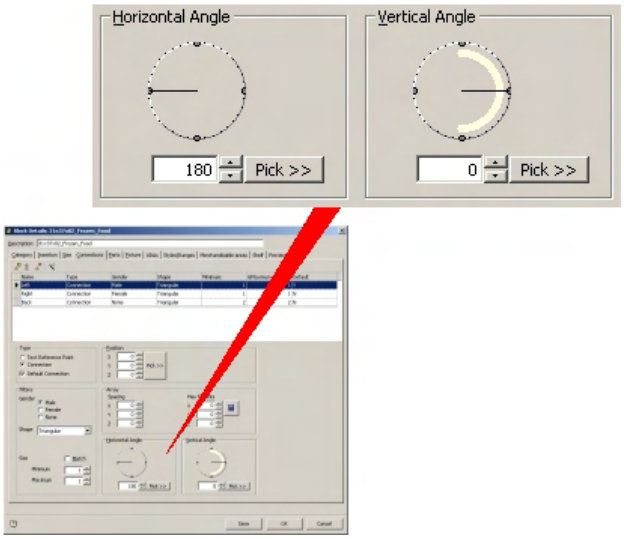
Max Extents

This specifies the length in that particular plane. For example specifying 500 specifies that the connection points will extend 500 mm from their origin.

> **Note:** Once a value has been entered, clicking on the calculate icon  will give the maximum distance the connection points can extend.

The Horizontal and Vertical Angle Frames

The **Horizontal and Vertical Angles** are used to control the direction of connection points, irrespective of whether they are assigned as a point, as a line or as a plane.



Changing the Horizontal Angle changes the direction the designated connection point faces over the floor.

Setting it to 0 degrees will make them face east, setting to 180 degrees will make them face west.

Setting the Vertical Angle affects whether the connection points are horizontal or face up or down.

Setting to 0 degrees will result in the connections being horizontal, 90 degrees pointing vertically up and 270 degrees vertically down.

> **Note**: Setting to 180 degrees will result in the connection point turning upside down and facing in the opposite direction. Please use caution when using this option.

Summary of Connection Requirements

For one item of equipment to connect to another the following must be true.

	Requirement	Optional or Mandatory
Gender	The connection points must have compatible genders	This requirement can be disabled in the Configuration Module
Shape	The connection points must have the same shape	This requirement can be disabled in the Configuration Module
Size	The connection points must have compatible sizes	This requirement can be disabled in the Configuration Module

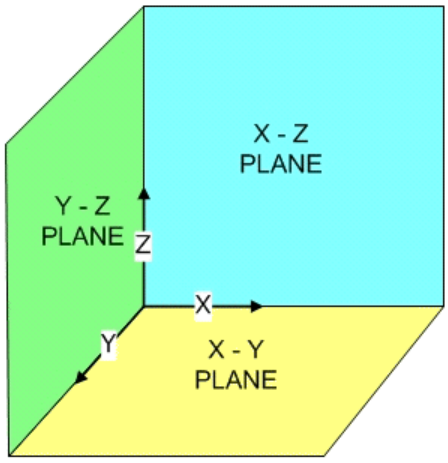
If any of these criteria are not true, then a connection cannot be made.

In addition, if the planes of the connections or the angles of the connections are not correctly specified relative to each other, equipment may connect together in unintended alignments.

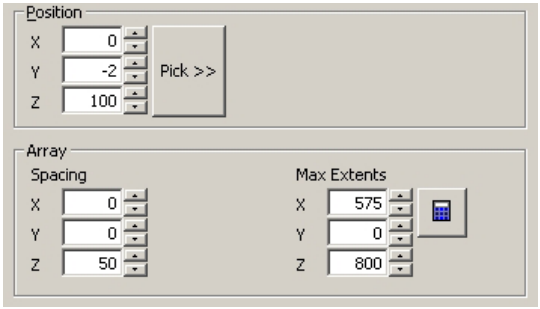
Connections Examples

Connection Lines for a Slatwall

Connection lines for a slatwall have to go in the X, Z plane.



The following settings were used for a 575 x 900 mm backpanel.



Position

The position was set with a -2 Y co-ordinate to put the connection line on the surface of the backpanel.

It was also given a +100 Z co-ordinate to move the lowest connection line above floor level.

Spacing

The X spacing was set to 0 to give a continuous line.

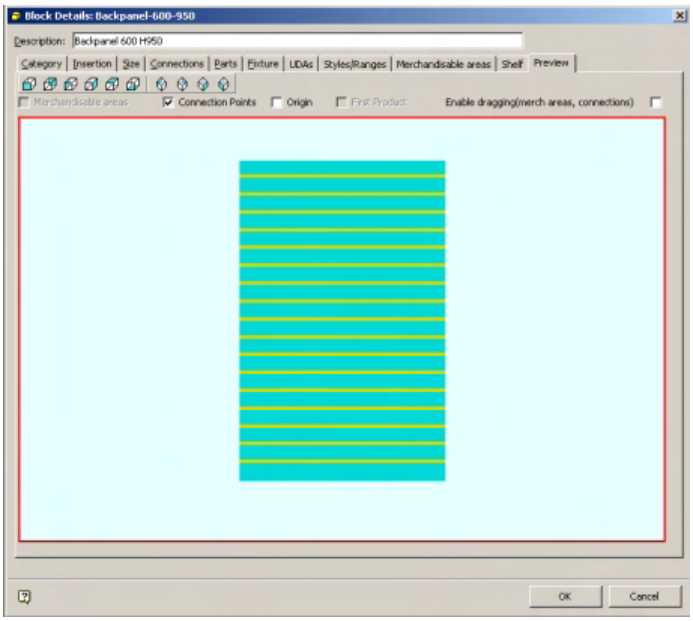
The X extents were set to 575 to get the line running across the full width of the backpanel.

The Z spacing was set to 50 mm to put the connection lines 50 mm apart.

The Z extents were set to 800 mm to keep the top connection line below the top of the backpanel.

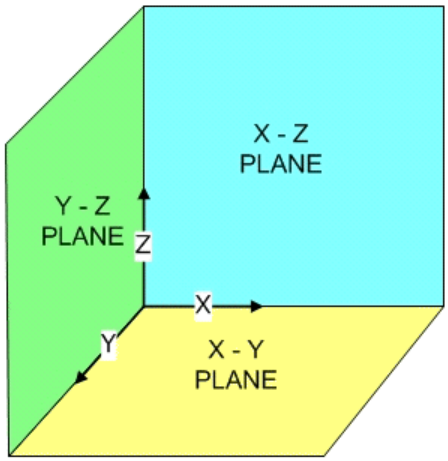
Result

The result looks as follows:

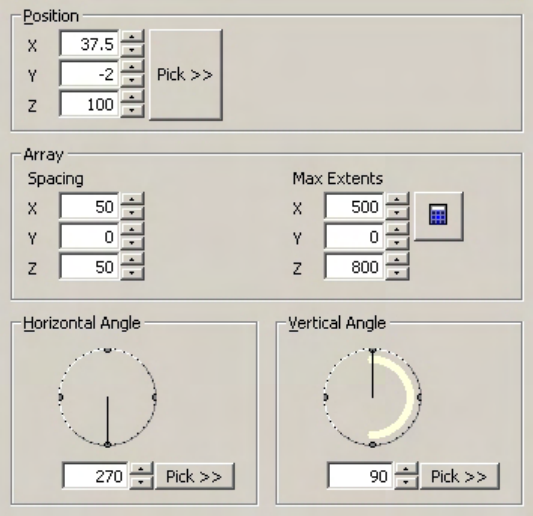


Connection Points for a Pegboard

Connection lines for a pegboard have to go in the X, Z plane.



The following settings were used for a 575 x 900 mm backpanel.



Position

The position was set with a +37.5 X co-ordinate to move the first column of points inside the edge of the backpanel

It was given a -2 Y co-ordinate to put the connection point tip on the surface of the backpanel.

It was also given a +100 Z co-ordinate to move the lowest connection point above floor level.

Spacing

The X spacing was set to 50 to give the horizontal spacing

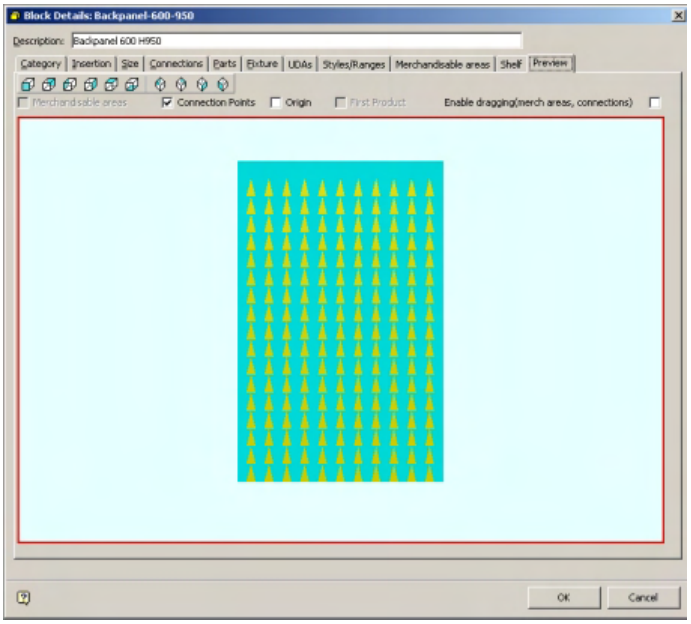
The X extents were set to 500 to keep the last column of points inside the edge of the backpanel

The Z spacing was set to 50 mm to put the connection lines 50 mm apart.

The Z extents were set to 800 mm to keep the top line of connection points below the top of the backpanel.

Result

The result looks as follows:



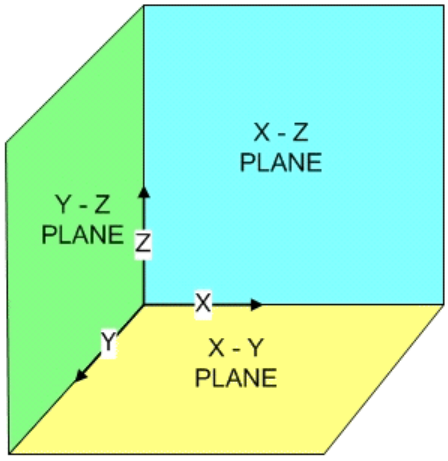
> **Tip**: Anything connecting to this array of connection points will connect to the tips of each point.

Example of a Connection Box

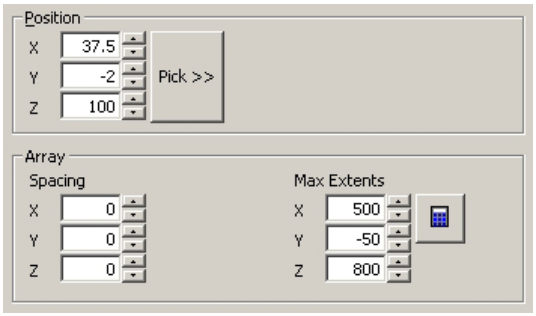
A **connection box** allows objects to be placed anywhere within a defined 3 dimensional box.

> **Note**: If a connection box is given minimal thickness, it becomes a connection plane - i.e. two dimensional

Connections for a connection box have to go in the X, Y and Z planes.



The following settings were used for a 575 x 900 mm backpanel.



Position

The position was set with a +37.5 X co-ordinate to move first edge inside the edge of the backpanel.

It was given a -2 Y co-ordinate to put the back of the box on the surface of the backpanel.

It was also given a +100 Z co-ordinate to move the lowest edge of the box above floor level.

Spacing

The X spacing was set to 0 to give a continuous box.

The X extents were set to 500 to keep the other edge inside the edge of the backpanel.

The Y spacing was set to 0 to give a continuous box.

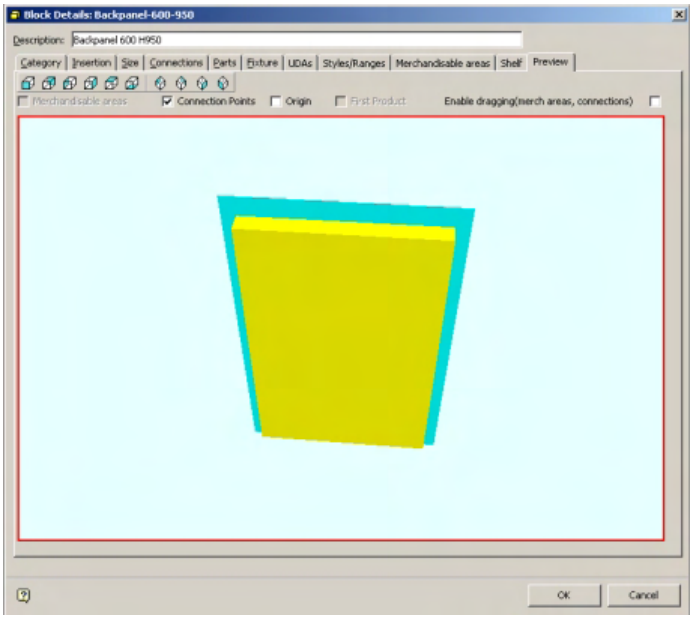
The Y extents were set to -50 to give the box a depth.

The Z spacing was set to 0 to give a continuous box.

The Z extents were set to 800 mm to keep the top line of connection points below the top of the backpanel.

Result

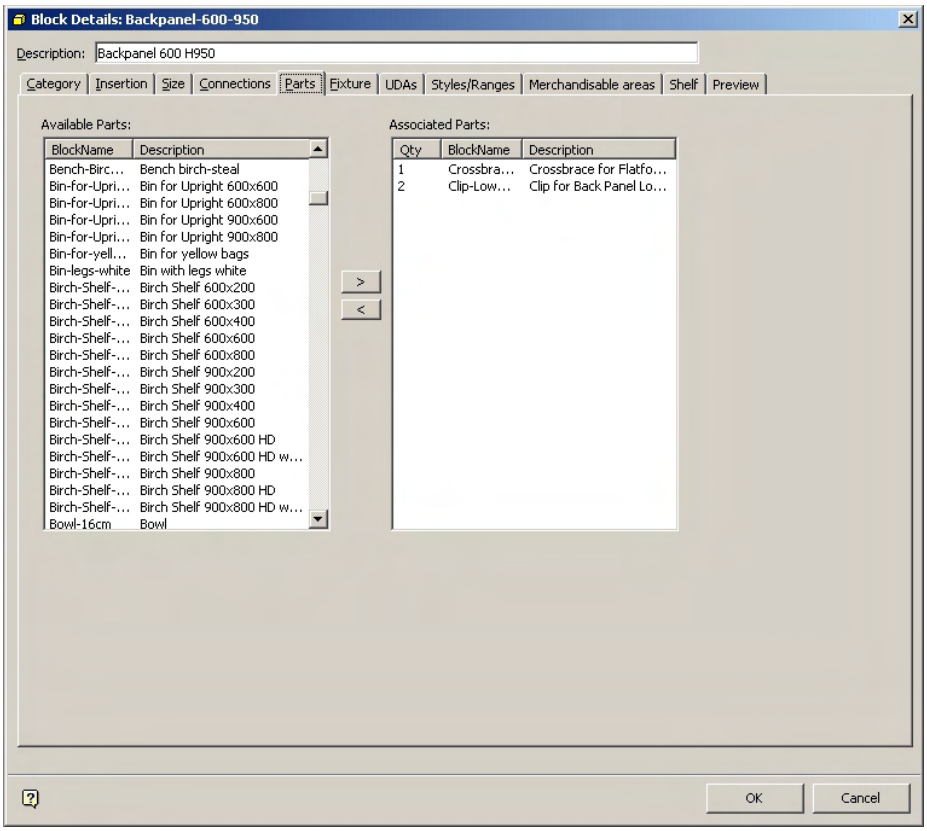
The result looks as follows:



Parts Tab

The **Parts Tab** enables a list of associated parts to be built up for a block.

This list is used for reporting purposes and does not affect the Planner or Merchandiser environments.



Available Parts

The Available Parts Frame contains a list of all available parts.

Associated Parts

The Associated Parts Frame contains a list of all parts associated with that particular block.

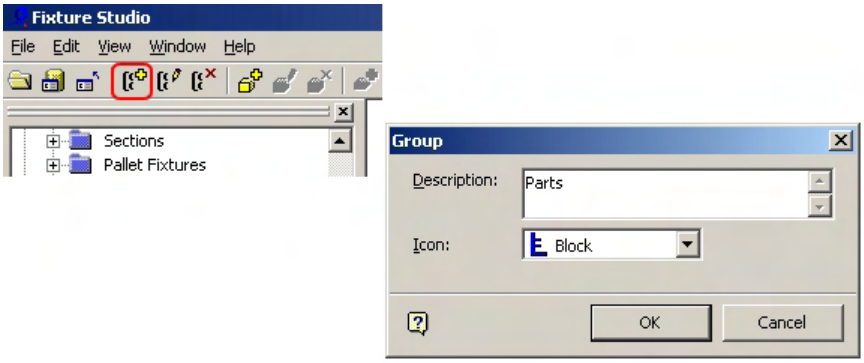
Creating Part Blocks

Part Blocks are specialized type of block that have no graphics and exist only within the Macro Space Management database. Their only use is for reporting purposes.

> **Note**: It is recommended that Part Blocks are kept in specific and separate Groups within the Fixture Studio Hierarchy.

Creating Groups for Part Blocks

To create a Group for a Part Block, click on the Add Group Icon on the Fixture Studio toolbar. This will bring up the Add Group dialogue box.

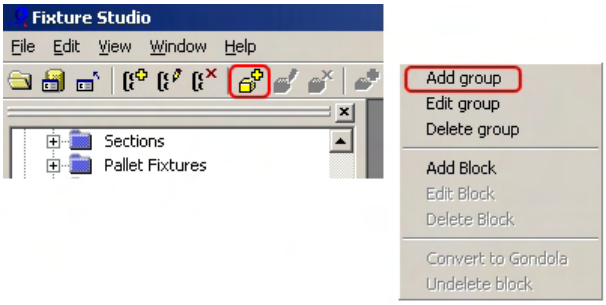


Type in a suitable name and select a suitable icon. Click on OK and the group will be created in the Fixture Hierarchy visible in the Object Browser.

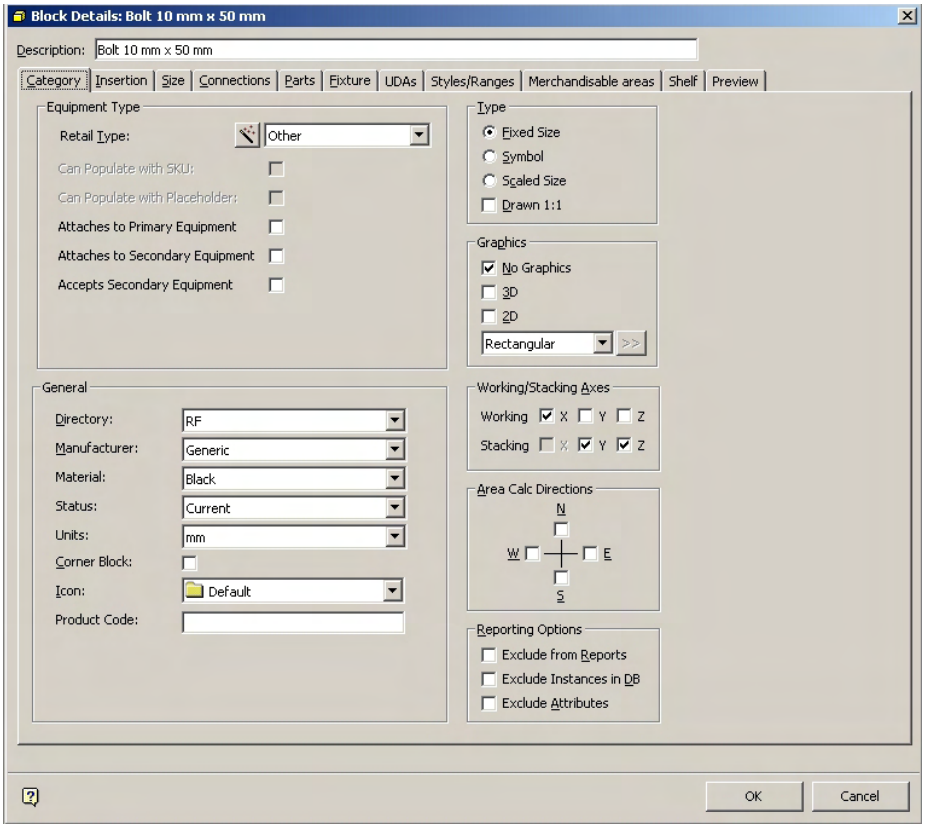
Creating Part Blocks

Select an appropriately named Group in the Fixture Hierarchy visible in the Object Browser.

Click on the Add Block icon or right click on the selected group to bring up the Block Definitions dialogue box.

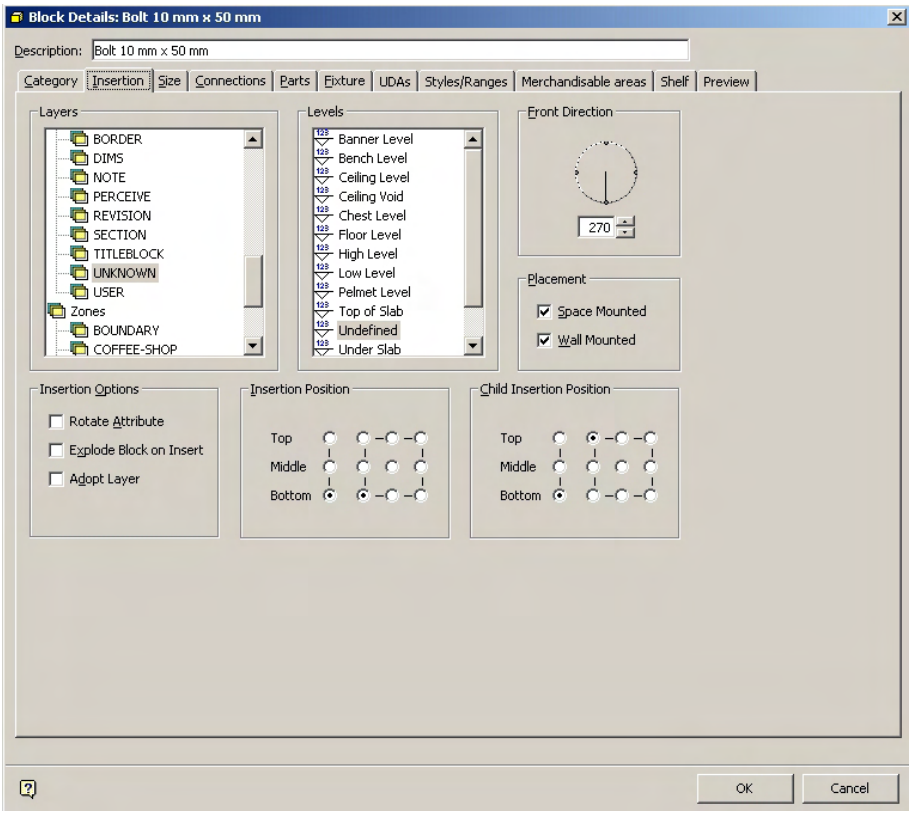


Only a few parameters need to be defined.



After inputting an appropriate block name and description, for the Category Tab, set the following:

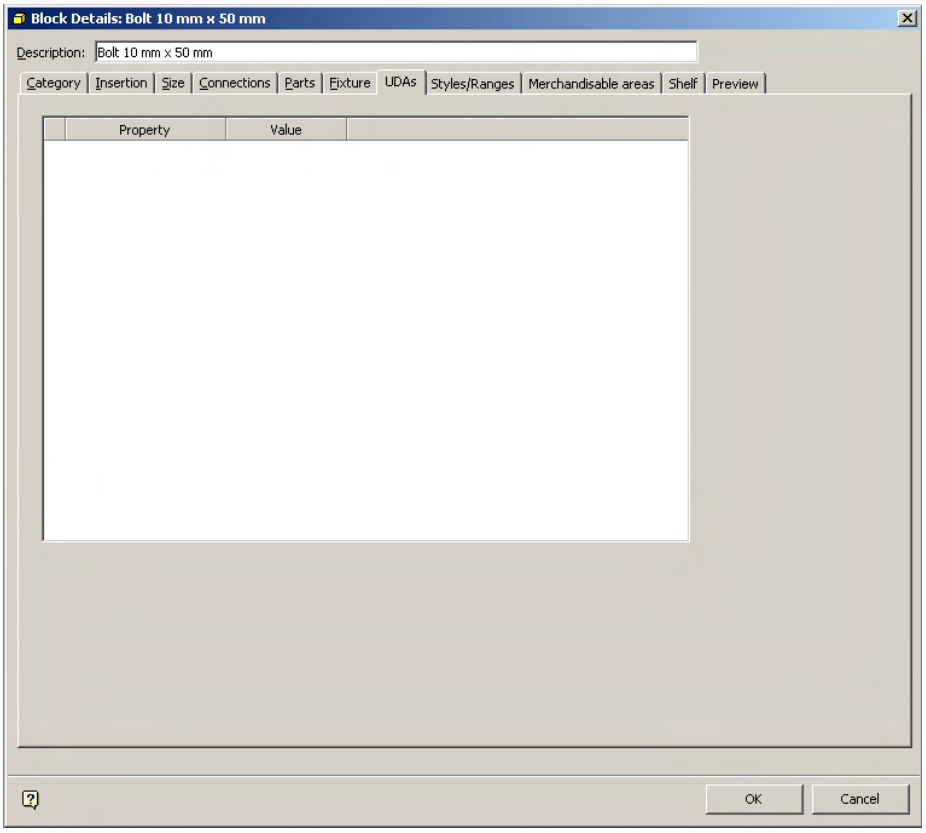
- Set Equipment type to Other
- Set Manufacturer to an appropriate name
- Set Material to an appropriate material
- Set Status to Current
- Set Units to an appropriate measurement
- Ensure that No graphics is selected in the Graphics frame
- Select an appropriate icon



For the Insertion Tab, select a nominal layer.

> **Note:** A layer is not necessary for a block that is to be used purely for reporting purposes, but Macro Space Management will not allow the block to be saved until one has been set.

If any User Defined Attributes need to be set (for example cost), these can be set in the UDA tab.

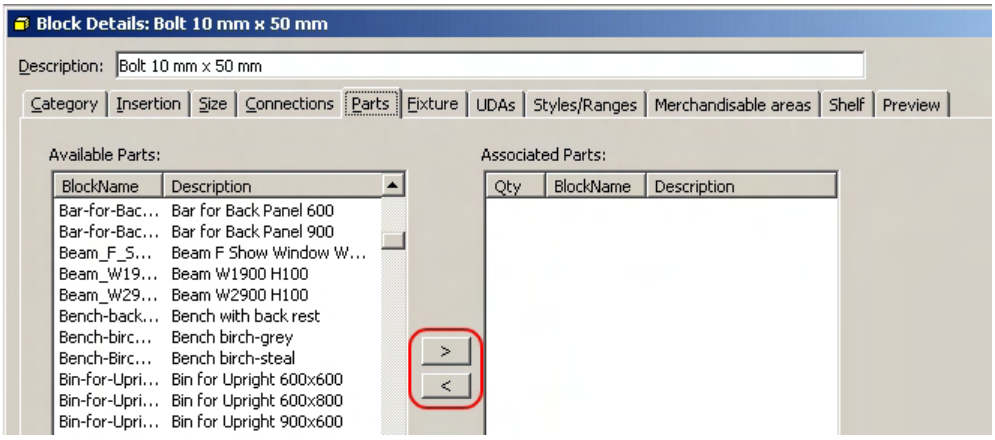


Note: The list of User Defined Attributes is customizable and will vary from implementation to implementation. The list is configured in the Admin Module.

Once the parameters have been input into the Categories, Insertion and UDA tabs, the part block is ready for insertion into a list of parts.

Building up a Parts List

The **Parts List** can be added to and edited using the arrows in the center of the Parts Tab.



Available Parts

The Available Parts Frame contains a list of all available parts. BlockNames, and Description can be sorted in ascending or descending order by clicking on the column header.

Associated Parts

The Associated Parts Frame contains a list of all parts associated with that particular block. In the above example, the Podium is made up of a Top and Frame.

Quantities, BlockNames, and Description can be sorted in ascending or descending order by clicking on the column header.

Building and Editing a Parts List

To add a part to the Associated Parts list, highlight the part in the Available Parts frame and use the Add arrow.

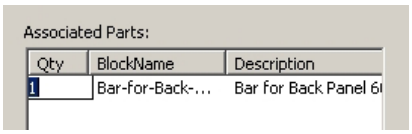
Alternatively highlight and double click on the part in the Available Parts frame.

To remove a part from the Associated Parts list, highlight the part in the Associated Parts frame and use the Add arrow.

Alternatively highlight and double click on the part in the Associated Parts frame.

Changing the number of a specific part

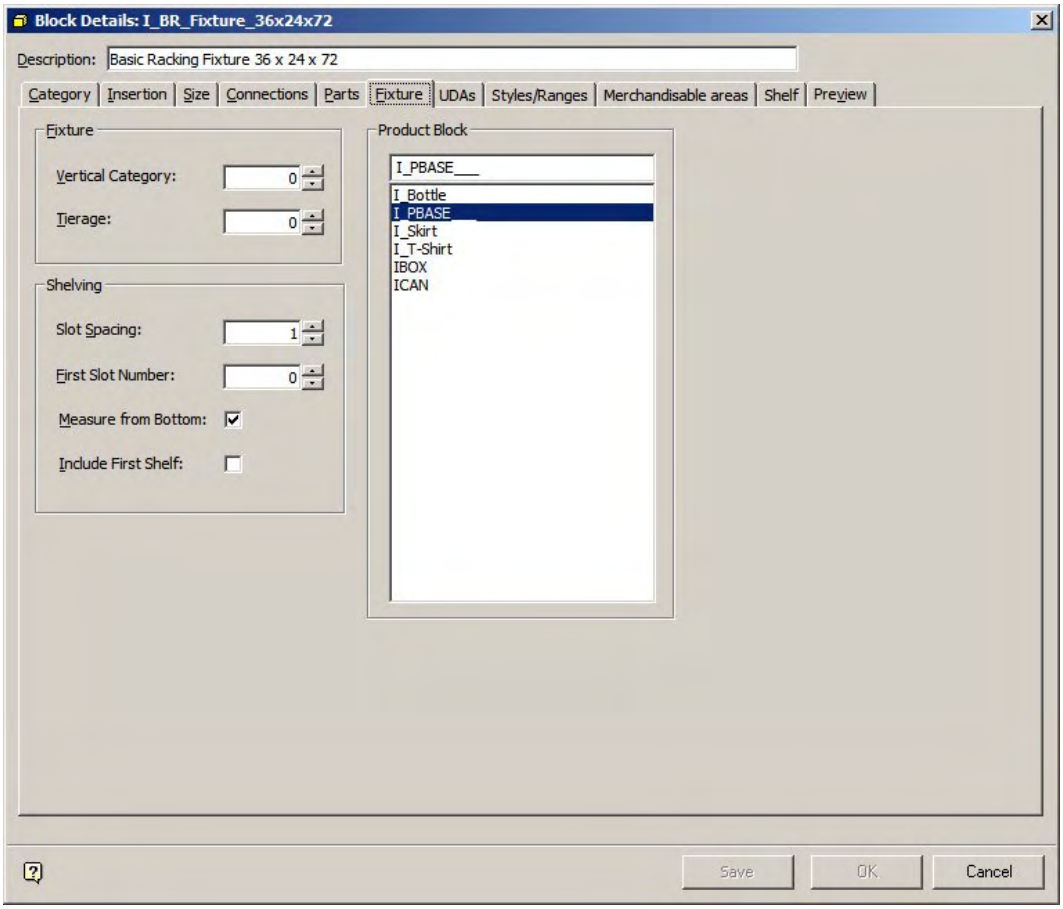
To change the number of a specific part in the associated parts list, highlight the required part then left click on the number in the Qty column.



