

Oracle® Retail Macro Space Management
User's Guide
Release 5.4.027.1

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Oracle Retail Macro Space Management, User's Guide, Release 5.4.027.1

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document.

Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Applications Release Online Documentation CD available on My Oracle Support and www.oracle.com. It contains the most current Documentation Library plus all documents revised or released recently.

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Audience

This document is intended for the users of Oracle Retail Macro Space Management. This may include merchandisers, buyers, and business analysts.

Related Documents

For more information, see the following documents in the Oracle Retail Macro Space Management Release 5.4.027.1 documentation set:

- *Oracle Retail Macro Space Management Administration Guide*
- *Oracle Retail Macro Space Management Configuration Guide*
- *Oracle Retail Macro Space Management Implementation Guide*
- *Oracle Retail Macro Space Planning Installation Guide*
- *Oracle Retail Macro Space Planning Licensing Information*

For information on In-Store Space Collaboration see the following documents in the Oracle Retail In-Store Space Collaboration Release 5.4.46.1 documentation set:

- *Oracle Retail In-Store Space Collaboration Release Notes*
- *Oracle Retail In-Store Space Collaboration User Guide*

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL: <https://metalink.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

If you are installing the application for the first time, you install either a base release (for example, 13.0) or a later patch release (for example, 13.0.2). If you are installing a software version other than the base release, be sure to read the documentation for each patch release (since the base release) before you begin installation. Patch documentation can contain critical information related to the base release and code changes that have been made since the base release.

Oracle Retail Documentation on the Oracle Technology Network

In addition to being packaged with each product release (on the base or patch level), all Oracle Retail documentation is available on the following Web site (with the exception of the Data Model which is only available with the release packaged code):

http://www.oracle.com/technology/documentation/oracle_retail.html

Documentation should be available on this Web site within a month after a product release. Note that documentation is always available with the packaged code on the release date.

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

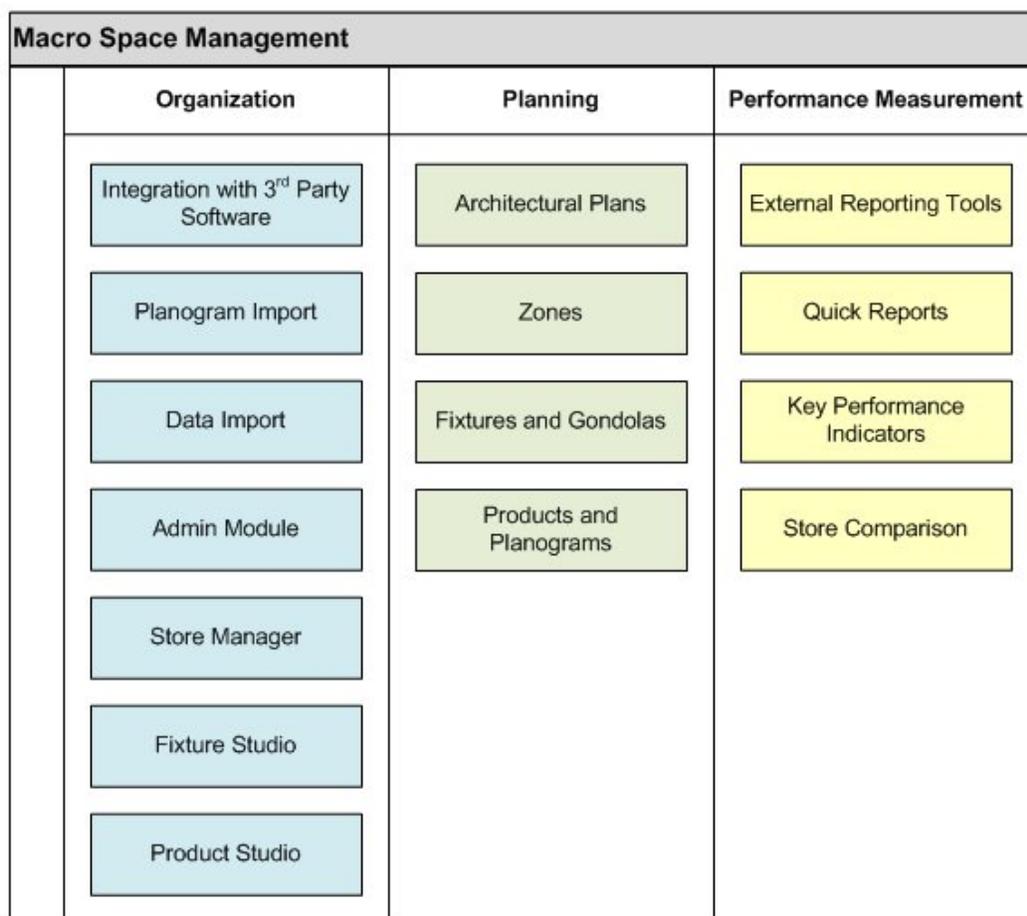
Macro Space Management

Macro Space Management (MSM) is a complex, integrated program that allows users to carry out highly sophisticated store planning, fixturing, and merchandising operations. It also allows them to monitor retail performance using KPIs and reports. MSM is primarily intended for centralized planning and is typically located at head or regional offices.

The results of Macro Space Management activities are stored in the central Macro Space Management database. This database can be accessed via the internet by authorized users.

MSM activities can be split into three main areas:

- Organization
- Store Planning
- Performance Measurement



Macro Space Management Workflow

Macro Space Management and In-Store Space Collaboration

Macro Space Management and **In-Store Space Collaboration** are members of a family of products from Oracle

- Macro Space Management is software that is used in head or regional offices to plan and control store layouts.
- In-Store Space Collaboration allows users to develop or revise store layouts on site.

Macro Space Management

Macro Space Management is primarily intended for centralized planning and is typically located at head or regional offices. It is a complex, integrated program that allows users to carry out highly sophisticated store planning operations involving fixturing and merchandising.

These operations can either be carried out in a Computer Aided Design environment (Planner), or in 3D Virtual Reality Environment (Merchandiser).

The results of all these activities are stored in a central database. This database can be accessed via the Internet by authorized users.

In-Store Space Collaboration

In-Store Space Collaboration is a web-based portable version of Macro Space Management that has most (but not all) of its functionality. In-Store Space Collaboration allows Internet or Intranet based access to store planning, merchandising and performance information held within the central Macro Space Management database. It enables users with laptop or tablet computers to develop or edit store plans on site within the actual stores.

In-Store Space Collaboration can be used either with a wireless Internet connection continuously updating the central database or by connecting to a company intranet after developing the store plan. This combination of remote access and the use of small tablet or laptop computers make the software highly portable, allowing the users to update information on-site in the varying retail outlets within the organization.

Depending on the user's access rights, these can include:

- Selecting a store plan.
- Selecting departments within the store plan to display.
- Viewing, adding, editing and deleting fixtures, fittings and gondolas.
- Viewing, adding, editing and deleting products and planograms.
- Using scanning or manual entries to update information on which planograms are physically present in a store.
- Using Key Performance Indicators (KPI) to look at every aspect of a stores operation including correctness of fixturing and merchandising, turnover and profitability and other performance information.

The data is first read from the central database. After adding, editing and deleting fixtures and merchandise within In-Store Space Collaboration, the results are saved back to the central Macro Space Management database.

A Quick Tour of Macro Space Management

This section provides a quick tour of Macro Space Management. It includes the following sections:

- Control of a Retail Organization
- Macro Space Management Modules
- Common Macro Space Management Components
- Macro Space Management Activities

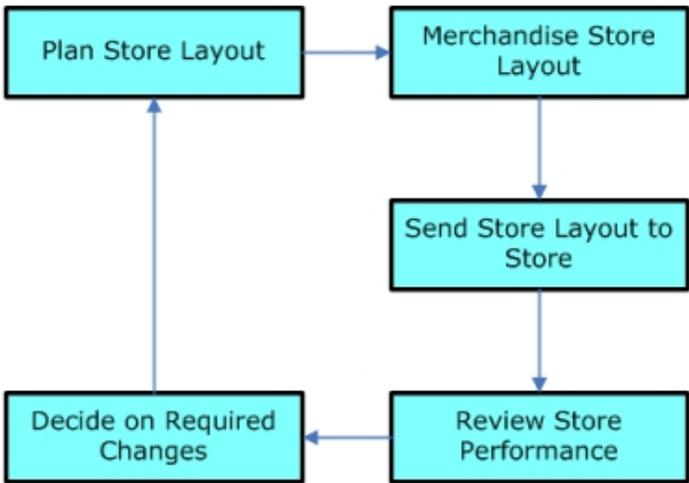
Control of a Retail Organization

Controlling a retail organization can be a complex activity, particularly if the organization has many stores. Macro Space Management is designed to make this task as easy as possible, allowing managers to focus on improving profitability, not on routine administrative tasks.

Macro Space Management allows four main activities to be carried out:

Activity	Description
Store planning	Designing store layouts by placing fixtures, fittings and gondolas accurately within the bounds set by an architectural drawing.
Merchandising	Populating the store layouts with products or merchandise.
Information Management	The import or export of information to and from Macro Space Management. Such information could include EPOS (Electronic Point of Sale) data.
Performance measurement	Measuring the performance of the stores.

This allows users to carry out the following repeated sequence of events:



MSM Workflow

Plan Store Layout

Normally carried out in the Planner environment, this allows users to plan a precise arrangement of fixtures, fittings and gondolas within the store. This is far more than a simple drawing, for Macro Space Management tools allow the user to determine which fixtures can be connected to one another, lists of required components, etc.

Macro Space Management also allows users to see (for example) what the sight-lines are for customers for the present arrangement of fixtures, or what percentage of the floor space is being utilized efficiently.

Merchandise Store Layout

Store layouts can be merchandised with products, planograms or a combination of the two. Both products and planograms can be designed within Macro Space Management if required. Macro Space Management tools allow the user to pre-configure which fixtures will accept which products or planograms.

Merchandising can be carried out in either the Planner or Merchandiser environments. If carried out in Merchandiser then a 3D virtual reality representation of the store can be seen, allowing users to see the store through the eyes of a customer.

Send Store Layout to Store

Macro Space Management contains provisions to activate pre-prepared store plans on specified dates. These plans can be automatically sent to the designated stores, allowing them to implement the revised layout.

Review Store Performance

Macro Space Management has the facility to import EPOS data, so it is possible to graphically performance by color coding the fixtures within the store according to performance. For example fixtures could be color coded for profit, turn over, stock turns or any other designated criteria. This allows managers to see at a glance which areas of the store are performing and which is not.

Decide on Required Changes

Once the performance of a store has been analyzed, it is possible to decide on what changes are required. These could be routine, for example switching from one seasons goods to another, or they could be more far reaching, for example switching for one type or merchandise to another.

Macro Space Management provides powerful tools for managers to maximize profitability.

Macro Space Management Modules

Macro Space Management consists of a series of interdependent modules. These can be bewildering for new users, so their main purpose is listed below.

Module	Purpose
Administration	Used to change fundamental settings within Macro Space Management. Changes made in the Admin module will generally affect all users.

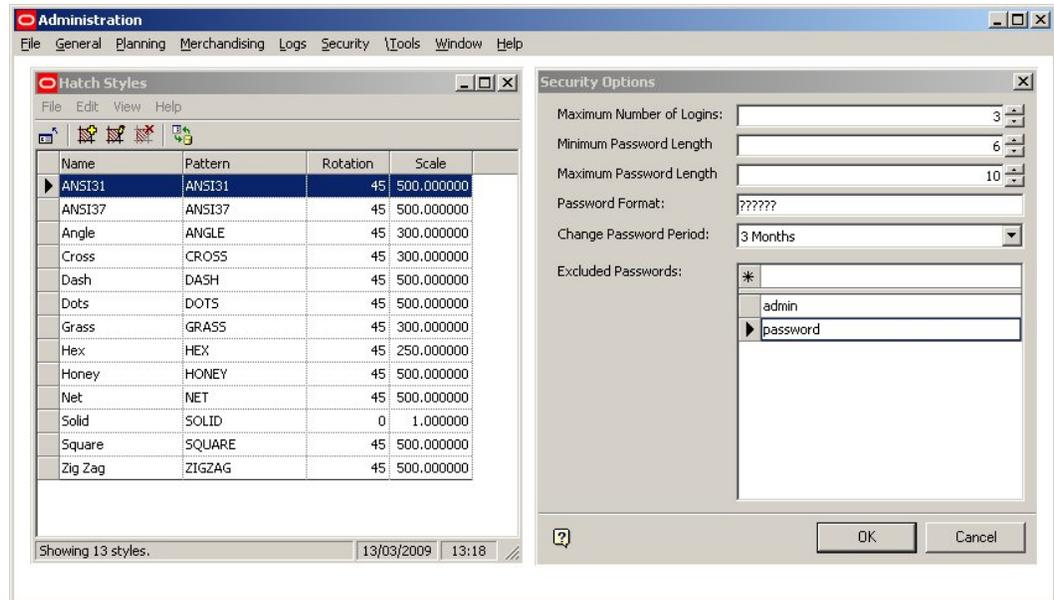
Module	Purpose
Data Import	Used to import data from third party software into Macro Space Management.
Fixture Studio	Used to set the properties for the Fixtures, Fittings and Gondolas used in Macro Space Management.
Import	Used to import standard lists of data into Macro Space Management such as store details.
Merchandiser	Merchandiser has two purposes: <ul style="list-style-type: none"> ▪ Design of Planograms. ▪ Store planning in a 3D (Virtual Reality) environment.
Product Studio	Design of products for placement in either Planner or Merchandiser
Planner	Store planning in a CAD (Computer Aided Design) environment
Report Studio	Allows users to get customized reports in data within Macro Space Management

Some of these modules give access to common Macro Space Management components. [More Info](#)

Admin Module Overview

The **Admin Module** enables a series of fundamental settings within Macro Space Management to be configured. This module is only available to those with Administrative privileges.

Some settings in the Admin Module are transferred to the Configuration Module and vice versa.



Settings in the Administration Module

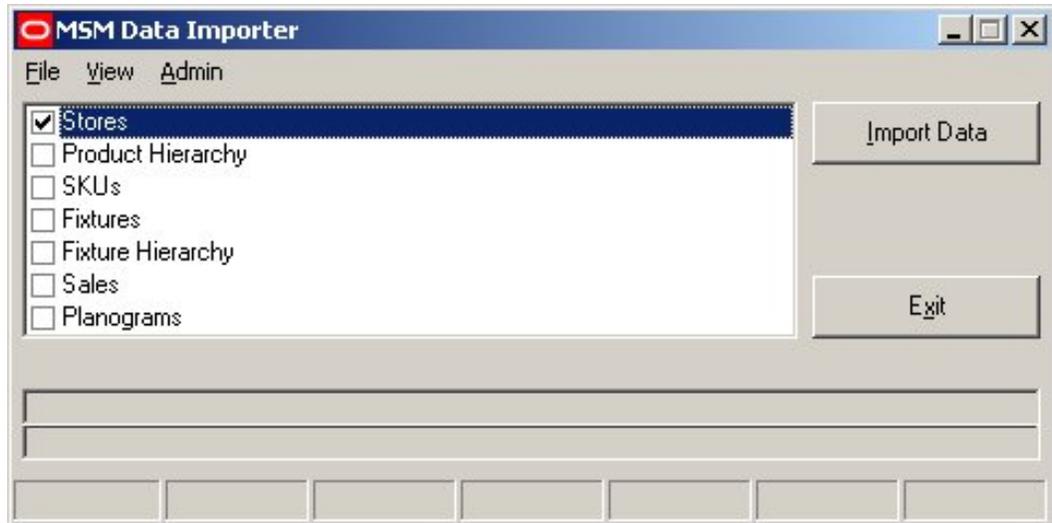
The following facets of Macro Space Management operations can be configured within the Admin Module.

Individual Module	Purpose
Calendars	The Calendars module allows the dates to be set for any specified period within Macro Space Management. An example would be the start and finish dates for accounting quarters.
Hatch Styles	Hatch Styles are the markings that are used to color or otherwise delineate zones.
Manufacturers	The Manufacturers module allows Macro Space Management users to build up a customized list of suppliers and service providers for use elsewhere in the software.
Planogram Substitution	Planogram substitution allows the Macro Space Management user to administer the substitution of one planogram for another when a specified conditions for example a trigger date, is met.
Processes	Currently not enabled.
Product Code Types	This Module enables Macro Space Management users to specify the form of varying Product Code types.
Ranges	This Module allows the user to specify permissible ranges for specified products. An example would be acceptable temperatures for chilled and frozen goods.
Scales	Scales allow the scale to be set for drawings, etc.
Severity Types	Severity types are a pre-defined list that specifies the desirability of placing specific types of products or planograms next to each other.
Status	The Status option allows Macro Space Management Administrators to configure the available status for Stores, Floors, Revisions, Drawings and other objects.
System Variables	System variables allow a number of basic parameters for Macro Space Management to be set globally. This module is used in conjunction with the Configuration module.
Tax Codes	Tax Codes enables the user to customize the tax rates used for accounting purposes.
Data Security	The Data Security section allows Administrators to specify which Stores, Products and Planograms individual users can access.
Functional Security	Functional Security allows Administrators to specify which sections of Macro Space Management individual users can access.

Individual Module	Purpose
Security Options	Security Options allow Administrators to configure the nature of the passwords used.
Seasons	The Seasons Module allows date ranges to be set for specific merchandising seasons. These could be general, such as Spring and Summer, or specific, such as Halloween.
Styles	Styles allow the detail of fixtures and gondolas to be customized to allow only specific planograms to required style to be placed.
Text Styles	Text Styles allows the font size and type to be specified for the different forms of annotation.
Title Blocks	Title blocks allows the user to define the size, etc., of the title blocks that hold information on the issue date, revision number, etc., of a drawing.
Units	The Units option allows users to specify the units of measurement to be used within Macro Space Management.
User Defined Attributes	User Defined Attributes allows the user to specify the form of certain types of user defined data.
Zone Types	Zone types are broad classes of zones.
Zone Definitions	Zone definitions are zones for specific purposes. Each Zone definition is assigned to a Zone type.

Data Import Module Overview

The **Data Import** module is used to define and execute import information that needs importing on a regular basis.



MSM Data Importer

Data is exported from third party databases in a specified CSV (Comma Separated Value) format. This data can then be imported into the central Macro Space Management database using the data import module.

Some import routines are provided as standard with Macro Space Management. These include:

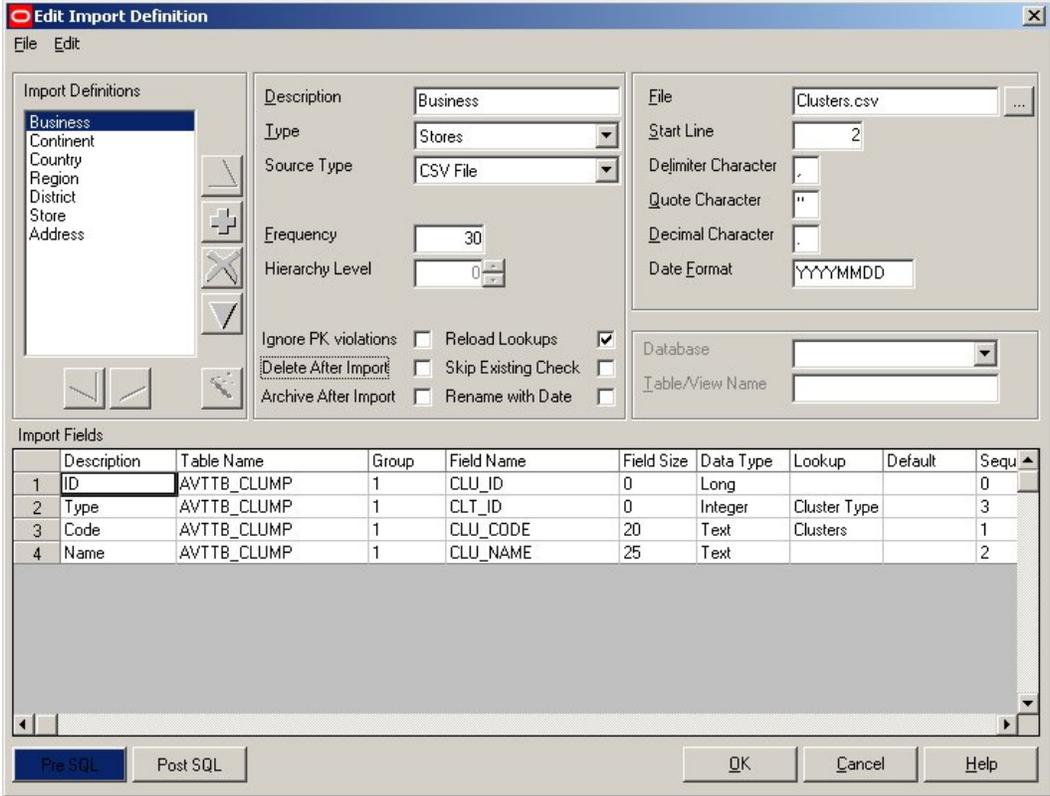
Calendar allows users to carry out data imports to fill the Calendar fields in the central database. Once imported, results can be maintained using the Admin Module.

Suppliers allow users to carry out data imports to fill the Supplier (or Manufacturer) fields in the central database. Once imported, results can be maintained using the Admin Module.

Products allow users to carry out data imports to fill the Products fields in the central database.

Sales allow users to import EPOS (Electronic Point of Sale) data into for performance measurement purposes.

Other import routines can be customized according to requirement. This can be done by using the data importer option (only available to administrators).



Edit Import Definition

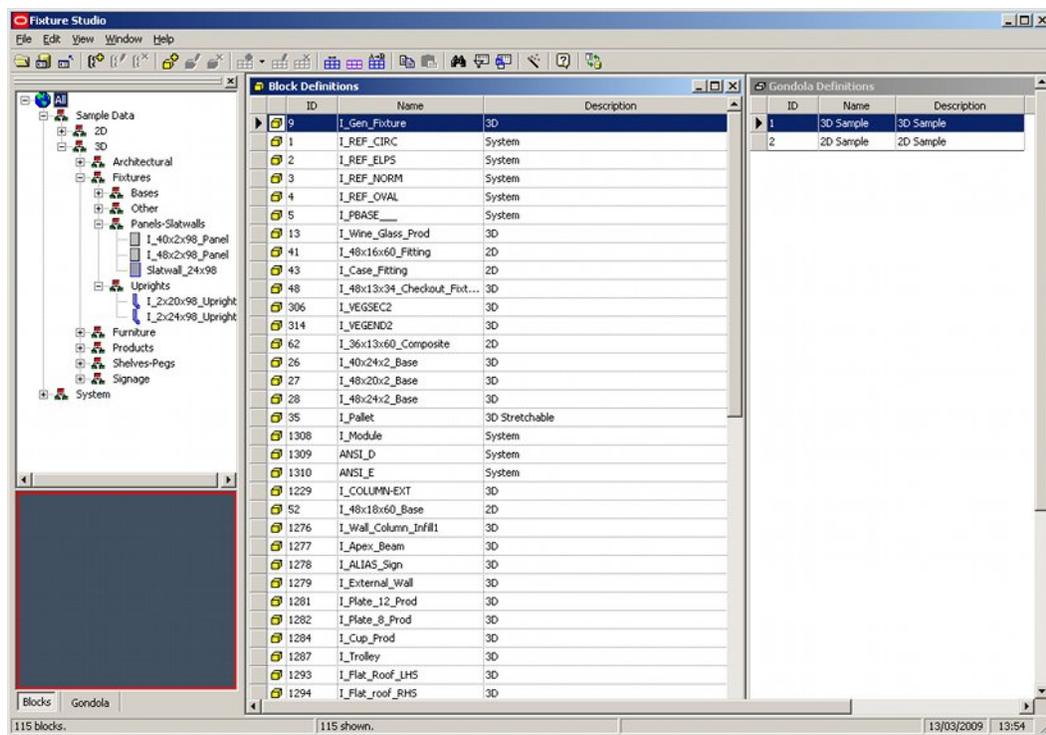
This allows the import of non-standard data from third party software to be set up for customer specific requirements.

Import Module Overview

The Import Module is used to import planograms in bulk from external software such as Apollo or Spaceman.

Fixture Studio Module Overview

Fixture Studio is a stand-alone module used to assign Macro Space Management properties to Fixtures, Fittings and Gondolas. These are intelligent properties that allow Macro Space Management to gather and analyze a wide variety of data when the fixture, etc is placed in a store layout drawing.



Fixture Studio

A wide range of properties can be assigned including:

Property	Effect
Category	Information on the general class the fixture falls in, what areas is calculated to occupy and how product is stacked onto it.
Insertion	How the fixture is inserted into the drawing and how product is inserted onto the fixture.
Size	The fixture dimensions and whether those dimensions are variable (stretchable).
Connection	How the fixture connects to other fixtures
Parts	What parts the fixture is made up from. (Bolts, castors, etc)
Fixture	How shelving and products fit onto a fixture
UDAs	What information (User Designed Attributes) is assigned to a fixture.
Styles/Ranges	What styles of shelving and products can be put on the fixture - and what range of temperatures and weights any product placed on the fixture can be.
Merchandisable Areas	What volume can be taken up by merchandise.
Shelf	Details about the angles of any shelving placed on the fixture.
Preview	Allows some aspects of the fixture to be previewed.

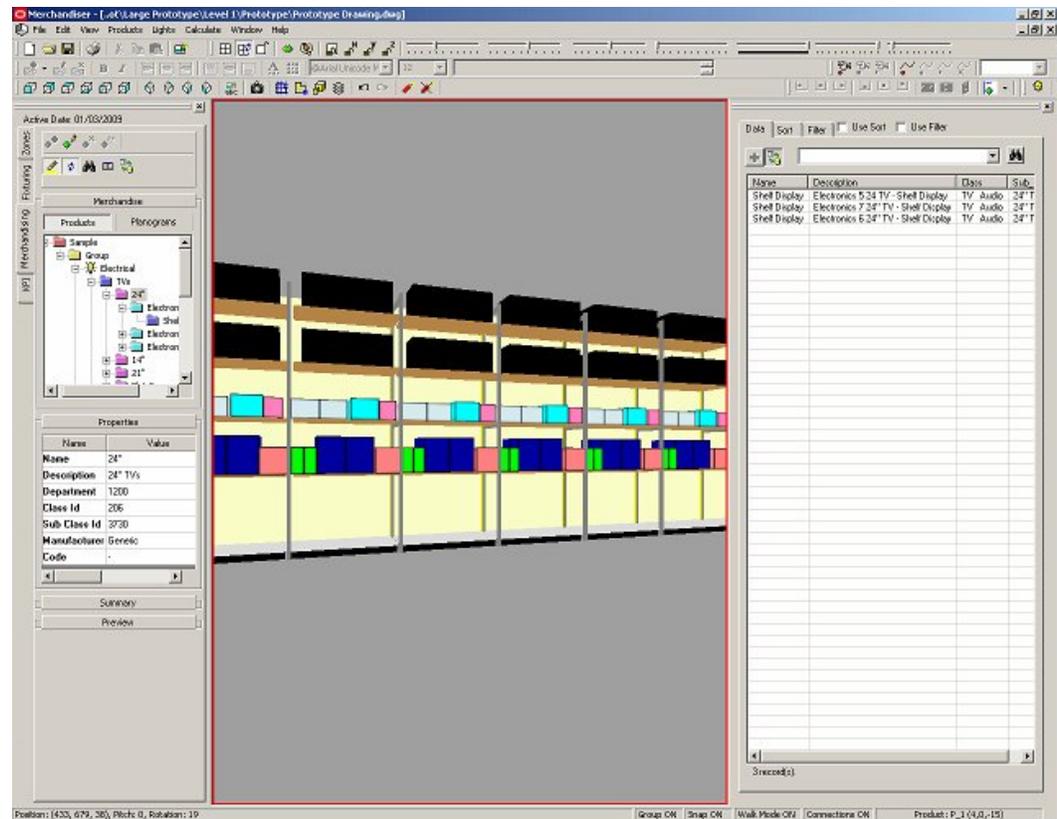
In addition, Gondolas can be created, edited and deleted.

Merchandiser Module Overview

Merchandiser has two main functions:

Design of Planograms.

Store planning in a 3D (Virtual Reality) environment.



Merchandiser Window

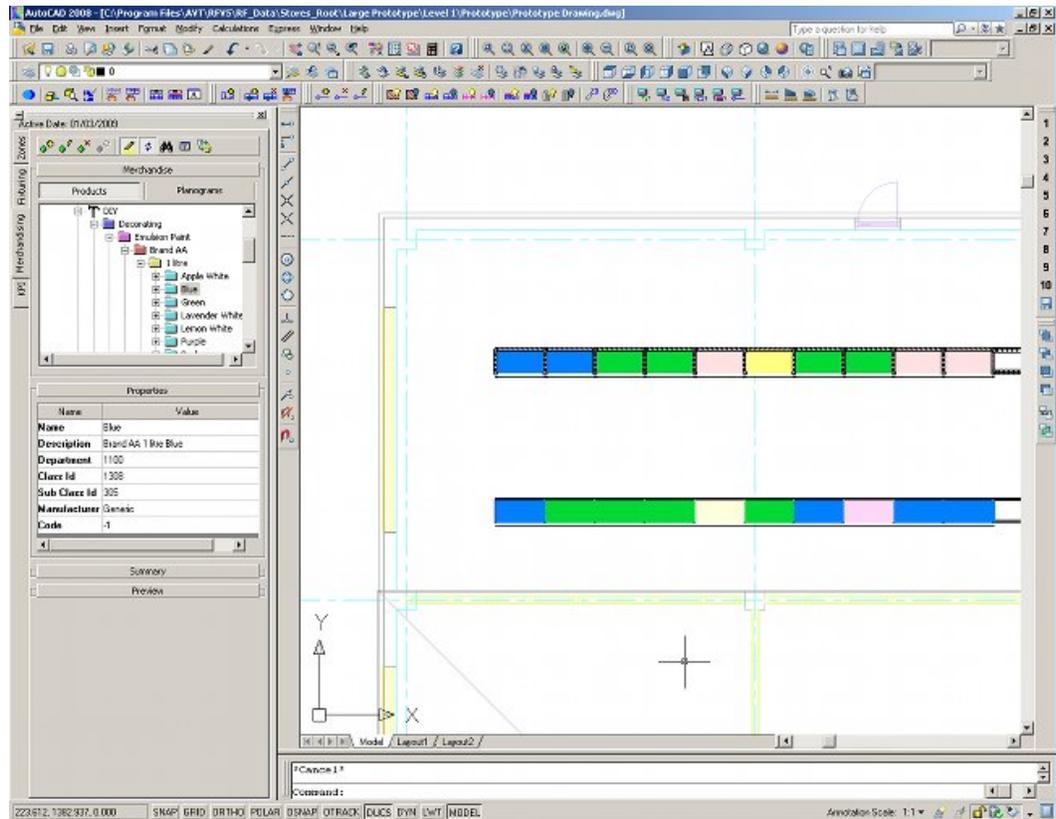
Planograms can be designed in varying levels of detail. These planograms can be arranged in a hierarchy and subsequently used to populate a store.

Merchandiser also allows the planograms, and the fixtures on which they have been placed, to be viewed in a Virtual Reality (VR) 3D environment. Using the provided controls, the Macro Space Management user can 'fly' round the VR store.

If required, the user can also take snapshots or short movies of the VR store to demonstrate its appearance to colleagues, suppliers and customers.

Planner Module Overview

The Planner Module is primarily used for the layout of zones, fixtures, and fittings within a store. It can do this with extreme accuracy. It can also be used to merchandise a store, but will show less detail than the same store if viewed in Merchandiser.



Planner Module Window

Starting with an architectural drawing:

- Zones can be placed
- Fixtures and Gondolas can be placed.
- The fixtures and gondolas can be merchandised with placeholders or planograms.
- Reports can be obtained on the store.

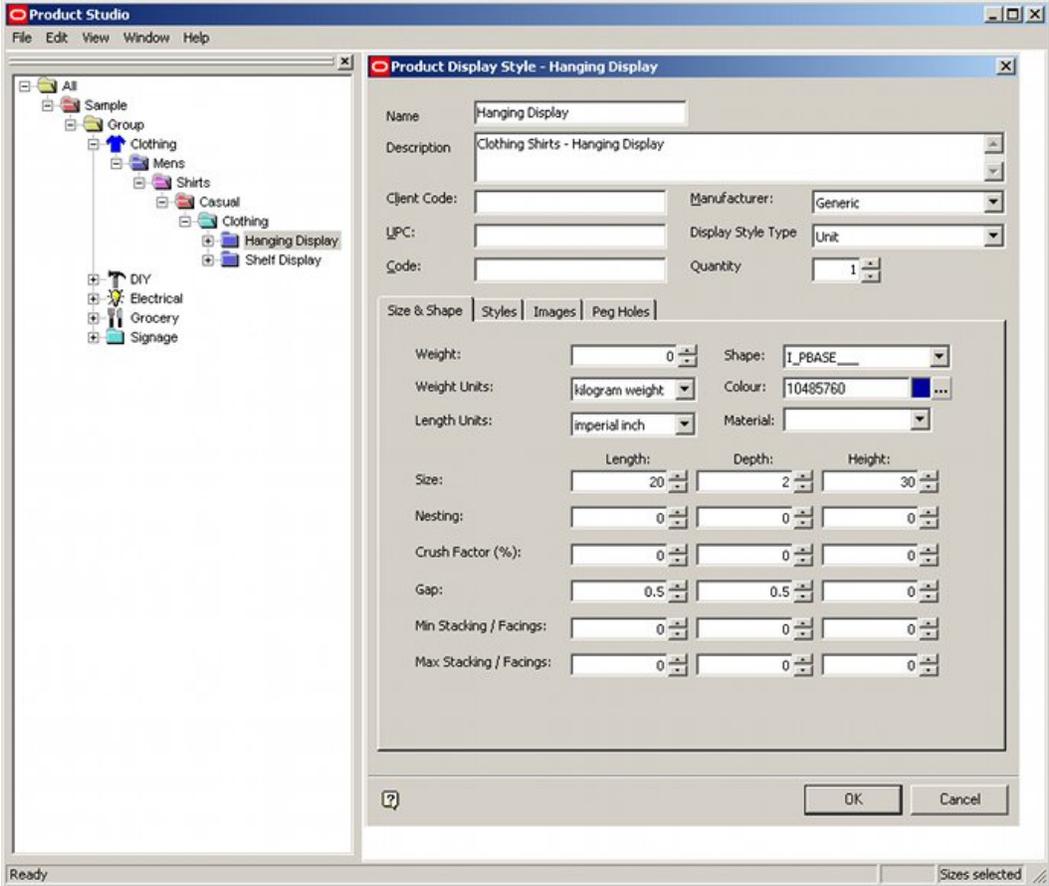
Product Studio Module Overview

Product Studio allows the design and editing of product information. This information has two main purposes:

It allows the dimensions, space around the product, maximum and minimum number of products, etc, to be specified. This allows Macro Space Management to calculate how the product will fit onto a fixture or shelf when the store is merchandised.

It allows images to be associated with products. This allows a virtual reality representation to be displayed when the product is viewed in a merchandised store in Merchandiser.

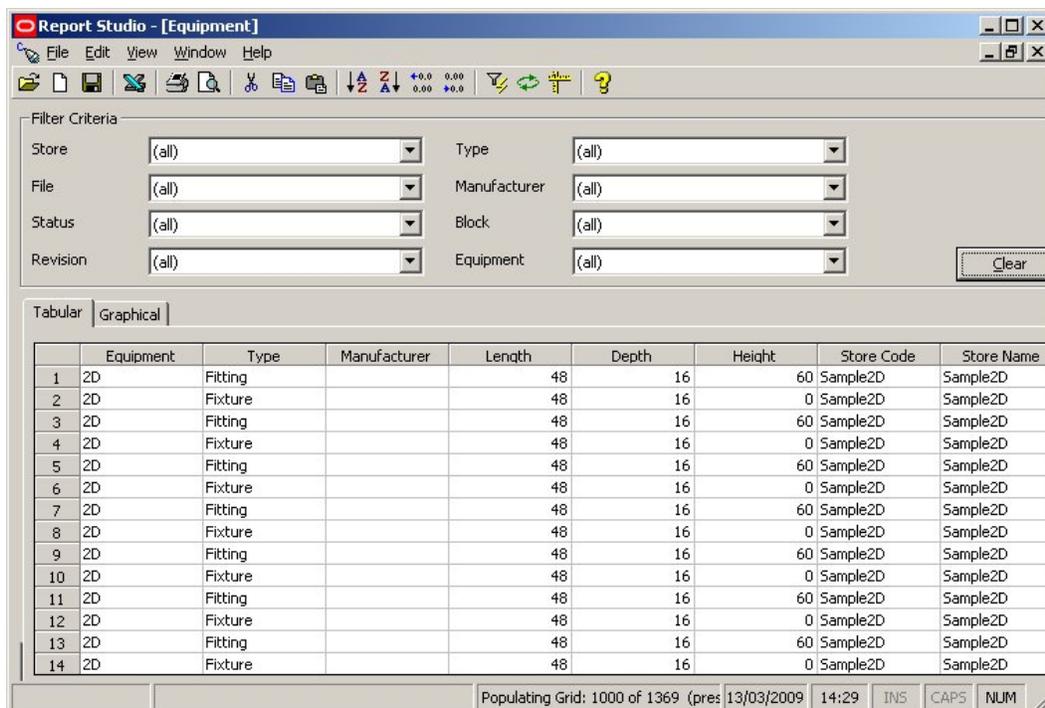
These images are arranged in a hierarchy that can be accessed in the Planner and Merchandiser environments.



Product Studio Window

Report Studio Module Overview

Report Studio allows the design, production, and review of customized reports giving an overview of the current and historical performance of the varying stores, floors, and revisions within Macro Space Management.



Report Studio Window

Reports can be designed using specifying customized lists of data and can be run to generate current information on performance by the retail outlets within Macro Space Management. Already generated reports can be reviewed to provide a comparison between historical and current performance.

Common Macro Space Management Components

Some Macro Space Management components can be accessed from a number of modules.

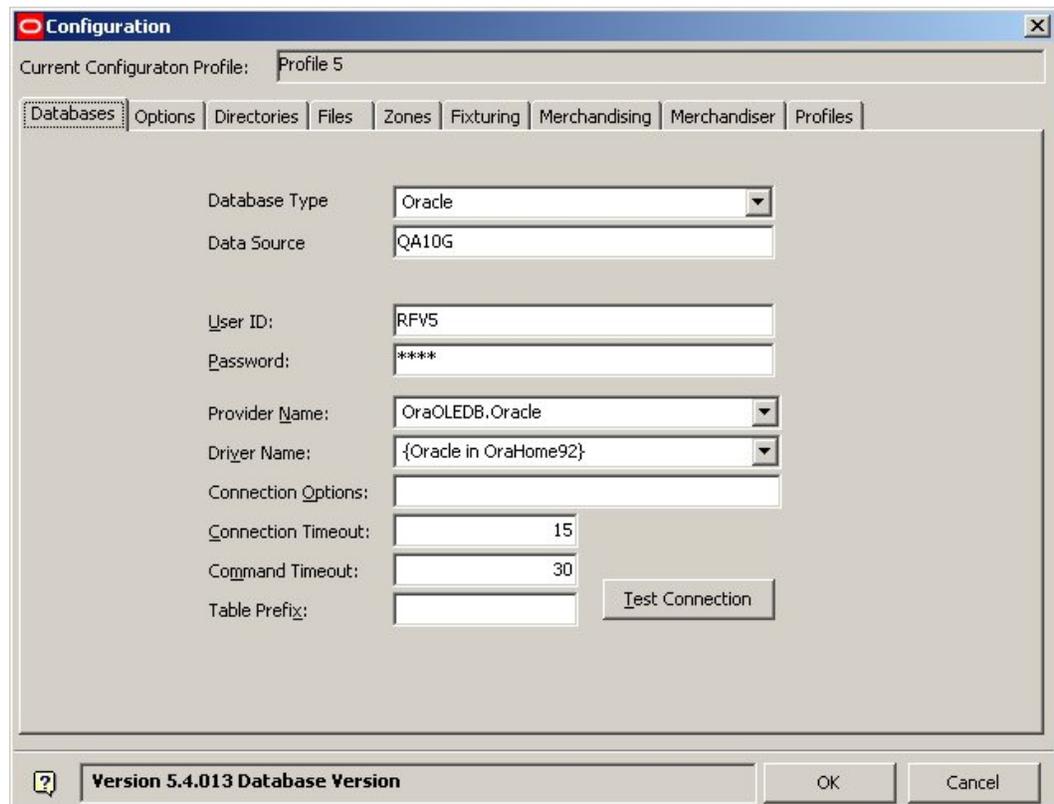
Component	Modules	Purpose
Configuration Module	Admin Module Data Import Module Fixture Studio Merchandiser Planner Product Studio	Used to make changes to Macro Space Management settings that are mainly local in effect.
Store Manager	Planner Merchandiser	Used to administer the available stores belonging to a retail organization.
Object Browser	Planner Merchandiser	User to control operations for zones, fixturing, merchandising and KPIs (performance measurement).

Component	Modules	Purpose
Object Grid	Planner Merchandiser	Used to select fixtures, fittings, gondolas, products and planograms from the list of those available.

These components are used to carry out tasks common to the modules. For example, the configuration module is used to set parameters that can affect how the Admin Module, Data Import Module, Fixture Studio, Merchandiser, Planner and Product studio operate.

Configuration Module Overview

The Configuration Module allows many of the features of Macro Space Management to be switched on or off. It also allows details of servers, directories, files to be customized, and a number of fundamental values set.

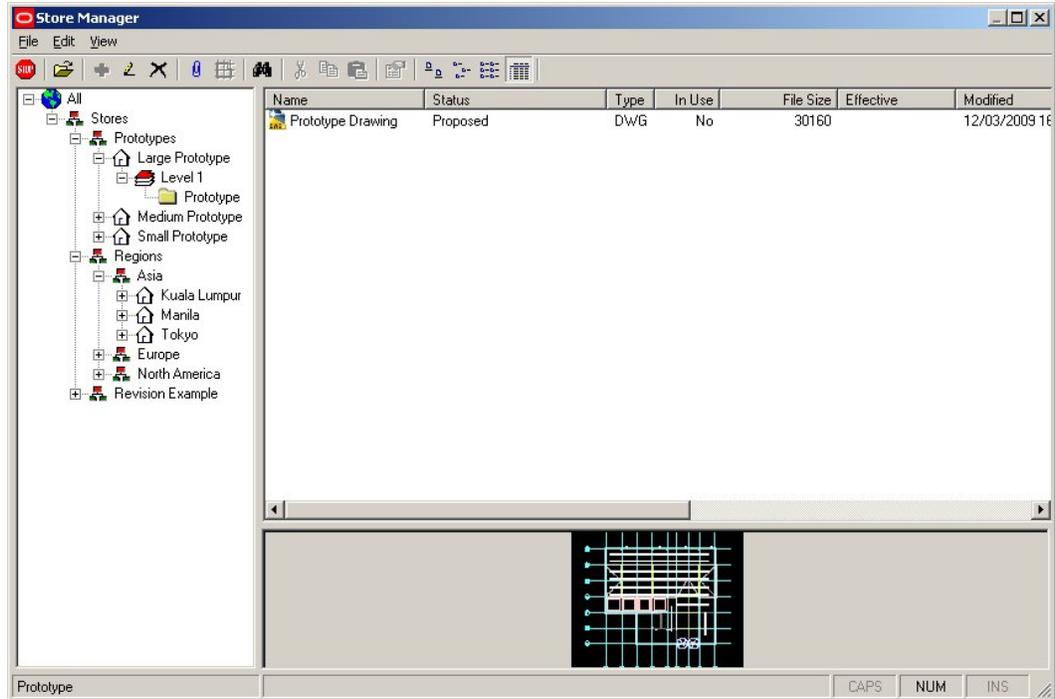


Configuration Window

Changes made in the Configuration Module can change information held in the Admin Module and vice versa.

Store Manager Overview

Store Manager is a module within Macro Space Management that allows the administration of Clusters, Stores, Floor, Revisions, and Files.



Store Manager Window

Macro Space Management contains large amounts of information. This can be as specific as the current contents of a shelf in a single store or as general as the floor plans to be implemented business wide in 6 months time. This mass of information has to be organized and administered. Within Macro Space Management this is achieved by the Store Manager module.

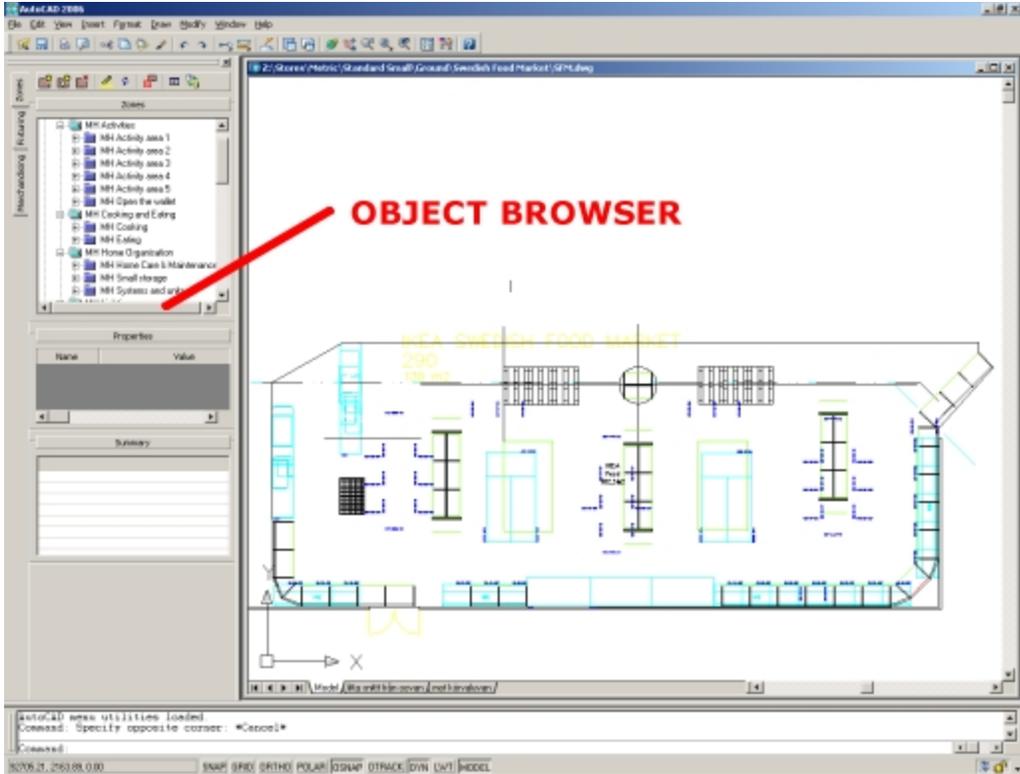
Store Manager operates in a similar way to Windows Explorer. It has been designed to be easy to use and allows information to be grouped in a way that reflects the structure of the organization.

Using Store Manager you can:

- Assign your retail outlets to logical groupings, allowing comparisons and analysis of sales to be made between individual stores or groups of stores.
- Assign or change floor plans for stores, allowing the effects of differing store layouts or merchandising mixes to be evaluated.
- Carry out routine administration on the files used within Macro Space Management.
- Get reports on the data used within Macro Space Management.
- Interface with external programs allowing import and export of data to and from those programs.

Object Browser

The Object Browser is a separate window on the main screen. It is found in both the Planner and Merchandiser environments and is used to control the various activities within those environments.



Object Browser

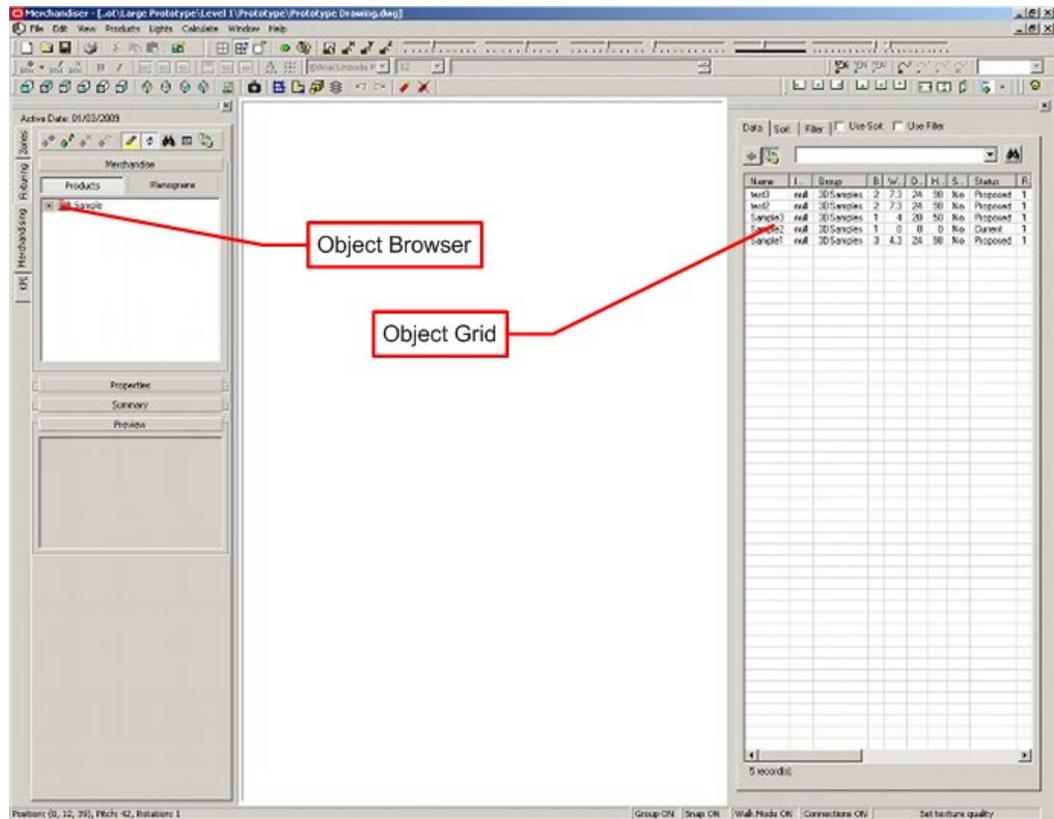
	Planner Environment	Merchandiser Environment
Zones	Yes	No
Fixturing	Yes	Yes
Merchandising	Yes	Yes
KPIs	Yes	Yes

Object Grid

The Object Grid provides an alternative to selecting lower level objects in the Object Browser, including the following:

- Zones
- Fixtures
- Products
- Planograms

It is an Object Browser window that is used in conjunction with the hierarchies visible in the Object Browser and is available in both the Planner and Merchandiser environments.



Object Browser and Grid

Information selected from a hierarchy in the Object Browser appears in the form of a list in the Object Grid. The user can then sort and filter the data to find the objects they want. Once the required object has been found it can be added to the drawing by dragging the item from the grid. In the Planner environment it can also be added by clicking the add button. (The Add button is disabled in Merchandiser).

The type of information that is displayed in the grid (as well as the sort and filter panels) is determined by the active panel in the object browser (that is zones, fixturing, products or planograms).

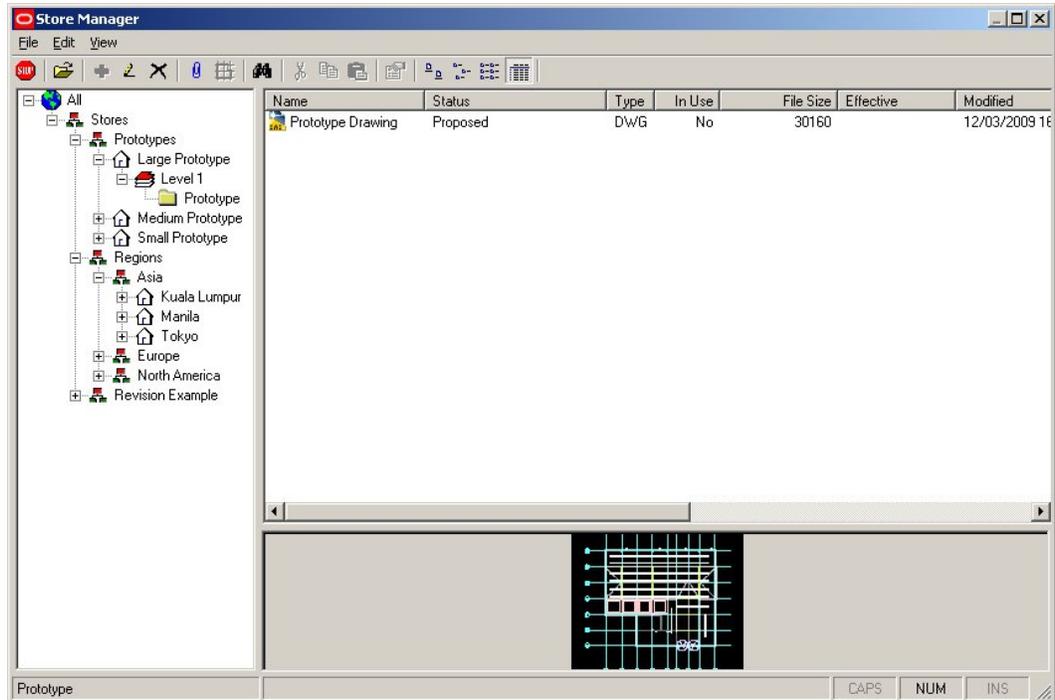
Macro Space Management Activities

This section lists some of the common activities performed in Macro Space Management. It includes the following sections:

- Organizing Stores
- Zones Overview
- Fixturing Overview
- Merchandising Overview
- KPIs (Performance Measurement)
- Reporting
- Distributing Store Plans to Stores for Implementation

Organizing Stores

Stores are organized using Store Manager. This can be accessed from either Planner or Merchandiser.



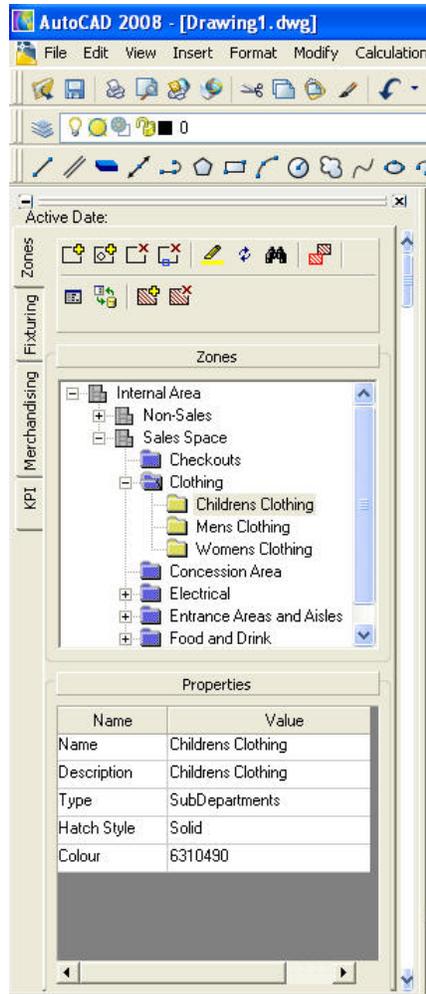
Store Manager Window

Store data can either be imported from a third party database or it can be created within Macro Space Management.

Zones Overview

Zones allow the internal area of the store to be subdivided into areas of different purposes. Some Zones have Sales functions; for example, electrical goods, fruit and vegetables, or women's fashion. Other Zones are used for non-sales purposes; for example offices, stock rooms, or toilets.

Zone Types are configured in the Admin Module. Zones are added, edited, and, deleted in Planner using the Zones Tab on the Object Browser.

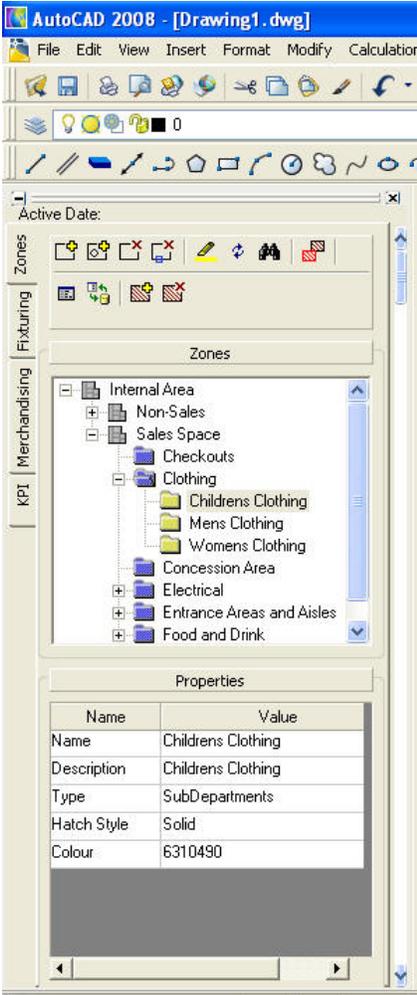


Object Browser - Zones

Fixturing Overview

Fixturing is the placement of fixtures, fittings, and gondolas into a drawing to form a coherent arrangement within a store. (The fixtures and gondolas can then be populated with merchandise).

Fixtures are drawn in the Planner environment, then imported into Fixture Studio and given intelligent (Macro Space Management) properties. Once in Fixture Studio, fixtures can be combined to form gondolas. These fixtures and gondolas then become available to Planner and Merchandiser where they can be added, edited, and deleted from the active drawing using the Fixtures Tab on the Object Browser

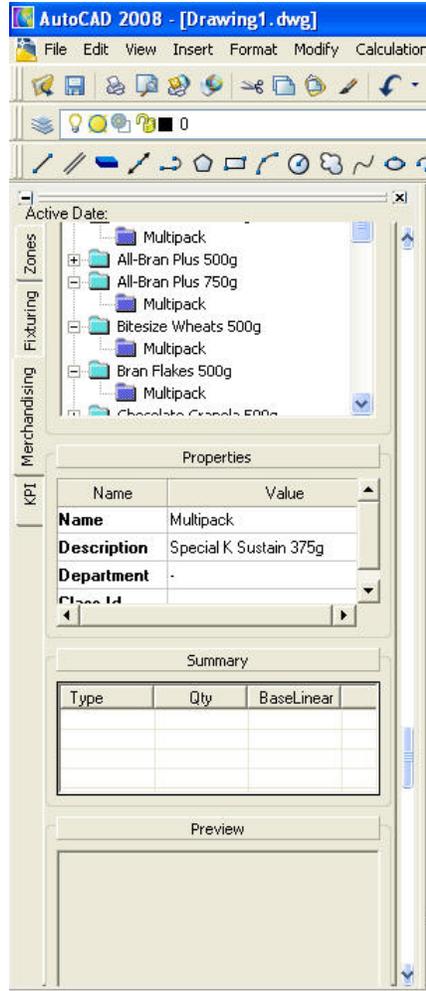


Object Browser - Fixturing

Merchandising Overview

Merchandising is the placement of Products or Planograms on the fixtures and gondolas within a store. Products are created, edited, and deleted in Product Studio. Planograms can be imported or created, edited, and deleted in Merchandiser.

Products and Planograms are added, edited, and deleted to fixtures in the drawing using the Merchandising Tab on the Object Browser.

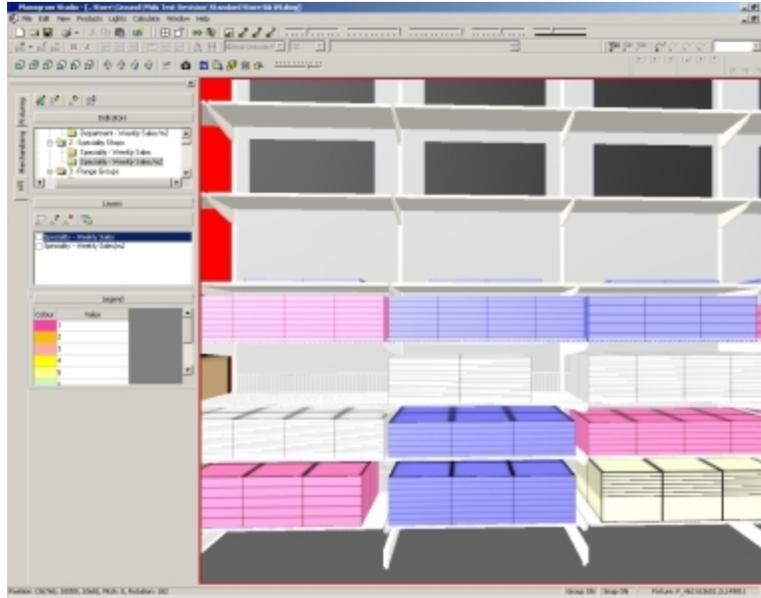


Object Browser - Merchandising

Macro Space Management allows some constraints on what can be placed where. For example styles which will only allow products to be placed on fixtures with a compatible style. Another example is planograms which can only be placed on fixtures that match preset criteria for that planogram.

KPIs (Performance Measurement)

Key Performance Indicators are available within Planer and Merchandiser. They can be applied to imported data (for example EPOS data) or to data within Macro Space Management (for example fixtures that have multiple planograms placed in error).



Examples of KPI

KPIs work as follows:

- The base data is selected by means of a SQL script.

- Maximum and minimum expected values are assigned to the data.

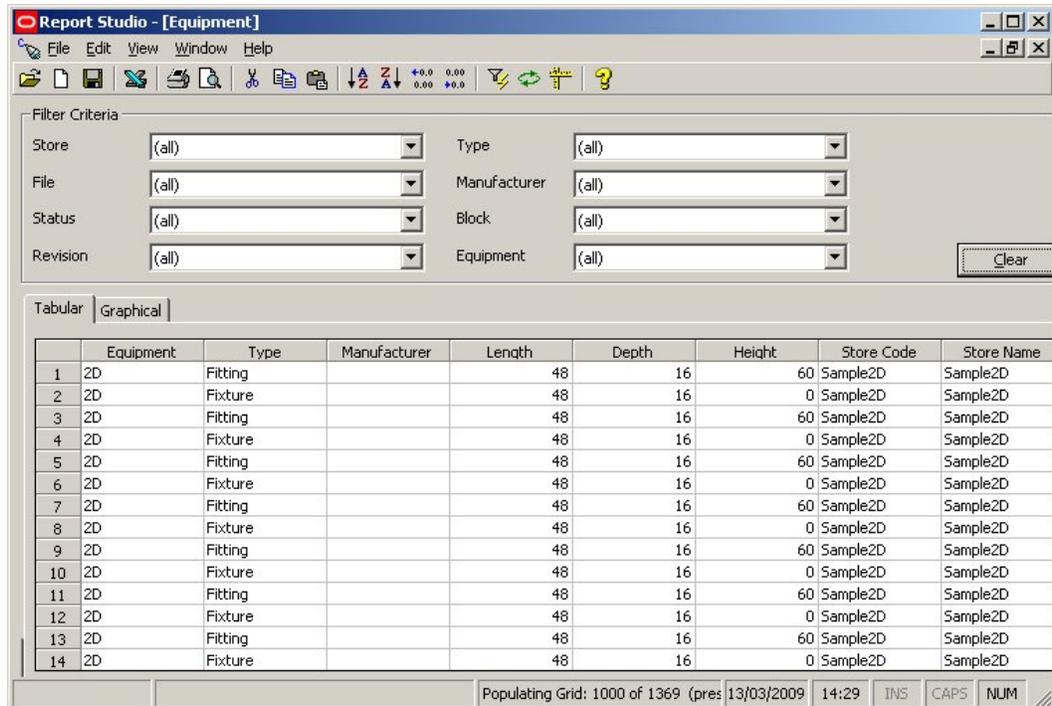
- The data range is then assigned to color coded bands.

- The fixtures in Merchandiser are color coded according to the specified criteria.

KPIs can either be configured by the customer or customized by Oracle if required.

Reporting

Reports can be obtained either by Report Studio or by other Oracle tools. The figure below is a Report Studio report.

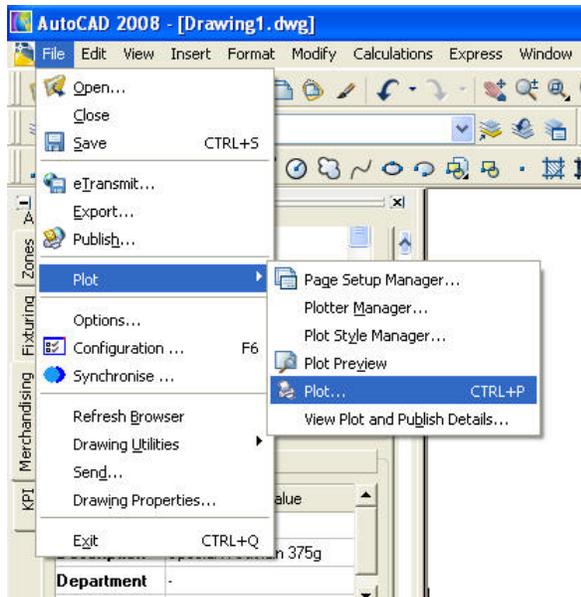


Reporting Studio Window

This enables the production of tabulated reports of data. Customizable filters allow the user to extract the precise data required.

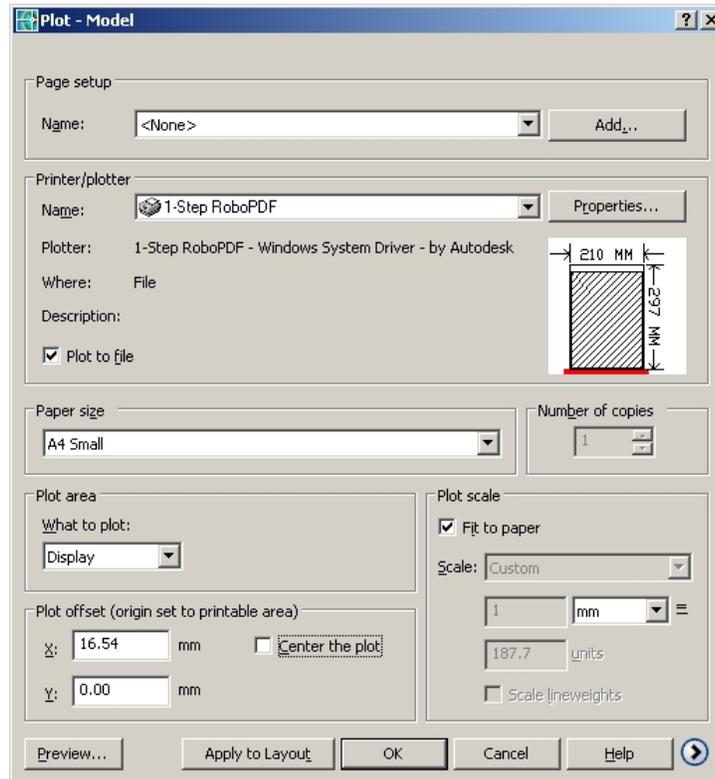
Distributing Store Plans to Stores for Implementation

There are several ways of distributing store plans to stores for implementation. One way is to use the AutoCAD Plot option. This is invoked from the File Menu.



Planner - Plot Option

This will bring up the Plot dialog box.



Plot Dialog Box

This allows you to output store plans in several forms including printed, PDF, and DWF file. These can then be sent to the designated store.

Some Useful Concepts

This section introduces you to some of the following useful concepts:

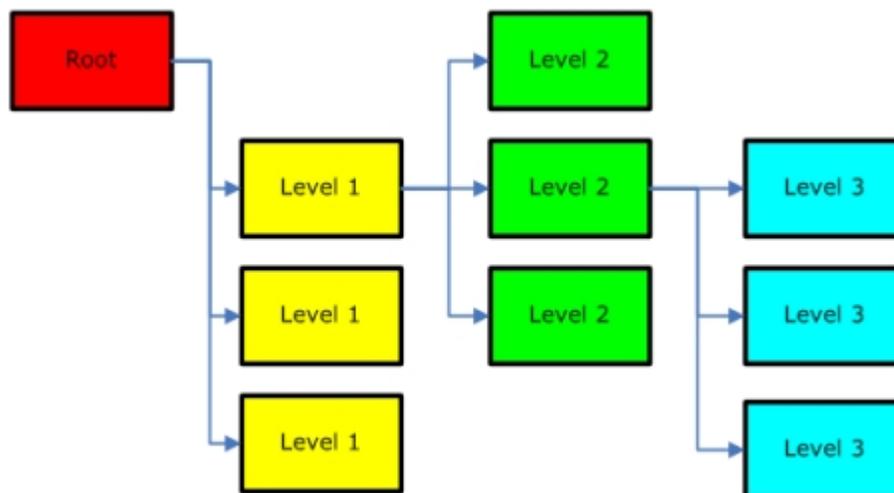
- Hierarchy
- Status and Life Cycles
- Overview of Synchronization and Adjacencies
- Checking in and checking out
- Read Only Files

Hierarchy

Lot of information in Macro Space Management is arranged in Hierarchies. Examples include:

- Stores
- Fixtures
- Gondolas
- Products
- Planograms

A hierarchy is simply a logical way of arranging a list of data. It is in the form of a tree, where you can open out branches in the tree as you move through it.



In the simplified example below, you can view the hierarchy started at the root (All) and opened it to show 3 level 1 options - Clothing, Electrical Goods and Food & Drink.



Hierarchies can be imported from third party databases or set up within Macro Space Management. The main hierarchies can be added to, edited or deleted from as follows:

Hierarchy	Where Maintained
Stores	Store Manager
Fixtures	Fixture Studio
Gondolas	Fixture Studio
Products	Product Studio
Planograms	Merchandiser

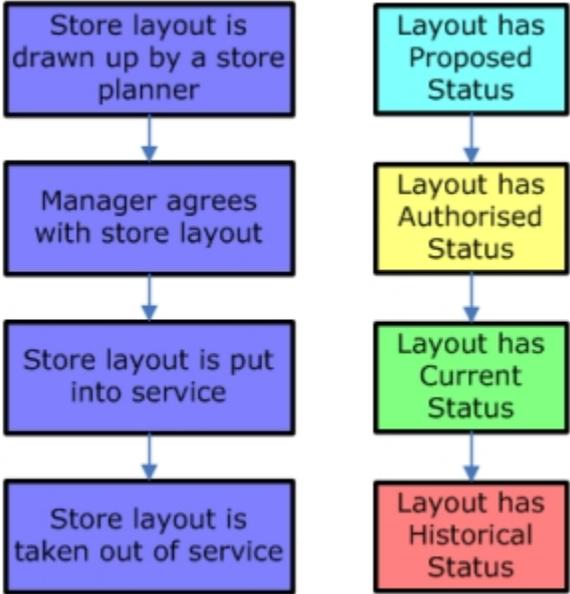
Status and Life Cycles

Objects within Macro Space Management go through a life cycle.

Object	Life Cycle
Store	A store could start as a management proposal, then be built and opened. Over the years it could become obsolescent and the decision be taken to close it.
Store Plans	Stores plans go through a series of stages. They could start as a concept, be approved by a manager, go into service at a specified date, become outdated by the passage of time and be retired.
Fixtures	Fixtures could be designed, go into service, then ultimately be replaced by a newer version.
Products	Products (for example special offers) could have a specified life.
Planograms	Planograms (just like products) could have a specified life.

Macro Space Management needs to keep track of where these objects are in their life cycle and it does this through Statuses. A status is no more than a label attached to an object which tells the software (and the user) where it is in its life cycle.

Considering the example of the store above, it would go through the following statuses during its life cycle..



These statuses could either be changed manually, or be changed automatically when they reach specific dates. (The exact details will depend on how Macro Space Management is configured).

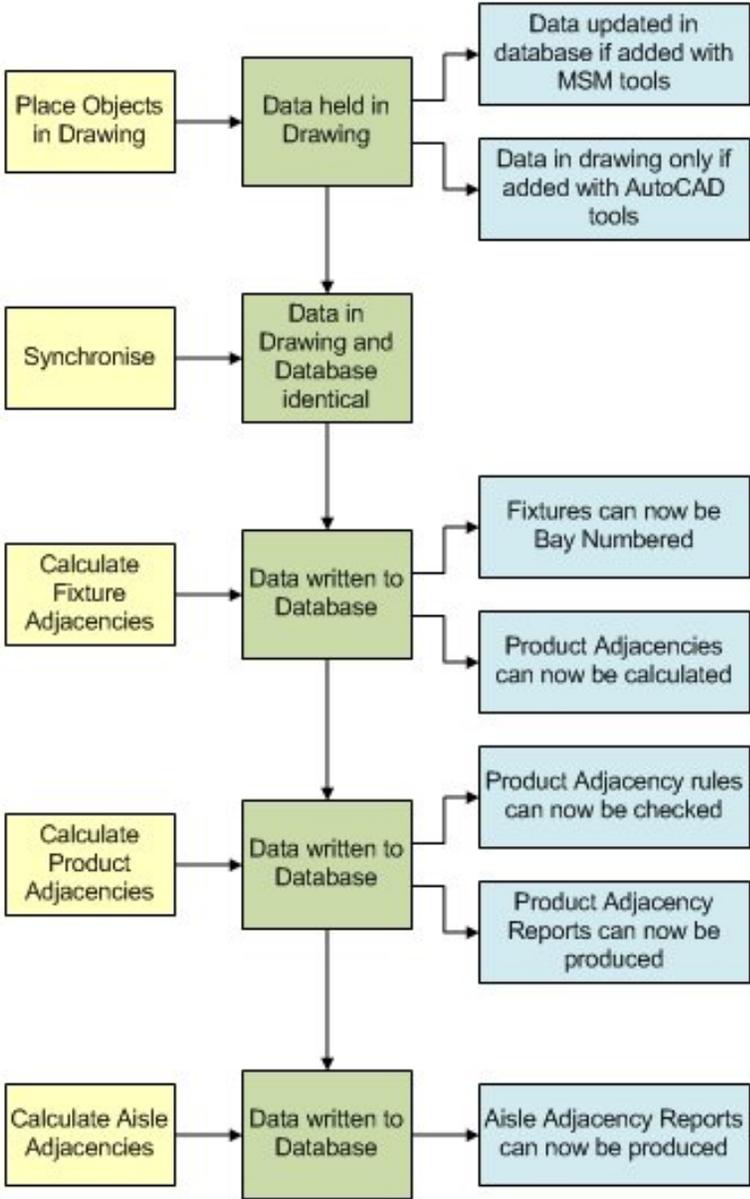
What you can do with objects within Macro Space Management often depends on their status. For example, only one store layout at a time for a floor within a store can have Current status - because in real life you can only have one possible arrangement for a store layout.

In similar vein, once a store layout becomes Historical - because it has been superseded by another more current layout - it is locked from any further changes.

Note: Sometimes you cannot carry out an action in Macro Space Management because the status of the object does not allow it. For example, if a fixture has had its status changed from Current to Old it will no longer be possible to see it in the hierarchy of available fixtures in Planner or Merchandiser (although it can be accessed via Fixture Studio).

Synchronization and Adjacencies

Synchronization and **Adjacency Calculations** are essential to the correct functioning of Macro Space Management.



After fixtures have been placed (and edited), Synchronization is run to ensure the details in the central database are the same as those on the drawing. Running Calculate Adjacencies then successively calculates Fixture Adjacency and Product Adjacency. These respectively calculate the relationship of fixtures and products to each other.

Checking in and checking out

The central Macro Space Management database holds many files. It is important that only one person at a time can make changes to a specific file. This is done by Checking Out and Checking In files.