The number can then be edited. Press <Return> to confirm.

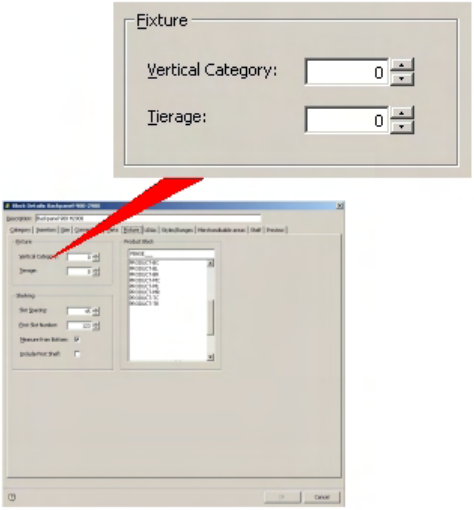
Fixture Tab

The **Fixture Tab** is used to specify the behavior of shelving and the Product Block for a fixture.



The Fixture Frame

The **Fixture Frame** allows some details of how the fixture is to be merchandised to be specified.



Note: Vertical Category and Tierage have been largely superseded by Styles in Macro Space Management.

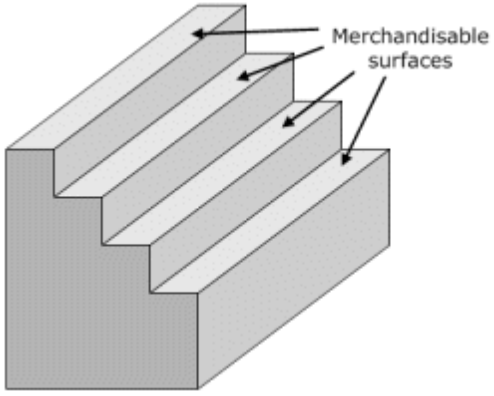
Vertical Category allows the aliased layer to be occupied by the fixture to be further sub-divided. The default is 0, but fixtures can be assigned to further vertical categories within the aliased layer. For example, TV's could be assigned to Vertical Category 1, CD Players to Vertical Category 2…

Setting the Vertical Category affects Adjacency calculations – fixtures in different Vertical Categories will not be shown as adjacent.

Setting the Vertical Category also affects annotation – if Vertical Categories are set, each category will receive its own separate annotation.

Finally, setting Vertical Categories affects the reporting options – material in different categories can be reported separately.

Tierage is used when the fixture has distinct merchandisable levels rather than shelves.



Examples of fixtures that have tiers are those used to display magazines or perfumes.

If the Fixture has shelves, the Tierage value should be left set to 0.

If the fixture has tiers rather than shelves, then the number of tiers should be specified.

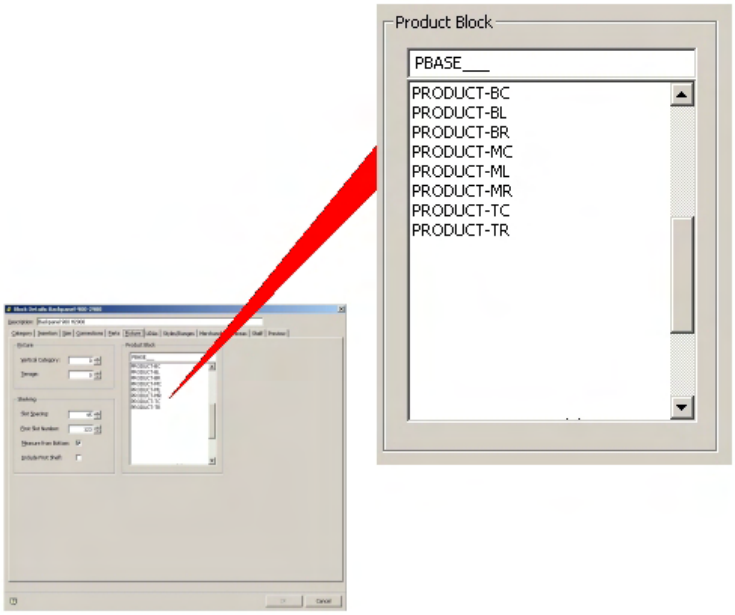
> **Note:** There are two ways of assigning a Product Base to a tiered fixture.

The product base can be designed such that a single product base fits the tier structure. In this case the entire fixture can be merchandised, but only with a placeholder indicating a class of product, for example cards or lipsticks.

Alternatively, each tier can be defined as a Merchandisable Area in the Merchandisable Areas tab. Each tier can then have a product base assigned to it. This would allow more specific placeholders to be used. For example CD's with artists names beginning with A & B would be placed on the upper tier.

The Product Block Frame

The **Product Block** Frame allows the details of the Product Block to be assigned to the Fixture.



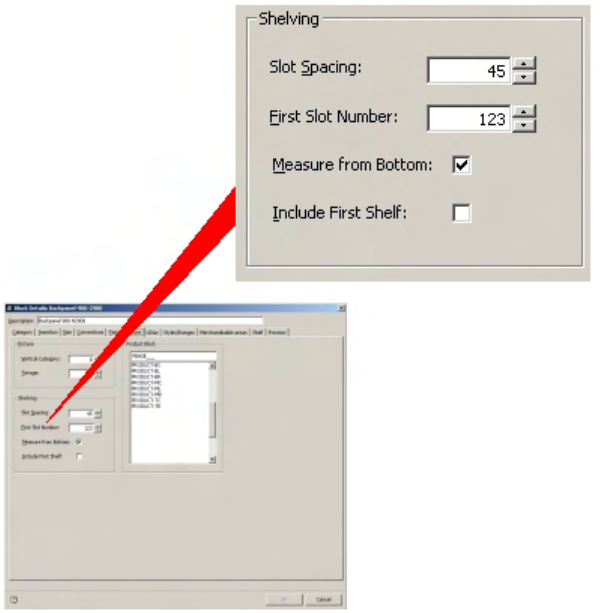
Note: If a product block has not been specified for a fixture or shelf, it will not be possible to merchandise that item of equipment with a placeholder.

Product Blocks assigned in this frame are used to act as indications of the dimensions that can be merchandised when placeholders for a general class of product (for example shoes or canned goods) are assigned to the fixture.

The default Product Block is PBASE__, which is a simple rectangular block but other product blocks can assigned. For example a round product block would be assigned to a table top, and a stepped product base would be assigned to a display cabinet with tiers.

The Shelving Frame

The **Shelving Frame** is used to set parameters affecting the behavior of shelves on a fixture.



> **Note**: This functionality has now been largely superseded by connections. If specified, connection lines will overwrite this spacing.

Slot Spacing gives the distance between successive shelves.

First Slot Number gives the height of the initial shelves.

Measure from Bottom and **Include First Shelf** are not active in this implementation of Macro Space Management.

About Merchandisable Areas, Product Blocks and Display Styles

Merchandisable areas

A merchandisable area is an irregular cube shaped space associated with a specific fixture or shelf object. It delineates the volume relative to the dimensions of that object that can be filled with product.

> **Note:** Merchandisable areas are defined within the Merchandisable Areas Tab in the Block Definitions dialogue box.

The merchandisable area is defined by specifying the two points that represent opposing corners of the cuboid. Accordingly, the geometry is simple and inflexible.

Placeholders and Display Styles

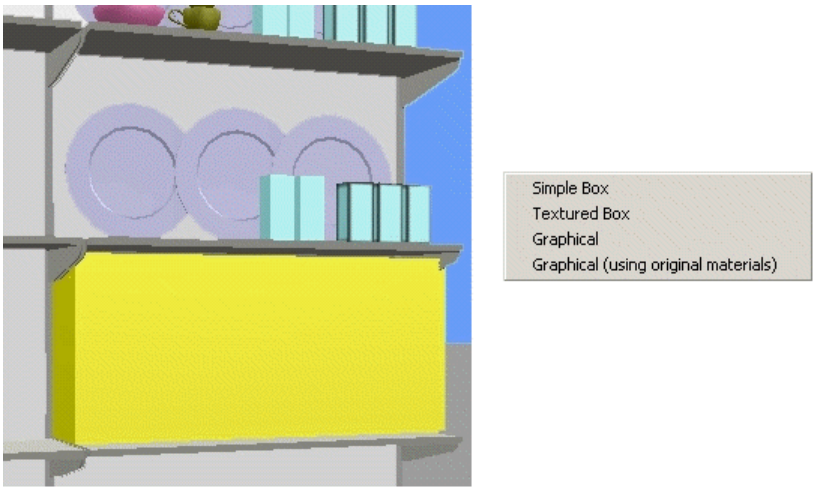
In the AutoCAD environment, all merchandise is displayed using placeholders.

In the Virtual Reality environment, there are two forms in which merchandise can be displayed.

At Article (SKU) level and above, they are displayed in the form of placeholders, which indicate that a particular form of merchandise has been used to populate that section of the store.

Placeholders are simple geometrical shapes (such as cubes and cylinders) and have no surface detail.

At Display Level, a product block containing a more detailed physical representation of the product is placed, the amount of detail depending on local settings.



In the above example, the lower shelf is populated with a placeholder; while the upper shelf has products displayed using three types of display style product blocks.

(The plates are shown as graphical style product blocks, the boxes on the left as simple boxes and the boxes on the right as textured boxes.

Product Blocks – Fixtures and Shelf Objects

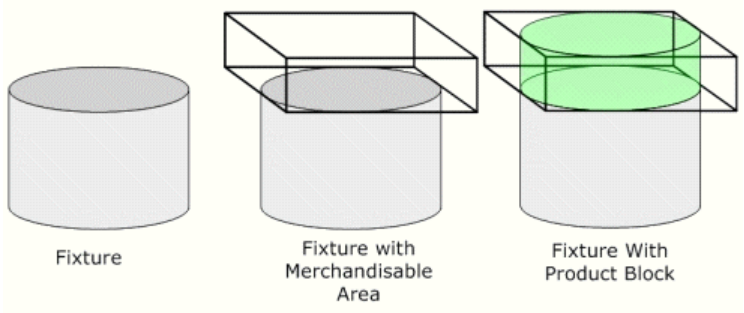
Because the merchandisable area is of simple geometry, fixtures and shelf objects need to have default product blocks associated with them in their block definitions.

These default product blocks can be of more complex shapes, for example cylinders, hemispheres, hexagons, etc. Only a single design of each class of product block is required as their dimensions are scaleable.

When placed on a fixture or shelf object product blocks expand to the maximum dimensions permitted by the merchandisable area. Thus a single cylindrical product block can be used for wide range of fixtures and shelf objects.

The Product Block will subsequently be used to define the volume occupied by a placeholder.

For example, a circular table must still have a cubic merchandisable area defined, as all merchandisable areas have to be simple cuboids.



In the above diagram, the merchandisable area is represented by the cuboid with the heavy black outline.

However, if this cuboid was merchandised directly with a placeholder, it would result in product being shown beyond the actual surface of the fixture. Accordingly, a cylindrical Product Block is associated with the fixture. This expands to the limits set by the

merchandisable area and represents the limits that will be shown as occupied by a placeholder.

Merchandising with Placeholders and Display Style Product Blocks

Placeholders

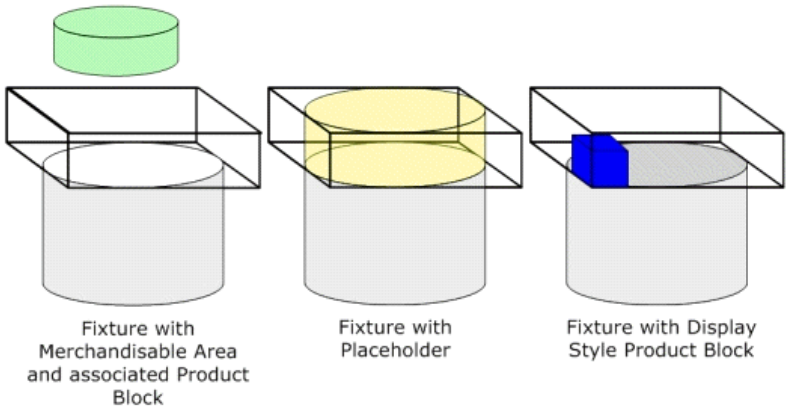
If a fixture or shelf object is merchandised with a placeholder, it will occupy the extents defined by the Merchandisable Area defined in block definitions.

In the example below, the fixture on the left has a default Product Block assigned (green cylinder). It will not be required unless the fixture is merchandised by a placeholder.

Because the default Product Block is scaleable, it will take up the size determined by the merchandisable area of the fixture. When the placeholder is then shown (yellow cylinder), it takes up the volume defined by the product block, which has itself expanded to the extents determined by the merchandisable area.

> **Note**: If the specified Product Block had been hexagonal, then the placeholder would have been shown as a hexagonal shape, scales to the extents of the merchandisable area.

A similar logic applies to other shapes of Product Block – they allow placeholders to be displayed in a number of geometries.



Display Style Product Blocks

If the same fixture is merchandised with a Display Style Product Block (the blue box in the right hand diagram) the display style product block will be placed within the limits set by the merchandisable area (the cuboid outlined in black).

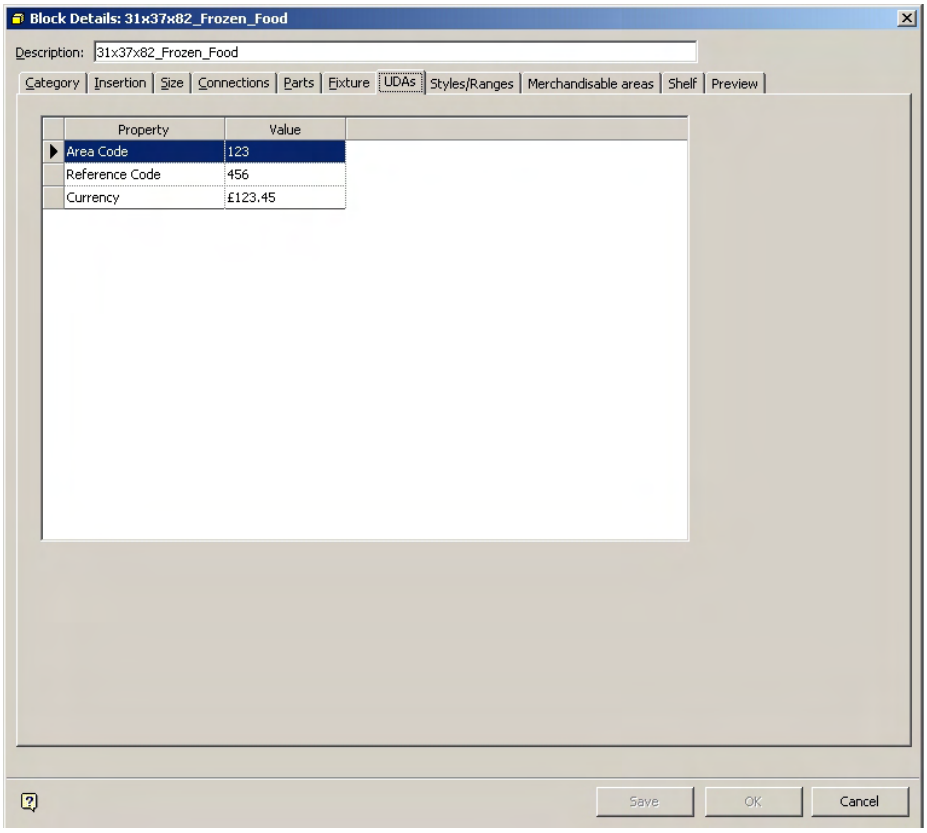
The display style product block then has to be moved within the limits of the actual merchandisable surface of the fixture using the alignment options available within Merchandiser.

> **Note**: The display style product block represents the actual dimensions of an instance of the merchandise being placed on a fixture. This means multiple instances of display style product blocks can be placed until the available volume defined by the merchandisable area is filled.

If a placeholder is used to represent merchandise, only a single instance is required, as this represents the volume occupied by a class of product, not individual items.

UDA (User Defined Attributes) Tab

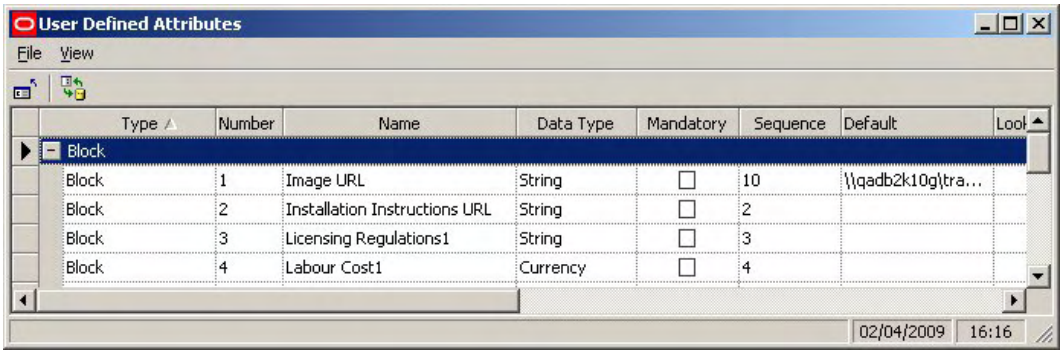
The **User Defined Attributes Tab** is used to specify customized information for a block.



UDA details are configured in the Admin Module, allowing UDA information to be added for each block.

Configuring UDA's in the Admin Module

UDA's are configured in the Admin Module. To do so, select the User Defined Attribute option from the Edit menu in that module. This will bring up the User Defined Attribute dialogue box. Users can then configure the required UDA's.



(See the Admin Module Help File for more information).

> **Note:** Only users with Administrator's privileges can access the Admin Module

Entering UDA's

When the **UDA tab** is selected, a list of UDA's will come up. These will be blank if the fixture is being added, or if no UDA's have been previously added.

Data can be typed in as require, pressing [Return] to enter each item of data.

Validation

UDA Data has a data type (assigned in the Admin module). If data does not match the specified type, it will not be accepted.

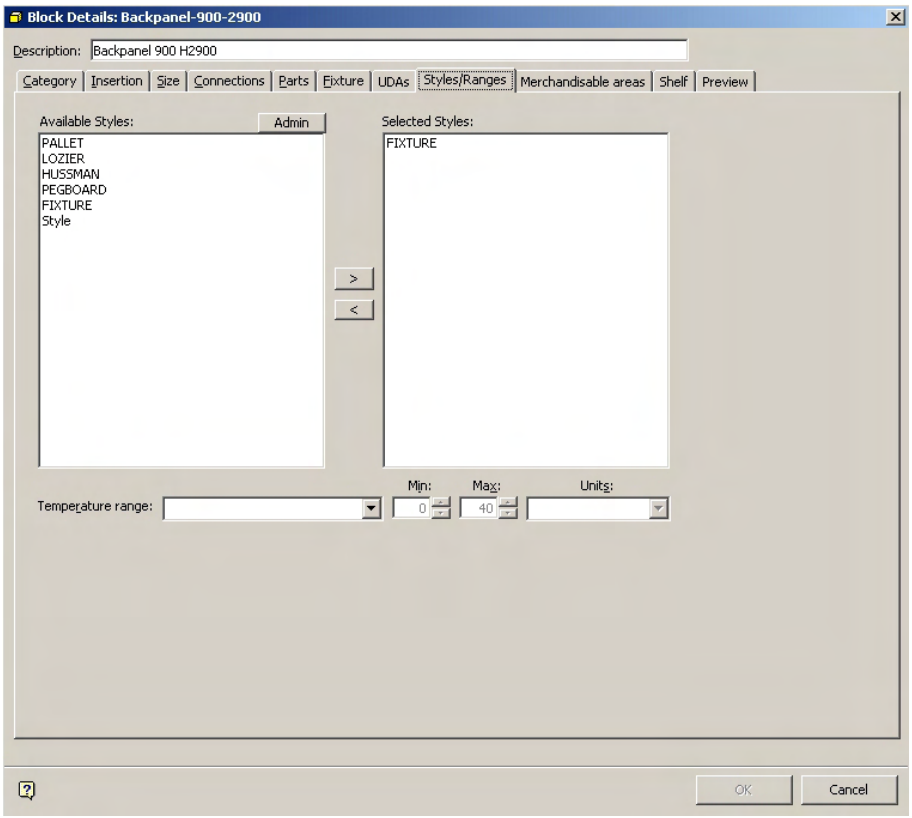
Mandatory UDA's

Some UDA's are mandatory and must be entered before the block definition can be saved.

Failure to enter these mandatory UDA's will result in an error message being displayed.

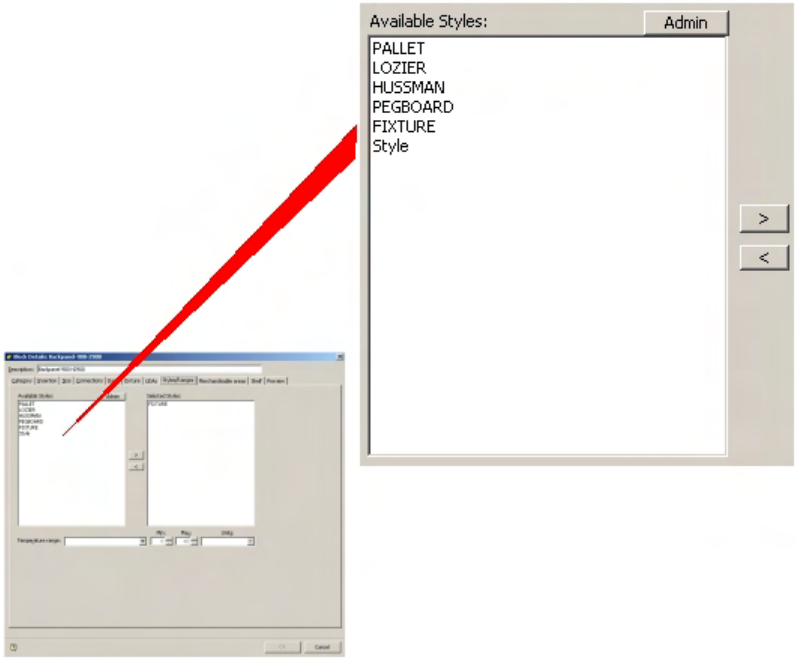
Styles/Ranges Tab

The **Styles/Ranges Tab** has two purposes: to set the styles for items of equipment, and to specify any ranges for physical parameters limiting the products than can be placed on that equipment.



The Available Styles Tab

The **Available Styles** Tab contains a list of styles that have been defined in the Admin Module.



They can be used to build up a list of available styles for a block.

Depending on the block, the styles will define the type of equipment it can connect with, and (if a shelf or fixture) the type of merchandise it can accept.

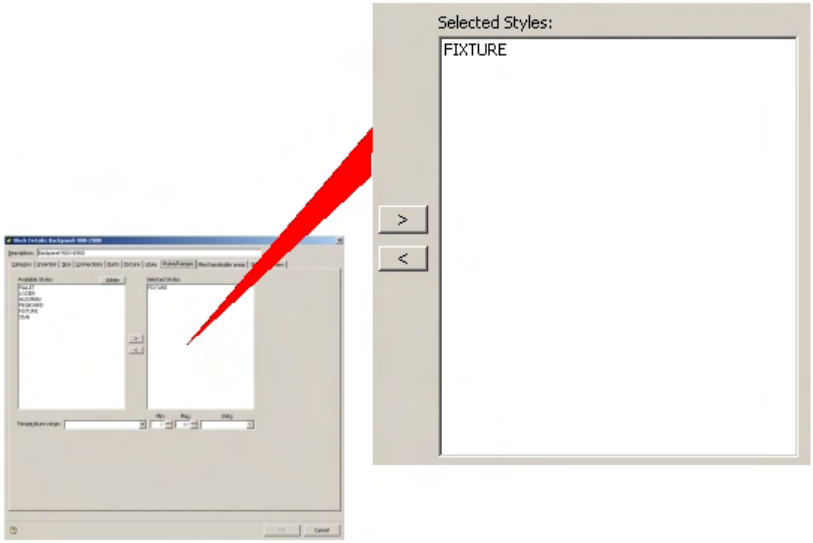
Building a Styles List

To add a style to the Selected Styles list, highlight the part in the Available Styles frame and use the Add arrow.

Alternatively highlight and double click on the part in the Available Styles frame.

The Selected Styles Tab

The **Selected Styles** Tab contains a list of styles that have been chosen from the Available Styles frame.



Depending on the block, the styles will define the type of equipment it can connect with, and (if a shelf or fixture) the type of merchandise it can accept.

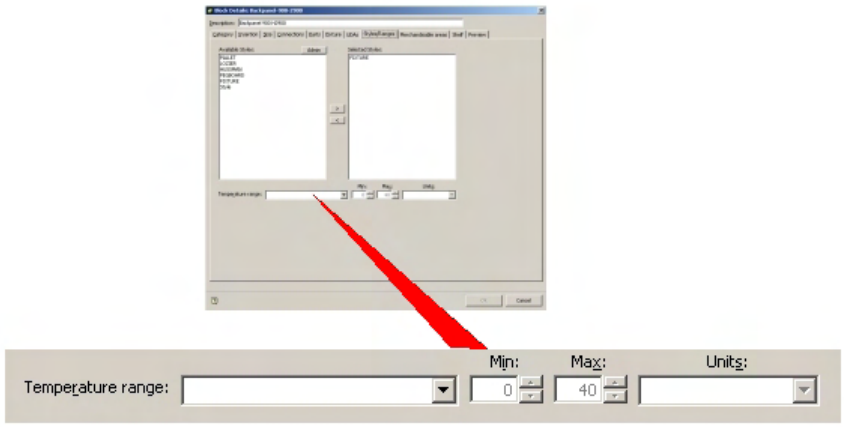
Removing from the Selected Styles List

To remove a part from the Selected Styles list, highlight the part in the Selected Styles frame and use the Remove arrow.

Alternatively highlight and double click on the part in the Selected Styles frame.

Range Options

The **Range Options** frame allows the user to set a permissible temperature range for the merchandise the block will accept.



This would most usefully be used for Freezer and Chilled Food units.

> **Note:** This functionality is not enabled for this implementation of Macro Space Management.

About Styles

There are three broad classes of style (although others can be defined).

- Fixture styles
- Shelf styles
- Product styles

Styles are used to define whether different types of objects fit together. They can be used to specify (for example) whether a shelf will fit on a fixture, or whether a product will fit on a shelf.

Fixtures must have one or more fixture styles. The fixture style specifies what form of shelving and other equipment can be attached to it. If product is to be placed directly on any fixture, it also requires a shelf style.

Shelves must have one or more fixture styles and also one or more shelf styles. The fixture style specifies what sort of fixture the shelf may be attached to. The shelf style specifies what form of product can be placed on the shelf.

Products must have one or more product styles. The product style specifies what form of shelving the product is compatible with.

Style Relationships can be configured using the Styles option in the Admin Module.

Assigning Styles can be done via the Block Details option in Fixture Studio.

Ranking Multiple Styles assigned to a type of object in order of priority can be done via the System Variables option in the Admin Module.

Preferred Styles can be assigned to individual shelves using the Edit option from the pop-up menu in the Merchandiser.

Types of Styles

Fixture Styles

Each fixture should be associated with one or more Fixture Styles. An example of a fixture style might be 'Metal'. This style might also be associated with fitting and shelves and can be used to indicate that particular items of equipment can be fitted together.

If product is to be placed directly on any fixture, it also requires a shelf style.

Shelf Styles

Each shelf must be associated with one or more Fixture Styles and also one or more Shelf Styles.

The Fixture Style is used to ensure the shelf fits onto a compatible fixture.

The Shelf Style only allows products with compatible styles to be placed.

Product Styles

Each product must be associated with one or more product styles. These product styles will determine the compatible shelves the product can be placed on.

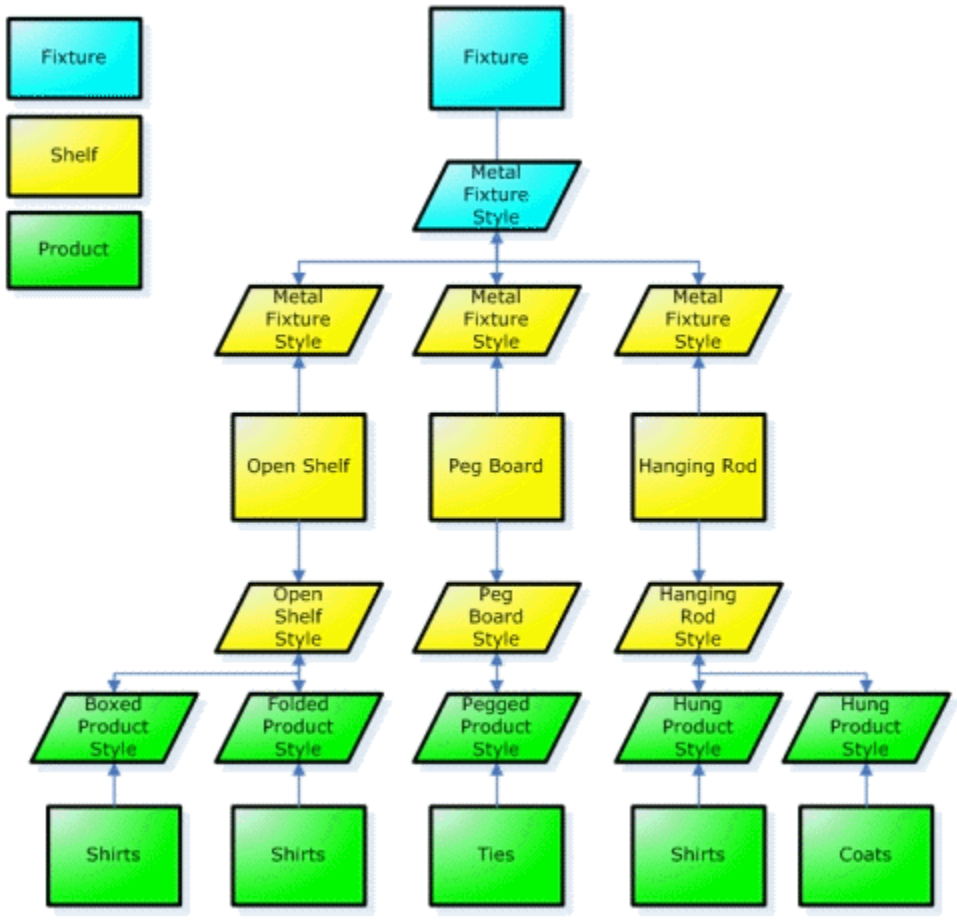
For example shirts could be available in both Hung and Folded Product (Display) Styles.

If a product is dragged into a shelf at item level then it will automatically select the correct Product Style. For example if shirts are dragged into an open shelf, they will be placed as Folded Shirts. If shirts are dragged onto a peg or bar, then they will be placed as Hung Shirts.

If product is dragged onto a shelf at Display Level then it can only be placed on equipment compatible with that style. For example Folded shirts cannot be placed onto a bar.

Using Styles

The diagram below indicates how styles interrelate.



The fixture has been assigned a Metal Fixture style.

The Open Shelf, Peg Board and Hanging Rod shelf objects have all been assigned Metal Fixture styles. This means any of these three types of shelf object can be placed on the fixture.

If another type of shelf object (for example a slatted backpanel) had been assigned the *Lozier* fixture style, it would not have a fixture style compatible with that assigned to the fixture itself, and could not be assigned to that fixture.

The Open Shelf, Peg Board and Hanging Rod shelf objects have also all been assigned appropriate shelf styles.

The varying types of products have been assigned product styles. For example shirts have been assigned Boxed, Folded and Hung product styles. These styles determine what form of shelf object shift can be placed on.

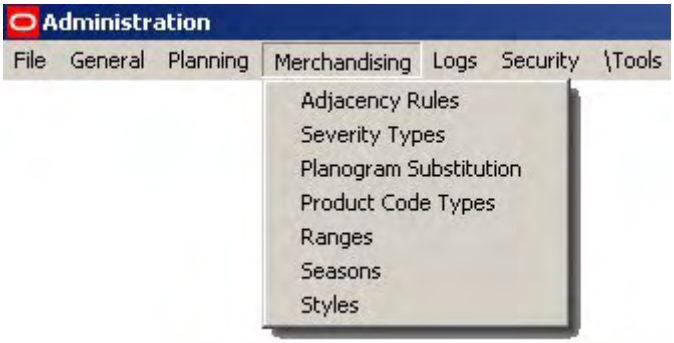
For example shirts with a Hung product style can only be placed on Hanging Rods. Conversely, the Open Shelf has been configured to accept both Boxed and Folded shirt styles.

Ties only have Pegged product style and are restricted to the Peg Board.

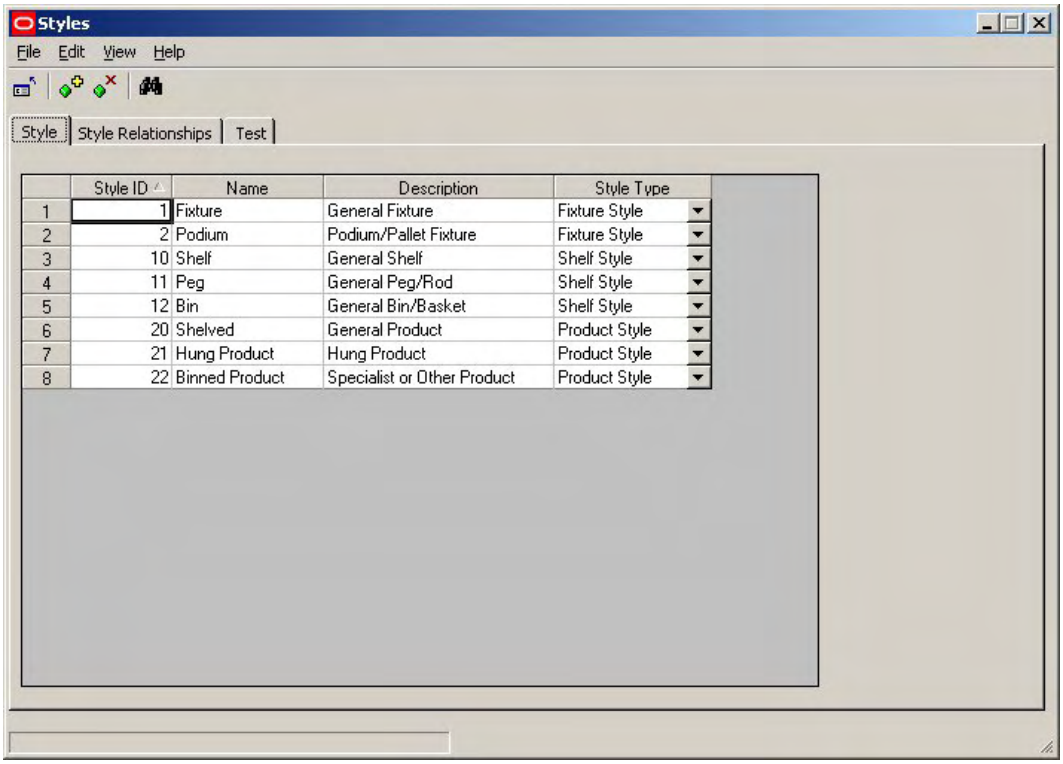
> **Note:** Where an object has multiple styles, they can be ranked in order of preference using the appropriate system variables, or set in order of preference using preferred styles.

Configuring Styles

Styles can be configured from within the Admin Module.



This will bring up the Styles dialogue box, which can be used to configure styles and the relationships between them.



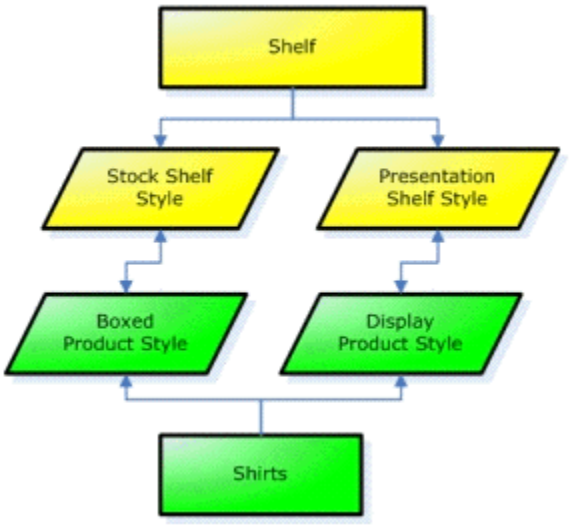
Preferred Styles

Because some objects can be associated with multiple styles, specific instances of shelves within the drawing can be given preferred styles.

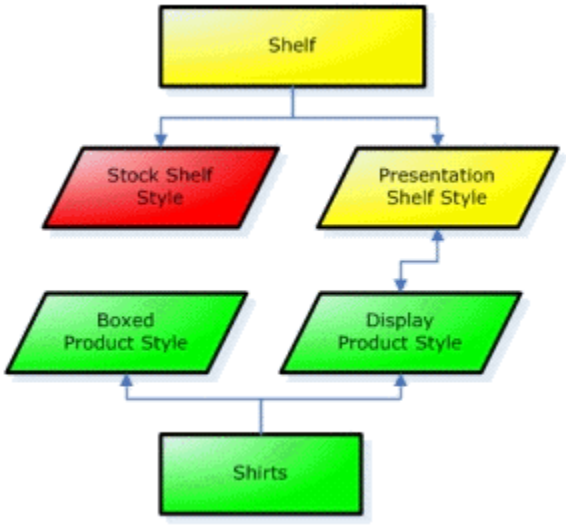
These preferred styles override the ranking set in the SPL_RANKING System variable for that specific shelf.

For instance, a shelf could be associated with both a Stock shelf style as well as a Presentation shelf style; two display styles may then be defined for a particular product, a Display product style and a Boxed product style.

The Stock shelf style would be linked with the Boxed product style, and the Presentation shelf style would be linked with the Display product style. This would allow both the Boxed and Display version of the product to be placed on the shelf.

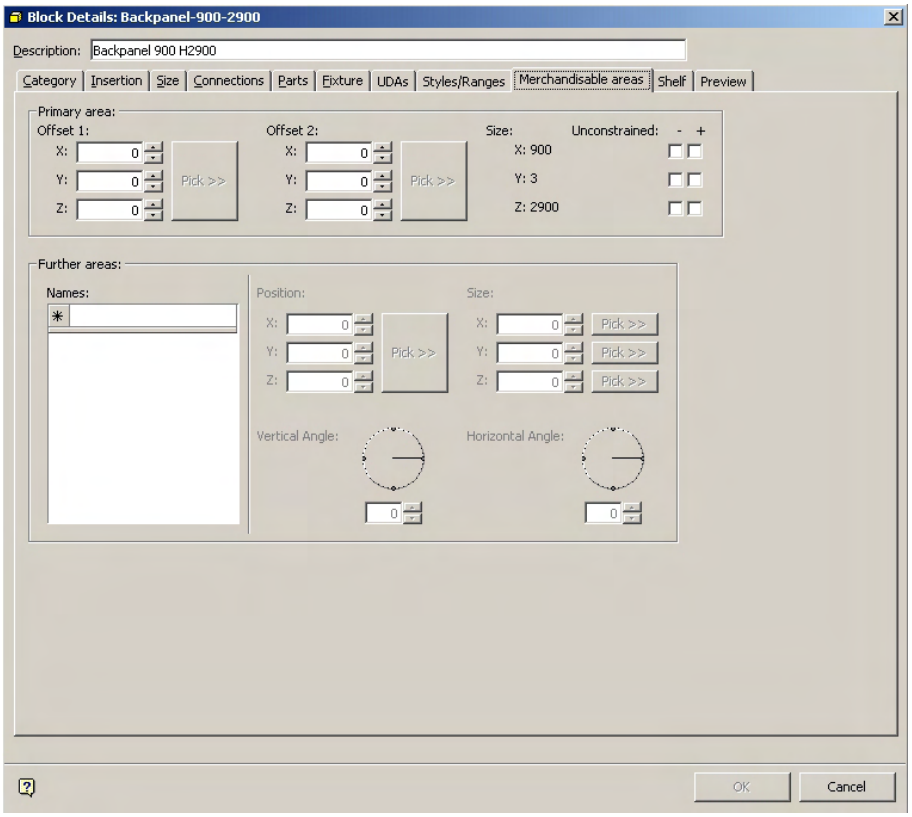


However, the user would be able to indicate the preferred style for a particular instance of a shelf as being Presentation, which would force the Display product to be placed for that particular shelf.



Merchandisable Areas Tab

The **Merchandisable Areas Tab** is used to indicate the location of merchandisable areas for an object.



The Primary Area Frame allows the user to specify the first merchandisable area.

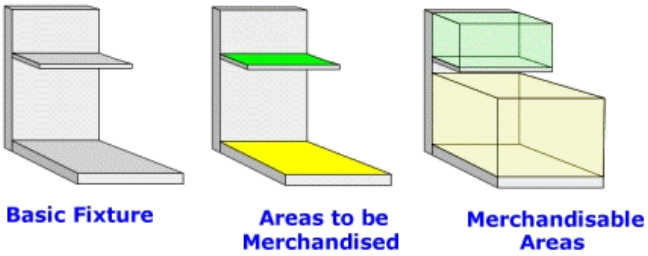
The Further Areas Frame allows the user to specify the second and subsequent merchandisable areas.

The Primary and Further areas are specified and behave in slightly different ways.

Merchandisable Area Concepts

Basic Concept

Merchandisable areas are used to specify which volumes of a fixture can accept merchandise.



In the example above, an idealized fixture consists of a base, backpanel and ledge (left hand diagram).

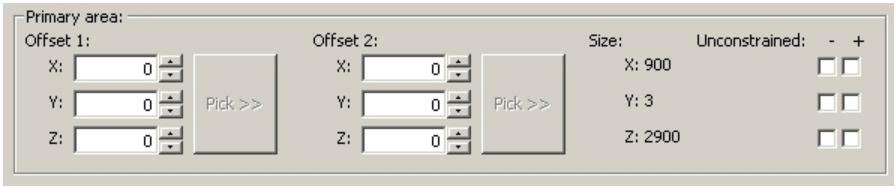
It is desired to create two merchandisable areas on the fixture. The Primary Merchandisable Area is to be created on the base (colored yellow) and a Further Merchandisable Area is to be created on the ledge (colored green).

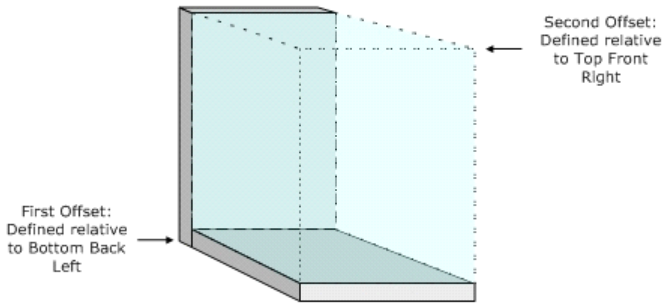
For each area a cube is defined (right hand diagram). This cube sets the maximum limits which merchandise can occupy.

First Merchandisable Area

The First Merchandisable Area is designed to be compatible with fixtures that can be defined as stretchable.

It is based on specifying two points relative to the bottom, back, left and top, front, right coordinates of a fixture.





When specified, Offset 1 and Offset 2 specify opposing corners of a cube.

Because these offsets are specified relative to the dimensions of the fixture, if the fixture dimensions change, then the dimensions of the cube change relative to it.

Example of First Merchandisable Area and Stretchable Fixture: Take a fixture of length 1200 mm, depth 400 mm and height 600 mm. This will have Offset 1 relative to the

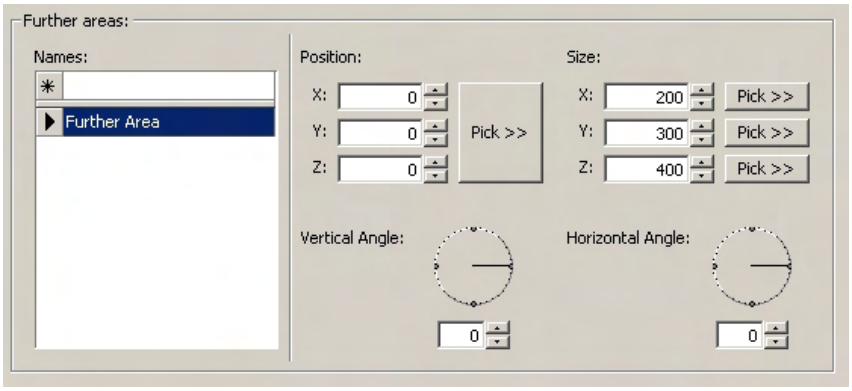
bottom, left, back of the fixture (coordinates 0, 0, 0) and Offset 2 relative to the top, front, right of the fixture (coordinates 1200, 400, 600). If the fixture is now stretched to length 1600 mm, the top, front, right of the fixture will have coordinates 1600, 400, 600. Offset 2 will now be relative to these modified coordinates and the merchandisable area will have been increased in size to match the new length.

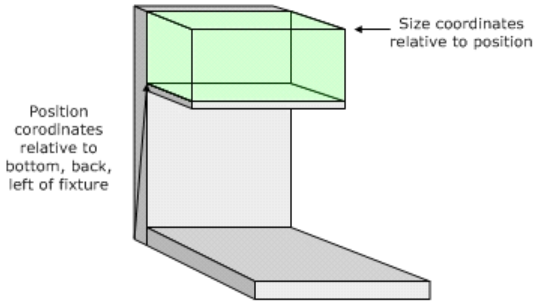
Further Merchandisable Areas

Further merchandisable areas are of fixed size and will not change relative to the dimensions of the fixture if the fixture is stretched.

They are based on specifying a position relative to the bottom, left, back of the fixture. This set of coordinate's details one corner of a cube.

A size is then specified relative to the position. This specifies the second corner of a cube.



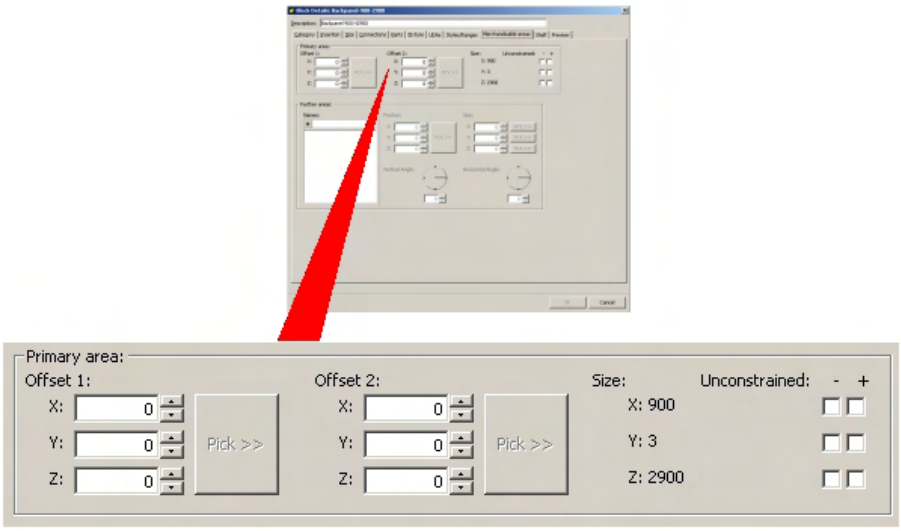


Example of Further Merchandisable Area: First the starting Position of the Further Merchandisable Area is specified relative to the bottom, back, left of the fixture. This might have coordinates 0, 50, 400. (Aligned with side of fixture, moved forward 50 mm to allow for thickness of backpanel, raised 400 mm to correspond to top of shelf). Next, the Size of the Further Merchandisable Area is specified. This is done by specifying coordinates for the opposing corners of a cube. These might be 600, 200, and 300. (Area is 600 mm long, 200 mm deep and 300 mm high).

The Primary Areas Frame

The **Primary Area Frame** allows the user to specify the Primary Merchandisable Area.

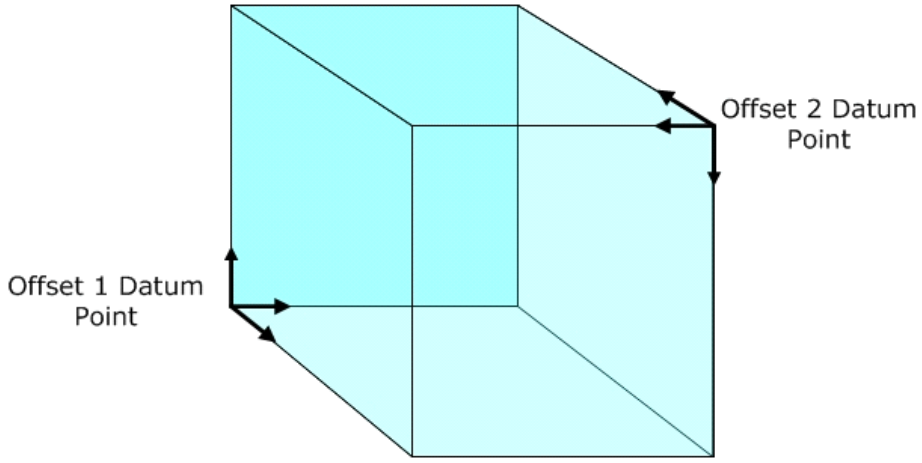
Primary Merchandisable Areas can be used in conjunction with stretchable fixtures.



The datum points from which Offset 1 and Offset 2 are set together define the extents of the object.

The datum point for Offset 1 is the back, bottom, left corner of the object, and the datum point for Offset 2 is the front, top, right corner of the object.

The effect of putting in the offset coordinates can be seen from the diagram below.



Putting in positive coordinates moves the offset point inside the extents of the drawing (in the directions shown by the heavy black arrows). Putting in negative coordinates moves the offset point outside the extents of the drawing.

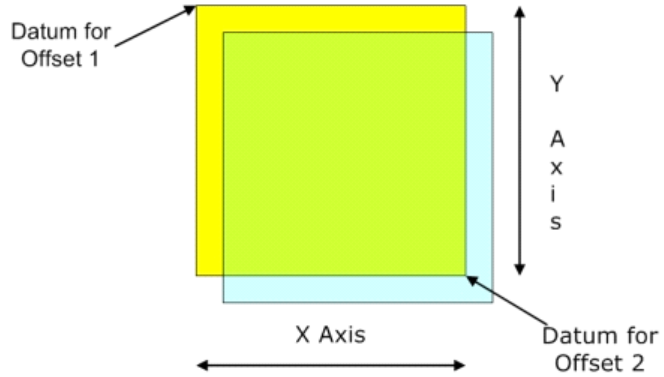
Offset 1 is specified relative to the bottom, back, left coordinates of the fixture.

Positive X coordinate	Decrease length of merchandisable area	Negative X coordinate	Increase length of merchandisable area
Positive Y coordinate	Decrease depth of merchandisable area	Negative Y coordinate	Increase depth of merchandisable area
Positive Z coordinate	Decrease height of merchandisable area	Negative Z coordinate	Increase height of merchandisable area

Offset 2 is specified relative to the front, top, right coordinates of the fixture.

Positive X coordinate	Decrease length of merchandisable area	Negative X coordinate	Increase length of merchandisable area
Positive Y coordinate	Decrease depth of merchandisable area	Negative Y coordinate	Increase depth of merchandisable area
Positive Z coordinate	Decrease height of merchandisable area	Negative Z coordinate	Increase height of merchandisable area

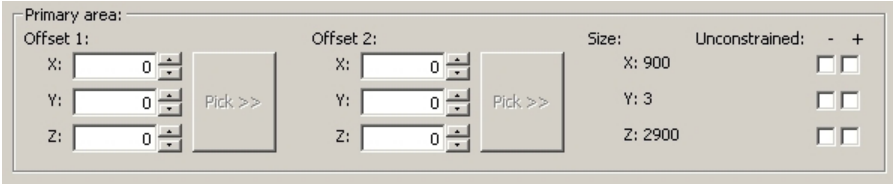
The effect in two dimensions can be seen by considering the following example. (The base of the fixture is shown in yellow and the merchandisable area is shown in blue).



Offset 1 has been given X and Y coordinates of 50, 50. This moves the offset position inside the extents of the fixture. The effect is that the first corner of the merchandisable area has been moved inside the fixture.

Offset 2 has been given X and Y coordinates of -50, -50. This moves the offset position outside the extents of the fixture. The effect is that the opposing corner of the merchandisable area has been moved outside the fixture.

Setting The Offsets



Manual Settings

The Offsets can be set manually, but before they are, knowledge of the dimensions of the object is required.

The basic length, depth and height can be obtained from the size tab.

If more detailed dimensions are required, the drawing can be loaded into the active AutoCAD drawing using the *Load Blocks into Drawing* command from the *File* menu. The AutoCAD Dist (Distance) command can then be used to measure the dimensions.

X, Y and Z dimensions can then be set by typing them in, or by using the spin controls.

Using the Pick Command

With the object open in the active AutoCAD drawing, click on the Pick button. Switch to the AutoCAD drawing and click on the required offset point. The selected coordinates will be transferred to fixture Studio.

Example of Primary Merchandised Area settings: In the above example both Offset 1 and Offset 2 have had their X coordinates set to -50 mm. This has the effect of moving the offset points outside the pallet in the X axis. This in turn increases the length of the merchandisable area by a total of 100 mm relative to the length of the pallet.

In the above example both Offset 1 and Offset 2 have had their Y coordinates set to -50 mm. This has the effect of moving the offset points outside the pallet in the Y axis. This in turn increases the depth of the merchandisable area by a total of 100 mm relative to the depth of the pallet.

The effects in the Z axis are more subtle.

Offset 1 (with its datum at the base of the pallet) has had its Z coordinate set to 180 mm. This has the effect of moving the offset point inside the extents of the drawing. As it is moved inside by 180 mm and 180 mm is the height of the pallet, this sets the offset to the top of the pallet.

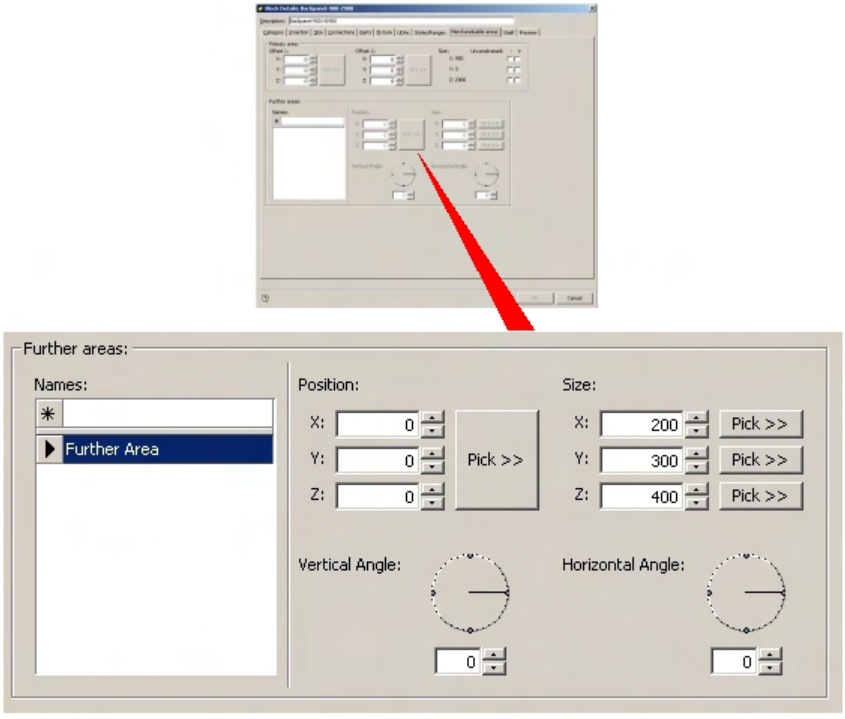
This has the effect of setting the base of the merchandisable area to the top face of the pallet.

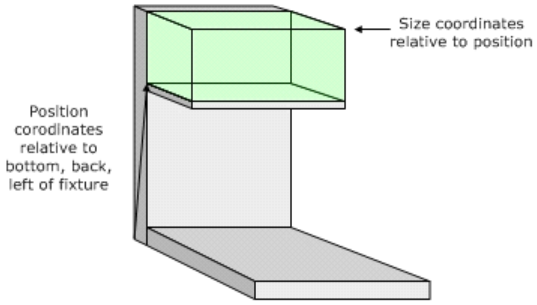
Offset 2 (with its datum at the top of the pallet) has had its Z coordinate set to -1300 mm. This has the effect of moving the offset point outside the extents of the drawing.

The practical effect is to set the top of the merchandisable area to 1300 mm above the top face of the pallet.

The Further Areas Frame

The further areas frame allows other merchandisable areas to be specified.



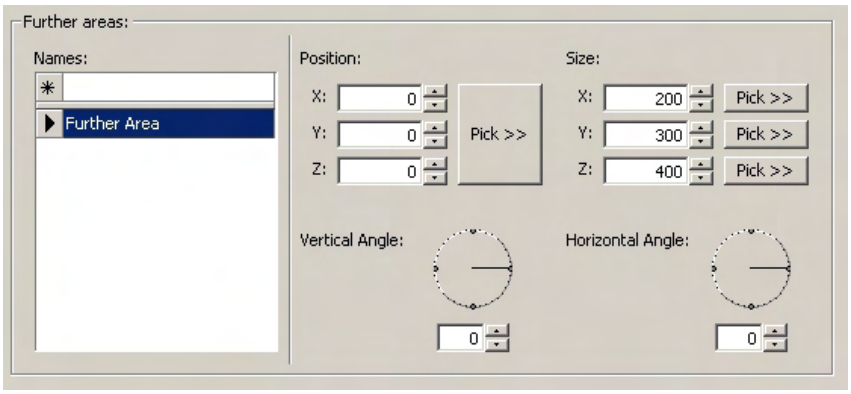


It requires two sets of coordinates:

The first is a position specified position relative to the bottom, left, back of the fixture. This set of coordinate's details one corner of a cube.

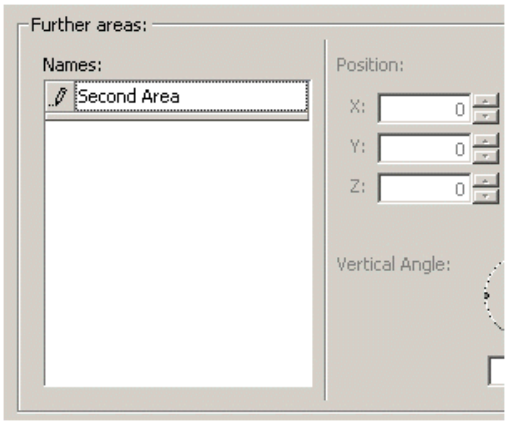
A size is then specified relative to the position. This specifies the second corner of a cube.

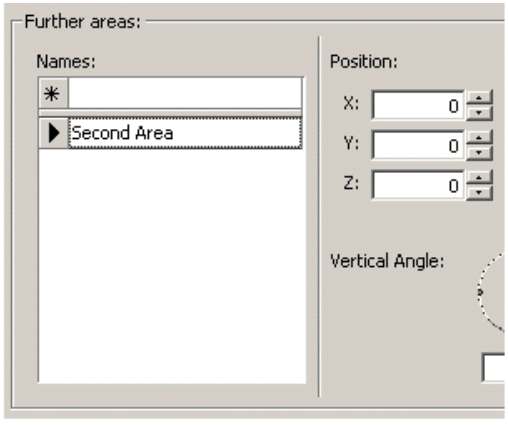
Setting the Offsets



Naming the merchandisable area

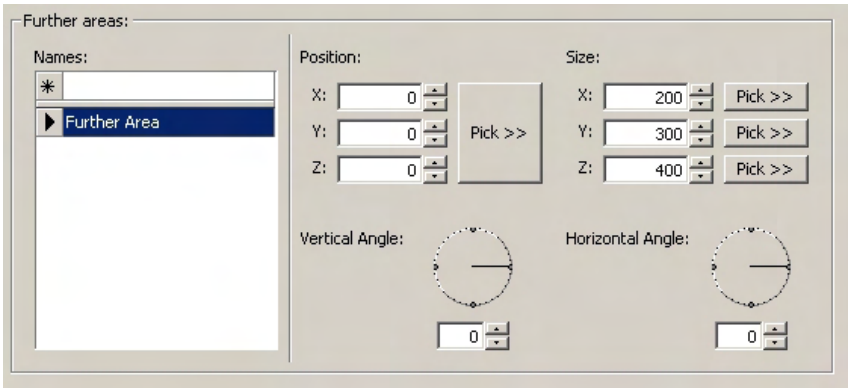
To name the Further Merchandisable Area, type in the name and press <Return>. The name will be entered in the list of Further Areas.





Users will not be able to edit the Further Area until they click on the name in the list of further areas.

Manual Settings



The Offsets can be set manually, but before they are, knowledge of the dimensions of the object is required.

The basic length, depth and height can be obtained from the size tab.

If more detailed dimensions are required, the drawing can be loaded into the active AutoCAD drawing using the Load Blocks into Drawing command from the File pull down menu. The AutoCAD Dist (Distance) command can then be used to measure the dimensions.

X, Y and Z dimensions can then be set by typing them in, or by using the spin controls.

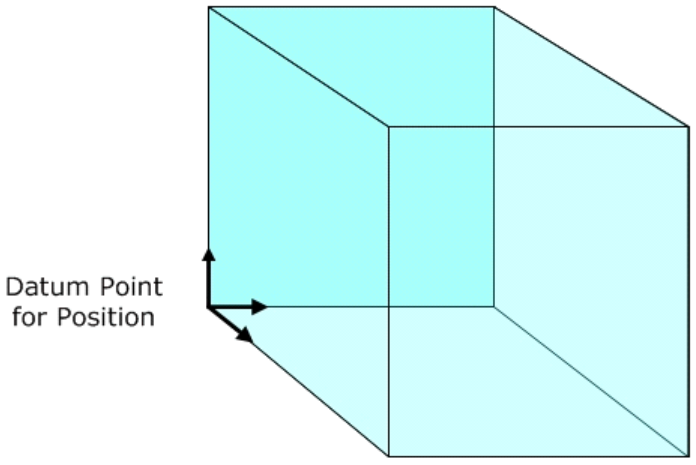
Using the Pick Command

With the object open in the active AutoCAD drawing, click on the Pick button. Switch to the AutoCAD drawing and click on the required offset point. The selected coordinates will be transferred to fixture Studio.

Setting the Datum Points

Setting the datum point for Position

The datum point for position is specified relative to the bottom, left, rear corner of the object.



Positive X values move the position to the right on the object.
Positive Y values move the position forward on the object.

Positive Z values move the position up on the object.

Setting the Size of the merchandisable area

The Size is set by defining a second datum point relative to the Position datum point.

Positive X values define the length of the merchandisable area to the right of the position datum.
Negative X values define the length of the merchandisable area to the left of the position datum.
Positive Y values define the depth of the merchandisable area forward of the position datum.
Negative Y values define the depth of the merchandisable area behind the position datum.
Positive Z values define the height of the merchandisable area above of the position datum.
Negative Z values define the height of the merchandisable area below of the position datum.