When an In-Store Space Collaboration or Macro Space Management user opens a file, it is automatically registered as Checked Out. Checked Out files can only be altered by the

user who has checked it out. Other users can view the file in Read Only mode, but they cannot make alterations in it.

Checked In files are files that have been closed (and normally saved) by their current user. Checked in files can be opened and altered by any In-Store Space Collaboration or Macro Space Management user.

Checking Out and Checking In are normally automatic, but some files may have to be manually checked in if there has been a system failure. Manual Checking In can only be done using Store Manager in Macro Space Management. In-Store Space Collaboration users have no way to manually check in files.

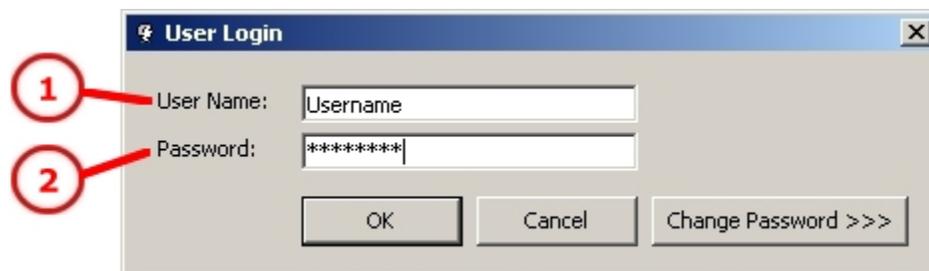
Read Only Files

Read Only files are files the user has permission to view but not to change. Within Macro Space Management there are three common reasons why files open as Read Only:

- The file has is in use by another user and has been Checked Out to them.
- The user does not have the privileges to make changes to the file.
- A file has been set to Read Only status by Macro Space Management. An example would be files of Historical status.

Logging On to Macro Space Management

When Macro Space Management is started a login dialog box appears to enter User Name and Password.



User Login Window

The User Name identifies the individual and specifies the privileges (access rights) they have. The Password which should be kept secret, confirms the identity of the individual logging in.

Note: The Configuration Module can be accessed directly from the log in window for users with Administrator's privileges. The Configure button can be toggled into view by use of <Ctrl + A>. You will not be able to use this option unless you have Administrator's Privileges.

**Configure Login**

Access Rights and Privileges

This section provides information on the access rights and privileges in Macro Space Management. It includes the following sections:

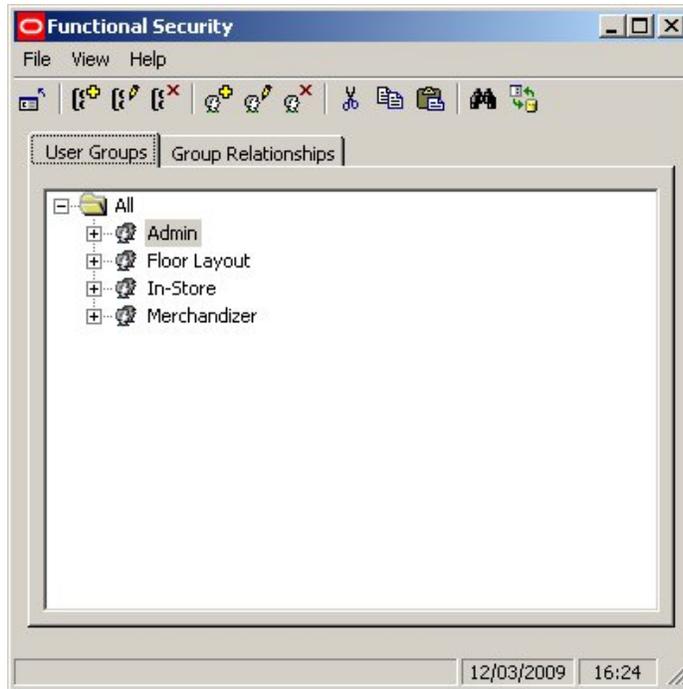
- [Macro Space Management Privileges](#)
- [Passwords](#)
- [Assigning and Changing Passwords](#)
- [User Privileges](#)
- [Security Server](#)

Macro Space Management Privileges

Access Rights allow Macro Space Management users different levels of access to the software. They are set in the Admin Module.

Note: Access to the Admin Module is restricted to a limited number of users. This is because the Admin Module can be used to set a wide variety of parameters affecting how Macro Space Management operates.

Setting Access Rights is done by means of the Functional Security option, which can be accessed from the Security option.



Functional Security

Passwords are also initially assigned in the Admin Module, but can be changed by the user. (See the Admin Module Help file for more information.)

Passwords

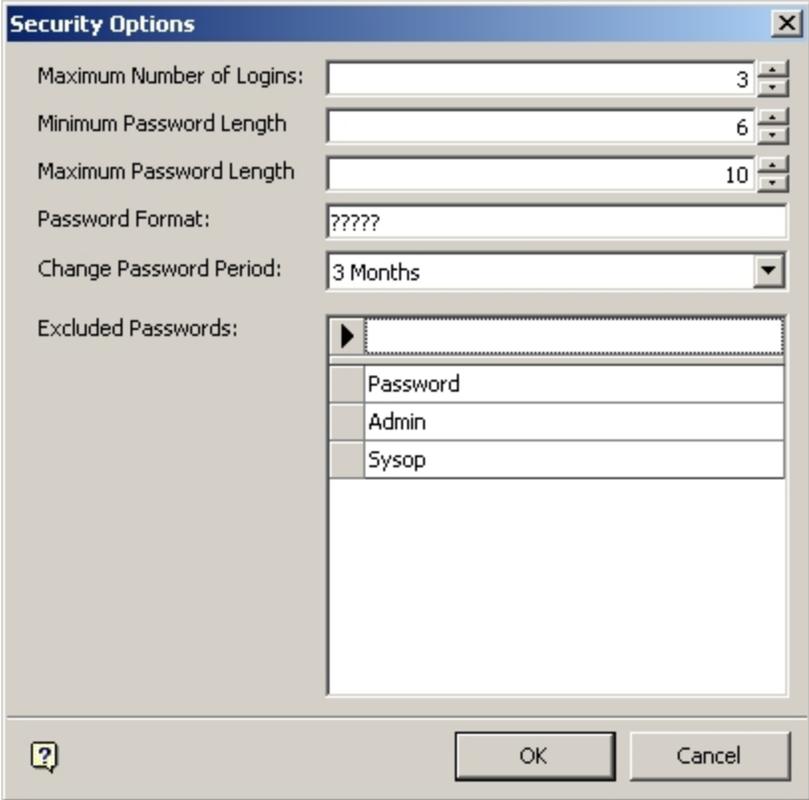
The Password Format is set in the Admin Module using the Security Options.

Note: Access to the Admin Module is restricted to a limited number of users. This is because the Admin Module can be used to set a wide variety of parameters affecting how Macro Space Management operates.

Depending on these settings a password should have:

- A maximum and minimum length
- A number of permissible log in attempts before the program
- A time period between mandatory password changes

Certain passwords can also be excluded by the Administrator. These would normally be easy to guess passwords such as Password, Admin or Sysop.

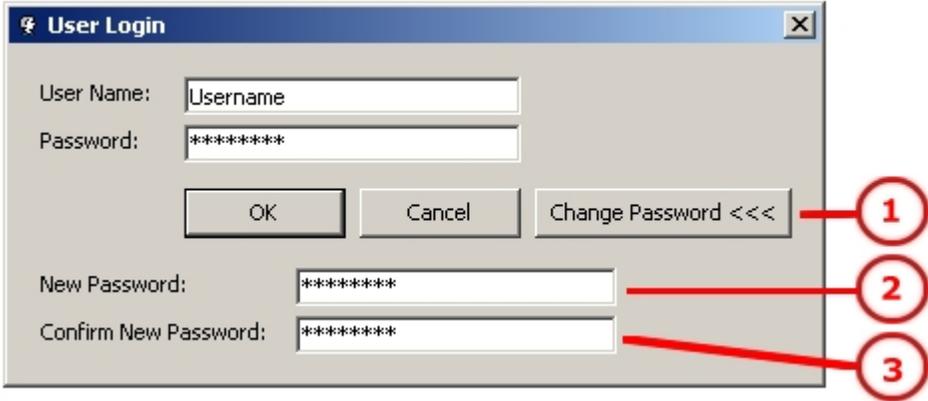


Security Options

Assigning and Changing Passwords

Passwords are initially assigned in the Admin Module when a new user is given access rights by an Administrator.

This password can be changed by the user at any time during log in by clicking on the Change Password (1) button. This will bring up an additional dialog that will allow the user to select (2) and confirm (3) a new password.



Change Password

Depending on settings within the Admin Module, users may also be forced to change passwords at preset intervals. This interval could be daily, weekly, monthly, yearly or never.

User Privileges

The user **Privileges** (access rights) are determined by the User Group he/she is put into by an Administrator. User Groups are defined within the Admin Module. Each User Group is given access to specified parts of Macro Space Management. For example, users assigned to the Admin User Group would have access to all parts of the program.

Users assigned to the Store Planners group may have access restricted to the Store Manager, Configuration and Fixture Studio Modules, as well as general access to the main part of Macro Space Management.

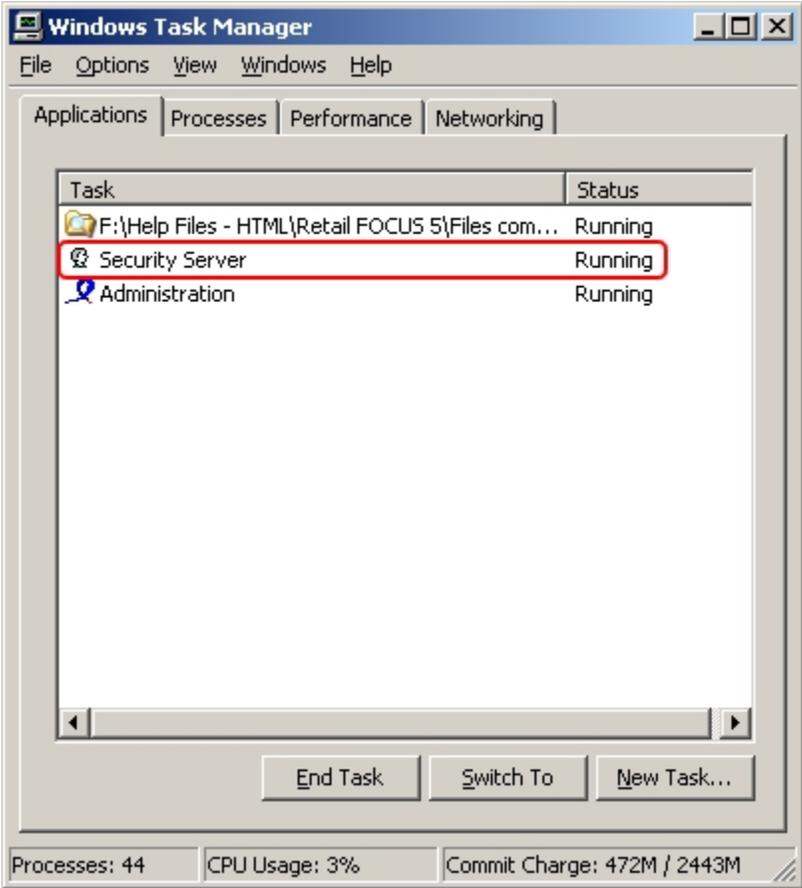
Users assigned to the *Merchandiser* group may have access restricted to the Store Manager, Configuration, Planogram and Product Studio Modules, as well as general access to the main part of Macro Space Management.

Attempts by the user (with Store Planners or Merchandisers privileges) to gain access to other parts of the program they have not been assigned rights, for example Admin Module, is not allowed. If users do not have access rights to a specific part of a module, those options are not activated and not available to that user.

Security Server

Security Server is a part of Macro Space Management that runs in the background. Once a user has logged into Macro Space Management, Security Server retains a record of the user's access rights. Each time a Macro Space Management user attempts to open another module, Security Server either allows or prevents it, depending on the user's rights.

This means that a user only has to log into Macro Space Management once per session. Its operation can be verified via the Windows Task Manager.

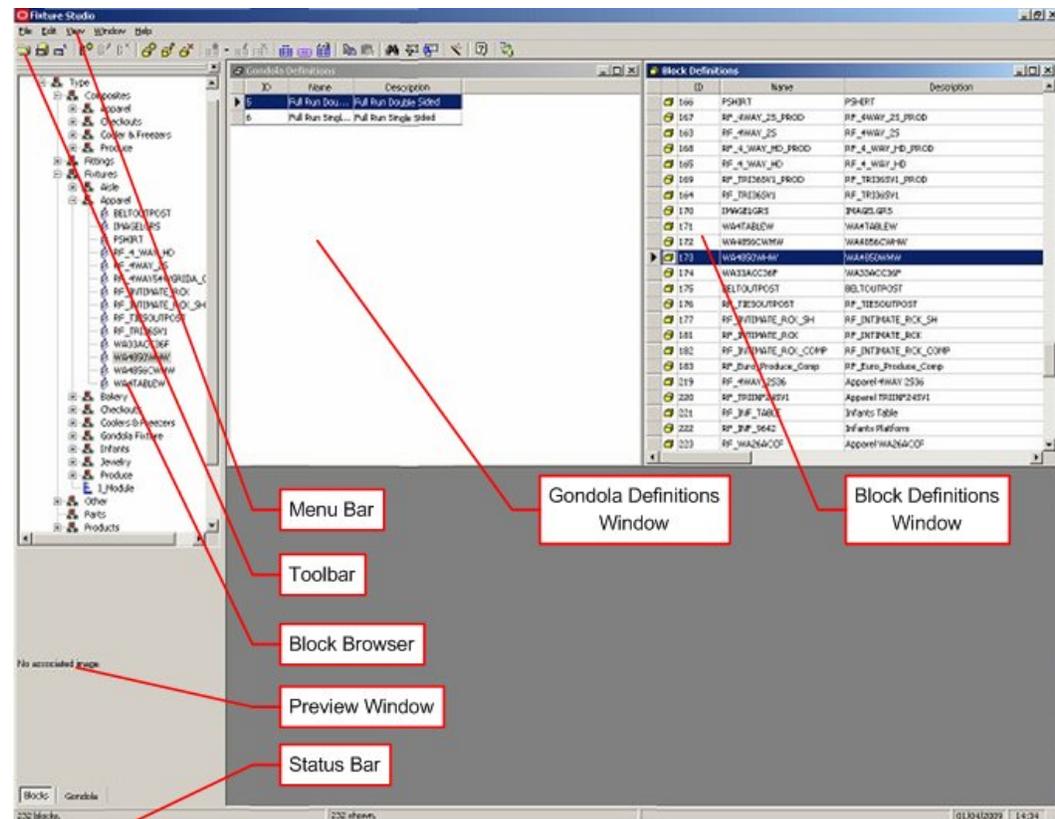


Security Server Window

Fixture Studio

Fixture Studio Components

The Fixture Studio Window has a number of parts.



Fixture Studio Window

- 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.

Fixture Studio Menu Bar

The **Menu Bar** contains five options.

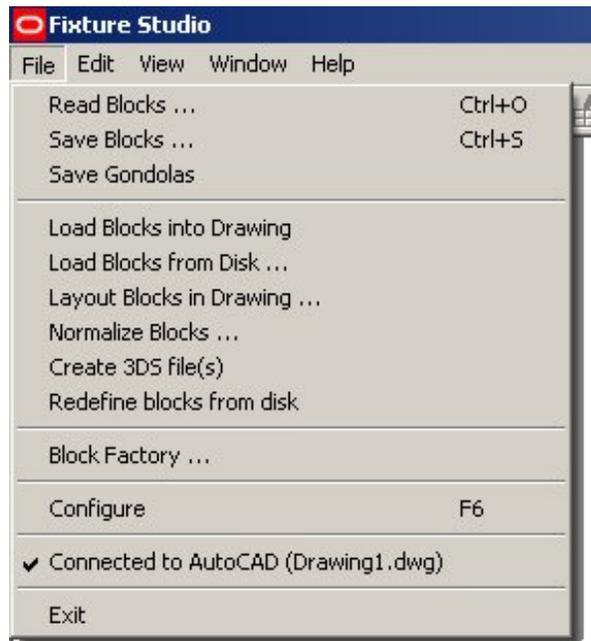


Menu Bar

- The **File** menu allows blocks to be read and saved. It also allows blocks to be loaded to and saved from the drawing and allows the blocks to be subjected to operations such as normalizing or producing 3DS files.
- The **Edit** menu allows block definitions to added, edited, and deleted.
- The **View** menu allows the way block definitions display in Fixture Studio to be defined.
- The **Window** menu allows you to specify the way the various windows and dialog boxes display in Fixture Studio.
- The **Help** menu calls the Help module and allows you to see system information for the computer the software is running on.

File Menu

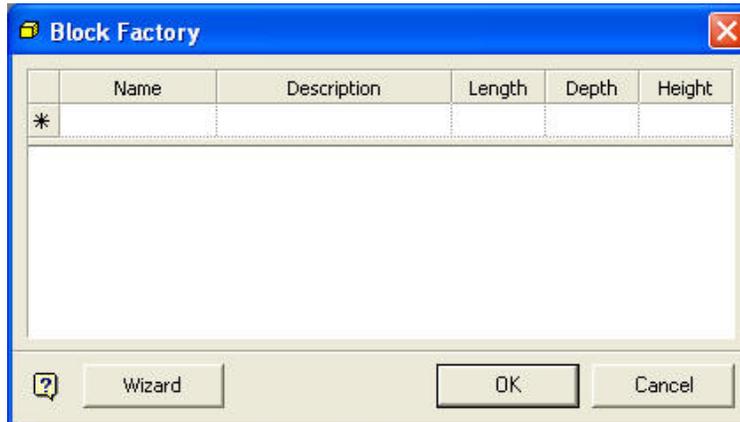
The **File Menu** has varying options concerned with reading and saving blocks, AutoCAD operations and connection to AutoCAD.



File Menu

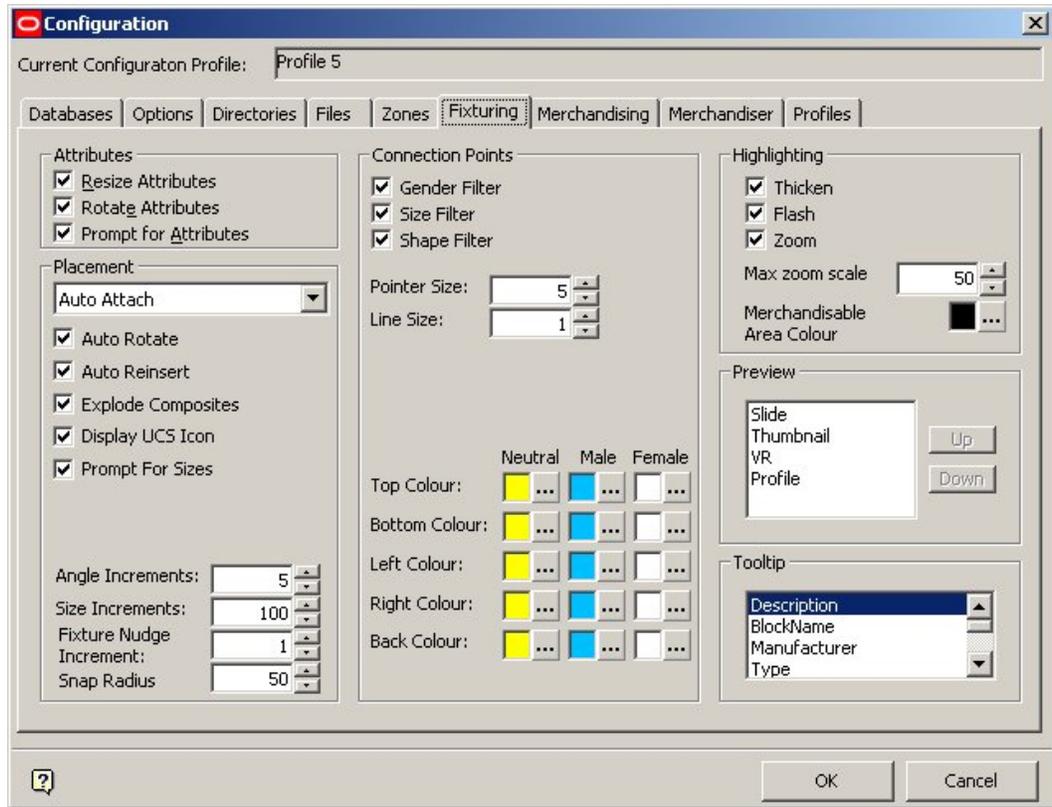
Note: The Load Blocks into Drawing, Load Blocks From Disk, Layout Blocks in Drawing, Normalize Blocks, Create 3DS Files and Redefine blocks from disk options are not enabled unless the Connect to AutoCAD option has been checked.

- **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, Lay Out Blocks in Drawing, Normalize Blocks, Create 3DS Files and Redefine blocks from disk** 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 dialog box.



Block Factory

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

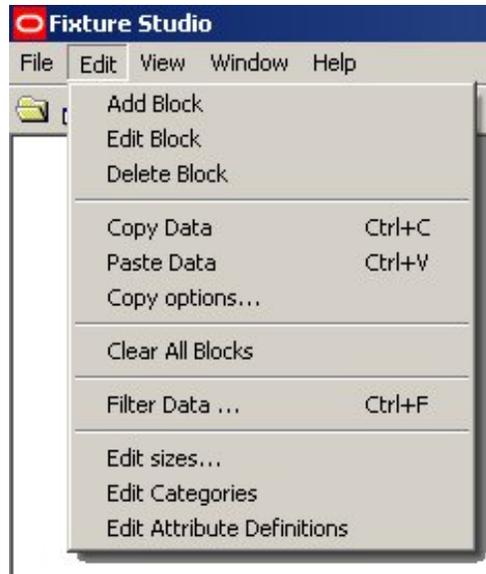


Configuration module

- **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 Menu

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



Edit Menu

- **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 appears.

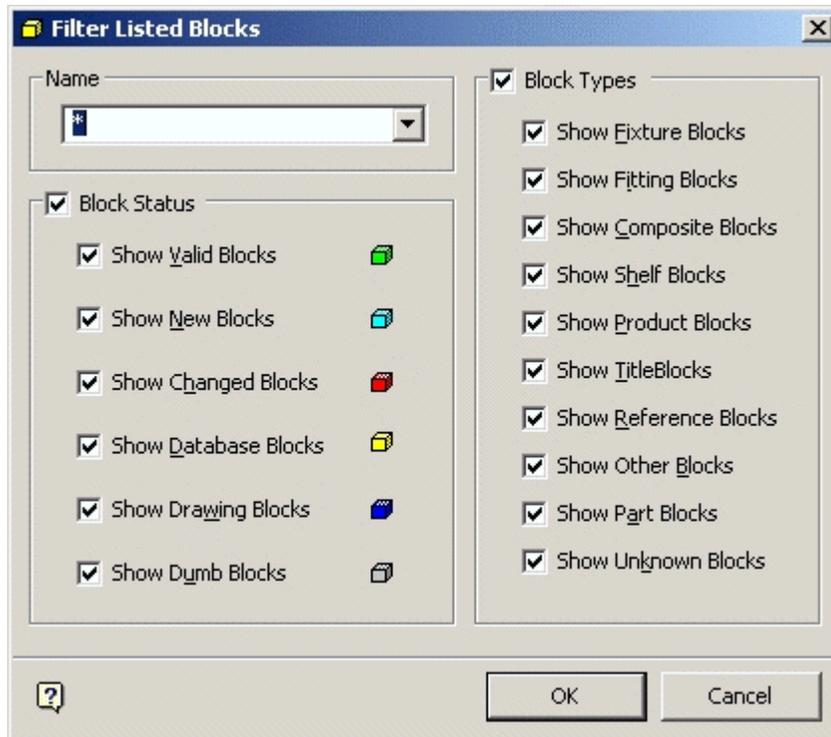


- **Copy Options** brings up a dialog box allowing the data being copied to be filtered.



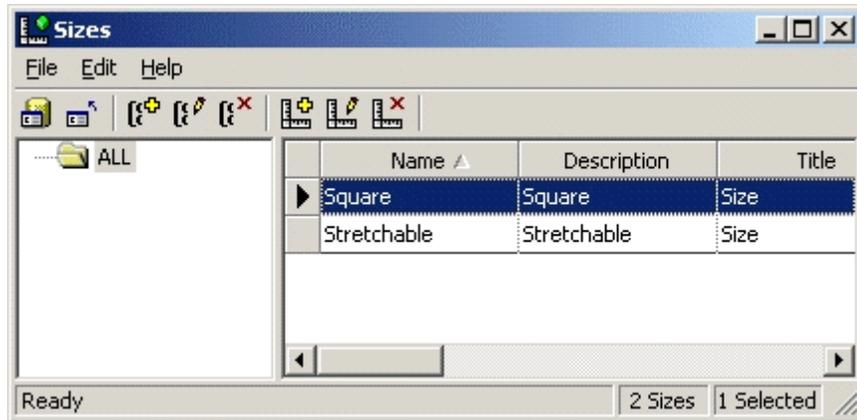
Copy Options

- **Clear all Blocks** removes all blocks from the list of blocks currently loaded into Fixture Studio.
- **Filter Data** brings up the Filter Listed blocks dialog box.



Filter Listed Blocks

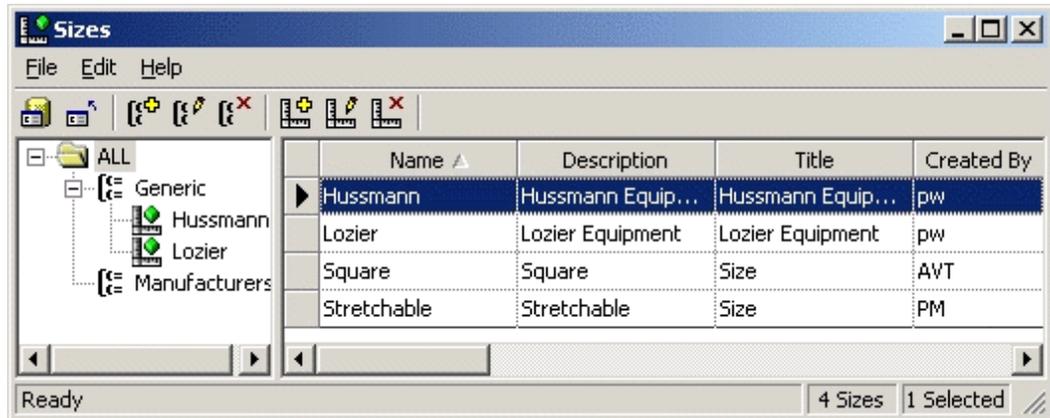
- **Edit Sizes** brings up the Edit Sizes dialog box.



Sizes Window

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.

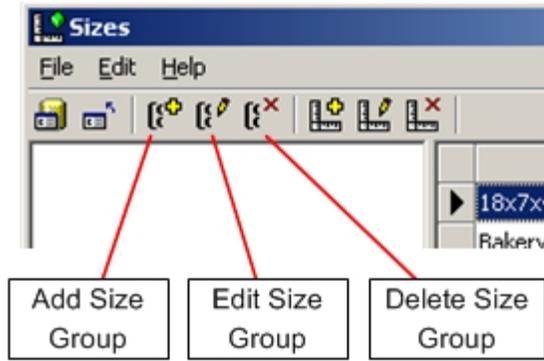


Editing Sizes

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

Setting Up Size Groups

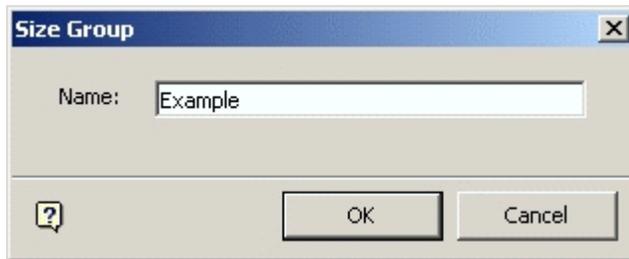
Size Group Classes are used to organize size groups into sub-divisions that make it easier to find the required Size Groups. Size Group Classes have an administrative function, but do not directly affect the data stored in Size Groups.



Setting Up Sizes

Adding a Size Group

You can build a hierarchical tree using Adding a Size Group option. To add a Size Group, highlight the node in the hierarchical tree to which the new Size Group is to be added and click the **Add a Size Group** icon. The Size Group dialog box appears.



Size Group

Type in the name of the required Size Group and click **OK**. The Size Group is 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 the **Edit a Size Group** icon. The Size Group dialog box appears.



Renaming Size Group

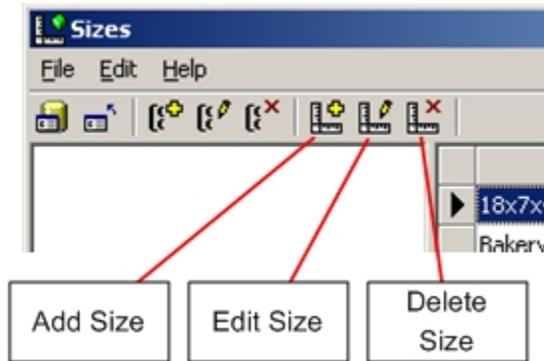
Change the name of the Size Group then click **OK**. The Size Group is amended in the hierarchical tree.

Deleting a Size Group

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

Adding a Size

To add a size click the **Add a Size** icon in the section of the toolbar concerned with adding, editing, and deleting sizes.



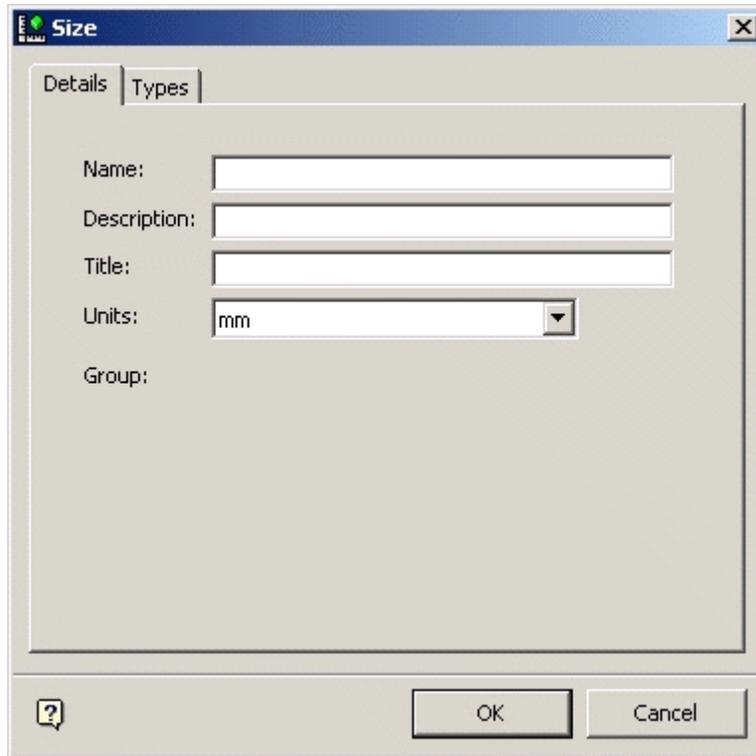
Adding a Size

When adding a size, first select the size group it is to be added to by clicking it. If this is not done, an error message appears.



Size Group - Error

If a Size Group has been selected, the Size dialog box appears.



The image shows a software dialog box titled "Size". It has two tabs: "Details" and "Types". The "Details" tab is selected and contains the following fields:

- Name: [Text input field]
- Description: [Text input field]
- Title: [Text input field]
- Units: [Dropdown menu showing "mm"]
- Group: [Text input field]

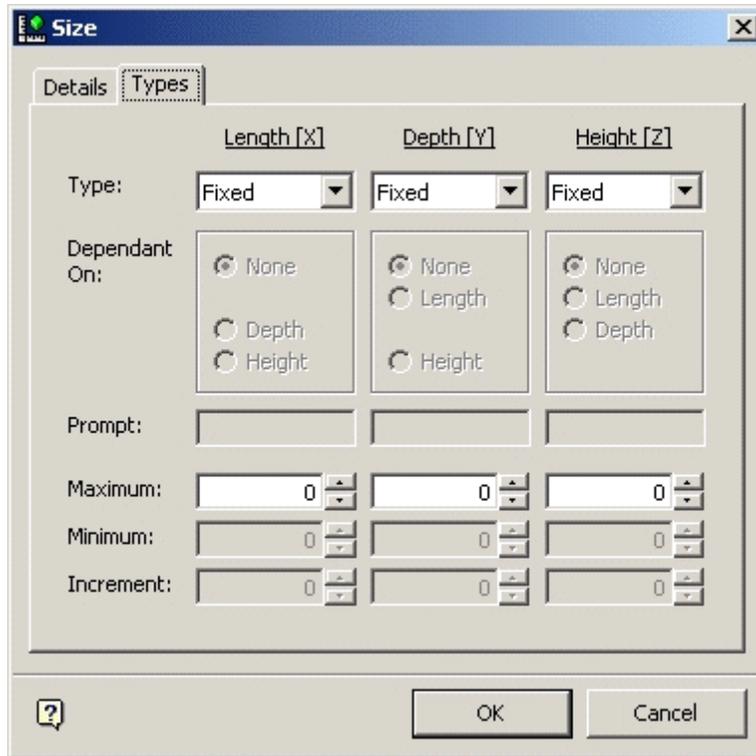
At the bottom of the dialog, there is a help icon (question mark in a square), an "OK" button, and a "Cancel" button.

Size - Details tab

On the Details tab, enter a name, a description and a title for the size. Select the units from the drop down list. Click OK to confirm and the size group is 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.

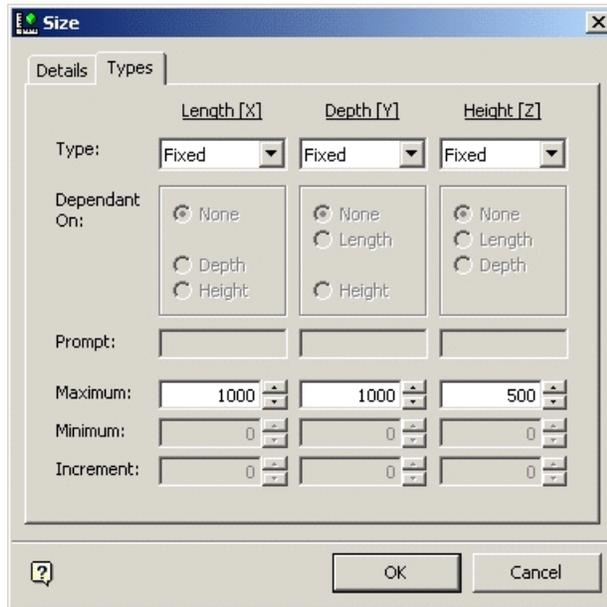


Size - Types tab

Options are:

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

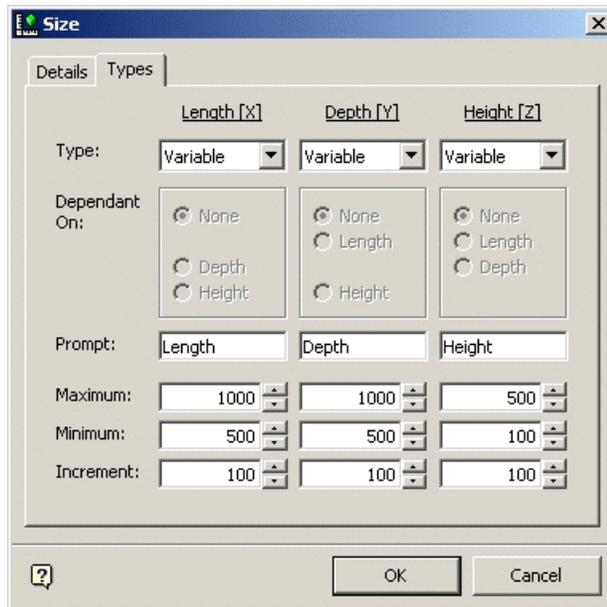
Fixed Sizes



Size - Fixed

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

Variable Sizes



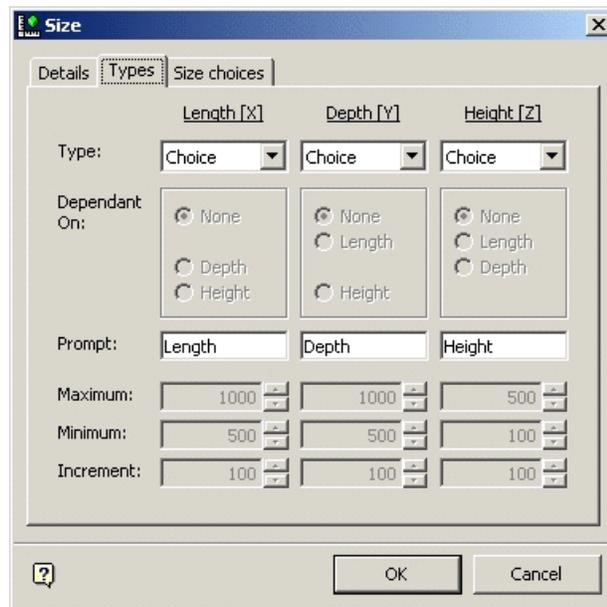
Size - Variable

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

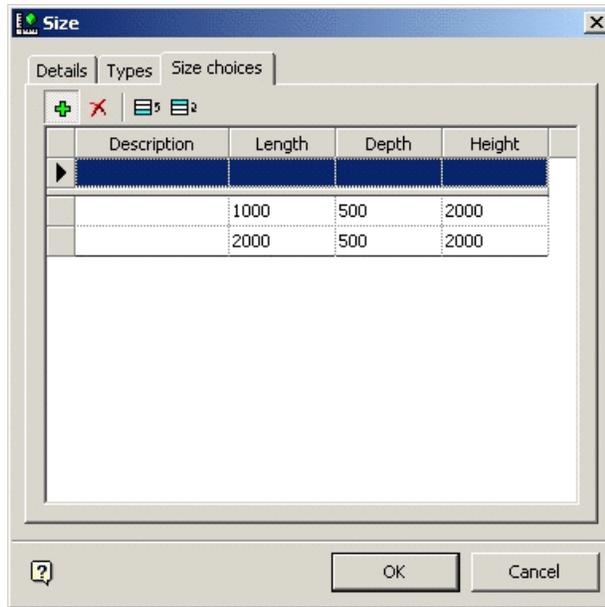
The Increment can be set to specify the change from one permissible dimension to another. For the above example, the length has a minimum value of 500 mm and a maximum value of 1000 mm. Because the increment has been set to 100 mm, you can set the length to 500, 600, 700, 800, 900 or 1000 mm when the block is inserted.

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



Size - Choices

When this option is selected from the Type drop down menu an additional Size Choices tab appears. The names entered in the prompt fields in the Types tab appears in the Size Choices tab as the names of the dimensions.



Size - Size Choices

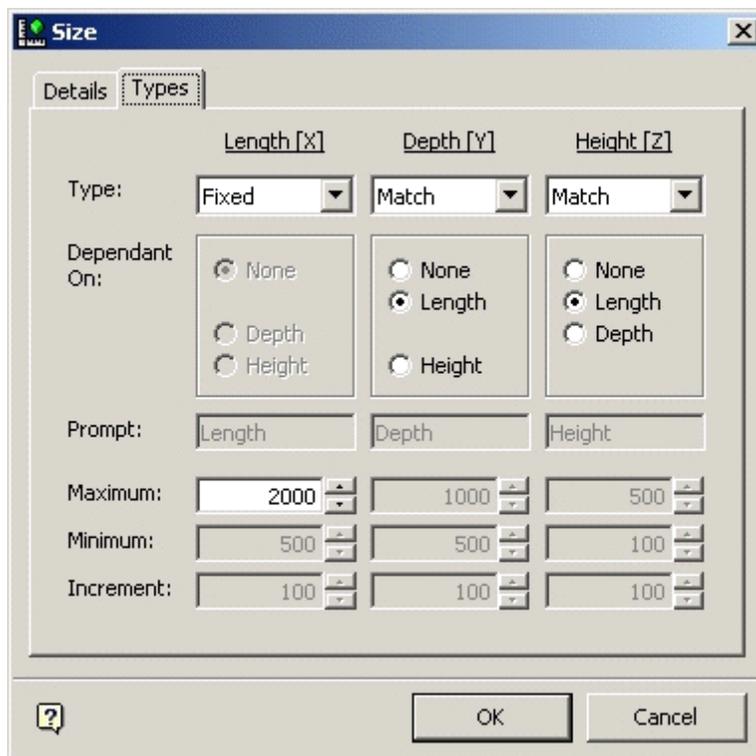
The actual dimensions can be added in the Size Choices tab.

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

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

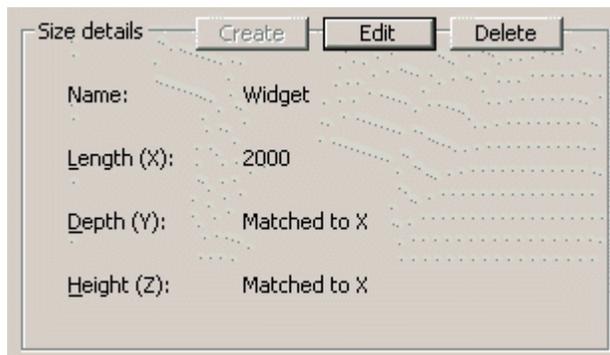
Match Sizes

Match Sizes enables you to link one dimension to another.



Size - Match Sizes

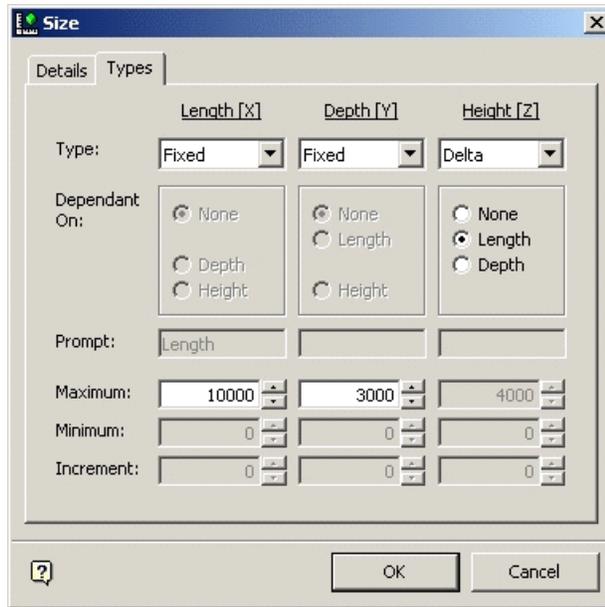
At least one dimension must be defined using another size option, for example Fixed. The other dimension(s) can be saved to the specified dimension. For example if the length has been fixed at 2000 mm, then the depth and height can be specified as matching the length. This results in a block where the length, depth and height all match.



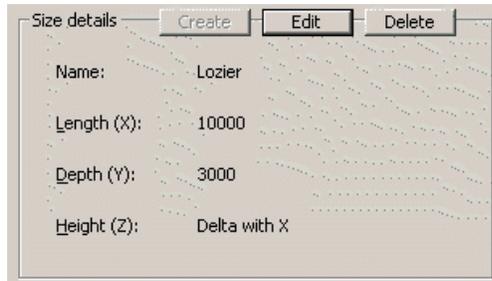
Size Details

Delta

Delta allows you to select another dimension and specify the current dimension to match that plus/minus a specified increment.



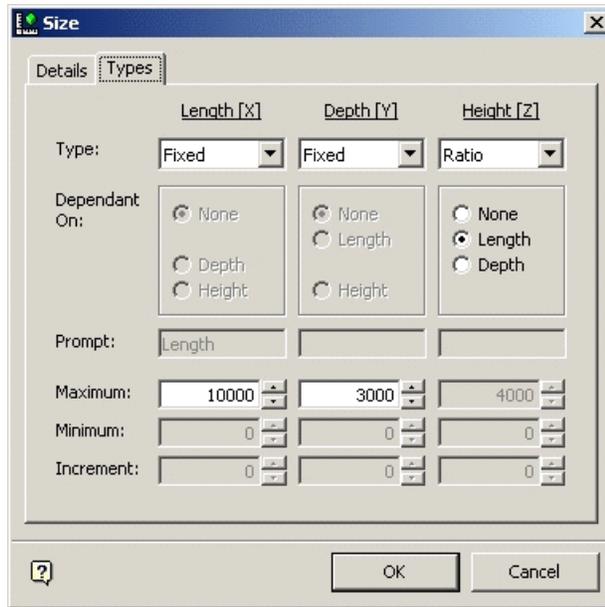
Size - Delta



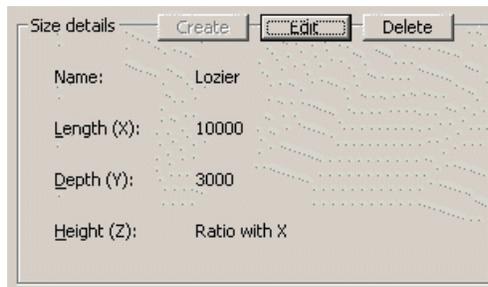
This functionality is not implemented in this release of Macro Space Management.

Ratio

Ratio allows you to select another dimension and specify the current dimension to be multiplied by a specific ratio.



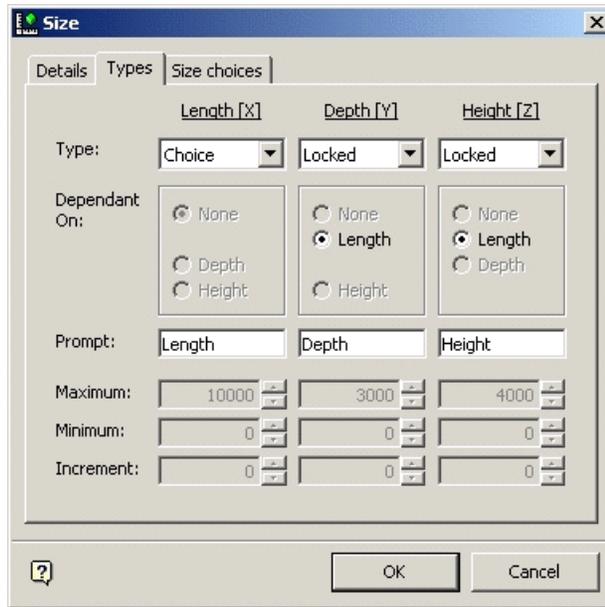
Size - Ratio



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

Locked

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

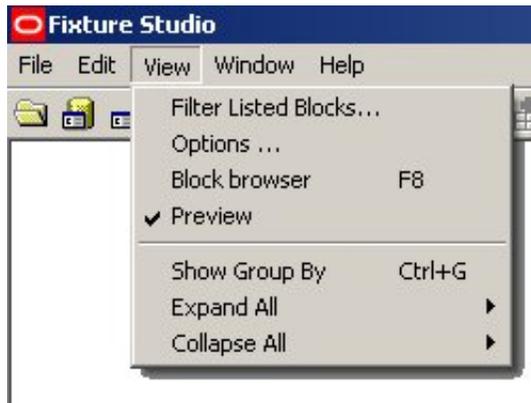


Size - Locked

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

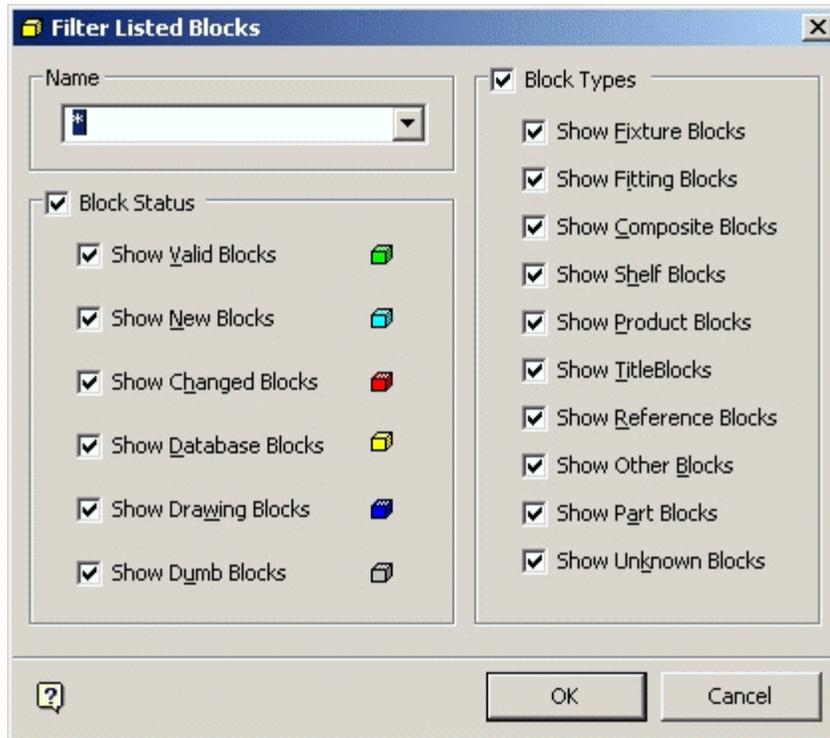
View Pull Down Menu

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



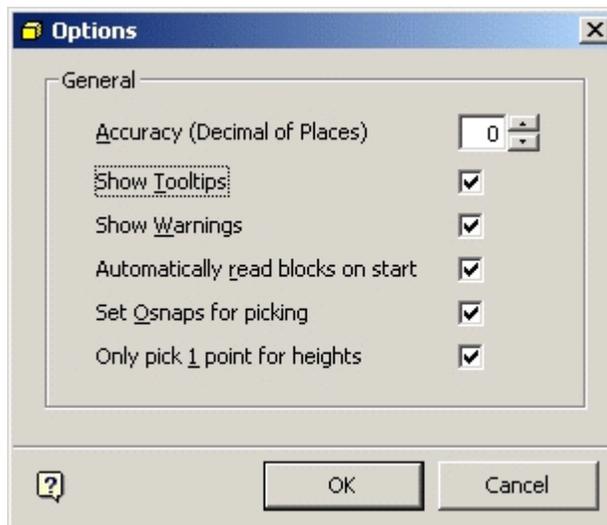
View Menu

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



Filter Listed Blocks

- **Options** bring up the Options dialog box. This can be used to set some options determining how Fixture Studio Functions

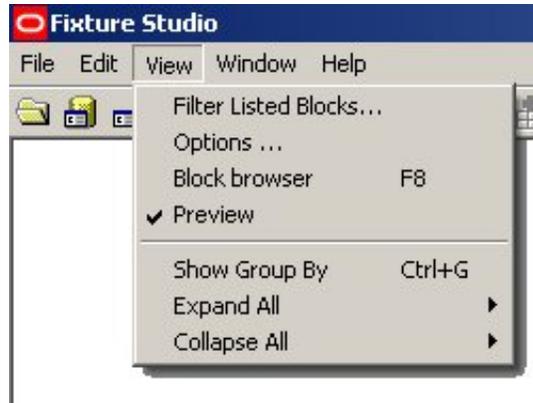


Filter Listed Blocks - Options

- **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.
- **Show Group by**, **Expand All** and **Collapse All** are discussed in more detail here.

Grouping Operations - Edit Menu

There are three options on the View menu that allow blocks with common criteria to be grouped together, the list expanded or collapsed.



View Menu - Show Group By

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'.

ID	Description	Name	Type	Size X	Size Y	Size Z
2101	Checkstand Area	13x13x9_pfieze...	Fixture	13	13	9
2102	Checkstand Area	14x13x9_pfieze...	Fixture	14	13	9
2103	Checkstand Area	16x13x9_pfieze...	Fixture	16	13	9

Block Definitions

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

	ID	Description	Name	Type	Size X	Size Y	Size
	1212	Hallmark Display Table	42x20x30_hall...	Fixture	42	20	30
-	43						
	1767	14x43x54_RX_Kiosk_RH	14x43x54_RX_...	Fixture	43	14	54
	1229	43X39_A_FRAME_FLORAL	43X39_A_FRAM...	Fixture	43	39	62
	2462	Grocery Area	43x12x81_shad...	Fixture	43	12	81
	1881	16x43x54_RX_Kiosk_LH	16x43x54_RX_...	Fixture	43	16	54
	2463	Grocery Area	43x18x81_nat...	Fixture	43	18	81
	1900	16x43x54_RX_Kiosk_RH	16x43x54_RX_...	Fixture	43	16	54
	1872	16x43x54_RX_Kiosk_Left...	16x43x54_RX_...	Fixture	43	16	54
-	44						
	1219	Refrigerated Service Coun...	44x39x33_ref_...	Fixture	44	39	33
	1	ANSI_A TitleBlock	ANSI_E	TitleBlock	44	34	1

Block Definitions - List

Clicking on the dragged column header changes the direction the data is sorted. The grouped data can be **expanded** or **collapsed** using the options on the View menu. A collapsed view is as below.

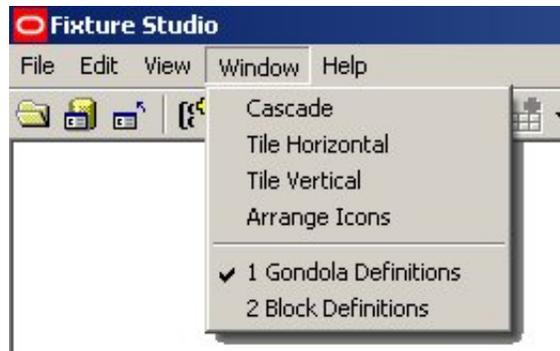
	ID	Description	Name	Type	Size X	Size Y	Size
▶	+ 44						
	+ 46						
	+ 47						
	+ 48						
	+ 49						
	+ 50						

Block Definitions - Collapsed View

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

Window Menu

The Window menu has two groups of options.



Window menu

The first set of options arranges the active windows within Fixture Studio. **Cascade** stacks the columns sequentially across the diagonal of the screen.

Block Definitions			
	ID	Name ▲	Description
Gondola Definitions			
	ID	Name	Description
	1	Wall Racking	Tall Wall Racking
	2	Wall Racking ...	Wall Racking - Double Si...
	3	Floor Racking	Floor Racking with ends
	4	4 Pallets	4 Pallets arranged in a s...
	5	4 Pallet Bins	4 Pallet Bins arranged in...

Gondola Definitions - Cascade View

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

Gondola Definitions			
	ID	Name	Description
	1	Wall Racking	Tall Wall Racking
	2	Wall Racking ...	Wall Racking - Double Si...
	3	Floor Racking	Floor Racking with ends
	4	4 Pallets	4 Pallets arranged in a s...

Block Definitions			
	ID	Name ▲	Description
	471	Frame_Protector_F_End_Euro_Euro	Frame I
	474	Frame_Protector_F_End_Euro_IKEA	Frame I
	476	Frame_Protector_F_End_IKEA	Frame I
	472	Frame_Protector_F_End_IKEA_Euro	Frame I
	473	Frame Protector F End IKEA IK...	Frame I

Gondola and Block Definitions Window

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



Gondola and Block Definitions Window

Gondola Definitions and **Block Definitions** allow switching between the two windows. Clicking on either **Gondola Definitions** or **Block Definitions** makes that window active within Fixture Studio.

Help Menu

The Help menu has two options.



Help menu

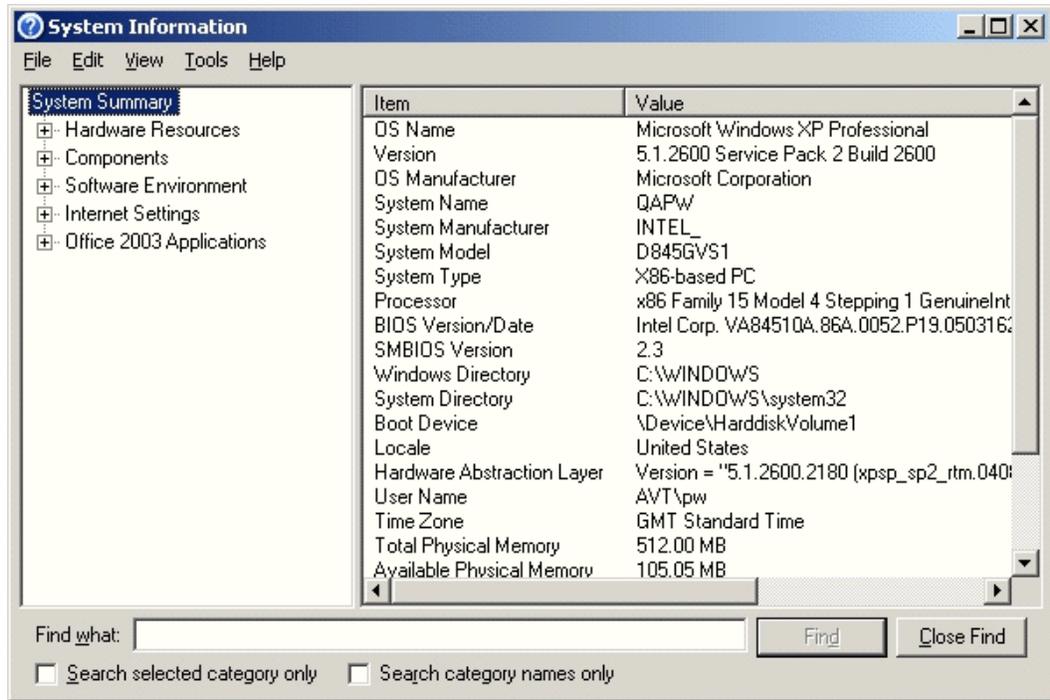
Clicking on Fixture Studio Help (or pressing the F1 function key) calls the online help module.

Clicking on About Fixture Studio displays information on the version of Fixture Studio.



Fixture Studio Version

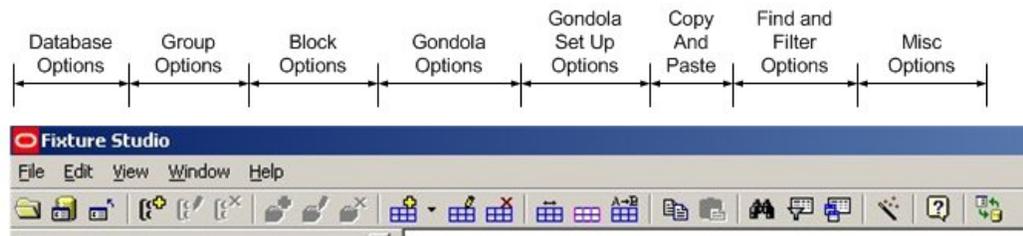
The **System Info** tab brings up the Windows System Information dialog box.



System Information

Toolbar

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

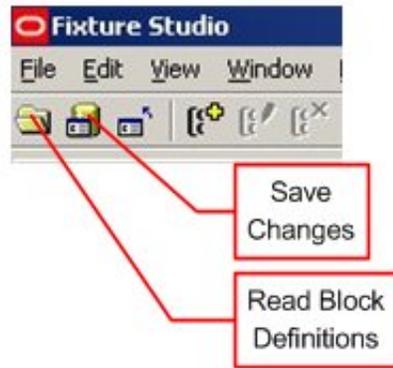


Fixture Studio Toolbar

Reading Block Definitions

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

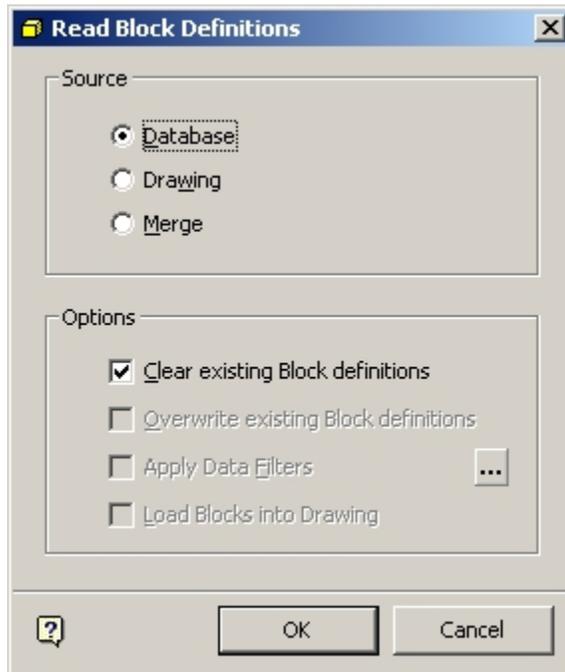
- Reading from the database
- Reading from the drawing
- Merging data from the database and active drawing



Fixture Studio - Reading Block Definitions

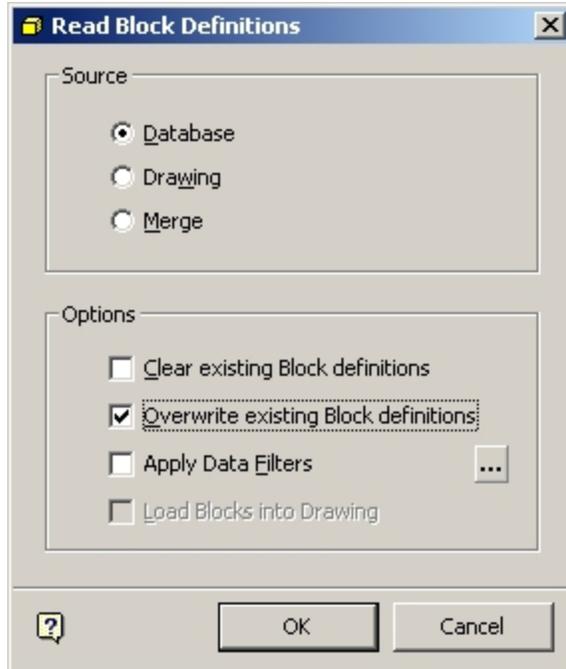
Reading from the database

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



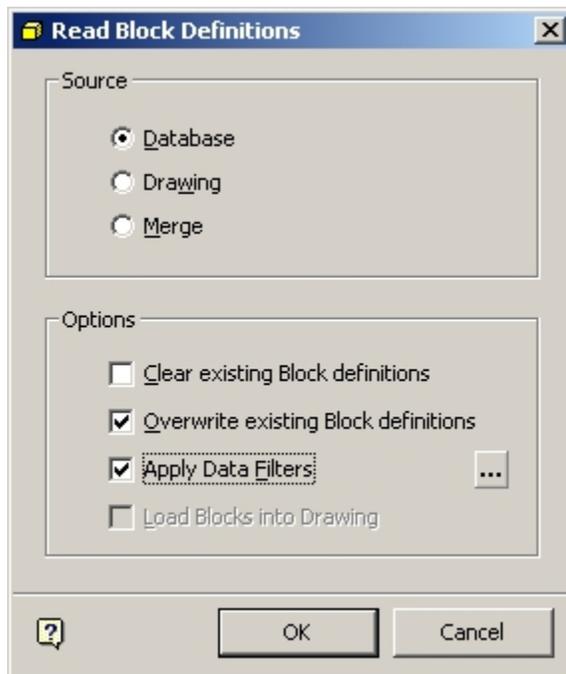
Read Block Definition - Clear existing Block definitions

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



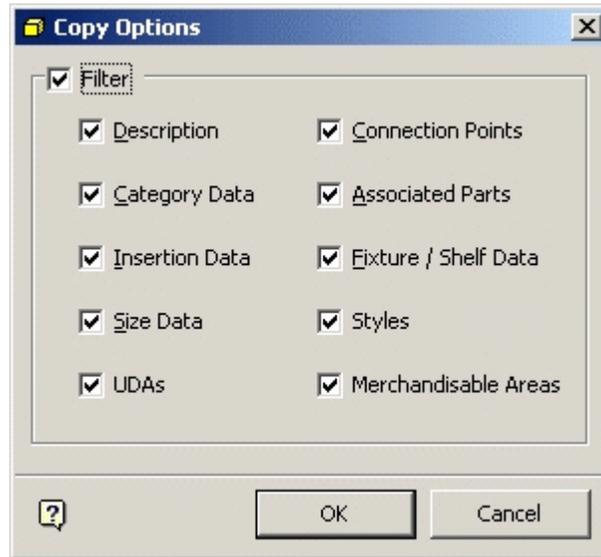
Read Block Definition- Overwrite existing Block definitions

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.



Read Block Definition - Overwrite existing Block definitions

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

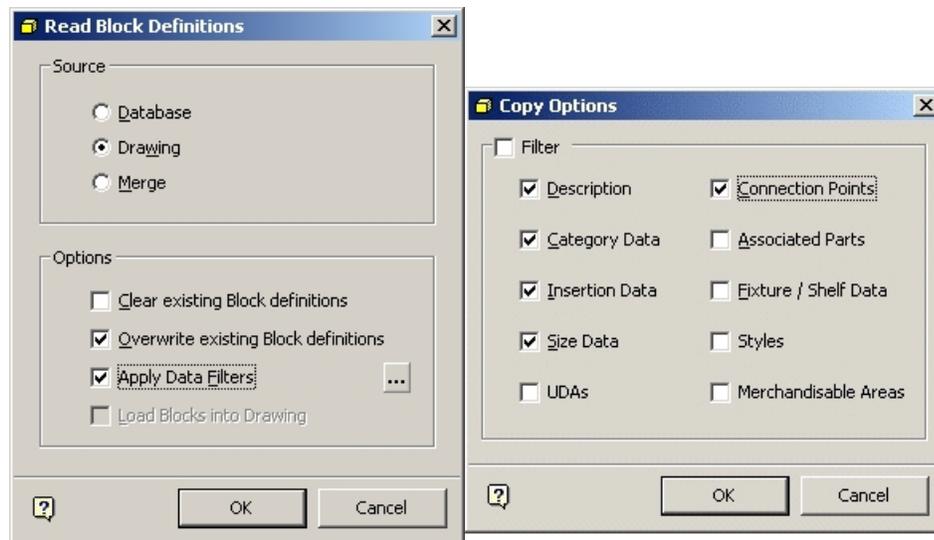


Copy Options

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).



Read Block Definitions – Drawing

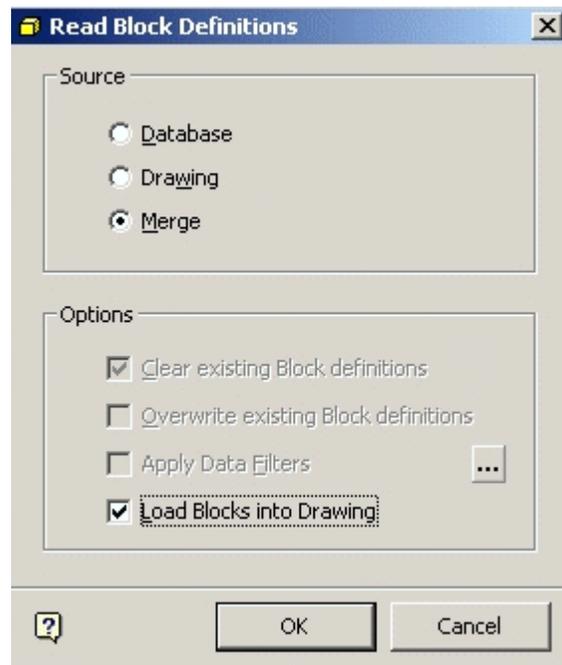
The information that can be read from the drawing is the Block Description, Category Data, Insertion Data, Size Data and Connection Points.

UDAs, 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 do not have 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

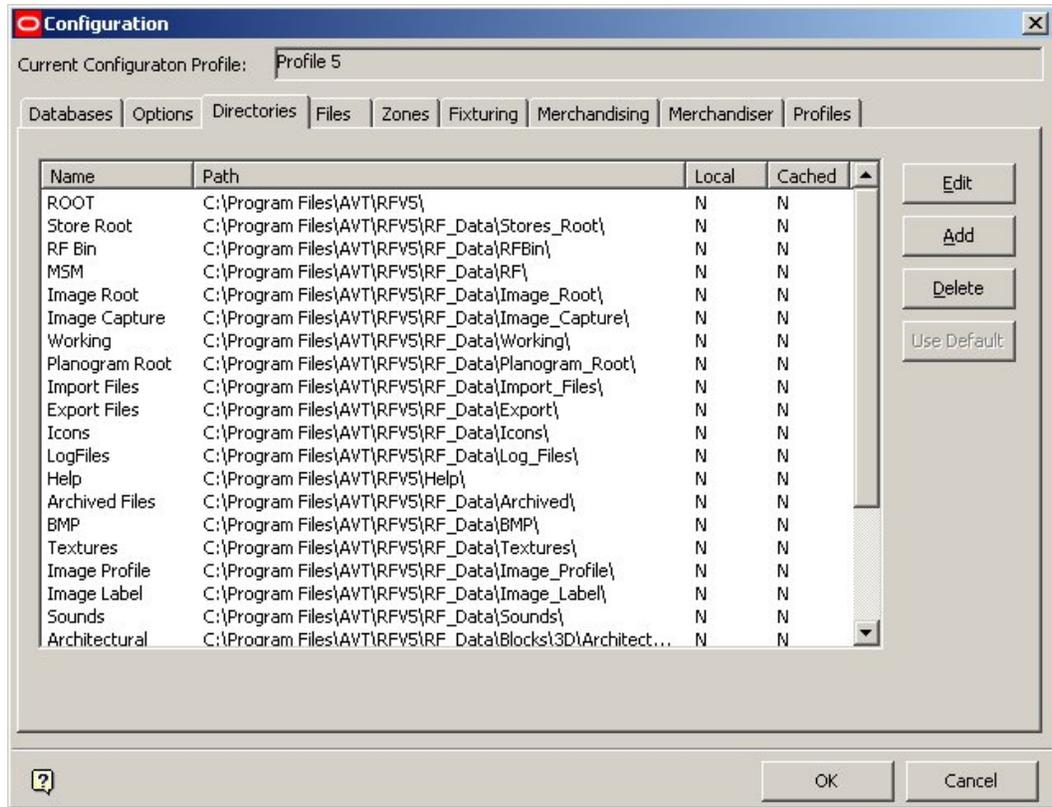
If information is merged, data is imported into Fixture Studio from both the active drawing and the central database.



Merging Information

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.

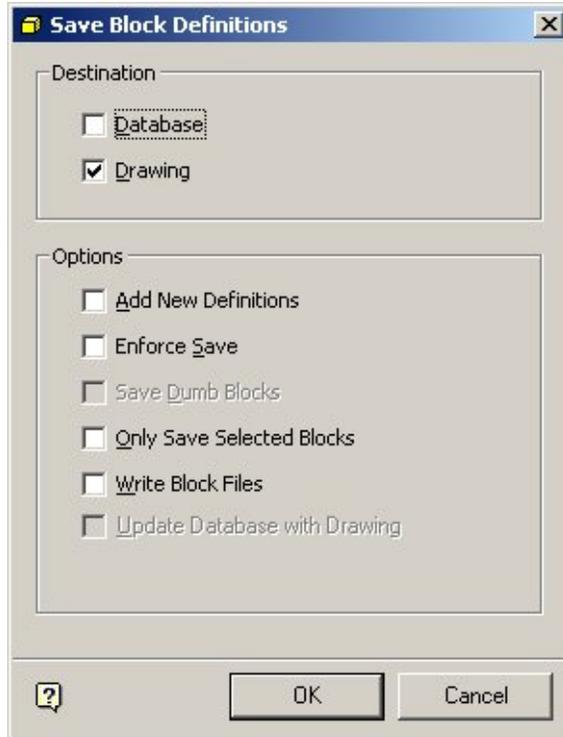
If the **Load Blocks into Drawing** option is checked, all Blocks held in the directory specified in the Configuration Module is loaded into the drawing. This is to ensure that the full complement of blocks is available from both the database and in the drawing.



Configuration - Directories Tab

Saving Block Definitions

Clicking on the Save Changes icon brings up the Save Block Definitions dialog box.



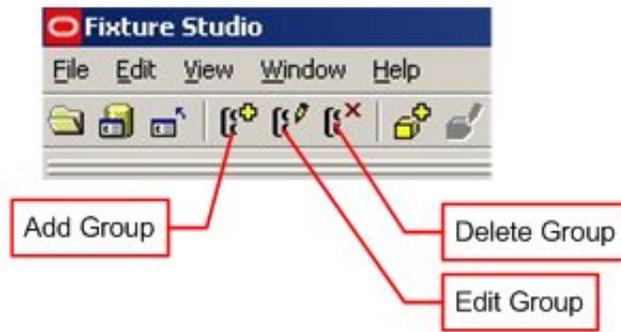
Saving Block Definitions

- The **Destination** frame enables you 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.
- **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.



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 dialog box appears.

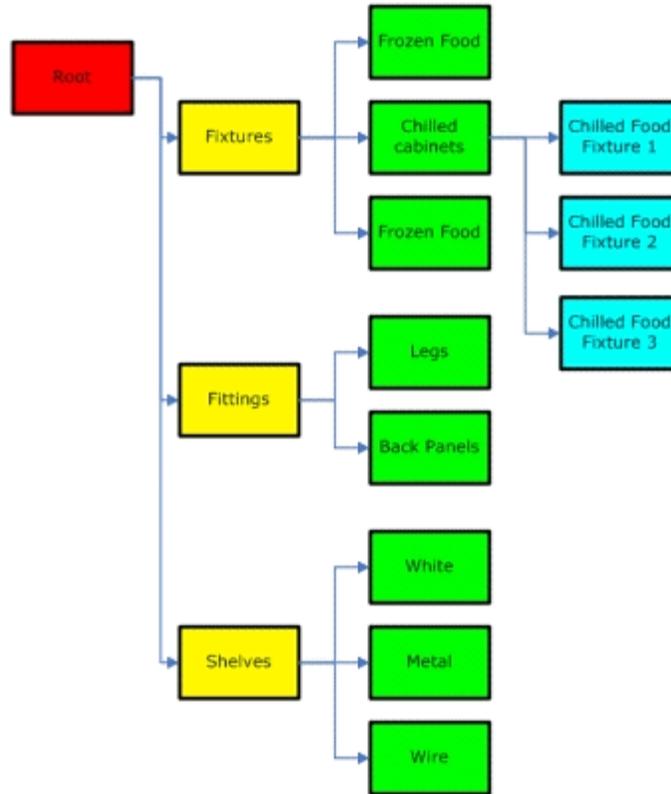


Add Group Dialog Box

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.

Editing 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.

Edit Group

To add a group, highlight the group which is to be edited. Click on the Edit Group icon. The Group dialog box appears.



Edit Group

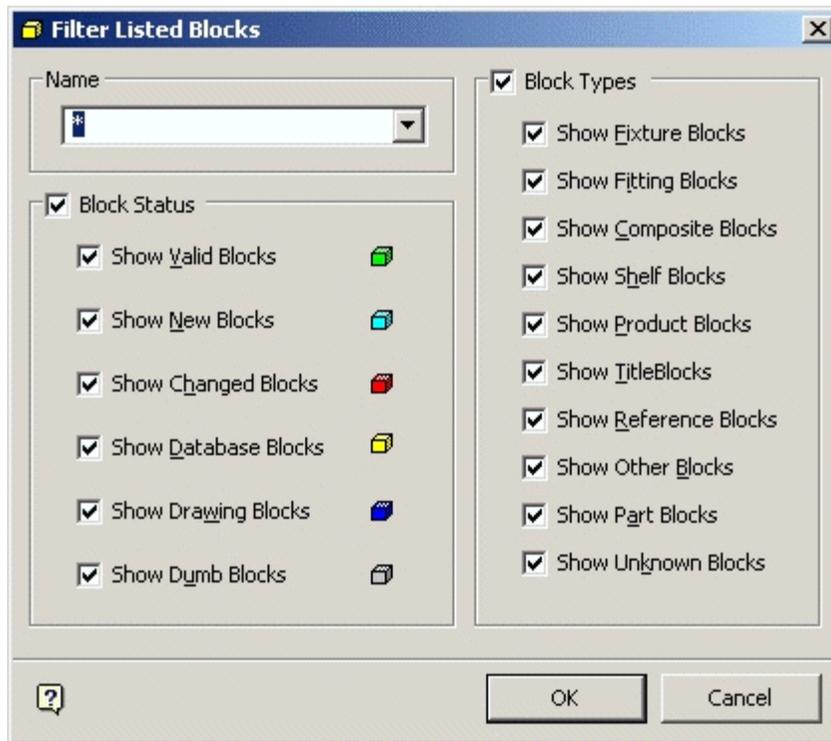
Edit the description if required. It is also possible to select an alternative icon from the drop down list. Click OK to conform. The Group details are now updated.