Setting the Angles of the merchandisable area

Both the vertical and horizontal angles can get for further merchandisable areas.

An example of where this would be used would be if merchandisable areas were set up on shelving intended to display newspapers at an angle for sale.

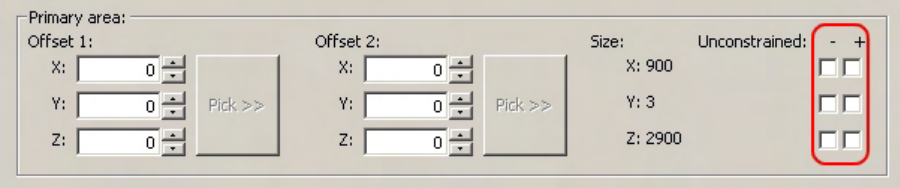
Constrained and Unconstrained Merchandisable Areas

Primary Merchandisable Areas can either be **constrained or unconstrained**.

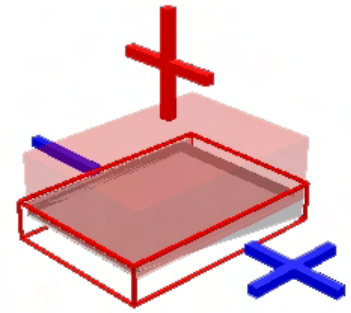
Constrained Areas are areas that stay within the specified co-ordinates.

Unconstrained Areas may take up any volume in the specified direction.

These options are set by checking the check boxes in the primary areas frame.



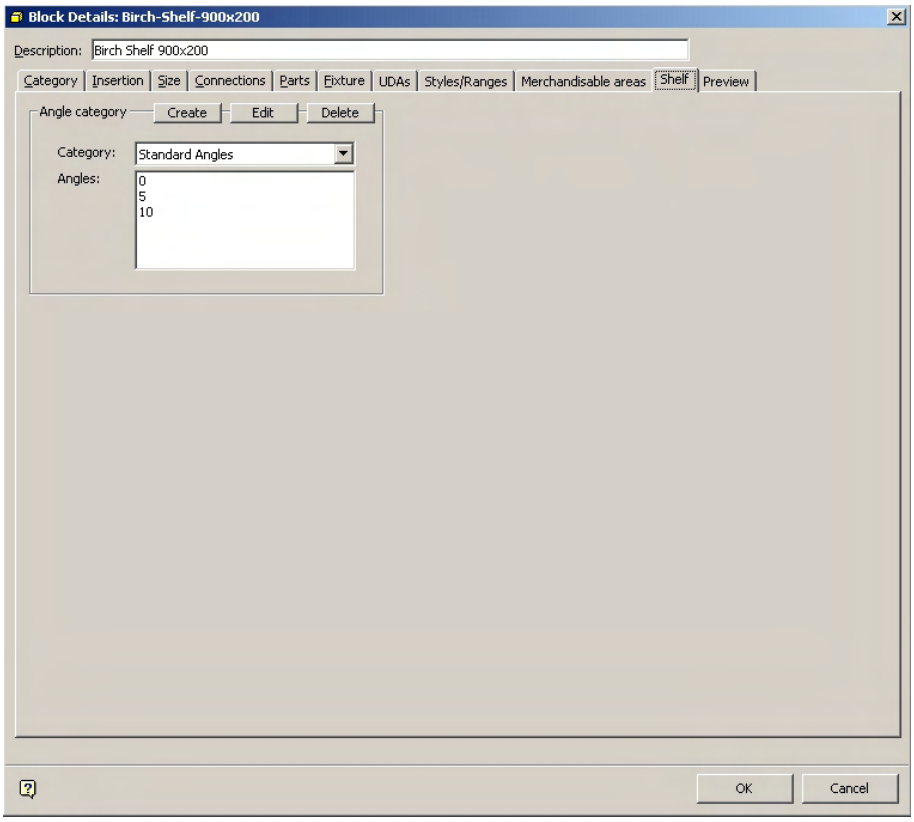
Unconstrained axes are shown visually in the Preview tab.



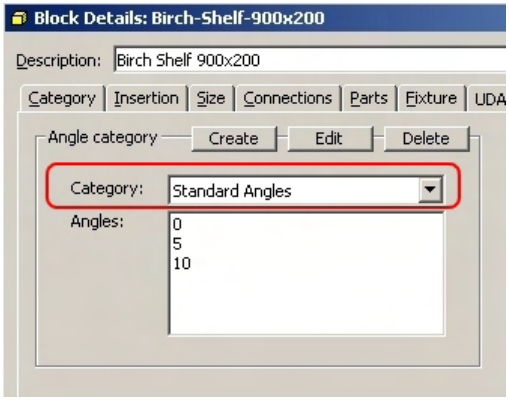
Any unconstrained axis will have a '+' or a '-' sign by it.

Shelf Tab

The **Shelf Tab** can be used to define the permissible angles for shelves to be set at when placed on a fixture.



Currently defined Angle Categories can be seen from the drop down list.

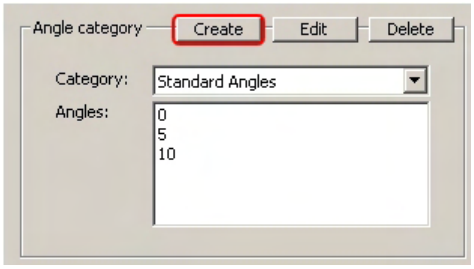


Specifying Permissible Shelf Angles

Angle categories many be created, edited or deleted.

Creating an Angle Category

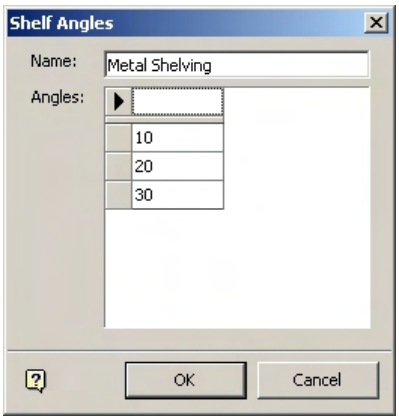
To create an Angle Category, click on the Create button.



This will bring up the Shelf Angles dialogue box.

Type in the required Angle Category name then left click into the Angles box. (Do not press <Return> at this stage or it will close the dialogue box).

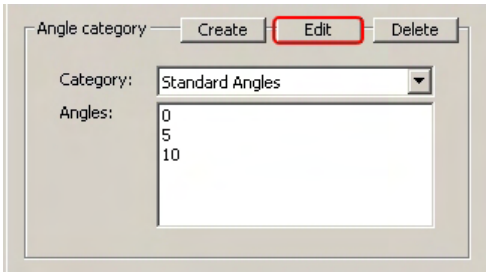
Type the required angle in and press <Return>. Continue to type in the required angles and pressing return until the desired list of angles has been built up.



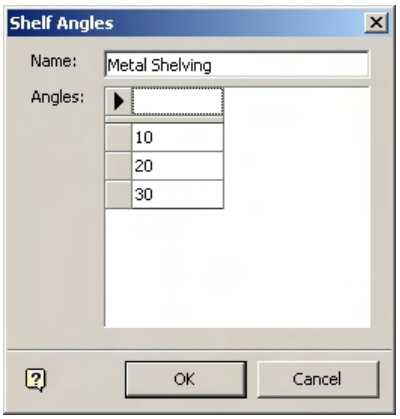
When the required Angles have been entered, click on OK to save the information to the database and close the dialogue box.

Editing an Angle Category

To Edit an Angle Category, click on the Edit button.



This will bring up the Shelf Angles dialogue box.



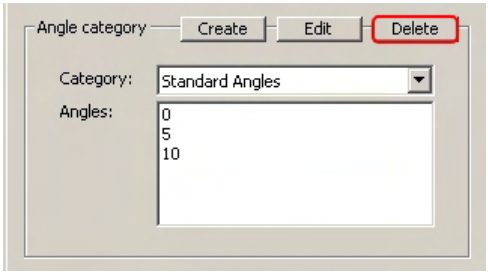
The Shelf Group Name cannot be edited.

The Angles can be edited by typing in the required angle and pressing return.

When the required changes have been made, click on OK to save the information to the database and close the dialogue box.

Deleting an Angle Category

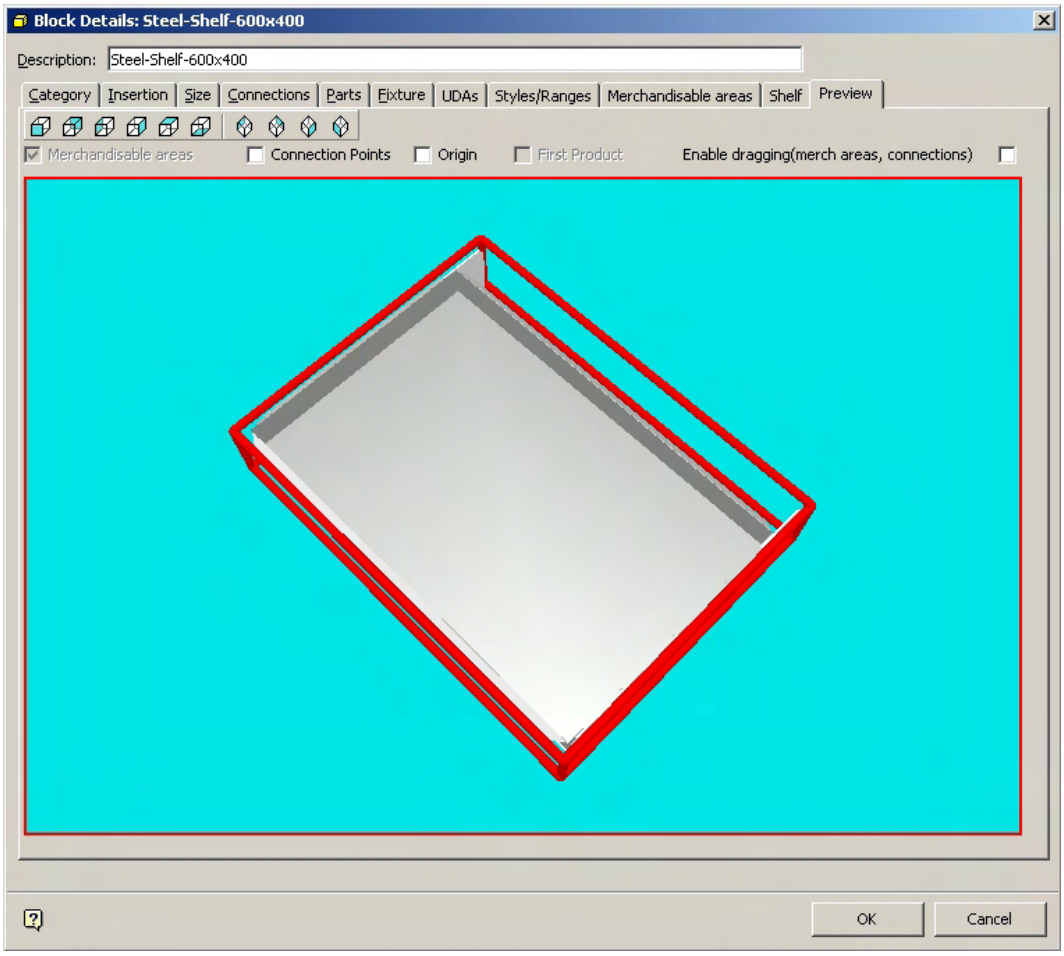
To delete an Angle Category, click on the Delete button.



The selected category will be deleted without further confirmation.

Preview Tab

The **Preview Tab** allows users to visually see merchandisable areas, connection points, the origin (insertion point) and the position of the first product placed on a fixture.



In the above image, the shelf is enclosed by a red selection frame.

While the selection frame is present the fixture can be rotated by holding down the left mouse key and moving the mouse cursor around the fixture.

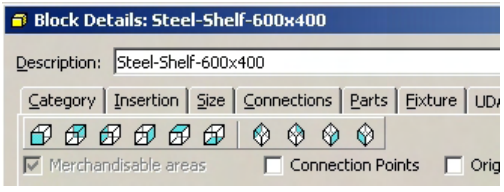
The selection frame can be removed by holding down the <Ctrl> key and left clicking with the mouse on the fixture. (Alternatively use the <Escape Key>).

While the selection frame is removed, the fixture can be moved on zoomed in and out on by holding down either the left or right mouse buttons and moving the mouse cursor around the fixture.

The selection frame can be restored by holding down the <Ctrl> key and left clicking with the mouse on the fixture.

Preview Tab Toolbar

The **Preview Tab Toolbar** allows users to select the point of view for the displayed preview.

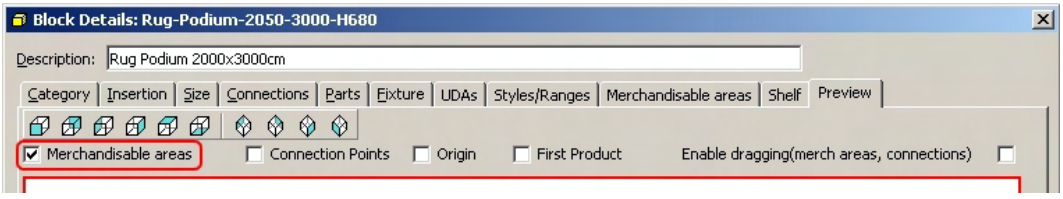


Click on the relevant icon to see the viewpoint.

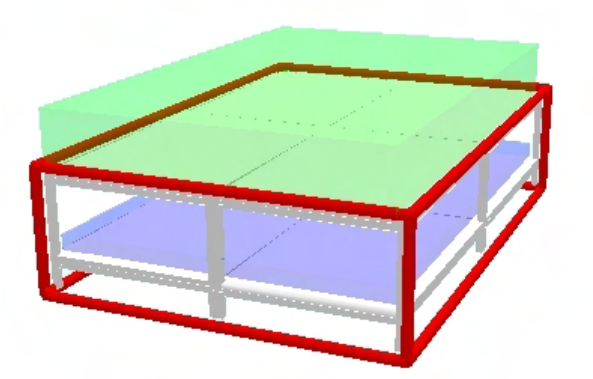
	Front view of selected object
	Back view of selected object
	Top view of selected object
	Bottom view of selected object
	Left view of selected object
	Right view of selected object
	NW isometric view of selected object
	NE isometric view of selected object
	SE isometric view of selected object
	SW isometric view of selected object

Merchandisable Areas Option

The **Merchandisable Areas** option allows users to see the assigned merchandisable areas for a fixture. Activate it by ticking the checkbox.



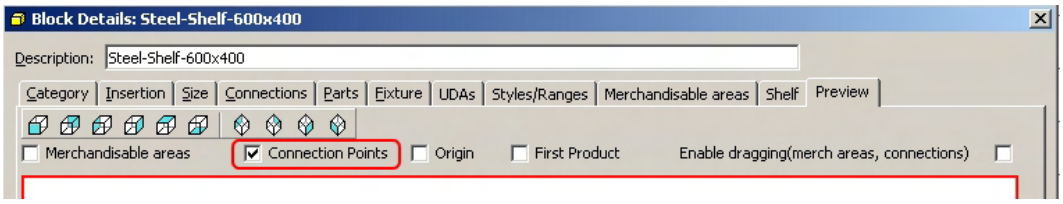
In the example below, the podium has two merchandisable areas.



Note: The preview will be more responsive to movement if only one option is checked at a time.

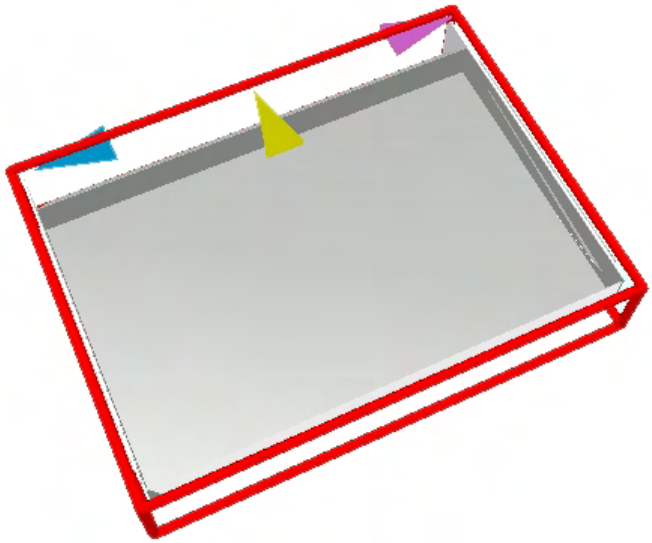
Connection Points Option

The **Connection Points** option allows users to see the position of the connection points. Select it by checking the Connection Points box.



This will bring up the connection point display. Each type of connection point is color coded.

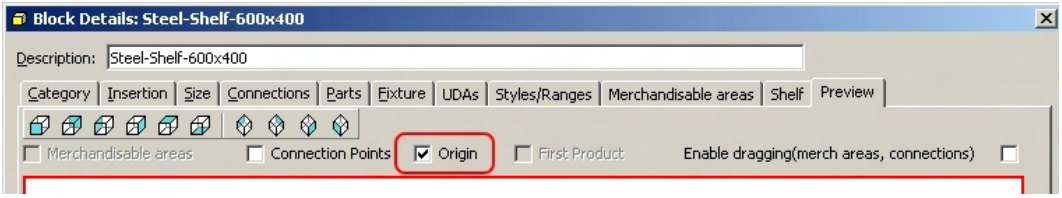
Note: The color coding of the connection points can be changed in the fixturing tab of the Configuration Module.



Note: The preview will be more responsive to movement if only one option is checked at a time.

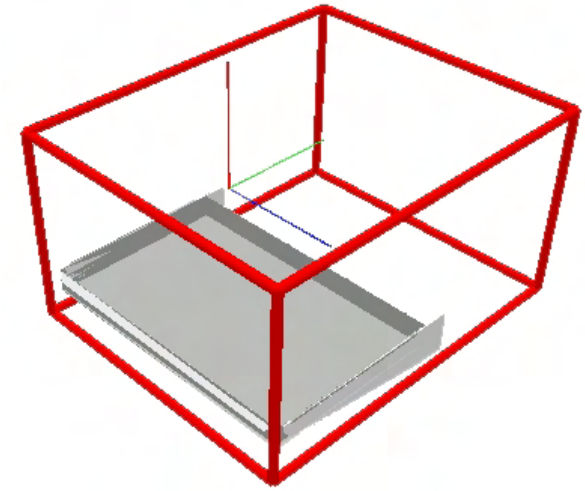
Origin Option

The **Origin Option** allows users to see where the insertion point of the fixture is. Select it by ticking the origin check box.



In the example below, the origin can be seen as a set of red, green and blue lines set at 90 degrees to each other.

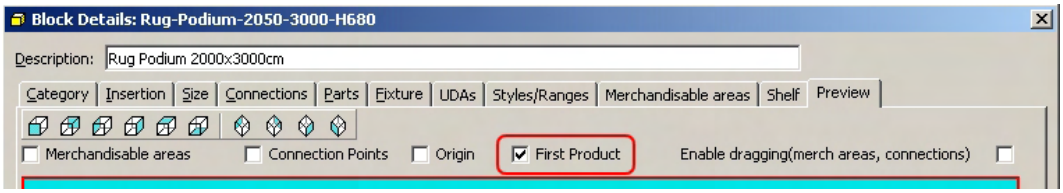
Blue Line	Direction of X Axis
Green Line	Direction of Y Axis
Red Line	Direction of Z Axis



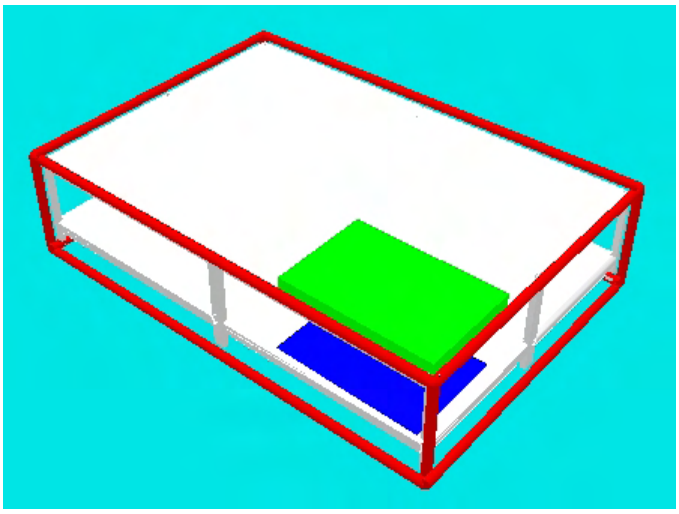
Note: The preview will be more responsive to movement if only one option is checked at a time.

First Product Option

Checking the **First Product** option will result in the position of the first product to be placed on the fixture being shown.



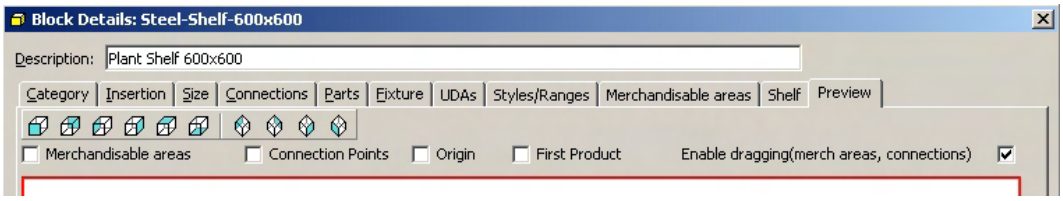
In the example below, the fixture has two merchandisable areas. Accordingly, the position of the first product in both merchandisable areas has been shown.



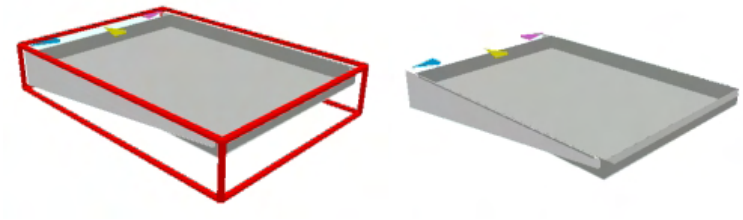
Note: The preview will be more responsive to movement if only one option is checked at a time.

Overview of Dragging Option

The **dragging option** allows users to manually change the positions of connection points or change the size and position of the merchandisable areas. The option is selected by ticking the Enable Dragging check box.



Before any dragging operations can be carried out, the fixture must first be removed from its selection box by left clicking on it.



In the above example, the fixture on the left has a selection box, and the one on the right has it removed.

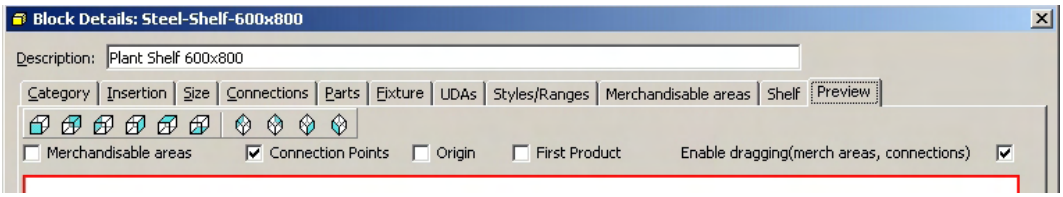
Once the selection box has been removed from the fixture, either merchandisable areas or connection points can be selected by left clicking on them.

In the example above, the left hand connection point has been selected by left clicking on it and is now enclosed by a red selection box.

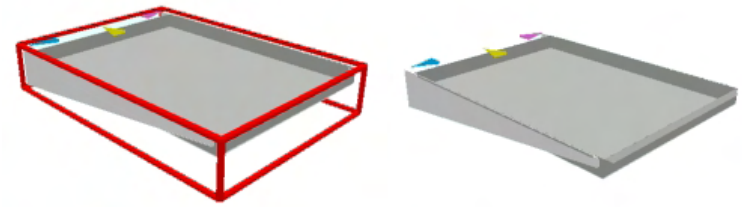
Dragging or Rotating Connection Points

Dragging connection points

To drag a connection point, select a fixture that has had connection points assigned. Check the Connection Points and Enable Dragging check boxes.



Ensure the fixture selection box is de-selected by left clicking on it (as per the fixture on the right).



Select a connection point by left clicking on it. It will be enclosed in a red selection box.

Move the mouse pointer over the selected connection point and hold down the left mouse key. The connection point can now be dragged to its new position.

Rotating a connection point

Select a connection point by left clicking on it. It will be enclosed in a red selection box.

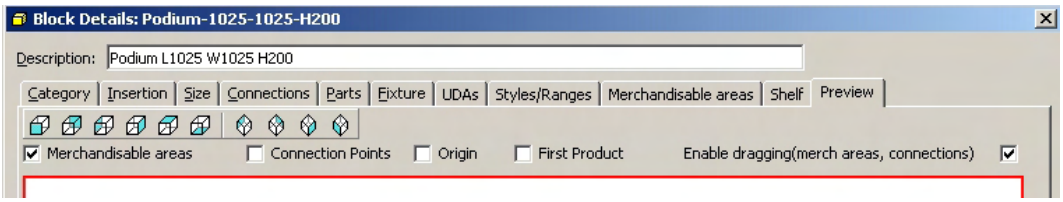
Move the mouse pointer over the selected connection point and hold down the right mouse key. The connection point can now be rotated to its new position.

Connections Tab

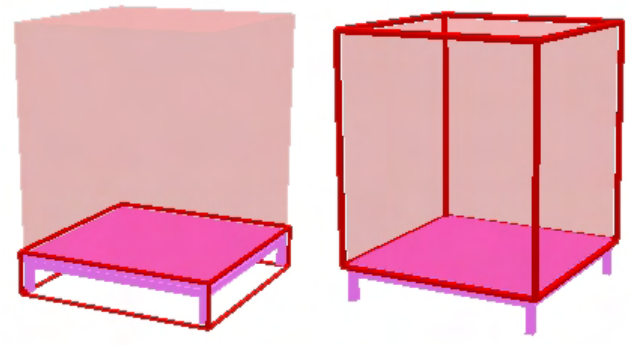
Changes made to connection points by dragging or rotating will be reflected in the Connections tab. Similarly, small changes in position can be made by changing the co-ordinates in the Connections tab, then confirming in the preview tab.

Dragging Merchandisable Areas

To drag a Merchandisable Area, select a fixture that has had one or more merchandisable areas assigned. Check the Merchandisable Areas and Enable Dragging check boxes.



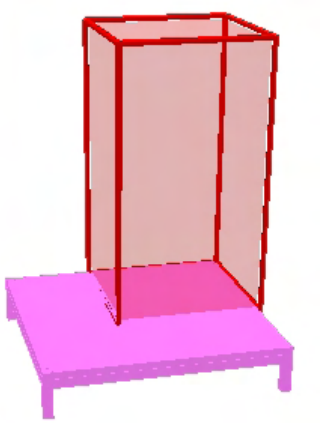
Next ensure that the fixture is de-selected and the merchandisable area selected. This can be done by holding down the <Ctrl> key and then left clicking on the fixture to de-select it. The merchandisable area can then be selected by holding down the <Ctrl> key, then left clicking on the merchandisable area to select it.



In the example above, the fixture is shown as selected on the left, while the merchandisable area is shown as selected on the right.

The merchandisable area can then be dragged by the mouse.

Move the mouse pointer over the merchandisable area and hold down the left mouse key. The merchandisable area can now be dragged to its new size.



Merchandisable Areas Tab

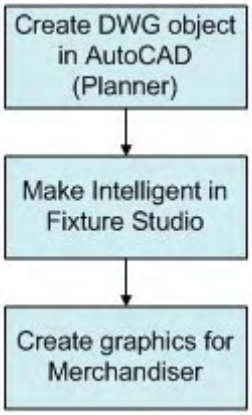
Changes made to merchandisable areas by dragging will be reflected in the Merchandisable Areas tab. Similarly, small changes in position can be made by changing the co-ordinates in the Merchandisable Areas tab, then confirming in the preview tab.

5

Fixture Creation

Basics of Block Creation

Blocks are created in three basic stages.



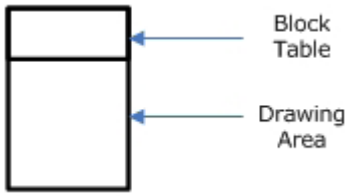
Firstly, a drawing of a fixture or fitting is created in Planner and turned into a block. This block is then saved to a specific directory within Macro Space Management.

The block is then imported into Fixture Studio and given properties beyond those that can be assigned to the basic block. These make the block 'intelligent' for retailing purposes.

Finally, additional graphics are produced that allow the block to be used in Merchandiser as well as the Planner environment.

Creating a block in Planner

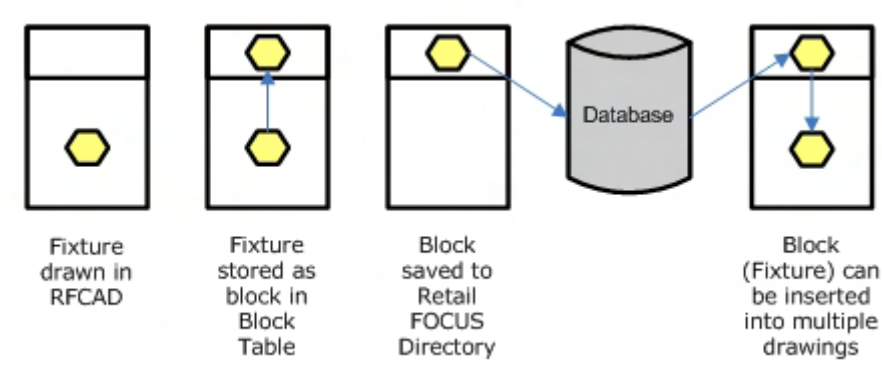
In order to **create a block within Planner**, the user must understand some basic concepts associated with block creation.



The drawing can be considered as being in two parts - a drawing area where you work and a block table where you store objects you have drawn. The drawing area is visible and the block table is not.

It is a little like writing a document in Word, then saving the file to the hard drive.

Creating a block in Planner goes through the following general stages:



Creating Fixture in Planner

The fixture is created within a Planner drawing. This may well be a complex set of polylines aligned together using the Move command. At this stage, the fixture only exists locally in the drawing area.

Store Fixture as Block in Block Table

The collection of polylines making up the fixture is turned into a block stored in the block table. This operation turns the polylines into a single object. It also stores additional properties such as the insertion point.

This operation is carried out using the Planner 'Block' command. At this stage the block is still local in the drawing.

Block Saved to a Directory in the Macro Space Management File Structure

This operation converts the block from one that is only available locally in a single drawing, to one that can potentially be made available in all drawings within Macro Space Management.

This is done by means of the Planner 'Wblock' command and will result in the block (fixture) being stored in a directory within the Macro Space Management directory structure.

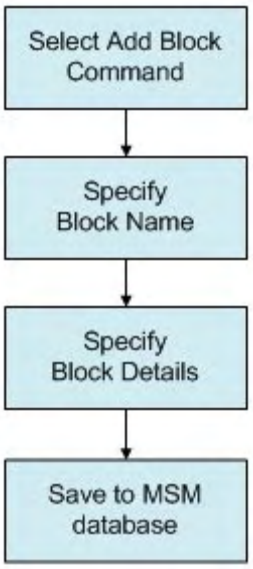
Inserting the Block into Multiple Drawings

Once the block is in the Macro Space Management directory structure it can be imported into Fixture Studio. After intelligent properties have been assigned to it, the block will appear in hierarchy within also object browser both Planner and Merchandiser environments.

This will make the block/fixture available in any drawing within the Macro Space Management environment.

Importing a Block into Fixture Studio

Importing a Block into Fixture Studio takes place in four broad stages.



- An appropriate Group in the fixture hierarchy is highlighted and the Add Block command selected.
- The block name is specified.
- The block details are specified using the block details dialogue box.
- The block details are saved to the central Macro Space Management database, ensuring the block has 'intelligent' properties when used in the Planner or Merchandiser environments.

Select Add Block Command

This can be selected from either the menu bar, toolbar or right click pop-up menu. The block will be added to whichever fixture group is highlighted.

Specify Block Name

This has to be typed into the dialogue box that will appear as a result of the add block command. It must be exactly the same as the block name that has been previously saved into the Macro Space Management directory structure by means of a Wblock command.

Specify Block Details

Once the block name has been entered, the block Details dialogue box will appear. This contains a series of tabs that allow the varying types of 'intelligent' properties to be assigned. One tab for example allows Connection Points to be assigned, another the Merchandisable Areas.

Save to Central Macro Space Management Database

This results in all the assigned details being saved to the central Macro Space Management database.

Producing Graphics for Merchandiser

The .dwg file imported into Fixture Studio serves as the graphic for the Planner environment. However, the Merchandiser environment requires a different form of graphic.

There are two possibilities for this: 3DS files and Lightwave files.

3DS files

These are files that can be generated from .dwg files using a built in function in Planner.

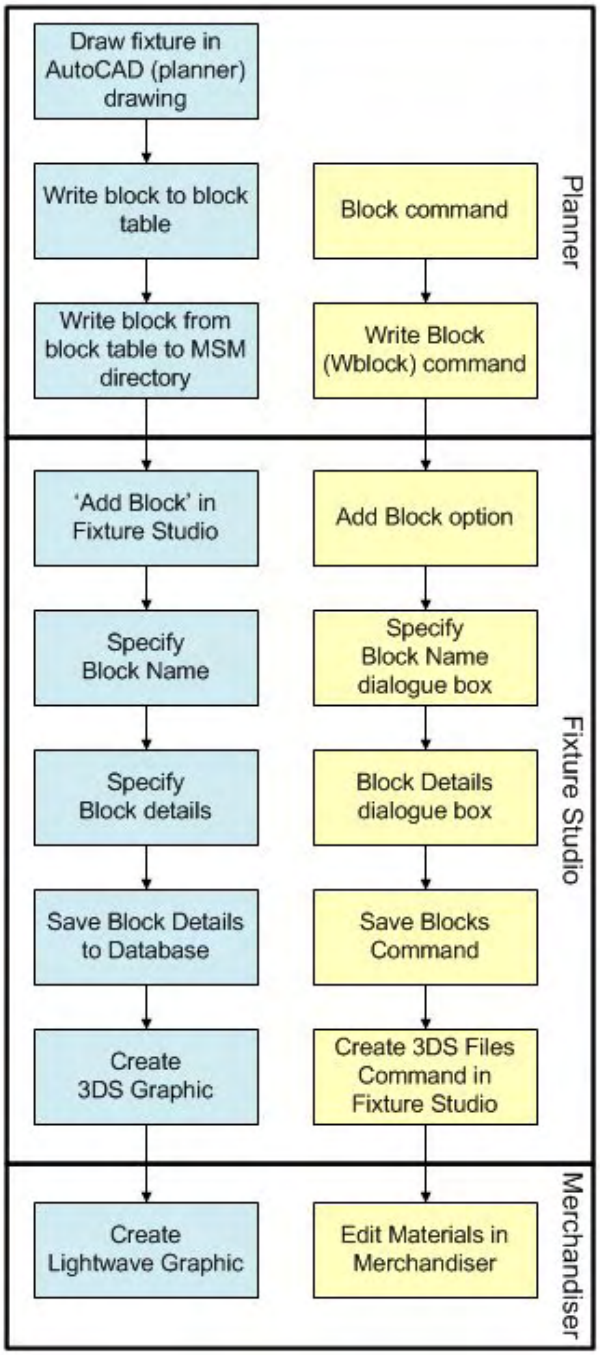
3DS files provide basic 3 dimensional graphics.

Lightwave Files (.lwo)

These files can either be generated by a built in function in Merchandiser or via third party software capable of generating lightwave files.

Lightwave files provide more realistic 3D graphics, but require more computer processing capacity.

Creating a Fixture



The fixture is drawn in a Planner drawing.

The block (fixture) is written to the block definitions table of the Planner drawing.

The block is written from the block definitions table to a folder within the Planner directory structure. (This folder must be specified in the Configuration Module).

The Add Block command in Fixture Studio is invoked to start the process of adding the block to Macro Space Management and adding 'intelligent' detail.

The name of the block is specified.

The block details (intelligent properties) are specified in the Block Details dialogue box.

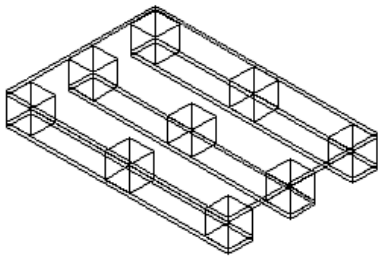
The block details are saved to the central Macro Space Management database.

A 3DS file is created for the graphics in the Merchandiser environment.

If necessary, a Lightwave Graphic is also created for the Merchandiser environment.

Drawing in the Planner Environment

The beginning point for creating a fixture is to create a drawing within the AutoCAD environment.

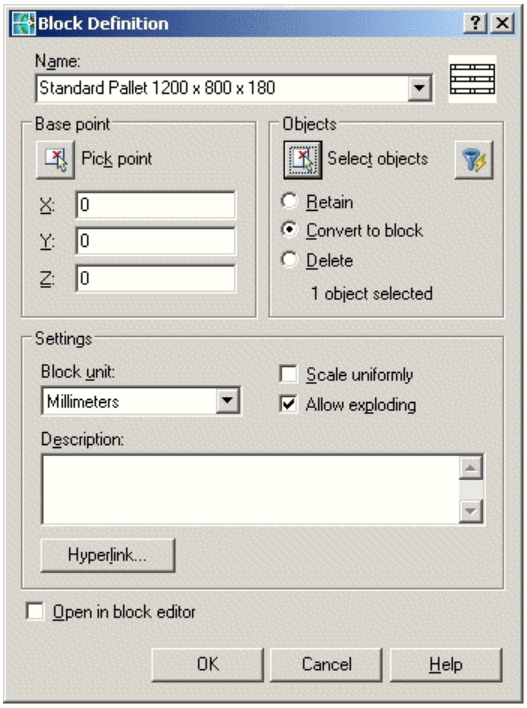


The drawing should be dimensionally accurate and showing the level of detail required for display in the Macro Space Management Planner and Merchandiser environments.

Turning the Drawing into a Block

The **Block command** is used to turn a selected object in the drawing into an Planner Block by using the command line or the toolbar.

This will bring up the Block Definition dialogue box.



1. **Type in a name for the block**

> **Note:** Naming conventions should be used for blocks. For example [Purpose of block] - [Length] - [Width] - [Height]. This will make it easier to select the required fixture from the hierarchical trees in Fixture Studio and Merchandiser. It will also make it possible to define gondolas with multiple sizes.

2. **Select the object in the drawing to turn into a block**

Selection of the object can be initiated by clicking on the Select Objects button in the Objects frame. The object can then be selected by left clicking twice to set a selection box and right clicking to complete the selection.

The radio button should be set to Convert to Block.

3. **Specify the Base Point**

This can be by clicking on the Pick Point button in the Base Point frame. This will take the user to the drawing where the Base point can be specified by clicking on a point in the drawing of the object. It is recommended that the base point be the origin of the drawing (co-ordinates 0,0,0)

> **Note**: The insertion point defined in Macro Space Management will reference this Base Point. It is strongly recommended that users pick a consistent Base Point – for example left, bottom, rear. If inconsistent base points are selected, it is probable that there will be alignment and adjacency calculation problems when the blocks are inserted into the various Macro Space Management environments.

The base point should also be specified with X, Y, Z coordinates of 0, 0, 0. If coordinates other than these are specified, the object will be inserted into the various Macro Space Management environments using these coordinates as an offset from the insertion point.

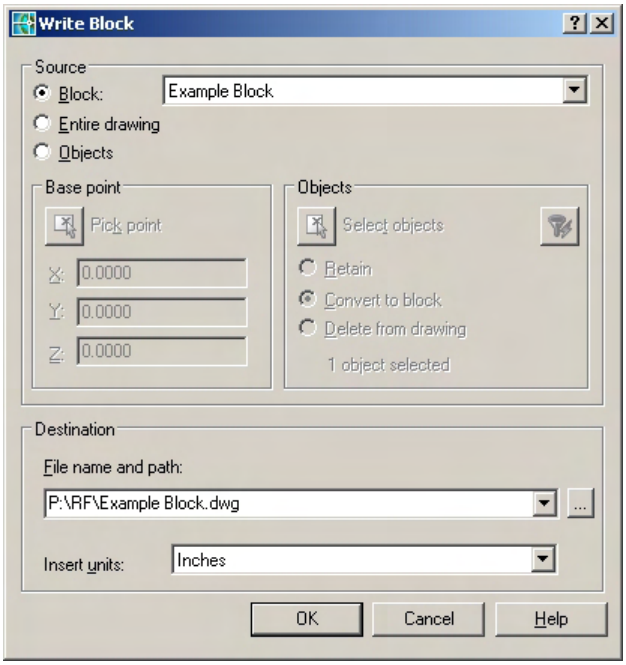
4. **Set other parameters**

The block units should be set to an appropriate unit, for example inches or millimeters. This unit should be kept consistent for blocks intended for a specific database.

The Allow Exploding option should be checked for all drawings that have been made by combining two or more parts together into a composite drawing.

Making the Block Universally Available

The **WBLOCK** command (used on the command line) is used to save blocks local to a drawing to a specified file location so they can be used in any drawing. Until this is done the block can only be used in the drawing in which it was created.

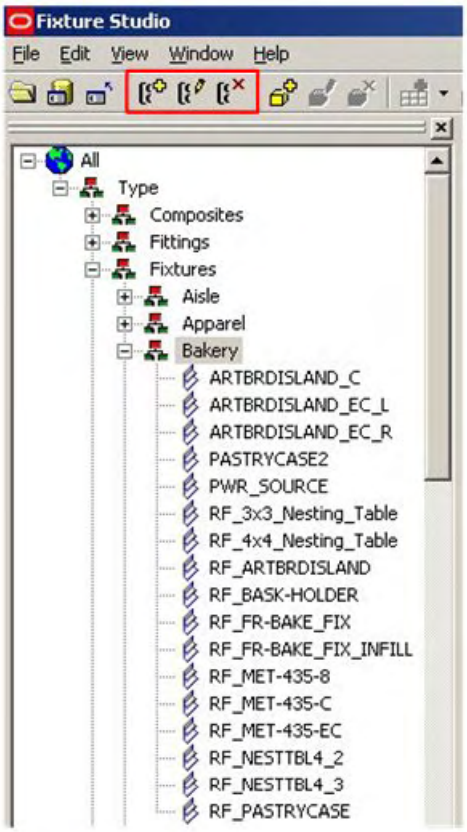


Note: The directory the block is saved to must be specified in the Configuration Module.

Using Groups within Fixture Studio

It is possible to **create a hierarchy** within Fixture Studio to organize and store the various blocks.

(This hierarchical tree also appears in the Object Browser in the Planner and Merchandiser modules).



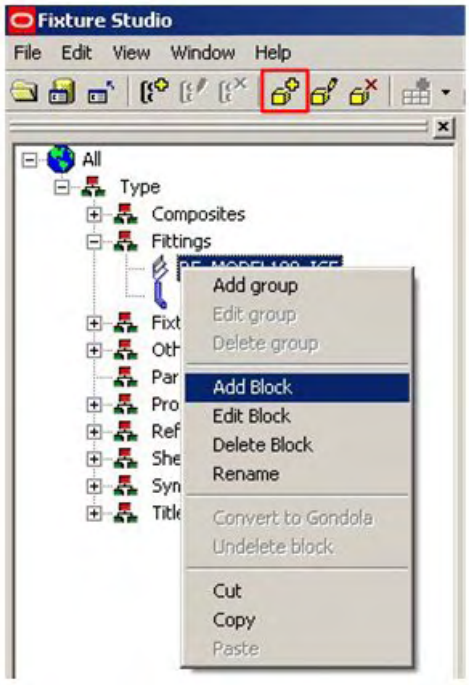
	Add a Group
	Edit a Group
	Delete a Group

It is recommended that a logical hierarchy is created and maintained to minimize the time it takes to identify and select equipment.

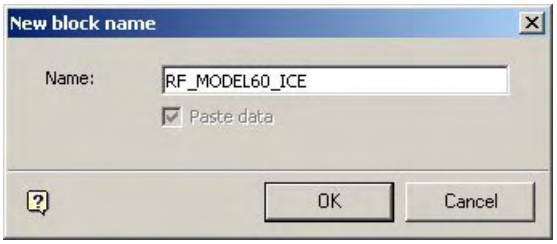
Adding a block to Fixture Studio

To **add a block** to Fixture Studio, click on the required Group to highlight it.

Either right click to bring up the pop-up menu and select Add Block or click on the Add Block Icon on the toolbar.

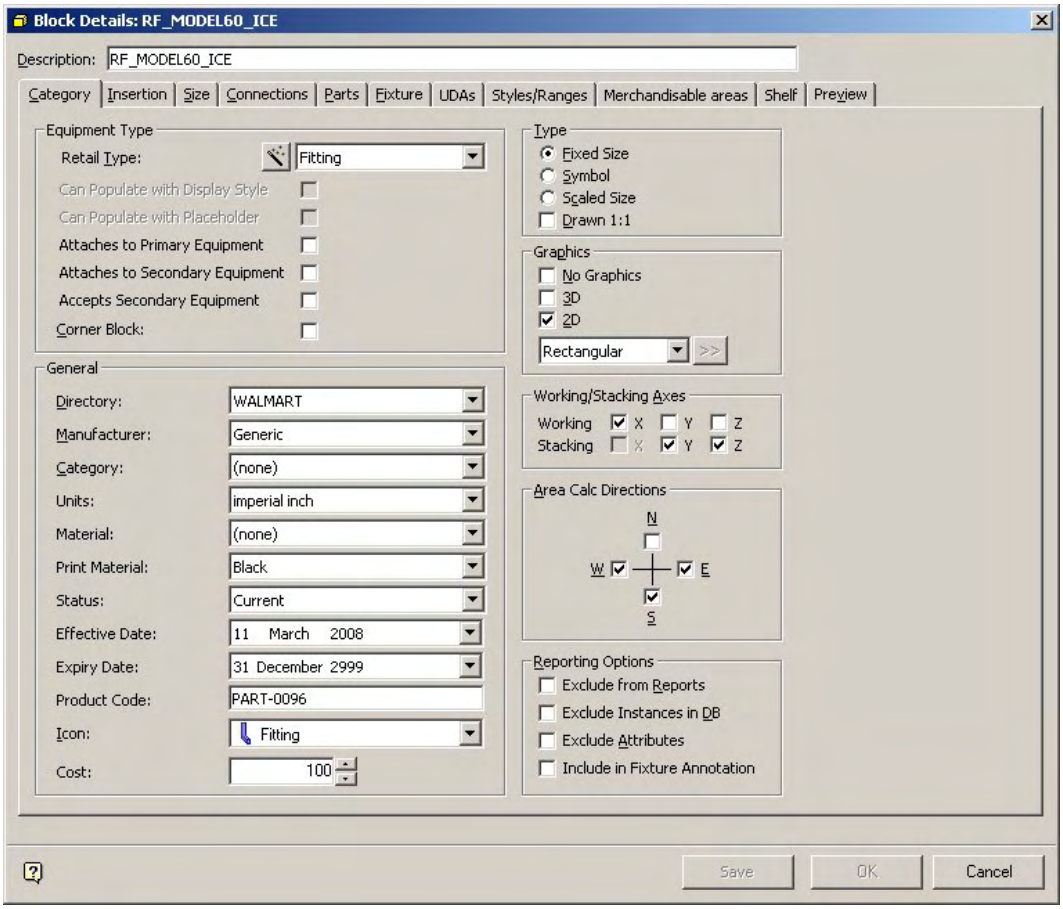


This will bring up the Add Block Name dialogue box.



> **Note:** This name must be exactly the same name as the corresponding AutoCAD block. The block must also be in the currently active AutoCAD drawing.

On clicking OK, the Block Details dialogue box will become active.



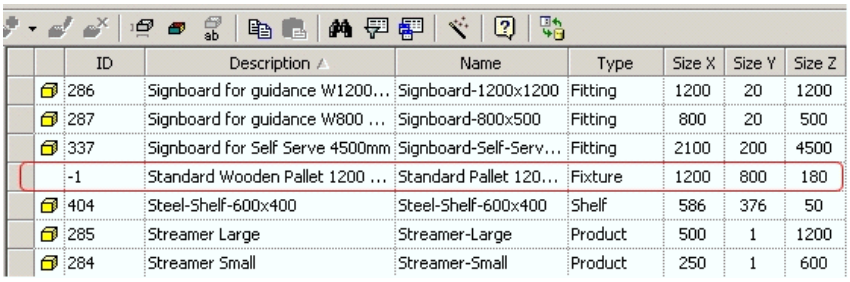
The dialogue box contains a number of tabs. Each of these tabs allows the user to configure intelligent properties on the block.

Set the parameters within the tabs are required and click on OK.

The block details are now stored within Fixture Studio, but need to be saved back to the central Macro Space Management database.

Saving Block Details back to the Central Database

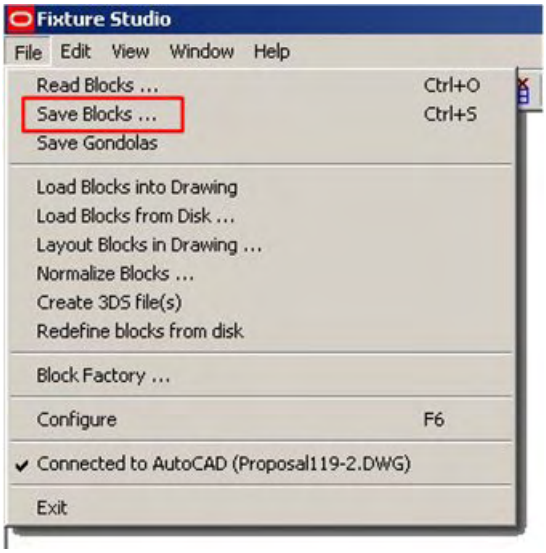
Blocks that have not been saved back to the central database have an ID that have a negative value.



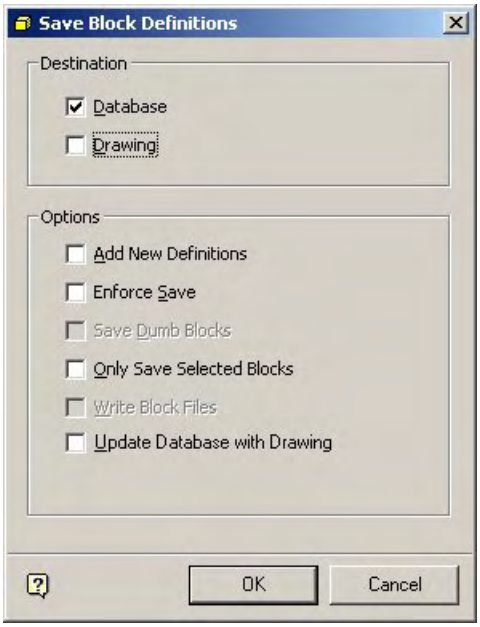
ID	Description	Name	Type	Size X	Size Y	Size Z
286	Signboard for guidance W1200...	Signboard-1200x1200	Fitting	1200	20	1200
287	Signboard for guidance W800 ...	Signboard-800x500	Fitting	800	20	500
337	Signboard for Self Serve 4500mm	Signboard-Self-Serv...	Fitting	2100	200	4500
-1	Standard Wooden Pallet 1200 ...	Standard Pallet 120...	Fixture	1200	800	180
404	Steel-Shelf-600x400	Steel-Shelf-600x400	Shelf	586	376	50
285	Streamer Large	Streamer-Large	Product	500	1	1200
284	Streamer Small	Streamer-Small	Product	250	1	600

In the example above, the Standard Wooden Pallet has an ID of -1. Other blocks requiring saving would have other negative ID's.

To save the block(s) to the central database select the Save Blocks option from the File pull down menu. (Alternatively use <Ctrl> + S).

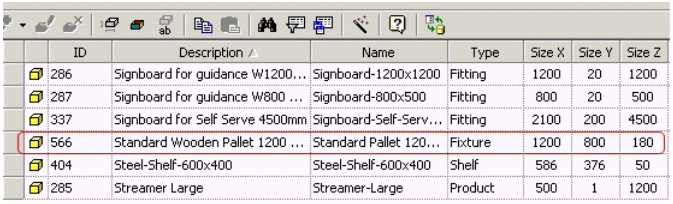


This will bring up the Save Block Definitions Dialogue Box



Check the Database, Add New Definitions and Enforce Save options.

All blocks will then be saved back to the database.



	ID	Description	Name	Type	Size X	Size Y	Size Z
	286	Signboard for guidance W1200...	Signboard-1200x1200	Fitting	1200	20	1200
	287	Signboard for guidance W800 ...	Signboard-800x500	Fitting	800	20	500
	337	Signboard for Self Serve 4500mm	Signboard-Self-Serv...	Fitting	2100	200	4500
	566	Standard Wooden Pallet 1200 ...	Standard Pallet 120...	Fixture	1200	800	180
	404	Steel-Shelf-600x400	Steel-Shelf-600x400	Shelf	586	376	50
	285	Streamer Large	Streamer-Large	Product	500	1	1200

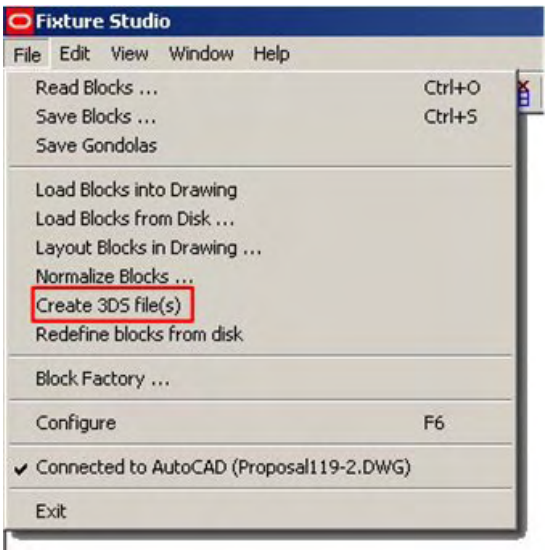
The newly created block will be assigned an ID number and the yellow cube in the first column indicates it has been successfully saved.

Creating a 3DS Object

A **3D Studio Object (.3DS Object)** is an alternative graphics file type to the .DWG file used in the Macro Space Management CAD environment.

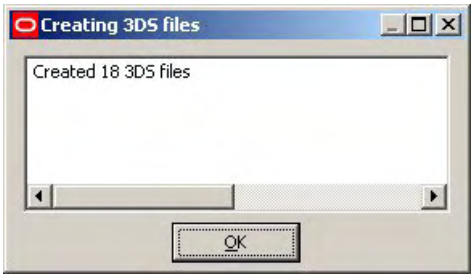
3DS Files are used in the Merchandiser environment.

Highlight the fixtures that 3DS objects are required for. To create a 3DS object select the Create 3DS File(s) option from the File menu.



Note: Fixture studio must be connected to AutoCAD for this option to be available.

A confirmatory dialogue box will appear confirming the 3DS Files have been created.



Creating Lightwave Graphics

- Lightwave Graphics can be created in Merchandiser.
- Lightwave graphics can display higher levels of detail than 3DS graphics, but will consequently slow processing of information when moving around the Virtual Reality Store.
- Lightwave graphics are beyond the scope of this Help File and will not be discussed further here.

6

Gondolas

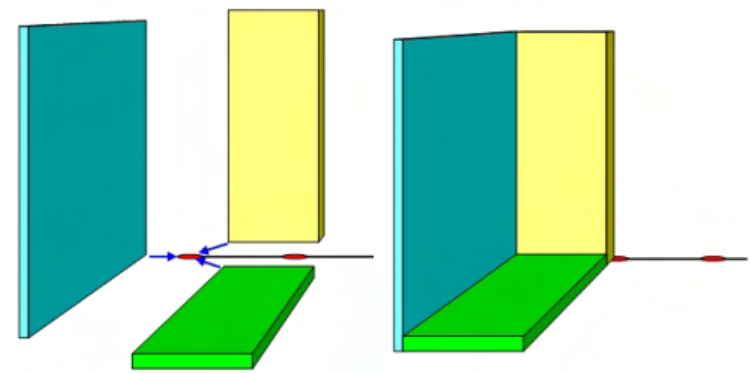
What is a Gondola

Gondolas are assemblies of similar fixtures and fittings that are aligned to each other in a precise spatial relationship. Their building blocks are the fixtures and fittings that have been defined in Fixture Studio.

Gondolas are made up of repeating units called bays. A gondola consists of one or more bays. Each bay contains a specific arrangement of fixtures and fittings.

A bay could be as simple as a simple fixture, for example a Freezer unit.

Equally, a bay could be made up of a backpanel, base, and upright.



Bays can be repeated any number of times specified by the user.

If the user specifies 6 bays when the gondola is added to a drawing, then six examples of that bay will be placed, each at a specific distance from the previous instance.

This assembly of fixtures and fittings can be added to, edited in and deleted from the Macro Space Management Planner or Merchandiser environments in a single operation; thus saving time over the alternative option of manipulating individual components.

Basic Steps in Gondola Creation

There are a number of basic steps to gondola creation.

Some of these steps must be taken at the time the database is first created; for example deciding on a naming convention.

The steps are:

- Decide on and implement a naming convention
- Import the blocks into Fixture studio (not covered in this section)
  - Ensure Insertion points are consistently located
- Assign Gondola Part Types
- Assign Gondola Sizes
- Define Gondola
  - Define name, main length and maximum bays
  - Select and assign dimensions
  - Specify the list of parts

- Define the part details
- Define the part size position and rotation

Naming Conventions

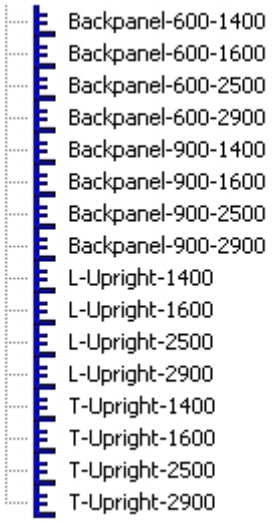
> **Note**: Naming conventions are vital to the efficient operation of Macro Space Management. They must be decided upon before any blocks are imported into Fixture Studio.

Lack of a naming convention will result in users spending large amounts of time creating dozens (if not hundreds) of gondolas that could have been defined far more efficiently using a naming convention.

A naming convention is a pre-thought out and logical way of assigning block names.

If we give blocks names like Widget-187567 and Gizmo-ADRTYN, it is not obvious what the blocks or, or what their dimensions are.

With a well thought out naming convention, things are far simpler.



In the above example, we can see we have three types of block; Backpanels, L shaped uprights and T shaped uprights.

We can also see that the backpanels have widths of 600 and 900 mm, and that they have heights of 1400, 1600, 2500 and 2900 mm.

Similarly we can see that both the L and T shaped uprights come in four heights; 1400, 1600, 2500 and 2900 mm.

Widget-187567 might well be a backpanel of width 600 mm and height 2500 mm, but we cannot tell this from the block name.

Naming Conventions

Naming conventions are of the general form:

Prefix-parameter-parameter-parameter-suffix

These can be any combination of numbers and letters, together with several separating characters.

The separating characters can be either a '–', '_' or an 'x', so each of the naming conventions below are equally valid:

- Prefix-Parameter-Parameter-Parameter-Suffix

- Prefix-ParameterxParameterxParameter-Suffix
- Prefix_ParameterxParameterxParameterxSuffix

However, the use of naming conventions must be consistent.

Naming blocks with a mixture of '–', '_' or 'x' will lead to errors.

For example we will have problems if we name blocks as in the example below:

- Backpanel-600-1400
- Backpanel-600x1600

This is because Macro Space Management expects to find the same separating character for blocks within a naming convention.

When the program draws a gondola, if it expects to see:

Prefix-Width-Height

And some of the blocks are named:

Prefix-WidthxHeight

It will find blocks with name like Backpanel-600-1400 because these are in the expected form.

It will fail to find blocks with names like Prefix-widthxheight because there is an 'x' present where Retail FOCUS expected to find a '–'.

Similarly we must avoid misspellings:

If we call a block Backpanal-600-1400 rather than Backpanel-600-1400, Retail FOCUS will fail to find the block because we have misspelt Backpanel.

> **Note:** Always check naming conventions for errors. If you have made an error when naming the block, Macro Space Management will not find it when drawing the gondola.

Examples of Naming Conventions

The examples below are all valid examples of naming conventions:

Prefix-Size

- Leg-1500
- Leg-2000
- Leg-2500

Prefix-WidthxHeight

- Backpanel-600x1500
- Backpanel-900x1500
- Backpanel-1200x1500

Prefix-Width-Depth-Height

- FreezerUnit-600-800-300
- FreezerUnit-600-800-400
- FreezerUnit-600-1000-500

Prefix-Width-Depth-Height-Suffix

- FreezerUnit-600-800-300-Lozier
- FreezerUnit-600-800-400-Lozier
- FreezerUnit-600-1000-500-Lozier
- FreezerUnit-600-800-300-Hoffmann
- FreezerUnit-600-800-500-Hoffmann

- FreezerUnit-600-1000-500-Hoffman

Prefix-Size

- Podium-Small
- Podium-Medium
- Podium-Large

In general naming conventions should be specified such that the block name provides all the information required. If we take the example of a naming convention of the form:

Prefix-Width-Depth-Height-Suffix

Block names of the form allow us to define gondolas so that at the time of addition into the Planner or Merchandiser environments we can choose the:

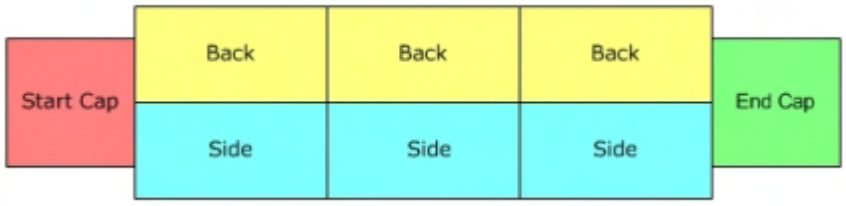
- Specific type – for example Freezer Units
- Specific width – for example 600, 800 and 1000 mm
- Specific depth – for example 800, 1000 and 1200 mm
- Specific height – for example 400, 500 and 600 mm
- Manufacturer – for example Lozier

> **Note:** One well thought out gondola definition could allow us to place dozens of different variants of that gondola in Planner or Merchandiser.

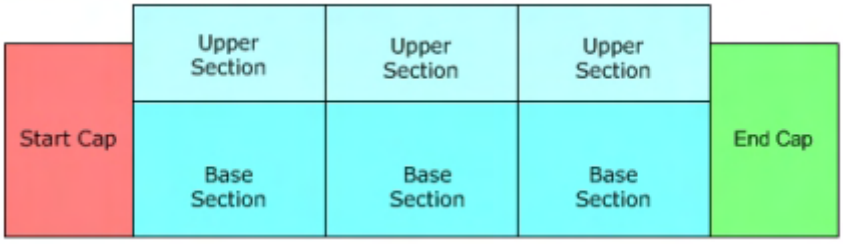
Gondola Parts

Gondolas can be considered to be made up from a number of components.