Deleting Group

To delete a group, highlight the group to be deleted. Click on the Delete Group icon. If the Group to be deleted has child groups or block definitions, a warning dialog appears. If there are no child objects, the group is deleted without any requirement for confirmation.

Filtering Blocks

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



Filter Listed Blocks

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

Filtering Blocks by Name

Search String	Result
---------------	--------

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

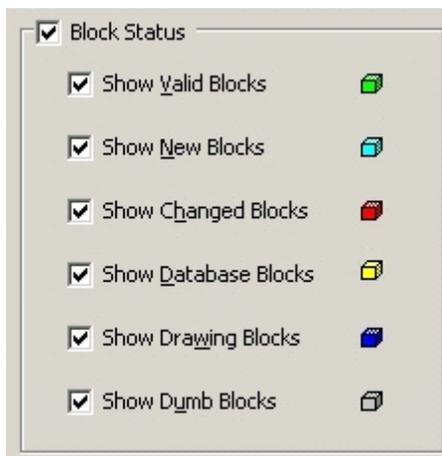
Filtering by Block Status

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

Filter by Block Status

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

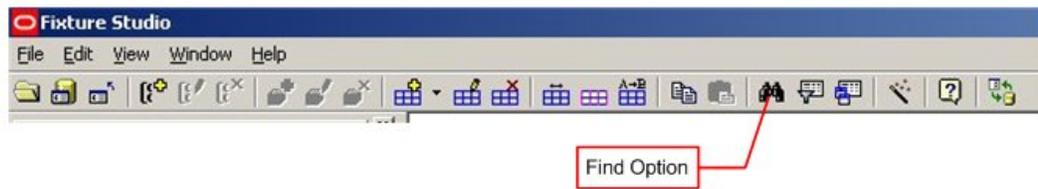


Block Status frame

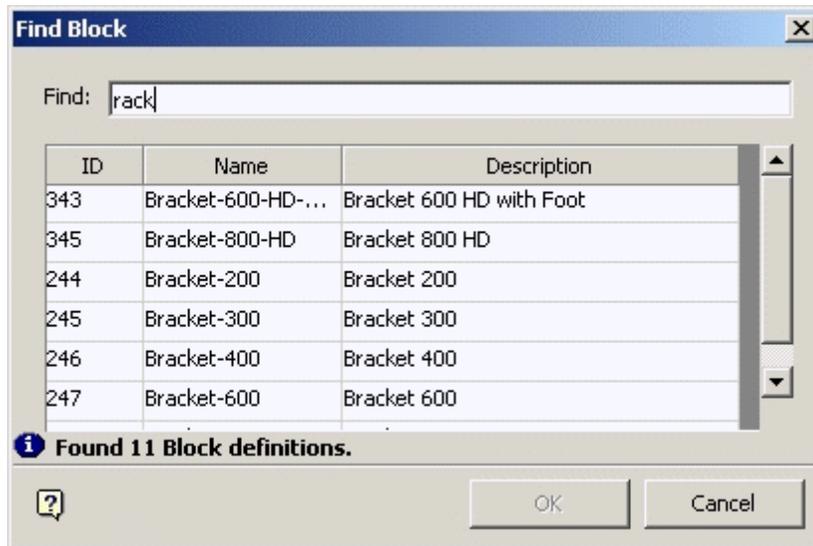
The status of each block is indicated by a color code.

Find Block Definitions

Clicking the **Find** icon on the toolbar brings up the Find Block dialog box.



Find Block Definitions



Find Block Definitions Dialog box

To use the Find option, type in the required search string into the Find box and press Enter. A list of block definitions matching the search string appears in the box below.

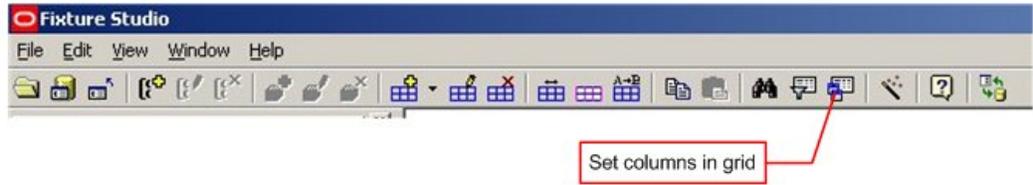
To display a block definition in the hierarchical tree in the Object Browser, highlight it in the list of block definitions and click on the OK button. The block definition in the Object Browser is highlighted and the Find Block dialog box closes.

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

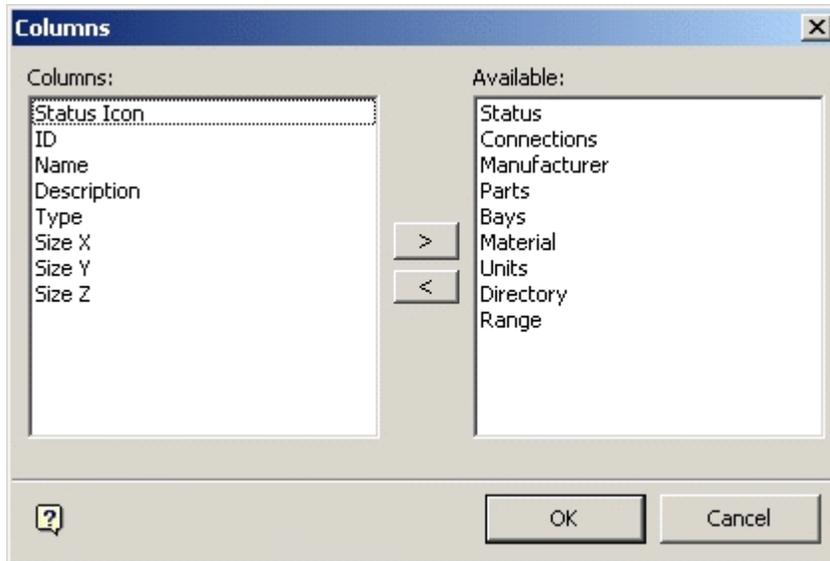
The columns that display in the Block Definitions window can be configured by clicking on the Set Columns in Grid icon in the toolbar.

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



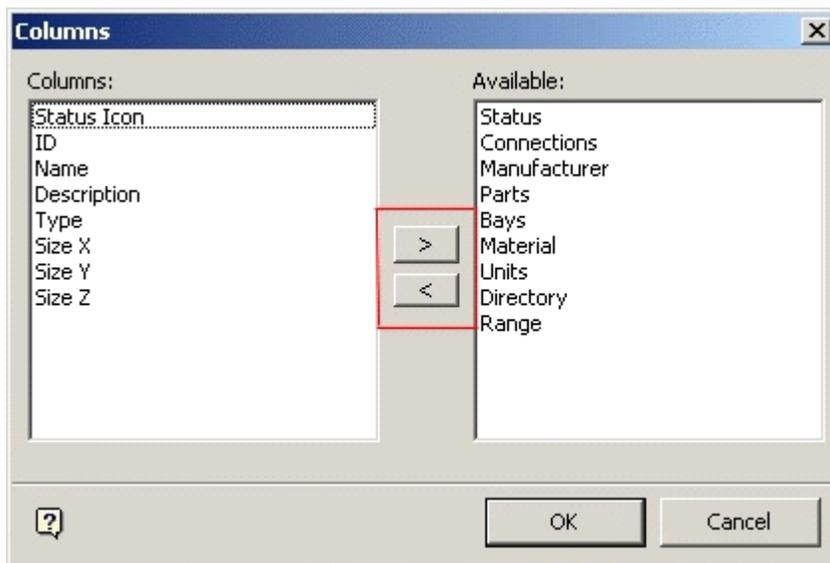
Setting Columns

This will bring up the Columns dialog box.



Columns dialog 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 dialog box.



Columns dialog box

When the selection has been made, clicking on OK results 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

Block Definition table

AutoCAD Operations from Fixture Studio

This section gives more information on a number of commands that interact with AutoCAD.

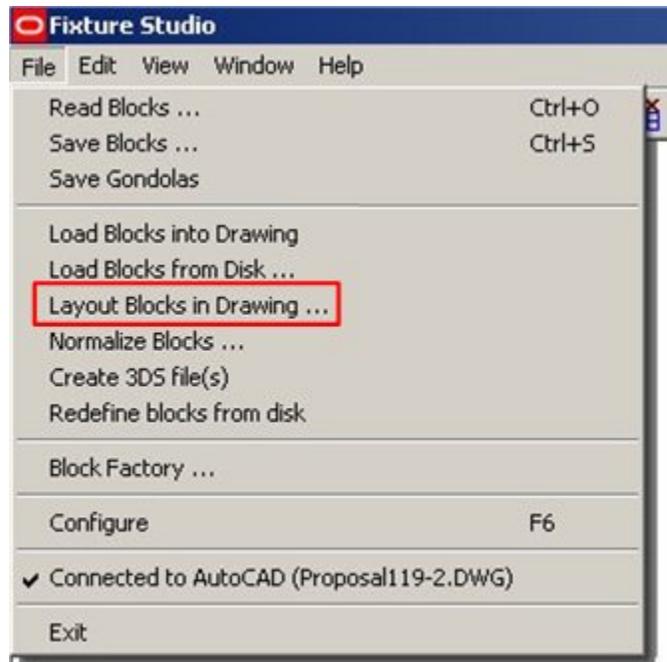
- [Laying Out Blocks](#)
- [Load Blocks From Disc](#)
- [Load Blocks into Drawing](#)
- [Normalize Blocks](#)
- [Redefine Blocks from Disc](#)

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.

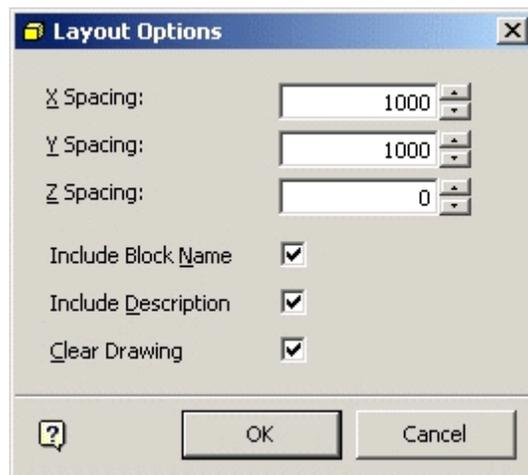
	ID	Description	Name ▲	Type
	109	L Upright 50 H1150	L-Upright-50-1150	Fitting
	111	L Upright 50 H1500	L-Upright-50-1500	Fitting
	108	L Upright 50 H950	L-Upright-50-950	Fitting
	113	L Upright 70 H2500	L-Upright-70-2500	Fitting
	115	L Upright 70 H2900	L-Upright-70-2900	Fitting
	485	Mesh F Goods W930 D598 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).



File pull down menu

This brings up the Layout Options dialog box.



Layout Options dialog box

The spacing between blocks can be specified by the X, Y and Z spacing. Tick the appropriate check boxes to add the block name and/or description to each block when it is being drawn. Ticking the Clear Drawing check box will clear all previous blocks from the drawing.

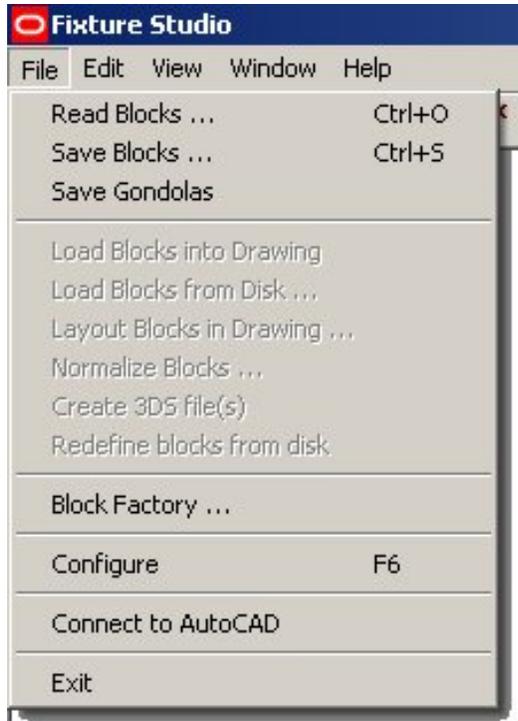
Load Blocks From Disc

Load Blocks from Disc enables you to select blocks from a source outside of the Macro Space Management database and load them into the currently active AutoCAD drawing. This is done in three stages:

- Ensure that the Connect to AutoCAD option has been selected
- Select the Load Blocks from Disc option

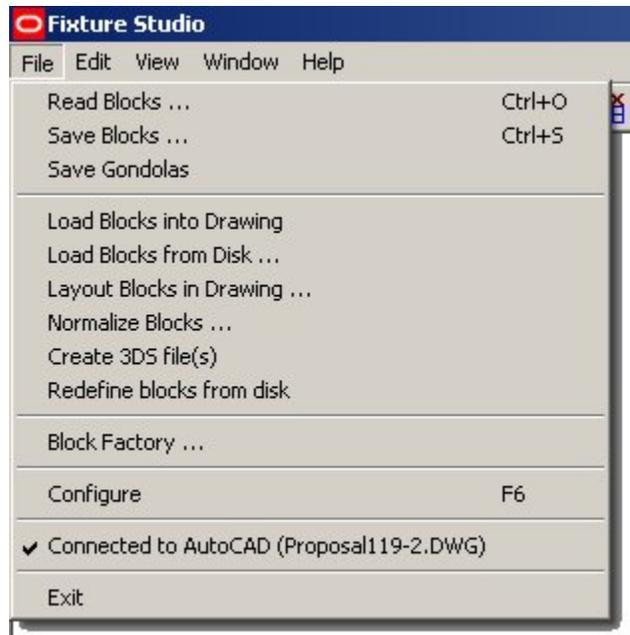
- Select the Insert option in AutoCAD

Connecting to AutoCAD



File Menu - Connect to AutoCAD

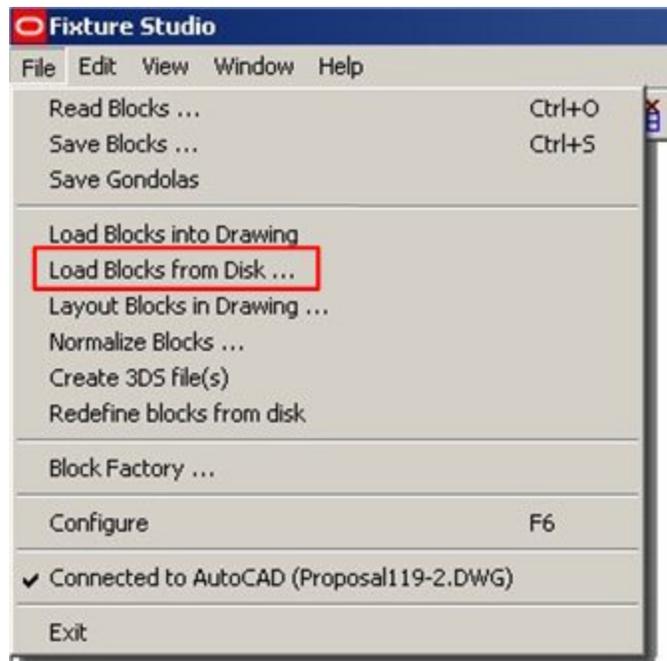
The Connect to AutoCAD option on the File Pull down Menu must be selected. If the AutoCAD environment is not open, AutoCAD will be activated. If it is open, Fixture Studio will link to AutoCAD. When AutoCAD is selected, the AutoCAD based option will be available, and the Connect to AutoCAD option will be selected.



File Menu - Connected to AutoCAD option

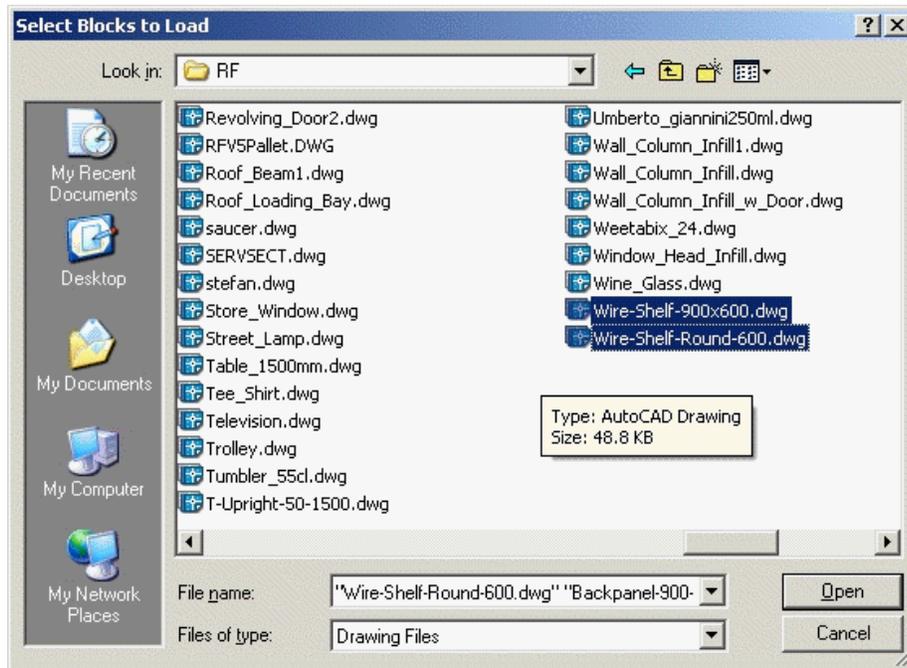
Using the Load Blocks From Disc option

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.



File Menu - Load Blocks from Disc option

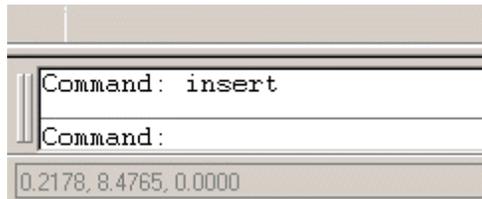
This will bring up Select blocks to Load dialog box. Navigate to the required directory and highlight the required blocks. Click on Open to transfer the block definitions to the active AutoCAD drawing.



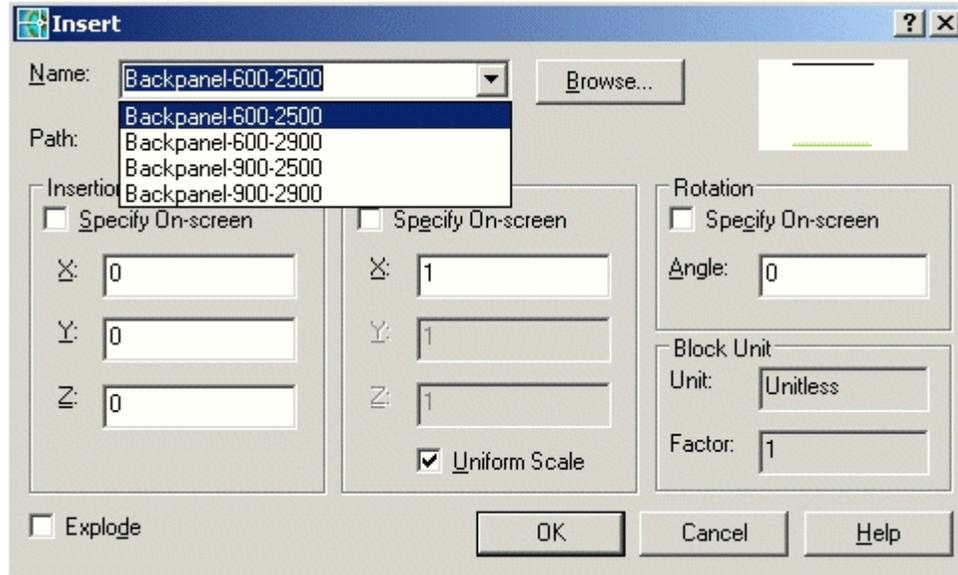
Select blocks to Load dialog box

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 dialog box.



Insert dialog box

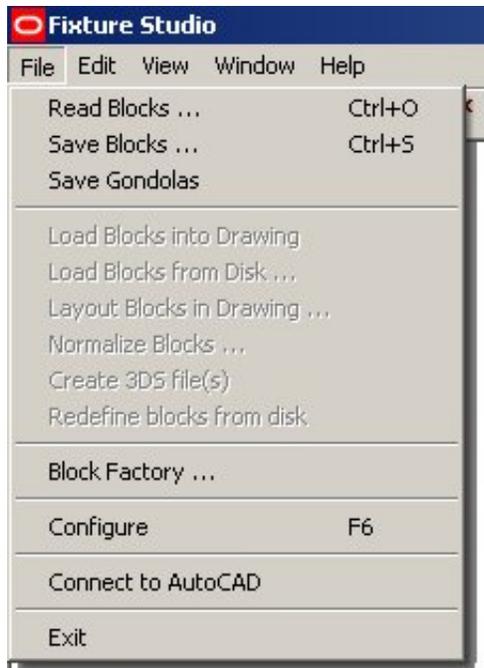
Block definitions can be selected using the Name drop down list. After specifying the Insertion Point, Scale, Rotation Angle and whether or not the components of the block are to be exploded, clicking on OK will place an instance of the block definition in the drawing.

Load Blocks 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. This is done in four stages:

- 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



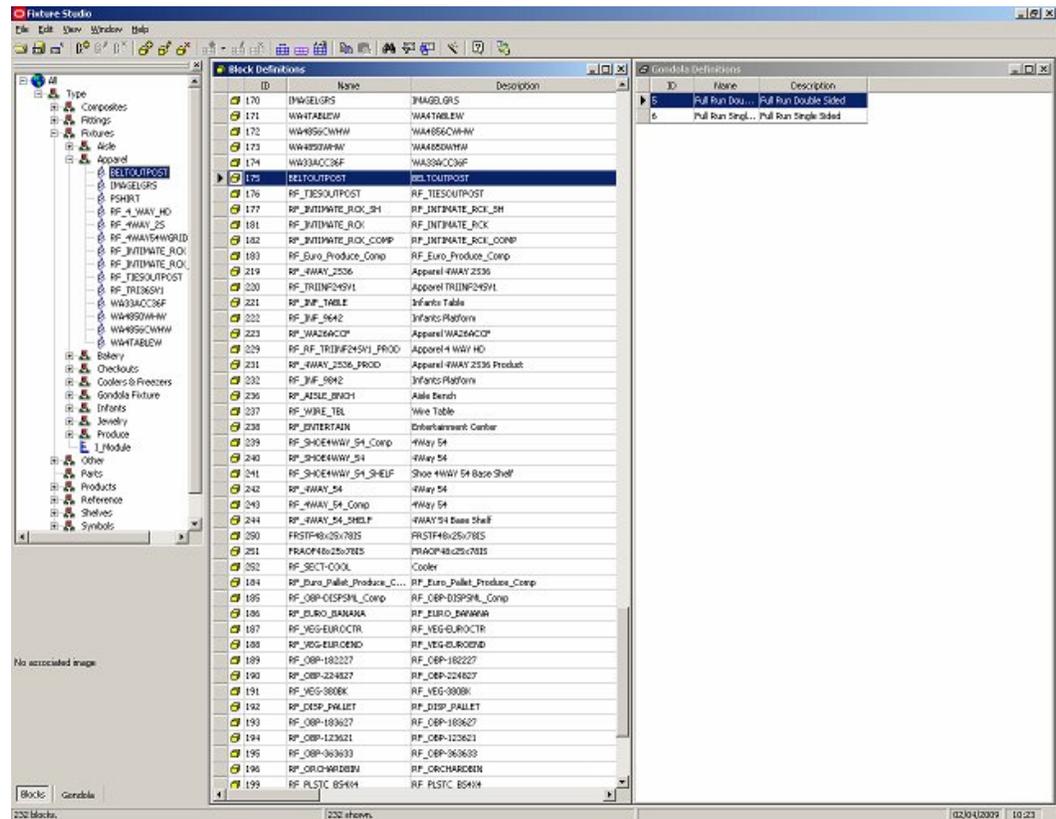
File Menu - Connect to AutoCAD option

The Connect to AutoCAD option on the File 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 is available and the Connect to AutoCAD option will have a tick by it.



File Menu - Connected to AutoCAD option

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

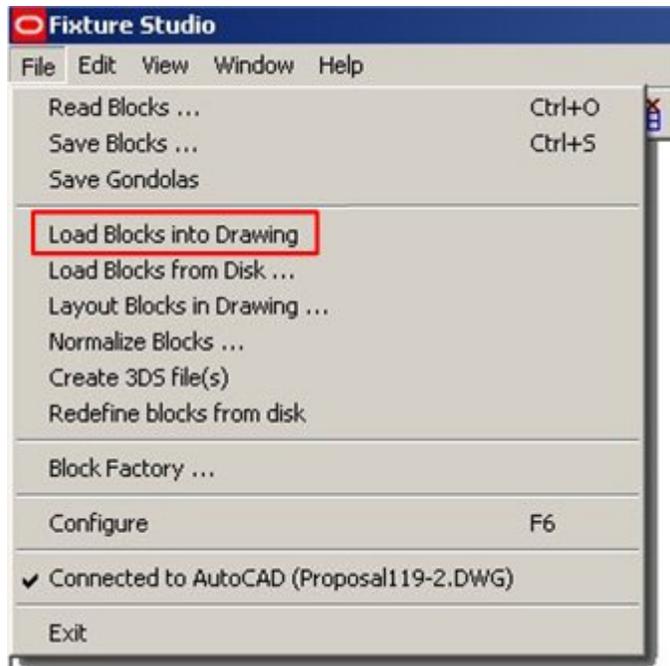


Block Definitions window

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.

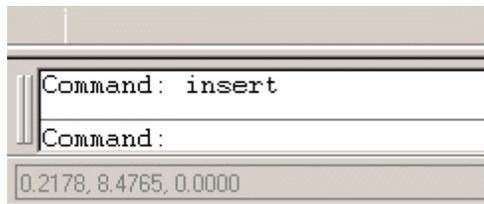
Using the Load Blocks into Drawing option

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.

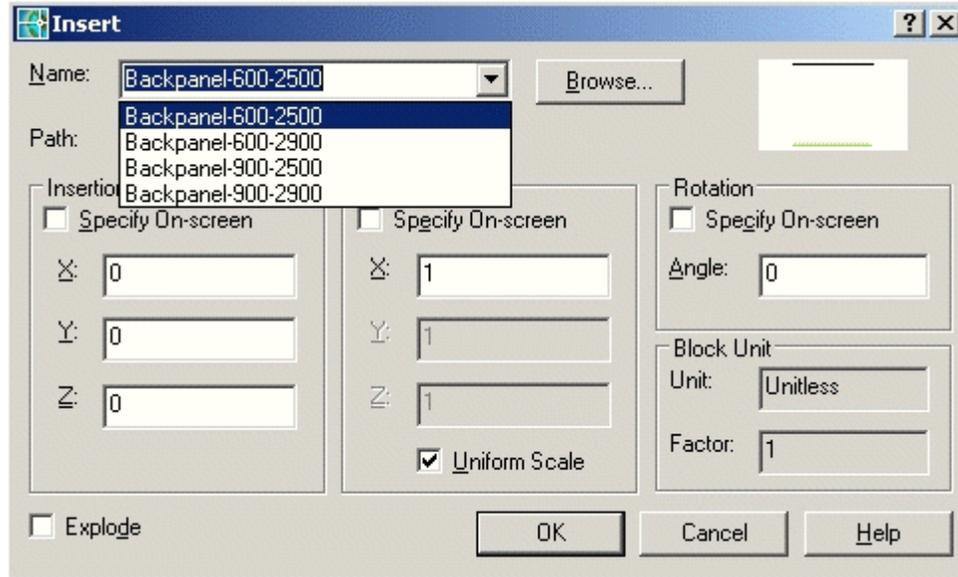


Load Blocks into Drawing

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 dialog box.

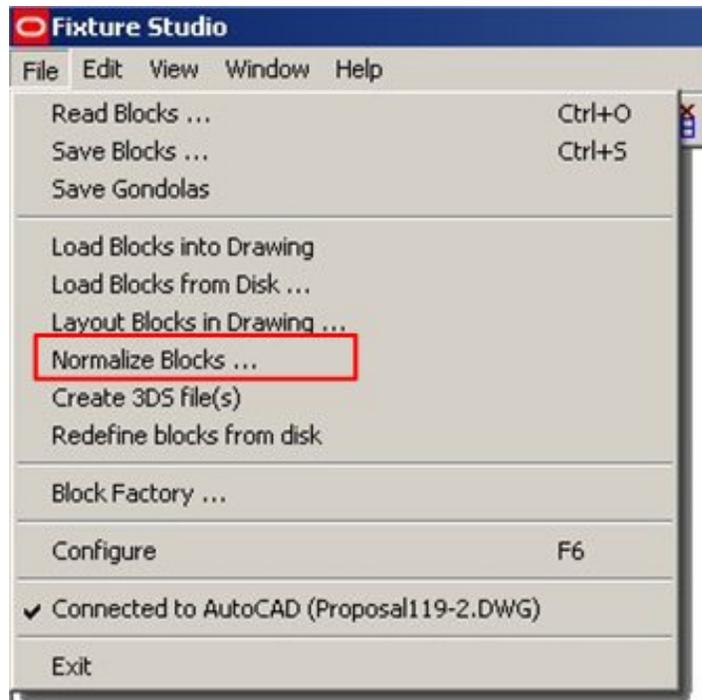


Insert dialog box

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.

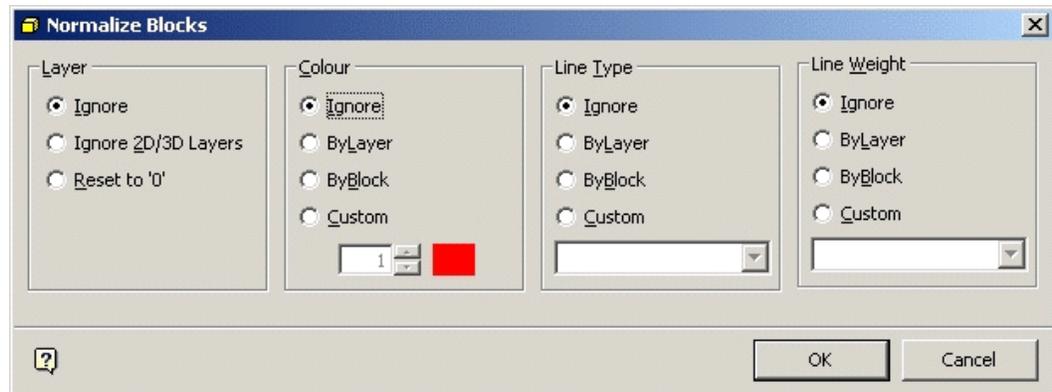
Normalize Blocks

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.



Normalize Blocks

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



Normalize Blocks dialog box

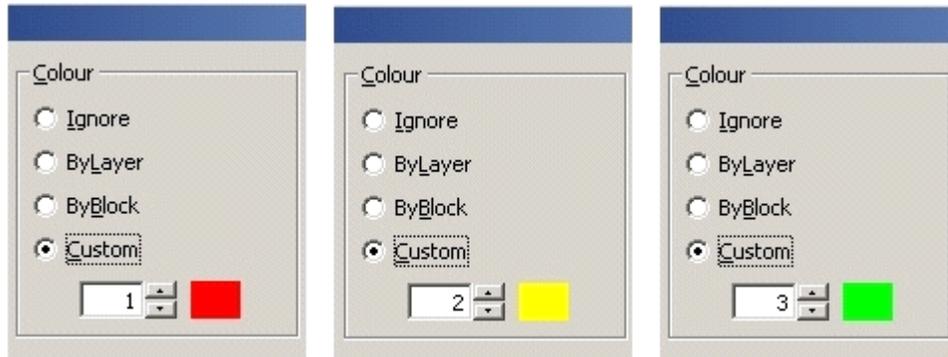
Layer

- 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.

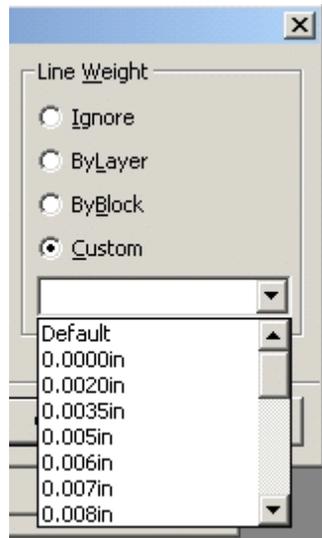


Line type

- 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

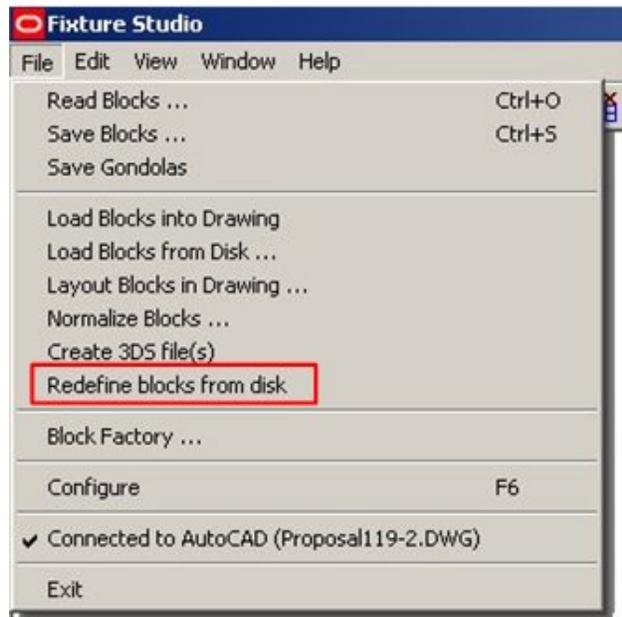
- If set to Ignore, line weights will be unchanged.
- If set By Layer line weights will be set to the default for that layer.
- If set ByBlock, the selected blocks will have their settings changed to the default for the layer except when the blocks have previously had custom properties assigned.
- If set to a Custom level all selected blocks will be set to the line weight selected from the drop down list.



Line Weight Option

Redefine Blocks from Disc

Redefine Blocks from Disc allows you 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.



Redefine Blocks from Disc



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.

Getting the Basics Right

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 many 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**

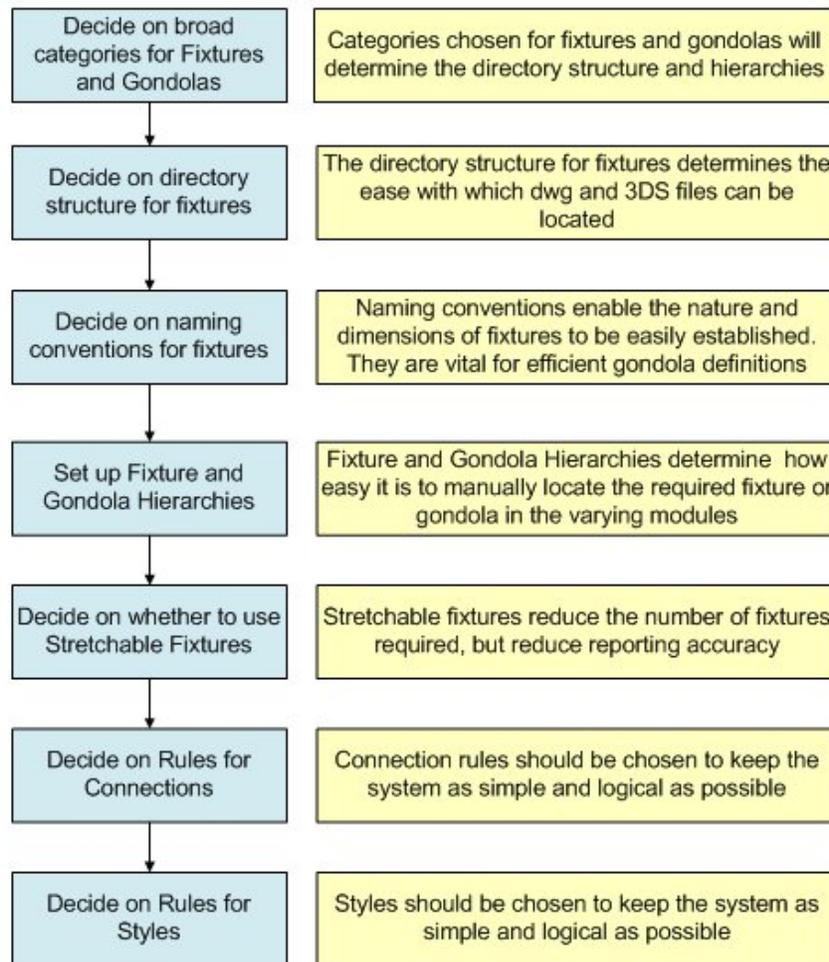
Styles determine which items of equipment can be placed on each other, and which styles of product can be placed on what items of equipment.

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:



About Categories for Fixtures

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

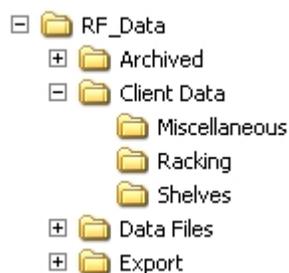
Equipment Category	Equipment Sub-Division	Connections to	Style Relationships with
Hussmann	Primary		
	▪ Legs (6)	▪ Other Primary Hussmann Equipment	▪ Other Primary Hussmann Equipment
	▪ Backpanels (20)	▪ Secondary Hussmann Equipment	▪ Secondary Hussmann Equipment
	▪ Slatwalls (12)	▪ Some items of Primary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

Directory Structures

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 that 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. 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 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, then 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 their paths specified in the Directories tab in the Configuration module.

Setting up Directory Structures

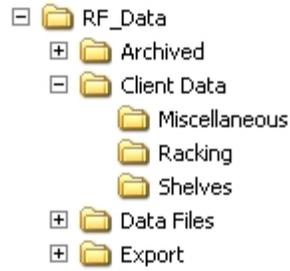
Directory Structures need to be set up before fixtures can be imported into them.

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

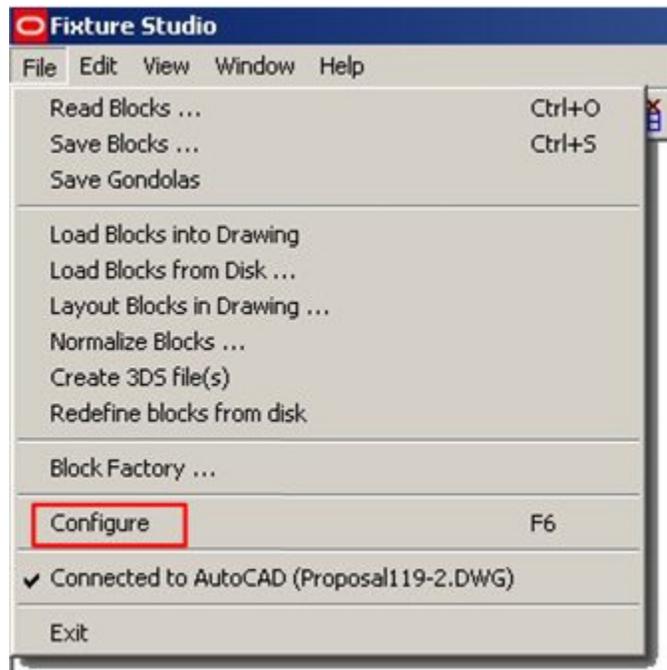
Using Windows Explorer, navigate to where the Macro Space Management data files are held. Create the required directories.



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

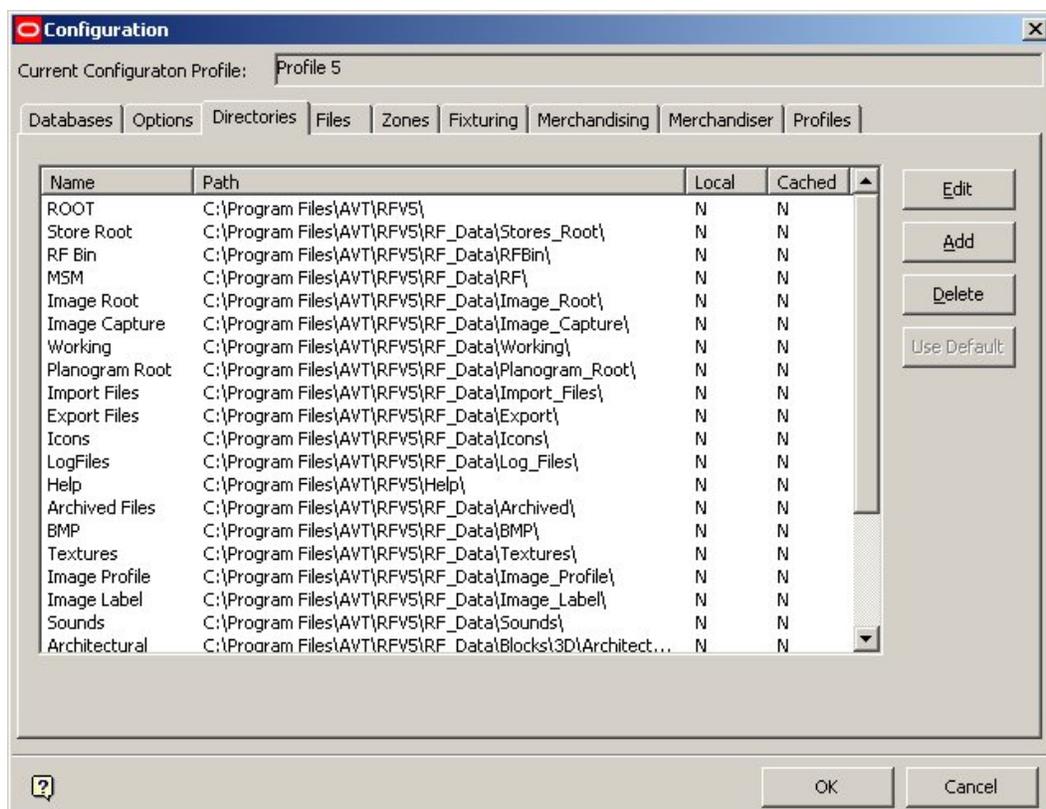
Set up the required links in the Configuration Module

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



Fixture Studio - Configure

Select the Directories Tab.



Fixture Studio - Directories Tab

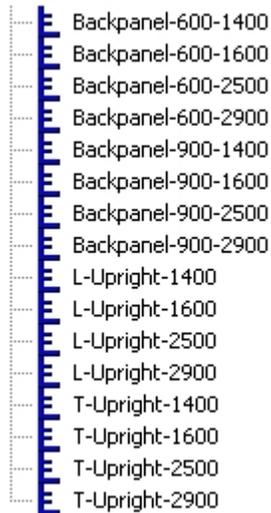
Use the **Add** button to allow paths to be added to the directories made using Windows Explorer.

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

With a well thought out naming convention, adding and recognizing fixtures is simpler.



In the above example, you can see that there are three types of block; Back Panels, L shaped uprights and T shaped uprights. You can also see that the back panels have widths of 600 and 900 mm, and that they have heights of 1400, 1600, 2500 and 2900 mm. Similarly you 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 back panel of width 600 mm and height 2500 mm, but you cannot tell this from the block name.

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' may lead to errors. For example you may have problems if you 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 may fail to find blocks with names like Prefix-widthxheight because there is an 'x' present where Retail FOCUS expected to find a '-'.

Similarly you must avoid misspellings. If you call a block Backpanel-600-1400 rather than Backpanel-600-1400, Retail FOCUS may fail to find the block because of the wrongly spelt 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.

Prefix-Width-Depth-Height-Suffix

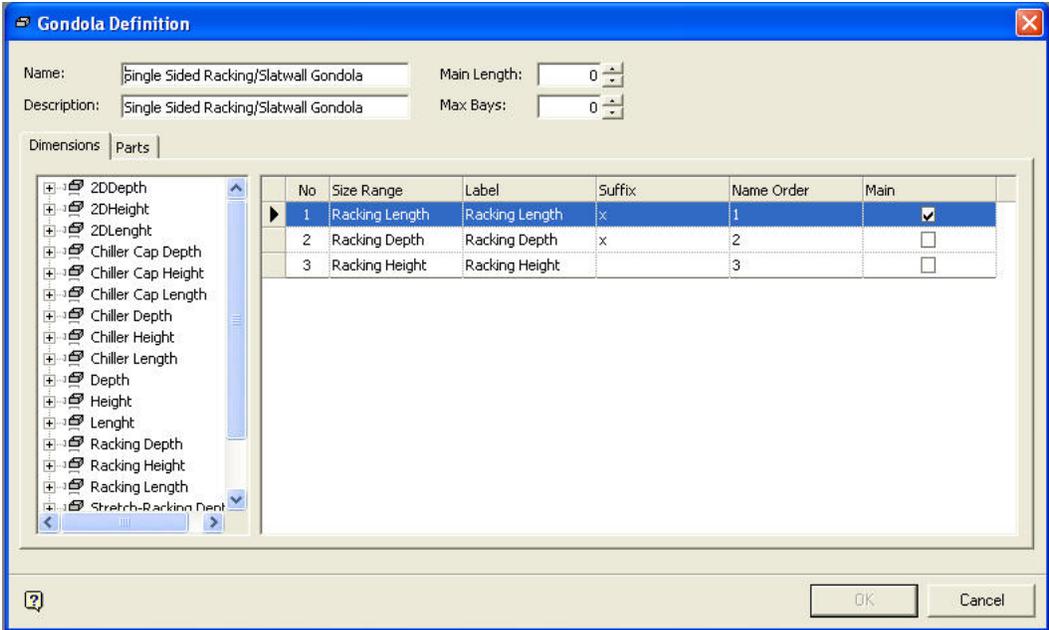
Block names of the form allows defining gondolas so that at the time of addition into the Planner or Merchandiser environments you can choose the:

- 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 allows placing dozens of different variants of that gondola in Planner or Merchandiser.

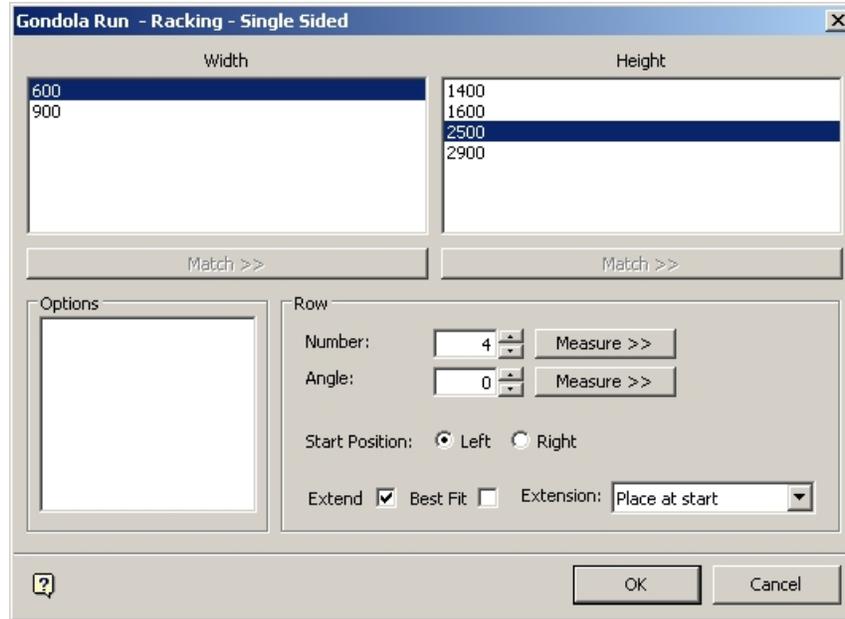
Gondolas and Naming Conventions

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



Gondola Definitions

When the gondola is placed in Planner or Merchandiser, a list of dimensions and options are available in the Add Gondola dialog box.



Add Gondola dialog 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 is 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 you 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

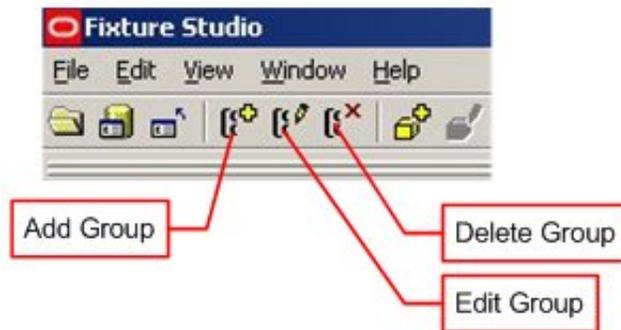
Fixture and Gondola Hierarchies

Well designed hierarchies make it easier to find fixtures and gondolas, both in Fixture Studio and in Planner and Merchandiser. It also makes 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.

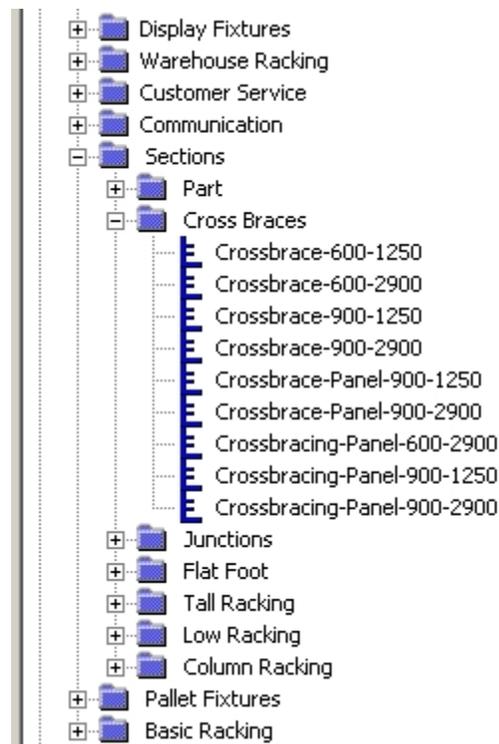
Groups

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 you are in the Blocks tab, Fixture Groups can be added, edited, or deleted from the Fixture hierarchy. If you are 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 you can readily find the required object.

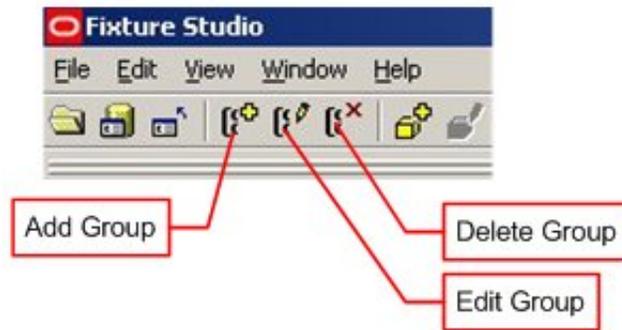


Hierarchical tree

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



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 dialog box appears.

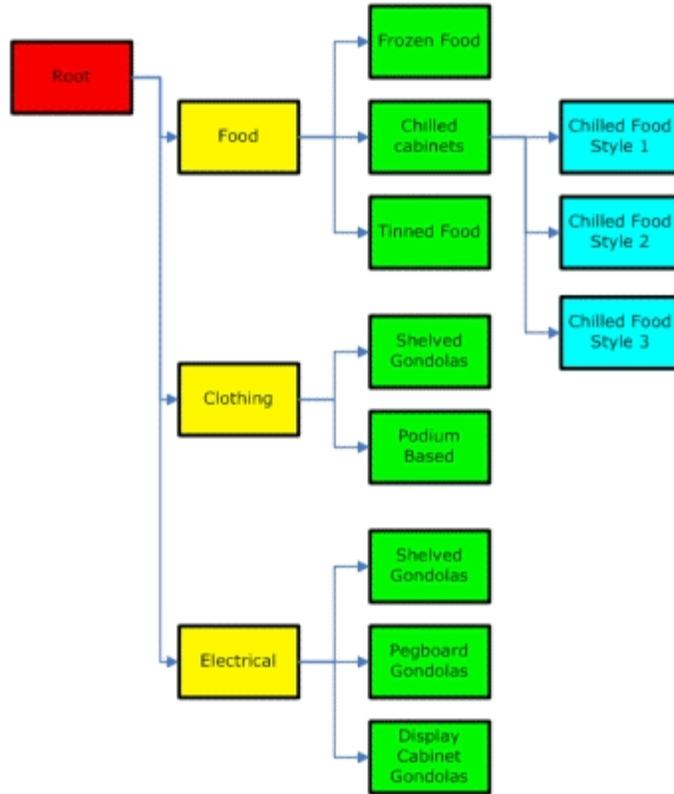


Add Group

Enter a description and select an icon from the drop down list. Click **OK** to conform. The group to be added is a child of its selected parent group.

Editing 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.

Edit Group

To add a group, highlight the group which is to be edited. Click the **Edit Group** icon. The Group dialog box appears.



Edit Group

Edit the description if required. You may select an alternative icon from the drop down list. Click **OK** to conform. The Group details will now be updated.

Delete Group

To delete a group, highlight the group to be deleted. Click on the **Delete Group** icon. If the Group to be deleted has child groups or block definitions, a warning dialog appears.

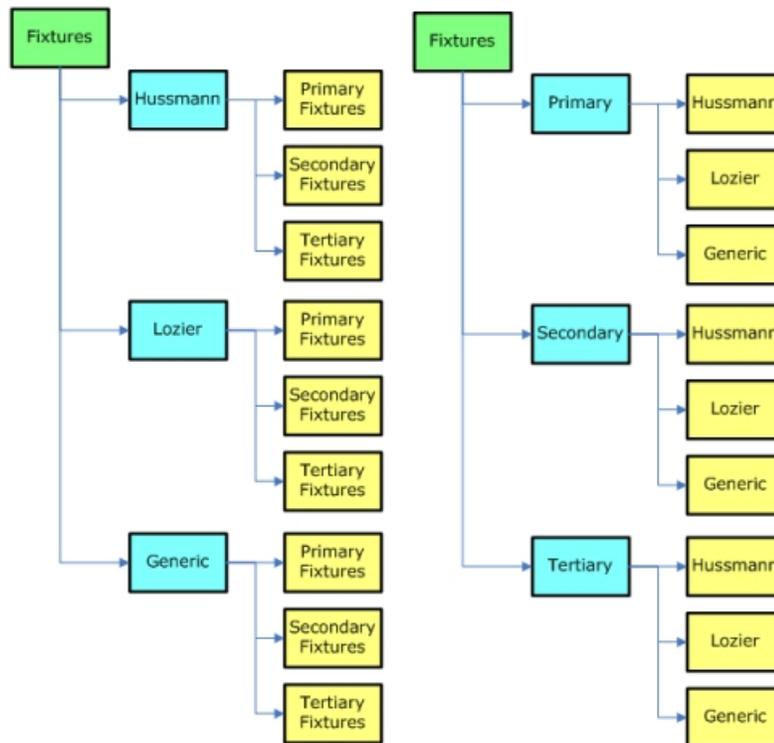


Delete Group

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

Examples of Hierarchies

Hierarchies can be set up in several ways. One of the examples is manufacturer based and another is based on equipment. Examples of both are shown below.



Examples of Hierarchies

When setting up hierarchies, you 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.

Overview of Stretchable Fixtures

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

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

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 only shows 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

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

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.

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 Back Panels and connections of shape Circle to Pegs, Hanging Rods, etc. This means that Slatwalls and Back Panels can only connect to Legs and not (say) Pallets. Similarly, it means that Pegs can only connect to the appropriate connections on the Back Panel. 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

This means that 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 only lets 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 only lets 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

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

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.

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 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 be 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.

About Blocks

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

Blocks Naming Conventions

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 back panel 600 mm wide x 1150 mm high.

Backpanel-600-1500 is a back panel 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.

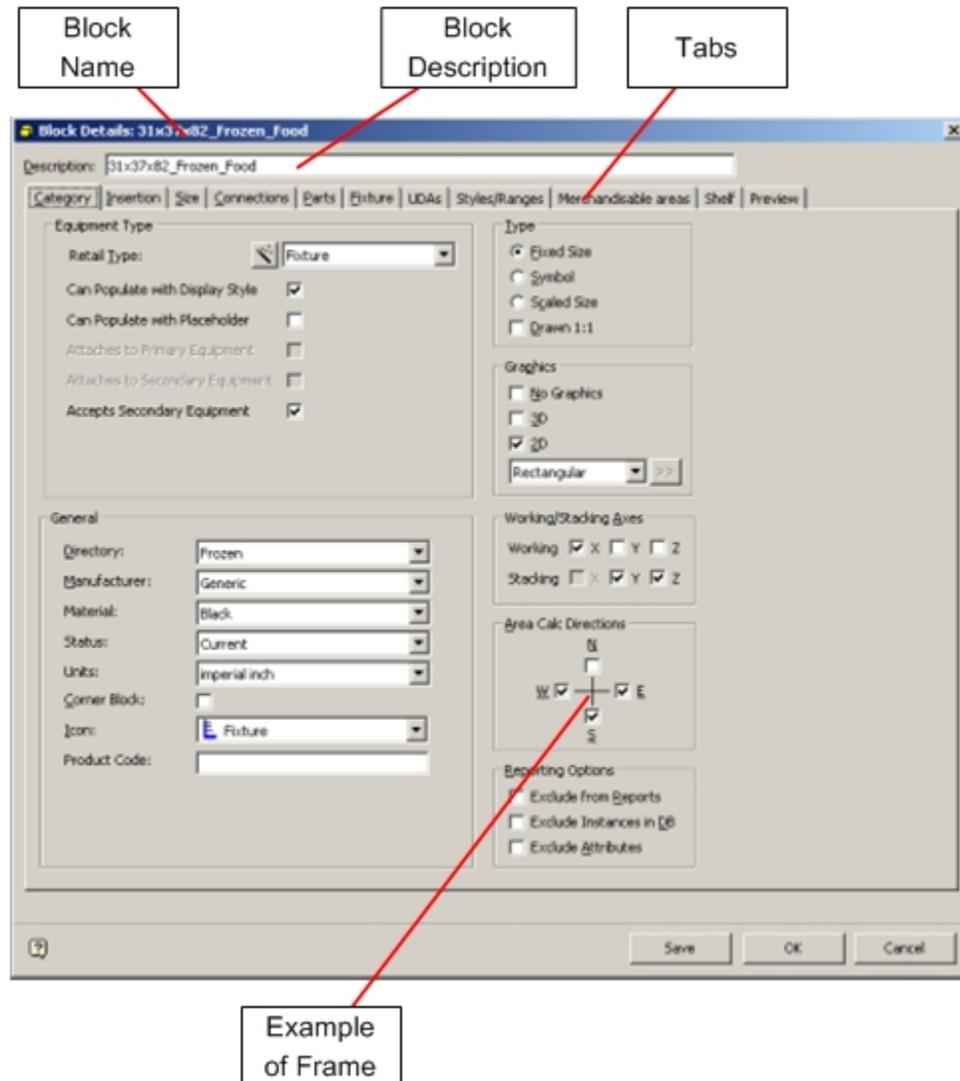
ID	Description ▲	Name	Type
405	Plant Shelf 600x600	Steel-Shelf-600x600	Shelf
406	Plant Shelf 600x600 HD	Steel-Shelf-600x600-HD	Shelf
407	Plant Shelf 600x600 HD with Foot	Steel-Shelf-600x600-HD-Foot	Shelf
408	Plant Shelf 600x800	Steel-Shelf-600x800	Shelf
409	Plant Shelf 600x800 HD	Steel-Shelf-600x800-HD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

Block Details Dialogue Box

The Block Details dialog box allows additional information to be added to an AutoCAD Wblock (World Block). This additional information gives ‘Intelligent Properties’ to the resulting Macro Space Management block. These intelligent properties can then be used by the block to interact with other blocks within the AutoCAD and Virtual Reality Environments and carry out the range of its fixturing, merchandising, and reporting functions.

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



Block Details dialog box

The Block Name at the top of the dialog 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.

Tabs

The tabs allow you to switch between various categories of Macro Space Management Block information. The tabs include:

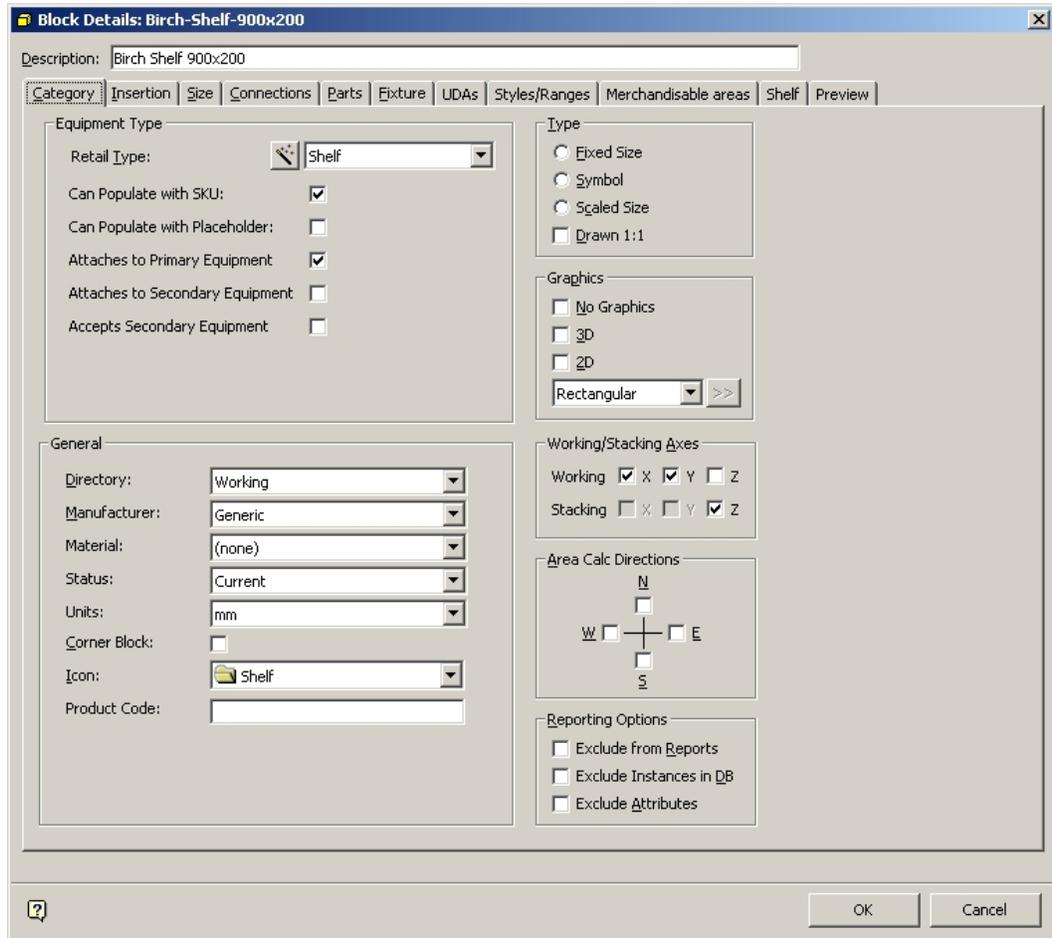
- Category
- Insertion
- Size
- Connections
- Parts
- Fixture

- UDAs (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.

Category Tab

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



Category tab

The Equipment Type Frame

The **Equipment Type** frame is used to specify basic parameters for the object.

The screenshot shows a dialog box titled "Equipment Type". It contains the following elements:

- Retail Type:** A dropdown menu currently showing "Other".
- Can Populate with Display Style:** An unchecked checkbox.
- Can Populate with Placeholder:** An unchecked checkbox.
- Attaches to Primary Equipment:** An unchecked checkbox.
- Attaches to Secondary Equipment:** An unchecked checkbox.
- Accepts Secondary Equipment:** An unchecked checkbox.
- Corner Block:** An unchecked checkbox.

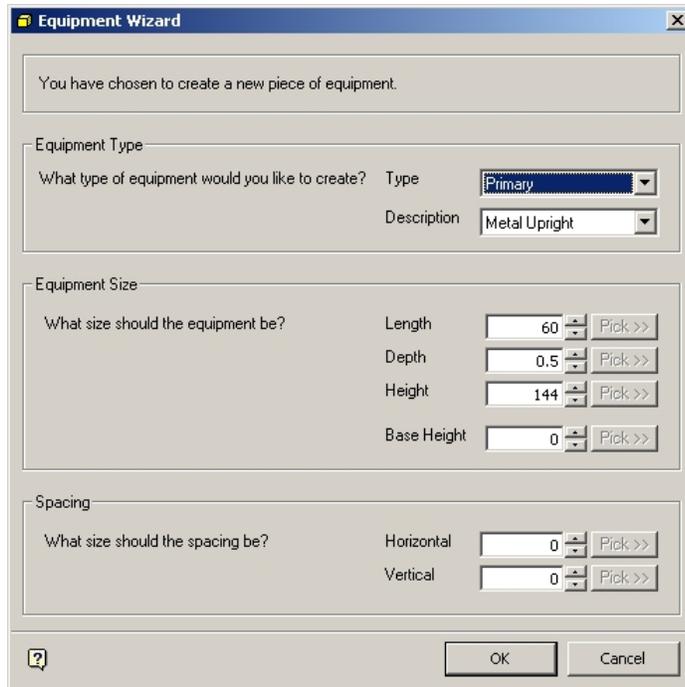
Equipment Type frame

- **Retail Type** can be set from a drop down list.
- **Can Populate with Display Style** 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).
- **Corner Block** determines if the block can be placed in the corner of the plan.

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

The Equipment Wizard

The **Equipment Wizard** allows you to define certain basic parameters from the available menus options.



Equipment Wizard

- **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 you to set a series of options concerning the general properties of the block.

The 'General' configuration frame contains the following fields and values:

- Directory: MSM
- Manufacturer: Generic
- Category: (empty)
- Units: mm
- Material: Black
- Print Material: Black
- Status: Current
- Effective Date: Tuesday, March 11, 2008
- Expiry Date: Saturday, December 30, 1899
- Product Code: (empty)
- Icon: Default
- Cost: 0

General frame

Directory

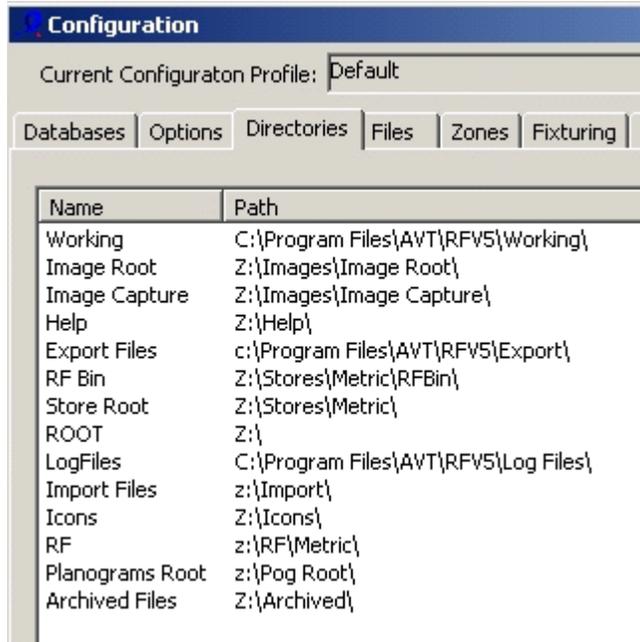
The Directory specifies the sub-directory in which the block details are stored. This can be selected from a drop down list.

The dropdown list for the Directory field shows the following options:

- IDEALISK STRAINER 20 STAI
- IDEALISK STRAINER 20 STAI
- IDEALISK STRAINER 20 STAI
- IKEA** (highlighted)
- IKEA 365+ BOWL 16 PATTERN
- IKEA 365+ BOWL 16 PATTERN
- IKEA 365+ BOWL 16 WHITE
- IKEA 365+ BOWL 8 WHITE

Directory List

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



Configuration Module - Directories tab

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

Manufacturer

Select the Manufacturer from the drop down list.



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

Category

Select the block category such as Freezer Unit, Furniture, Racking, or Miscellaneous Unit, from the drop down list.

Units

Select the units of measurement for the block from the 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).

Material

Select the material from the drop down list.

Material 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.

Status Drop Down List

This list is configured in the Administration module (Edit > status). Depending on implementation, the status may affect the way the blocks display in the various hierarchical trees they appear in.

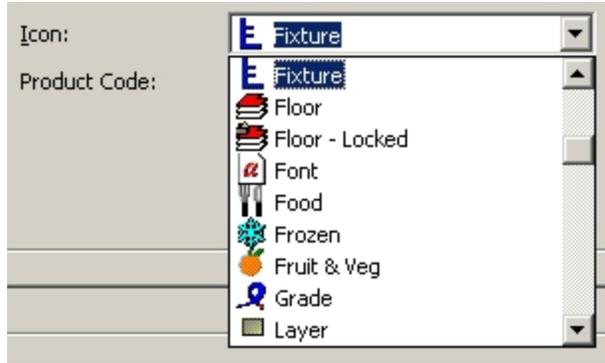
Code

Code field

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.

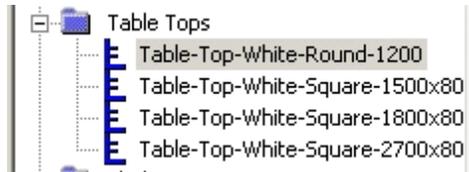
Icon

You can select the icon for the block from a drop down list.



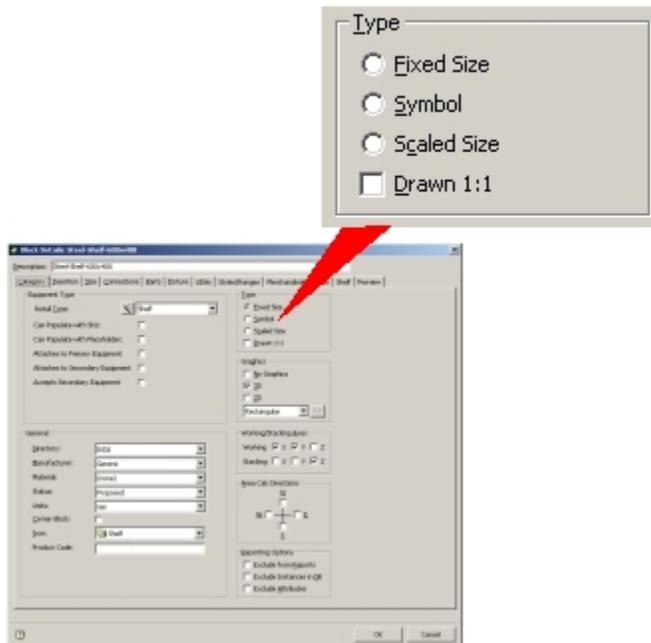
Icon Drop down list

This list can only be customized by Oracle. The selected icon appears against the Block Definition in the various hierarchical trees.



The Type Frame

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

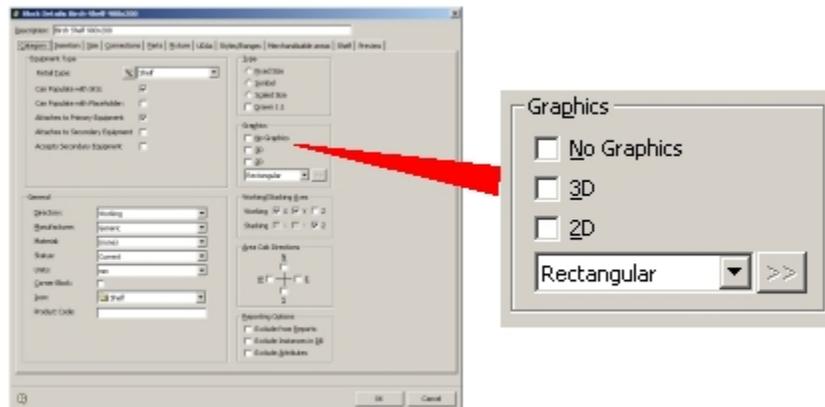


Type Frame

- **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 is drawn in the AutoCAD environment.



Graphics frame

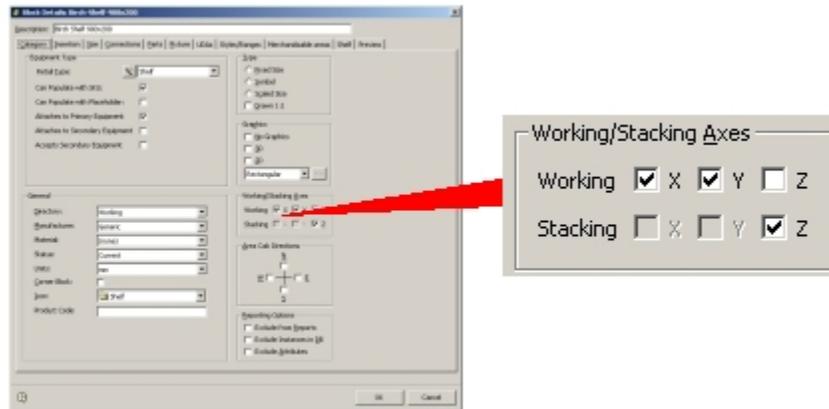
- **No Graphics** is an option that can be used for blocks that are not visually displayed. An example would be an associated block (such as a bolt or castor) which doesn't need to have graphics, but can still be included in reports.
- The **3D** and **2D** checkboxes determine which AutoCAD layer the 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

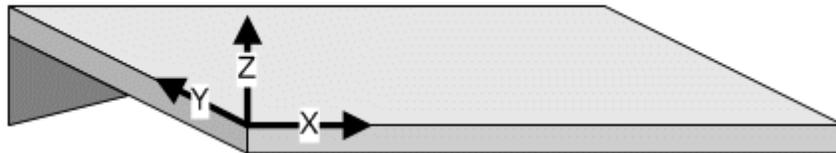
The **Working and Stacking Axes** determine how products align and stack respectively on shelves in the Virtual Reality environment. They do not affect product placement in the Planner environment as products are represented by placeholders.



Working and Stacking Axes

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.

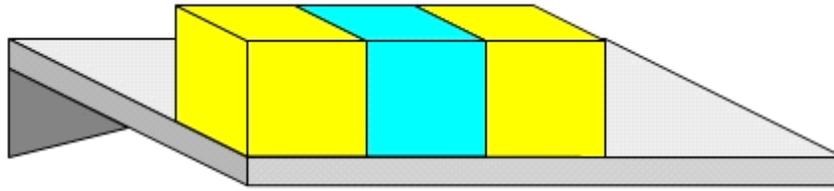


- If the X axis is checked, products may be aligned along the length of the block.
- If the Y axis is checked, products may be aligned over the depth of the block.
- If the Z axis is checked, products may be aligned relative to the height above the block.

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 plane. 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.