Looked at from above the gondola might have Side Bays, Back Bays, a Start Cap and an End Cap.

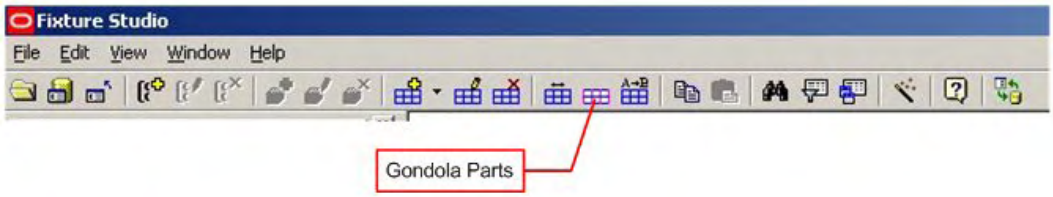


Looked at from the side, the bay might have two levels.

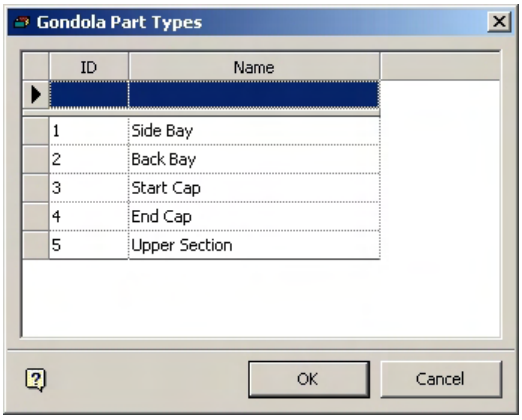


The base section might be a freezer unit, while the upper section might be shelving holding condiments.

These sections can be defined as generic types in the Gondola Parts dialogue box. This is accessed from the Gondola Parts icon on the toolbar.



This will bring up the Gondola Parts dialogue box.



Individual components of a gondola are assigned to a Gondola part.

For instance a Side Bay might contain a Base Unit, Upright and Backpanel

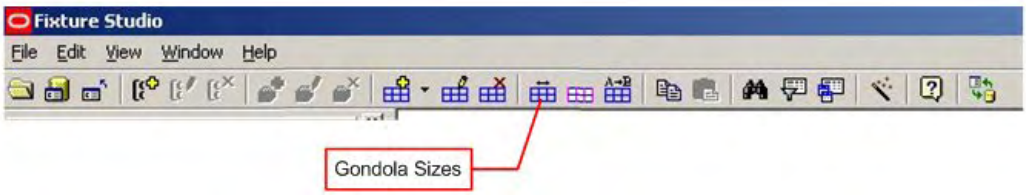
If we then decide to manipulate that bay (for example moving or deleting it) Retail FOCUS will apply that operation to all the components of the bay.

Assigning Gondola Sizes

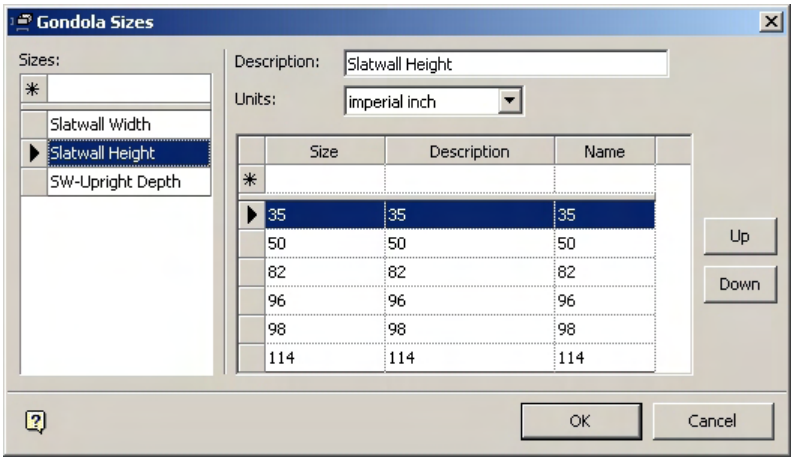
When we place a gondola, we can only place it in permitted sizes.

For example, a manufacturer might only make freezer units in widths of 600, 800 and 1000 mm, depths of 500, 600 and 700 mm and heights of 600 and 750 mm.

These sizes are assigned in the Gondola Sizes dialogue box. This is accessed by clicking on the Gondola Sizes icon on the toolbar.



This will bring up the Gondola Sizes dialogue box.



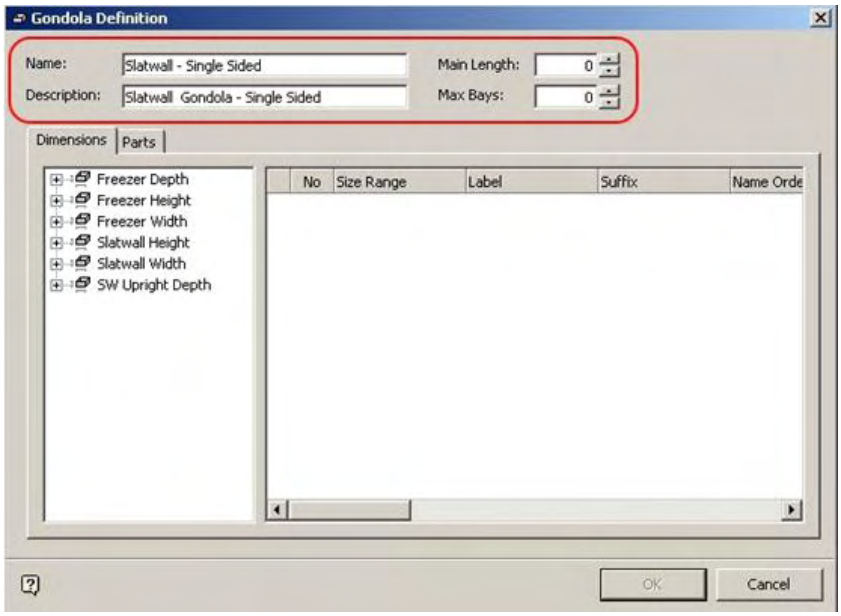
Here, names can be assigned to specific sizes within the gondola, and then a specific list of dimensions assigned to that size.

In the above example, the Size 'Slatwall Height' has been assigned the dimensions 35, 50, 82, 96, 98 and 114 inches.

Only these sizes will be available in the Add Gondola dialogue box if a gondola containing this component is placed in a drawing.

Defining Name, Main Length and Max Bays

The **Gondola Name** can be defined in the Gondola Definitions dialogue box.



The Name must be unique as this is what will be used to identify the gondola definition in the central Macro Space Management database.

The Description can be used to give more information as to the gondola definition if desired.

Main Length

If set to 0, then the main length will be set automatically based on the naming conventions selected.

If only a single size of block is to be specified, then the dimension can be entered manually in the Main Length text box.

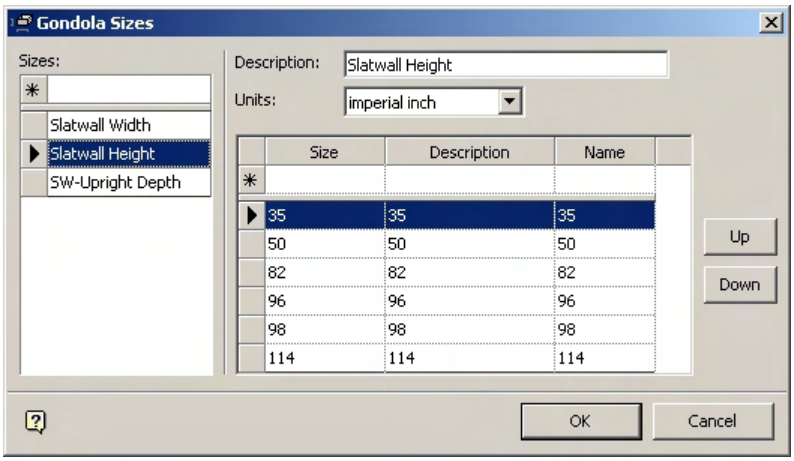
Max Bays

If set to 0, then any number of bays can be specified.

If set to a positive number, this will limit the number of bays that can be placed when the gondola is added to a drawing.

Specifying and Assigning Dimensions

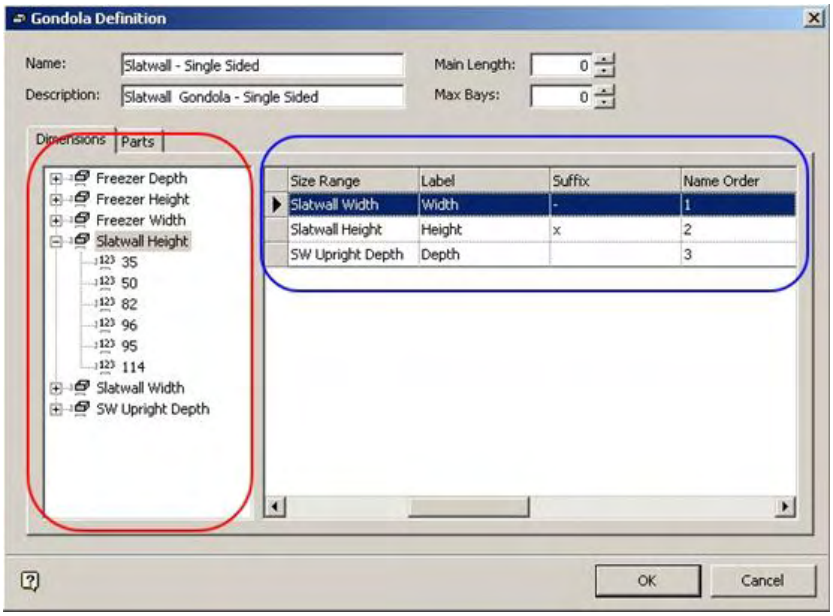
When we place a gondola, we only wish to be able to specify dimensions that are applicable to that gondola. Accordingly, we specified the permissible sizes in the Gondola Sizes dialogue box.



These sizes will now be available in the Gondola definitions dialogue box when the gondola is added to a drawing.

Specifying and Assigning Dimensions

With the Sizes defined we can select the required sizes from the options on the left of the Dimensions tab (outlined in red).



Each dimension specified has to have a series of other parameters set including:

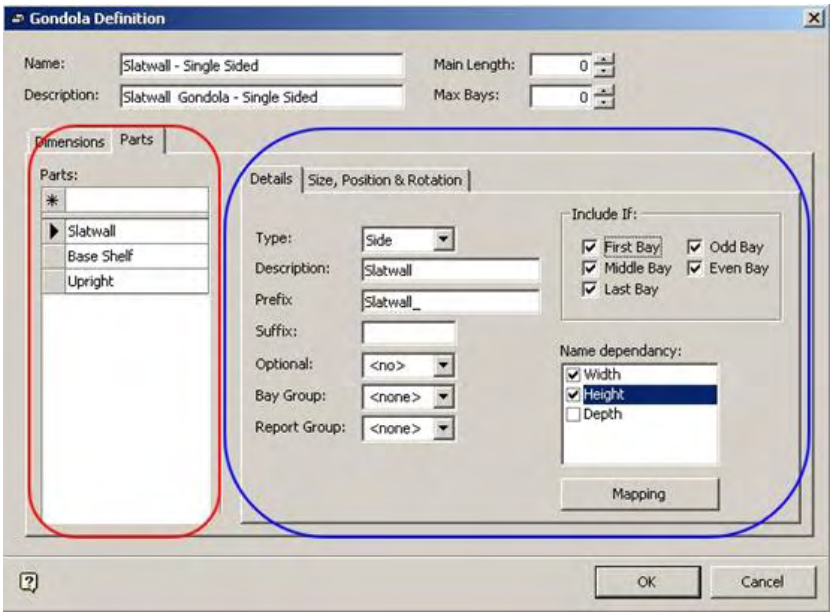
- Label
- Suffix
- Name Order
- Main Dimension

These are in the section outlined in blue. They will be discussed on more detail during the practical example on creating gondolas.

Defining the Part Details

The gondola is made up of a series of parts. These are defined generically (for example Freezer Units or Backpanels).

The parts are first named on the left hand side of the parts tab (outlined in red) then details are entered on the right hand size of the parts tab (outlined in blue).



Entering Part Names

Part names are entered by typing them into the text box marked with an asterisk and then pressing Return. Part names are for the convenience of the user, so they should be selected for ease of use.

Entering Part Details

The part details serve three main purposes:

a. They allow Macro Space Management to select the correct block when the gondola is drawn using name dependencies.

b. Setting the type allows the user to group together the individual components of a bay.

For example a side bay might contain an Upright, Base Unit and Backpanel.

c. They allow the user to specify which part of the gondola the part belongs to.

For example a Start Cap would only belong to the First Bay and an End Cap would only belong to the Last Bay.

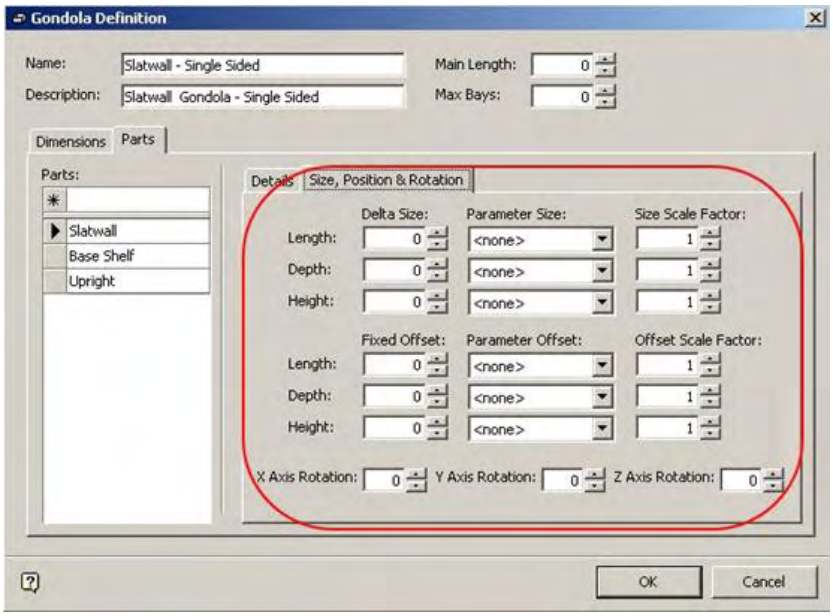
These aspects will be discussed in more detail in the section on creating a practical gondola.

Specifying Part Size, Position and Rotation

A gondola can contain a wide variety of parts.

These have to be orientated as to size relative to the length of the bay, position relative to base point of the bay and rotation relative to the initial insertion position of the block.

This information is entered in the Size, Position and Rotation Tab



Size

Size might be required if the part to be added is some fraction of the dimensions of the bay.

For example, if the bay is to contain two parts alongside each other, they could be specified as being half the width of the bay.

Position

A part might be offset relative to its insertion point in the bay. For example, if the gondola contains parts on two levels, parts on the upper level might be inserted at floor level, then require an offset in the vertical plane to put them in the correct position.

Note that all offsets are relative to the un-rotated orientation of the block.

- Offsets in the X axis are relative to length
- Offsets in the Y axis are relative to depth
- Offsets in the Z axis are relative to height

Rotation

Blocks will be inserted into the drawing with the front of the part facing down the drawing. However, some parts of the gondola (Start Caps, Back and End Caps) will require the front direction of the block to be changed so that it faces in the correct direction for that section of the gondola.

> **Note:** Rotations are normally in the Z (Vertical) plane. It is unusual to rotate on the X or Y planes.

Calculating the Block Sizes, Positions and Rotations

To understand how to calculate Sizes, Positions and Rotations, it is necessary to understand how gondolas are drawn when they are added to the drawing.

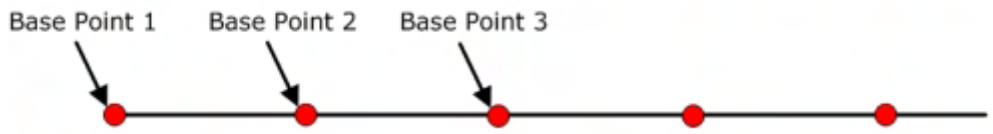
- When a gondola is specified in the Add Gondola dialogue box, an imaginary base line is created in the drawing.
- This baseline has a series of equi-spaced base points drawn along it. Each base point serves as the datum point for a bay.
- The components of that bay are drawn relative to the base point in terms of size, position and rotation.

Baselines and Base Points

When a gondola is added to a drawing, the number of bays required is specified.

Each bay emanates from a specific base point. Each successive bay is offset by a specific distance from the previous base point.

This results in Macro Space Management using an imaginary baseline to construct the gondola along.



Insertion Points

Each block has an insertion point, shown as a blue square.

This is set in Fixture Studio and must be consistent for all blocks of the same type.

For example all backpanels must have their insertion point in one position, for example bottom, back, left.

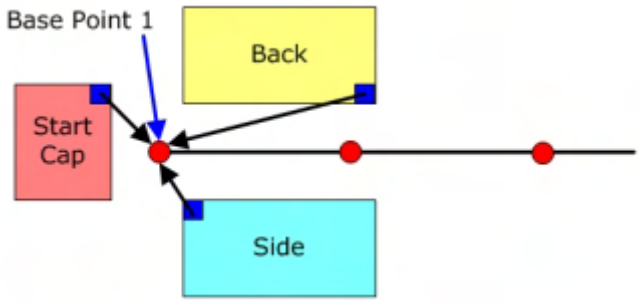
Similarly, all T uprights must have their insertion point in a consistent position. This might be bottom, middle, center.

Note: The insertion point position has been selected to suit the geometry of the block.

Note: The Insertion Point for any block can be seen in the Planner environment. Click on the block to select it, and the insertion point will appear as a blue square.

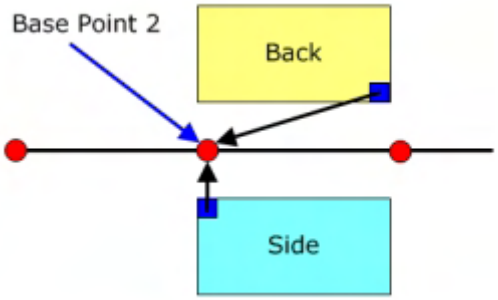
Alignment of Bays to Base Points

Gondolas are made up of bays and each bay is positioned relative to a specific base point.

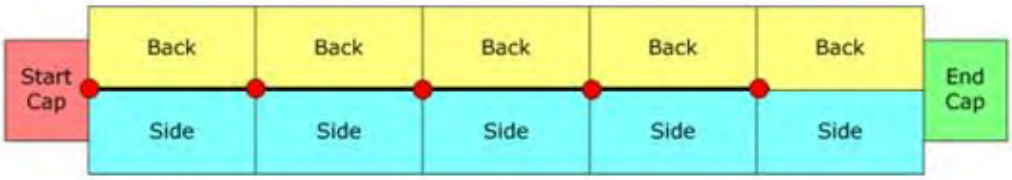


In the above example the Start Cap, the first Side Bay and the first Back Bay are all positioned relative to the first base point.

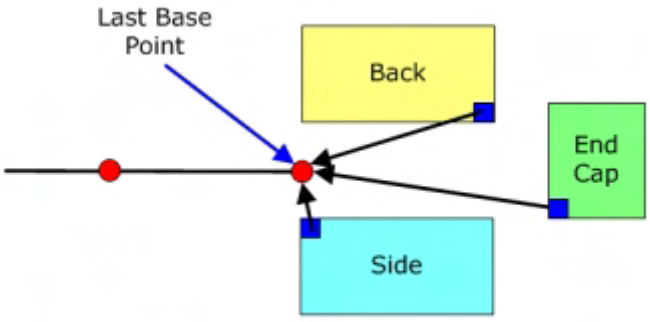
Similarly, the second Side Bay and the second Back Bay are positioned relative to the second base point.



As successive bays are added, the full gondola is created.

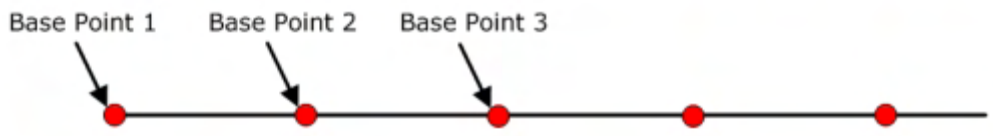


Note how the End cap is still positioned relative to the last base point, although it is some distance from it.



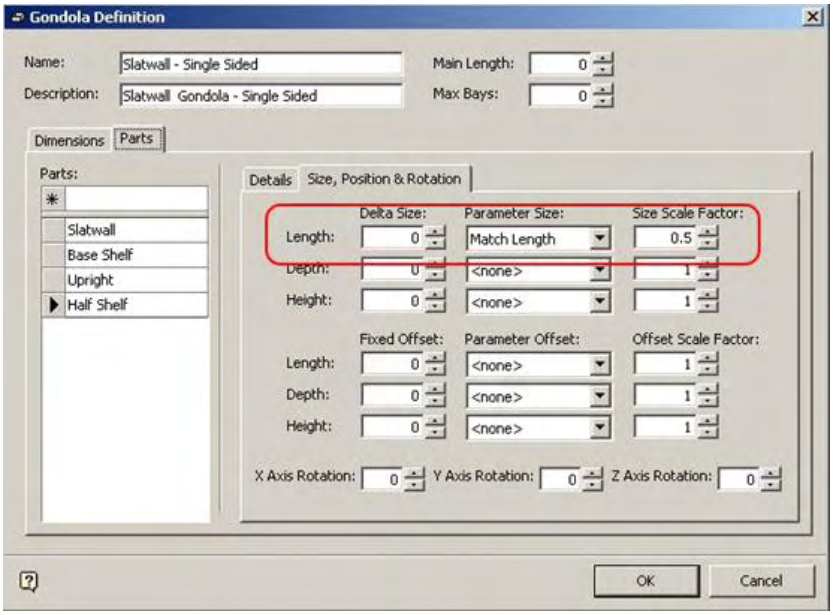
Sizes of Gondola Parts

The distance between base points is determined by the main dimension of the gondola.



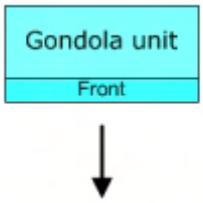
If a part to be used in the gondola is a fraction of the distance between base points, this can be specified in the Gondola Definition dialogue box.

For example, if we wished to place a shelf half the length of the bay, we could specify that we would match the main dimension and use a size of half of it.

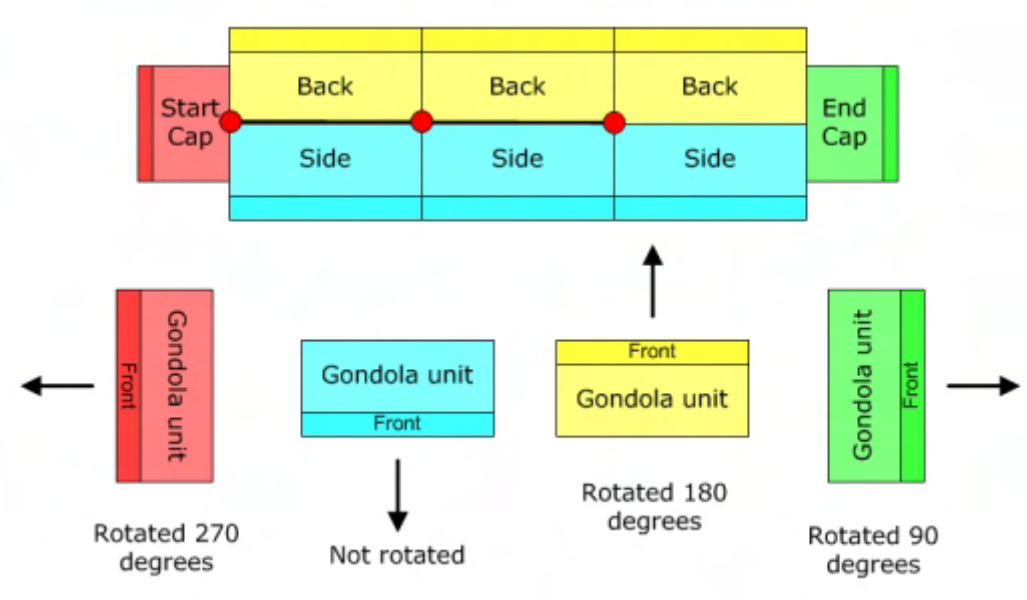


Rotations Of Gondola Parts

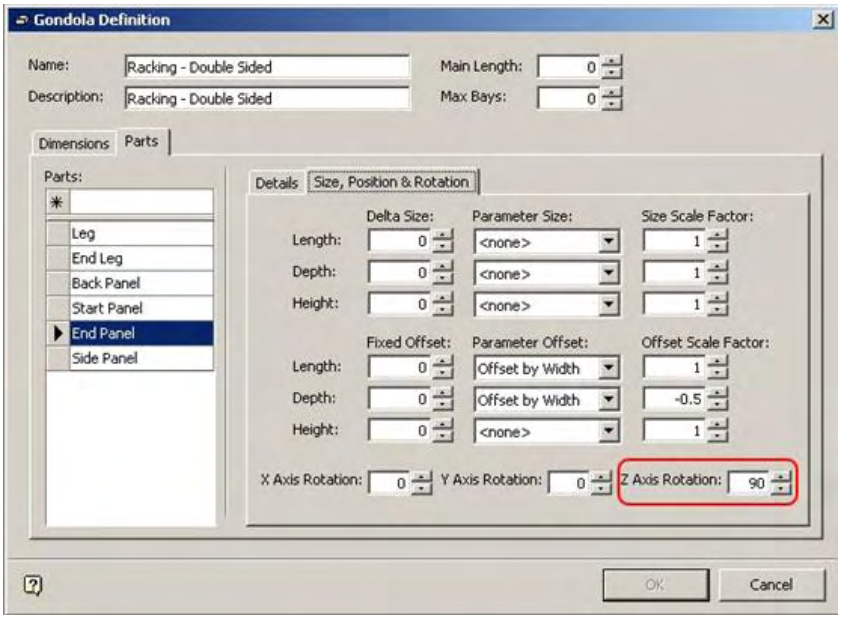
All fixtures and fittings have a designated front direction. This is normally set to point down the drawing when they are inserted.



When a gondola is created, some of the parts (Start Cap, Back and End Cap) need to have their components rotated so that the front of those parts is facing in the right direction when the gondola is drawn.

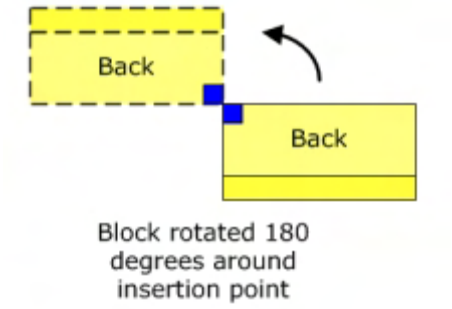


If we wanted to add a part to the End cap we would specify a 90 degree rotation in the Gondola Definition dialogue box.



Rotation and Offsetting of Gondola Parts

When a gondola component is rotated to get it into the correct orientation, it is rotated around its insertion point.



In the case of a component to be used for the back of the gondola, it is rotated through 180 degrees.

Because it rotates around the insertion point its position changes. In the above example, we can see that the component to be used for the back of the gondola has been displaced to the left during the rotation.

We therefore have to apply an offset to get it back into its intended position.

These offsets will vary depending on which part of the gondola is being defined.

Note that all offsets are relative to the un-rotated orientation of the block.

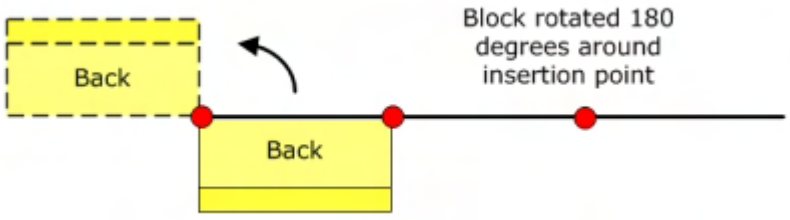
- Offsets in the X axis are relative to length
- Offsets in the Y axis are relative to depth
- Offsets in the Z axis are relative to height

Side

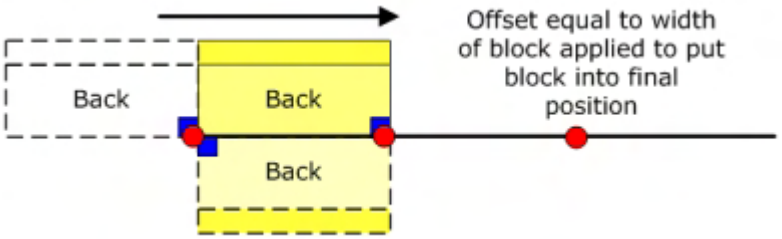
The sides of a gondola do not require any rotations or systematic offsets.

Back

The Back of the gondola is rotated through 180 degrees to get the front facing in the correct direction.

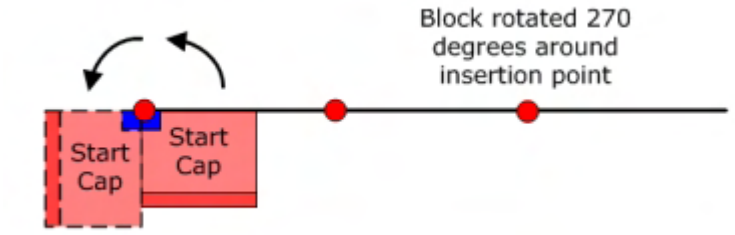


It then needs a positive offset equal to the width of the block.

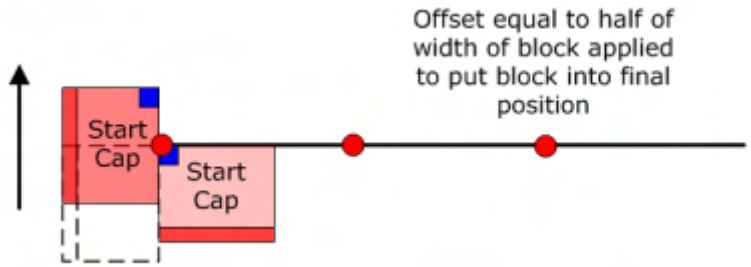


Start Cap

The Start Cap is rotated through 270 degrees to get the front facing in the correct direction.

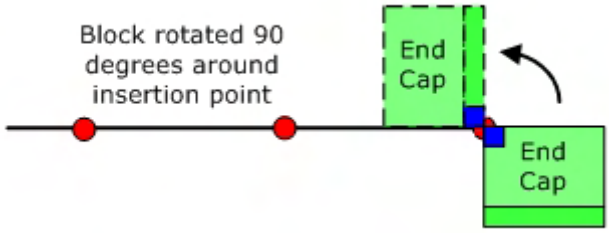


It then needs a positive offset equal to half of the width of the block.

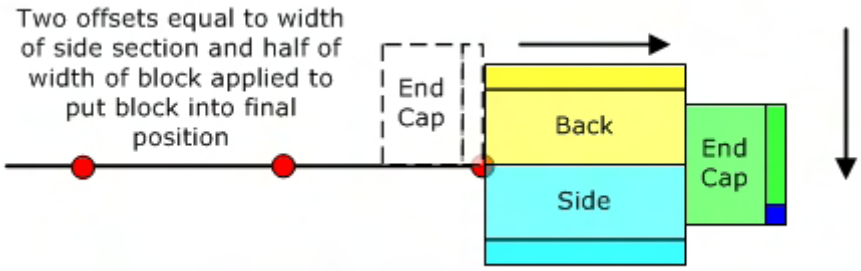


End Cap

The End Cap is rotated through 90 degrees to get the front facing in the correct direction.



It then requires two offsets to get it into the correct final position.



Firstly, it requires a positive offset equal to the width of the Side component of the gondola to move it to the right.

Then it requires a negative offset of half its width to move it the correct distance down. (The negative offset is to move the block down, as opposed to up).

Offsetting of Gondola Parts

There can be two reasons for offsetting gondola parts.

- To correct the relative position once a part has been rotated.

An example of this might be a freezer unit that has been rotated to form the back of a gondola.

- To 'mate' parts within a bay.

An example might be to get a Backpanel into correct alignment with its parent leg.

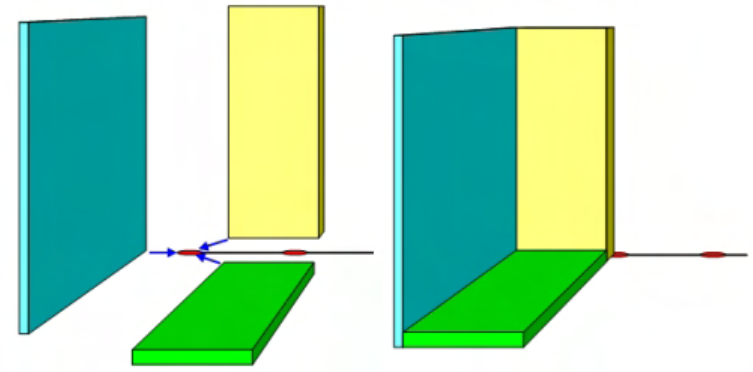
Gondola Creation Basics

What is a Gondola

Gondolas are assemblies of similar fixtures and fittings that are aligned to each other in a precise spatial relationship. Their building blocks are the fixtures and fittings that have been defined in Fixture Studio.

Gondolas are made up of repeating units called bays. A gondola consists of one or more bays. Each bay contains a specific arrangement of fixtures and fittings. A bay could be as simple as a simple fixture, for example a Freezer unit.

Equally, a bay could be made up of a backpanel, base, and upright.



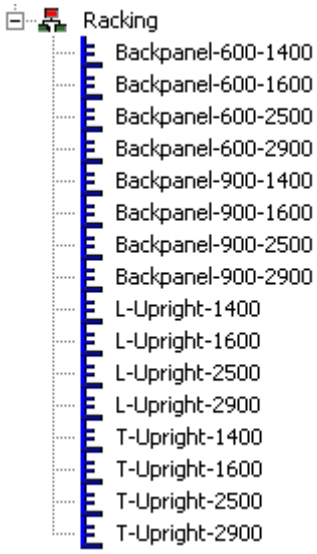
Bays can be repeated any number of times specified by the user.

If the user specifies 6 bays when the gondola is added to a drawing, then six examples of that bay will be placed, each at a specific distance from the previous instance.

This assembly of fixtures and fittings can be added to, edited in and deleting from the Planner or Merchandiser environments in a single operation; thus saving time over the alternative option of manipulating individual components.

Parts Used

The **parts used** for this gondola example are as follows:



The Backpanels use the naming convention Prefix-width-height

Thus Backpanel-600-1400 is a backpanel of 600 mm width and 1400 mm height.

The Legs use the naming convention Prefix-height

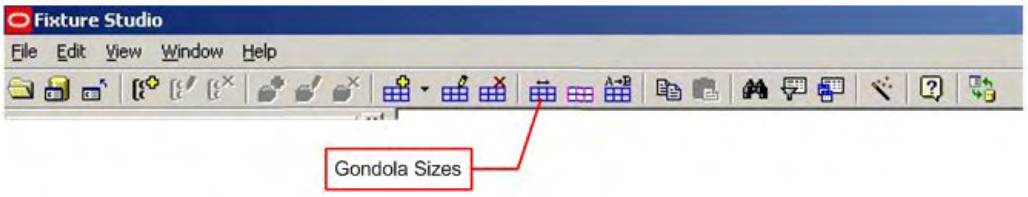
Thus L-Upright-1400 is an 'L' shaped leg 1400 mm high, and T-Upright-1400 is a 'T' shaped leg 1400 mm high.

The 'L' shaped legs will be used for single side gondolas and the 'T' shaped legs will be used for double sided gondolas.

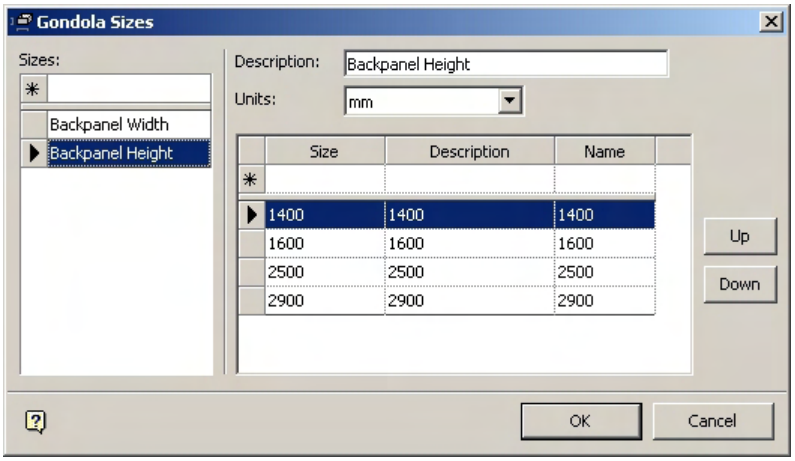
> **Note**: The use of a good naming convention allows us to identify the purpose and dimensions of a block at a glance.

Specifying Gondola Sizes

The **range of possible sizes** for a specific dimension for the gondola is specified using the Gondola Size Dialogue Box. This is accessed by clicking on the icon in the toolbar.



This will bring up the Gondola Sizes dialogue box.



The dimensions entered for each size name will be those that will be visible in the Add Gondola dialogue box. More Info

Care must be taken to:

(a) Select Size names that will be unique to the dimensions being referenced

Backpanel Height has been used rather than Height. This is because we only want dimensions pertinent to the Backpanels; 1400, 1600, 2500 and 2900 mm

If we had a more general Heights size it might also contain heights of 1800, 2000, 2100, 2300 and 3500 mm. As these sizes will not be used for this specific gondola, but would be available in the Add Gondola dialogue box, they would only lead to errors when the gondola is placed in a drawing. (The software will search for non-existent block names).

These may be appropriate to other fixtures, but they are not related to the Backpanel heights. This would lead to serious problems when adding a gondola to a drawing.

(b) Specify only the dimensions required.

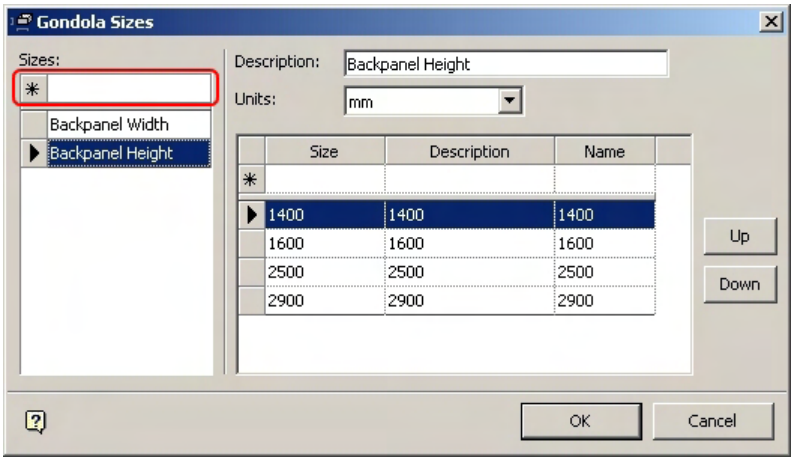
The Backpanels have heights of 1400, 1600, 2500 and 2900 mm.

These are the only dimensions that should be entered as Backpanel dimensions.

If we enter a Backpanel height of 2000 mm, the user will be presented with this as a size option when adding a gondola to the drawing. Because there is not a Backpanel 2000 mm high, drawing the gondola will fail.

Adding Size Names

The **names of Sizes** are added by typing them into the Size name text box, then pressing return.



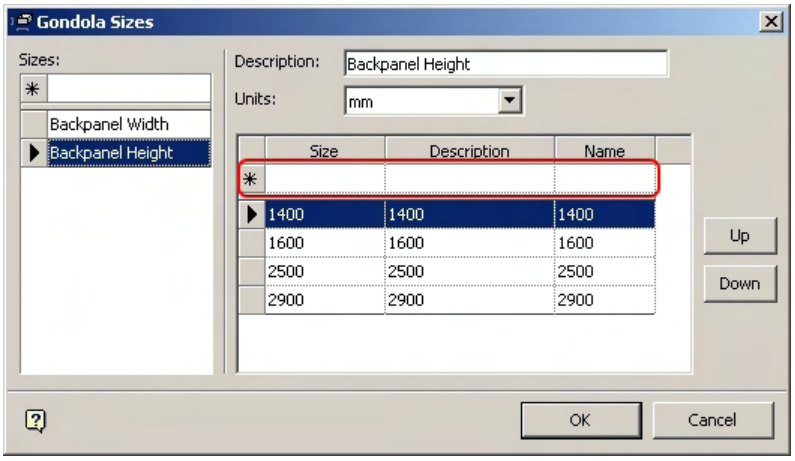
As we build up more gondola definitions, the range of Size Names should be chosen to keep them unique.

For example, if we were adding sizes appropriate to Lozier equipment we might add:

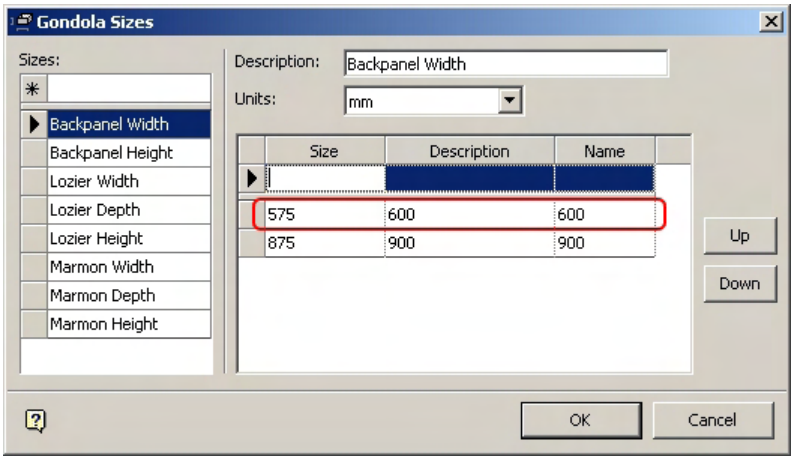
- Lozier Height
- Lozier Width
- Lozier Depth

Adding Size Parameters

The **Sizes** are added by typing them into the Size parameter text box, then pressing return.



The **Size** is the size to be used for drawing the gondola. It defines the distance between Base Points.



In the example above, the Backpanel would be drawn with 575 mm between base points.

If the value were changed to 625 mm, it would be drawn with 625 mm between base points.

The **Description** is what will appear in the Add Gondola dialogue box when gondolas are added to the drawing.

We could change the descriptions to 1400 mm, 1600 mm, etc, if this would make it easier for the person placing gondolas.

The **Name** is what Macro Space Management will look for in the block name derived from the naming convention.

It will look for '1400' as the height in the naming convention of Prefix-width-height if a height of 1400 is selected in the Add Gondola dialogue box.

Practical Example

We have two components for the gondola: the Backpanels and the Uprights. In each case we identify the unique dimensions:

Backpanel

Width	600, 900
Height	1400, 1600, 2500, 2900

Upright

Height	1400, 1600, 2500, 2900

Some of these dimensions are duplicated.

For example, the Upright heights match the Backpanel heights.

From this I deduce that I only need two dimensions in the Gondola size dialogue box.

I have called these:

- Backpanel Width
- Backpanel Height

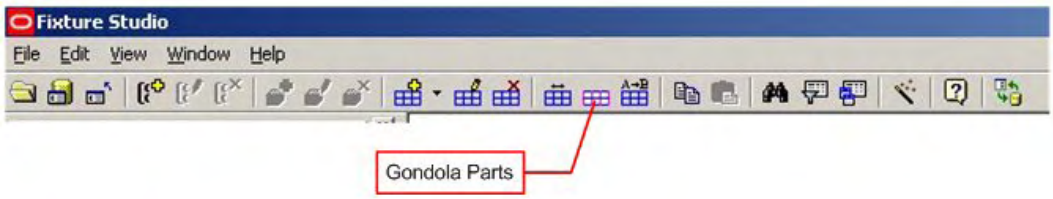
(The dimensions are as above).

> **Note**: We only need these two sizes because when (for example) I specify the Backpanel Height, I've automatically specified the Upright height.

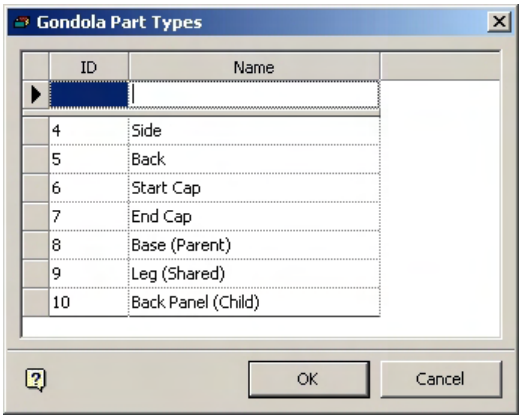
Specifying Gondolas Parts

The range of **possible parts** for a gondola is specified using the Gondola Parts Dialogue Box.

This is accessed by clicking on the icon in the toolbar.



This will bring up the Gondola Parts dialogue box.



Parts assigned to a Part Type will be deleted from a placed gondola when one of the parts in that section of the gondola is deleted.

The List contains two classes of part types:

> Side, Back, Start Cap and End Cap are part types where it is intended deleting one part should delete all the associated parts.
>
> Base, Leg and Backpanel are part types where it is not desirable to delete all parts in the bay.

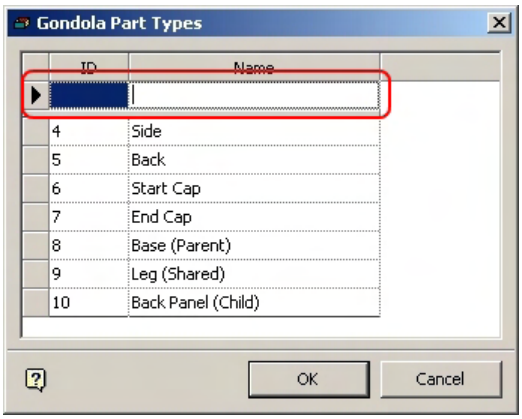
It is often helpful to put information in brackets after the part name.

Base (Parent) indicates that any associated parts will be deleted along with the base.

Leg (Shared) indicated that the leg might be shared with 2 or 4 bays, and thus only the leg, and not all components of the associated bays should be deleted.

Entering Part Names

To enter a part name type it into the Name text box and then press return.



The name will then appear in the list.

(Any data not yet stored to the central database will have a negative ID; for example -4).

Defining the Gondola

Defining the Gondola

Gondola definition is a slow, methodical process. It is recommended users use a checklist to make sure they carry out all the required actions.

An example of a checklist is as follows:

Preparations

Block Preparation

- Is the naming convention used for the blocks correct?
- Are the positions of the Insertion points understood?
- Are the dimensions of the blocks known?

Size and Part Preparation

- Has a specific list of sizes for the Gondola been defined in the Gondola Size dialogue?
- Are all the required parts in the Gondola Parts dialogue?

Gondola Definition

Basic Parameters

- Have the Gondola Name and Definition been defined?
- Has the main dimension been defined if required?
- Has the maximum number of bays been defined if required?

Dimensions

- Have the required dimensions been selected from the list?
- Has the main dimension been set to True?

For each dimension:

- Has the Label been set?
- Has the Suffix been set?
- Has the Name Order been set?

Parts

For each part of the gondola have the following details been set?

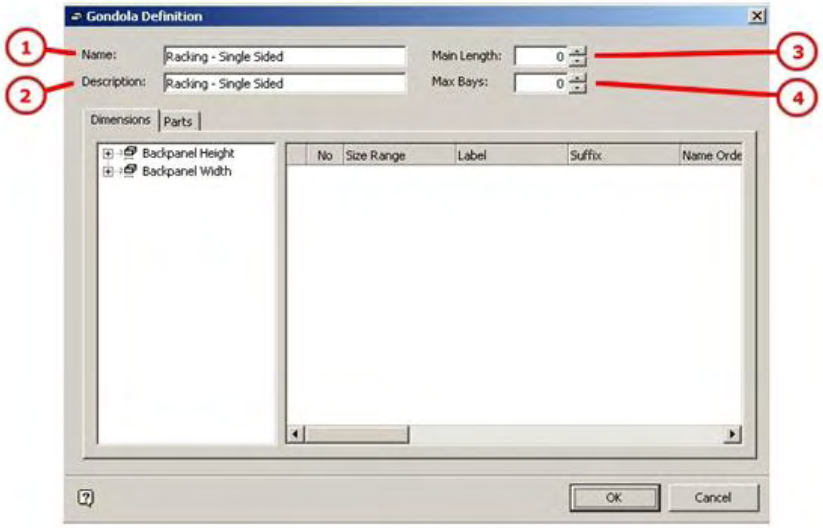
- Type
- Description
- Prefix
- Suffix (if required)
- Optional (end caps, etc)
- Bay Group
- Report Group
- Include If (Bays required)
- Name Dependency

For each part of the gondola have the following positional parameters been set?

- Size (Delta size, Parameter Size, Size Scale Factor if required)
- Offset (Fixed Offset, Parameter Offset, Offset Scale Factor if required)
- Rotations (normally in Z axis)

Defining the Gondola - Name, Main Length and Max Bays

The first stage to setting up a gondola is to define the name, main length and max bays.



The **Name (1)** of the gondola is what will identify it in the database, and what will appear in the gondola hierarchy.

Chose a name what will allows all users to identify the gondola easily.

Lozier Mobile Gondola is better than Lozier because it identifies the gondola with more precision.

Description (2) allows a slightly more comprehensive definition of the gondola to be added. For example, we might use as description of Lozier Mobile Gondola (North America) to indicate that type of gondola was only used in North America.

Main Length (3) only needs to be set if no main dimension is set in the dimensions panel.

If left set to 0, then the gondola dimensions will be calculated using the main dimension set in the dimensions tab. (See later)

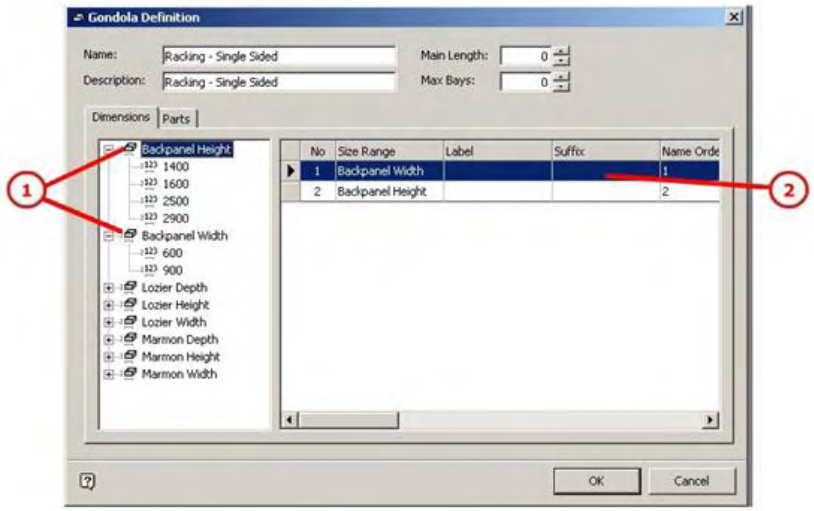
If **Max Bays (4)** is left set to 0 then the user may place any number of bays when the gondola is added to a drawing.

If set to a positive number, then this will define the maximum number of bays that can be placed.

For example, if set to 10, then a maximum of ten bays can be placed.

Defining the Gondolas - Dimensions

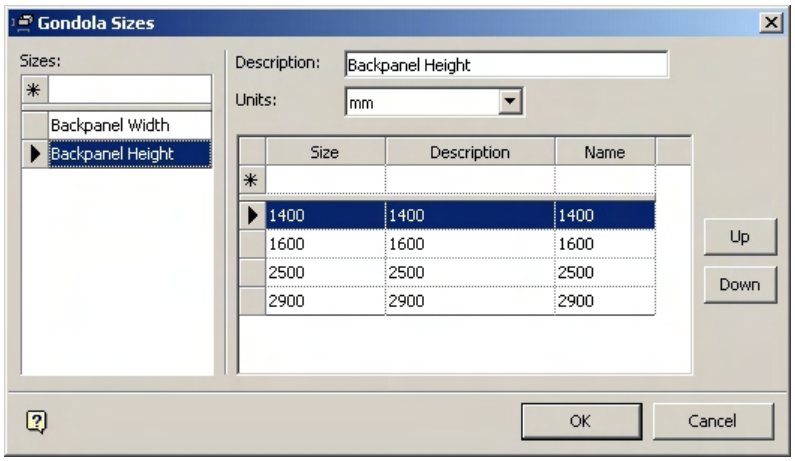
The **dimensions** are set in the dimensions tab of the Gondola Definitions dialogue box.



The **Required Dimensions (1)** are selected from the list of available dimensions.

This is done by double clicking on them so they appear in the list of Selected Dimensions (2) on the right.

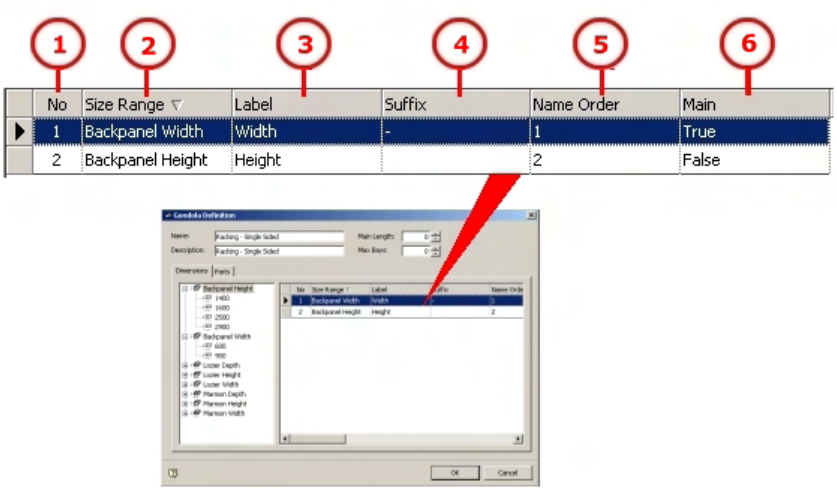
> **Note**: Only Backpanel Height and Backpanel Width were selected from the available options. These two options contain all the dimensions we require for this gondola. Note that we still have to fill in information in the list of **Selected Dimensions (2)** on the right.



> **Note**: The sizes are defined in the Gondola sizes dialogue box.

Customizing the Dimensions

Once the dimensions have been selected, they have to be customized. This is done on the right hand side of the dimensions tab.



Number (1) is a parameter set by the software when the dimension is selected from the pane on the left.

Size Range (2) is the name of the dimension – this was selected by double clicking on the available dimensions in the left hand pane.

Label (3) is the name that will be given to that dimension in the Add Gondola dialogue box. This can be entered by typing it in and pressing <Return>.

Suffix (4) is associated with the naming convention. It indicates the separating character between the different parts of the naming convention.

If the parts to be used have the naming convention Prefix-Width-Height then the width will require a suffix of – to match that present in the naming convention.

The height will not require a suffix as it does not have one in the naming convention.

Suffixes are entered by typing it in and pressing <Return>.

Name Order (5) represents the sequence the dimensions appear in the naming convention.

If we are using a naming convention of Prefix-Width-Depth-Height then Width would be given name order 1, Depth name order 2 and Height name order 3.

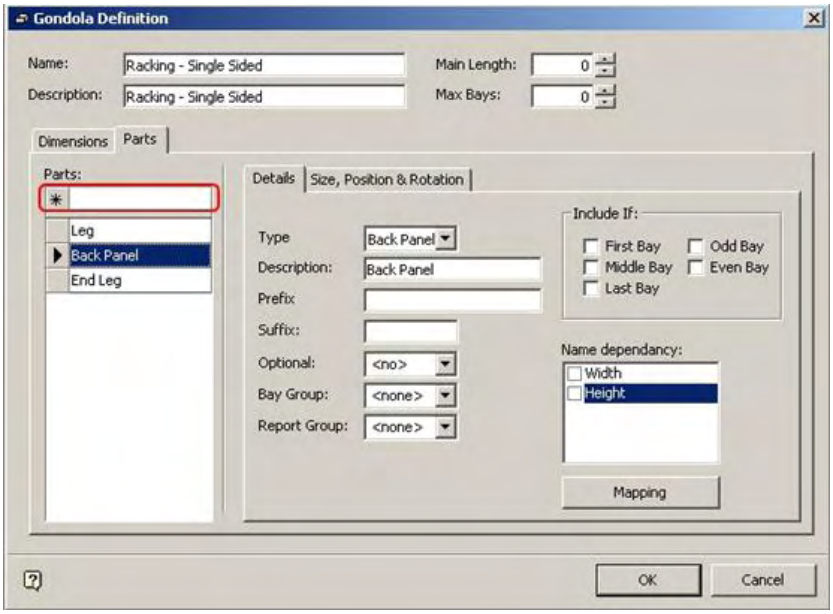
Name Orders are entered by typing it in and pressing <Return>.

Main (6) indicates the dimension to be used to set the basic measurements of the bays in the gondola. One of the dimensions must be set to True by typing it in and pressing <Return>.

Defining the Gondola - Basic Parts

Basic Parts

The next stage is to define the list of parts that will make up the gondola. This is done in the Parts Tab.



Type the required name in the Parts text box and press Return.

For this gondola we will require

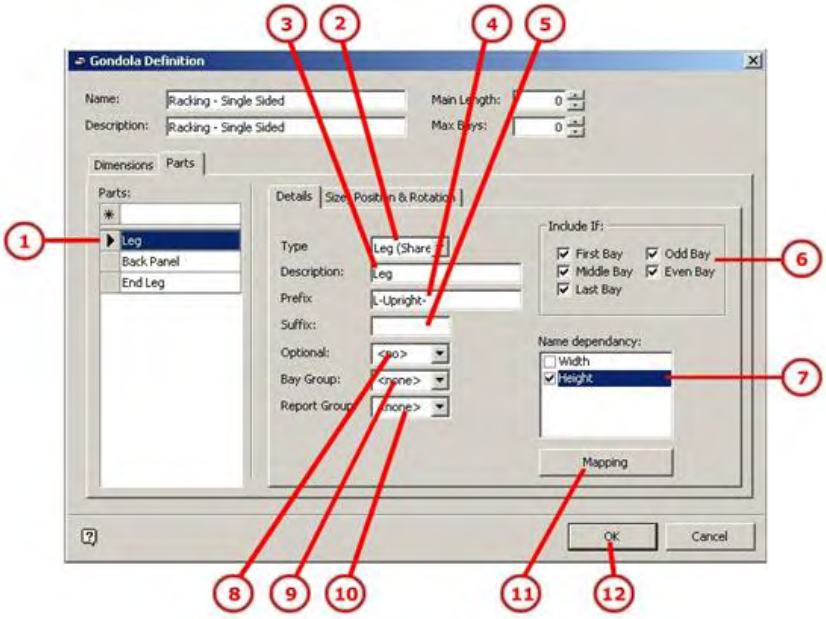
- Leg
- Backpanel
- End Leg

The first two parts will go into every bay, the End Leg only into the last bay.

Defining the Gondola - Leg Details

Leg Details

Leg details are defined by clicking on Leg in the **list of parts (1)**.

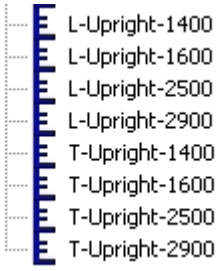


Type (2) can be set using the drop down list.

Description (3) will default to that selected from the list of parts.

Prefix (4) will define the first part of the naming convention.

Note that we have two types of legs in the list of available parts.



The L-uprights are suitable for the single sided racking we are setting up.

Accordingly, we set a prefix of L-Upright- to select these legs.

(We can select the others with a prefix of T-Upright-)

We do not need a **Suffix (5)** in this instance.

We select the required gondola sections in the include If (6) check boxes.

As we want a leg in every section, we check all the options.

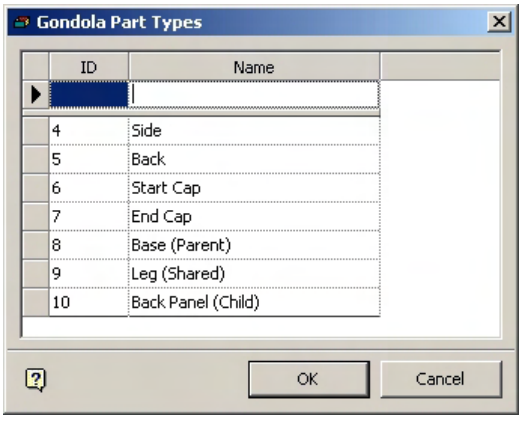
Only one of the **Name Dependency boxes (7)** is checked; that for height.

This means in conjunction with the L-Upright- Prefix and the sizes defined in the gondola sizes dialogue box, we can select the following blocks when the gondola is drawn.

At this stage we do not need to worry about the **Optional (8)**, **Bay Groups (9)** or **Report Group (10)** options.

If necessary, clicking on the **Gondola Mapping (11)** option will tell us what block names have been defined by the naming convention options we have set.

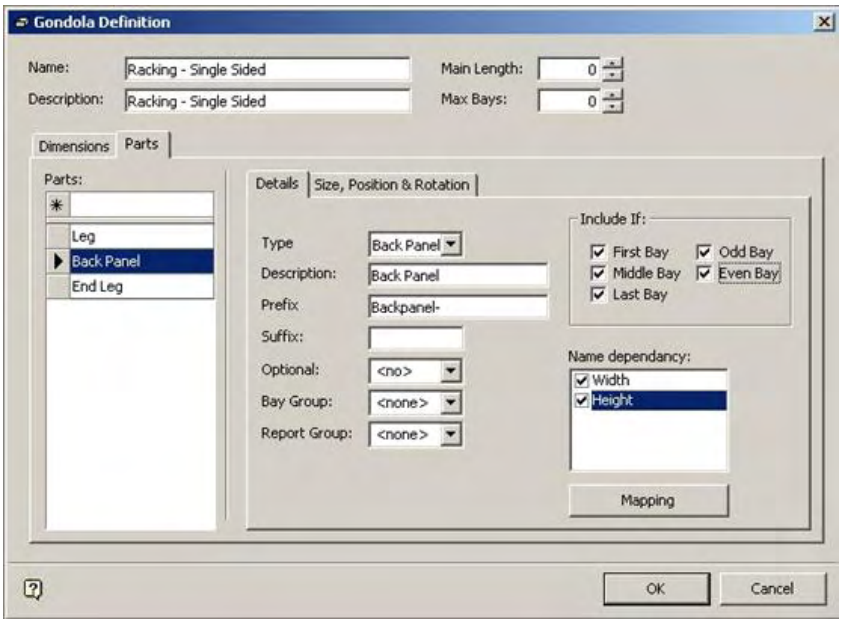
Do not at this stage click on the **OK (12)** button.



Note: The parts available in the drop down list are set up using the Gondola Parts dialogue box.