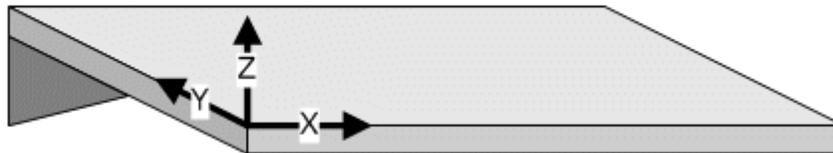
Note: If only some of the working axes are checked, then not all the alignment commands will be enabled in Merchandiser.

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.



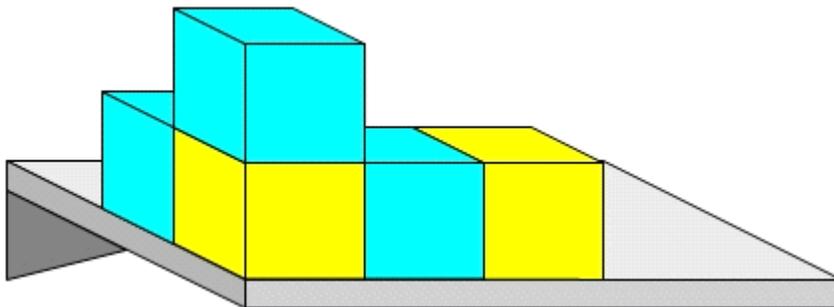
Stacking Axis

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.



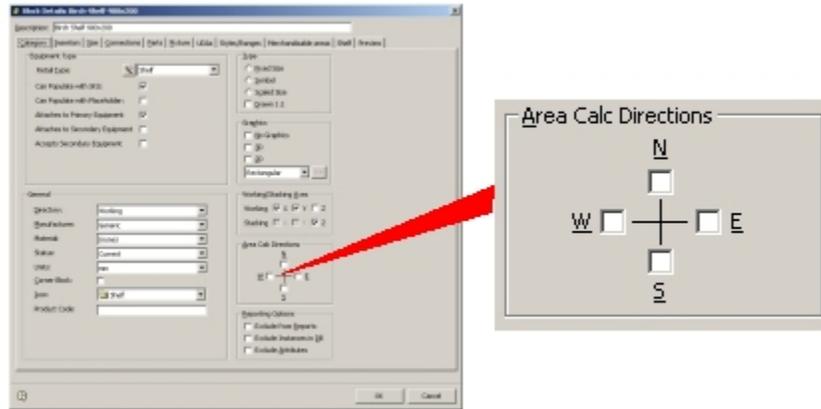
- If the X axis is checked, products may be stacked along the length of the block.
- If the Y axis is checked, products may be stacked down the depth of the block.
- If the Z axis is checked, products may be stacked vertically.

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 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 Calculations Direction frame

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.

The Reporting Options Frame

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



Reporting Options frame

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** allows the Block Definition to be excluded from Macro Space Management’s reports.
- **Exclude Instances in DB** allows you 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.

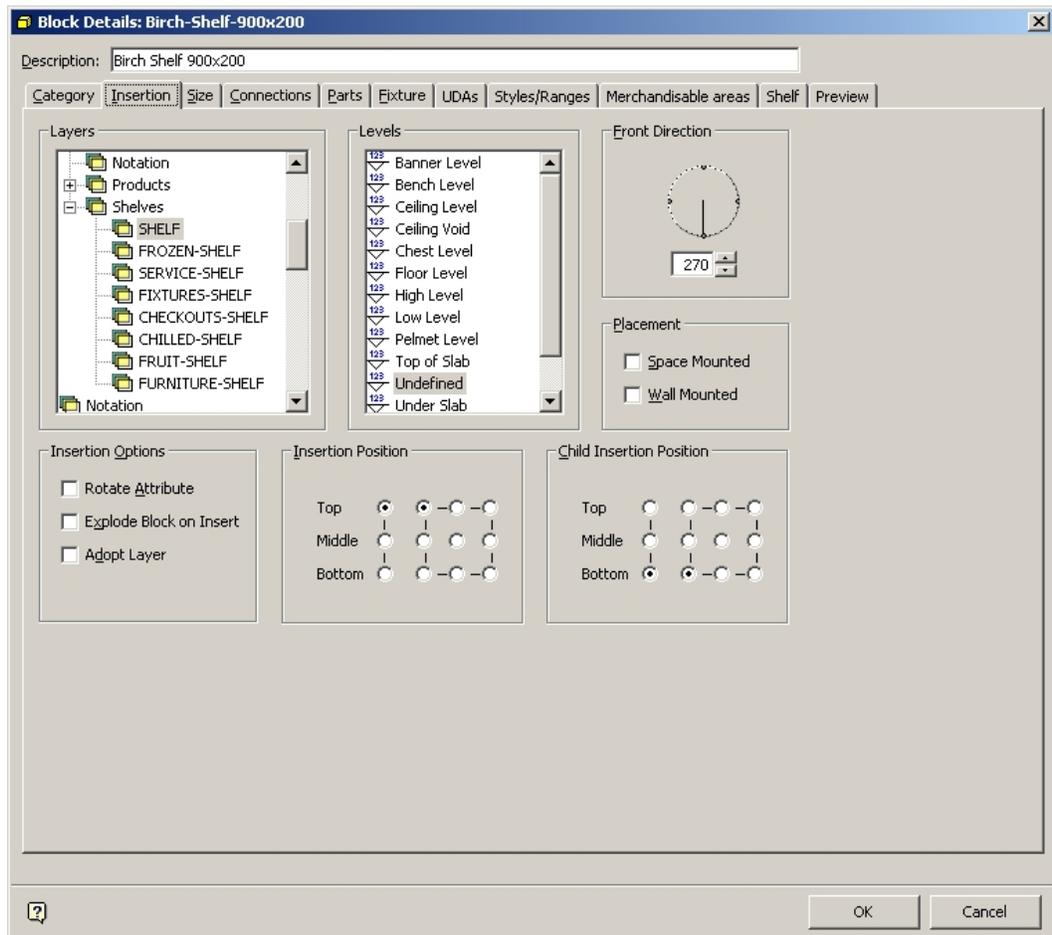
- **Exclude Attributes** allows certain attributes of the Block Definition to be excluded from being stored in the central database.

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

- **Include in Fixture Annotation** allows you to include the block definition in fixture annotations.

Insertion Tab

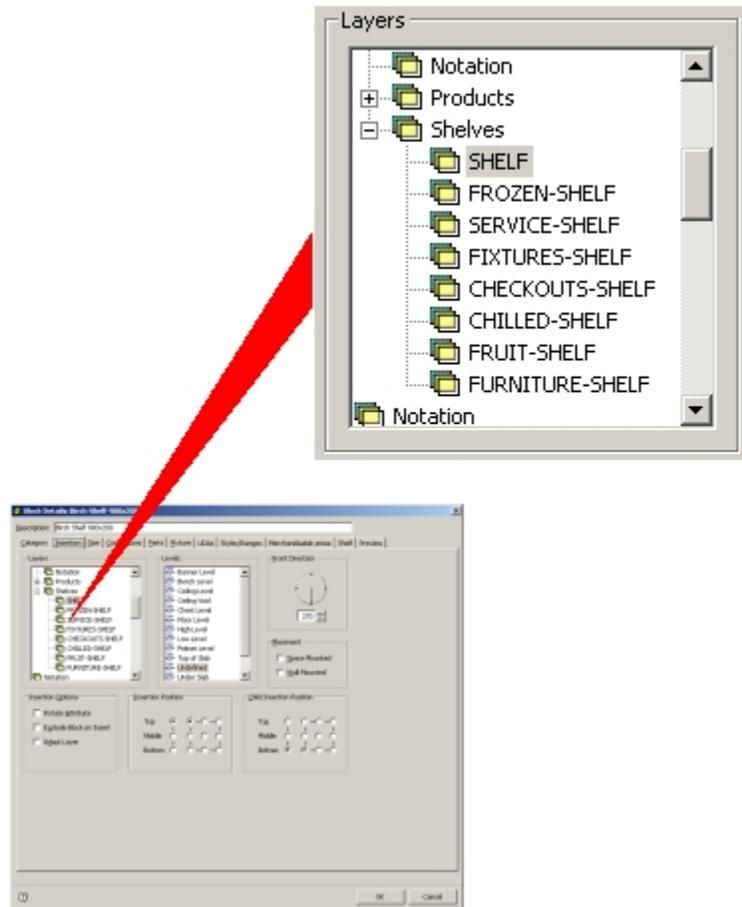
The **Insertion** tab is used to specify a number of details affecting how the block is inserted into the drawing.



Reporting Options frame

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.



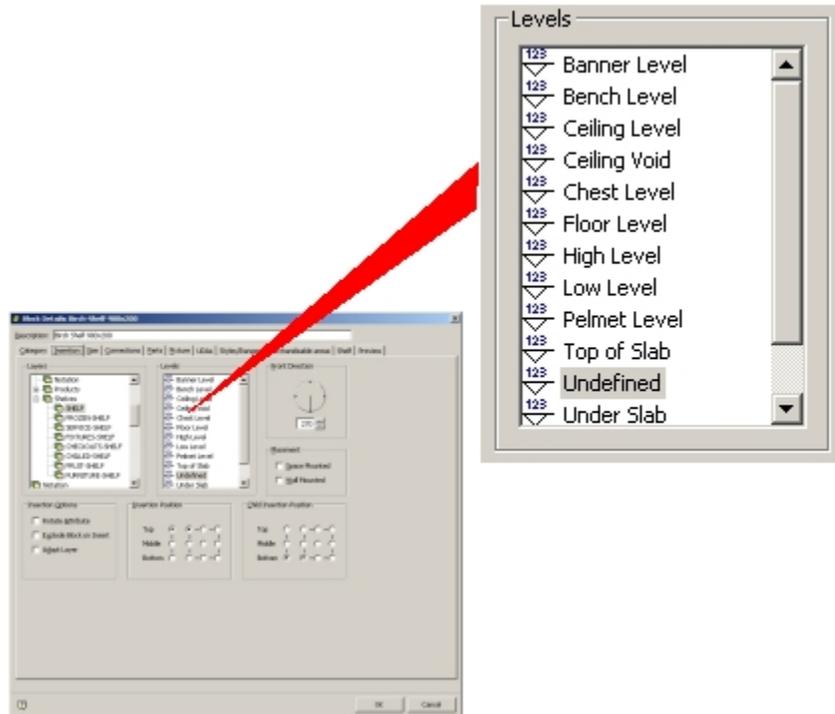
Layers frame

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 dialog 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.



Levels frame

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.

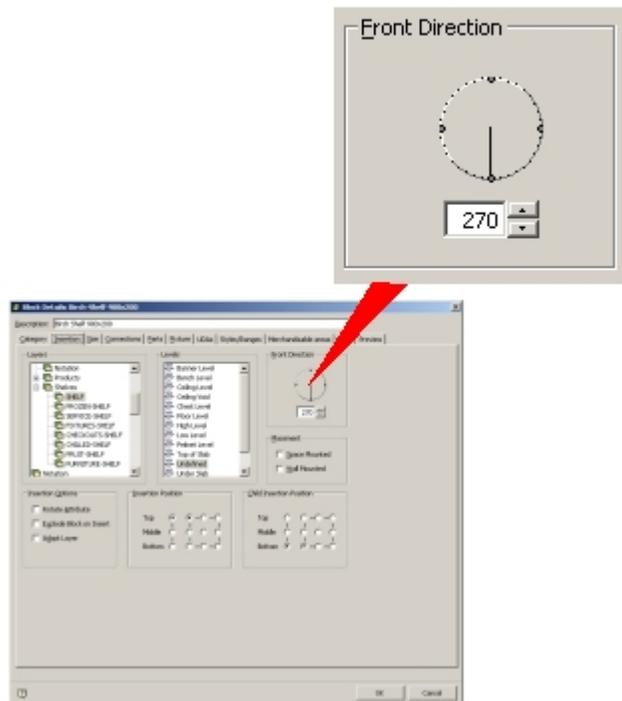
Level ID	Level Description	Default Elevation	Relative to Level
0	Undefined	0	Floor
1	Top of Slab	0	Floor
3	Floor Level	0	Floor
4	Ceiling Level	13000	Floor
5	Under Slab	0	Floor
6	Low Level	75	Floor
8	Bench Level	1200	Floor
9	Chest Level	1500	Floor
10	High Level	-100	Ceiling Level
12	Ceiling Void	200	Ceiling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

Level ID	Level Description	Default Elevation	Relative to 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** frame 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.



Front Direction frame

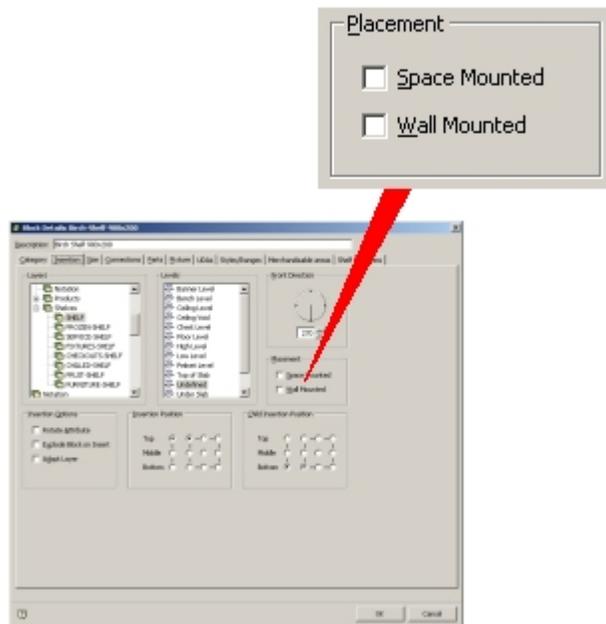
The orientation of the Front Direction of the equipment can then be changed by rotating the equipment when it has been inserted.

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.



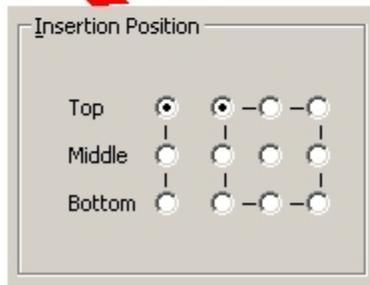
Placement frame

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

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

The Insertion Position Frame

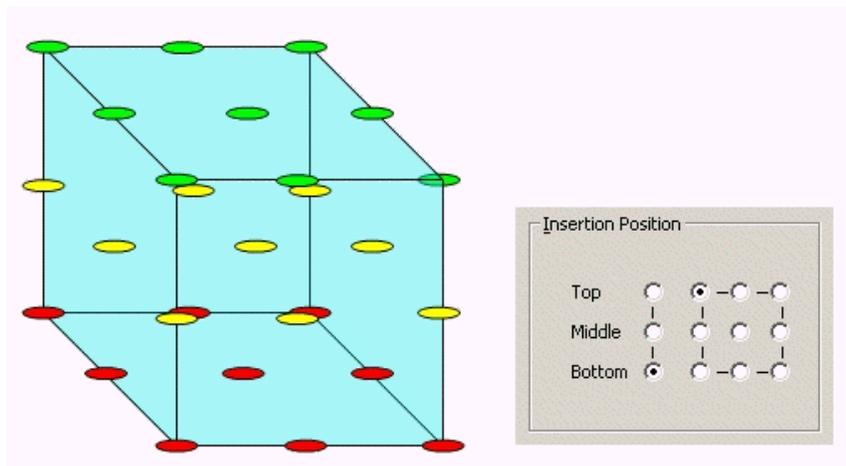
The **Insertion Position** is a position specified within Macro Space Management that matches the insertion position created when the associated graphic for the block was drawing in AutoCAD (or some other graphics program).



Insertion Position Frame

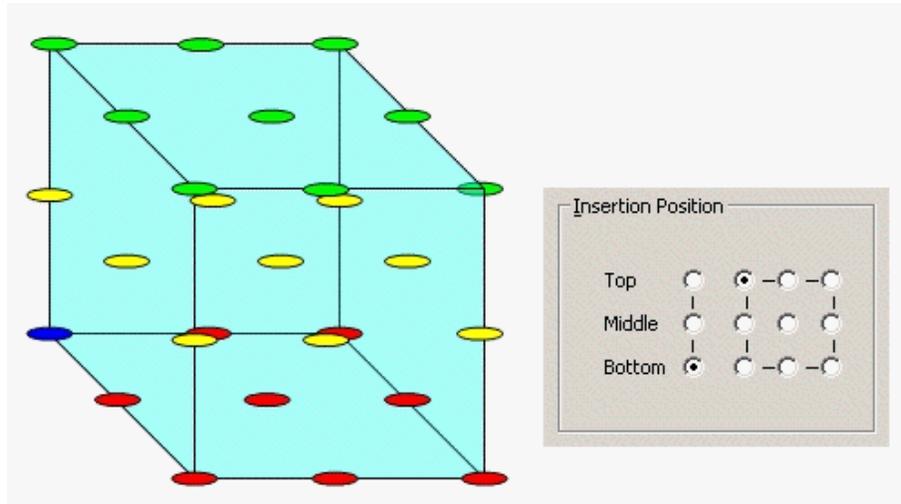
Note: The Insertion Position specified within Macro Space Management is passive – changing the Insertion Position does not change the position of the graphical insertion position created when the graphic was drawn.

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.

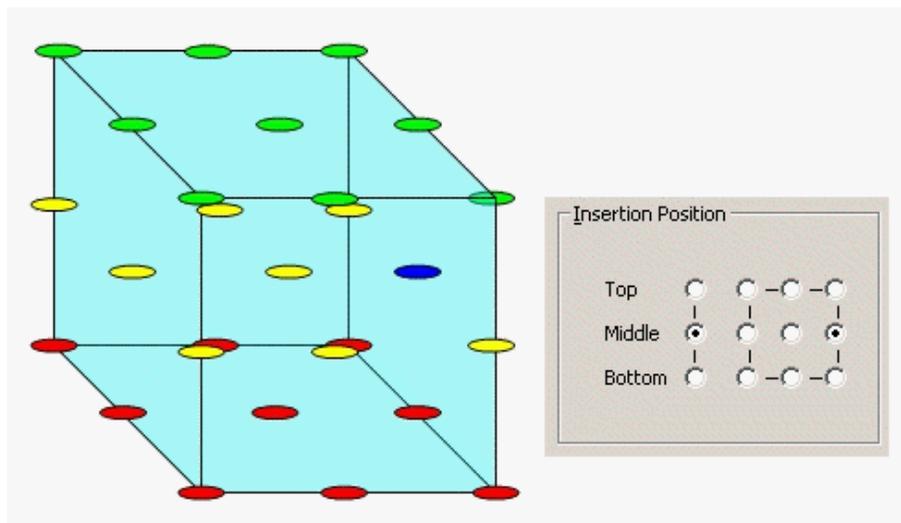


There are twenty seven possible insertion positions, aligned in three layers: top (green circles), middle (yellow circles) and bottom (red circles). The layer can be selected by clicking on the appropriate radio button. Each layer contains nine possible insertion points ranging from left rear to front 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.



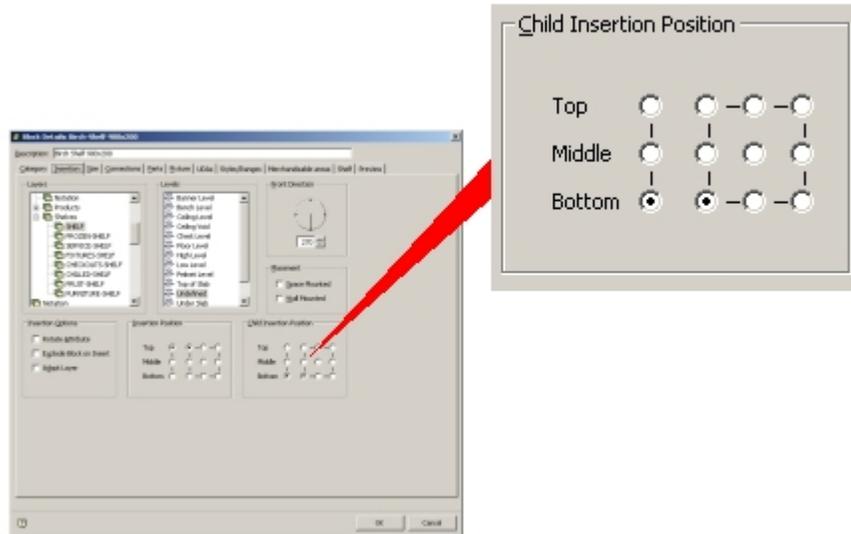
Note: In the above example, the insertion position (blue circle) is bottom, left, rear.



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

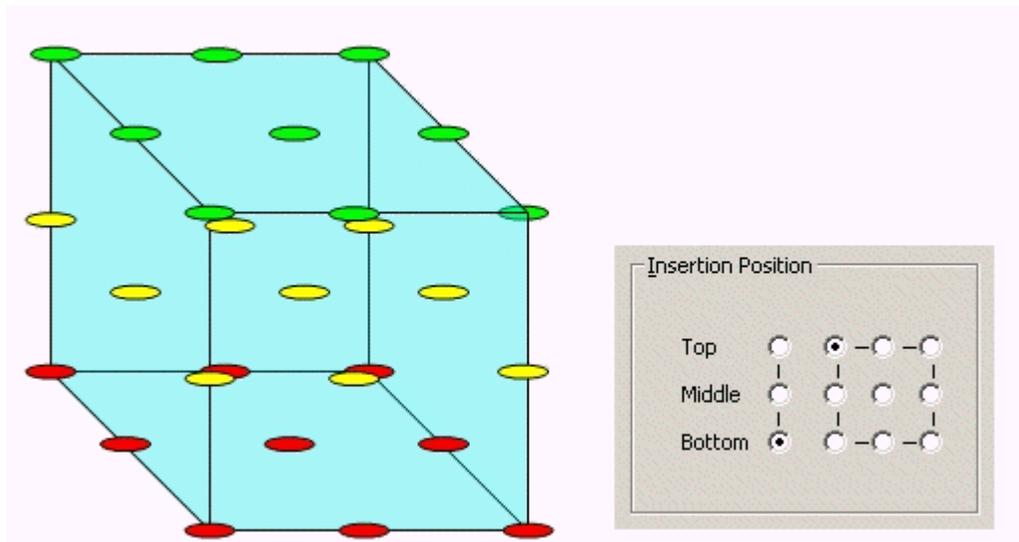
The Child Insertion Position Frame

The **Child Insertion Position** frame enables the child insertion position to be specified.

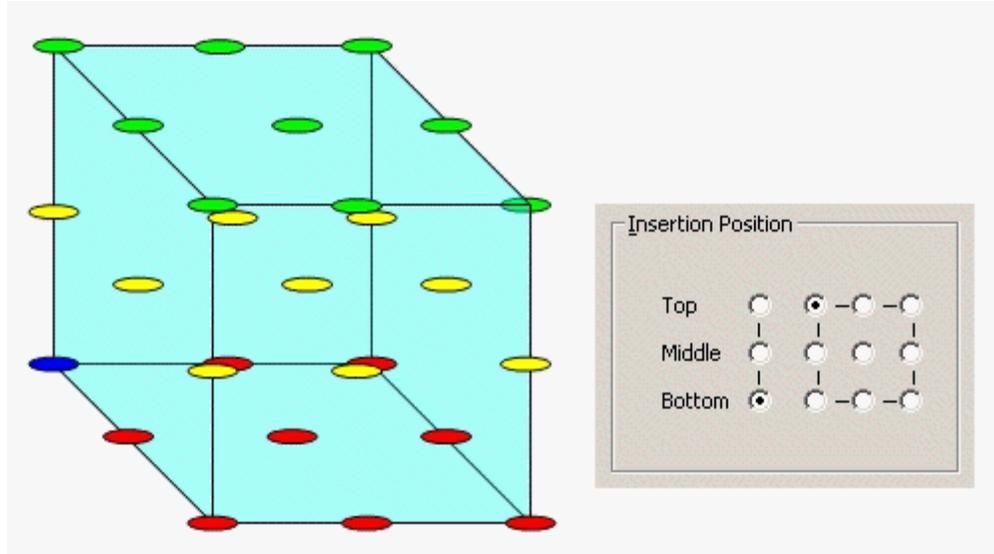


Child Insertion Position frame

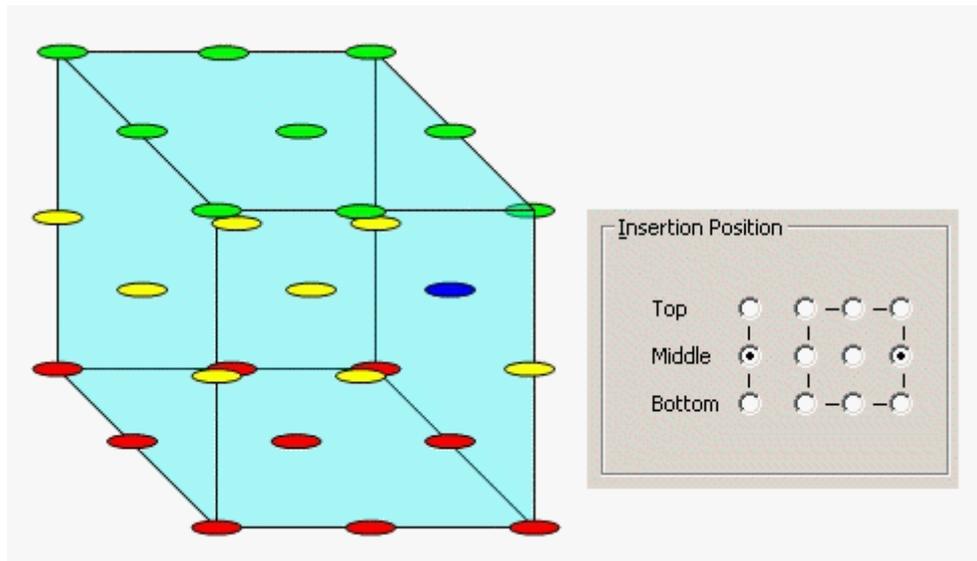
The Child Insertion Position is the datum point from which merchandise is inserted onto the object.



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.



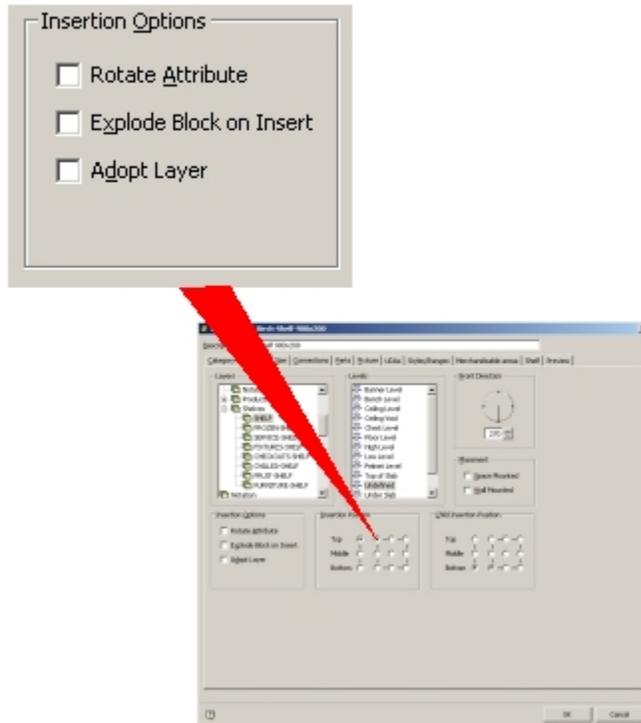
In the above example, the insertion position (blue circle) is bottom, left, rear.



In the above example, the insertion position (blue circle) is middle, right, centre.

The Insertion Options Frame

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



Insertion Options frame

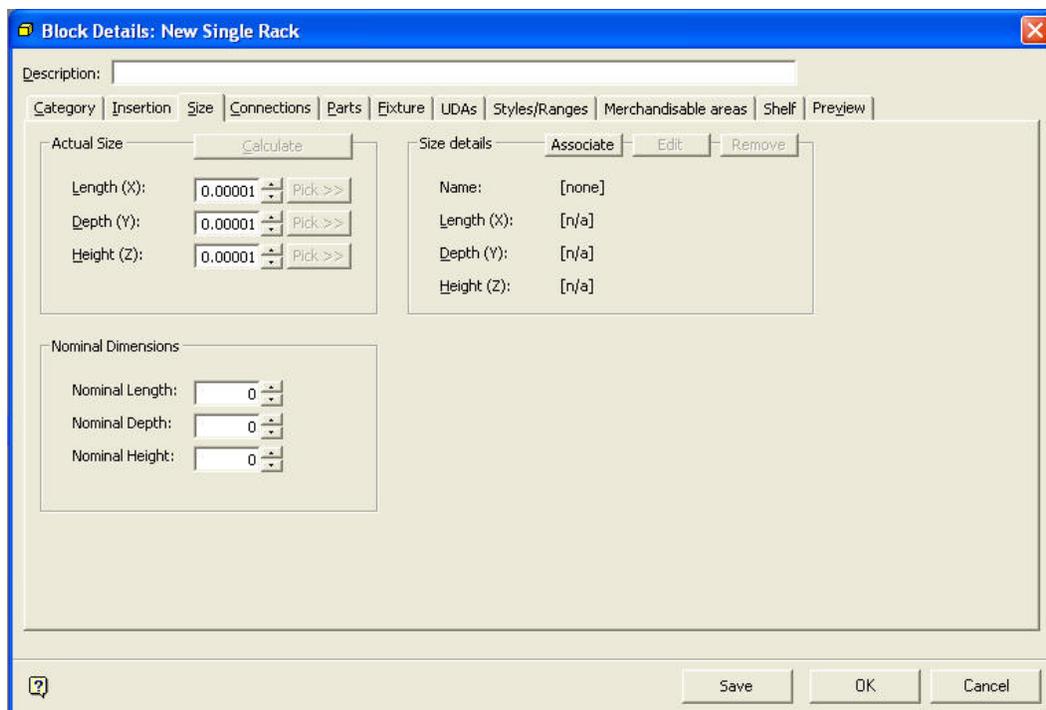
Rotate Attribute, when enabled, ensures any non-constant attributes on the block will be rotated so they are upright and readable. For example, a text tag associated with a block. If the block is inserted in an orientation where the text would otherwise not be readable, the text will be rotated so it 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.



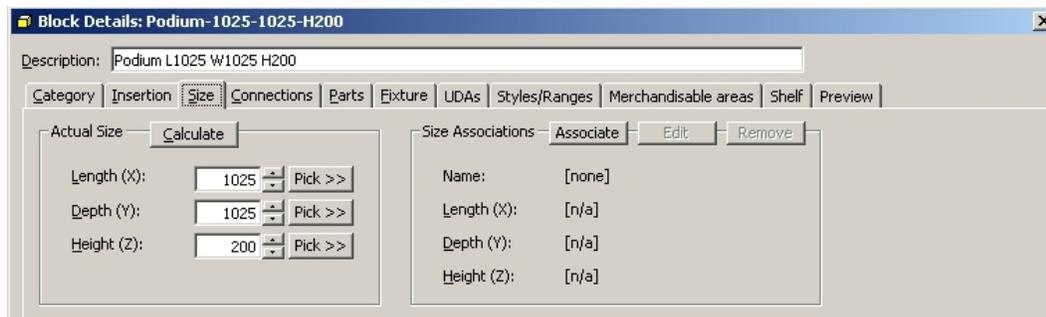
Size tab

It contains three frames.

- **Actual size** is the maximum dimensions of the block
- **Size Details** contains information on the ranges of permissible sizes.
- **Nominal Dimensions** are the volume the fixture occupies once all equipments have been added to it.

Overview of Block Sizes

Blocks are of two main types. 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, which means that when they are placed into a drawing, the required length, width, and height can be selected from a predefined list.



Block Sizes

Blocks with a single fixed set of dimensions have 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

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

Size Group

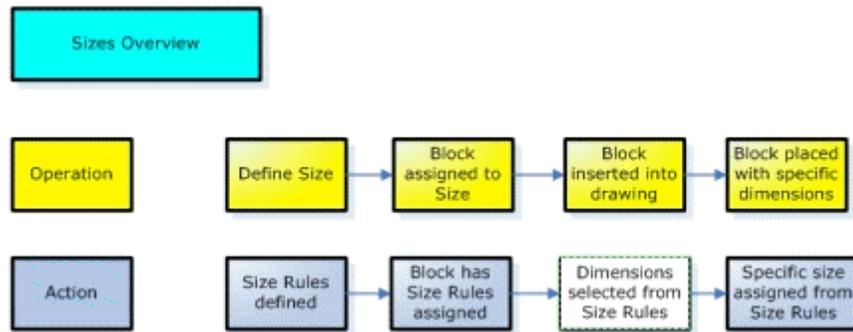
A Size Group allows sizes to be collected into similar within a hierarchical tree of sizes.

Size Rules

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

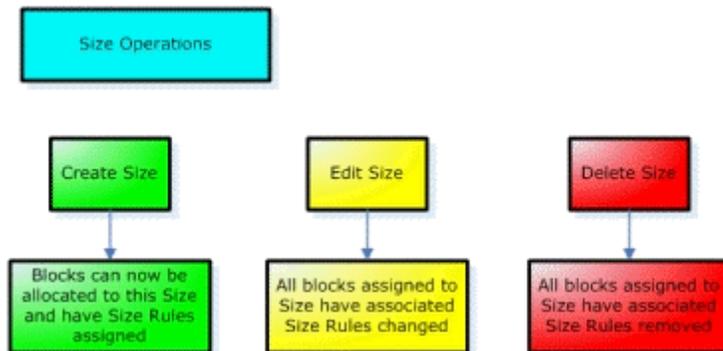
Overview

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



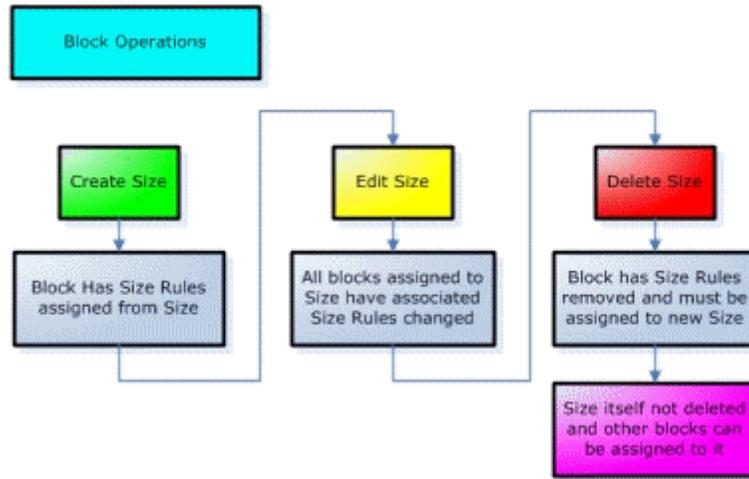
A Size is a set of definitions (size rules) as to what sets of dimensions are allowed for a block that has been assigned to that size group. When any Block is assigned to a size, it inherits the set of size rules associated with that size group. When the Block is inserted into the drawing, a dialog appears 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.

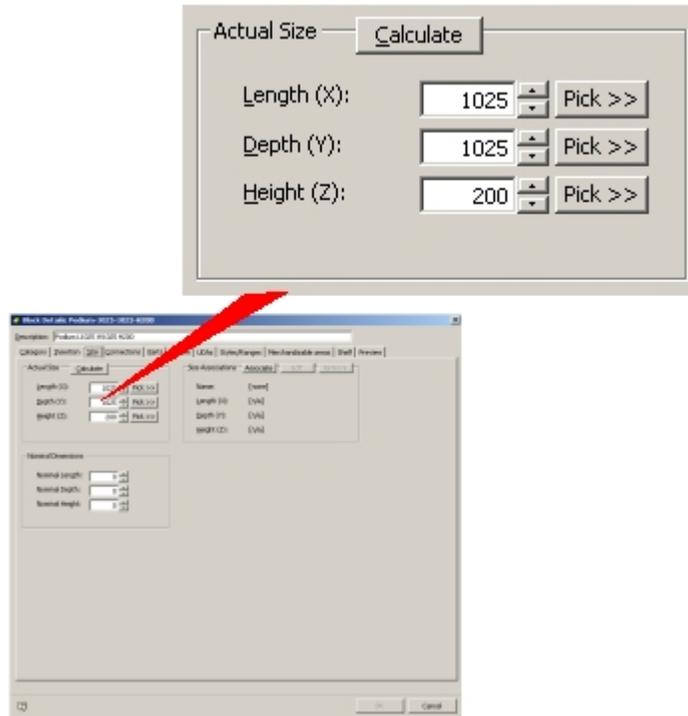
Note: It is the Size that is being edited, and not the Block Definition. Changes made to the Size will affect all blocks that reference that Size, and not just the block that is having its definitions set.

Delete Size removes the Block Definition currently referenced. 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.



Actual Size Frame

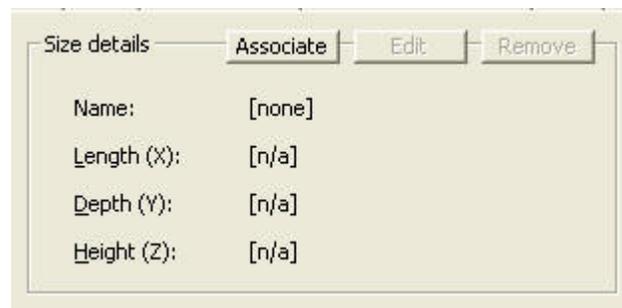
For the Calculate and Pick options to work, the drawing must be loaded into the active AutoCAD drawing using the Load Blocks into Drawing command from the File menu. Clicking on the **Calculate** button results in the maximum dimensions being returned to Fixture Studio.

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 Details Frame

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

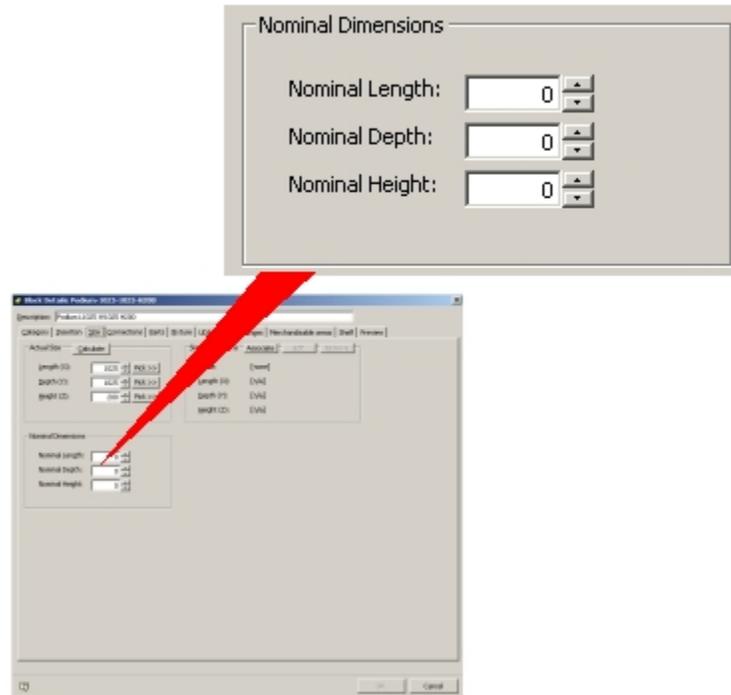


Size Details Frame

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.



The Nominal Dimensions Frame

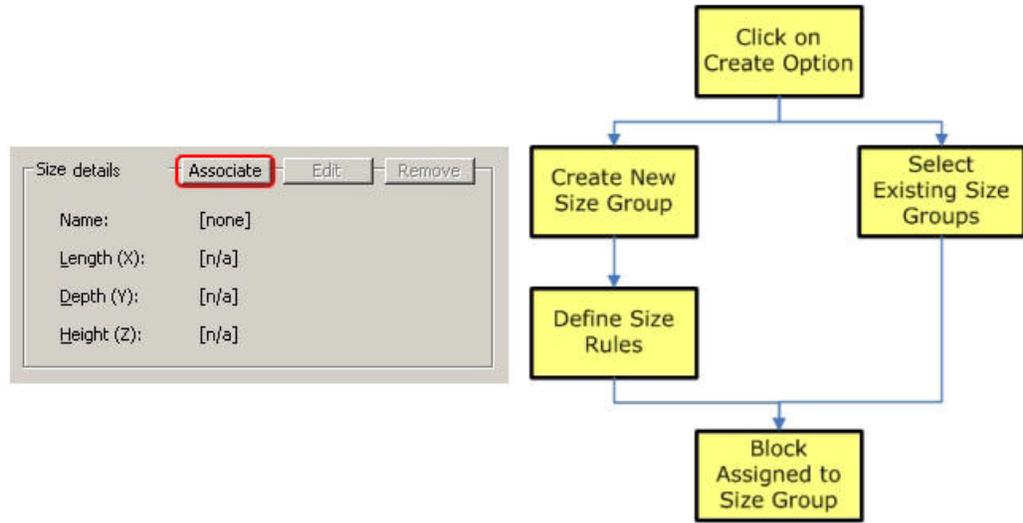
Nominal dimensions are primarily used for primary fixtures, where attached secondary equipment will substantially increase the volume. For example, consider a backpanel 600 mm long, 1900 mm high and 5 mm deep. If this backpanel has shelves attached, it will eventually occupy a significantly larger space. 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.

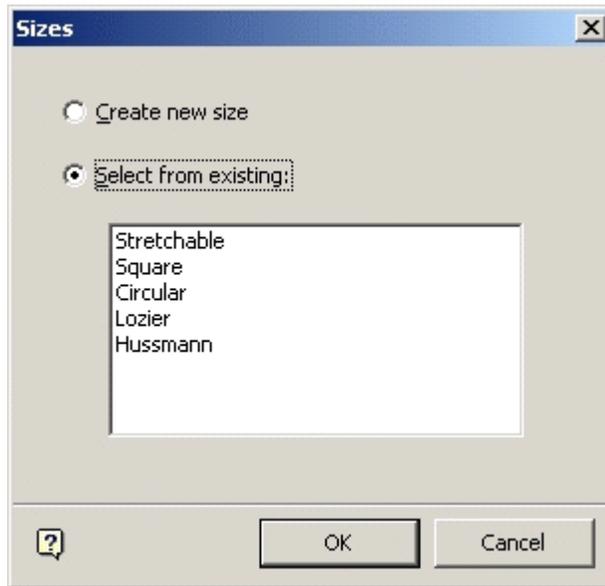
Size Details Frame

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 dialog box.



Sizes dialog 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 dialog box.

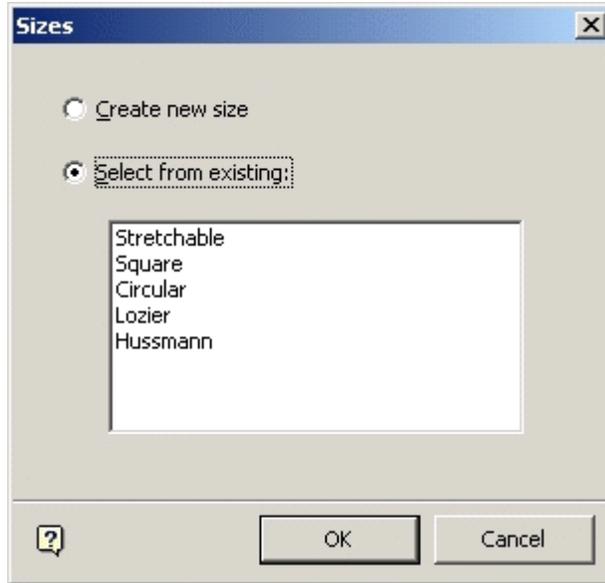


Configure Sizes

This can be configured to set the size rules.

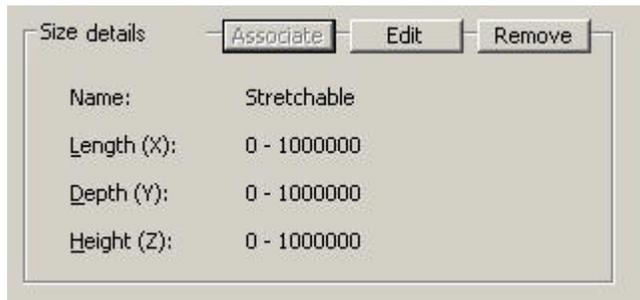
Select from Existing

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



Size - Select from Existing

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.



Edit Size Rule Option

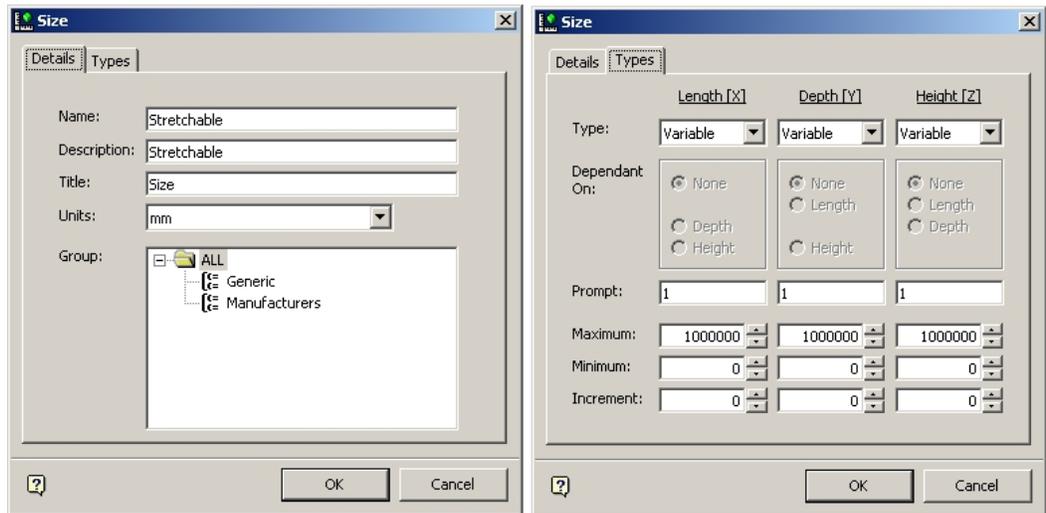
Editing Size Group

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



Size Group details - Edit

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



Size Dialog B ox

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.

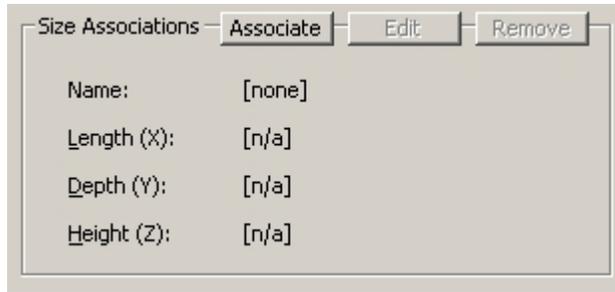
Removing Size Group Association

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



Size Associations - Remove

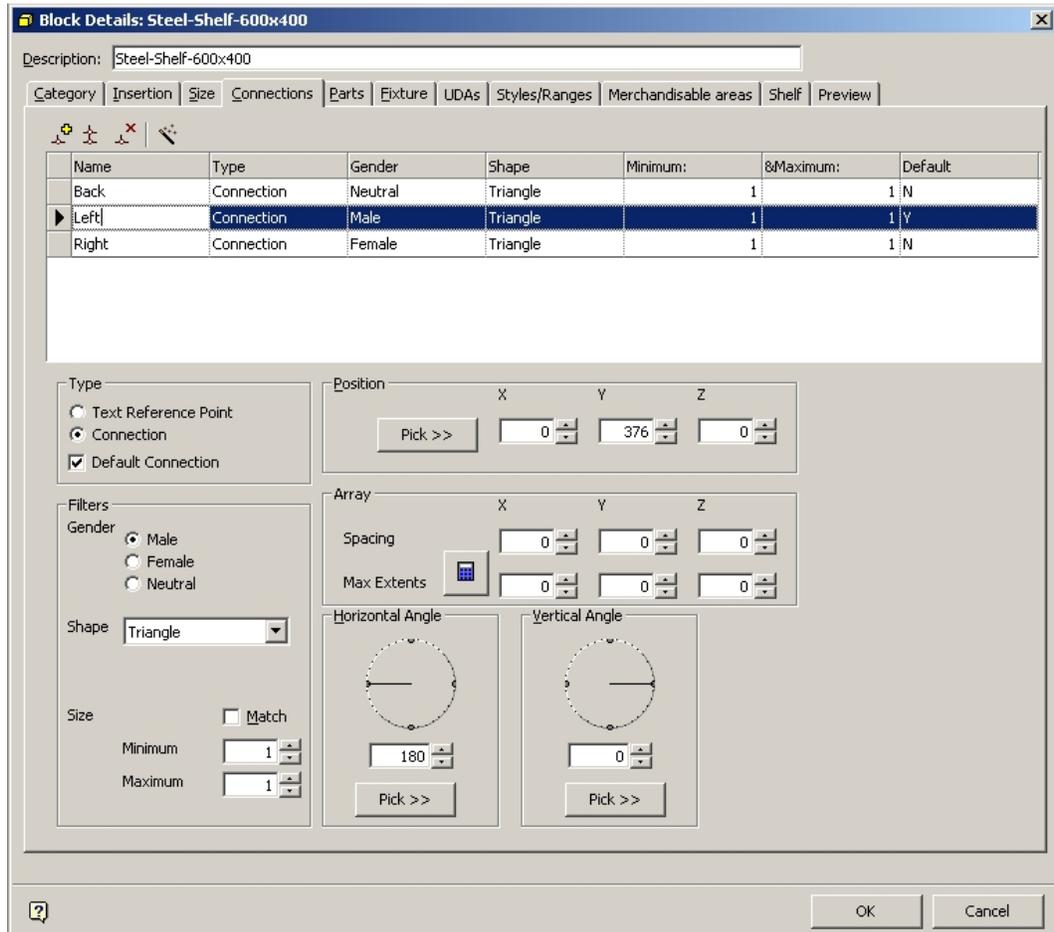
This removes the link to the size group (and its associated size rules) but it does not delete the Size Group itself. The Size details frame will then show that no Size Group has been associated with this particular block.



Size Associations - Associate

Connection Tab

The **Connections** tab allows you to specify the connection options for Macro Space Management blocks.

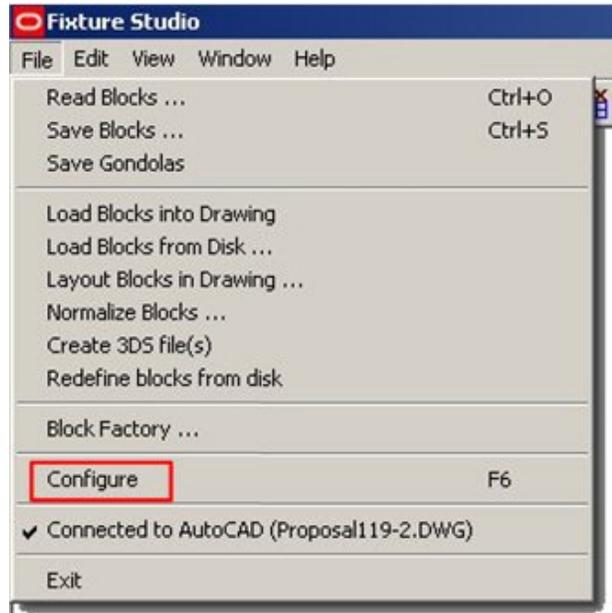


Connections tab

A small toolbar at the top allows you to add, copy, and delete connections, while the wizard on the toolbar allows you to add three basic connections. The Connections List enlists all current connections for the Macro Space Management Block.

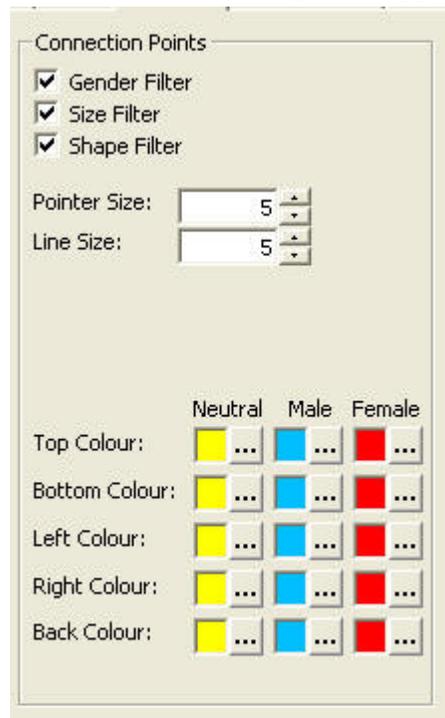
The Connections Tab and the Configuration Module

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 menu.



Fixture Studio - Configure

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



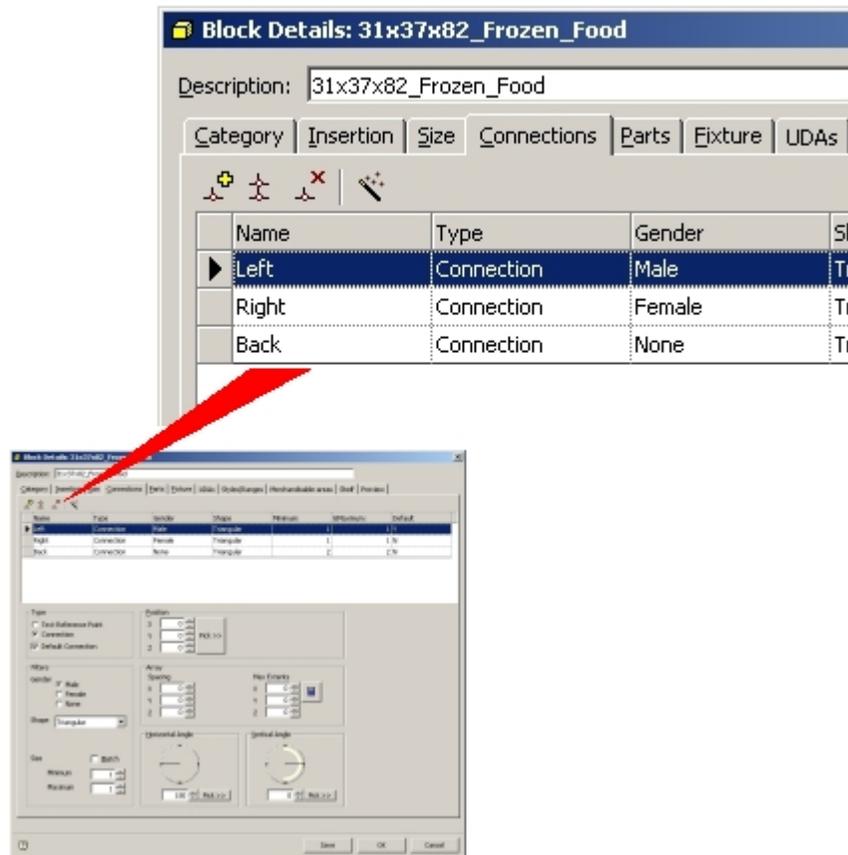
Connection Points

A series of check boxes allow you to configure how connection points operate. These settings are local and do not affect other users of Macro Space Management.

- **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.
- **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.

The Connections Toolbar

The Connections toolbar on the upper left of the Connections tab allows you to add, copy and delete connections. It also allows you to invoke the Connections Wizard.

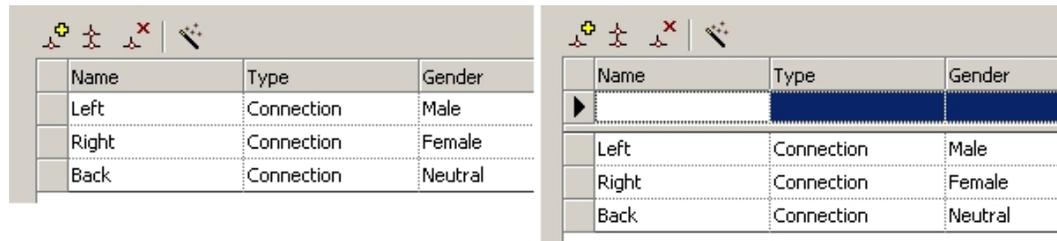


Connections toolbar

Icon	Function
	Add a Connection
	Copy a Connection
	Delete a Connection
	Connection Point Wizard

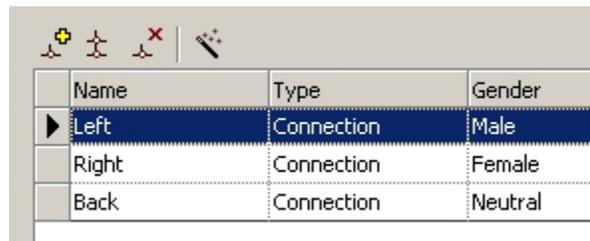
Add a Connection

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.

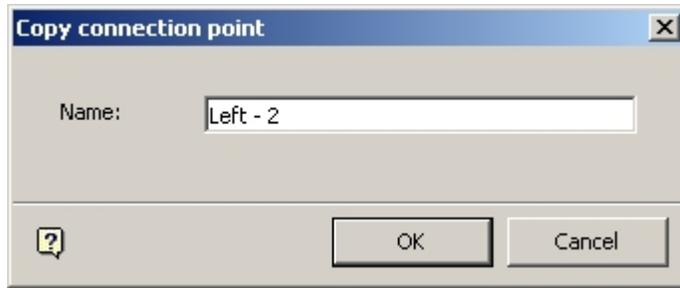


Copy a Connection

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 dialog box.



Copy Connection Point

Edit the name to one suitable for the new connection. On clicking **OK**, a duplicate connection will be added, save with the changed name.

Name	Type	Gender
Left	Connection	Male
Right	Connection	Female
Back	Connection	Neutral
Left - 2	Connection	Male

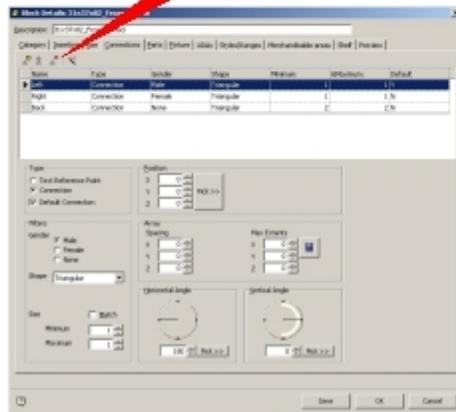
Delete a Connection

To delete a connection, highlight the connection to be deleted and click the Delete icon. When asked for confirmation, click **Yes** to delete a connection.



The Connections Wizard

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



Connections Wizard

This will bring up the Connections Wizard dialog box.



Connections Wizard dialog 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.

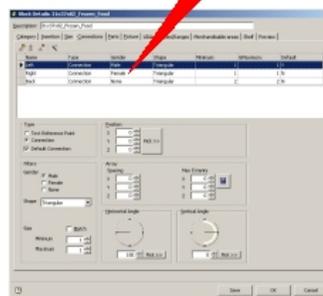
The **Back connection** has no gender, so it will attach to any other connection. Checking the **Clear Existing Blocks** checkbox will remove any existing connections. On clicking **OK** on the Wizard, the selected default connections will be added.

	Name	Type	Gender	Shape	Default	Justifica
▶	Left	Connection Point	Male	Triangular	True	Offset
	Right	Connection Point	Female	Triangular	False	Offset
	Back	Connection Point	None	Triangular	False	Offset

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.

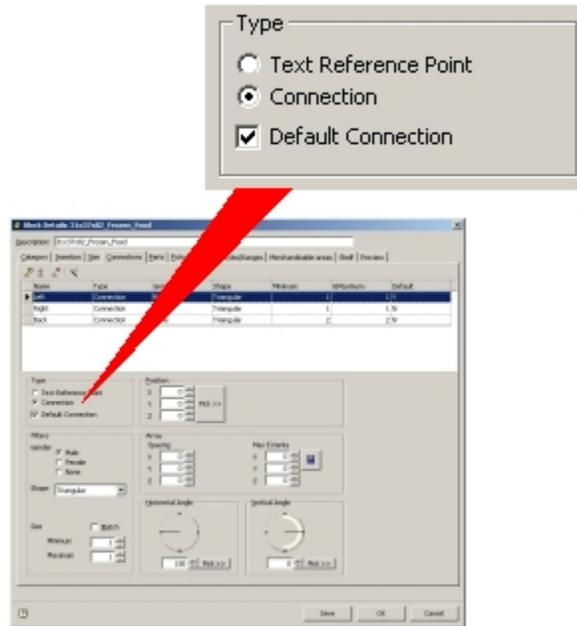
Name	Type	Gender	Shape	Minimum:	&Maximum:	Default
▶ Left	Connection	Male	Triangular	1	1	Y
Right	Connection	Female	Triangular	1	1	N
Back	Connection	None	Triangular	2	2	N



Connections List

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



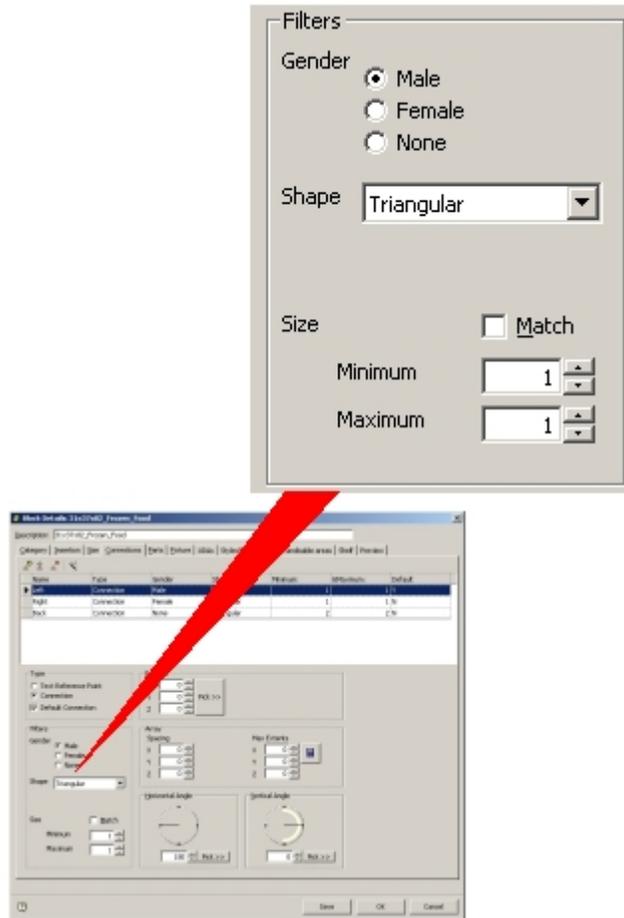
Connection Type

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

A Connection is used to indicate how fixtures join.

Gender, Shape and Size

Gender, shape and size are set using the Filters frame.



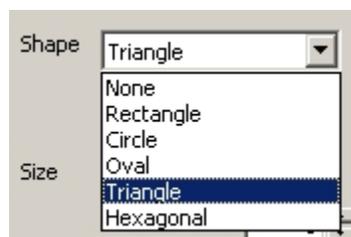
Filters frame

The gender of a connection determines whether that connection is compatible with another. There are three genders; male, female and neutral.

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.



Filters frame – Shape Dropdown 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 connection point connects to what connection, that is, 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

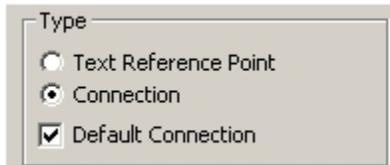
A maximum and minimum size for the connection can be set using the spin controls. A pair of connection points must have compatible sizes to connect together. If the Match checkbox is ticked, then the connections must have identical maximum and minimum sizes. If they are not identical, the connections 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.



Filters frame – Type dropdown list

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 Position Frame

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

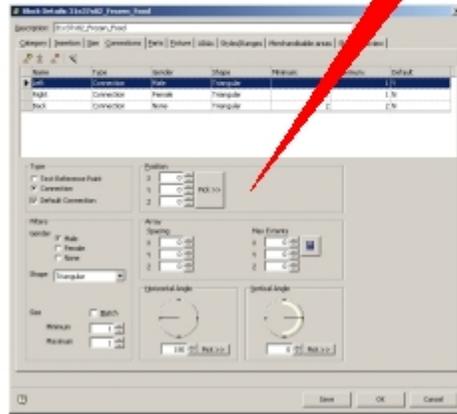
Position

X 0

Y 0

Z 0

Pick >>



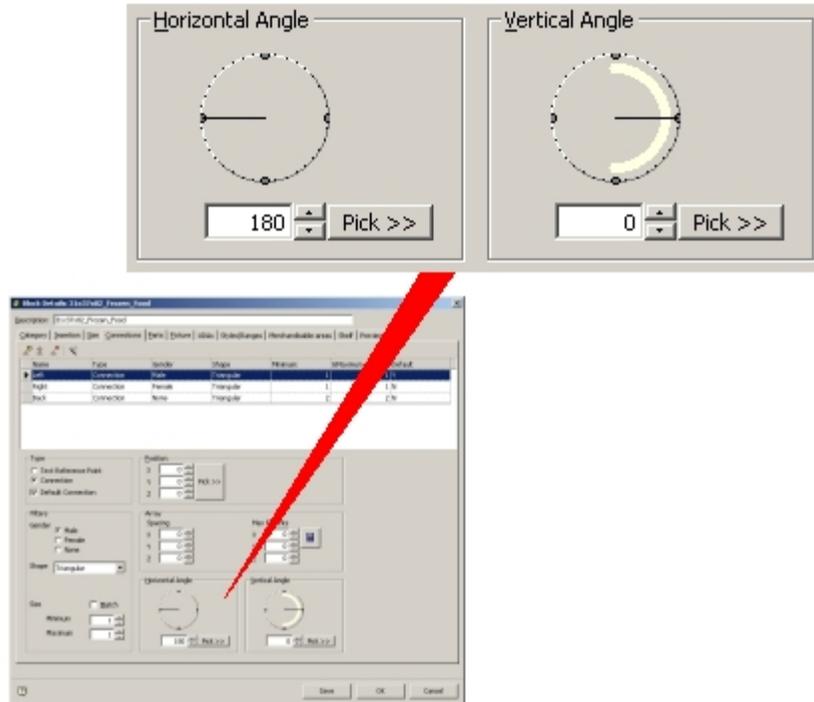
The Position Frame

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 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.



The Horizontal and Vertical Angle Frames

- 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

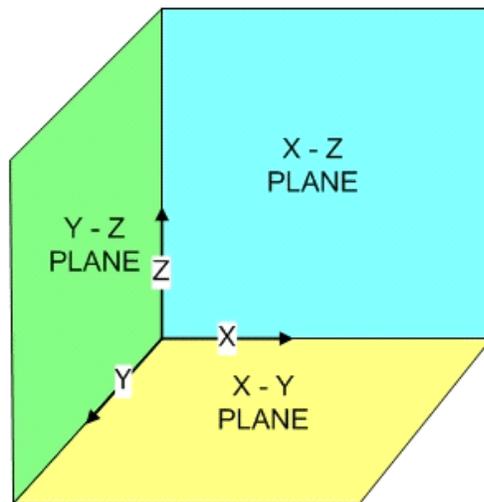
	Requirement	Optional or Mandatory
Shape	The connection points must have the same shape	This requirement can be disabled in the Configuration Module
Size	The connection points must have compatible sizes	This requirement can be disabled in the Configuration Module

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.

Connection 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

X

Y

Z

Array

Spacing	Max Extents
X <input type="text" value="0"/>	X <input type="text" value="575"/> <input type="button" value="Pick >>"/>
Y <input type="text" value="0"/>	Y <input type="text" value="0"/>
Z <input type="text" value="50"/>	Z <input type="text" value="800"/>

Connection Lines for a Slatwall - Settings

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.

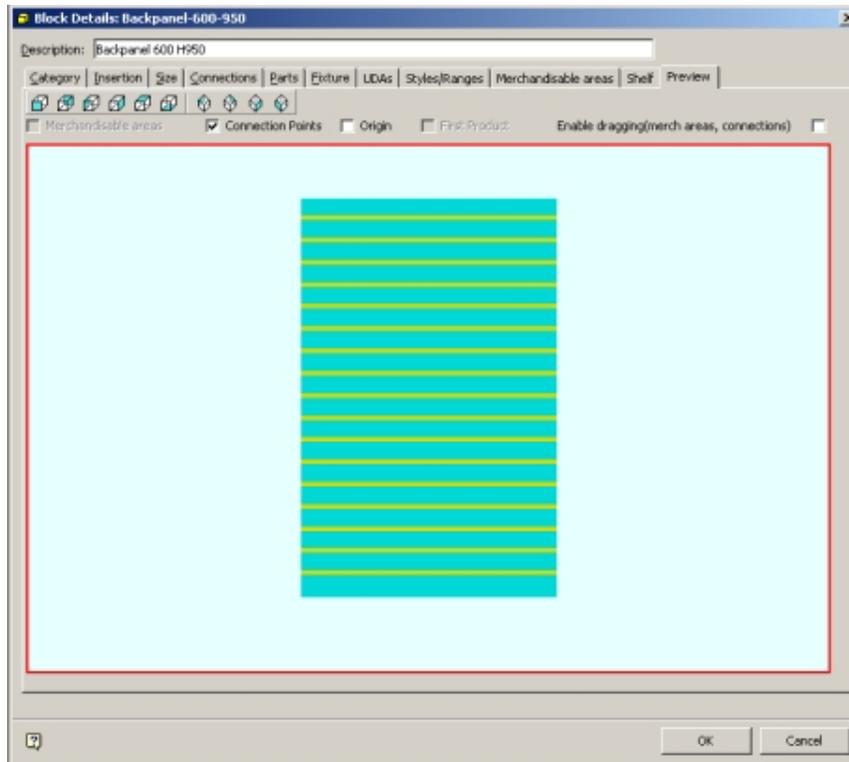
The X extents were set to 575 to get the line running across the full width of the backpanel.

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

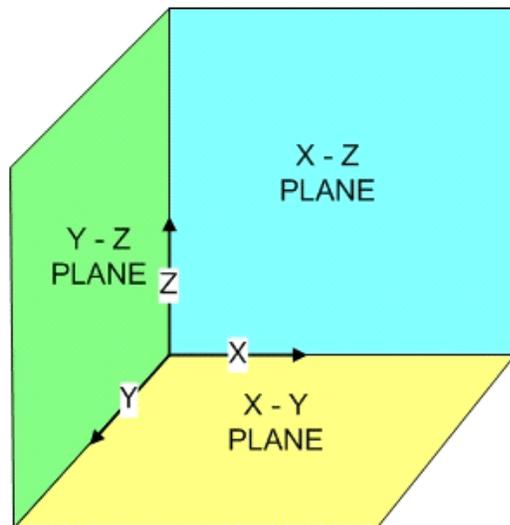
The result looks as follows:



Connection Lines for a Slatwall - Results

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		
X	37.5	Pick >>
Y	-2	
Z	100	
Array		
Spacing		Max Extents
X	50	X 500
Y	0	Y 0
Z	50	Z 800
Horizontal Angle		Vertical Angle
270 Pick >>		90 Pick >>

Connection Points for a Pegboard - Settings

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

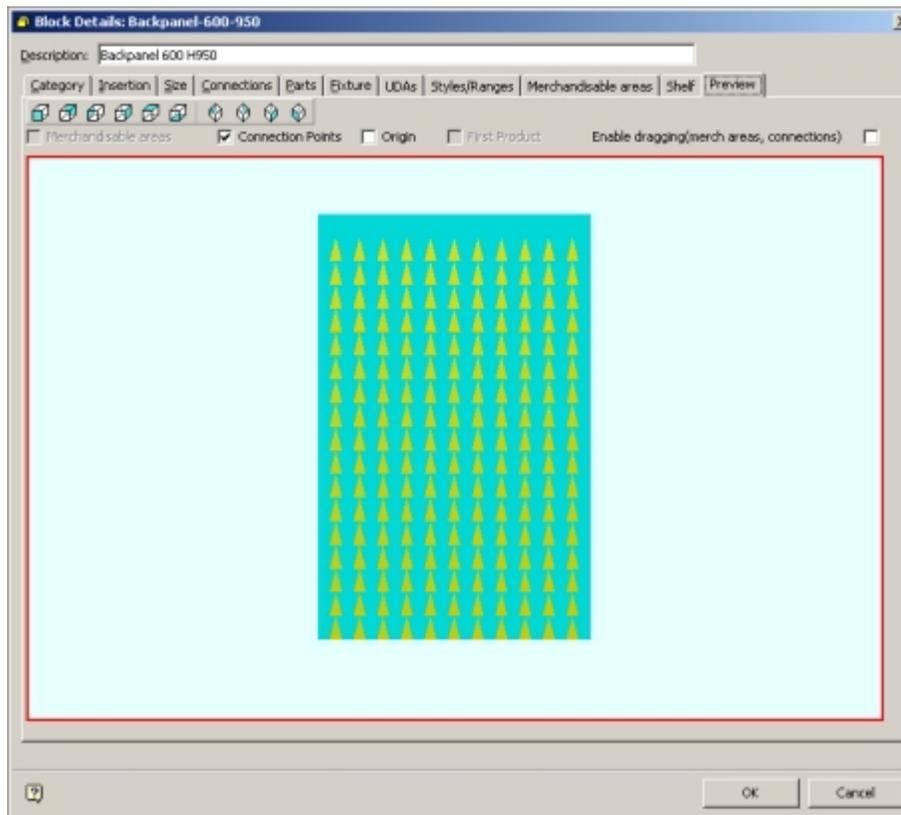
The X extents were set to 500 to keep the last column of points inside the edge of the backpanel

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:



Connection Points for a Pegboard - Results

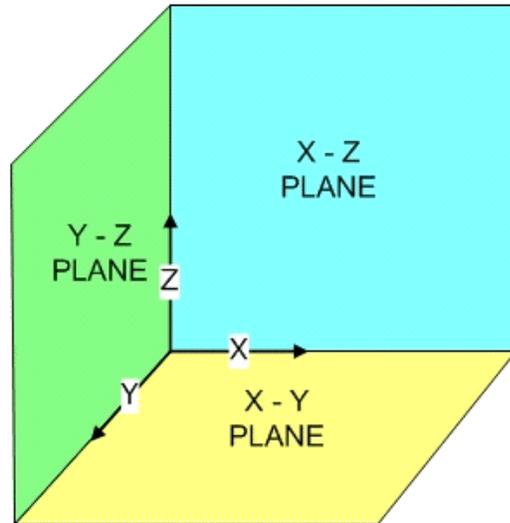
Tip: Anything connecting to this array of connection points will connect to the tips of each point.

Connection Box

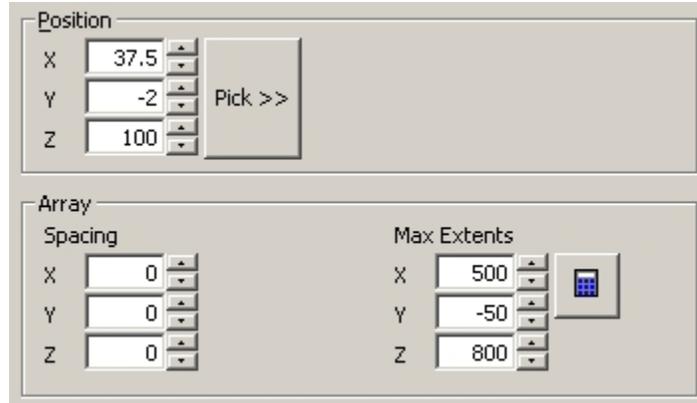
A connection box allows objects to be placed anywhere within a defined 3 dimensional box.