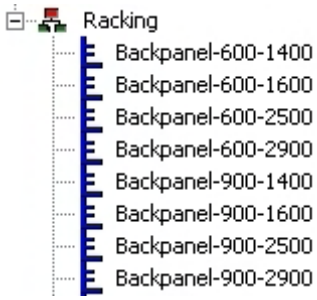
Defining the Gondola - Backpanel Details

Defining the backpanel proceeds in similar manner to the leg, the completed dialogue box looking as follows:



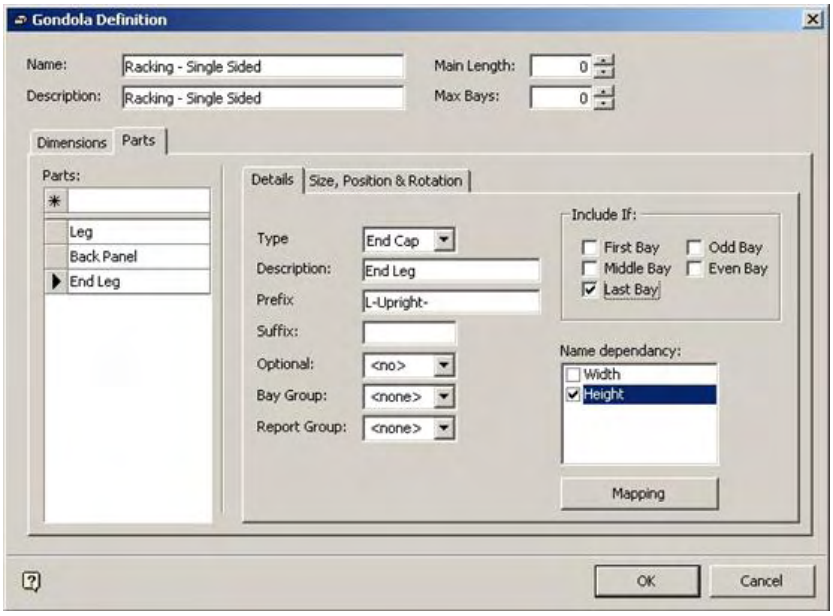
Note that the Prefix has been entered as Backpanel- and that both name dependencies have been checked.

This will allow us to select blocks from the following list.



Defining the Gondola - End Leg Details

The **end leg** is different from the other gondola parts that have been defined. It is only present in the last bay of the gondola and serves to finish the run of racking.



The Type has been set to End Cap and only the Last Bay in the Include If section.

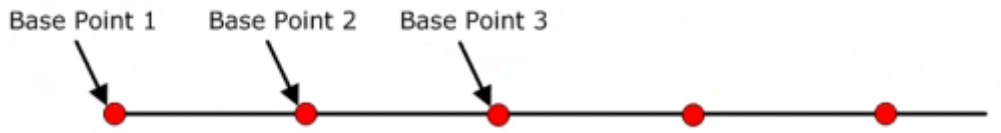
The other settings are as for the Leg.

Overview of Leg Size, Position and Rotation

Defining Sizes

The Size, Position and Rotation have to be defined for each part.

This is to ensure that it is inserted in the correct position and orientation relative to its base point.

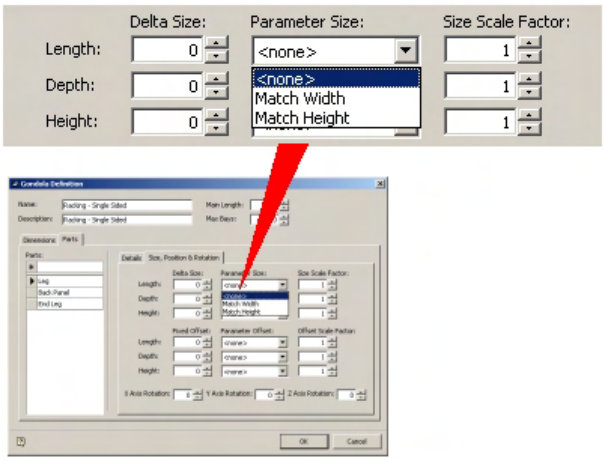


The y = mx + c Equation

The Size of the part can be set using a y = c + mx equation.

This can be written as Result = Constant + (Size x Factor)

This is not as difficult to understand as it seems. The Size options can be found on the Size, Position and Rotation tab.



Delta Size/Fixed Offset

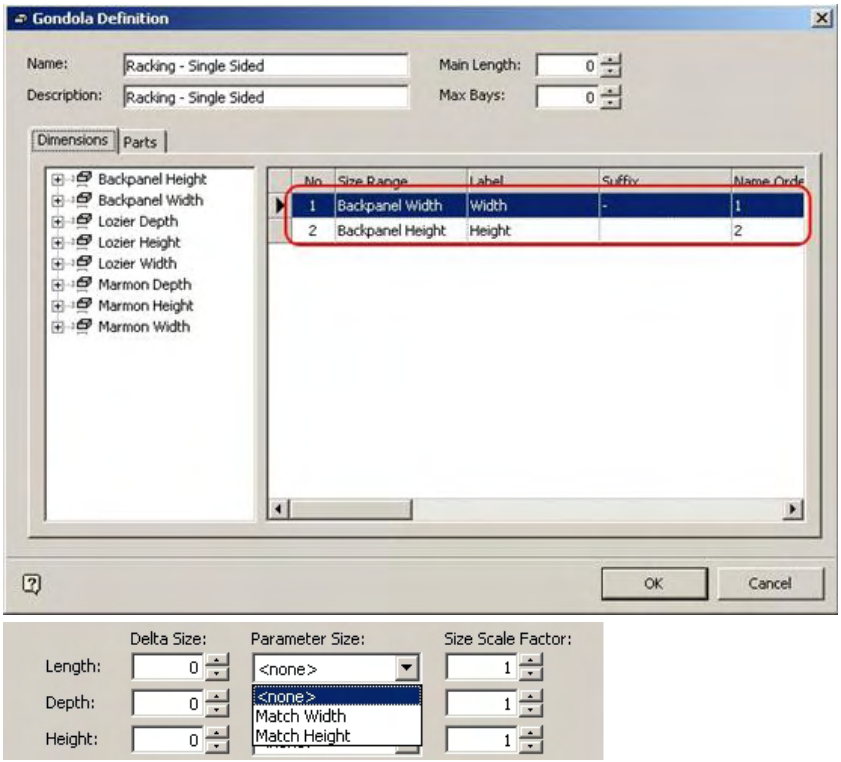
The Delta Size corresponds to the constant c in the y = mx + c equation.

If we set it to 50 mm, then this value will always be used when it comes to calculating the size of the part.

Parameter Size

This is the 'x' part of the equation.

It can be selected from a drop down list that corresponds to the dimensions selected in the Dimensions Tab



As we have only selected two dimensions in the Dimensions tab, the drop down list only contains two options; Match Width and Match Height.

If we select Match Width (Length) then the final size will depend on the width of the block chosen as a result of the name dependencies.

If we chose a width of 600 mm in the Add Gondola dialogue, the calculated size would be relative to the 600 mm width of that block.

If we chose a width of 900 mm in the add gondola dialogue box, the calculated size would be relative to the 900 mm width of that block.

Scale Factor

A scale factor is a number that the Parameter Size is multiplied by.

If the scale factor is set to 0 then the block will be set to the dimension set in the Delta size.

If the Scale Factor is set to 0.5, the calculated value will be half that of the Parameter Size.

If the Scale Factor is set to 2, the calculated value will be twice that of the Parameter Size.

Examples

Delta Size	Parameter Size	Scale Factor	Result
50 mm	None	1	Block size + 50 mm

Size (y) = 50 mm + (1 x block size)

Delta Size	Parameter Size	Scale Factor	Result
50 mm	None	0	50 mm

y = 50 mm + (0 x block size)

Delta Size	Parameter Size	Scale Factor	Result
0 mm	Width (600 mm)	0.5	300 mm

y = 50 mm + (0.5 x block size of 600 mm)

Delta Size	Parameter Size	Scale Factor	Result
50 mm	Width (600 mm)	1	650 mm

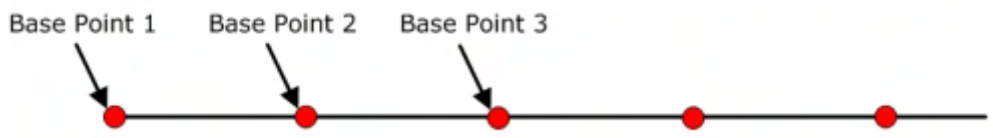
y = 50 mm + (1 x block size of 600 mm)

Defining Offsets

Overview

The Size, Position and Rotation have to be defined for each part.

This is to ensure that it is inserted in the correct position and orientation relative to its base point.

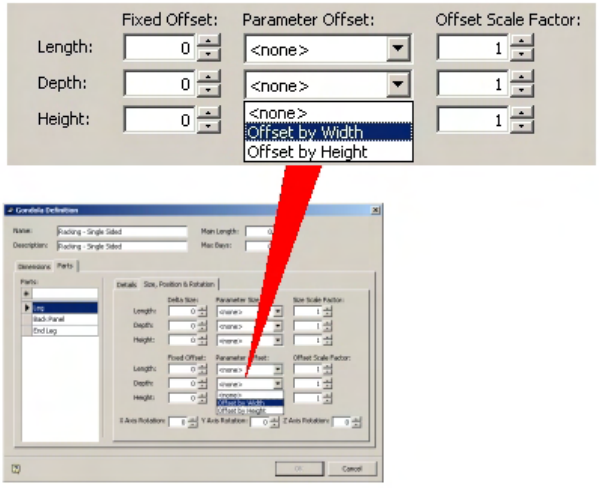


The y = mx + c Equation

The offset for the part (if one is required) can be set using a y = c + mx equation.

This can be written as Result = Constant + (Size x Factor)

This is not as difficult to understand as it seems. The Offset options can be found on the Size, Position and Rotation tab.



Delta Size/Fixed Offset

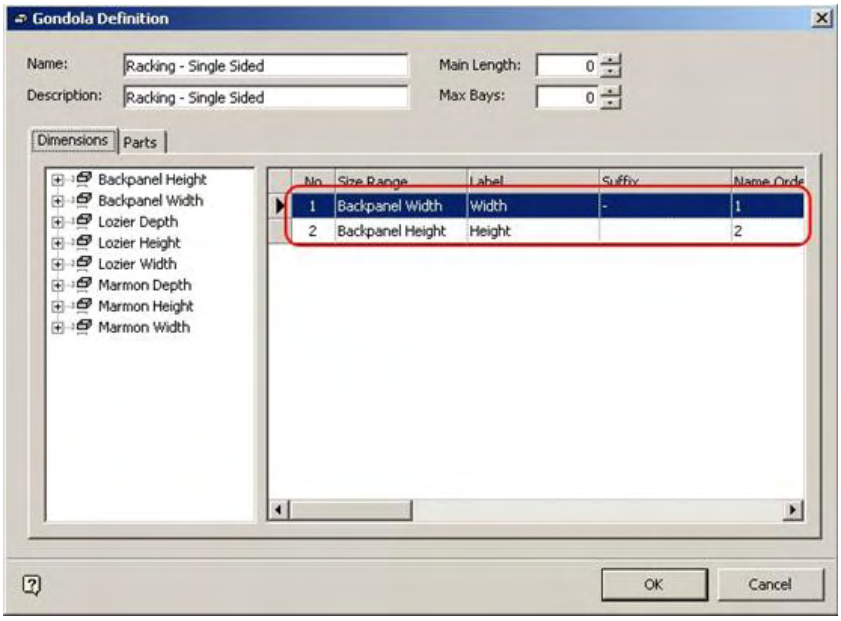
The Delta Size corresponds to the constant c in the y = mx + c equation.

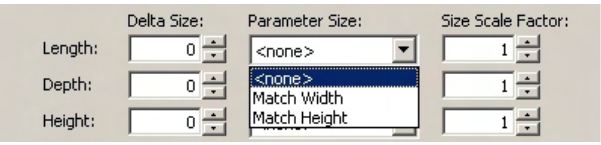
If we set it to 50 mm, then this value will always be used when it comes to calculating the size of the offset.

Parameter Size

This is the 'x' part of the equation.

It can be selected from a drop down list that corresponds to the dimensions selected in the Dimensions Tab





As we have only selected two dimensions in the Dimensions tab, the drop down list only contains two options; Match Width and Match Height.

If we select Match Width (Length) then the final offset will depend on the width of the block chosen as a result of the name dependencies.

If we chose a width of 600 mm in the Add Gondola dialogue, the calculated offset would be relative to the 600 mm width of that block.

If we chose a width of 900 mm in the add gondola dialogue box, the calculated offset would be relative to the 900 mm width of that block.

Scale Factor

A scale factor is a number that the Parameter Size is multiplied by.

If the scale factor is set to 0 then the offset will be set to the dimension set in the Delta size.

If the Scale Factor is set to 0.5, the calculated offset will be half that of the Parameter Size.

If the Scale Factor is set to 2, the calculated offset will be twice that of the Parameter Size.

Examples

Delta Size	Parameter Size	Scale Factor	Result
50 mm	None	1	Block size + 50 mm

Size (y) = 50 mm + (1 x block size)

Delta Size	Parameter Size	Scale Factor	Result
50 mm	None	0	50 mm

y = 50 mm + (0 x block size)

Delta Size	Parameter Size	Scale Factor	Result
0 mm	Width (600 mm)	0.5	300 mm

y = 50 mm + (0.5 x block size of 600 mm)

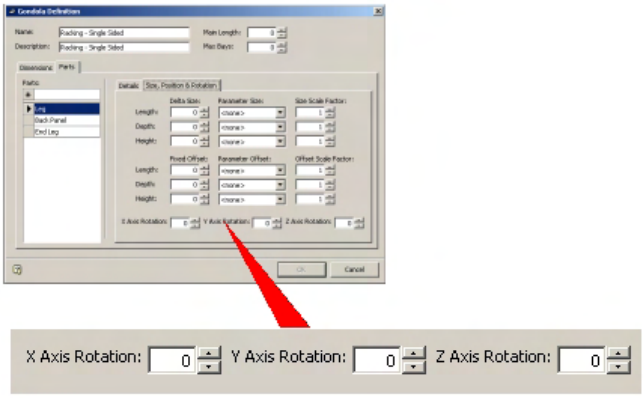
Delta Size	Parameter Size	Scale Factor	Result
50 mm	Width (600 mm)	1	650 mm

y = 50 mm + (1 x block size of 600 mm)

Note: Offsets can be used in conjunction with rotations - the final position of the part will be a combination of the offset and the rotation.

Rotations

Rotations can be in the X, Y or Z planes.



For normal purposes, we only have to be concerned about rotations about the Z axis – in the vertical plane.

Typically, we would use rotations of 90 or 270 degrees to bring parts into position at the start or end of a gondola.

Note: Rotations can be used in conjunction with offsets - the final position of the part will be a combination of the offset and the rotation.

Defining Sizes

There are three parts to the gondola, Leg, Backpanel and End Leg.

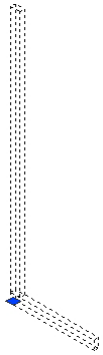
For the purposes of this gondola, there is no need to define the size as we will be using the defaults specified in the block definition.

Defining Offsets and Rotations

Offsets and Rotations are required to put the parts in the correct position relative to the Base point.

Each part will generally require a different offset and/or rotation.

Before Offsets and Rotations can be specified, the uses must ascertain the position of the insertion point of each block as the blocks will be placed relative to this insertion point.



For example, this L-upright has its insertion point specified at the bottom, center, rear.

It is also necessary to know any dimensions that might affect offsets.

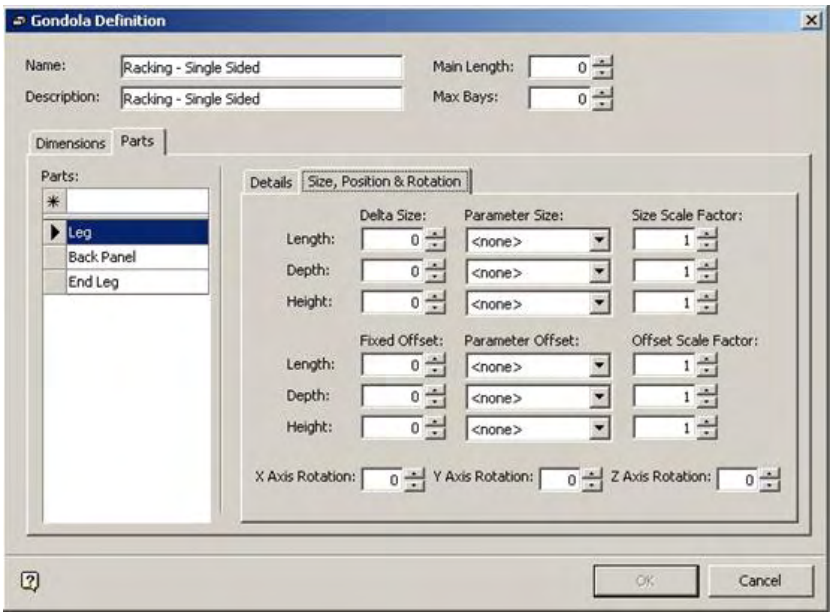
For example, the horizontal arm of the L Upright is 50 mm high.

Leg - Defining Offset and Rotation

The **leg** has its insertion point at the bottom, center, rear.

It does not require any offset to put it at over the Base Point of the bay.

It does not require a rotation.



Backpanel - Defining Offset and Rotation

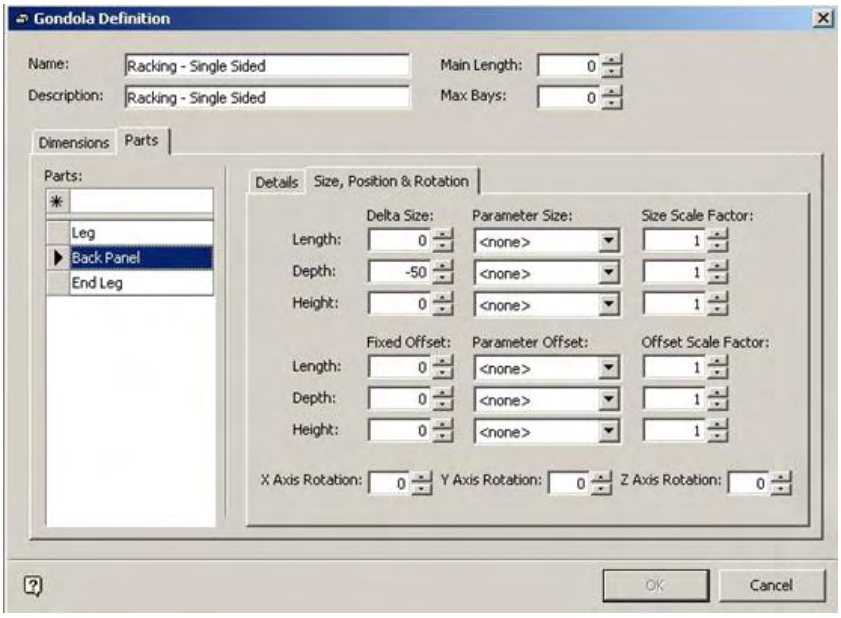
The **Backpanel** has an insertion point at the bottom, left, rear.

The insertion point was specified as being 50 mm below the bottom of the Backpanel.

The Backpanel requires a –Y offset of 50 mm to bring it in front of the vertical arm of the L upright.

It would have required a Z offset of 50 mm to bring it on top of the horizontal arm of the L Upright. However, this offset was built into the block definition when it was created. A Z offset is therefore not required.

It does not require a rotation.



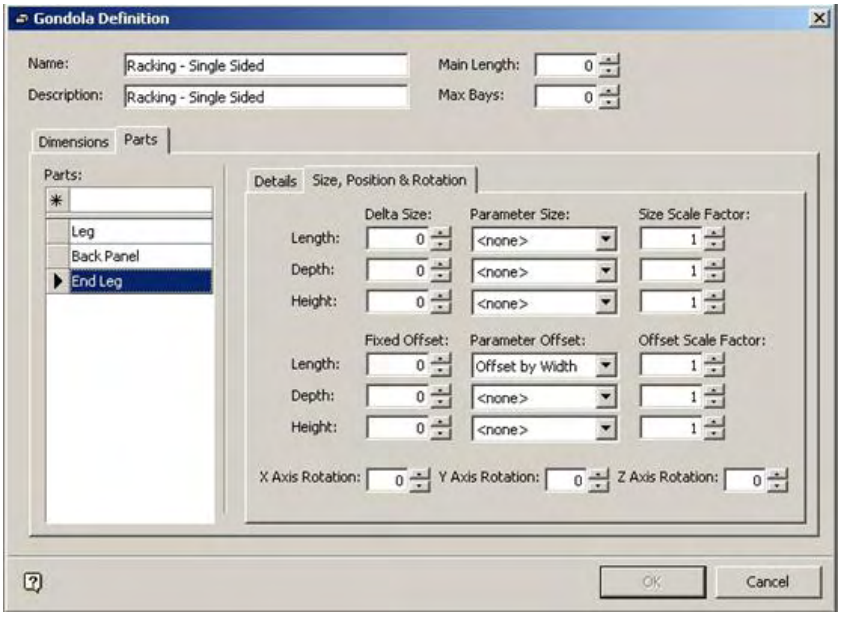
End Leg - Defining Offset and Rotation

The **end leg** has its insertion point at the bottom, center, rear.

It requires an offset to put it on the opposite side of the final Backpanel to the Standard leg.

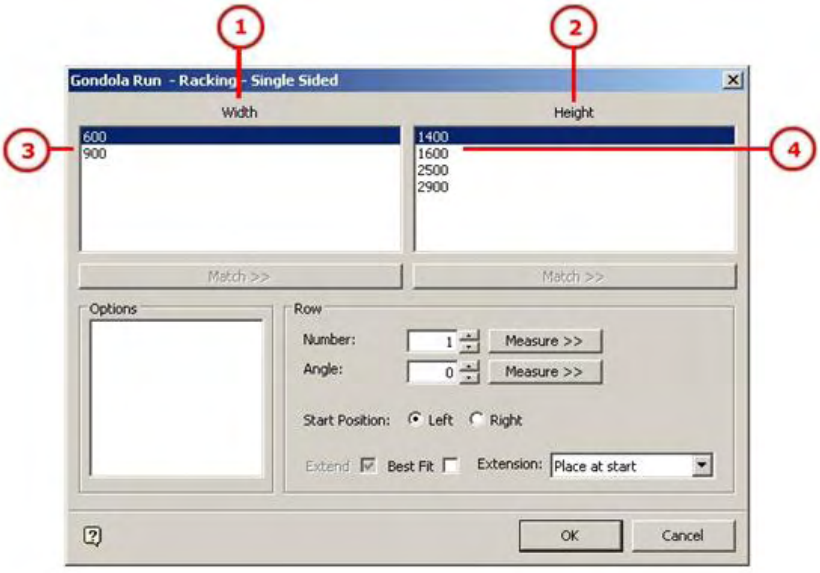
This will be an offset by Width.

It does not require a rotation.



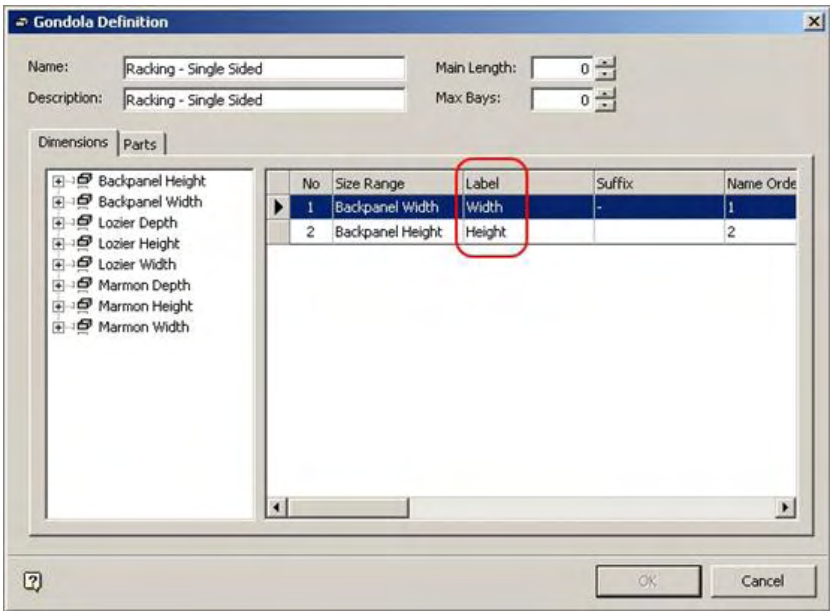
The Add Gondola Dialog Box

Once the gondola has been defined and saved, it can be placed into a drawing by means of the Add Gondola dialogue box.



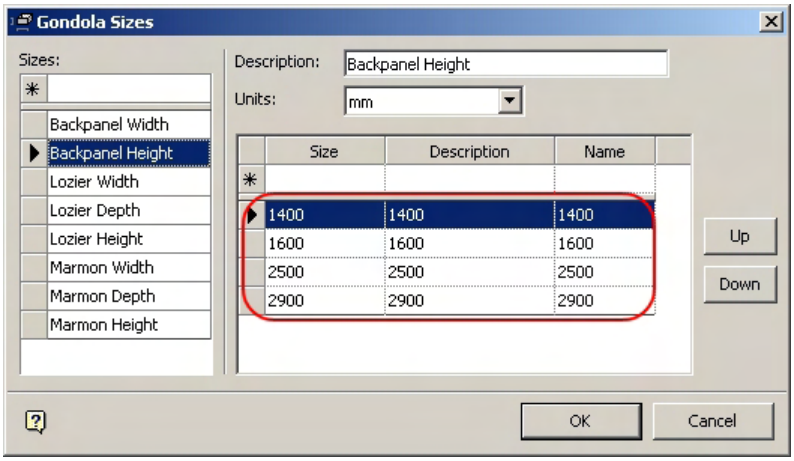
Dimension Labels

The **Width (1)** and **Height (2)** captions correspond to the Labels in the Dimensions Tab.



Dimension Sizes

The **Dimensions (3)** and **(4)** correspond to the sizes in the Gondola Sizes dialogue box.


Gondola Sizes
Sizes:
Backpanel Width
Backpanel Height
Lozier Width
Lozier Depth
Lozier Height
Marmon Width
Marmon Depth
Marmon Height
Description:
Backpanel Height
Units:
mm
Size
Description
Name
1400
1400
1400
1600
1600
1600
2500
2500
2500
2900
2900
2900
Up
Down
OK
Cancel

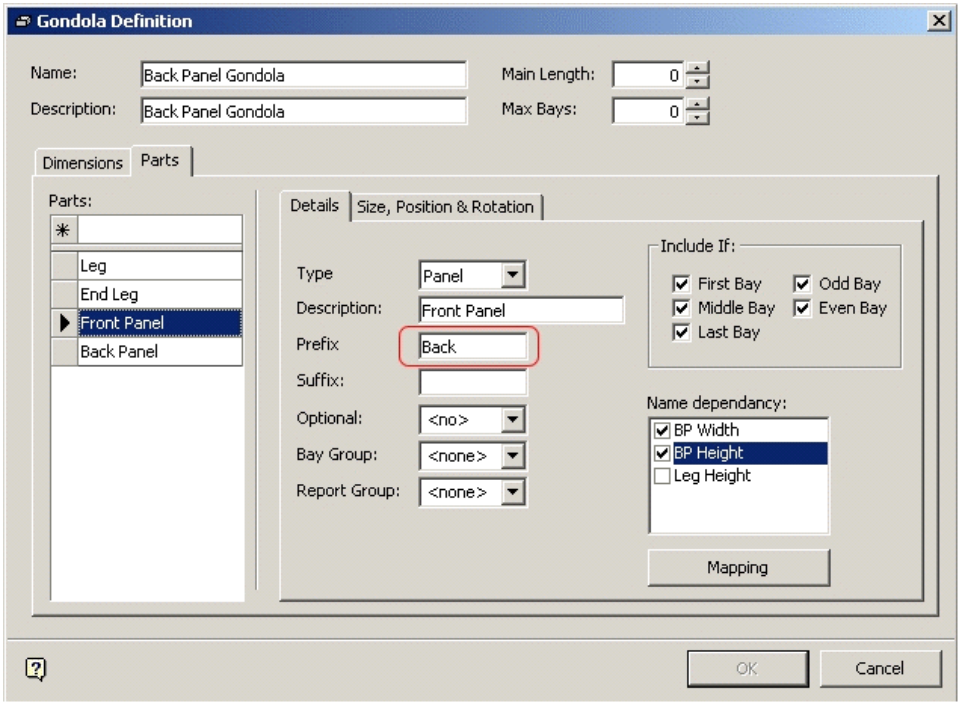
7

Points to Watch

Points to watch give solutions to commonly experienced problems.

Problems with Naming Conventions

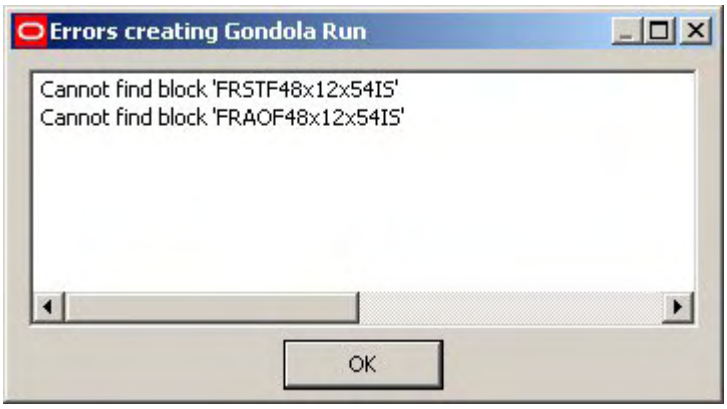
The **Gondola Definitions** dialogue box is used to specify the components of a gondola.



If there are errors in specifying the components, Macro Space Management will not be able to find the blocks to draw the gondola in the Cad or Virtual Reality environments.

In the above example, the Prefix has been wrongly typed in as Back rather than Backpanel.

The gondola can be saved without problems, but when an attempt is made to place it in a drawing an error message will result.



All Prefixes and Suffixes must be correctly defined for Macro Space Management to reference the correct block.

Combinations using Naming Conventions

Naming conventions rely on a consistent approach being applied to block names.

	269	Podium L1025 W1025 H200	Podium-1025-1025-H200
	270	Podium L1025 W1025 H480	Podium-1025-1025-H480
	451	Podium L1025 W1025 H680	Podium-1025-1025-H680
	444	Podium L1025 W1500 H200	Podium-1025-1500-H200
	445	Podium L1025 W1500 H480	Podium-1025-1500-H480
	452	Podium L1025 W1500 H680	Podium-1025-1500-H680
	272	Podium L1200 W1200 H200	Podium-1200-1200-H200
	273	Podium L1200 W1200 H480	Podium-1200-1200-H480
	453	Podium L1200 W1200 H680	Podium-1200-1200-H680
	447	Podium L1200 W1750 H200	Podium-1200-1750-H200
	446	Podium L1200 W1750 H480	Podium-1200-1750-H480
	454	Podium L1200 W1750 H680	Podium-1200-1750-H680
	271	Podium L1200 W800 H200	Podium-1200-800-H200

In the above example, podiums have been named using a consistent convention.

There are available in widths of 1025 and 1200 mm, depths of 800, 1025, 1200, 1500 and 1750 mm and heights of 200, 480 and 680 mm.

This gives a theoretical number of 2 x 5 x 3 = 30 combinations, yet there are only 13 actual blocks.

When specifying gondolas, care must be taken that the dimensions chosen minimize the number of potential combinations, or else more combinations will be generated than there are blocks to match them.

If a block name is generated while drawing a gondola that does not match the list of available ones, an error will result.