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.



Connection Box - Settings

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

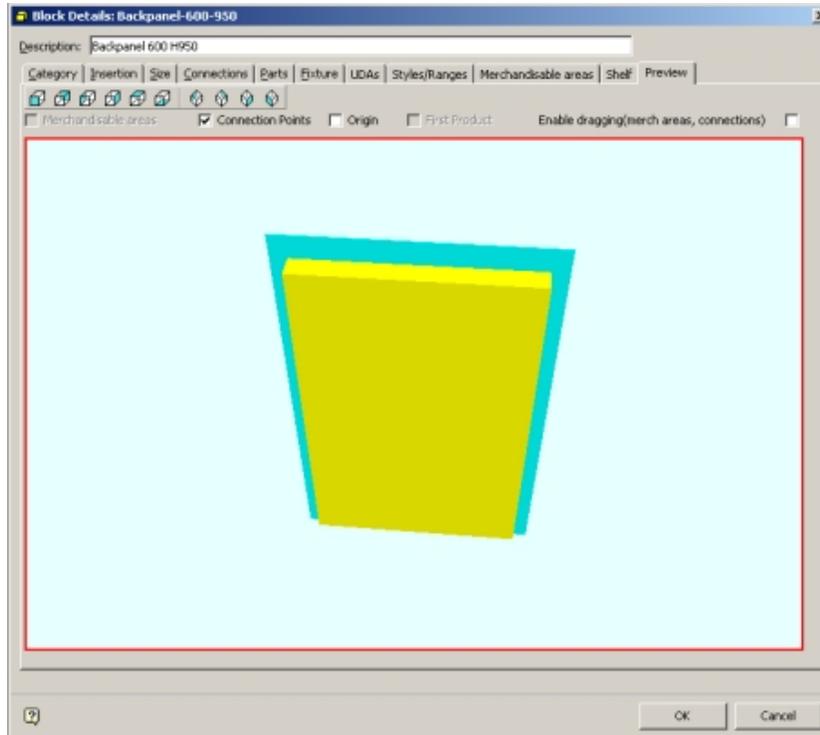
The X spacing was set to 0 to give a continuous box.

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

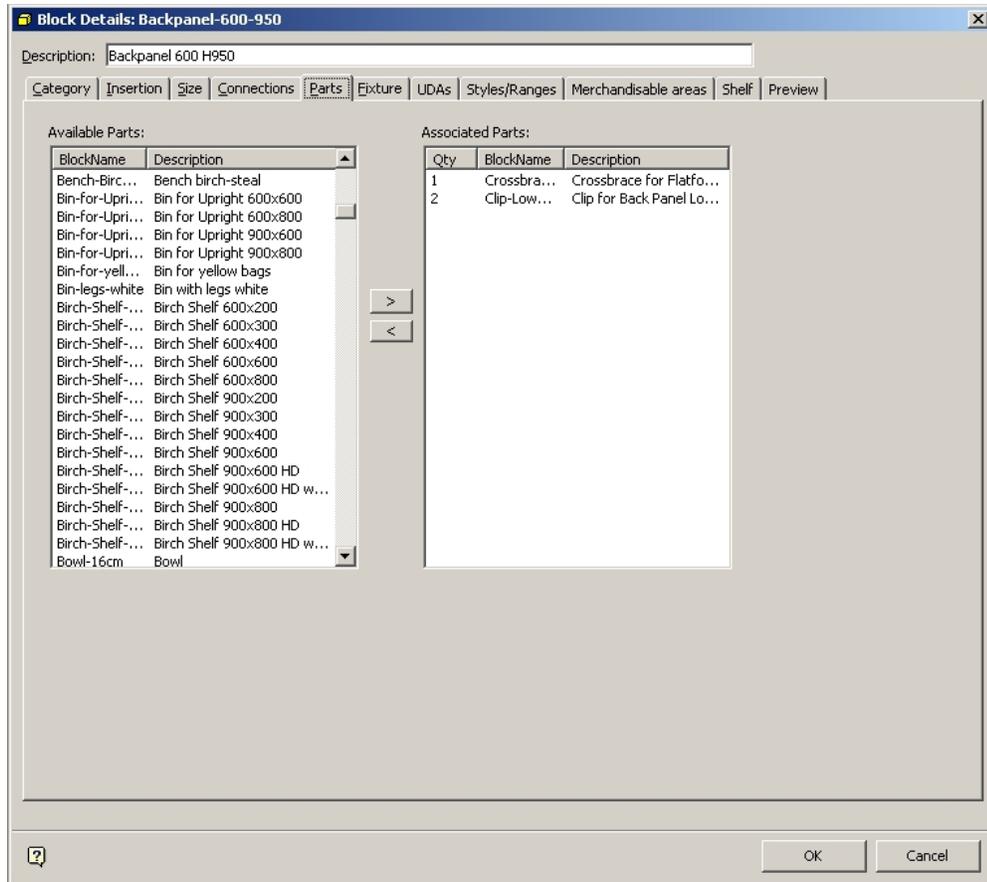
The result looks as follows:



Connection Box - Results

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.



Parts Tab

The Available Parts frame contains a list of all available parts. The Associated Parts frame contains a list of all parts associated with that particular block.

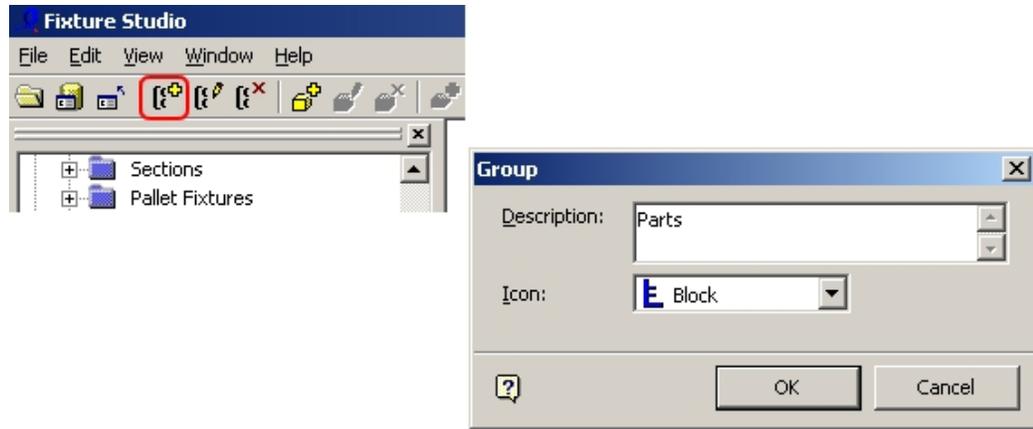
Part Blocks

Part Blocks are specialized type of block that have no graphics and exist only within the Macro Space Management database. It is only used 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 dialog box.

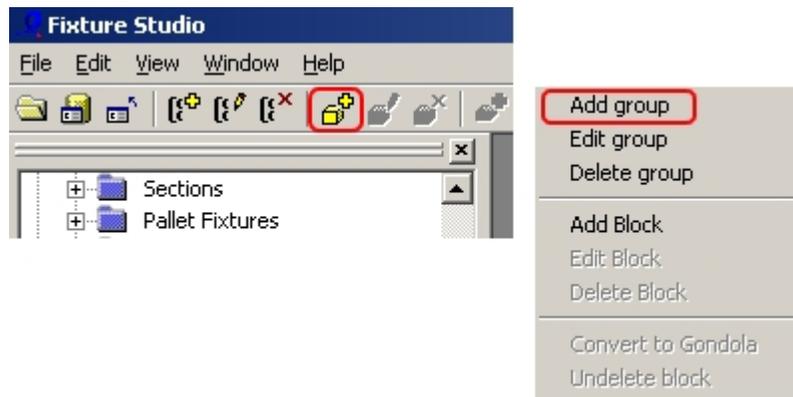


Add Group

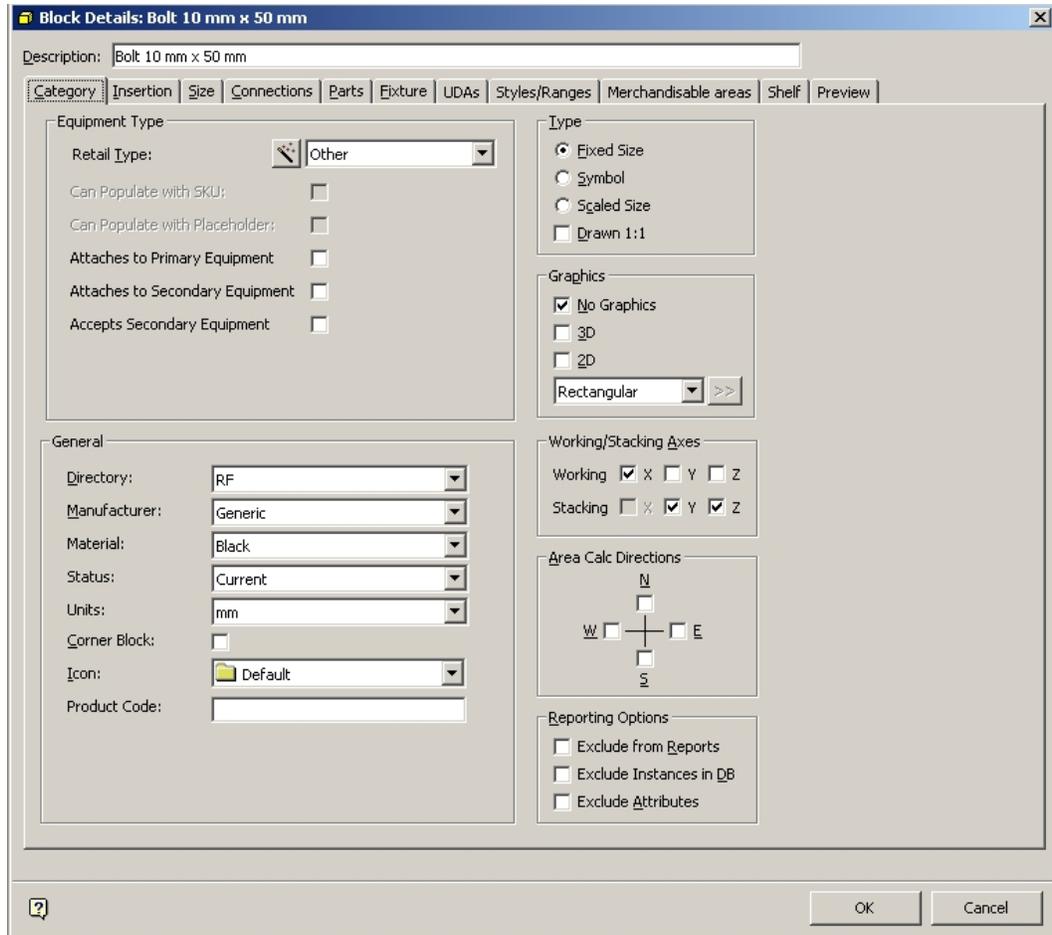
Type in a suitable name and select a suitable icon. Click **OK** and the group will be created in the Fixture Hierarchy visible in the Object Browser.

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 dialog box.

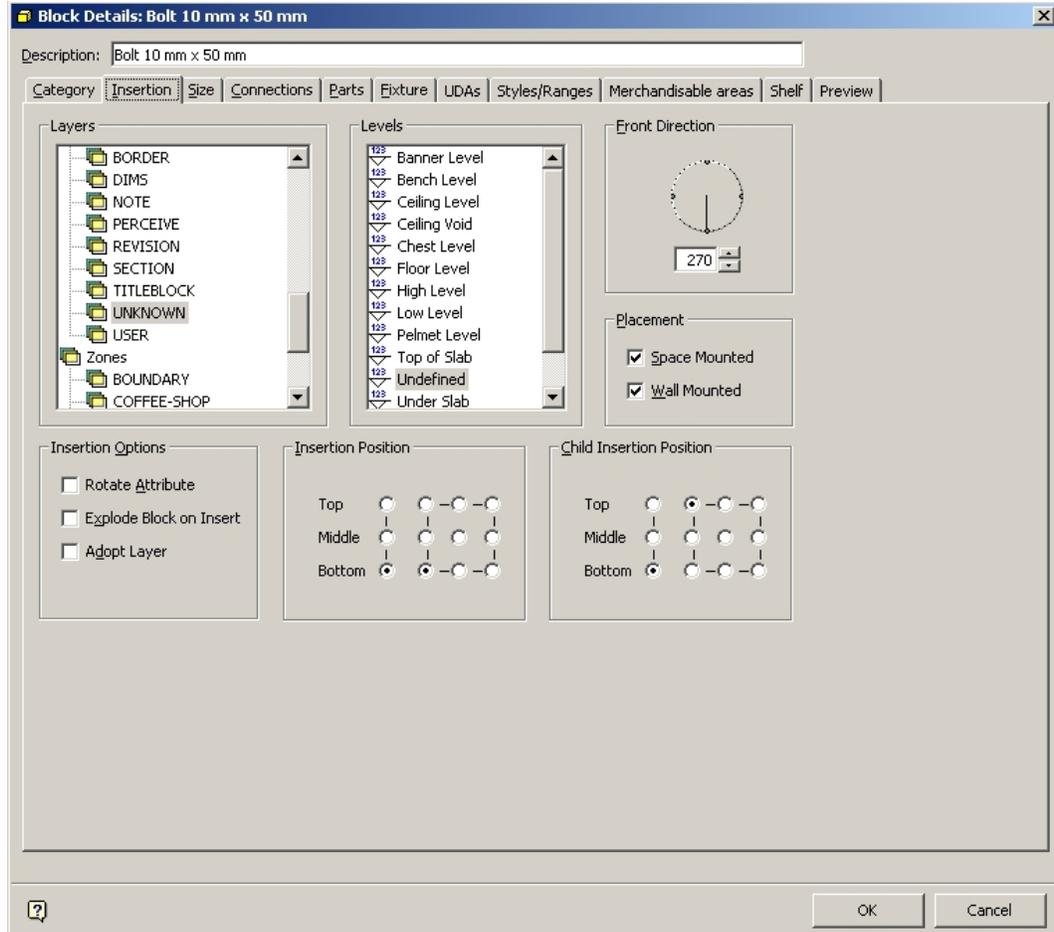


Only a few parameters need to be defined.



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

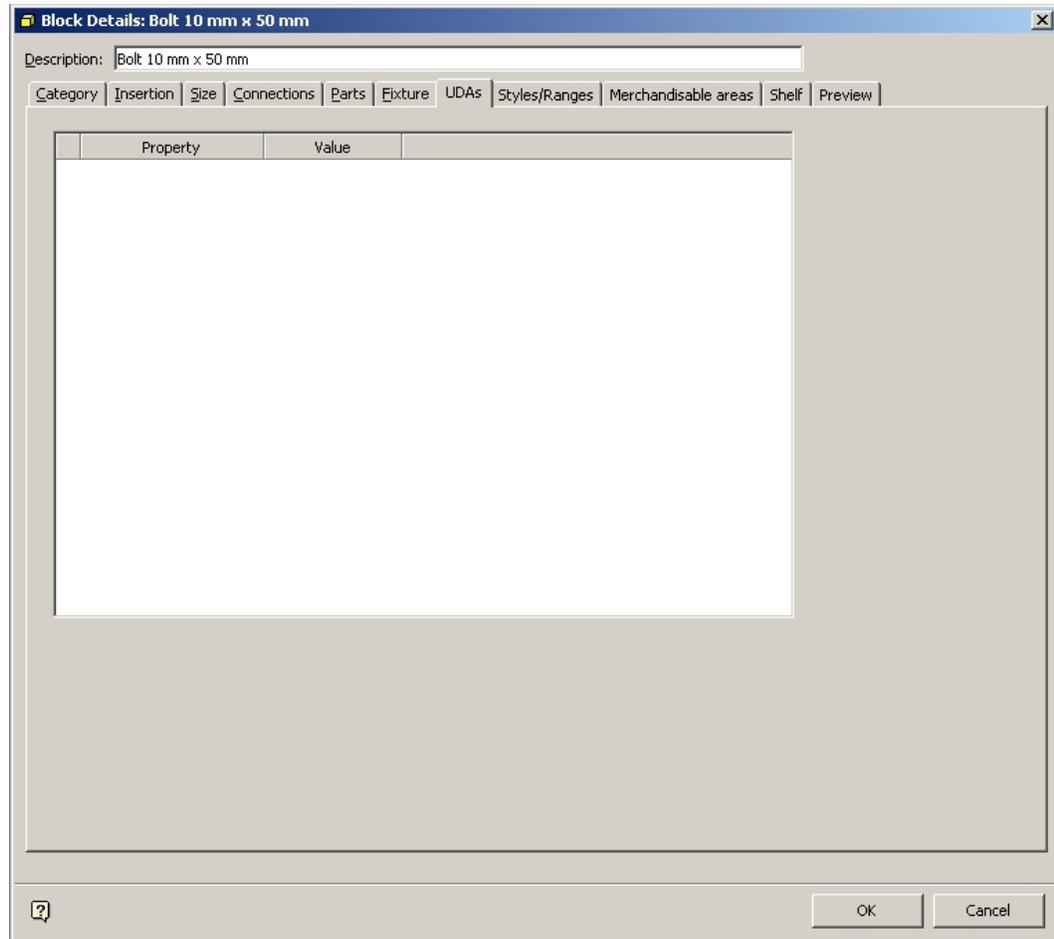
- Set Equipment type to Other
- Set Manufacturer to an appropriate name
- Set Material to an appropriate material
- Set Status to Current
- Set Units to an appropriate measurement
- Ensure that No graphics is selected in the Graphics frame
- Select an appropriate icon



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.

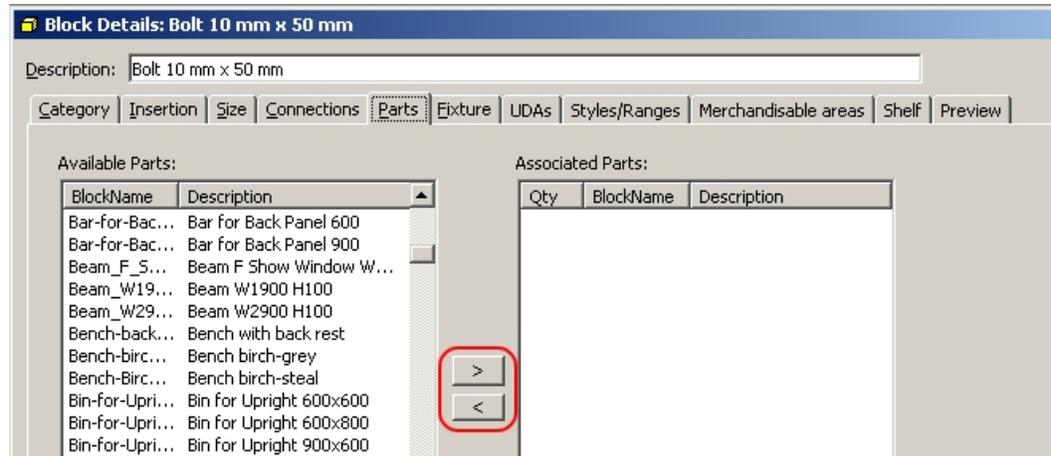


Note: The list of User Defined Attributes is customizable and will vary from implementation to implementation. The list is configured in the Admin Module.

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 centre of the Parts tab.



Building Parts List

- 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.

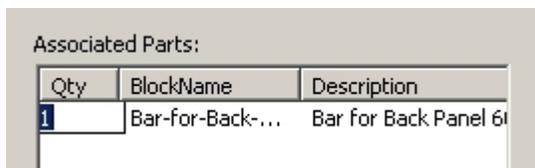
To remove a part from the Associated Parts list, highlight the part in the Associated Parts frame and use the Add arrow.



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

Changing the number of a specific part

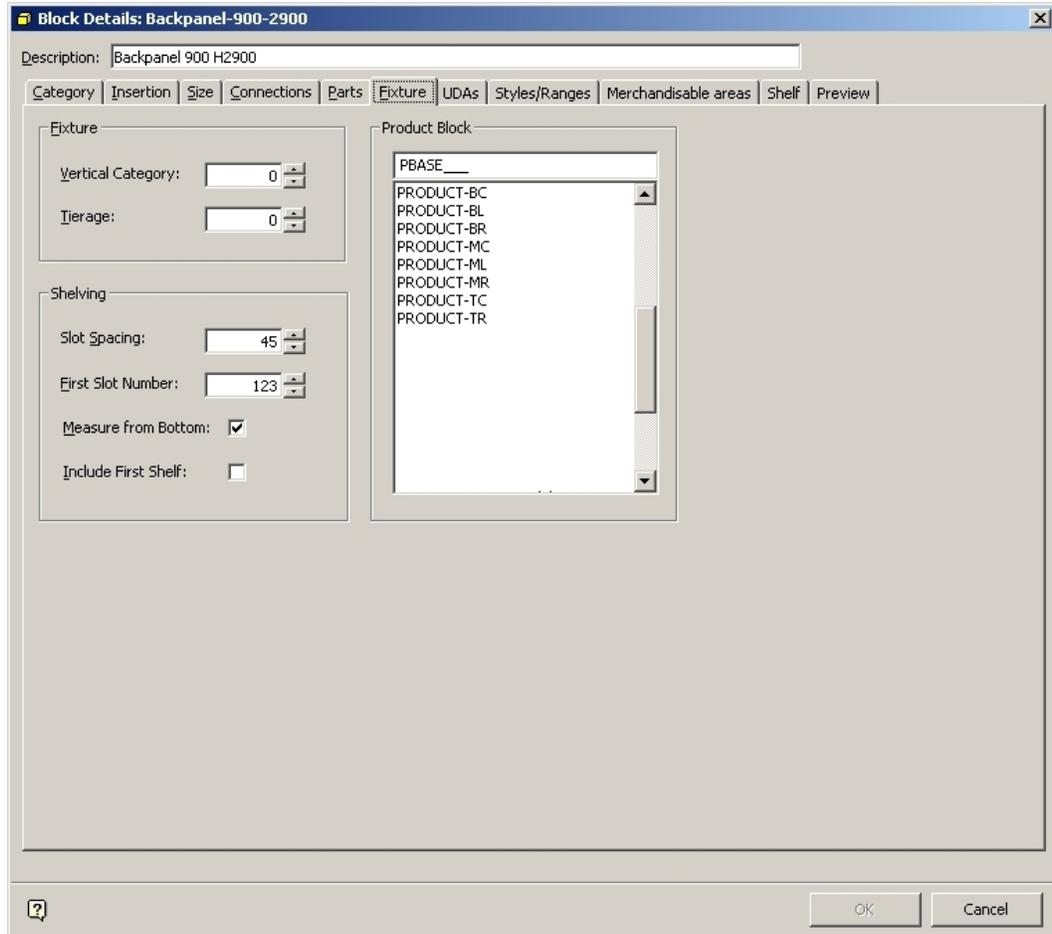
To change the number of a specific part in the associated parts list, highlight the required part then left click on the number in the Qty column.



The number can then be edited. Press Enter to confirm.

Fixture Tab

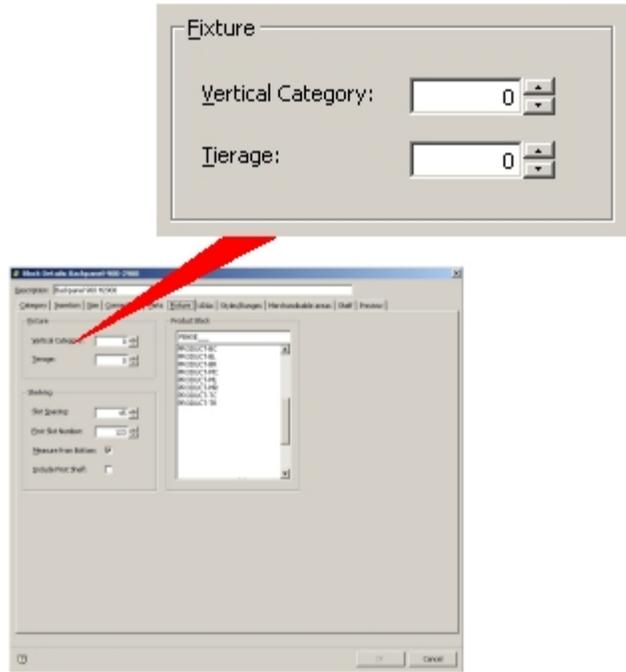
The **Fixture** tab is used to specify the behavior of shelving and the product block for a fixture.



Fixture Tab

The Fixture Frame

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



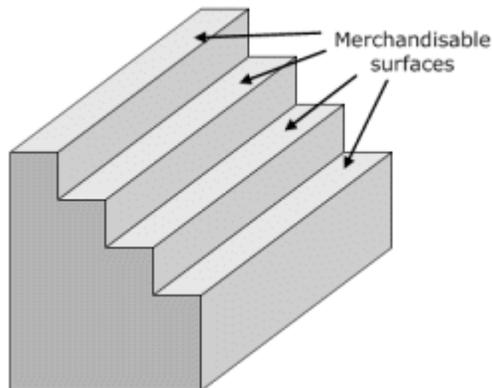
Fixture frame

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 subdivided. 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 and annotation. Fixtures in different Vertical Categories are not shown as adjacent and if Vertical Categories are set, each category will receive its own separate annotation. 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.

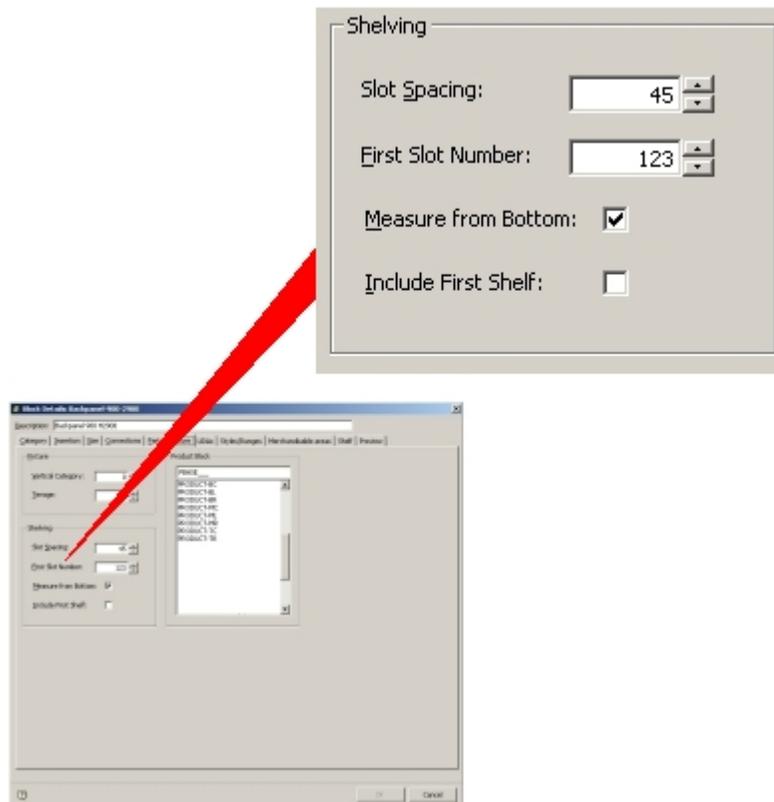
Note: There are two ways of assigning a Product Base to a tiered fixture.

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 artist's names beginning with A & B would be placed on the upper tier.

The Shelving Frame

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



Shelving Frame

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

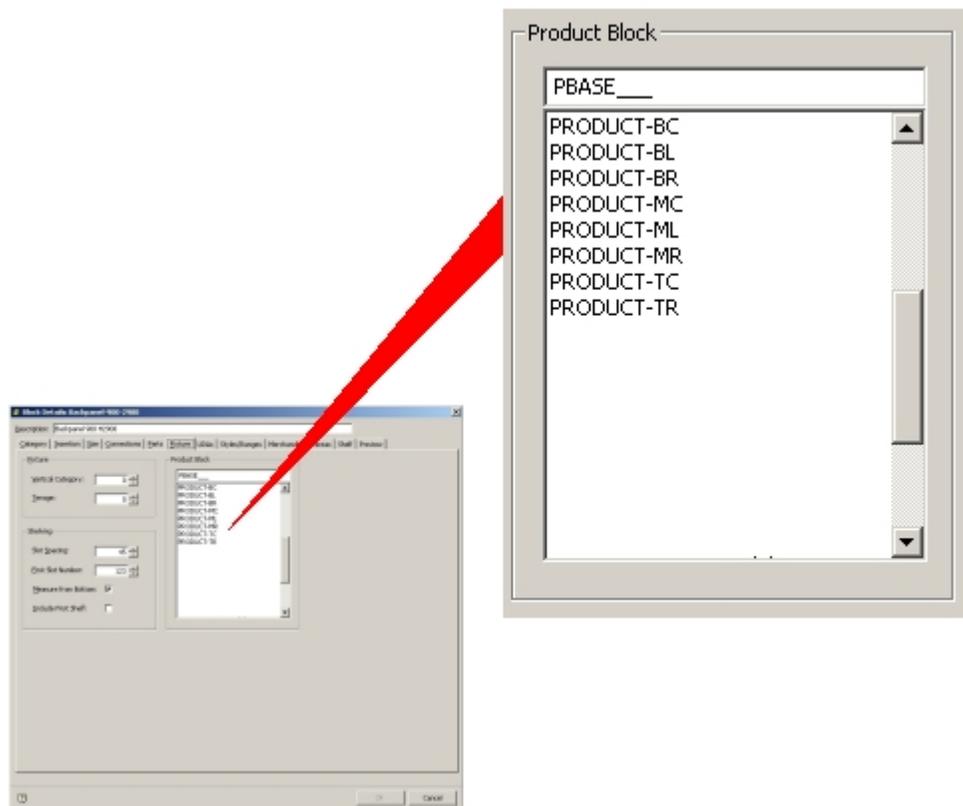
Slot Spacing gives the distance between successive shelves.

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.

The Product Block Frame

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



Product Block Frame

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 be 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.

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 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.



Place holder

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.)

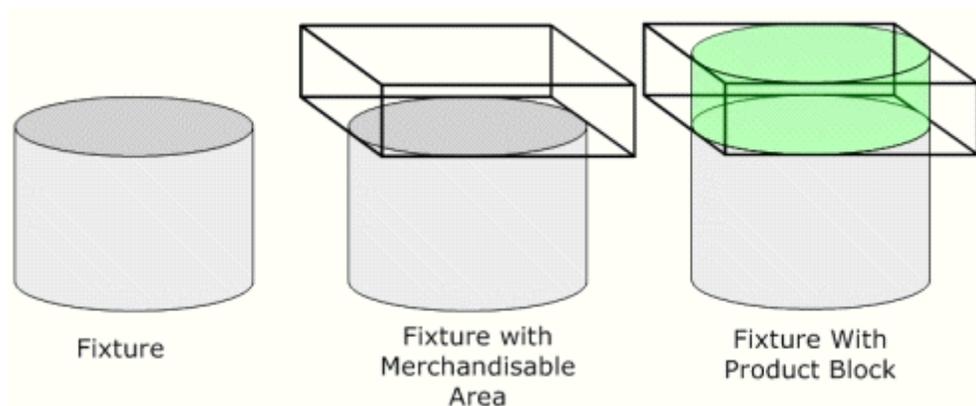
Product Blocks – Fixtures and Shelf Objects

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

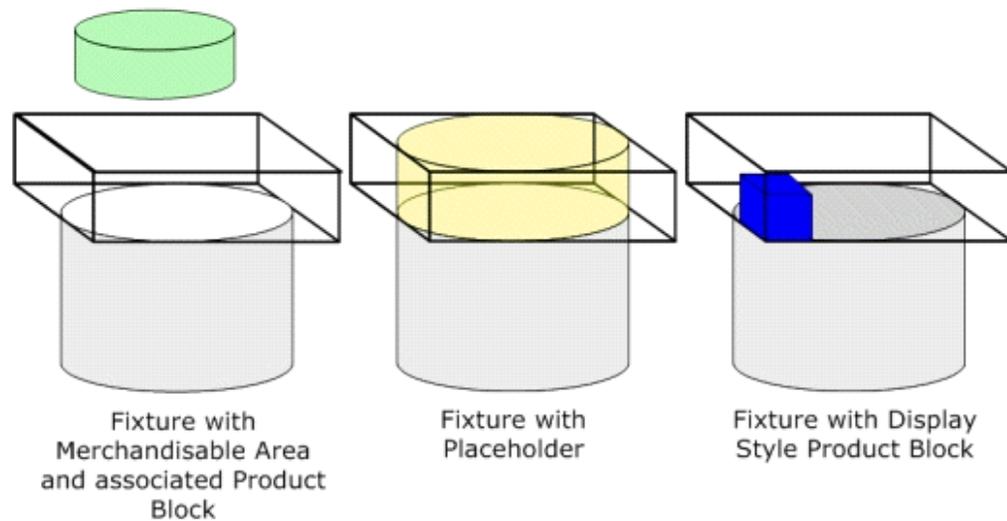
If a fixture or shelf object is merchandised with a placeholder, it will occupy the extents defined by the Merchandisable Area defined in block definitions.

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).

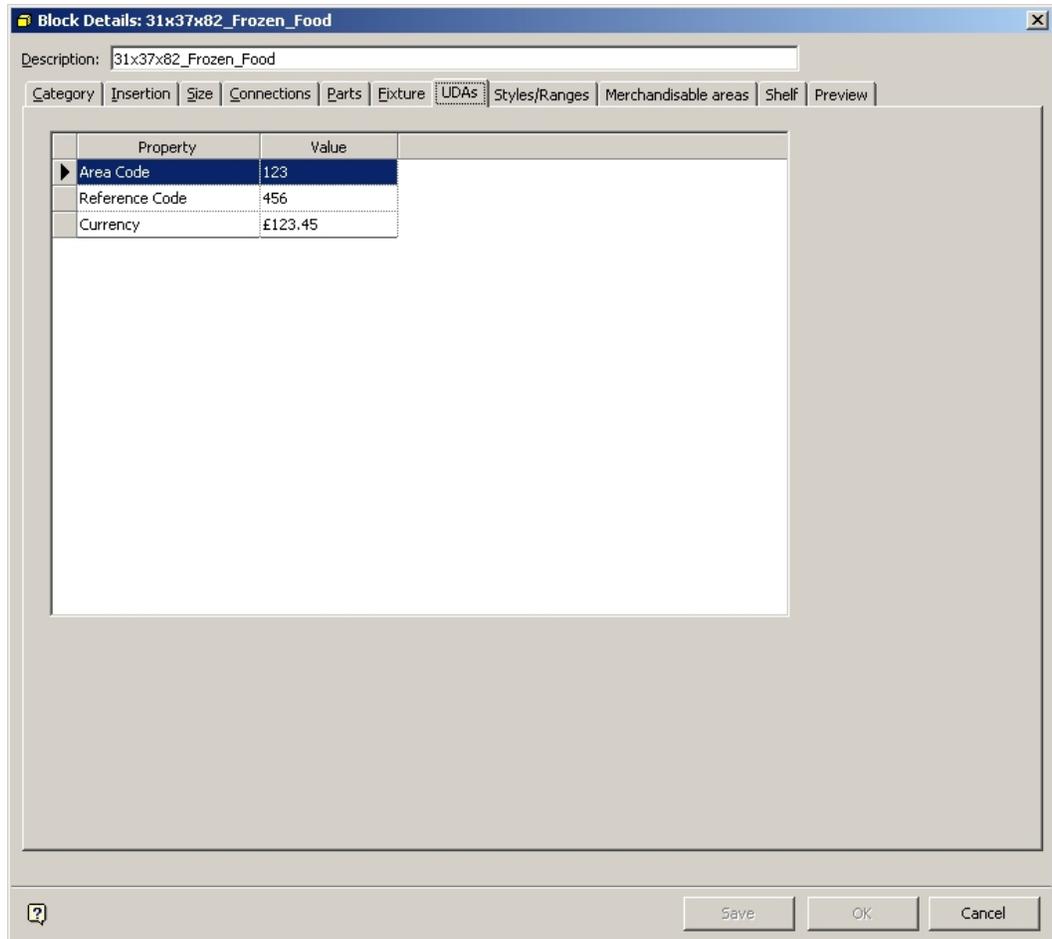
The display style product block then has to be moved within the limits of the actual merchandisable surface of the fixture using the alignment options available within Merchandiser.

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.



User Defined Attributes Tab

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

Entering UDAs

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



List of UDAs

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



Validation

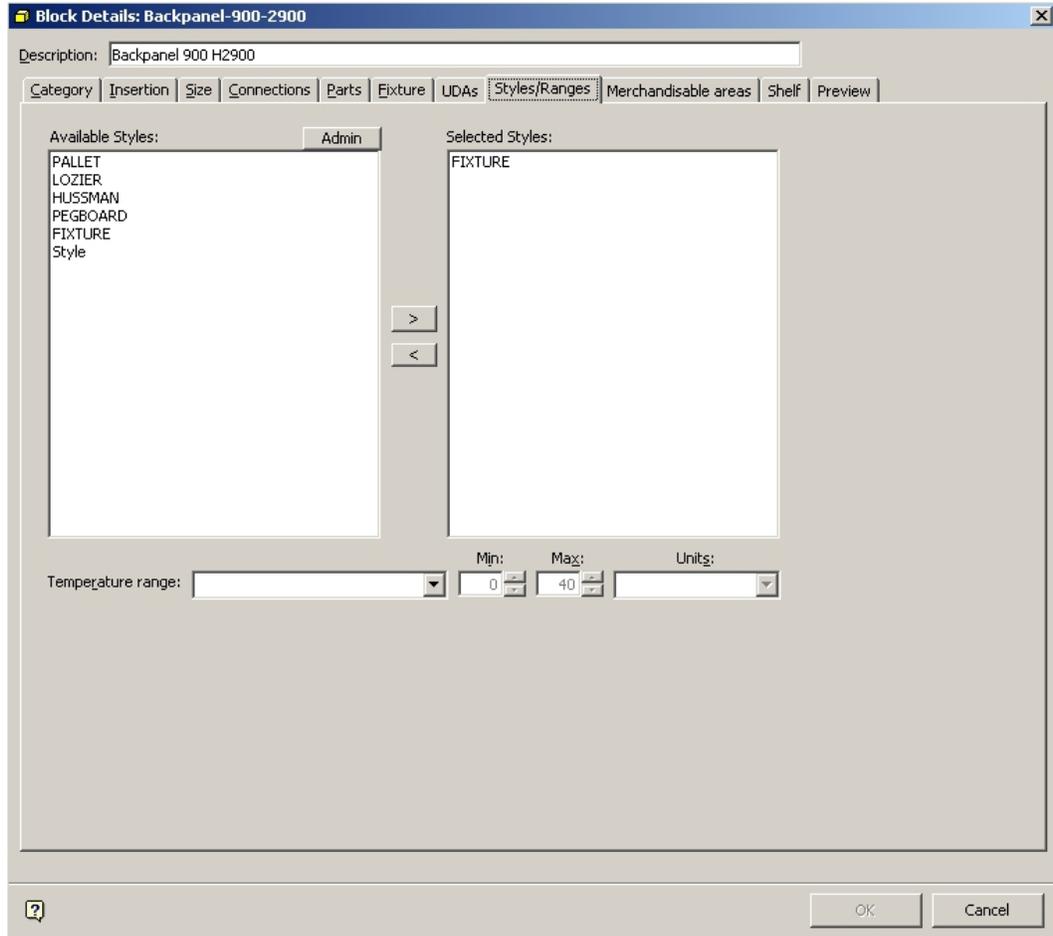
UDA Data has a data type (assigned in the Admin module). If data does not match the specified type, it will not be accepted.

Mandatory UDAs

Some UDAs are mandatory and must be entered before the block definition can be saved. Failure to enter these mandatory UDAs will result in an error message being displayed.

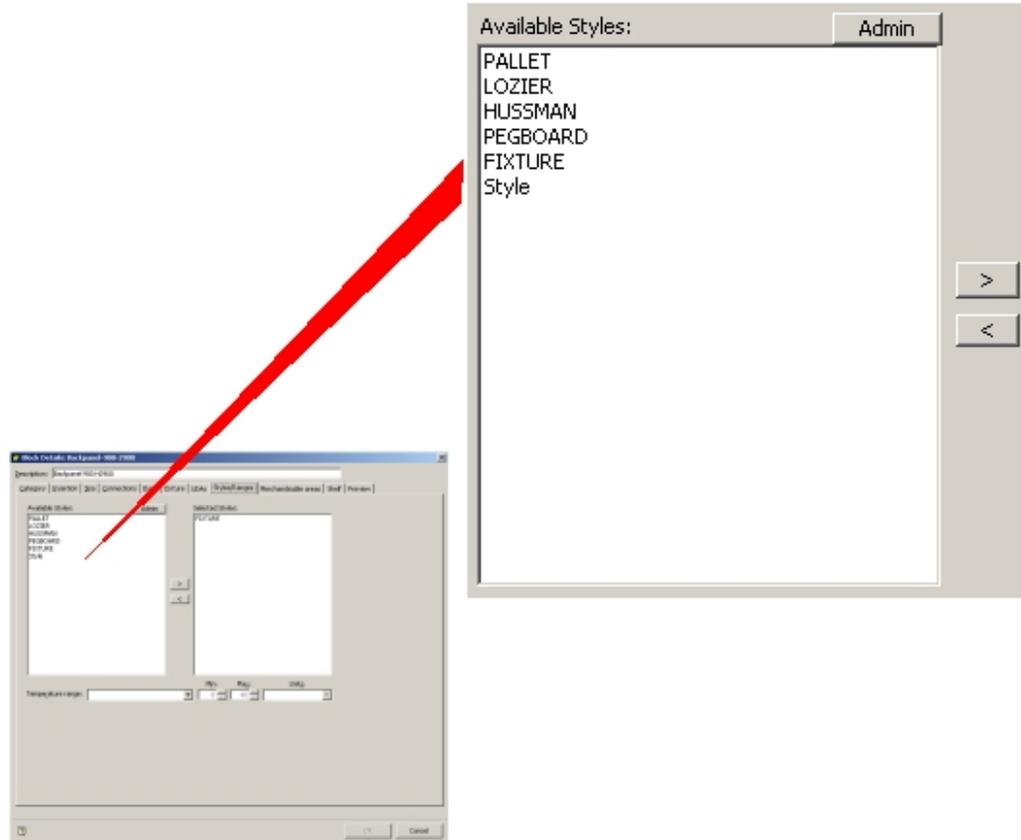
Styles/Ranges Tab

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.



Styles/Ranges tab

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



Available Styles Tab

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

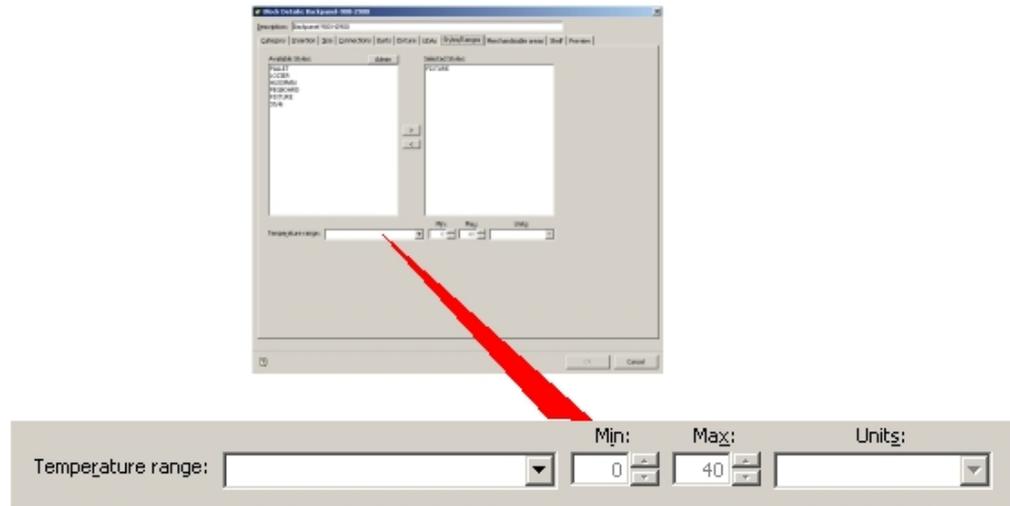
To add a style to the Selected Styles list, highlight the part in the Available Styles frame and use the Add arrow.



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.



Range Options frame

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

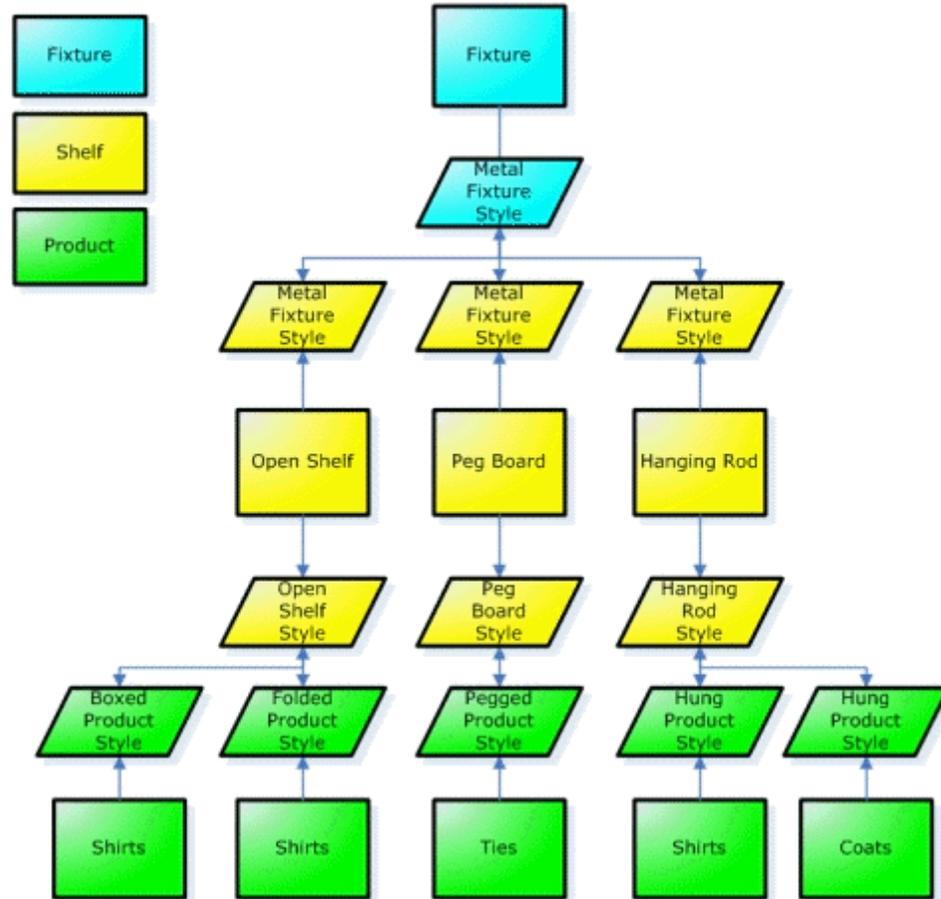
Each product must be associated with one or more product styles. These product styles will determine the compatible shelves the product can be placed on.

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 fixture style.

The Open Shelf, Peg Board and Hanging Rod shelf objects have all been assigned Metal Fixture 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 back panel) 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 shirt 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.

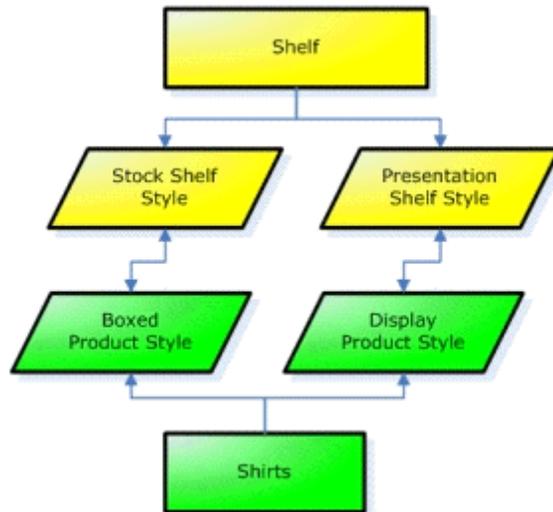
Preferred Styles

Some objects can be associated with multiple styles; specific instances of shelves within the drawing can be given preferred styles.

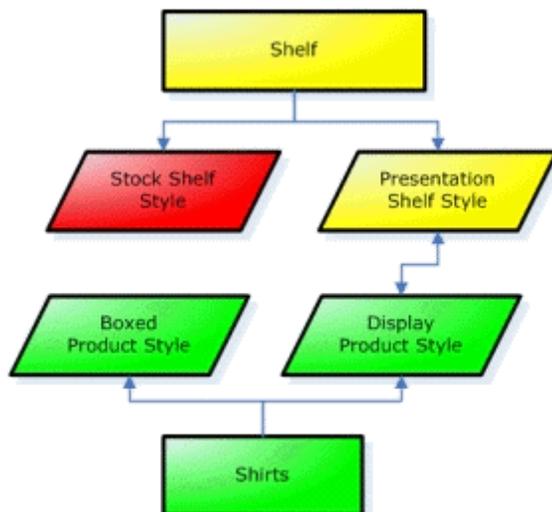
These preferred styles override the ranking set in the SPL_RANKING System variable for that specific shelf.

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.

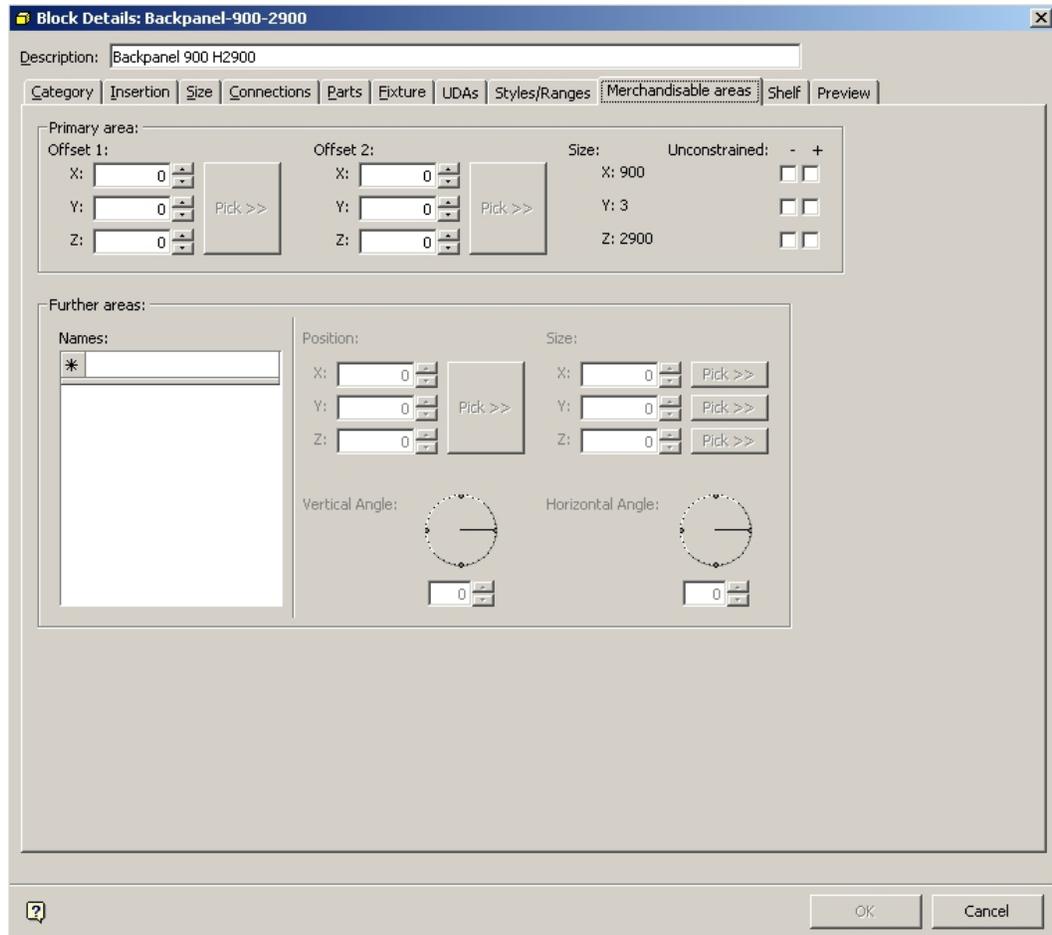


However, the user would be able to indicate the preferred style for a particular instance of a shelf as being Presentation, which would force the Display product to be placed for that particular shelf.



Merchandisable Areas Tab

The **Merchandisable Areas** tab is used to indicate the location of merchandisable areas for an object.



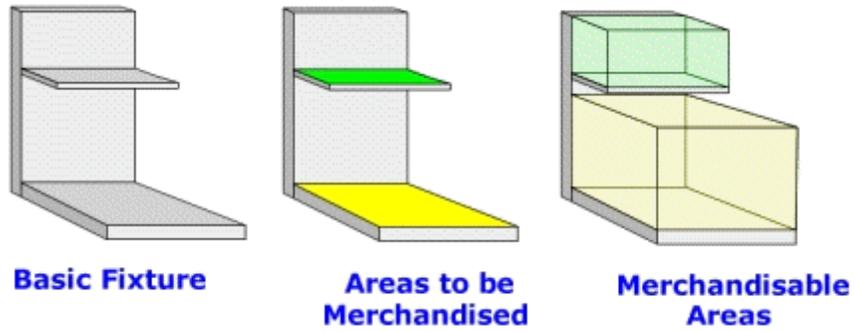
Merchandisable Areas Tab

The Primary Area Frame allows specifying the first merchandisable area.

The Further Areas Frame allows specifying the second and subsequent merchandisable areas.

Merchandisable Area Concepts

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, back panel 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).

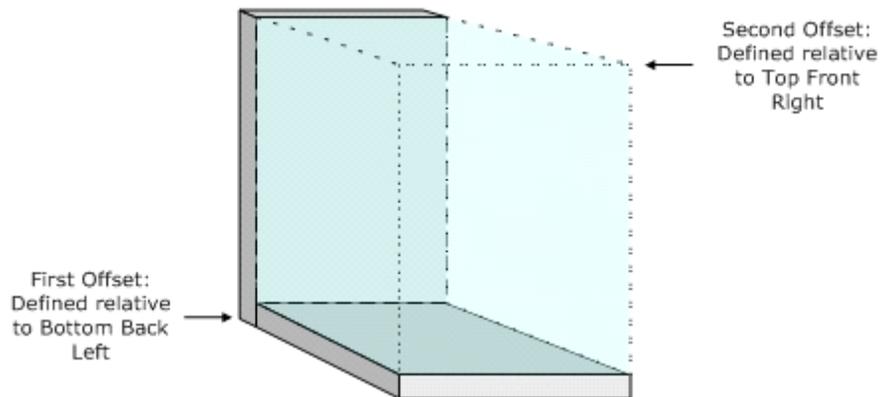
For each area a cube is defined (right hand diagram). This cube sets the maximum limits which merchandise can occupy.

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.

Primary area:			Size:		Unconstrained: - +	
Offset 1:	Offset 2:		X: 900		<input type="checkbox"/>	<input type="checkbox"/>
X: 0	X: 0		Y: 3		<input type="checkbox"/>	<input type="checkbox"/>
Y: 0	Y: 0	Pick >>	Z: 2900		<input type="checkbox"/>	<input type="checkbox"/>
Z: 0	Z: 0					

First Merchandisable Area

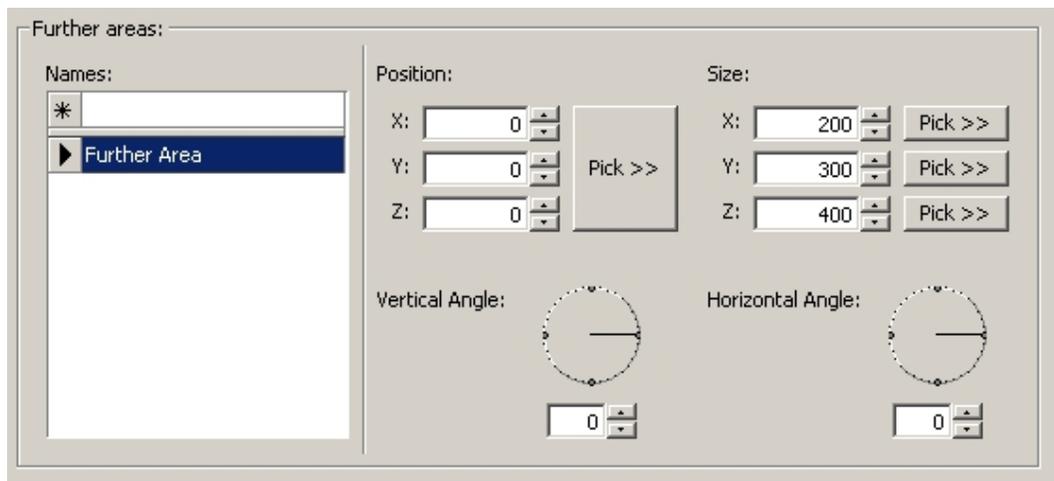


When specified, Offset 1 and Offset 2 specify opposing corners of a cube. Because these offsets are specified relative to the dimensions of the fixture, if the fixture dimensions change, then the dimensions of the cube change relative to it.

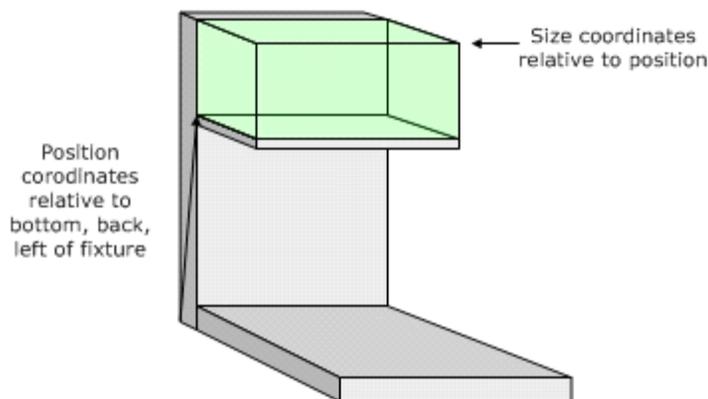
Example of First Merchandisable Area and Stretchable Fixture: Take a fixture of length 1200 mm, depth 400 mm and height 600 mm. This will have Offset 1 relative to the bottom, left, back of the fixture (coordinates 0, 0, 0) and Offset 2 relative to the top, front, right of the fixture (coordinates 1200, 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 Area

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.



Further Merchandisable Area

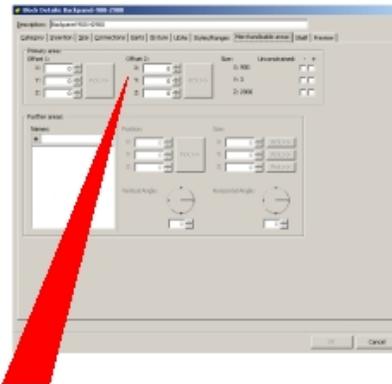


Example of Further Merchandisable Area: First the starting Position of the Further Merchandisable Area is specified relative to the bottom, back, left of the fixture. This might have coordinates 0, 50, 400. (Aligned with side of fixture,

moved forward 50 mm to allow for thickness of back panel, 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, 300. (Area is 600 mm long, 200 mm deep and 300 mm high).

The Primary Areas Frame

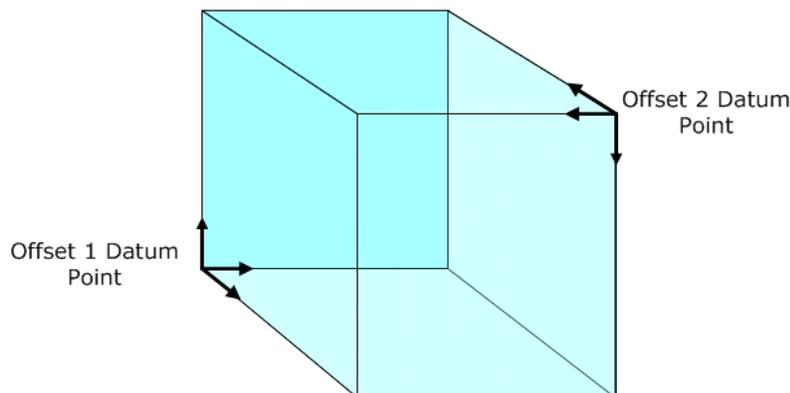
The **Primary Area Frame** allows the user to specify the Primary Merchandisable Area. Primary Merchandisable Areas can be used in conjunction with stretchable fixtures.



Primary area:		Size:	Unconstrained:
Offset 1:	Offset 2:	X: 900	<input type="checkbox"/> <input type="checkbox"/>
X: <input type="text" value="0"/>	X: <input type="text" value="0"/>	Y: 3	<input type="checkbox"/> <input type="checkbox"/>
Y: <input type="text" value="0"/>	Y: <input type="text" value="0"/>	Z: 2900	<input type="checkbox"/> <input type="checkbox"/>
Z: <input type="text" value="0"/>	Z: <input type="text" value="0"/>		

Primary Areas Frame

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.

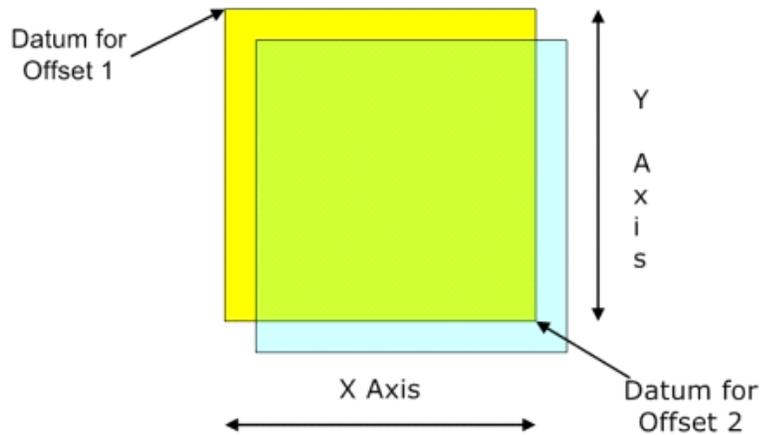
Offset 1 is specified relative to the bottom, back, left coordinates of the fixture.

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

Primary area:					
Offset 1:		Offset 2:		Size:	Unconstrained: - +
X: <input type="text" value="0"/>	Pick >>	X: <input type="text" value="0"/>	Pick >>	X: 900	<input type="checkbox"/>
Y: <input type="text" value="0"/>		Y: <input type="text" value="0"/>		Y: 3	<input type="checkbox"/>
Z: <input type="text" value="0"/>		Z: <input type="text" value="0"/>		Z: 2900	<input type="checkbox"/>

Offset Setting

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 manually entering 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 Merchandisable 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.

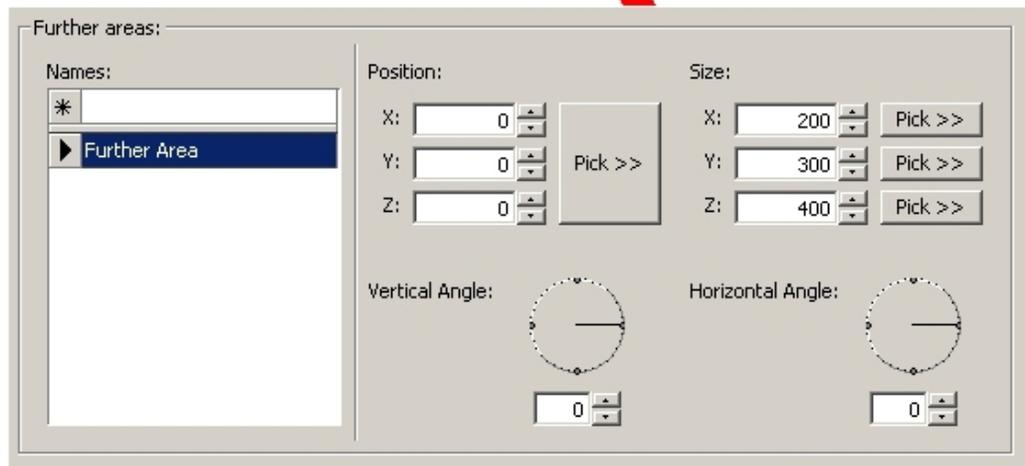
Offset 1 (with its datum at the base of the pallet) has had its Z coordinate set to 180 mm. This has the effect of moving the offset point inside the extents of the drawing. As it is moved inside by 180 mm and 180 mm is the height of the pallet, this sets the offset to the top of the pallet.

This has the effect of setting the base of the merchandisable area to the top face of the pallet.

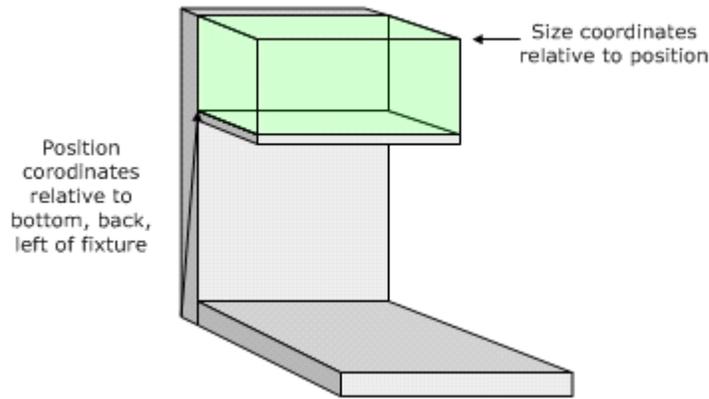
Offset 2 (with its datum at the top of the pallet) has had its Z coordinate set to -1300 mm. This has the effect of moving the offset point outside the extents of the drawing. The practical effect is to set the top of the merchandisable area to 1300 mm above the top face of the pallet.

The Further Areas Frame

The further areas frame allows other merchandisable areas to be specified.



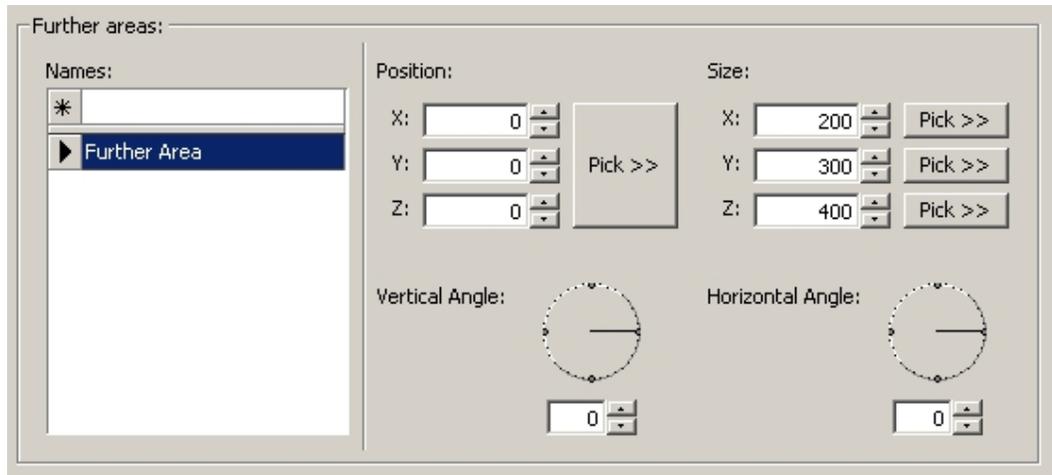
Further Areas Frame



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.

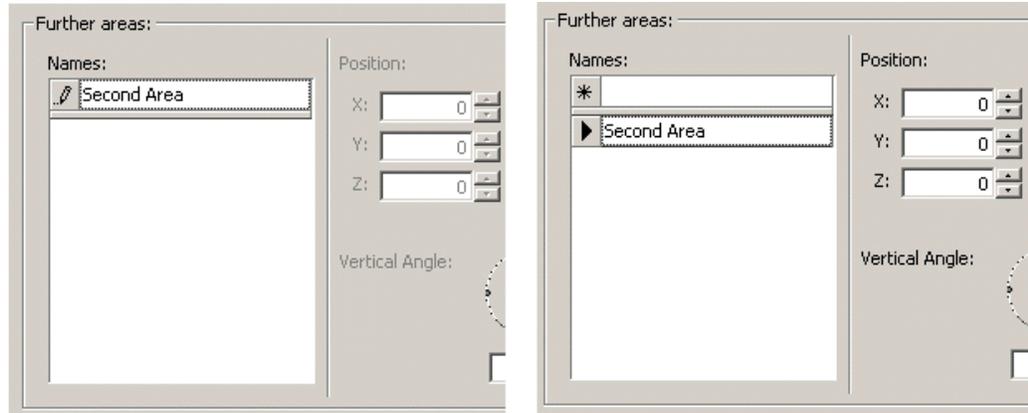
Setting the Offsets



Setting the Offsets

Naming the merchandisable area

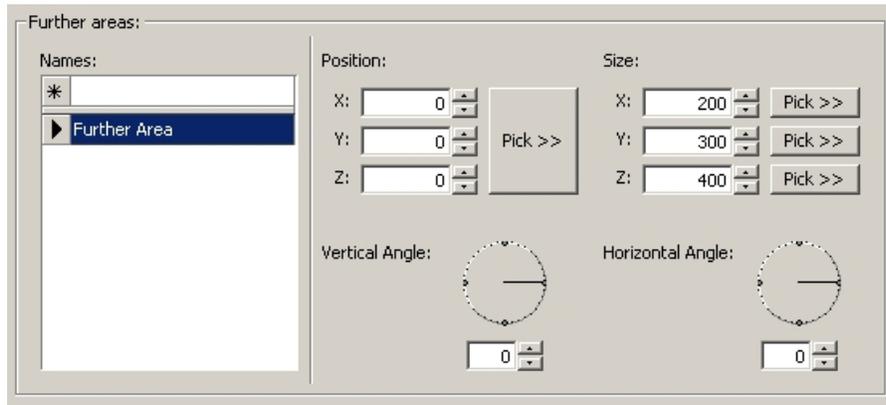
To name the Further Merchandisable Area type in the name and press <Enter>. The name will be entered in the list of Further Areas.



Further Merchandisable Area type

You may not edit the Further Area until they click on the name in the list of further areas.

Manual Settings



Manual Settings

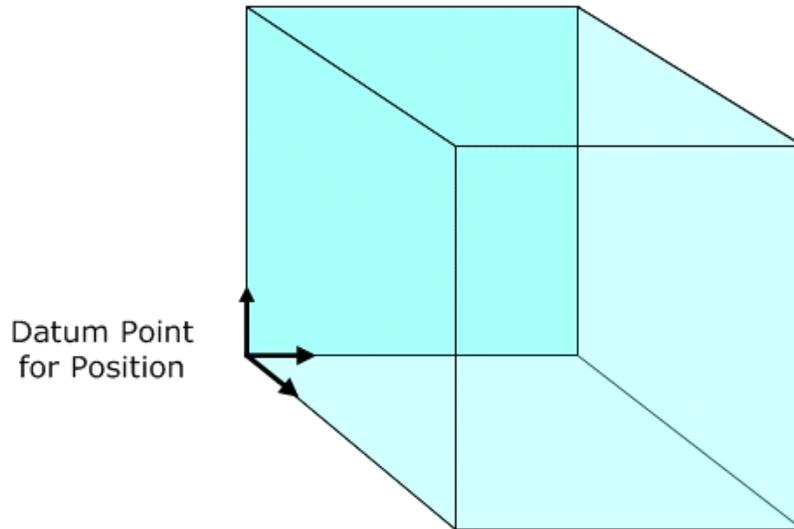
The Offsets can be set manually, but before they are, knowledge of the dimensions of the object is required. The basic length, depth and height can be obtained from the size tab. If more detailed dimensions are required, the drawing can be loaded into the active AutoCAD drawing using the **Load Blocks 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 manually typing 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 - 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**.

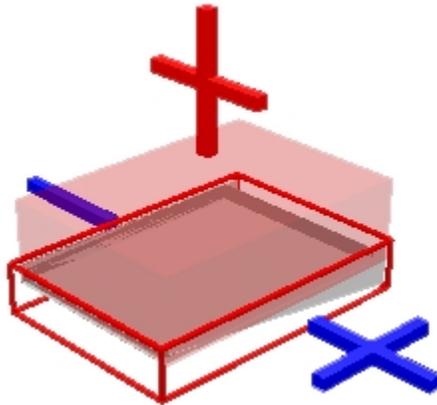
- Constrained Areas are areas that stay within the specified co-ordinates.
- Unconstrained Areas may take up any volume in the specified direction.

These options are set by checking the check boxes in the Primary areas frame.

The screenshot shows a configuration panel titled "Primary area:". It is divided into several sections: "Offset 1:" with X, Y, and Z input fields (all set to 0) and a "Pick >>" button; "Offset 2:" with X, Y, and Z input fields (all set to 0) and a "Pick >>" button; "Size:" with X: 900, Y: 3, and Z: 2900; and "Unconstrained:" with a red-bordered box containing a minus sign, a plus sign, and three checkboxes.

Primary Area Frame

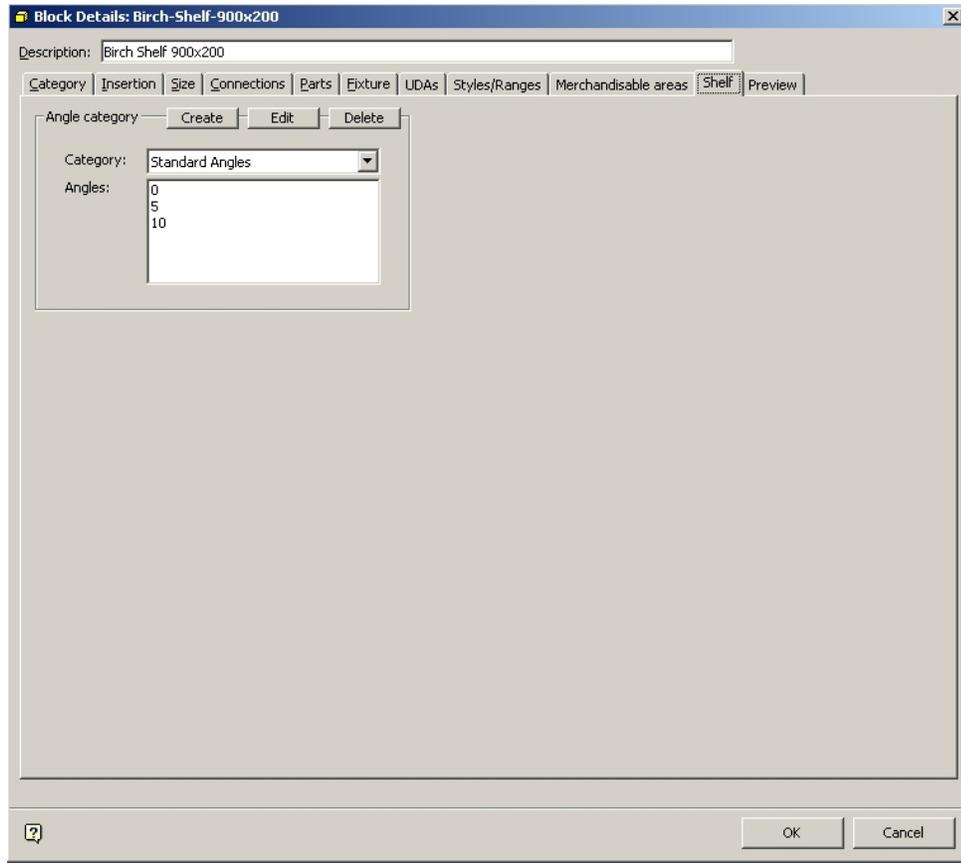
Unconstrained axes are shown visually in the Preview tab.



Any unconstrained axis will have a '+' or a '-' sign by it.

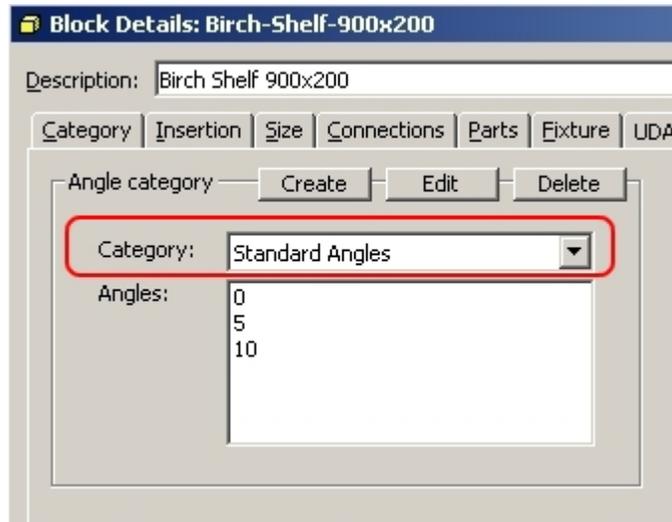
Shelf Tab

The Shelf tab can be used to define the permissible angles for shelves to be set at when placed on a fixture.



Shelf Tab

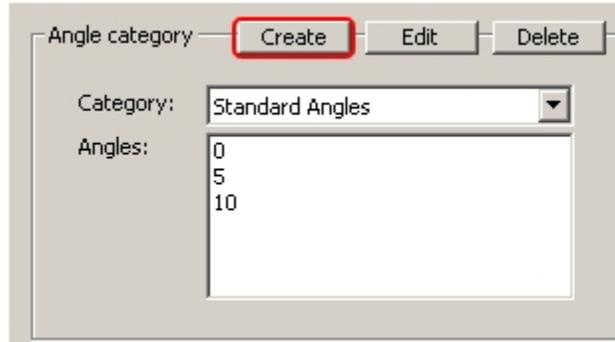
Currently defined Angle Categories can be seen from the drop down list.



Angle Categories

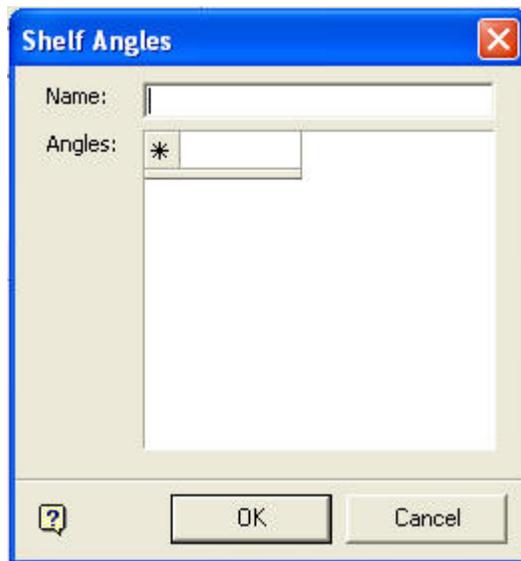
Specifying Permissible Shelf Angles

Angle categories may be created, edited or deleted. To create an Angle Category, click on the Create button.



Create Angle Categories

This will bring up the Shelf Angles dialog box.



Shelf Angles dialog box

Type in the required Angle Category name then left click into the Angles box. (Do not press <Enter> at this stage or it will close the dialog box). Type the required angle in and press <Enter>. Continue to type in the required angles and pressing return until the desired list of angles has been built up.

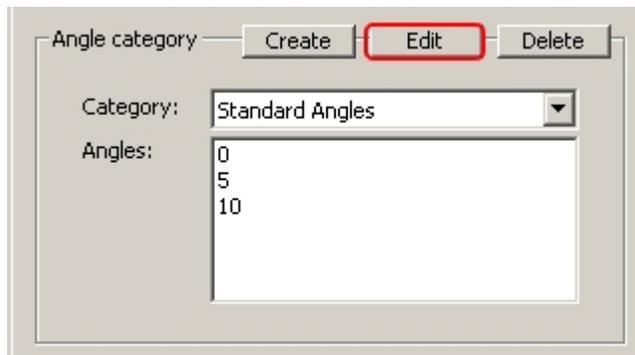


Shelf Angles

When the required Angles have been entered, click on OK to save the information to the database and close the dialog box.

Editing an Angle Category

To Edit an Angle Category, click on the Edit button.



Edit an Angle Category

This will bring up the Shelf Angles dialog box.

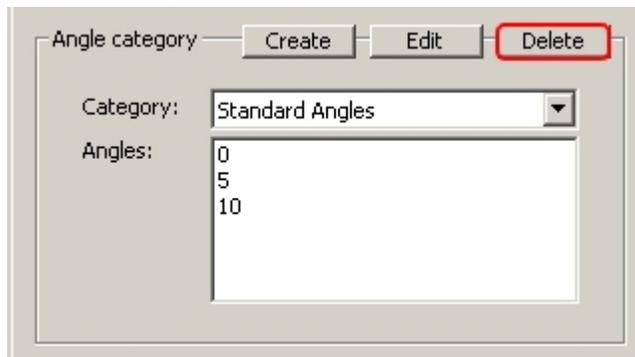


Shelf Angles dialog box

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 dialog box.

Deleting an Angle Category

To delete an Angle Category, click on the Delete button.

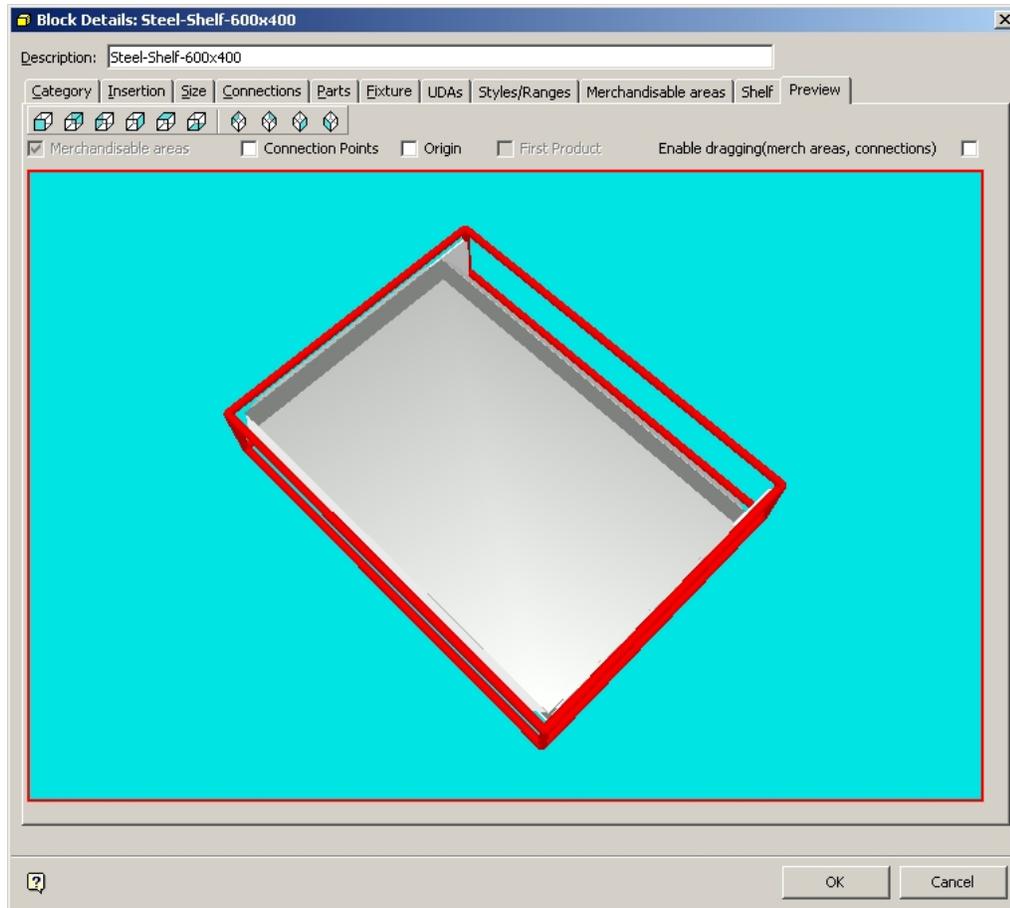


Delete Angle Category

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.



Preview Tab

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 you can 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

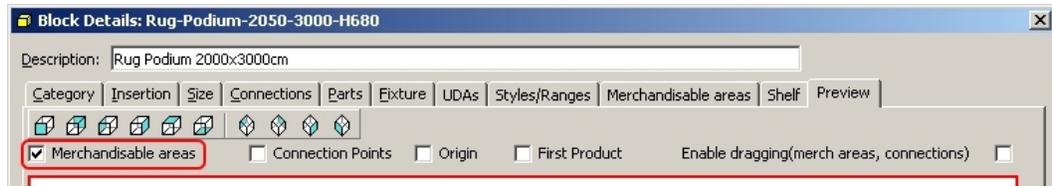
The **Preview Tab Toolbar** allows users to select the point of view for the displayed preview.



Preview Tab Toolbar

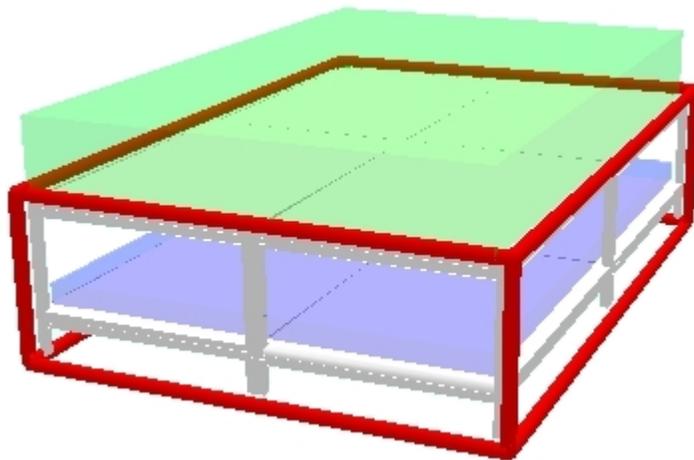
Merchandisable Areas Option

The Merchandisable Areas option allows you to see the assigned merchandisable areas for a fixture. Activate it by selecting the checkbox.



Merchandisable Areas option

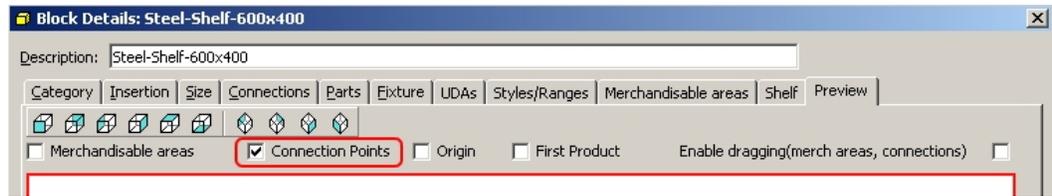
In the example below, the podium has two merchandisable areas.



Note: The preview will be more responsive to movement if only one option is checked at a time.

Connection Points Option

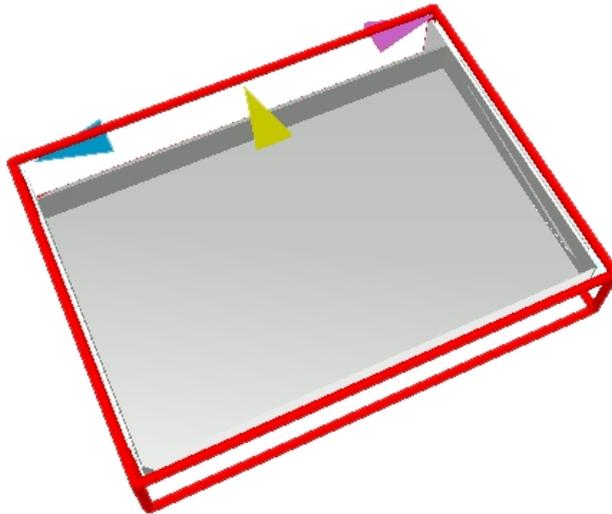
The **Connection Points** option allows users to see the position of the connection points. Select it by checking the Connection Points box.



Connection Points option

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

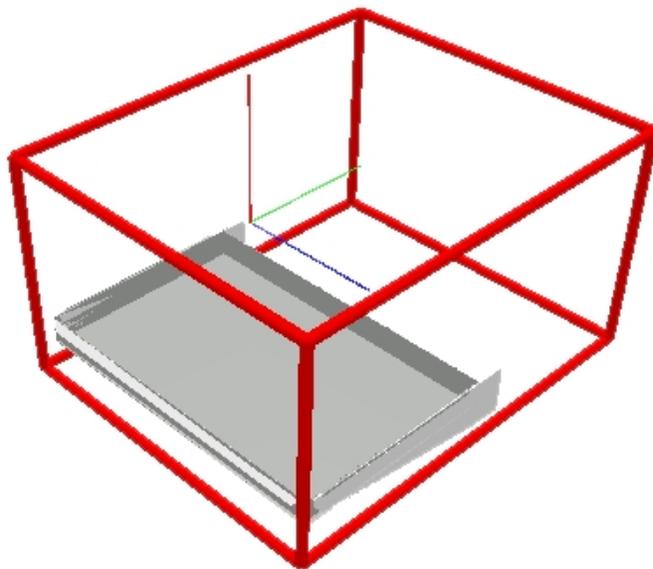
The **Origin Option** allows users to see where the insertion point of the fixture is. Select it by ticking the origin check box.



Origin Option

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.

Color	Direction
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.

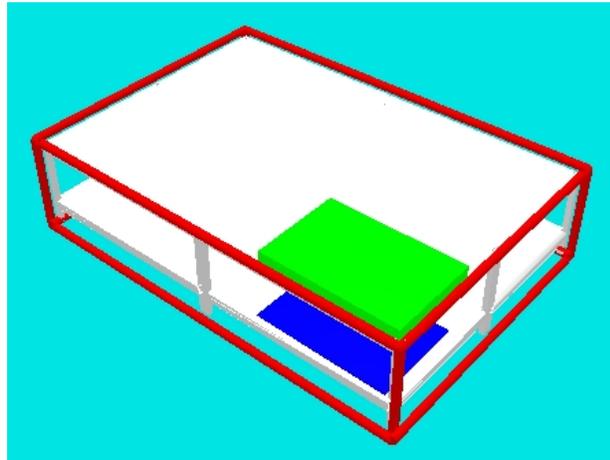
First Product Option

Checking the **First Product** option will result in the position of the first product to be placed on the fixture being shown.



First Product option

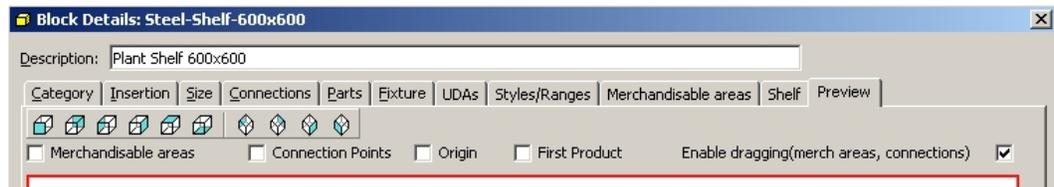
In the example below, the fixture has two merchandisable areas. Accordingly, the position of the first product in both merchandisable areas has been shown.



Note: The preview will be more responsive to movement if only one option is checked at a time.

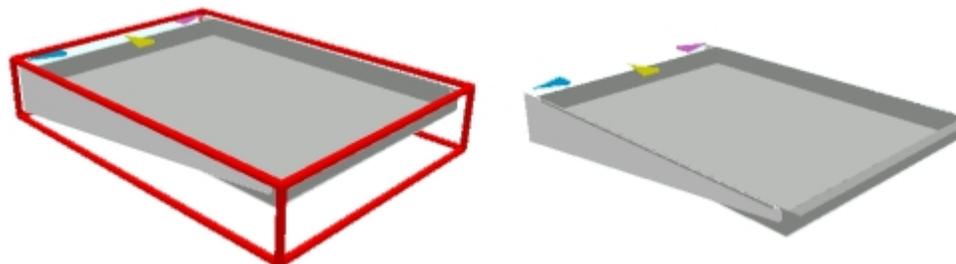
Overview of Dragging Option

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.



Enable Dragging option

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.

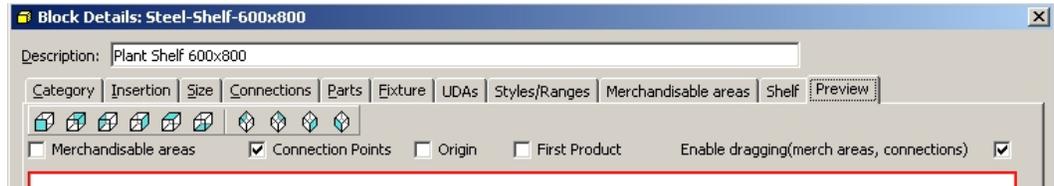
Once the selection box has been removed from the fixture, either merchandisable areas or connection points can be selected by left clicking on them.



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.

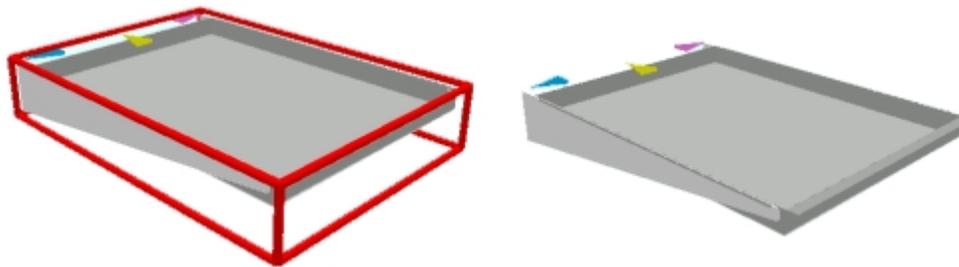
Dragging or Rotating Connection Points

To drag a connection point, select a fixture that has had connection points assigned. Check the Connection Points and Enable Dragging check boxes.



Drag Connection Points

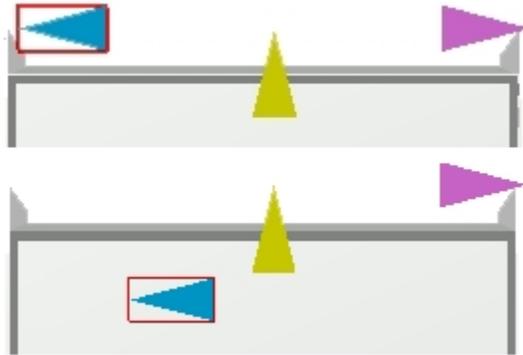
Ensure the fixture selection box is de-selected by left clicking on it (as per the fixture on the right).



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.

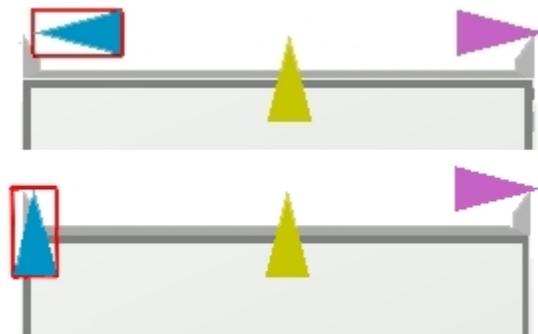


Rotating a connection point

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.

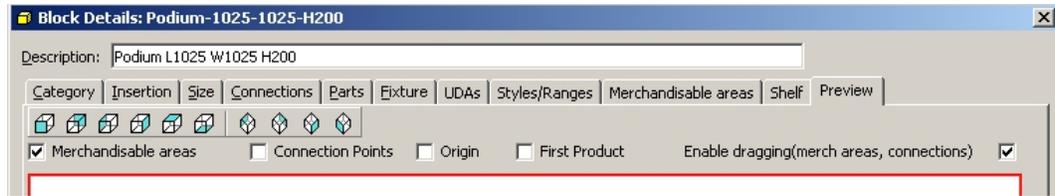


Connections Tab

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 coordinates in the Connections tab, then confirming in the preview tab.

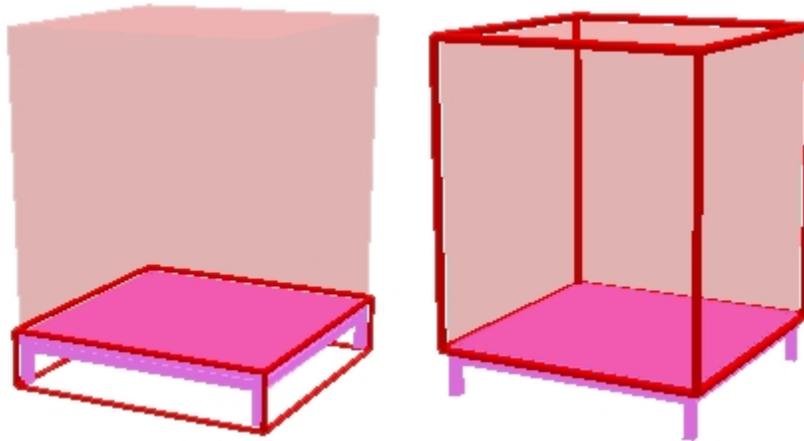
Dragging Merchandisable Areas

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.



Merchandising Areas - Drag

Next ensure that the fixture is de-selected and the merchandisable area selected. This can be done by holding down the <Ctrl> key, 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.

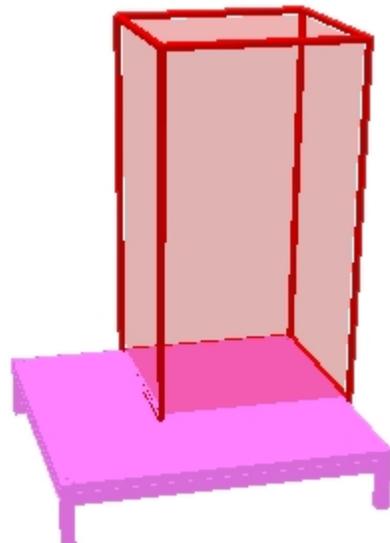


Merchandising area - Select

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.



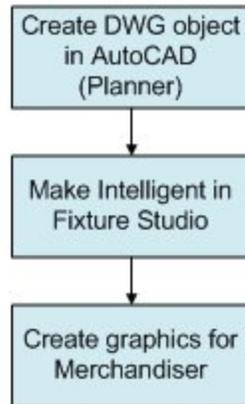
Merchandisable Areas Tab

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.

Fixture Creation

Basics of Block Creation

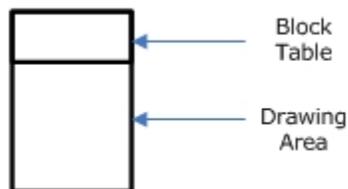
Blocks are created in three basic stages.



1. 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.
2. 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.
3. Finally, additional graphics are produced that allow the block to be used in Merchandiser as well as the Planner environment.

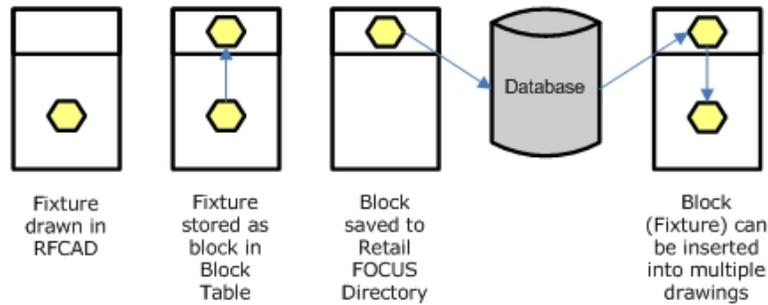
Creating a block in Planner

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.

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.

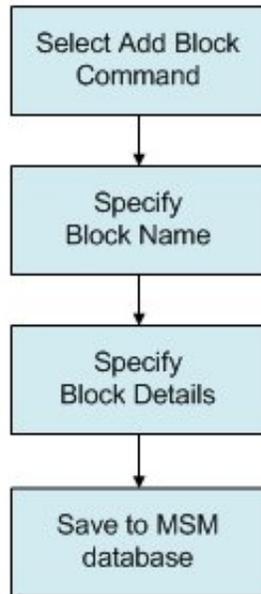
Inserting the Block into Multiple Drawings

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 dialog 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 dialog 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 dialog 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 such as the 3DS files and Lightwave files.

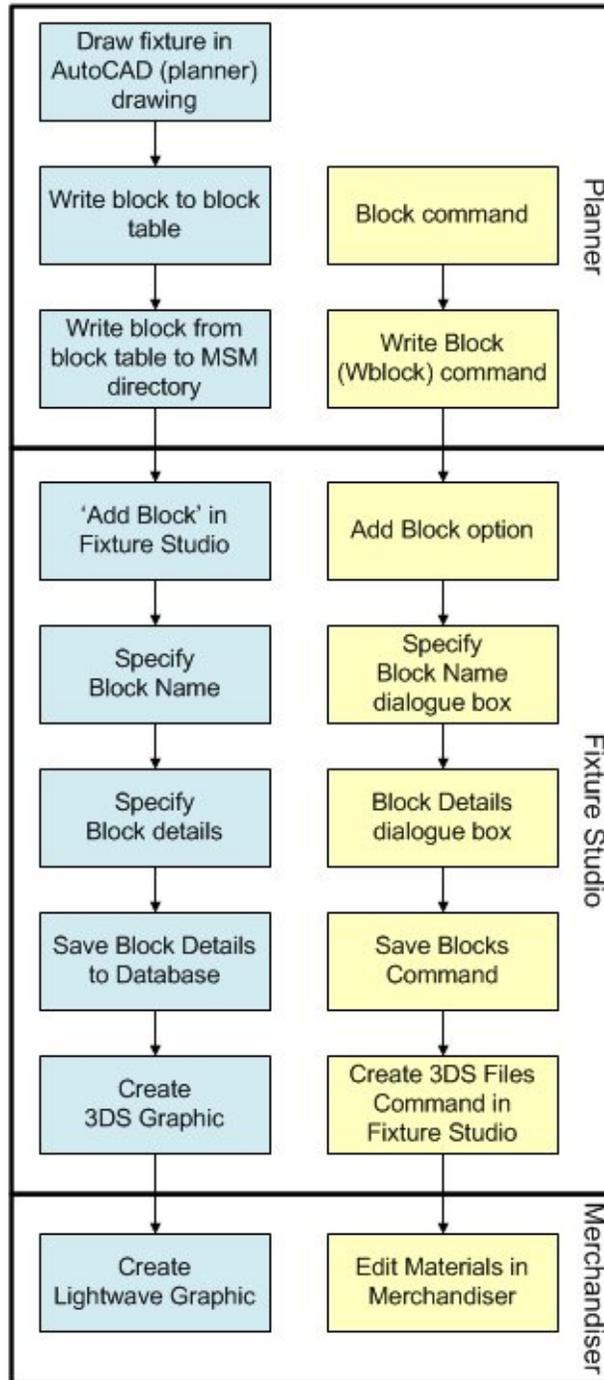
3DS files

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).

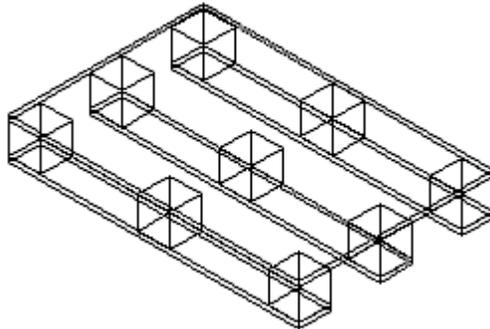
The Add Block command in Fixture Studio is invoked to start the process of adding the block to Macro Space Management and adding 'intelligent' detail. The name of the block

is specified. The block details (intelligent properties) are specified in the Block Details dialog 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.

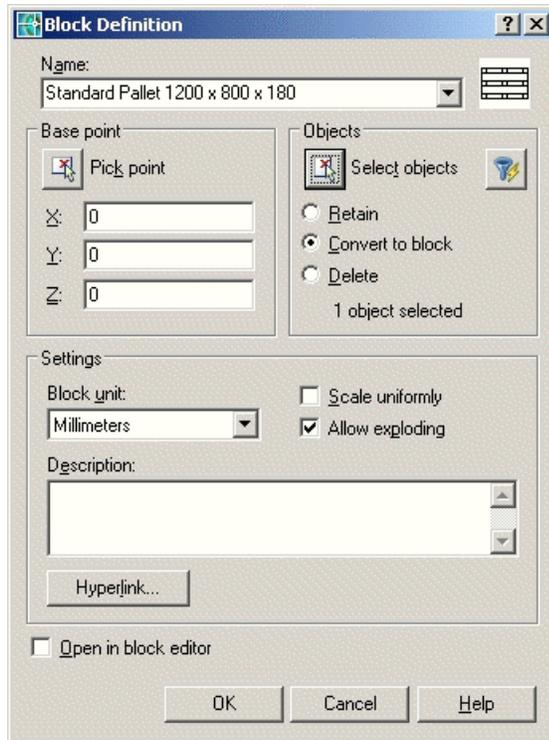
Turning the Drawing into a Block

The Block command is used to turn a selected object in the drawing into a Planner Block by using the command line or the toolbar.



Block command

This brings up the Block Definition dialog box.



Block Definition dialog 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 by clicking 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 by clicking the Pick Point button in the Base Point frame. This will take you 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 such as the block units 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.

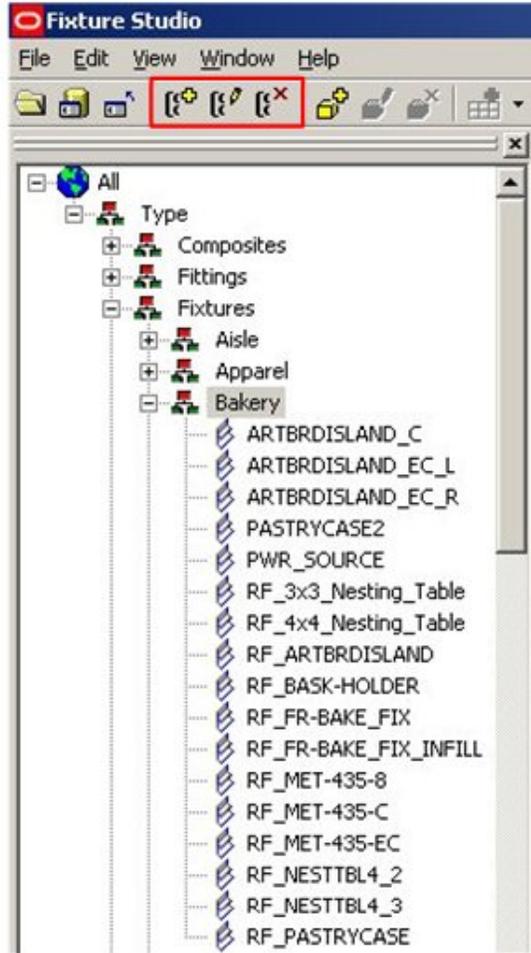
Making the Block Universally Available

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.



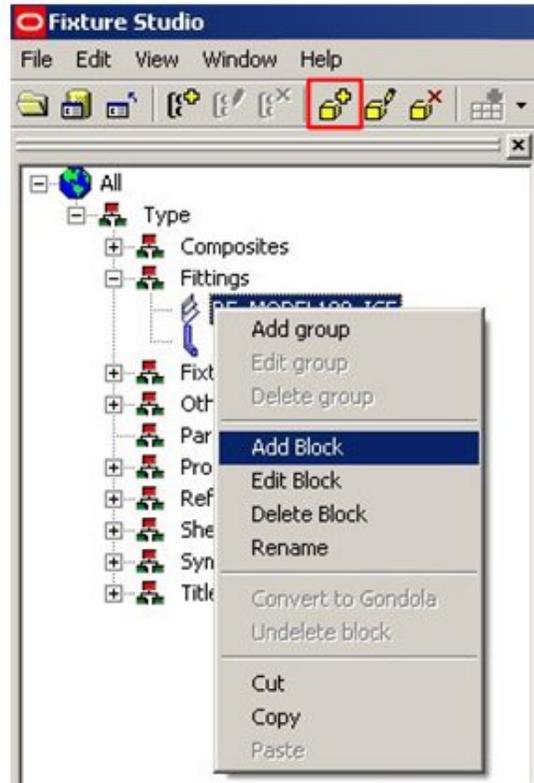
Fixture Studio - Create Hierarchy

	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.

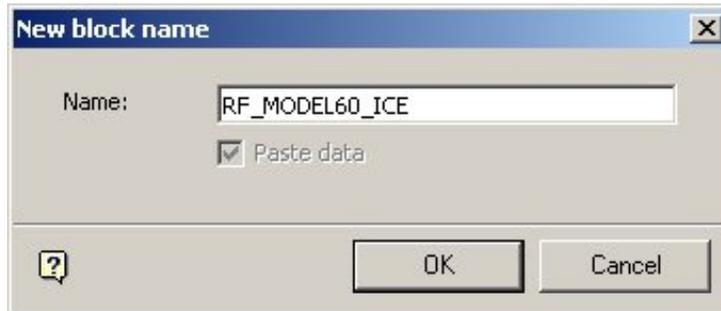
Adding a block to Fixture Studio

To add a block to Fixture Studio, click on the required Group to highlight it. Right click to bring up the pop-up menu and select Add Block. Alternatively, click the **Add Block** icon on the toolbar.



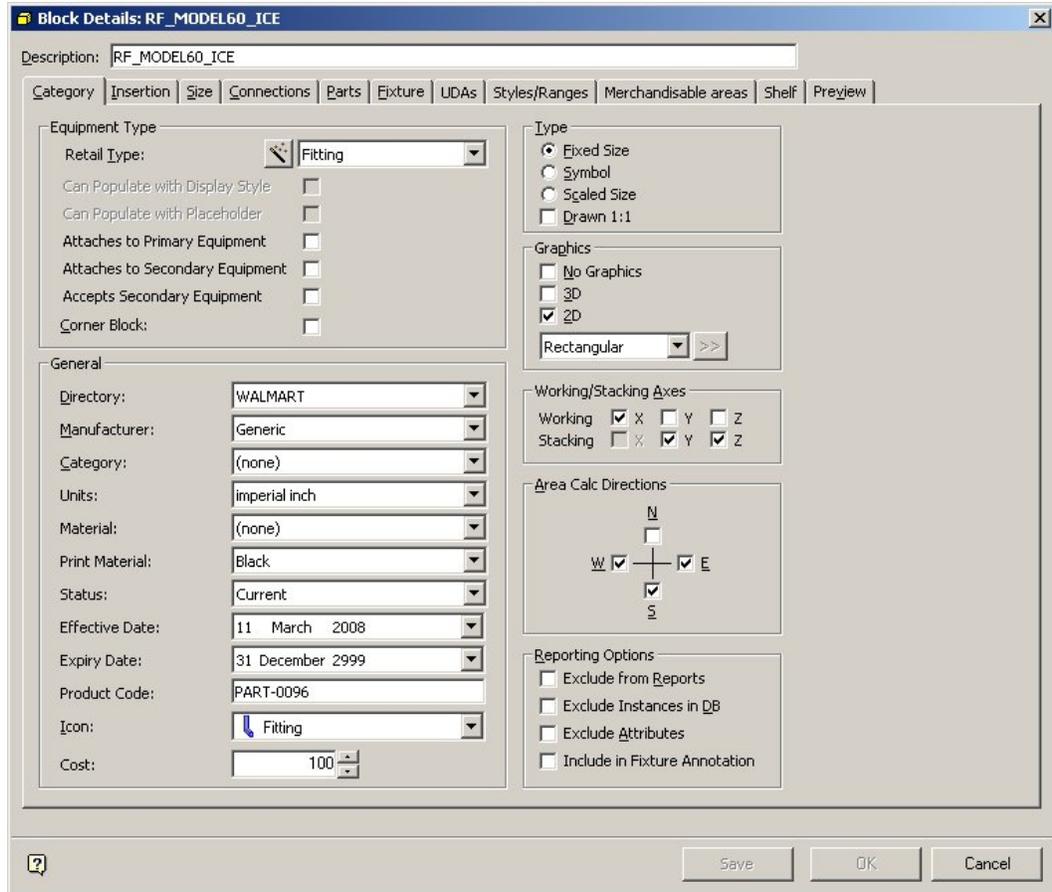
Fixture Studio - Add Block

This will bring up the Add Block Name dialog 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 dialog box will become active.



The dialog box contains a number of tabs. Each of these tabs allows you to configure intelligent properties on the block. Set the parameters within the tabs are required and click **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 has a negative value.

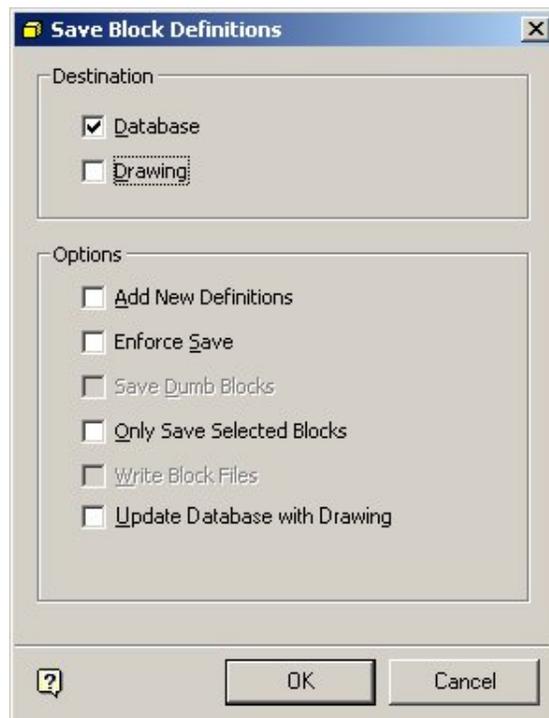
ID	Description	Name	Type	Size X	Size Y	Size Z
286	Signboard for guidance W1200...	Signboard-1200x1200	Fitting	1200	20	1200
287	Signboard for guidance W800 ...	Signboard-800x500	Fitting	800	20	500
337	Signboard for Self Serve 4500mm	Signboard-Self-Serv...	Fitting	2100	200	4500
-1	Standard Wooden Pallet 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 IDs. To save the block(s) to the central database select the **Save Blocks** option from the File menu. Alternatively use <Ctrl> + S.



Fixture Studio - Save Blocks

This brings up the Save Block Definitions Dialogue Box



Save Block Definitions Dialogue Box

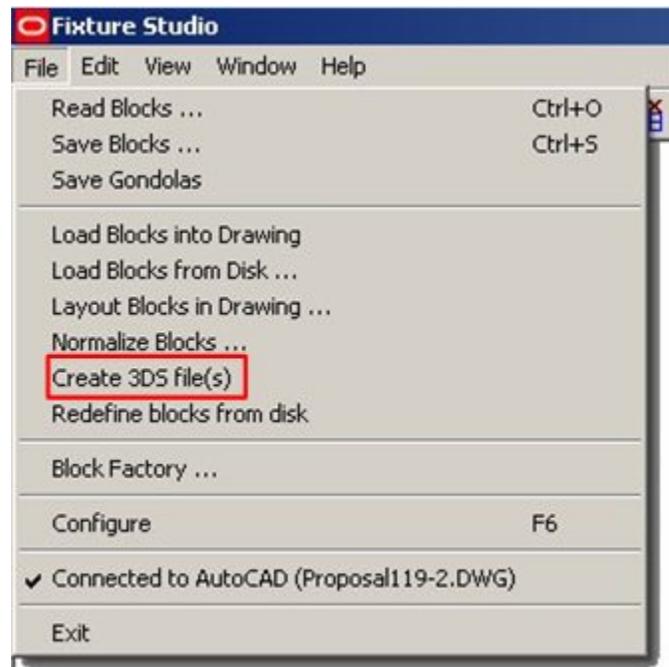
Check the **Database**, **Add New Definitions** and **Enforce Save** options. All blocks are then saved back to the database.

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 is assigned an ID number and the yellow cube in the first column indicates it has been successfully saved.

Creating a 3DS Object

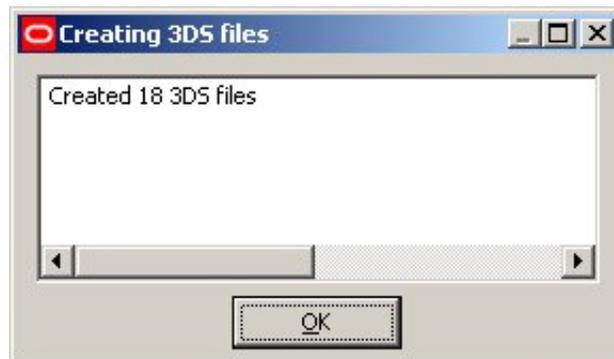
3D Studio Object (.3DS Object) is an alternative graphics file type to the .DWG file used in the Macro Space Management CAD environment. 3DS Files are used in the Merchandiser environment. Highlight the fixtures for which 3DS objects are required. To create a 3DS object select the **Create 3DS File(s)** option from the File menu.



Fixture Studio - Create 3DS File

Note: Fixture studio must be connected to AutoCAD for this option to be available.

A confirmatory dialog box appears confirming the 3DS Files have been created.



Create 3DS file - Confirm

Creating Lightwave Graphics

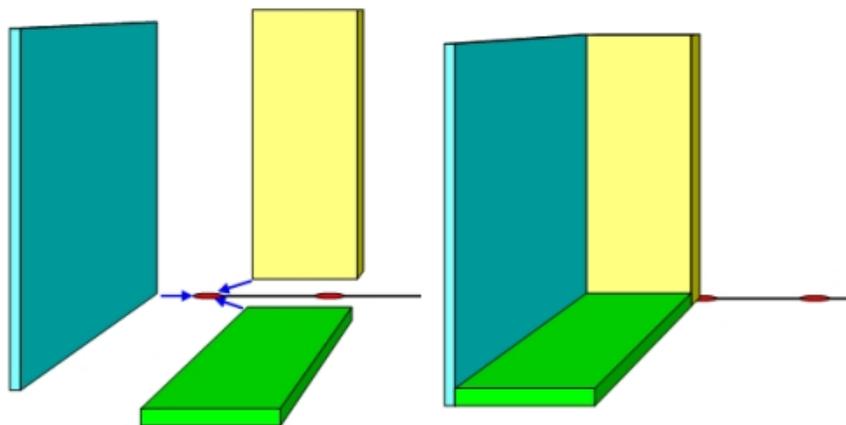
Lightwave Graphics can be created in Merchandiser. Lightwave graphics can display higher levels of detail than 3DS graphics, but will consequently slow processing of information when moving around the Virtual Reality Store.

Note: Lightwave graphics are beyond the scope of this Help File and will not be discussed further here.

Gondolas

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 back panel, 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.

To create a gondola, follow the below mentioned steps:

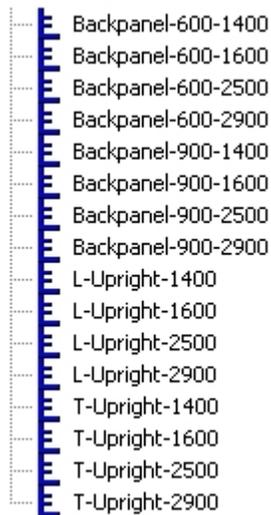
1. Decide on and implement a naming convention.
2. Import the blocks into Fixture studio. Ensure Insertion points are consistently located.
3. Assign Gondola Part Types.
4. Assign Gondola Sizes.
5. Define Gondola:
 - a. Define name, main length and maximum bays.
 - b. Select and assign dimensions.
 - c. Specify the list of parts.
 - d. Define the part details.
 - e. Define the part size position and rotation.

Naming Conventions

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 you give blocks names like Widget-187567 and Gizmo-ADRTYN, it is not obvious what the blocks are, or what their dimensions are. With a well thought out naming convention, identifying gondolas is simpler.



In the above example, there are three types of block; Back Panels, L shaped uprights and T shaped uprights. The back panels have widths of 600 and 900 mm, and that they have heights of 1400, 1600, 2500 and 2900 mm. Similarly both the L and T shaped uprights come in four heights; 1400, 1600, 2500 and 2900 mm.

Widget-187567 might well be a back panel of width 600 mm and height 2500 mm, but it may not be clear from the block name. 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 you will have problems if you 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 you must avoid wrong spellings. If you name a block Backpanal-600-1400 rather than Backpanel-600-1400, Macro Space Management will fail to find the block because of the wrong spelling.

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.

Prefix-Width-Depth-Height-Suffix

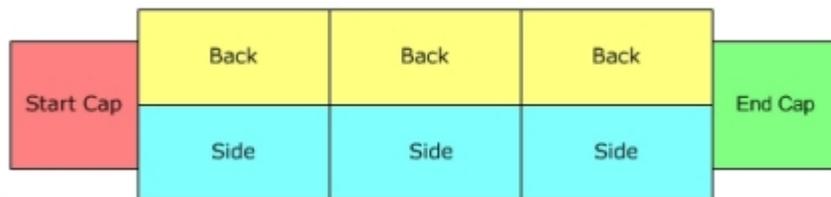
Block names of the form allows defining gondolas so that at the time of addition into the Planner or Merchandiser environments you can choose the:

- 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

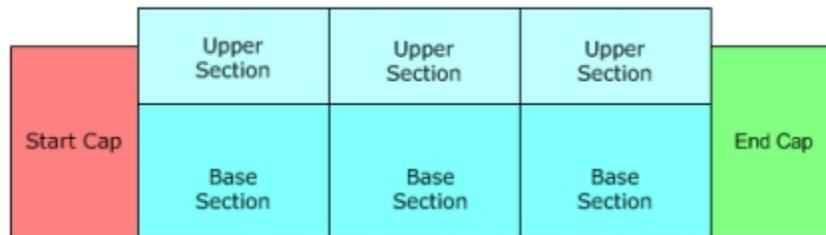
Tip: One well thought out gondola definition could allow you to place dozens of different variants of that gondola in Planner or Merchandiser.

Gondola Parts

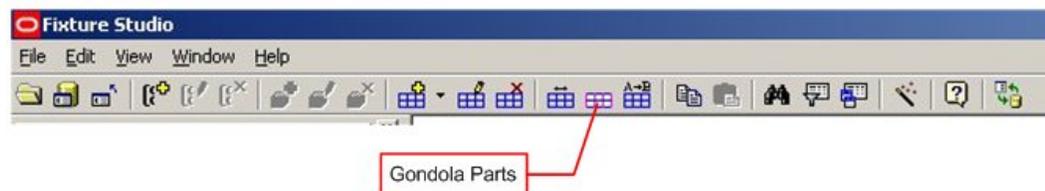
Gondolas can be considered to be made up from a number of components. Looked at from above the gondola might have Side Bays, Back Bays, a Start Cap and an End Cap.



Looked at from the side, the bay might have two levels.

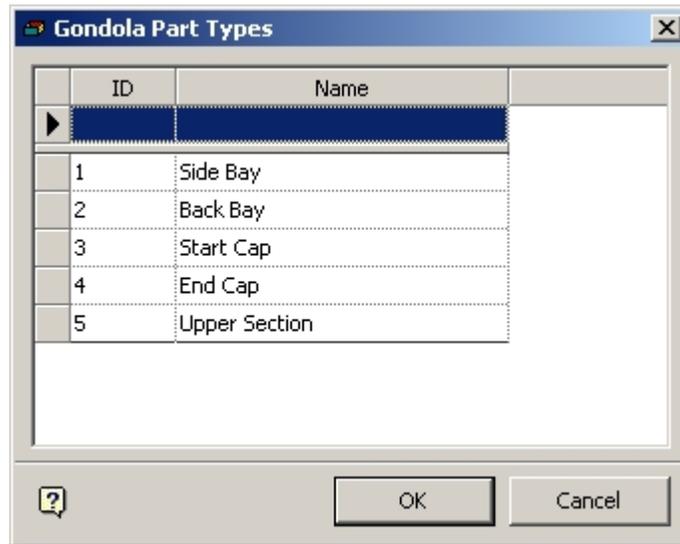


The base section might be a freezer unit, while the upper section might be shelving holding condiments. These sections can be defined as generic types in the Gondola Parts dialog box. This is accessed from the Gondola Parts icon on the toolbar.



Fixturo Studio - Gondola Parts

This brings up the Gondola Parts dialog box.

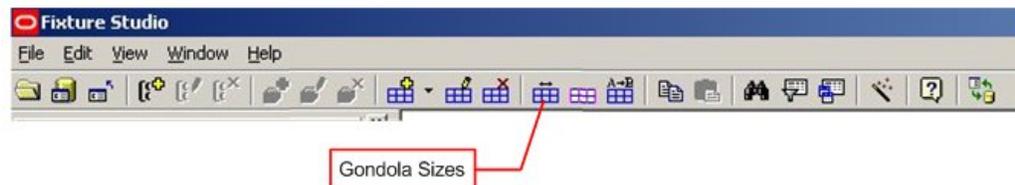


Gondola Parts dialog box

Individual components of a gondola are assigned to a Gondola part. For instance a Side Bay might contain a Base Unit, Upright and Back Panel. If you then decide to manipulate that bay (for example moving or deleting it) the application applies that operation to all the components of the bay.

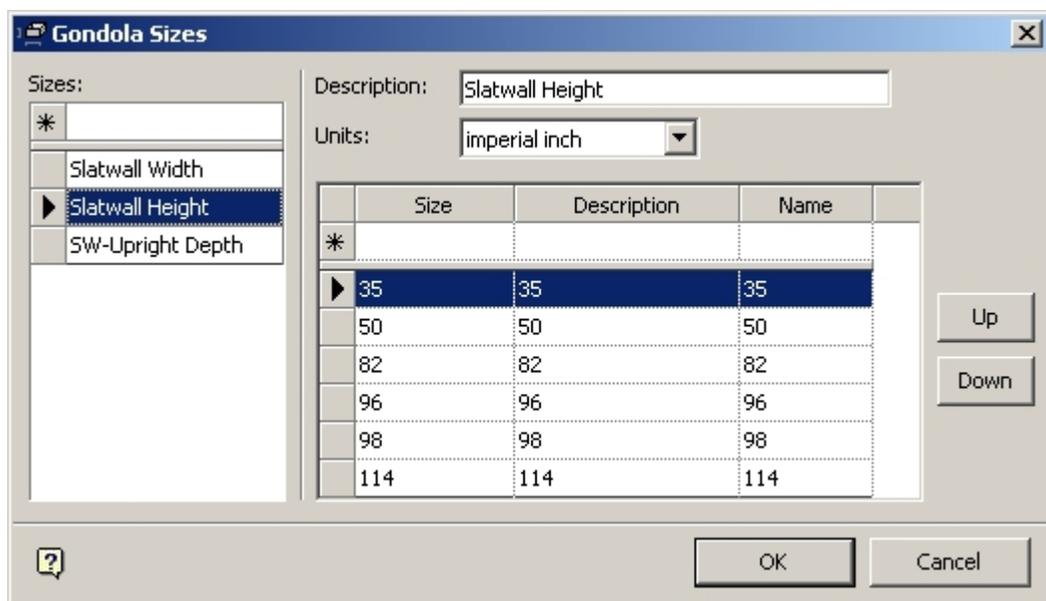
Assigning Gondola Sizes

When placing a gondola, you 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 dialog box. This is accessed by clicking on the Gondola Sizes icon on the toolbar.



Fixture Studio - Gondola Sizes

This brings up the Gondola Sizes dialog box.



Gondola Sizes dialog 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 dialog box if a gondola containing this component is placed in a drawing.

Ensure 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 Back Panels; 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 dialog box, they would only lead to errors when the gondola is placed in a drawing. (The software will search for non-existent block names).

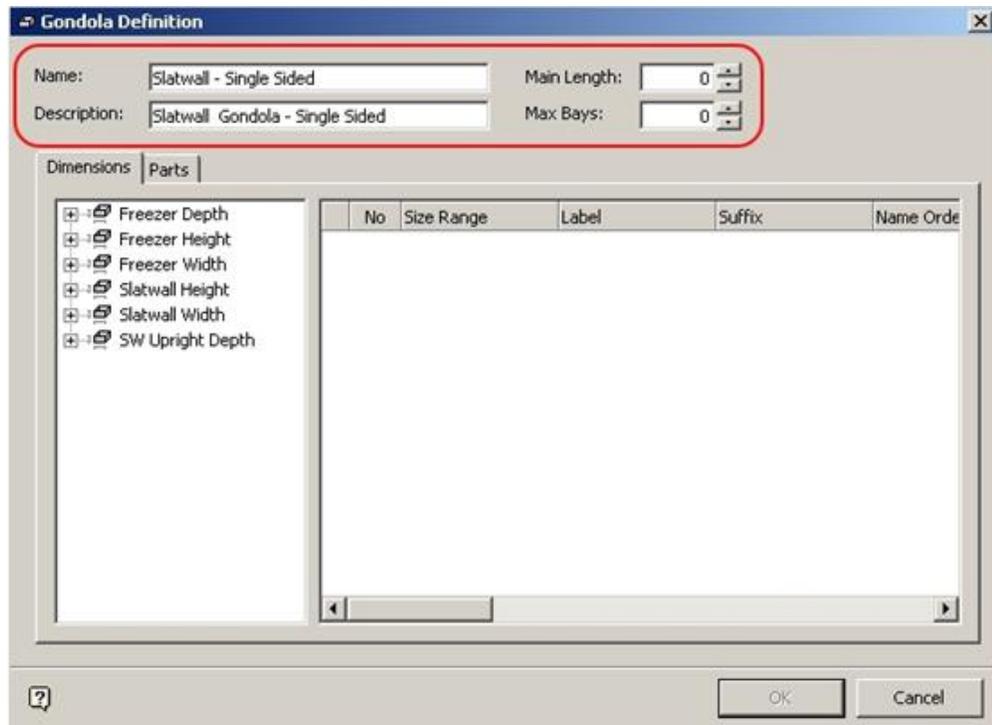
These may be appropriate to other fixtures, but they are not related to the Back Panel heights. This would lead to serious problems when adding a gondola to a drawing.

(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.

Defining the Name, Main Length and Max Bays

The gondola name can be defined in the Gondola Definitions dialog box.



Gondola Definitions dialog box

The **Name** must be unique so that it can be identified in the central Macro Space Management database. For example, if you were adding sizes appropriate to Lozier equipment you may add: Lozier Height, Lozier Width, Lozier Depth

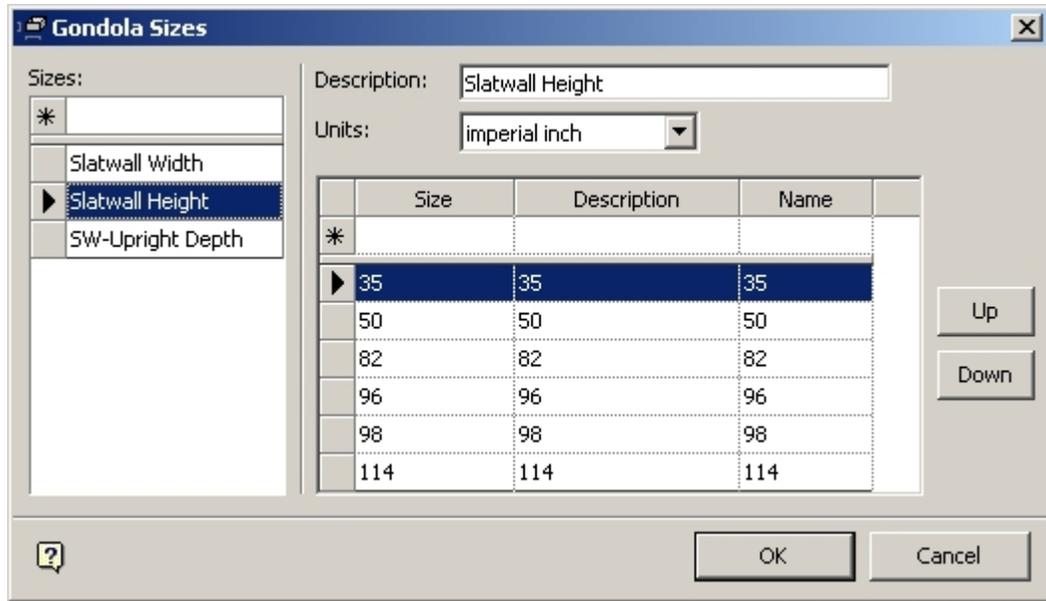
The **Description** can be used to give more information as to the gondola definition if desired. The **Description** appears in the Add Gondola dialog box when gondolas are added to the drawing. For example, you can change the descriptions to 1400 mm, 1600 mm, etc., if this would make it easier for the person placing gondolas.

Main Length: If set to 0 then the main length is 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.

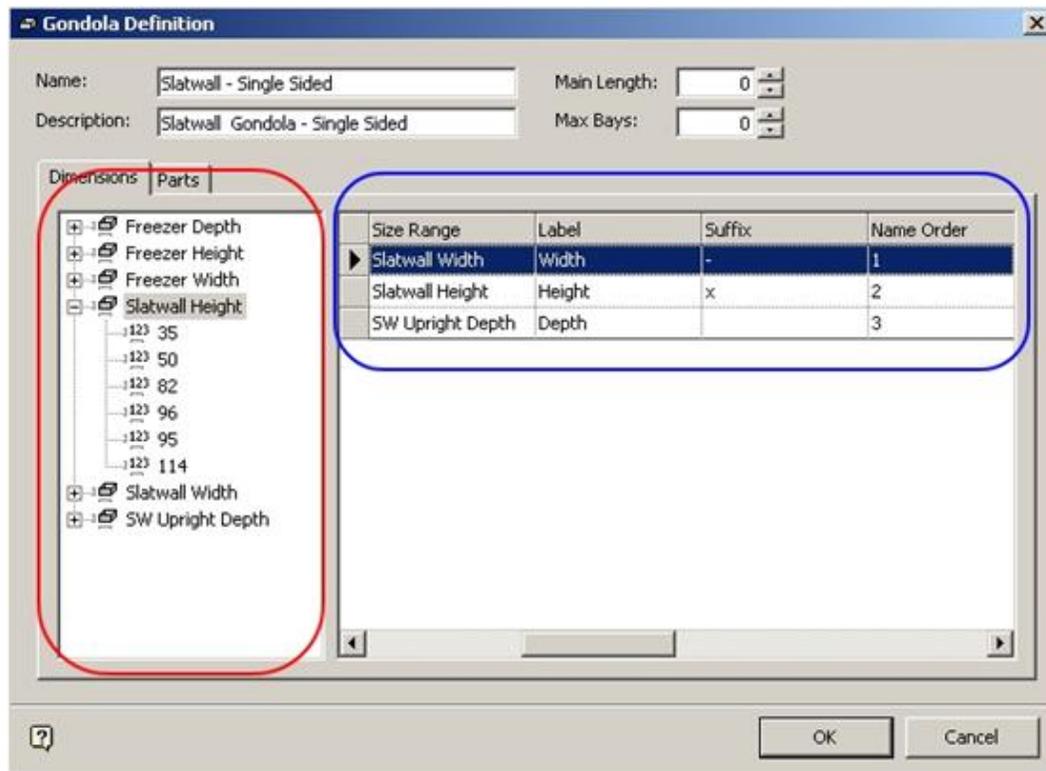
Specifying and Assigning Dimensions

When placing a gondola, you can specify dimensions that are applicable to that gondola. You can specify the permissible sizes in the Gondola Sizes dialog box.



Gondola Sizes dialog box

These sizes are available in the Gondola definitions dialog box when the gondola is added to a drawing. With the Sizes defined you can select the required sizes from the options on the left of the Dimensions tab (outlined in red).



Gondola definitions dialog box

Each dimension specified has to have a series of other parameters set including:

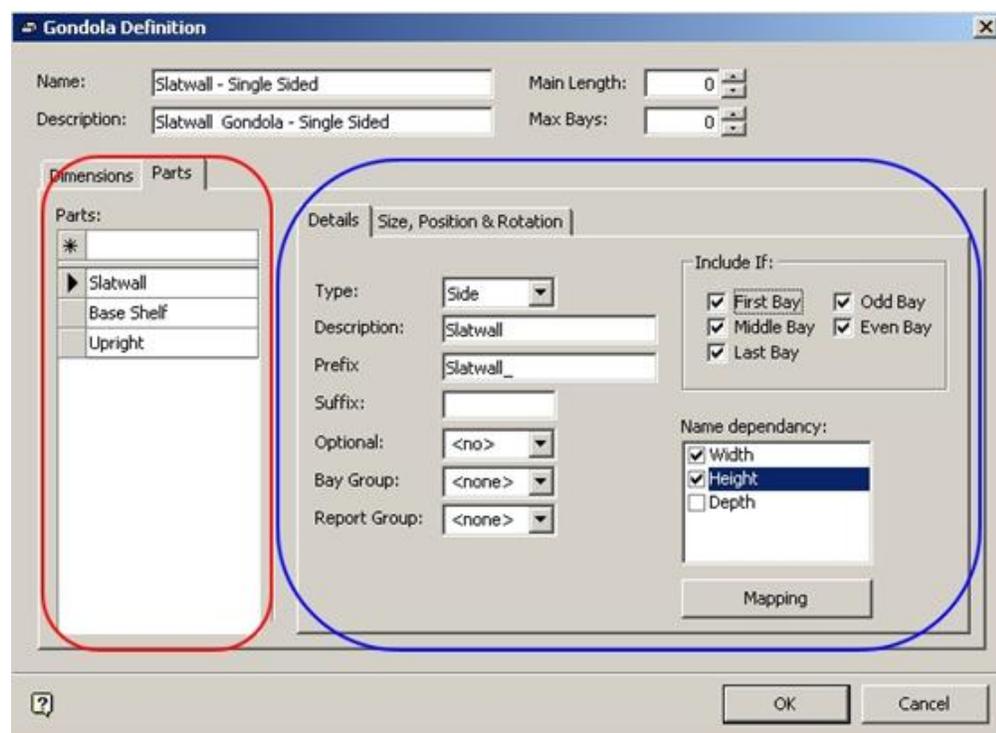
- Label

- Suffix
- Name Order
- Main Dimension

These are in the section outlined in blue.

Defining the Part Details

The gondola is made up of a series of parts. These are defined generically (for example Freezer Units or Back Panels). 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 side of the parts tab (outlined in blue).



Gondola Definition - Parts Tab

Entering Part Names

Part names are entered by typing them into the text box marked with an asterisk then pressing return. Part names are for the convenience of the user, so should be selected for ease of use.

Entering Part Details

The part details serve three main purposes:

- They allow Macro Space Management to select the correct block when the gondola is drawn using name dependencies.
- Setting the type allows you to group together the individual components of a bay. For example a side bay might contain an Upright, Base Unit and Back Panel.

- They allow you 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.

Specifying 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.

The screenshot shows the 'Gondola Definition' dialog box. The 'Name' field is 'Slatwall - Single Sided' and 'Main Length' is '0'. The 'Description' field is 'Slatwall Gondola - Single Sided' and 'Max Bays' is '0'. The 'Parts' list on the left includes 'Slatwall', 'Base Shelf', and 'Upright'. The 'Size, Position & Rotation' tab is selected and circled in red. It contains the following fields:

Delta Size:	Parameter Size:	Size Scale Factor:
Length: 0	<none>	1
Depth: 0	<none>	1
Height: 0	<none>	1
Fixed Offset:	Parameter Offset:	Offset Scale Factor:
Length: 0	<none>	1
Depth: 0	<none>	1
Height: 0	<none>	1
X Axis Rotation: 0	Y Axis Rotation: 0	Z Axis Rotation: 0

Gondola Definition - 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 are 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) 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 that rotations are normally in the Z (Vertical) plane. It is unusual to rotate on the X or Y planes.

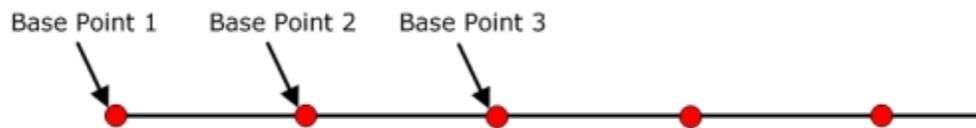
Calculating the Block Sizes, Positions and Rotations

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 dialog 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 back panels 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, centre.

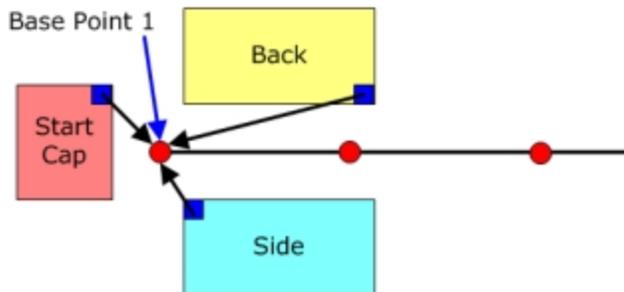
Note that the insertion point position has been selected to suit the geometry of the block.



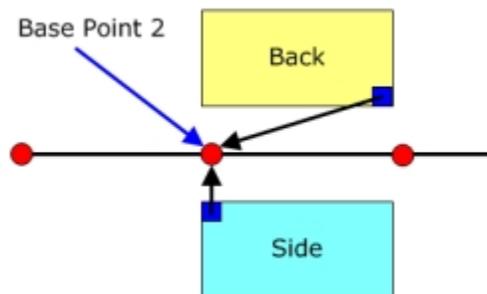
Note: The Insertion Point for any block can be seen in the Planner environment. Click on the block to select it, and the insertion point will appear as a blue square.

Alignment of Bays to Base Points

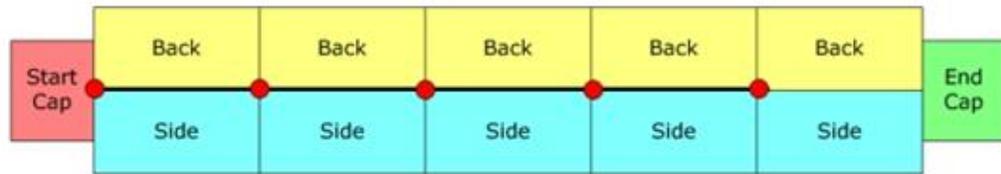
Gondolas are made up of bays and each bay is positioned relative to a specific base point.



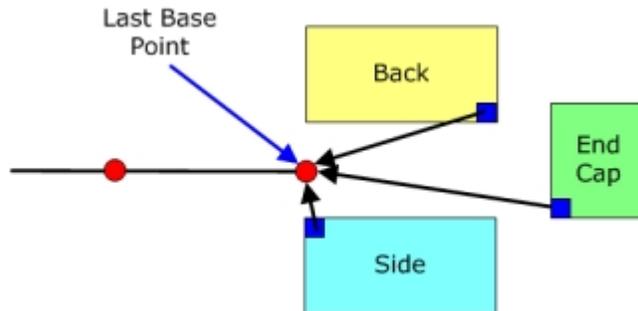
In the above example the Start Cap, the first Side Bay and the first Back Bay are all positioned relative to the first base point. Similarly, the second Side Bay and the second Back Bay are positioned relative to the second base point.



As successive bays are added, the full gondola is created.

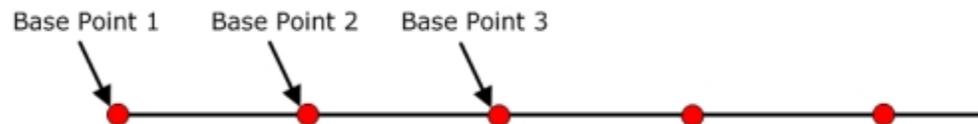


Note how the End cap is still positioned relative to the last base point, although it is some distance from it.

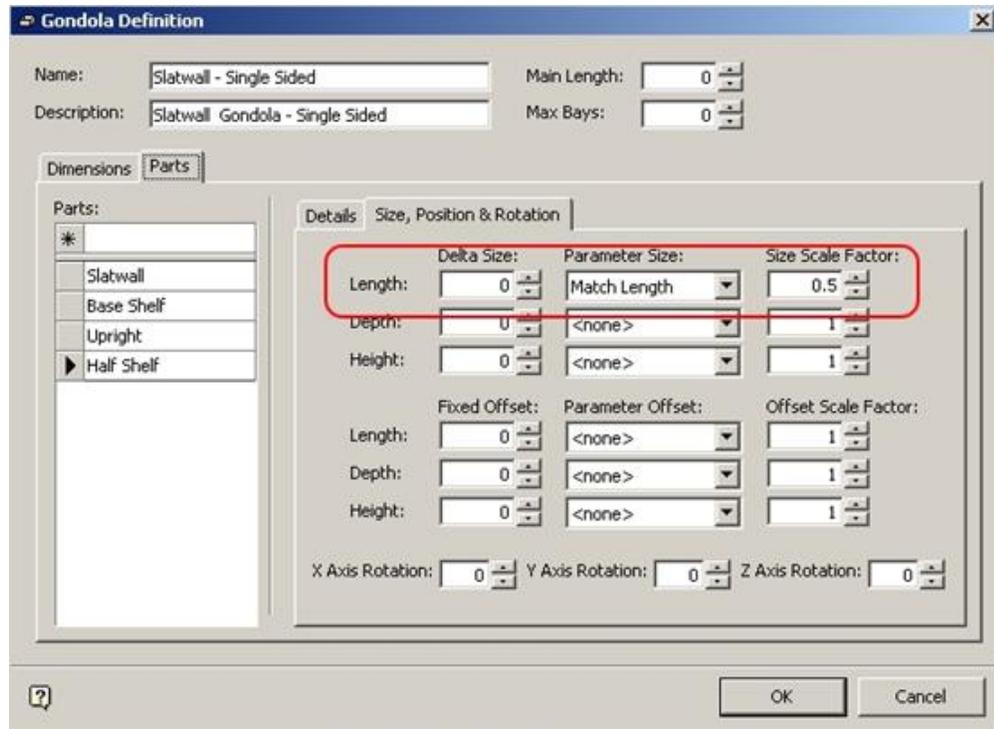


Sizes of Gondola Parts

The distance between base points is determined by the main dimension of the gondola.



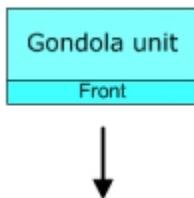
If a part to be used in the gondola is a fraction of the distance between base points, this can be specified in the Gondola Definition dialog box. For example, if you want to place a shelf half the length of the bay, you could specify the main dimension and use a size of half of it.



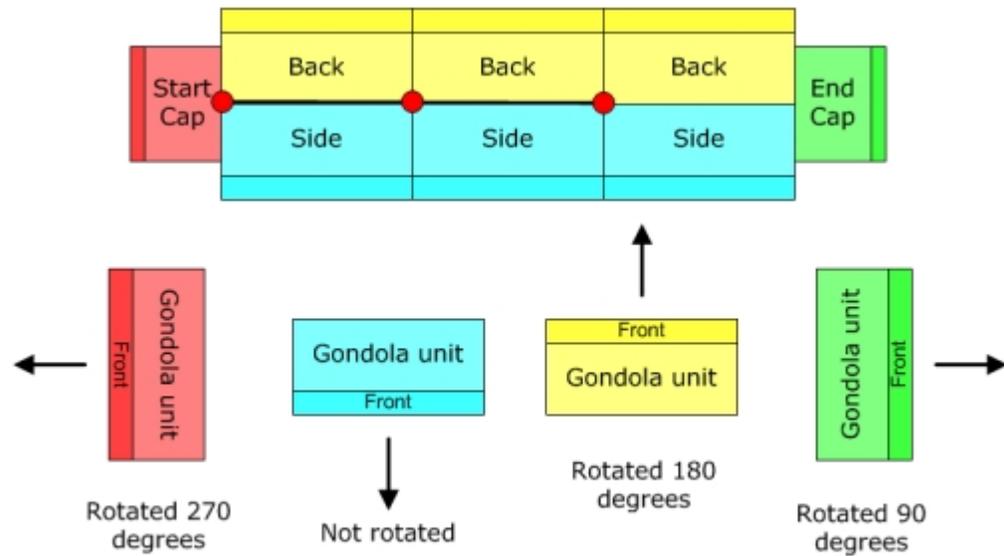
Gondola Definition dialog box

Rotations Of Gondola Parts

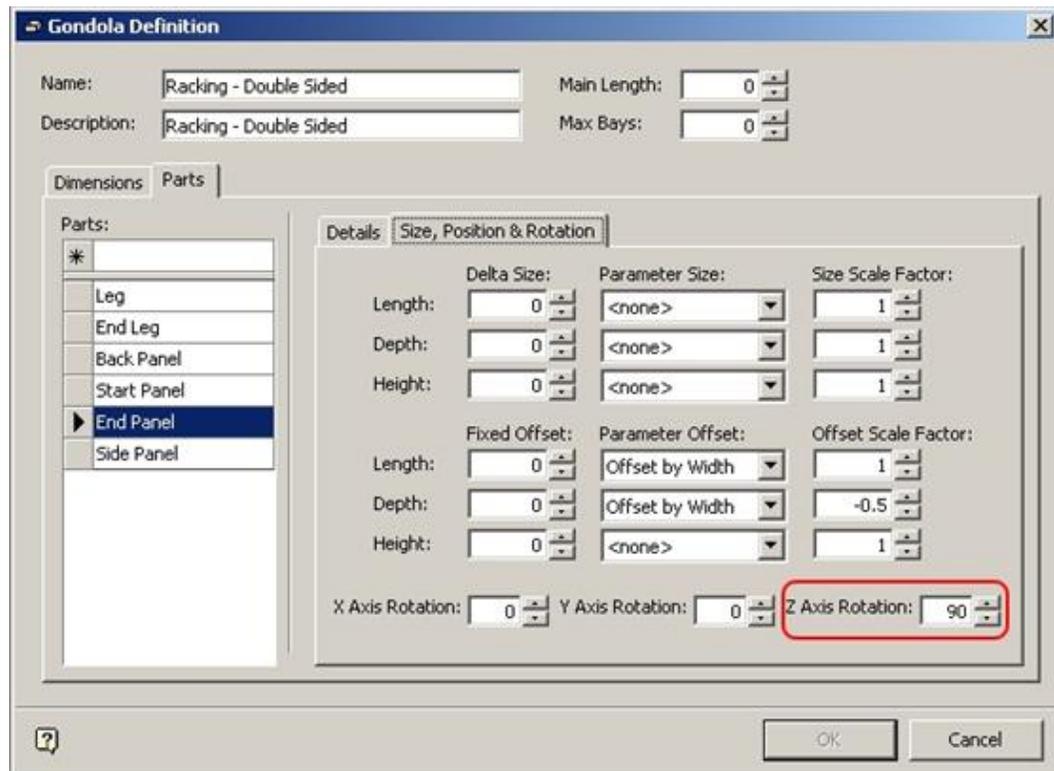
All fixtures and fittings have a designated front direction. This is normally set to point down the drawing when they are inserted.



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.



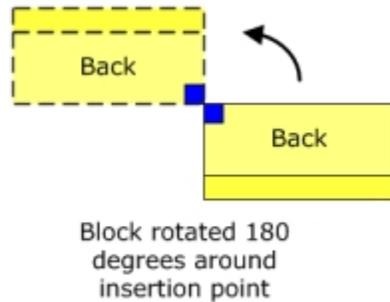
If you want to add a part to the End cap you can specify a 90 degree rotation in the Gondola Definition dialog box.



Gondola Definition dialog 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, you can see that the component to be used for the back of the gondola has been displaced to the left during the rotation.

You 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.

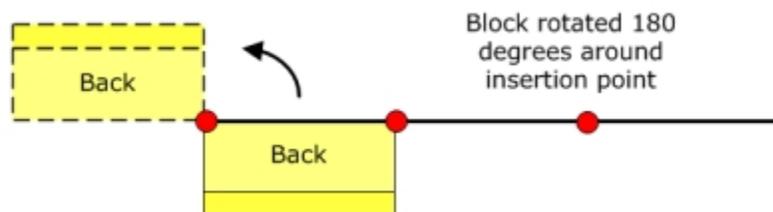
- Offsets in the X axis are relative to length
- Offsets in the Y axis are relative to depth
- Offsets in the Z axis are relative to height

Side

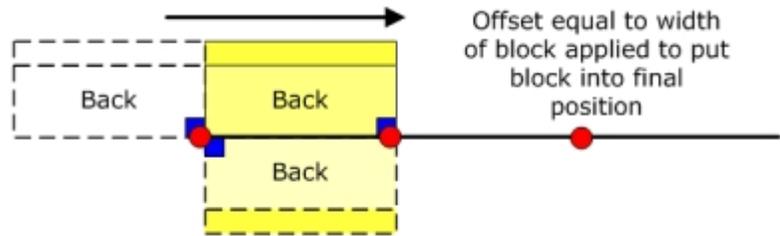
The sides of a gondola do not require any rotations or systematic offsets.

Back

The back of the gondola is rotated through 180 degrees to get the front facing in the correct direction.

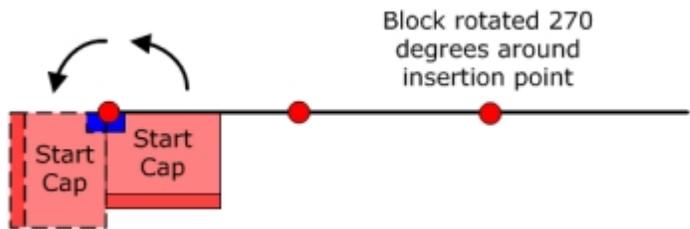


It then needs a positive offset equal to the width of the block.

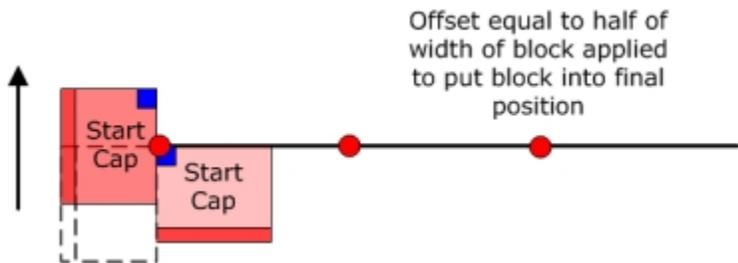


Start Cap

The Start Cap is rotated through 270 degrees to get the front facing in the correct direction.

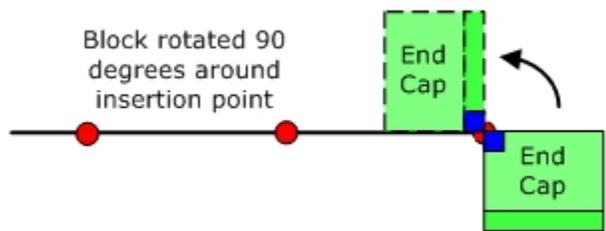


It then needs a positive offset equal to half of the width of the block.

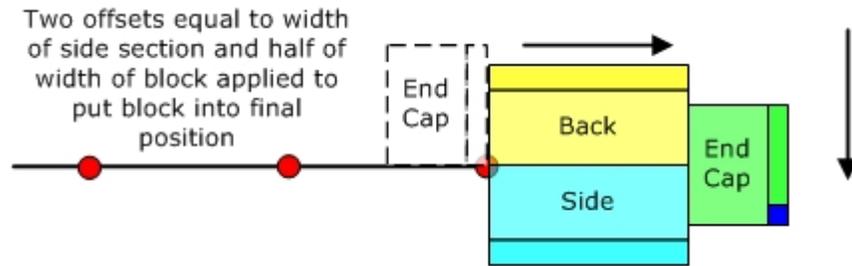


End Cap

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

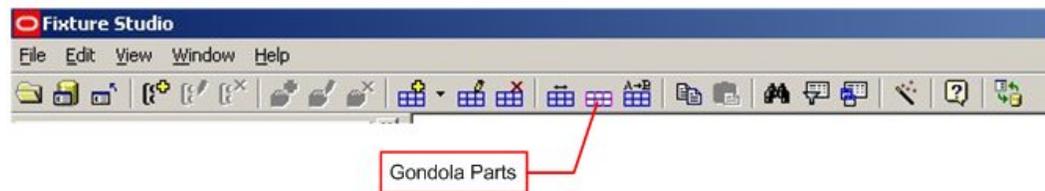
There are two reasons for offsetting gondola parts.

- 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 Back Panel into correct alignment with its parent leg.

Basic Gondola Creation

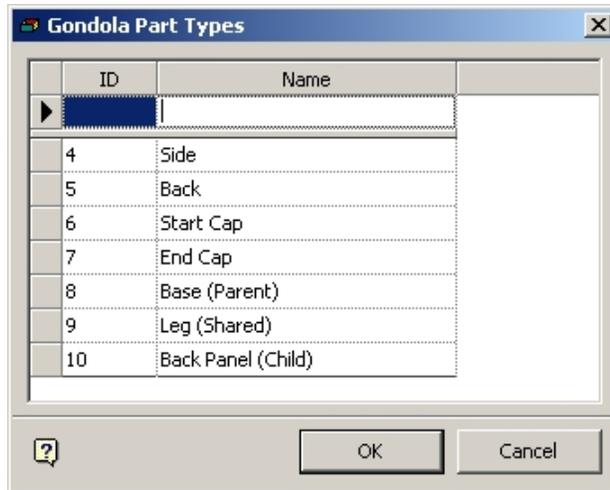
Specifying Gondola Parts

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.



Gondola Parts

This brings up the Gondola Parts dialog box.



Gondola Parts dialog box

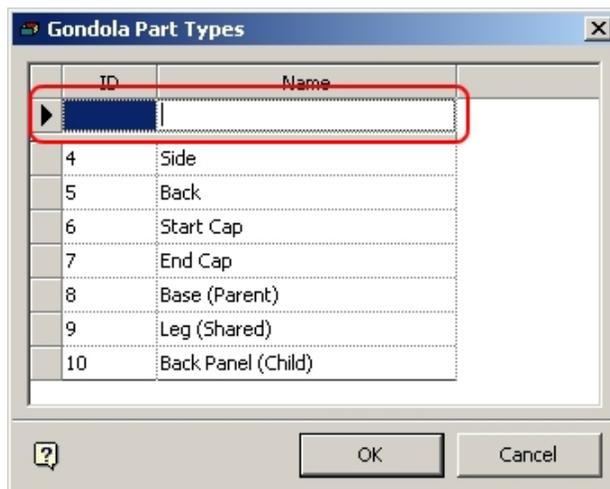
Parts assigned to a Part Type are deleted from a placed gondola when one of the parts in that section of the gondola is deleted. The List contains two classes of part types:

- 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 Back Panel 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 are 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 then press return.



Gondola Parts Types dialog box

The name appears in the list. Any data not yet stored to the central database will have a negative ID; for example -4.

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:

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 dialog?

Are all the required parts in the Gondola Parts dialog?

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?

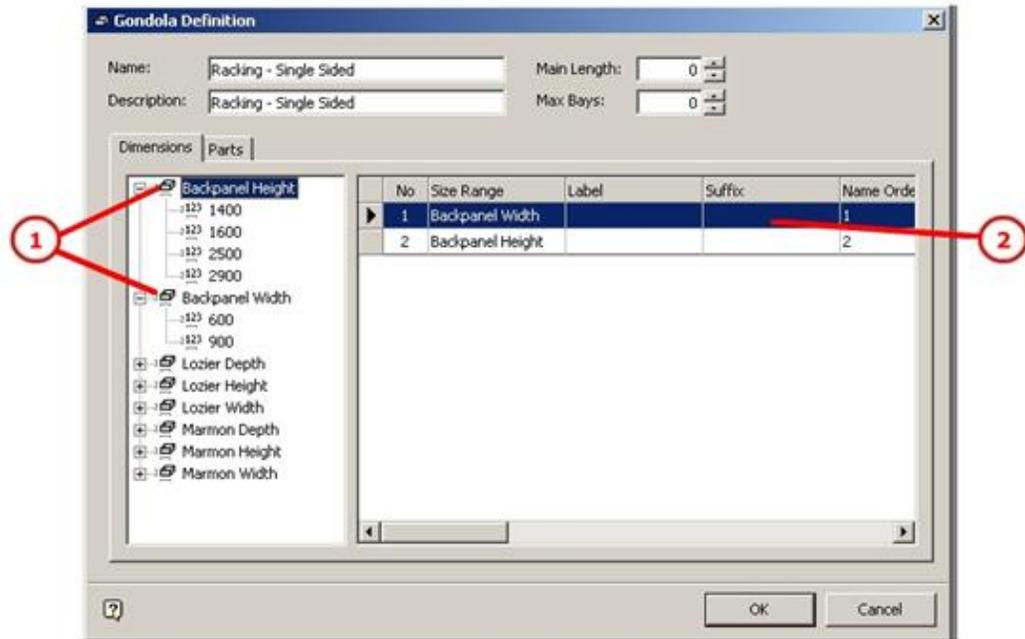
- Type
- Description
- Prefix
- Suffix (if required)
- Optional (end caps, etc)
- Bay Group
- Report Group
- Include If (Bays required)
- Name Dependency

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)

Overview of Defining Dimensions

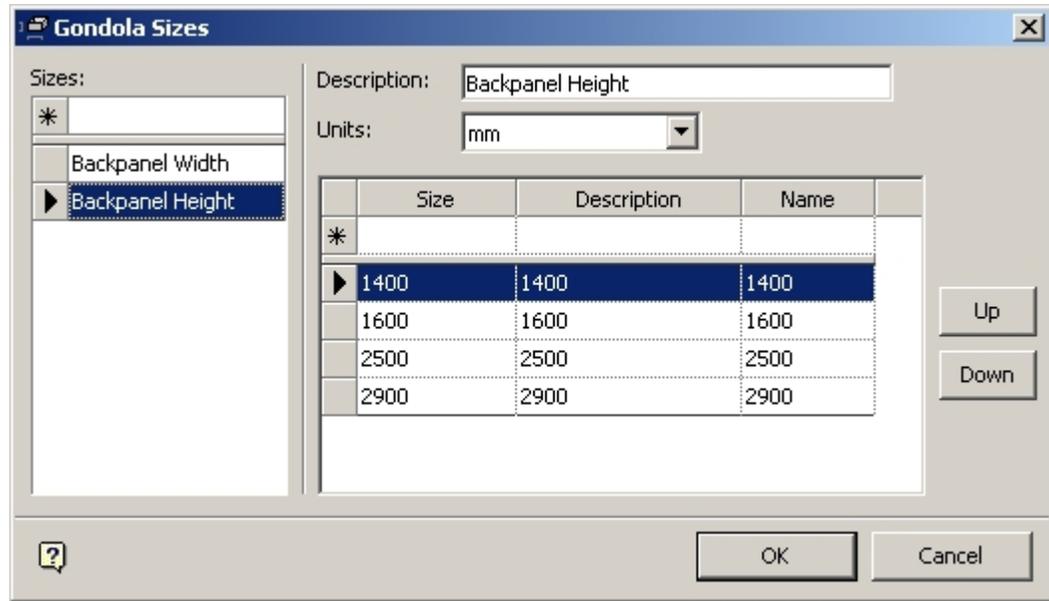
The dimensions are set in the dimensions tab of the Gondola Definitions dialog box.



Gondola Definitions dialog 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 required for this gondola. Note that you have to fill in information in the list of Selected Dimensions (2) on the right.



Gondola Sizes

Note: The sizes are defined in the Gondola sizes dialog box.

Once the dimensions have been selected, they have to be customized. This is done on the right hand side of the dimensions tab.

No	Size Range ▾	Label	Suffix	Name Order	Main
1	Backpanel Width	Width	-	1	True
2	Backpanel Height	Height		2	False

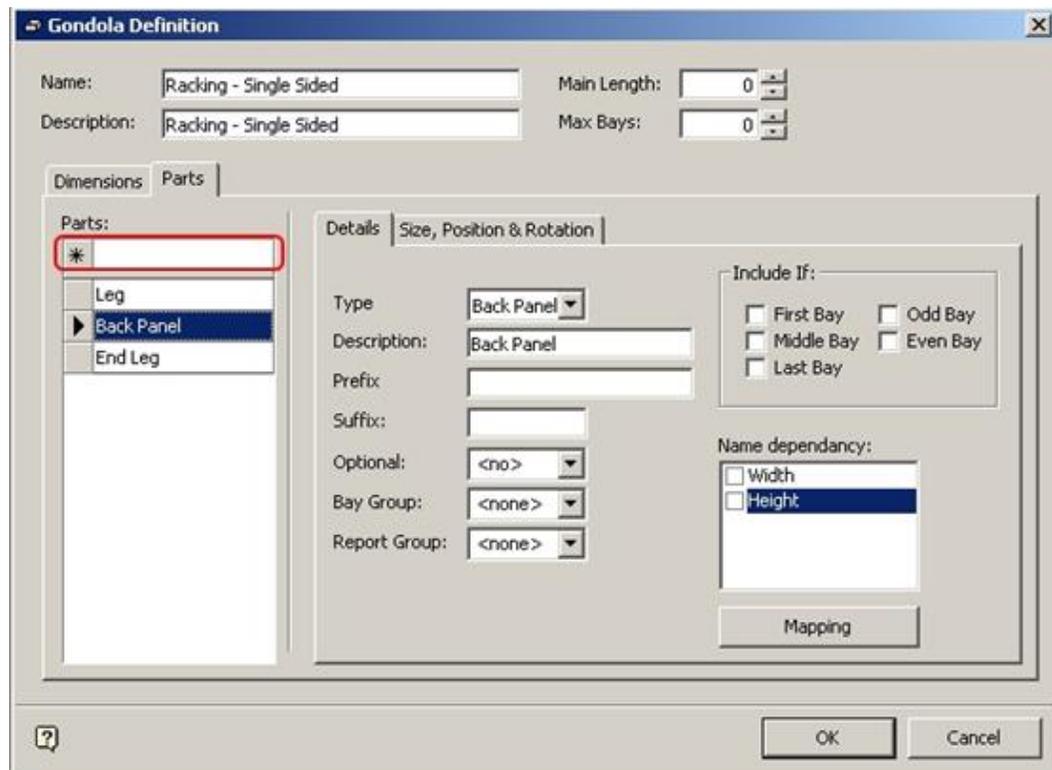


- **Number (1)** is a parameter set by the software when the dimension is selected from the pane on the left.
- **Size Range (2)** is the name of the dimension; this is selected by double clicking on the available dimensions in the left hand pane.
- **Label (3)** is the name that is given to that dimension in the Add Gondola dialog box. This can be entered by typing it in and pressing <Enter>.

- **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 <Enter>.
- **Name Order (5)** represents the sequence the dimensions appear in the naming convention. If you 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 <Enter>.
- **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 <Enter>.

Defining the Gondola - 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.



Gondola Definition - Parts tab

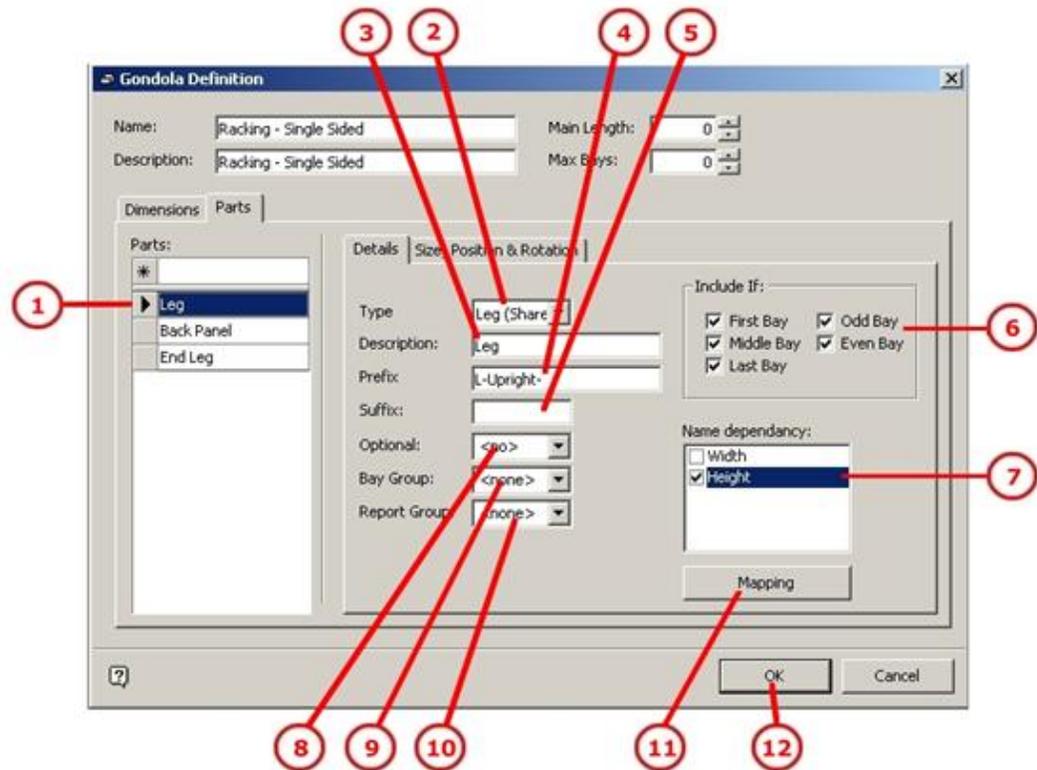
Type the required name in the Parts text box and press return. For this gondola you will require:

- Leg
- Back Panel
- End Leg

The first two parts go into every bay, the End Leg only into the last bay.

Defining the Gondola – Leg Details

Leg details are defined by clicking on Leg in the list of parts (1).

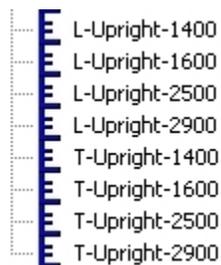


Gondola Definition - Leg Details

Type (2) can be set using the drop down list.

Description (3) will default to that selected from the list of parts.

Prefix (4) defines the first part of the naming convention. Note that there are two types of legs in the list of available parts.



The L-uprights are suitable for the single sided racking you are setting up. Accordingly, you can set a prefix of L-Upright- to select these legs.

You do not need a **Suffix (5)** in this instance.

Select the required gondola sections in the **Include If (6)** check boxes. Check all the options if you want a leg in every section.

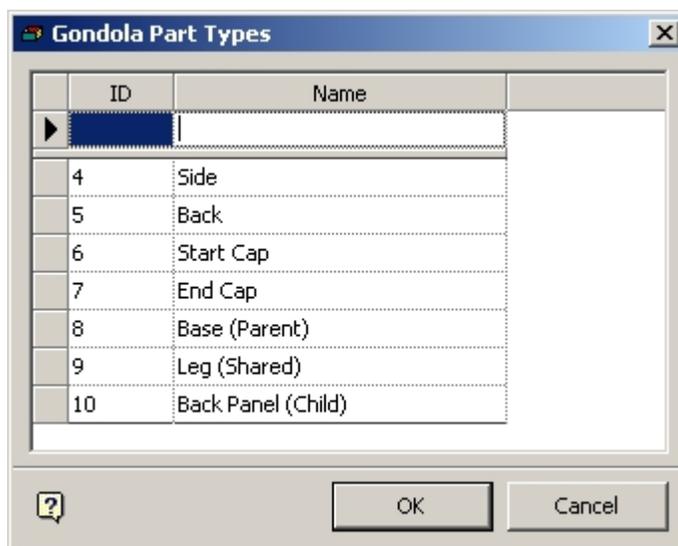
Only one of the **Name Dependency boxes (7)** is checked for height. This means in conjunction with the L-Upright- Prefix and the sizes defined in the gondola sizes dialog box, you can select the following blocks when the gondola is drawn.



You may leave the fields **Optional (8)**, **Bay Groups (9)** or **Report Group (10)** options blank at this stage.

If necessary, click the **Gondola Mapping (11)** option to define the block naming convention options set.

Do not at this stage click on the **OK (12)** button.



Gondola Part Types

Note: The parts available in the drop down list are set up using the Gondola Parts dialog box.

Defining Gondola - Back Panel Details

Defining the back panel proceeds in similar manner to the leg, the completed dialog box looking as follows:

Gondola Definition

Name: Main Length:

Description: Max Bays:

Dimensions | **Parts**

Parts:

- *
- Leg
- Back Panel**
- End Leg

Details | **Size, Position & Rotation**

Type:

Description:

Prefix:

Suffix:

Optional:

Bay Group:

Report Group:

Include If:

First Bay Odd Bay

Middle Bay Even Bay

Last Bay

Name dependency:

Width

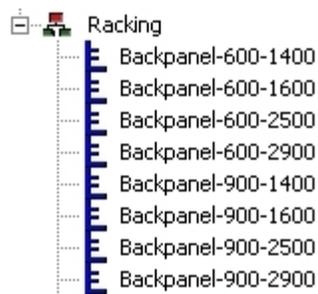
Height

Mapping

OK Cancel

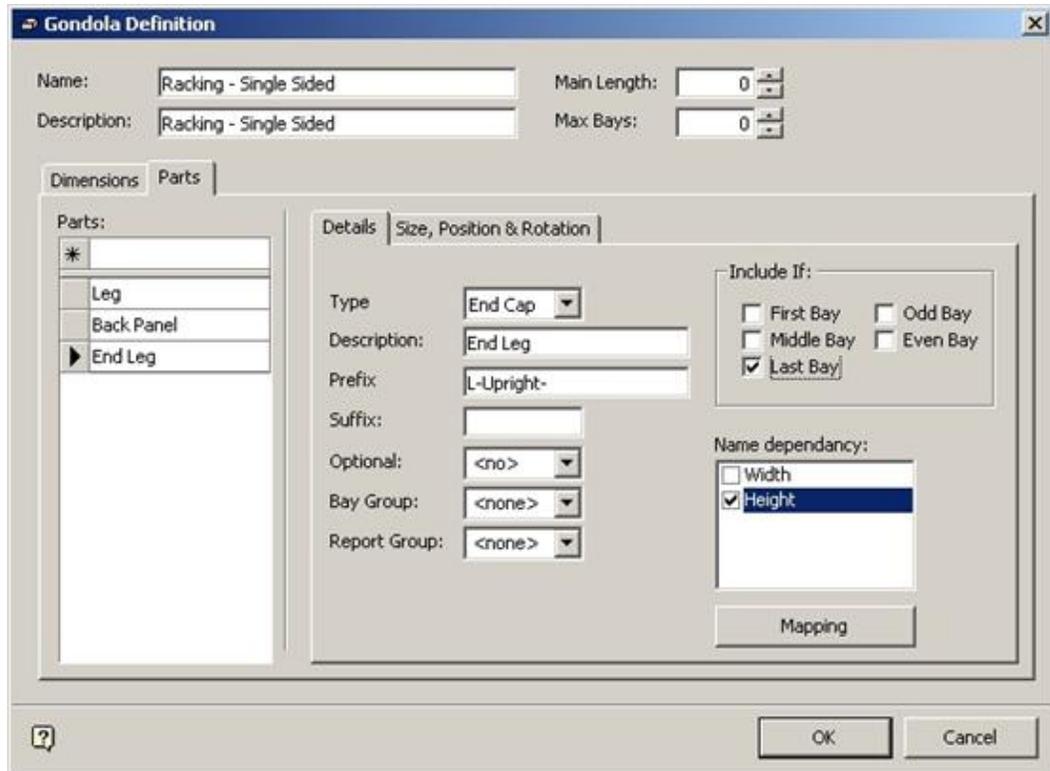
Gondola Definition - Backpanel Details

Note that the Prefix has been entered as Backpanel- and that both name dependencies have been checked. This will allow selecting blocks from the following list.



Defining 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.



Gondola Definition - End Leg Details

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.

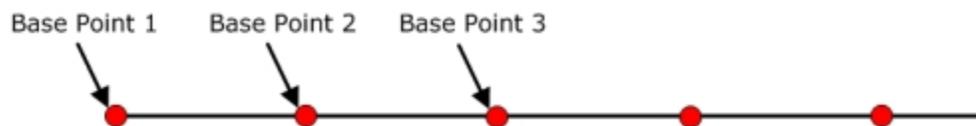
Overview of Leg Size, Position, and Rotation

Defining Sizes

There are three parts to the gondola, Leg, Back Panel and End Leg. For the purposes of this gondola, there is no need to define the size as you will be using the defaults specified in the block definition.

Defining Offsets

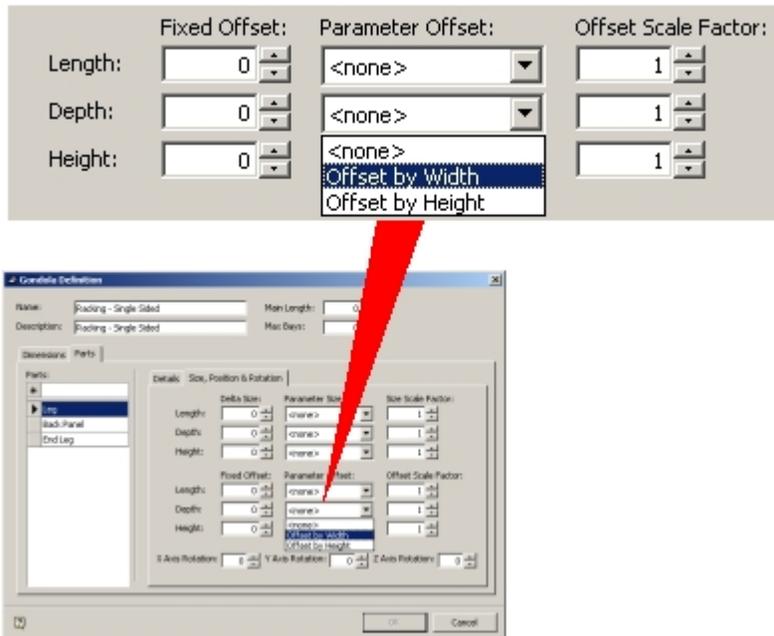
The Size, Position and Rotation have to be defined for each part. This is to ensure that it is inserted in the correct position and orientation relative to its base point.



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 $\text{Result} = \text{Constant} + (\text{Size} \times \text{Factor})$

This is not as difficult to understand as it seems. The Offset options can be found on the Size, Position and Rotation tab.

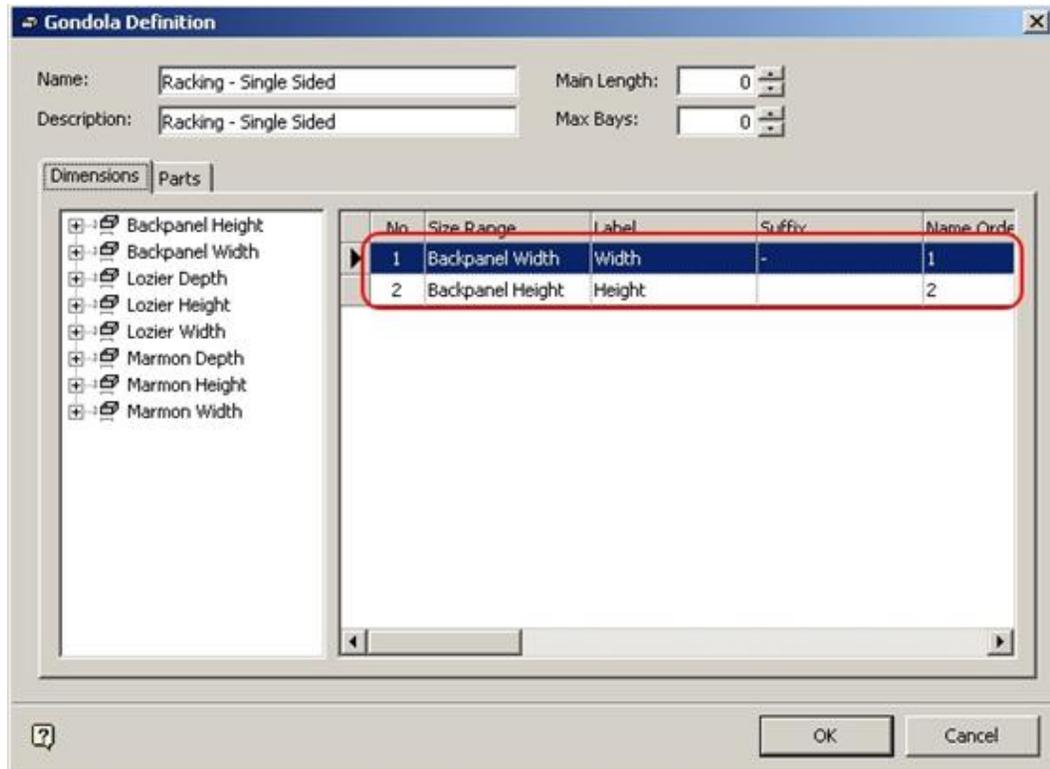


Delta Size/Fixed Offset

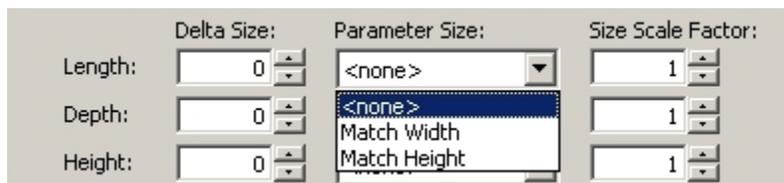
The Delta Size corresponds to the constant c in the $y = mx + c$ equation. If set to 50 mm, this value will always be used when it comes to calculating the size of the offset.

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



Dimensions Tab



As you have only selected two dimensions in the Dimensions tab, the drop down list only contains two options; Match Width and Match Height.

- If you 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 you chose a width of 600 mm in the Add Gondola dialog, the calculated offset would be relative to the 600 mm width of that block.
- If you chose a width of 900 mm in the add gondola dialog 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

$$\text{Size (y)} = 50 \text{ mm} + (1 \times \text{block size})$$

Delta Size	Parameter Size	Scale Factor	Result
50 mm	None	0	50 mm

$$y = 50 \text{ mm} + (0 \times \text{block size})$$

Delta Size	Parameter Size	Scale Factor	Result
0 mm	Width (600 mm)	0.5	300 mm

$$y = 50 \text{ mm} + (0.5 \times \text{block size of 600 mm})$$

Delta Size	Parameter Size	Scale Factor	Result
50 mm	Width (600 mm)	1	650 mm

$$y = 50 \text{ mm} + (1 \times \text{block size of 600 mm})$$

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 set in the X, Y or Z planes.



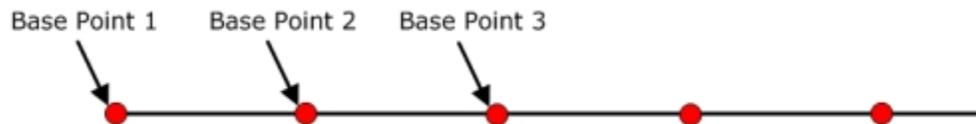
X Axis Rotation: Y Axis Rotation: Z Axis Rotation:

For normal purposes you only have to be concerned about rotations about the Z axis – in the vertical plane. Typically 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 rotations - the final position of the part will be a combination of the offset and the rotation.

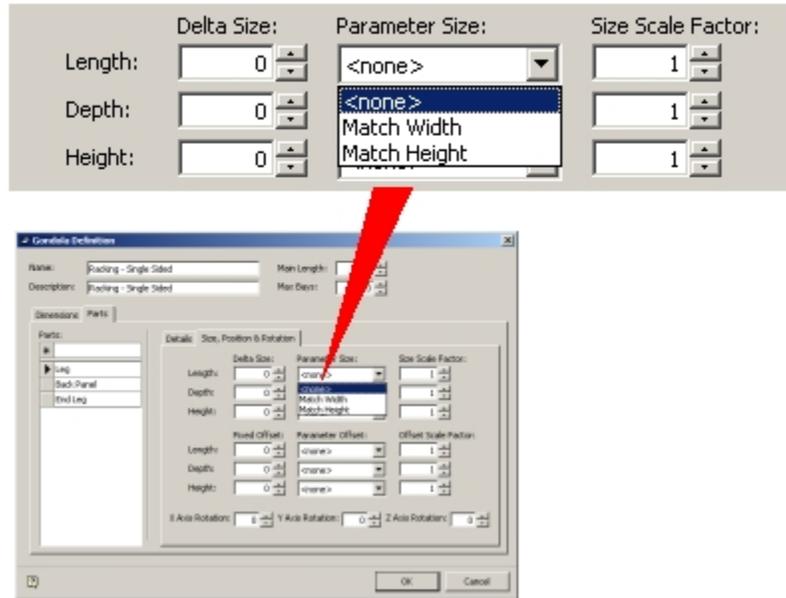
Defining Sizes

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). The size options can be found on the size, position and rotation tab.



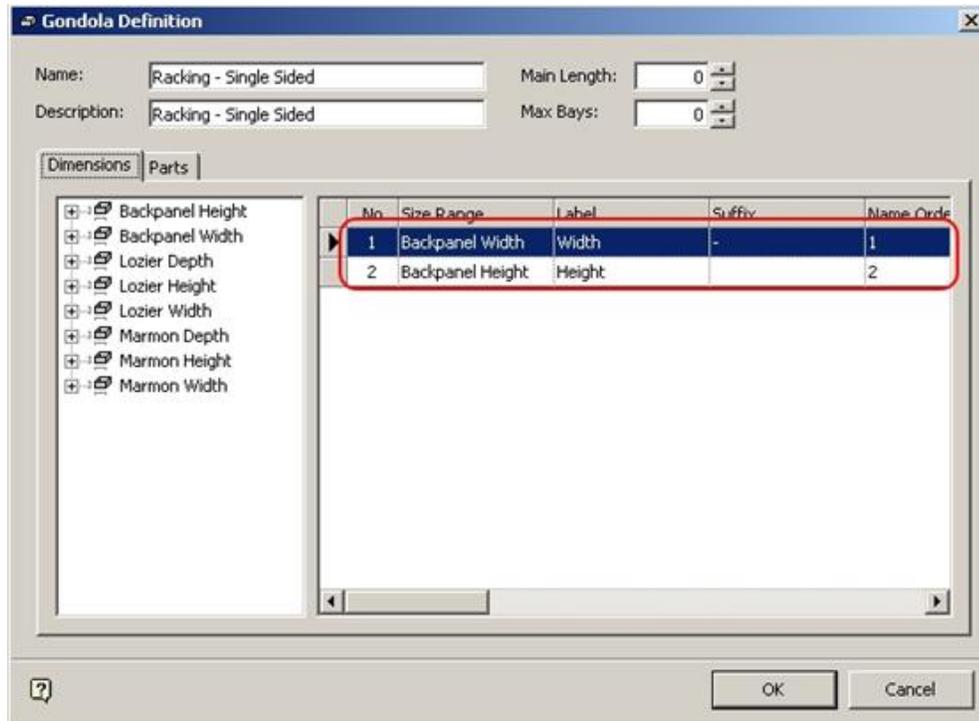
Gondola Definition - Define Sizes

Delta Size/Fixed Offset

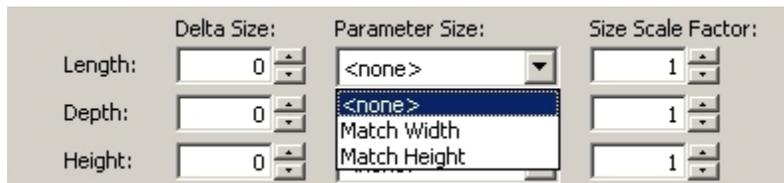
The Delta Size corresponds to the constant c in the $y = mx + c$ equation. If it's set to 50 mm, then this value will always be used when it comes to calculating the size of the part.

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.



Gondola Definition - Dimensions tab



As you have only selected two dimensions in the Dimensions tab, the drop down list only contains two options; Match Width and Match Height.

- If you 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 you chose a width of 600 mm in the Add Gondola dialog, the calculated size would be relative to the 600 mm width of that block.
- If you chose a width of 900 mm in the add gondola dialog 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

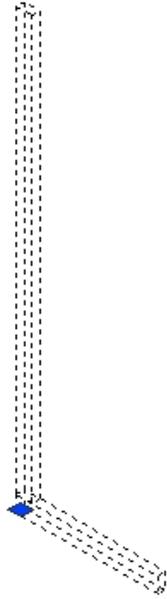
y = 50 mm + (0.5 x block size of 600 mm)

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 and Rotations

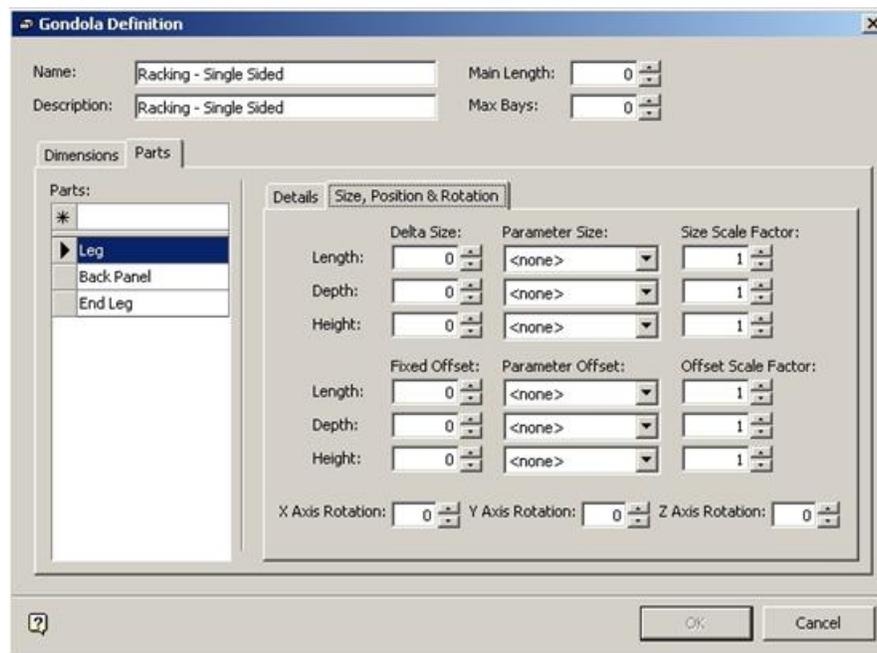
Offsets and Rotations are required to put the parts in the correct position relative to the base point. Each part will generally require a different offset and/or rotation. Before Offsets and Rotations can be specified, the user must ascertain the position of the insertion point of each block as the blocks will be placed relative to this insertion point.



For example, this L-upright has its insertion point specified at the bottom, centre, 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, centre, rear. It does not require any offset to put it at over the Base Point of the bay. It does not require a rotation.

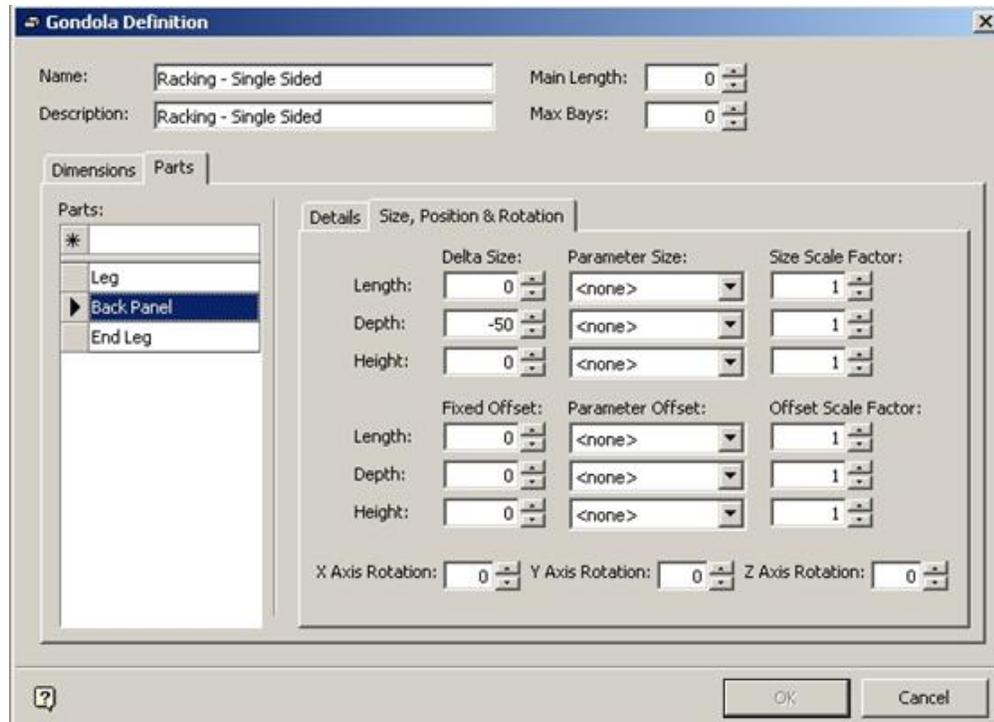


Gondola Definition Dialog Box

Backpanel - Defining Offset and Rotation

The Back Panel has an insertion point at the bottom, left, rear. The insertion point was specified as being 50 mm below the bottom of the Back Panel. The Back Panel requires a – Y offset of 50 mm to bring it in front of the vertical arm of the L upright.

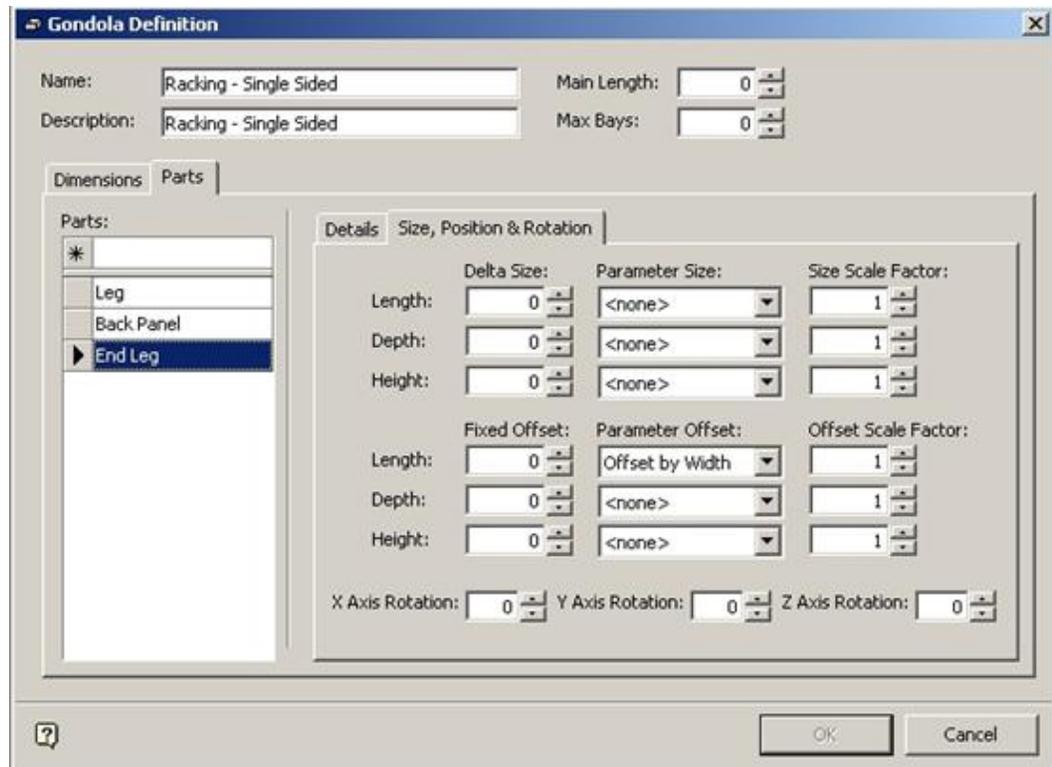
It would have required a Z offset of 50 mm to bring it on top of the horizontal arm of the L Upright. However, this offset was built into the block definition when it was created. A Z offset is therefore not required. It does not require a rotation.



Gondola Definition Dialog Box

End Leg - Defining Offset and Rotation

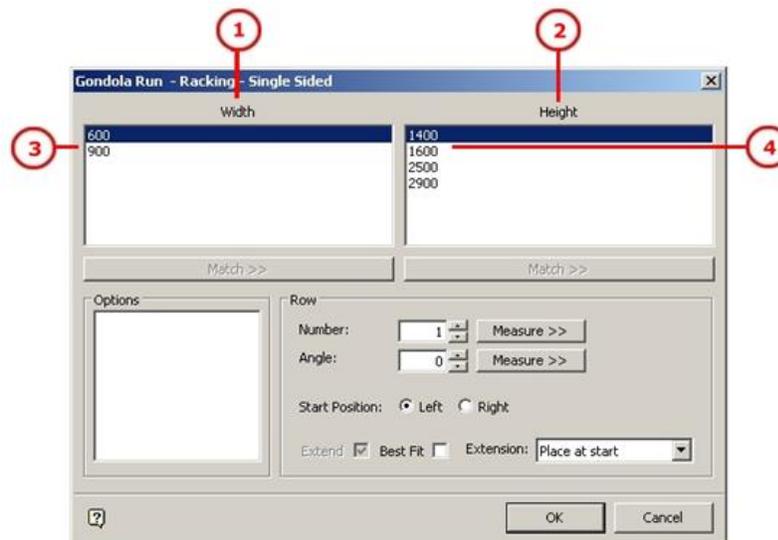
The end leg has its insertion point at the bottom, centre, rear. It requires an offset to put it on the opposite side of the final Back Panel to the Standard leg. This will be an offset by Width. It does not require a rotation.



Gondola Definition Dialog Box

Add Gondola Dialogue Box

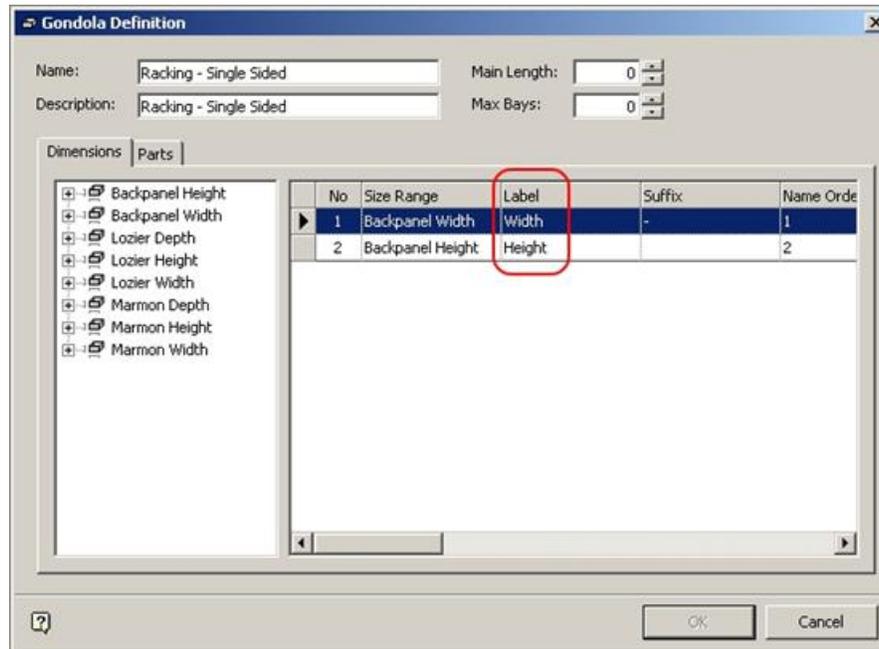
Once the gondola has been defined and saved, it can be placed into a drawing by means of the Add Gondola dialog box.



Add Gondola dialog box

Dimension Labels

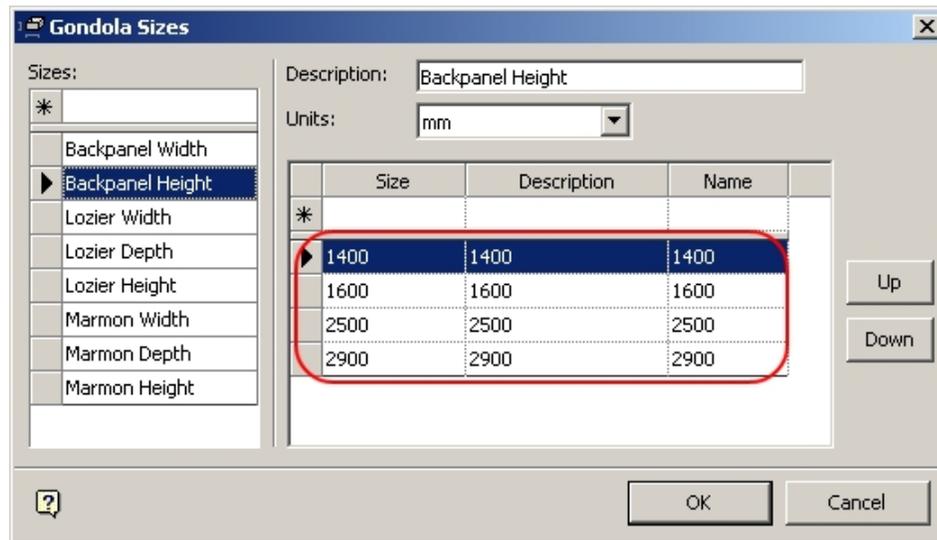
The **Width** (1) and **Height** (2) captions correspond to the Labels in the Dimensions tab.



Dimensions tab

Dimension Sizes

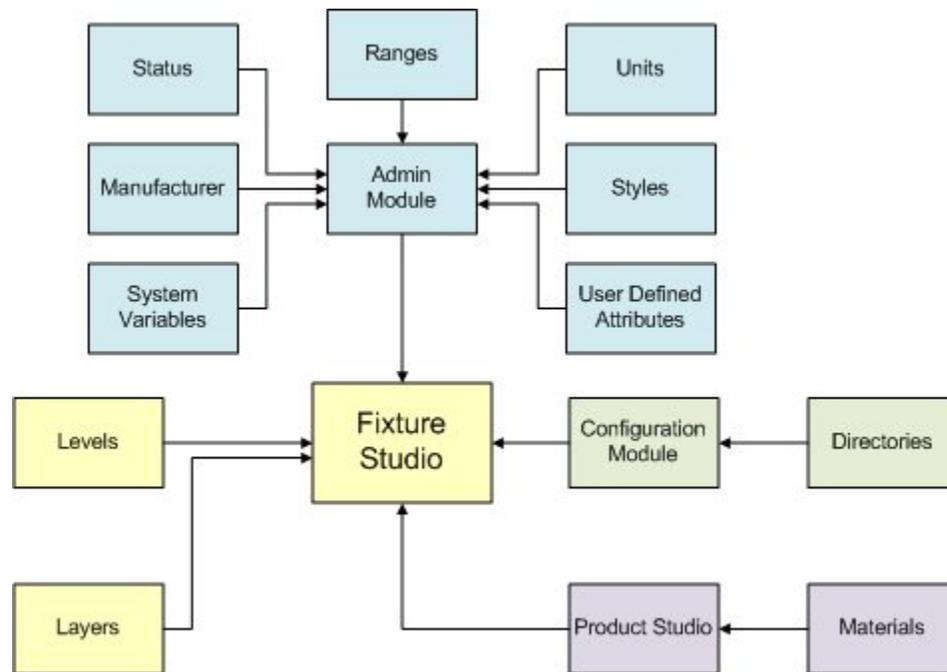
The **Dimensions (3)** and **(4)** correspond to the sizes in the Gondola Sizes dialog box.



Gondola Sizes dialog box

Relationships between Fixture Studio and other Modules

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



Administration Module

The following can be configured within the Administration module:

- List of Manufacturers
- List of Ranges
- Available statuses
- List of possible Styles
- List of default units
- User Defined Attributes

Configuration Module

Directory for graphics (dwg and 3DS) files can be configured within the Configuration Module.

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

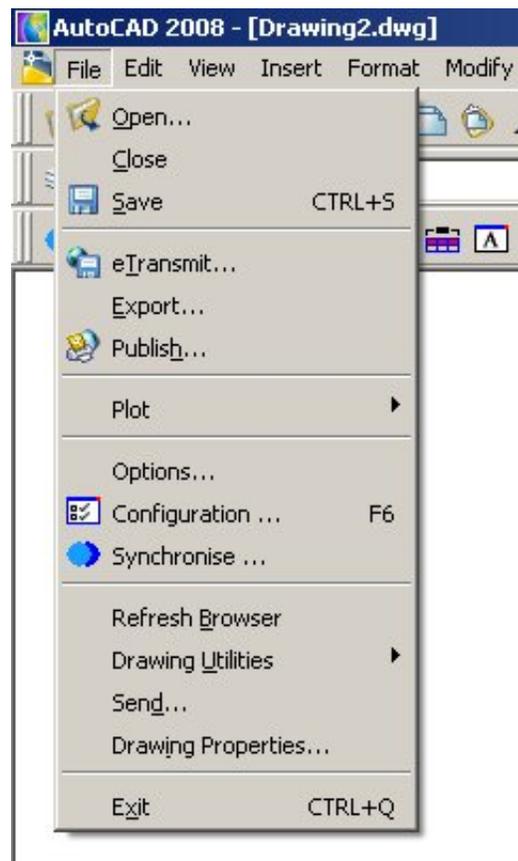
List of available materials – this affects the appearance of the graphics.

AutoCAD Menu Options

The File Menu

The **File** menu allows you to access to a number of general options.

Note: This section of the help file refers to the File menu associated with the 2008 version of AutoCAD. If you are using earlier versions of AutoCAD, the interface may be slightly different.



Planner - File menu

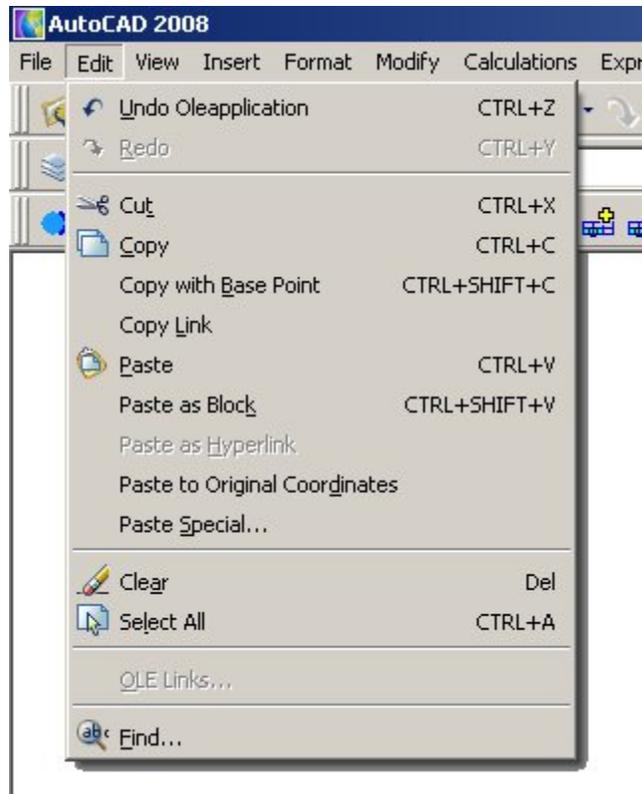
Functionality	Source	Comment
Open	Macro Space Management	Opens Store Manager

Functionality	Source	Comment
Close	Macro Space Management	Closes the current drawing
Save	Macro Space Management	Saves the current drawing
eTransmit	AutoCAD	See AutoCAD Help File for further information.
Export	AutoCAD	See AutoCAD Help File for further information.
Publish	AutoCAD	See AutoCAD Help File for further information.
Plot	AutoCAD	See AutoCAD Help File for further information.
Options	AutoCAD	See AutoCAD Help File for further information.
Configuration	Macro Space Management	Opens the Configuration Module
Synchronize	Macro Space Management	Opens the Synchronization Module
Refresh Browser	Macro Space Management	Refreshes the Object Browser with the latest information from the database
Drawing Utilities	AutoCAD	Calls varying AutoCAD utilities - see AutoCAD Help File for further information.
Send	AutoCAD	See AutoCAD Help File for further information.
Drawing Properties	AutoCAD	See AutoCAD Help File for further information.
Exit	Macro Space Management	Exits the Module

The Edit Menu

The **Edit** menu gives you access to the AutoCAD functionality.

Note: This section of the help file refers to the Edit menu associated with the 2008 version of AutoCAD. If you are using earlier versions of AutoCAD, the interface may be slightly different.



Planner - Edit menu

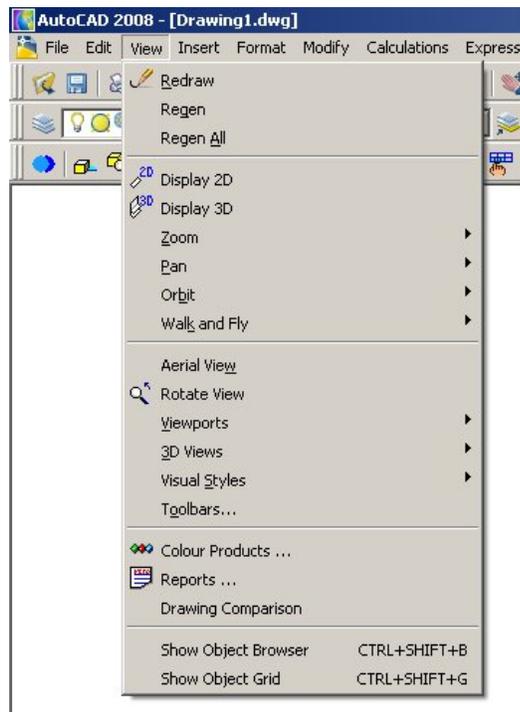
Functionality	Source	Comment
Undo	Macro Space Management	Allows the last command(s) to be undone. (The exact text will vary depending on what the last executed command was).
Redo	Macro Space Management	Allows the last command(s) to be undone. (The exact text will vary depending on what the last executed command was).
Cut	AutoCAD	See AutoCAD Help File for further information.
Copy	AutoCAD	See AutoCAD Help File for further information.
Copy with Base Point	AutoCAD	See AutoCAD Help File for further information.
Copy Link	AutoCAD	See AutoCAD Help File for further information.
Paste	AutoCAD	See AutoCAD Help File for further information.
Paste as Block	AutoCAD	See AutoCAD Help File for further information.
Paste as Hyperlink	AutoCAD	See AutoCAD Help File for further information.
Paste to Original Coordinates	AutoCAD	See AutoCAD Help File for further information.
Paste Special	AutoCAD	See AutoCAD Help File for further information.
Clear	AutoCAD	See AutoCAD Help File for further information.

Functionality	Source	Comment
Select All	AutoCAD	See AutoCAD Help File for further information.
OLE Links	AutoCAD	See AutoCAD Help File for further information.
Find	AutoCAD	See AutoCAD Help File for further information.

The View Menu

The **View** menu provides the following options:

Note: This section of the help file refers to the View menu associated with the 2008 version of AutoCAD. If you are using earlier versions of AutoCAD, the interface may be slightly different.



Planner - View Menu

Functionality	Source	Comment
Redraw	AutoCAD	See AutoCAD Help File for further information.
Regen	AutoCAD	See AutoCAD Help File for further information.
Regen All	AutoCAD	See AutoCAD Help File for further information.

Functionality	Source	Comment
Display 2D	Macro Space Management	Displays the drawing in Macro Space Management 2D Mode. (The blocks must have been configured accordingly).
Display 3D	Macro Space Management	Displays the drawing in Macro Space Management 3D Mode. (The blocks must have been configured accordingly).
Zoom	AutoCAD	See AutoCAD Help File for further information.
Pan	AutoCAD	See AutoCAD Help File for further information.
Orbit	AutoCAD	See AutoCAD Help File for further information.
Walk and Fly	AutoCAD	See AutoCAD Help File for further information.
Aerial view	AutoCAD	See AutoCAD Help File for further information.
Rotate View	AutoCAD	See AutoCAD Help File for further information.
Viewports	AutoCAD	See AutoCAD Help File for further information.
3D views	AutoCAD	See AutoCAD Help File for further information.
Visual Styles	AutoCAD	See AutoCAD Help File for further information.
Toolbars	AutoCAD	See AutoCAD Help File for further information.
color Products	Macro Space Management	Allows products be to colored according to their general type.
Reports	Macro Space Management	Allows simple reports to be produced on objects within the current drawing.
Drawing Comparison	Macro Space Management	Allows one drawing to be compared with another.
Show (Hide) Object Browser	Macro Space Management	Will show or hide the Object Browser.
Show (Hide) Object Grid	Macro Space Management	Will show or hide the Object Grid.

The Insert Menu

The **Insert** menu provides ways to attach further information to the store plan.

Note: This section of the help file refers to the Insert menu associated with the 2008 version of AutoCAD. If you are using earlier versions of AutoCAD, the interface may be slightly different.



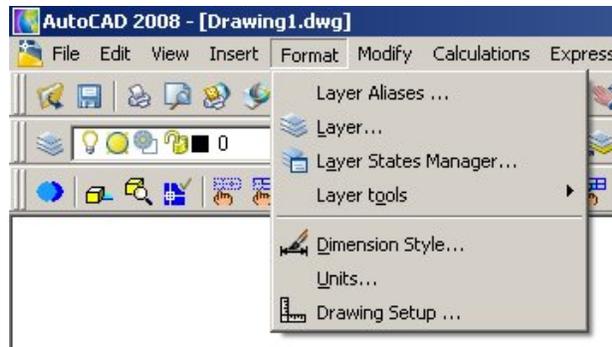
Planner - Insert Menu

Functionality	Source	Comment
Block	AutoCAD	See AutoCAD Help File for further information.
External References	AutoCAD	See AutoCAD Help File for further information.
DWF Underlay	AutoCAD	See AutoCAD Help File for further information.
Add Architectural Plan	Macro Space Management	X-Refs an architectural plan to the currently active drawing
Add Title Block	AutoCAD	See AutoCAD Help File for further information.
Update Title Block	AutoCAD	See AutoCAD Help File for further information.
Bay Numbering	Macro Space Management	Add numbering to the fixtures in the store plan

The Format Menu

The **Format** menu allows you to control the layers, dimensions and units associated with the drawing.

Note: This section of the help file refers to the Format menu associated with the 2008 version of AutoCAD. If you are using earlier versions of AutoCAD, the interface may be slightly different.



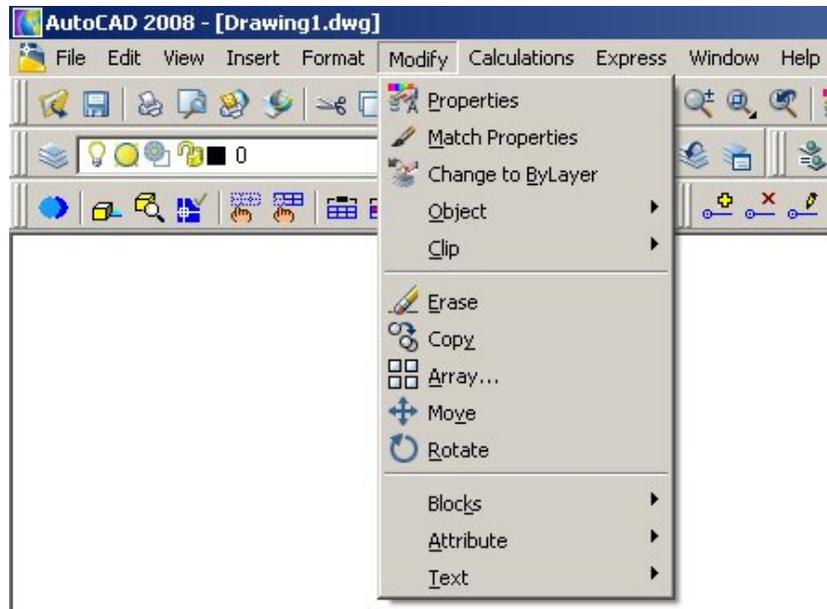
Planner - Format Menu

Functionality	Source	Comment
Layer Aliases	Macro Space Management & AutoCAD	Calls a mixture of Macro Space Management and AutoCAD functionality.
Layer	AutoCAD	See AutoCAD Help File for further information.
Layer States Manager	AutoCAD	See AutoCAD Help File for further information.
Layer Tools	AutoCAD	See AutoCAD Help File for further information.
Dimension Style	AutoCAD	See AutoCAD Help File for further information.
Units	AutoCAD	See AutoCAD Help File for further information.
Drawing Set Up	Macro Space Management	Allow the user to select the scales for Paper space.

The Modify Menu

The **Modify** menu allows you to modify objects in the store plan.

Note: This section of the help file refers to the Modify menu associated with the 2008 version of AutoCAD. If you are using earlier versions of AutoCAD, the interface may be slightly different.

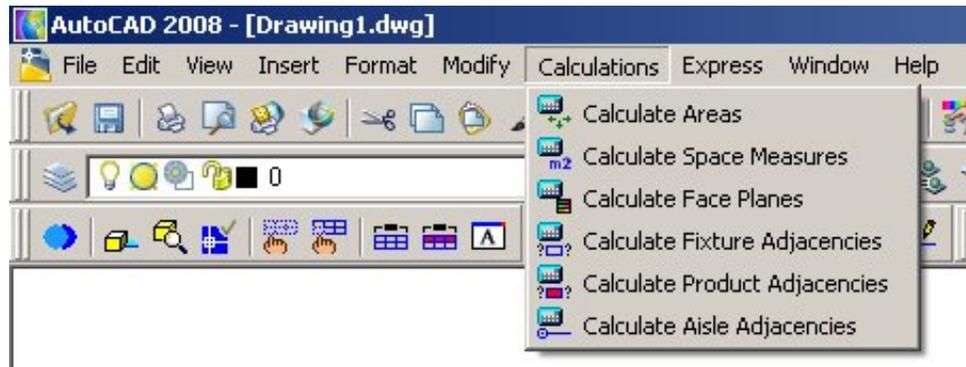


Planner - Modify Menu

Functionality	Source	Comment
Properties	AutoCAD	See AutoCAD Help File for further information.
Match Properties	AutoCAD	See AutoCAD Help File for further information.
Change to ByLayer	AutoCAD	See AutoCAD Help File for further information.
Object	AutoCAD	See AutoCAD Help File for further information.
Clip	AutoCAD	See AutoCAD Help File for further information.
Erase	AutoCAD	See AutoCAD Help File for further information.
Copy	AutoCAD	See AutoCAD Help File for further information.
Array	AutoCAD	See AutoCAD Help File for further information.
Move	AutoCAD	See AutoCAD Help File for further information.
Rotate	AutoCAD	See AutoCAD Help File for further information.
Blocks	Macro Space Management & AutoCAD	Calls a mixture of Macro Space Management and AutoCAD functionality.
Attributes	Macro Space Management	Allow the user to select the scales for Paper space.
Text	Macro Space Management & AutoCAD	Calls a mixture of Macro Space Management and AutoCAD functionality.

The Calculations Menu

The **Calculations** menu enables you to initiate various calculations that enter data into the central Macro Space Management database.

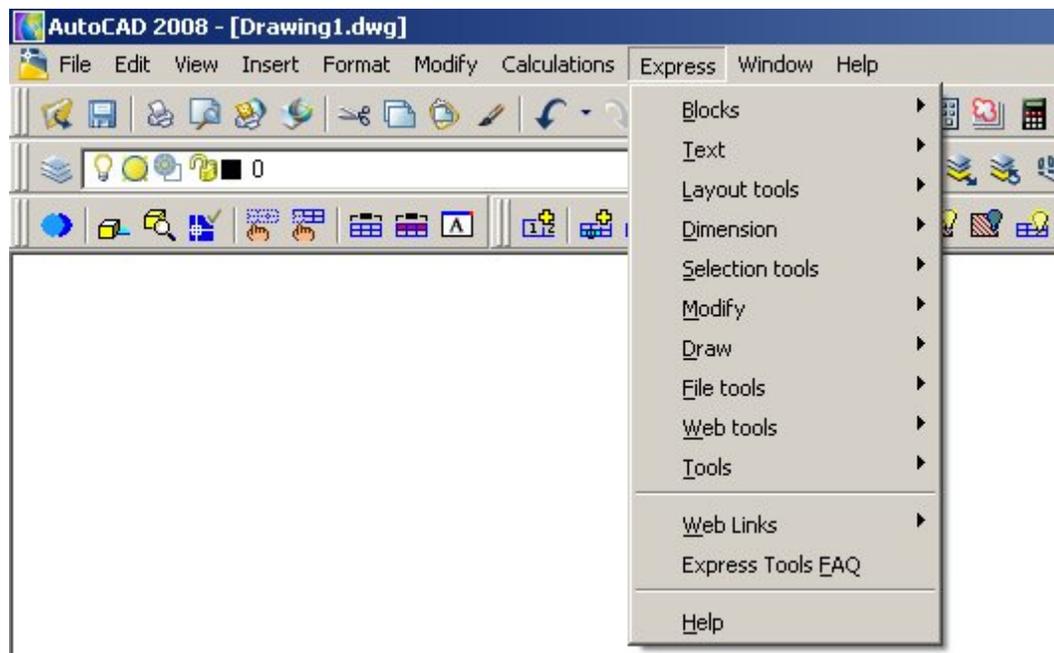


Planner - Calculations Menu

The Express Menu

The Express menu provides quick access to commonly used AutoCAD functionality.

Note: This section of the help file refers to the Express menu associated with the 2008 version of AutoCAD. If you are using earlier versions of AutoCAD, the interface may be slightly different.

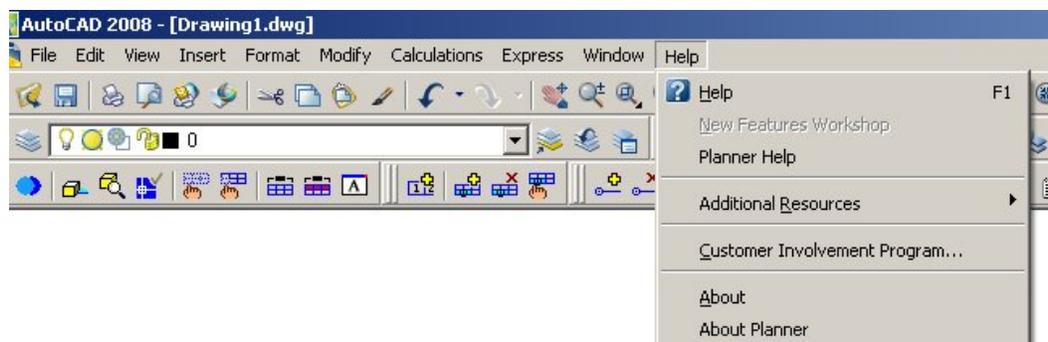


Planner - Express Menu

The Help Menu

The **Help** menu contains a number of options that access Help and Assistance.

Note: This section of the help file refers to the Help menu associated with the 2008 version of AutoCAD. If you are using earlier versions of AutoCAD, the interface may be slightly different.

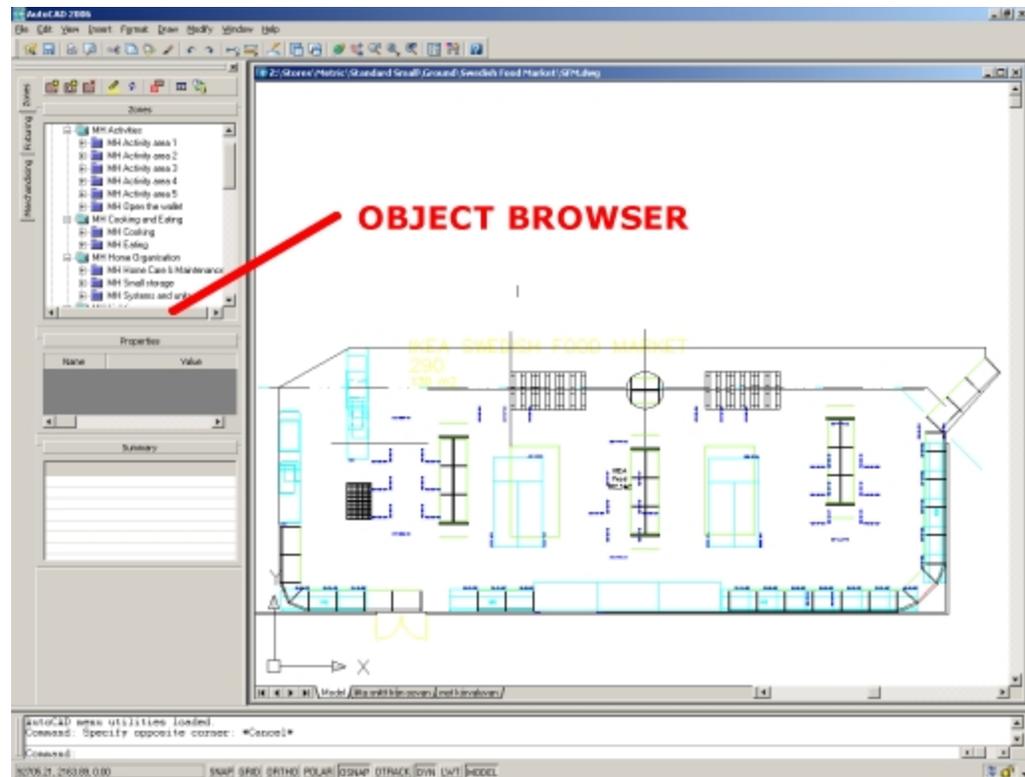


Planner - Help Menu

Functionality	Source	Comment
AutoCAD Help	AutoCAD	See AutoCAD Help File for further information.
New Features Workshop	AutoCAD	Not yet available
Planner Help	Macro Space Management	Calls Macro Space Management's Help File for this module.
Additional Resources	AutoCAD	See AutoCAD Help File for further information.
Customer Involvement Program	AutoCAD	See AutoCAD Help File for further information.
About	AutoCAD	Gives the AutoCAD version.
About Planner	Macro Space Management	Gives the Planner version

Object Browser

The Object Browser is a separate window. It offers Macro Space Management users a single point of access to the Zone, Fixture, Product, and Planogram libraries and the Key Performance Indicators (KPIs). It is available in the Planner and Merchandiser environments and is used to control the various activities within these environments.



Object Browser

The Object Browser is made up of four tabs positioned on the left-hand side. The four tabs are as follows:

- Zones – this includes tools for drawing boundaries to represent departments etc. in to the store plan.
- Fixturing – this includes tools for adding and removing fixtures, fittings and gondolas etc in to the store plan.
- Merchandising – this includes tools for adding and removing product categories and planograms etc. in to the store plan.
- KPI – this includes tools for displaying Key Performance Indicators (KPIs) on the store plan.

	Planner Environment	Merchandiser Environment
Zones	Yes	Yes
Fixturing	Yes	Yes
Merchandising	Yes	Yes
KPIs	No	Yes

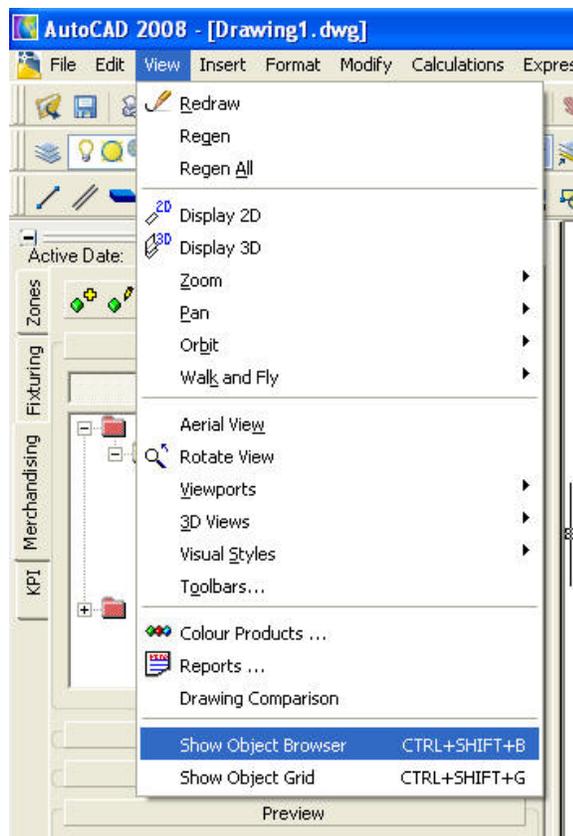
Turning off and accessing the Object Browser

The Object Browser can be turned off by clicking on the close button (x) in the upper right corner.



Object Browser - Turning Off

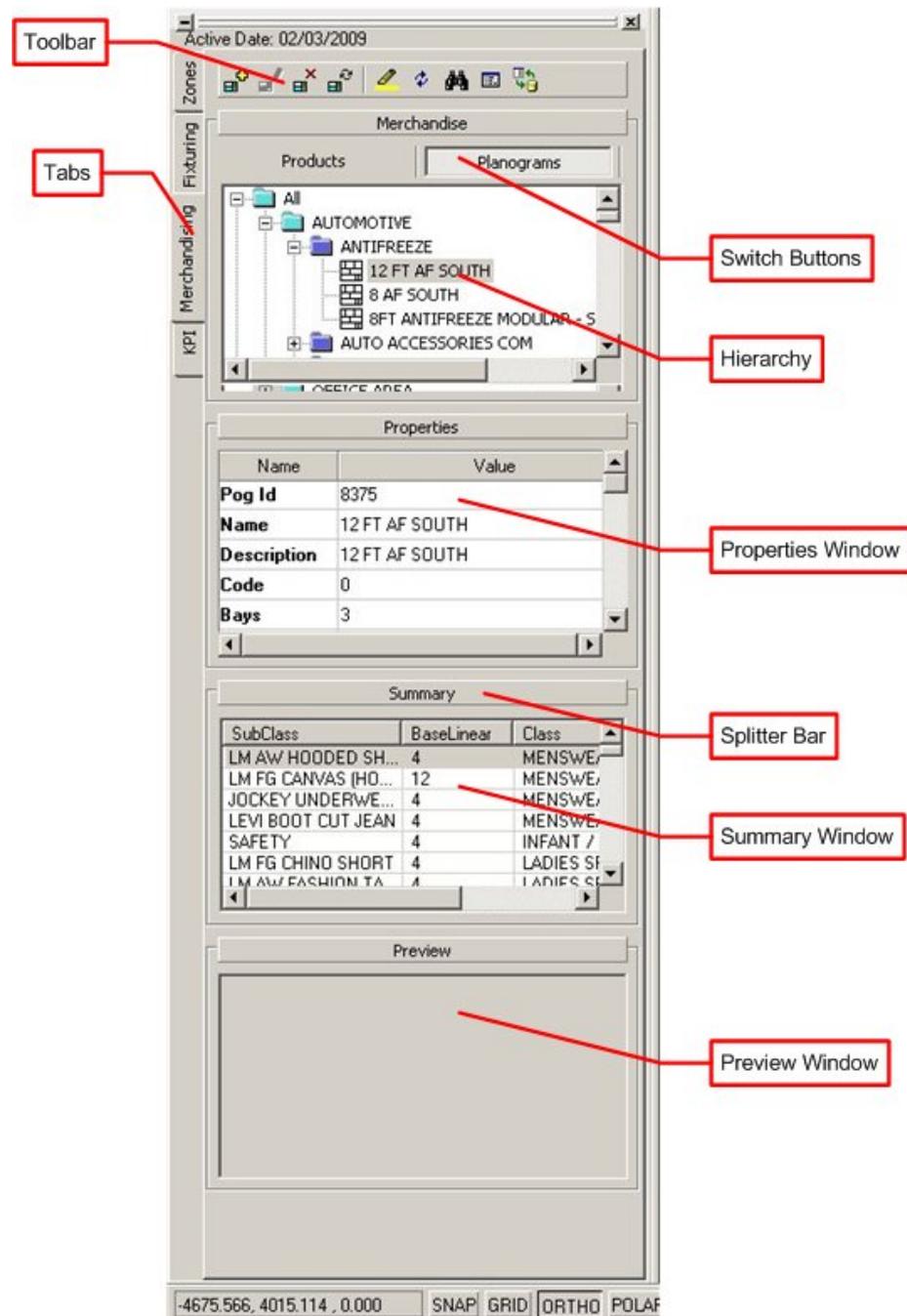
The Object Browser can be opened by selecting the Show Object Browser option on the View drop down menu.



Show Object Browser

Parts of the Object Browser

The **Object Browser** has a series of parts. These are described below.



Parts of Object Browser

- **Tabs** allow the Object Browser to be switched from one function to another. The Object Browser can be used to add, edit and delete Zones, Fixtures, and Merchandise. Each tab has the same general components.

- A **Toolbar** at the top allows various functions to be accessed. These typically allow adding, editing and deleting of the required objects, together with searching, filtering and refreshing options.
- The Fixturing and Merchandising tabs have **Switch Buttons**. In Fixturing, you can click on one or other button to select Fixturing or Gondola operations. In Merchandising you can use the buttons to switch between planograms and products.
- Each tab has a series of Information Windows. These vary from each tab but can include:
 - Hierarchical trees: these give information on what objects can be added, edited or deleted in the drawing. In the Zones Tab for example, the hierarchical tree allows you to select different types of zones.
 - The Properties window gives details of the selected object.
 - The Summary window gives totals of types of objects placed in the drawing.
 - The Preview window shows a low resolution image of the selected object. In the Fixturing tab for example, this would be an image of the selected fixture.
- The Information windows can be opened or closed by clicking the **Splitter Bars**.

Refresh Option

All the toolbars in the various Object Browser tabs contain a **Refresh** button.



Refresh button

When clicked, it updates the hierarchies in that particular tab with the latest information from the central Macro Space Management database. Once the hierarchies have been refreshed, the latest information from the database can be incorporated in the drawing. For example, once the refresh button has been used in the Fixturing tab, the hierarchies contain the most recent fixture and gondola information for insertion into the drawing. This allows updating these definitions in Fixture Studio then making them immediately available within Merchandiser.

Note: In this instance, if the drawing is already open then fixtures already placed in the drawing will not use any changes loaded in the refresh operation until the drawing is closed and re-opened.

However, all new fixtures and gondolas added to the open drawing will use the new data.

Opening and Closing the Object Browser

The Object Browser is open by default the first time you log in to Macro Space Management.

There are two ways to close the Object Browser.

- Press the button at the top right of the Object Browser.
- Right click the double bar on the Object Browser and click the **Close** option.

There are two ways to open the Object Browser.

- Use the View – Show Object Browser menu option.
- Use <Ctrl> + <Shift> + B.

Moving the Object Browser

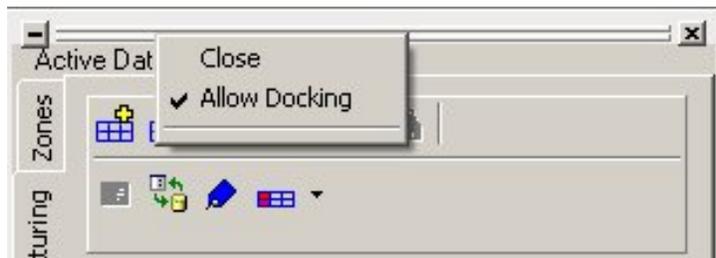
The Object browser behaves differently in the Planner and Merchandiser environments. In the Planner environment it can be docked on any side of the screen or can be floated. In the Merchandiser environment it can be docked on any side of the screen, but not floated.

Planner

By default the Object Browser is docked on the left-hand side of the screen the first time you log in to the Planner module. The Object Browser can be moved to dock on any of the four sides of the screen. To move the Object Browser, click and hold the double bar on the Object Browser and drag to it to a new position.

The Object Browser can also be un-docked or float on the screen. This can be done in two ways.

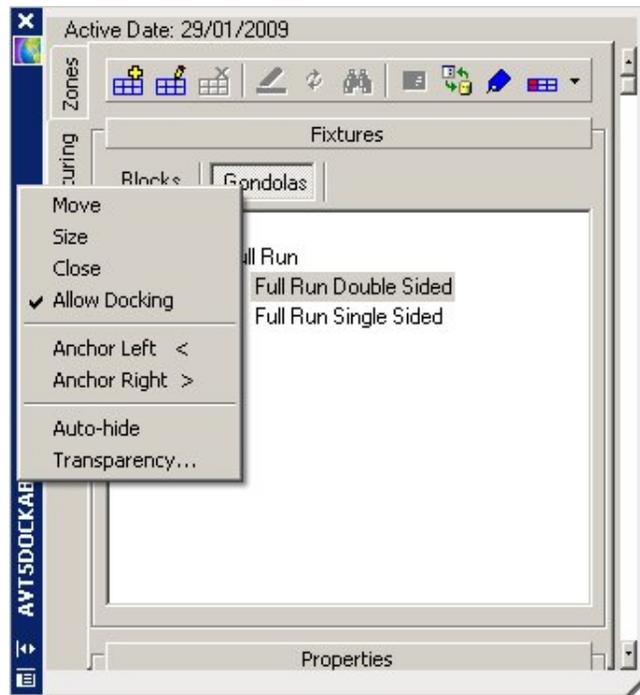
- Right click the double bar on the Object Browser and deselect the **Allow Docking** option.
- Click and hold the double bar on the Object Browser and drag it to the middle of the screen.



Object Browser - Docking

When the Object browser is floating it can be minimized to save space while still leaving it visible on the screen.

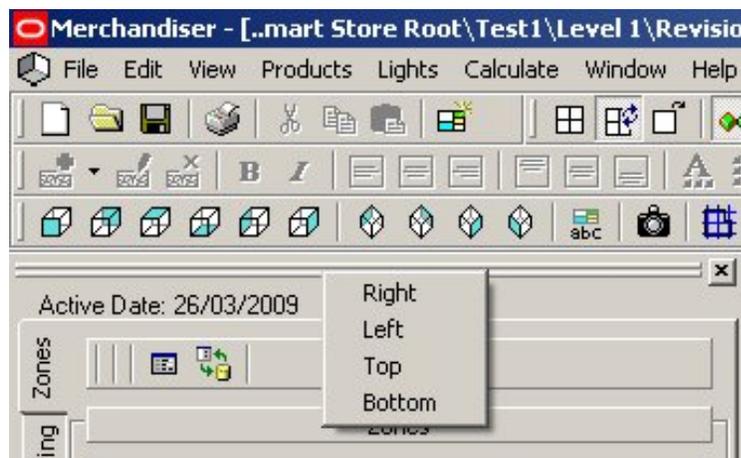
The Object Browser can be re-docked by right clicking the title bar on the left and selecting **Allow Docking**, then drag the Object Browser to the side of the screen where you want to dock it.



Object Browser - Docking

Merchandiser

By default the Object Browser is docked on the left-hand side of the screen the first time you log in to the Merchandiser module. The Object Browser can be moved to dock on any of the four sides of the screen. To do this, right click on the double bar at the top and select the required location.



Object Browser - Merchandiser

Anchoring the Object Browser - Planner Module

The Object Browser can also be anchored on the left or right side of the AutoCAD window. By anchoring the Object Browser it remains on screen, but in a minimized state,

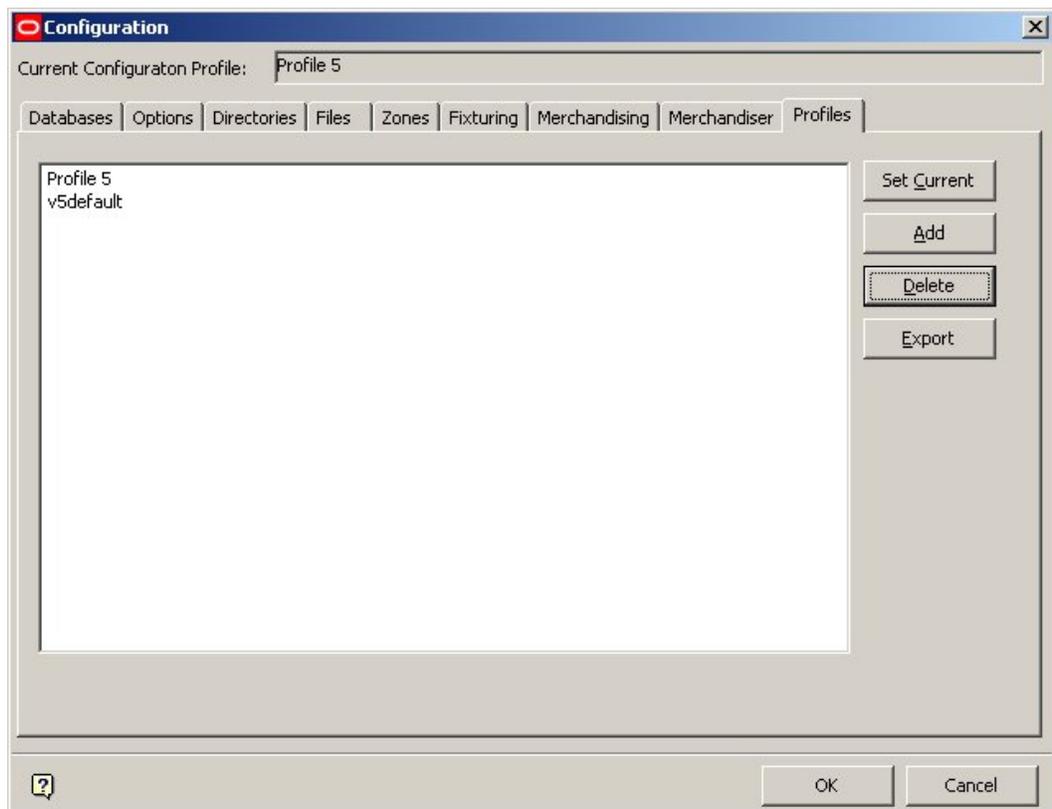
which allows you to bring it back up when needed. This also helps to increase the amount of visible drawing area. This can be done from the right click menu.

Adjusting the Object Browser

The width of the Object Browser can be adjusted by moving the mouse cursor to the right-hand edge and dragging the mouse to the desired width. The windows displayed on the Object Browser can be minimized by clicking on the title buttons at the top of each window.

Saving Settings for the Object Browser

Settings for the Object Browser are saved by Macro Space Management so if closed, it reopens in the same state as it was closed. Individual settings are saved to the profile currently selected in the Profiles tab of the Configuration module.



Object Browser - Configuration

The Object Browser opens at the same width and height and in the same tab as when it was closed, if the user profile remains selected. The application retains the appearance of the hierarchy displayed and the information window from the last session.

Note: If you have not used that machine or profile before, then default settings will be used. Similarly, if you logs onto another machine, then the settings used will be the same as when you last used that machine.

Zones Tab

Macro Space Management uses Zones to assign space to different departments and non-sales areas. The zone types available to your business are customized within the Administration module. Zones can also be used to help you select fixtures or merchandise.

The Zones tab is divided into four sections:

- The Toolbar – provides controls to add, modify, and delete zones from a store plan.
- The Zones Window – shows a hierarchy of available zones.
- The Properties Window – when a Zone is selected from the hierarchy, its properties are visible in this window.
- The Summary Window – shows details of the zones based on the open store plan.

Zones Tab Toolbar

Zones are 'read-only' in the Merchandiser environment. Accordingly, the majority of the functionality that is present when the Object Browser is used in the Planner module is absent.

Planner

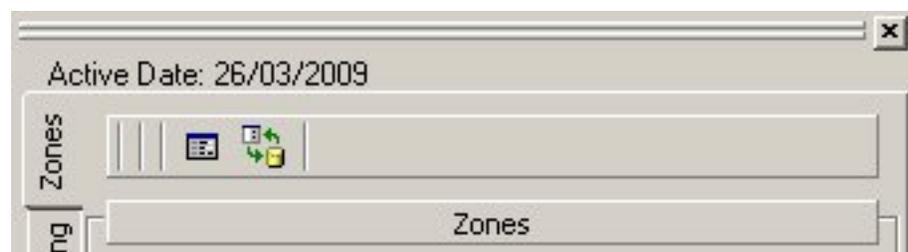


Planner - Zones toolbar

Icon	Action
	Add Zone
	Add Hole
	Delete all Zones of that type
	Delete selected Zone or Hole
	Highlight Zone in Store Plan
	Highlight Selected zone in Tree
	Detect Clashes
	Options

Icon	Action
	Refresh
	Hatch
	Remove Hatch

Merchandiser



Merchandiser - Zones toolbar

Icon	Action
	Options
	Refresh

The Hierarchy, Properties and Summary Windows

The Hierarchy Window

The hierarchy window displays the zone hierarchy. This hierarchy is defined in the Administration module and shows all the zones that can be added to a store plan. The hierarchy can be expanded using the plus control next to each item on the hierarchy. It can also be collapsed by using the minus control next to each item.

The Properties Window

The Properties window displays information for the zone that has been selected in the zone hierarchy. The content of this window is customizable by an Oracle Retail consultant.

The Summary Window

The Summary window displays information on the zones placed in the open store plan. The content of this window is customizable by an Oracle Retail consultant. If set up to do so, this window can also show the zones drawn in the prototype store plan and their areas. This allows you to see what zones should be added to the new store plan and the target areas.

Fixturing Tab

The **Fixturing** tab allows you to add fixtures, fittings, gondolas, and other equipments to the store plan. Fixtures and fittings can be placed one at a time if required. Fixtures, fittings, and other equipments that are placed one at a time are known as blocks.

Gondolas are a collection of fixtures and fittings that have been designed to be placed in a specific layout. Gondolas can place the correct number of fixtures and fittings for a given size by using a simple control.

The Fixturing tab is divided in to 5 parts as follows:

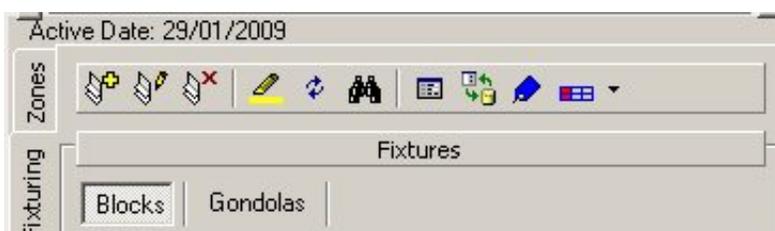
- The toolbar – provides controls that allow you to add, edit, and delete Fixtures and gondolas.
- The Fixtures window – shows a hierarchy of available blocks and gondolas.
- The Properties window – after selecting a block from the hierarchy, this window shows the details for the selected block. The content of this window is customizable by an Oracle Retail consultant.
- The Summary window – shows details of equipment placed based on the active store plan. The content of this window is customizable by an Oracle Retail consultant.
- The Preview window – shows a sample picture of the block selected in the block hierarchy.

Note: In Merchandiser, fixtures can only be added by dragging and dropping from the hierarchy. The Add icon is not active.

Fixturing Tab Toolbar

The **Fixturing** tab toolbar in the Object Browser enables you to control all aspects of adding, editing, and deleting fixtures and gondolas within the Planner and Merchandiser environments.

Clicking on the Switch Buttons determines whether the Fixturing or Gondola options are active.



Fixturing Toolbar

Icon	Action
	Add Fixture
	Edit Fixture in Fixture Studio

Icon	Action
	Delete Fixture
	Highlight Fixture in drawing
	Highlight selected item in tree
	Find
	Options
	Refresh
	Show Attributes
	Promotional Fixtures

Note: When Fixtures are added, the Add Fixture dialog box (present in the Planner Environment) does not appear in Merchandiser.

Gondola Toolbar



Gondola Toolbar

Icon	Action
	Add Gondola
	Edit Gondola in Fixture Studio
	Delete gondola option not available
	Highlight Gondola in drawing option not available
	Highlight selected item in tree option not available
	Find Option not available
	Options not available

Icon	Action
	Refresh
	Show Attributes
	Promotional Fixtures

Note: The graphics for fixtures are created in the Planner environment.

When editing fixtures, ensure that the information held in the central Macro Space Management database continues to reflect the actual details of the graphic. If information in the central database does not match the graphic, there could be problems with alignment in the Virtual Reality environment, adjacency calculations, etc.

The Hierarchy, Properties, Summary and Preview Windows

The Hierarchy Window

The Hierarchy window displays both the block and the gondola hierarchies. To toggle between the hierarchies use the Blocks or Gondolas buttons respectively. The hierarchies are defined in the Fixture Studio environment and show all the fixtures and gondolas that can be added to a store plan.

The hierarchy can be expanded using the plus control next to each item on the hierarchy. It can also be collapsed by using the minus control next to each item. An item in the hierarchy can be highlighted by clicking on the name of the block or gondola.

The Properties Window

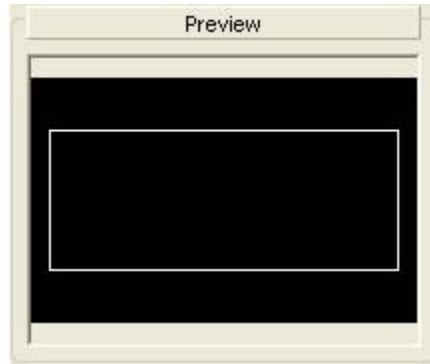
The Properties window displays information for the block that has been selected in the blocks hierarchy. The content of this window is customizable by an Oracle Retail consultant.

The Summary Window

The Summary window displays information on the blocks placed in the open store plan. The content of this window is customizable by an Oracle Retail consultant.

The Preview Window

The Preview window shows a sample picture of the block selected in the block hierarchy.



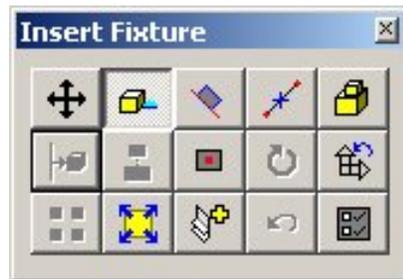
Preview Window

The preview is not updated when the Gondola hierarchy is displayed.

Placing Fixtures and Gondolas

Placing Fixtures

To add a block to the store plan, highlight the required block in the hierarchy. You can then either press the Add Fixture button on the tool bar, or drag and drop the fixture to the store plan drawing. When a block is added the Insert fixture dialog opens.



Insert Fixture

These controls allow blocks to be positioned accurately in the store plan. Pressing the left mouse button places the block in an initial position. Pressing the right mouse button or the <Esc> key finishes placing the block.

Placing Fixtures - Merchandiser Module

To add a block to the store plan, highlight the required block in the hierarchy then drag and drop the fixture to the store plan drawing. The Insert Fixture dialog box does not appear in Merchandiser.

Placing Gondolas

To add a gondola to the store plan:

1. Select the required gondola in the hierarchy.
2. Press the Add Gondola button on the toolbar or drag and drop the gondola to the store plan drawing. You are prompted to select a start point for the gondola.
3. Press the left mouse button and the Gondola Run dialog box opens.

Gondola Run dialog box

4. Select the dimensions of the blocks to use in the gondola.
5. Select the **Row** details of the gondola.
6. Select the **Start Position** of the gondola.
7. Once the options are set, press the **OK** button. The dialog box closes and places all the blocks required for the gondola run in to the store plan.

Merchandising Tab

The **Merchandising** tab allows you to add product placeholders (products), and planogram placeholders (planograms) to the store plan. A product is any category, sub-category, or SKU that is included in the product hierarchy, i.e. any level in the hierarchy. Planograms are also organized in to a hierarchy of planogram groups. However, you can only place planograms in to the store plan. Planogram groups cannot be placed. Placeholders are markers that can be placed on to fixtures to indicate the product category, sub-category or planogram that will be used.

The Merchandising tab is divided in to 5 parts:

- The toolbar – provides controls that allow products and planograms to be added, edited, and deleted
- The Merchandise window – shows a hierarchy of available products and planograms
- The Properties window – shows details for the product that has been selected in the product hierarchy. Similarly it will show details of a planogram that has been selected in the planogram hierarchy. The content of this window is customizable by an Oracle Retail consultant.
- The Summary window – shows details of products and planograms placed based on the active store plan. The content of this window is customizable by an Oracle Retail consultant

- The Preview window – shows a sample picture of product display styles selected in the product hierarchy

Note: Product display styles are only available in Merchandiser.

Note: In Merchandiser, products and planograms can only be added by dragging and dropping from the hierarchy. The Add icon is not active

Merchandising Tab Toolbar

The **Merchandising** tab Toolbar in the Object Browser enables you to control all aspects of adding, editing, and deleting products and planograms within the Planner and Merchandiser environments.

Clicking on the Switch Buttons will determine whether the Product or Planogram options are active.

Products Toolbar



Products Toolbar

Icon	Action
	Add Product
	Edit Definition
	Delete Product
	Reverse Product Placement Direction
	Highlight in Store
	Highlight in Tree
	Find

Icon	Action
	Options
	Refresh

Planogram Toolbar



Icon	Action
	Add Planogram
	Edit Definition
	Delete Planogram
	Reverse Planogram Placement Direction
	Highlight in Store
	Highlight in Tree
	Find
	Properties
	Refresh

The Hierarchy, Properties, Summary and Preview Windows

The Hierarchy Window

The hierarchy window displays the product and the planogram hierarchies. To toggle between the hierarchies use the Products or Planograms buttons.

The Product hierarchy is defined in the Product Studio module and shows all the products that can be added to a store plan. The Planogram hierarchy can be configured in Merchandiser and shows all the planograms that can be added to a store plan. The hierarchies can be expanded using the plus control next to each item on the hierarchy. It can also be collapsed by using the minus control next to each item.

An item in the hierarchy can be highlighted by clicking on the name of the product or planogram.

The Properties Window

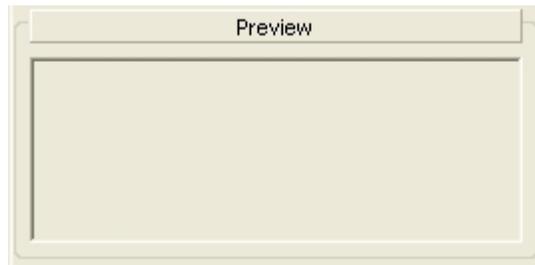
The Properties window displays information for the merchandise that has been selected in the products or planograms hierarchy. The content of this window is customizable by an Oracle Retail consultant.

The Summary Window

The Summary window displays information on the merchandise placed in the open store plan. The content of this window is customizable by an Oracle Retail consultant. The window can show the merchandise allocated per zone in the prototype store plan. This allows you to see what merchandise should be added to the new store plan.

The Preview Window

The Preview Window is blank for both Products and Planograms.



KPI Tab

The **KPIs** tab of the Object Browser allows you to see performance of a store plan at a glance. The available KPIs can be customized and more KPIs can be added either by an Oracle Retail consultant or a trained Macro Space Management super user.

The KPI tab is divided into 4 parts:

- The toolbar – provides controls that allow KPIs to be run and modified.
- The Indicators window – shows a hierarchy of available KPIs.
- The Layers window – shows a list of KPIs that have been run against the store plan.
- The Legend window – shows the color bands associated with a KPI that has been run.

When the tab is first opened the Layers and Legend windows are blank. These windows are populated when a KPI is run.

KPI Tab Toolbar

The **KPI** tab toolbars in the Object Browser are used to add and edit KPIs and to edit the list of KPIs selected for display in the ViewPorts.

Upper Toolbar



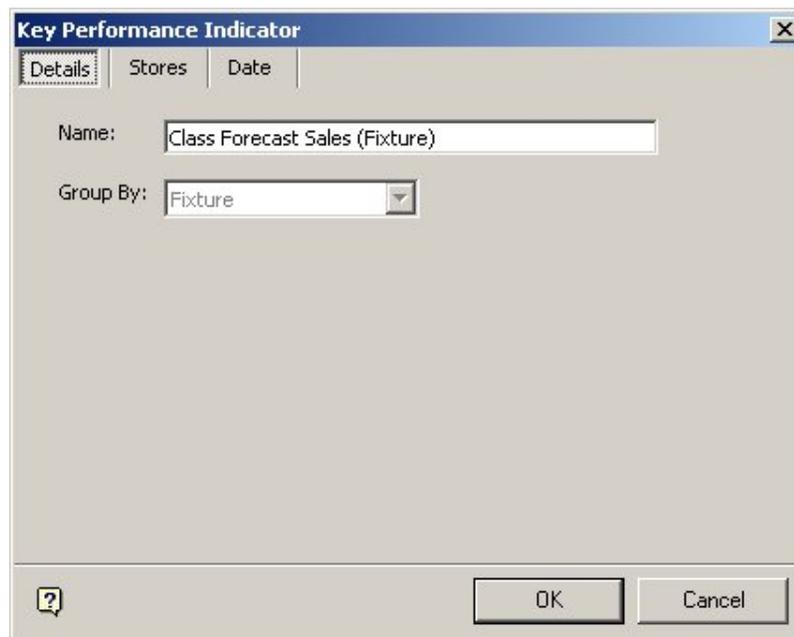
KPI toolbar

Icon	Action
	Edit Indicator
	Edit Themes
	Add KPI

Running a KPI

To run a KPI:

1. Select the KPI that is to be run from the hierarchy of Indicators that are shown on the Object Browser.
2. Press the **Add KPI** button to open the Key Performance Indicator dialog for the highlighted KPI.



KPI - Details tab

The Details tab shows the name of the selected KPI in the **Name** field.

3. Edit the name if required. This will only change the name that is shown in the Layers section of the KPI tab on the Object Browser and not the name of the KPI definition saved in the database.
The Group By field is automatically populated with the KPI Type that was saved in the KPI definition.
4. Press the **OK** button to close the dialog and apply the KPI to the store plan drawing. The **Layers** frame shows the KPI that has just been run and the legend is updated with the Color Theme for the KPI.

Turning Off KPIs

KPIs can be turned off in the store plan view by clear the check box next to the KPI name in the Layers pane on the Object Browser. When no KPIs are checked the store plan view returns to the normal view mode.

Deleting KPIs

The **Delete KPI** button removes the highlighted KPI from the list in the Layers pane. If this is the KPI being displayed in the store plan view, then the results are cleared and the view returns to normal, that is, with no KPI applied.

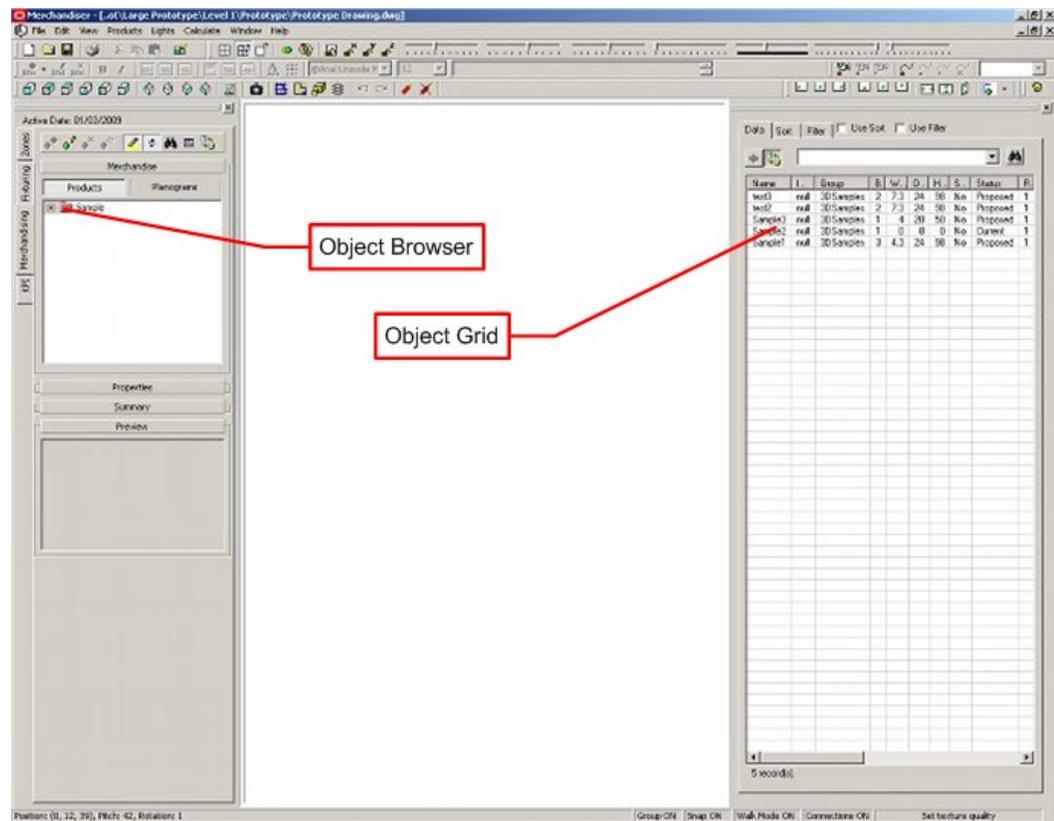
Note: The Delete KPI only stops the results from being displayed. The KPI definition is still saved in the database. If the KPI needs to be run again, this can be done by selecting it within the KPI hierarchy again and clicking the Add KPI button.

Object Grid

The Object Grid provides an alternative to select the lower level objects in the Object Browser, including the following:

- Zones
- Fixtures
- Products
- Planograms

The Object Grid is used in conjunction with the hierarchies in the Object Browser and is available in both the Planner and Merchandiser environments.



Object Grid

Information selected from a hierarchy in the Object Browser appears in the form of a list in the Object Grid. The higher the level selected in a hierarchy in the Object Browser, more items will appear in the list on the Object Grid. For example selecting 'Food' in the Merchandising tab would result in all food product (or planograms) appear in the Object Grid. Selecting 'Fruit' would restrict the information displayed to just fruit items.

Note: The number of items displayed is set to a default maximum of 250 items. This is to prevent the Object Grid having to filter and sort thousands of items each time these operations are carried out. This default value can be changed - consult Oracle Technical Support for further information.

You can then sort and filter the data to find the objects. Once the required object has been found it can be added to the drawing by dragging the item from the grid. In the Planner environment, it can also be added by clicking the **Add** button. (The Add button is disabled in Merchandiser). When an object is added from the grid, that row in the grid includes values and colors.

The object grid contains three tabs:

- Data - displays the actual object data.
- Sort - allows you to sort the data by multiple columns.
- Filter - allows you to filter the data by multiple columns.

The type of information that is displayed in the grid (as well as the sort and filter panels) is determined by the active panel in the object browser (that is, zones, fixturing, products or planograms).

The data is automatically filtered by clicking on a node in the object browser tree; for instance, clicking on a product sub-category shows all SKUs that are related that sub-category. This automatic filtering affects the filters on the Filter tab, which you can then modify.

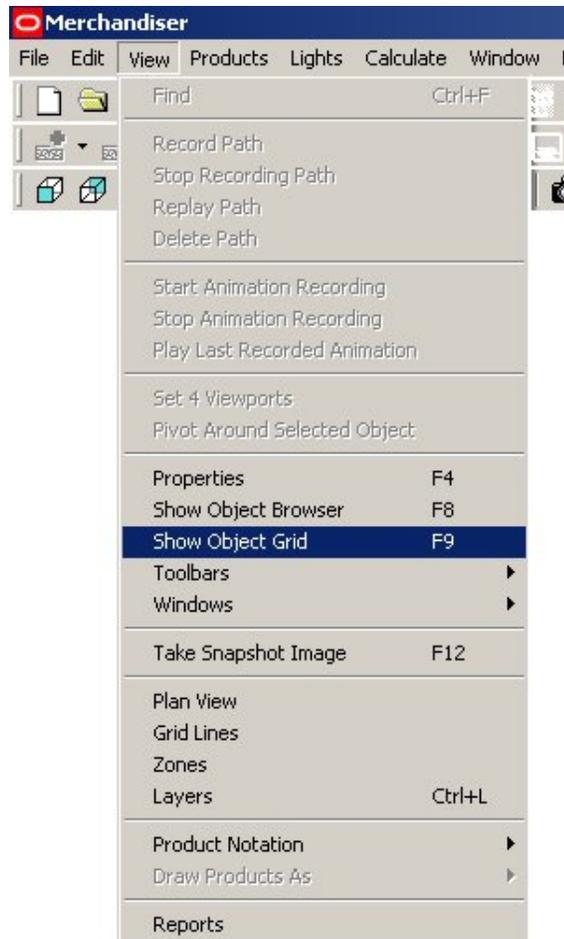
This automatic filtering may only work for the following levels (dependant on the custom SQL):

- Product Department (BA)
- Product Category (RA)
- Product Sub-Category (PA)
- Planogram Group Parent
- Fixture Group Parent
- Zone Group Parent

It is also possible to trigger a change in the list of displayed products, if a different zone is selected. In this way, the application can restrict which products are placed in which zone.

Showing and Hiding the Object Grid

The **Object Grid** display can be turned On or Off using the Object Grid option on the View pull down menu in both the Planner and Merchandiser environments.



Object Grid - show

Display can also be toggled On or Off by use of the F9 key.

Opening and Closing the Object Grid

There are two ways to open the Object Grid:

- Use the View – Show Object Grid menu option.
- Use <Ctrl> +<Shift> +<G> keyboard shortcut.

There are two ways to close the Object Grid:

- Press the button at the top right of the Object Grid.
- Right click the double bar on the Object Grid and click the Close option.

Moving the Object Grid

The Object browser behaves differently in the Planner and Merchandiser environments. In the Planner environment it can be docked on any side of the screen. It can also be

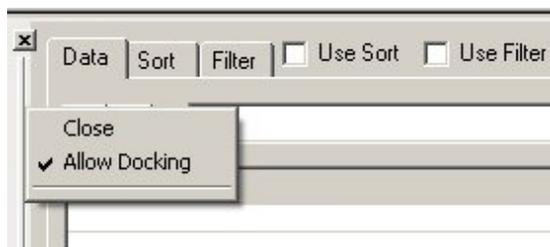
floated. In the Merchandiser environment it can be docked on any side of the screen, but not floated.

Planner

By default, the Object Grid is docked on the bottom of the screen the first time you log in to Macro Space Management. The Object Grid can be moved to dock on any of the four sides of the screen. To move the Object Grid click and hold the double bar on the Object Grid and drag to it to a new position.

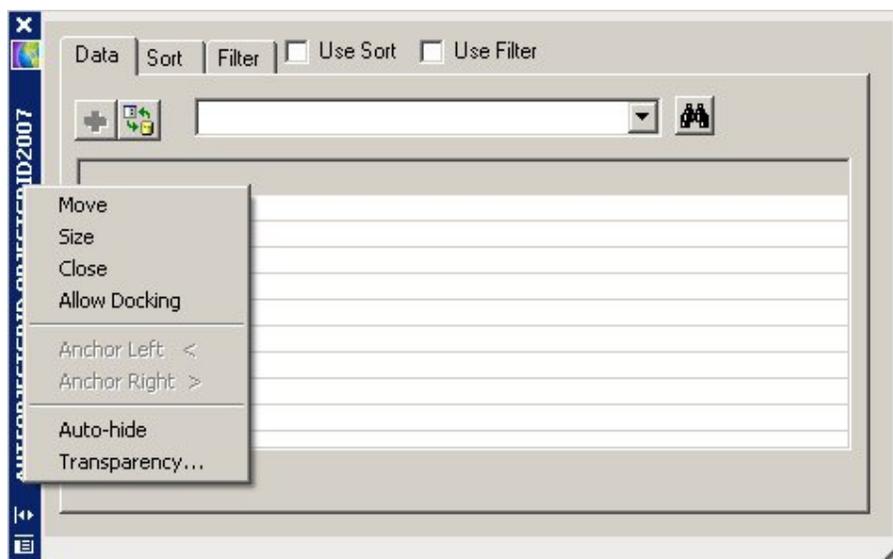
The Object Grid can also be un-docked or float on the screen. This can be done in two ways.

- Right click the double bar on the Object Grid and clear the Allow Docking option.
- Click and hold the double bar on the Object Grid and drag it to the middle of the screen.



Object Grid - Docking

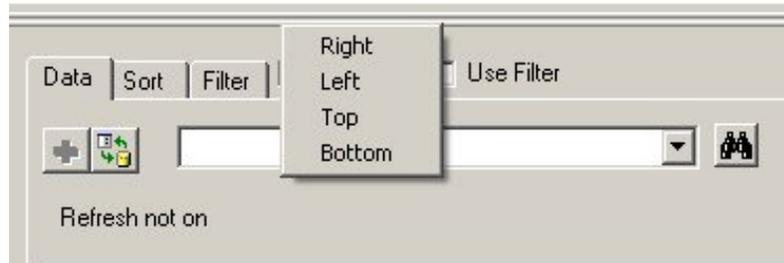
When the Object Grid is floating, it can be minimized to save space while still leaving it visible on the screen. The Object Grid can be re-docked by right clicking the title bar on the left and selecting Allow Docking. Then drag the Object Grid to the side of the screen where you want to dock it.



Object Grid – Docking Dialog Box

Merchandiser

By default, the Object Browser is docked on the left-hand side of the screen the first time you log in to the Planner module. The Object Browser can be moved to dock on any of the four sides of the screen. To do this, right click on the double bar and select the required location.

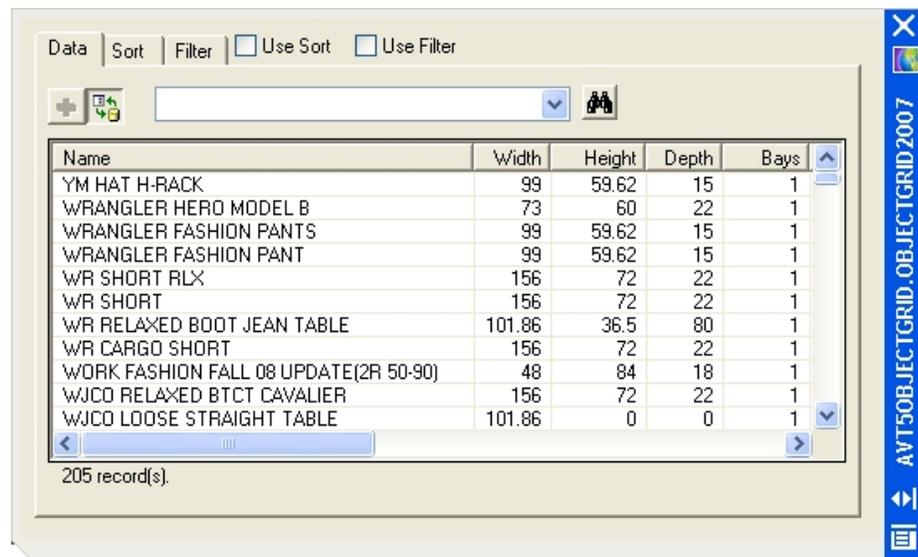


Object Grid in Merchandiser

Anchoring the Object Grid

(Planner Module only)

The Object Grid can be anchored on the left or right side of the AutoCAD window. By anchoring the Object Grid it remains on screen, but in a minimized state, which allows you to bring it back up when needed. This also helps to increase the amount of visible drawing area.



Object Grid - Anchoring

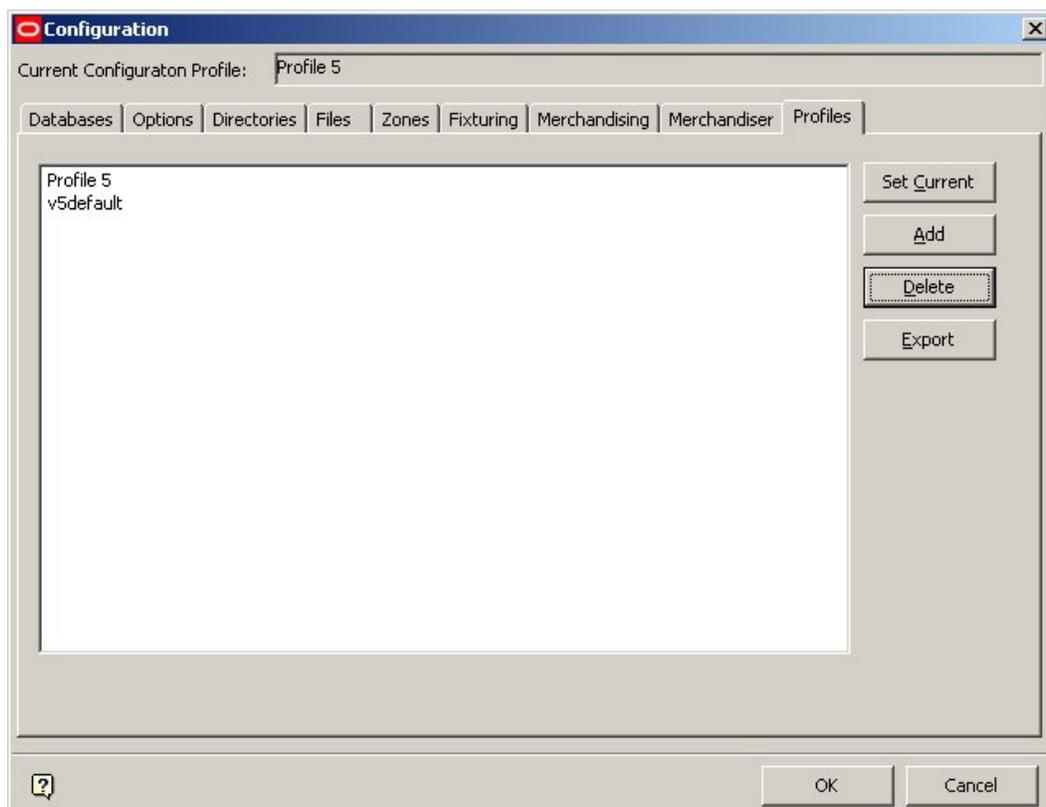
To anchor the Object Grid press the minus sign on the bottom right. To restore the Object Grid to normal, press the Auto-hide button on the title bar of the Object Grid.

Adjusting the Object Grid

The width of the Object Grid can be adjusted by moving the mouse cursor to the right side edge and dragging the mouse to the desired width. Windows displayed on the Object Grid can be minimized by clicking the title buttons at the top of each window.

Saving Settings for the Object Grid

Settings for the **Object Grid** are saved by Macro Space Management. When reopened, it opens in the same state as it was closed by an individual user. Individual settings are saved to the profile currently selected in the Profiles Tab of the Configuration Module.



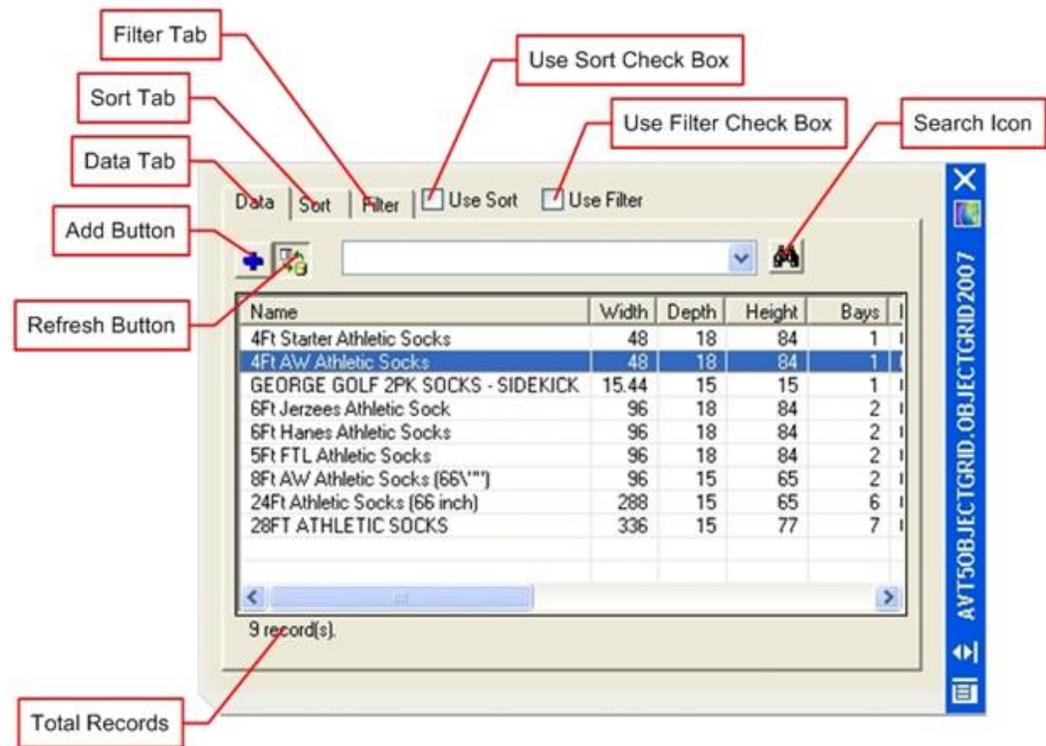
Object Grid - Configure

When the user profile is selected, the Object Grid opens at the same state and tab as when it was closed. By default, the Object Grid opens at the Data tab. (For example, if closed in the Sort Tab, it reopens in the Data Tab). When reopened, the columns that were visible and hidden within the Object Grid Data panel when the module was closed, remain in the same state.

Note: If you have not used a machine with your profile on it, then default settings will be used. Similarly, if you log onto another machine, then the settings used will be the same as when you last used that machine.

Using the Object Grid

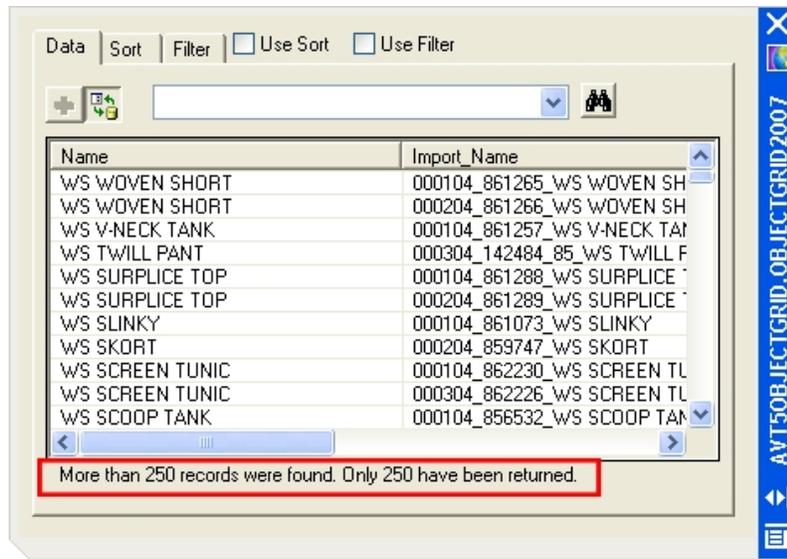
The **Object Grid** has a series of controls which enable you to sort and filter data.



Object Grid - Parts

- The **Refresh** button can be toggled on and off. It determines whether data in the Object Grid will be updated if a different point is selected in the current hierarchy in the object Browser.
- The **Add** button allows you to add the currently selected object to the drawing.
- The **Data** tab allows you to see the list of currently selected data.
- The **Sort** tab allows you to set the selected sort sequences into ascending or descending.
- The **Filter** tab allows you to filter the currently selected data.
- The **Use Sort** checkbox enables you to toggle sorting On and Off.
- The **Use Filter** checkbox allows you to toggle filtering On and Off.
- The **Search** icon allows you to search for specific text strings.
- The Total Records displayed are located at the bottom of the screen.

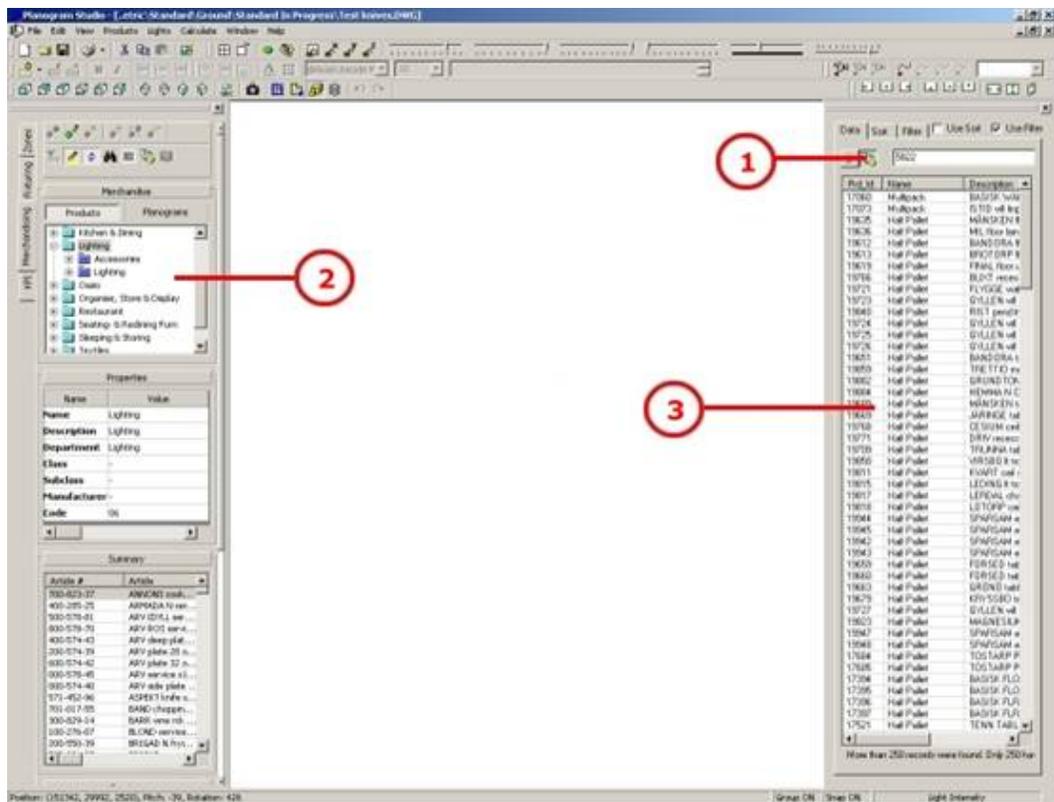
If there are more records than the maximum specified in the software, a warning message appears at the bottom of the Object Grid as follows.



Object Grid - Error

Selecting Data to Load into the Object Grid

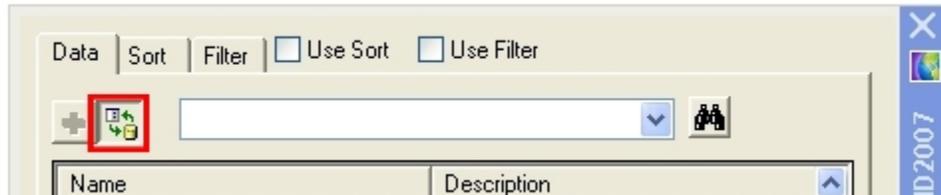
Data is selected from the currently selected hierarchy in the Object Browser. For example, if the products hierarchy is selected in the merchandising tab, then the selected list of products are loaded into the object grid.



Object Grid – Selecting Data

- Refresh button on Object Grid
- Object Browser
- Object Grid

To select a list of products ensure the **Refresh** button on the Object Grid is selected.



Object Grid - Refresh

Select an appropriate node from the hierarchy in the Object Browser, the appropriate list of information appears in the Object Grid. If there are more than the permitted number of entries a warning appears at the base of the Object Grid.

Selecting Objects

You can select fixtures or planograms from the Object Grid.

- **Fixtures**

To populate the Object Grid with Fixtures, from the Fixtures tab on the Object Browser, select a fixture group. The Object Grid populates with all fixtures that have been associated with that group.

- **Gondolas**

Gondolas cannot be selected using the Object Grid.

- **Products**

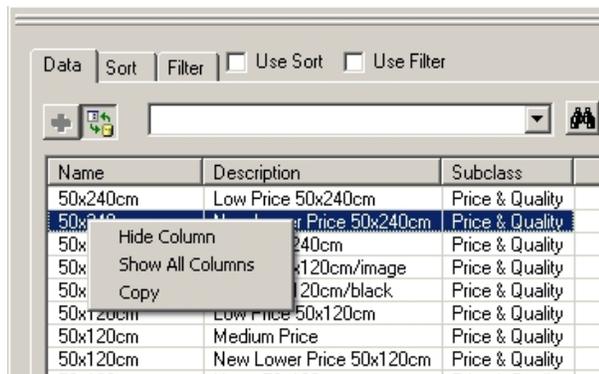
As most merchandising is done using planograms, the Object Grid populates with planograms even if a product is selected (down to sub-class level). That list of planograms is then displayed in the Object Grid.

- **Planograms**

To populate the Object Grid with planograms, select a planogram group in the Object Browser. All planograms associated with that group are then displayed in the Object Grid.

Hiding and Changing Order of Columns

Columns can be hidden by positioning the mouse cursor over the column you wish to hide, then right click to bring up the pop-up menu.



Object Grid - Columns

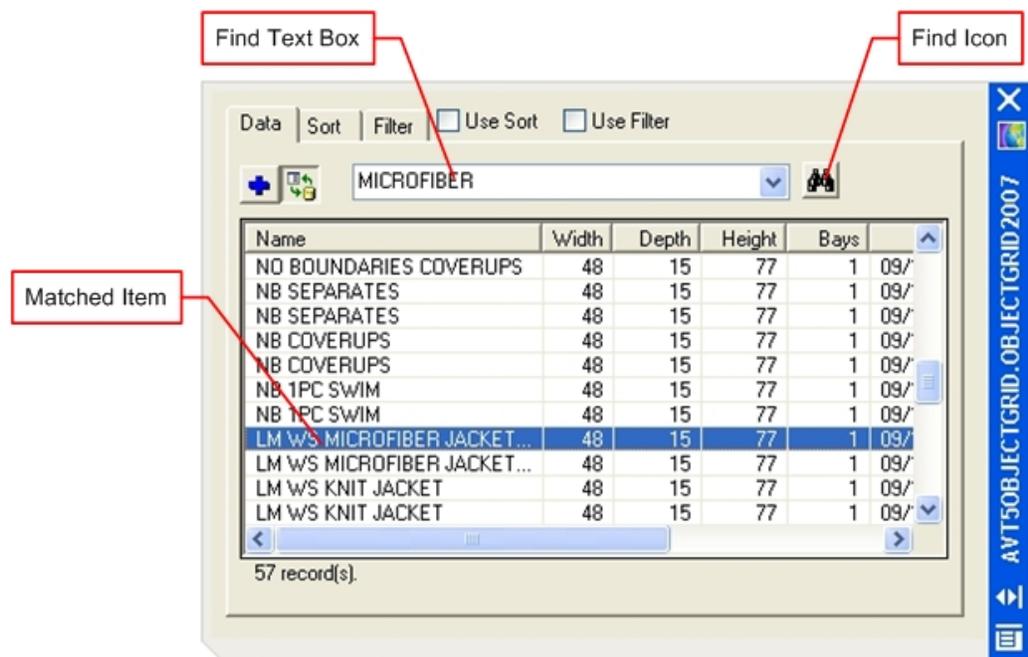
The same pop-up menu can be used to show all columns and copy data from the cell last clicked on by the mouse.

You can reorder the column position in the Grid by positioning the mouse cursor over the required column heading, hold the left mouse key down and drag it to its new position. Release the mouse key in its new position.

Searching Data

To search for data:

1. Select the Data Tab.



2. Type a text string into the Find Text box. The Search String can include wild cards. The drop down list in the Find Edit Box displays the last 10 search criteria, allowing you to revert back to previous searches. You can use <Ctrl + X>, <Ctrl + C> and <Ctrl +

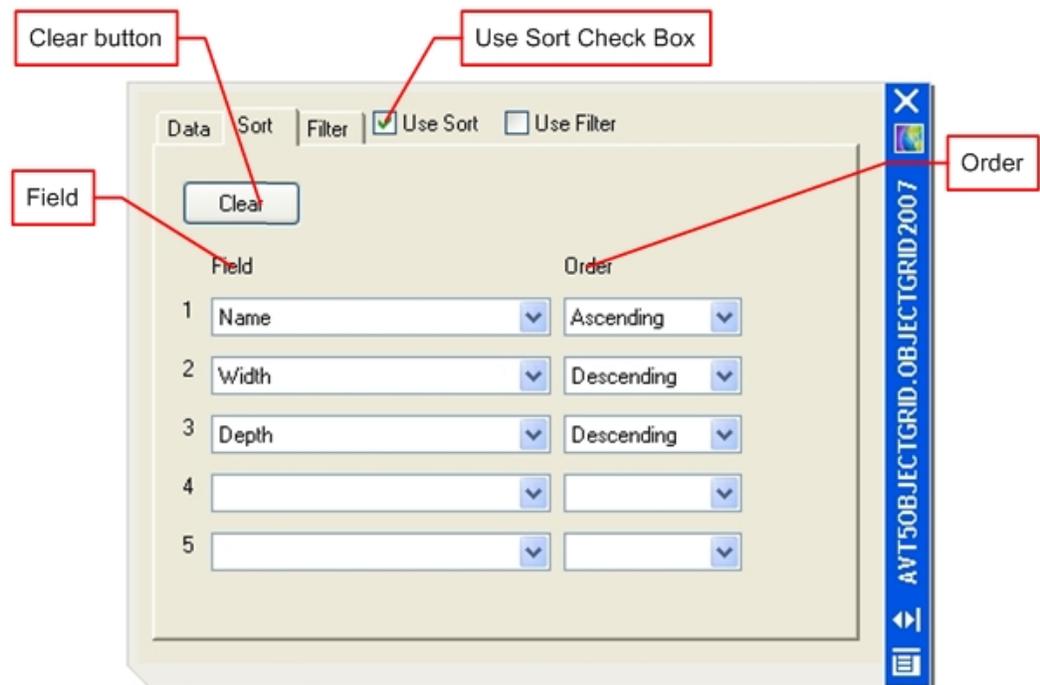
V> to cut, copy and paste data between the Windows clipboard and the Find Edit Box.

3. Click the Find icon, the first matched item appears highlighted in the list of objects. Successive clicks on the Search icon brings up further matches. When the list of matches has been exhausted (or if there are no matches) then a warning message appears.

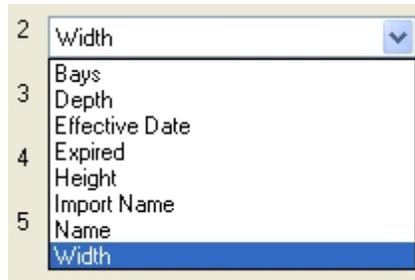


Sorting Data

Data can be sorted in the Sort Tab.



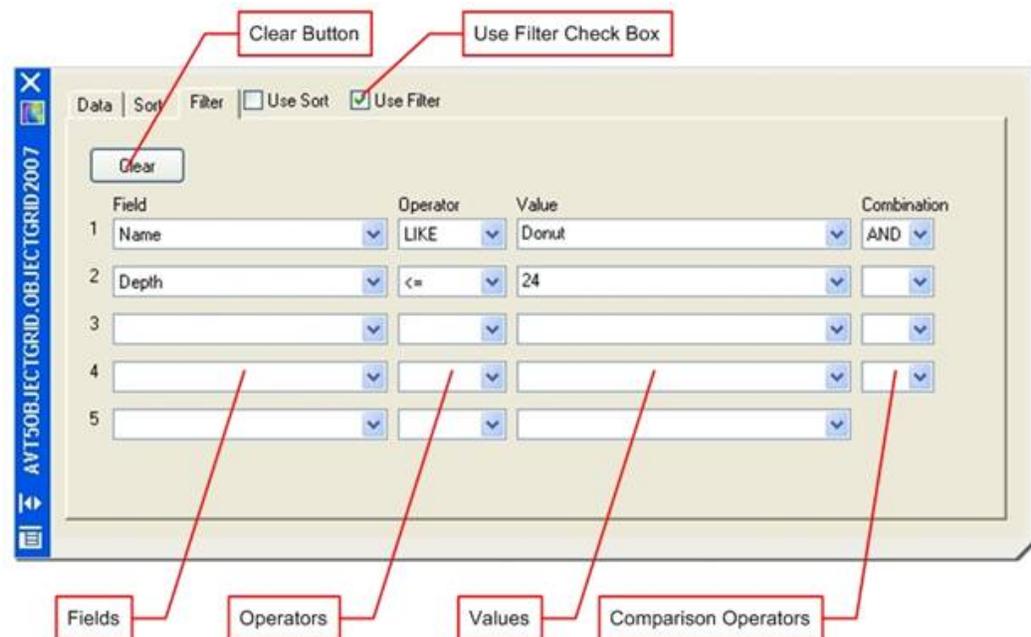
For Sorting to be enabled, the Use Sort checkbox must be enabled. If you sort the data in the data tab by clicking on a column header, this automatically clears the Use Sort checkbox. Select the required Field from the drop down list. The sequence fields that can be ordered are set by the drop down list.



Settings can be removed by clicking the Clear button.

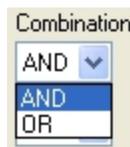
Filtering Data

Data can be filtered from the Filter Tab.



For Filtering to be enabled the **Use Filter** checkbox must be selected. The Field to be filtered can be selected from a drop down list. The available fields include those from any columns that have been hidden.

The operator to be used for filtering is also selected from a drop down list. Operators include =, <>, <, <=, >, >=, IN, NOT IN, LIKE, NOT LIKE. A value can be typed into the Value text box. The Combination drop down list can be set to AND or OR.

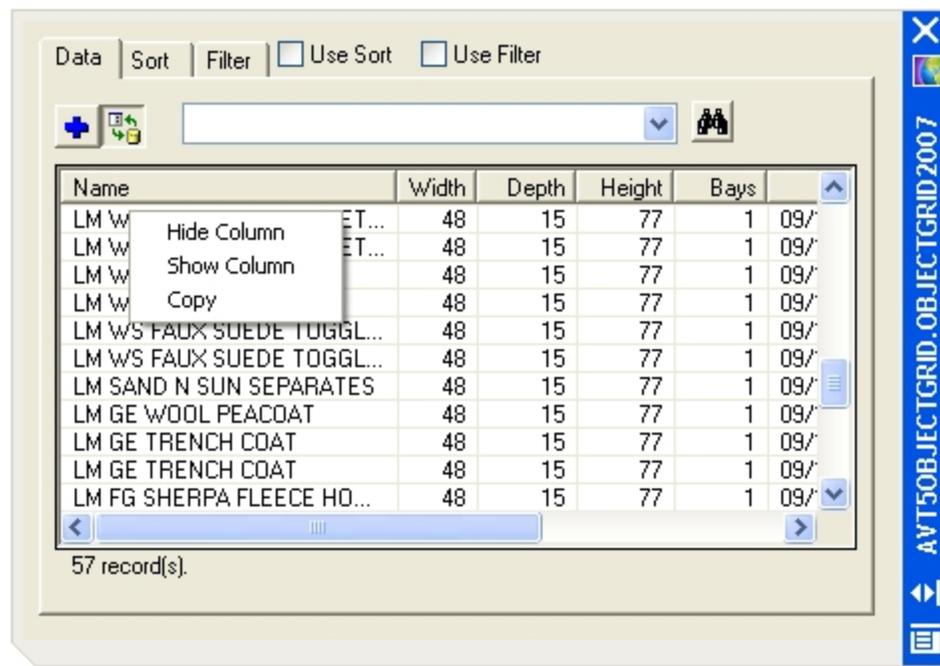


AND means all the conditions specified have to be satisfied for a filtered object to be selected.

OR means that if either of the conditions specified met are specified, a filtered object is selected.

Working with Columns

There are two actions that can be carried out with columns in the Object Grid; showing/hiding column and changing the column order. Columns can be hidden by positioning the mouse cursor over the column you wish to hide, then right clicking to bring up a pop-up menu.



The same pop-up menu can be used to show all columns and to copy data from the cell last clicked on by the mouse. The column order can be changed by positioning the mouse cursor over the required column heading, holding down the left mouse key and dragging it to its new position. Releasing the mouse key leaves it in its new position.

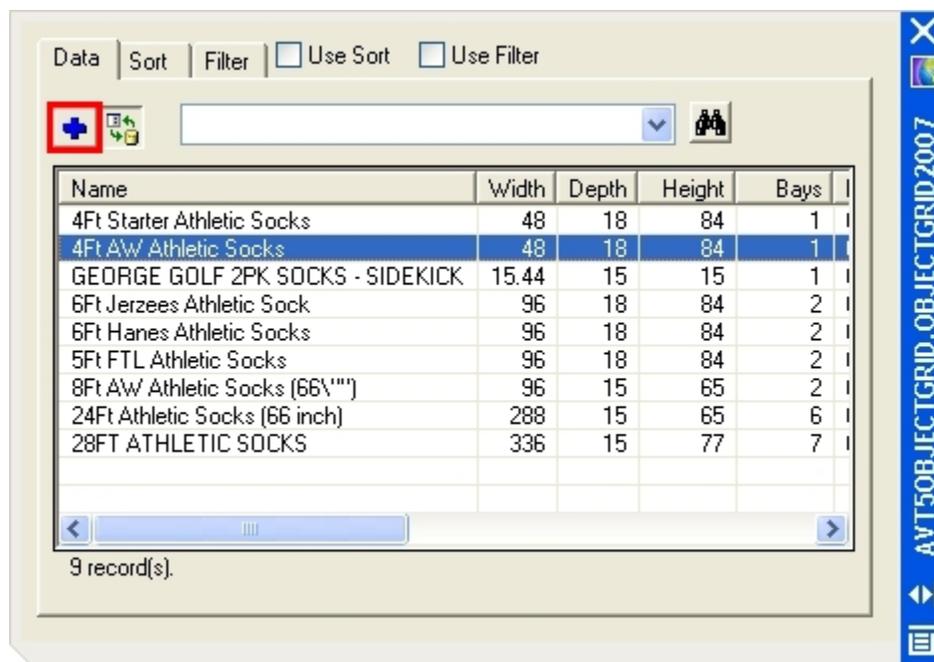
Adding an Object to the Drawing

Planner Environment

Objects can be added from the Object grid into the drawing in two ways:

- 'dragging and dropping'
- **Add** button in the Data Tab.

The Add button is enabled if an object is selected by clicking on it.



Only a single object can be added to the drawing at one time.

Merchandiser

Objects can only be added by 'dragging and dropping' as the Add button is disabled in this environment. Only a single object can be added to the drawing at one time.

Technicalities

Operators

Operators are used to select or filter data.

Valid operators that can be used depend on the type of data to be filtered.

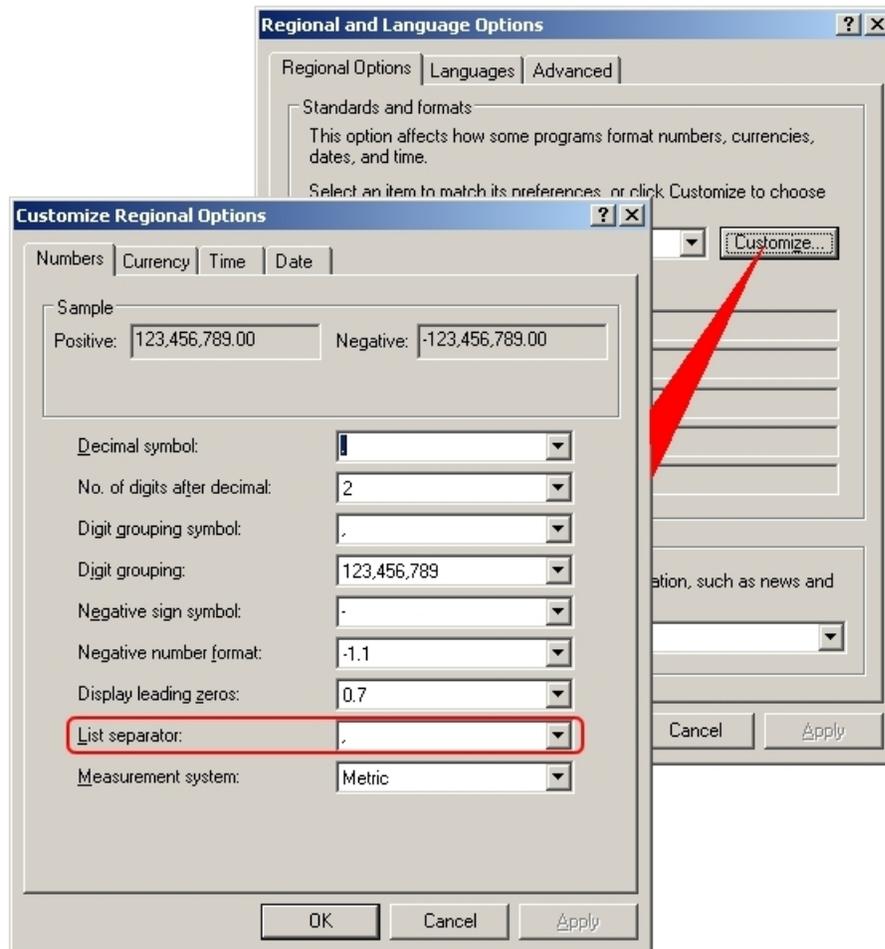
Comparison	Means	Boolean	Numeric	Text	Date
=	Equal to	x	x	x	x
<>	Not equal to	x	x	x	x
<	Less than		x	x	x
<=	Less than or equal to		x	x	x
>	Greater than		x	x	x
>=	Greater than or equal to		x	x	x
IN			x	x	x

Comparison	Means	Boolean	Numeric	Text	Date
NOT IN			x	x	x
LIKE				x	
NOT LIKE				x	

In the case where the LIKE operator is used, it assumes wild cards (*Value*) unless you define them explicitly.

In the case where the IN operator is used, you need to separate the values using a space or the Operating System locale setting for the list separator.

The Operating System locale setting can be found by going to the Windows control panel and selecting the Regional and Language Option.



Clicking on the Customize button in the Regional and Language Options dialog box brings up the Customize Regional Options dialog box. This shows the current setting for the List Separator.

Examples of Combinations

The effect of multiple filters depends on whether AND or OR is selected.

- Class = Tinned Goods AND Description = Beans will find all tinned goods with a description of 'beans'.
- Class = Tinned Goods OR Description = Beans will find all tinned goods. It will also find any item with a description of 'beans'. (This could include dried beans in plastic packaging).
- Use of AND will normally give a more specific result than OR.

Wild cards

A wild card character can be used to substitute for any other character or characters in a search string.

- The asterisk (*) substitutes as a wild card for any number of characters.
- The question mark (?) substitutes as a wild card for any single character.
- The hash mark (#) substitutes for any single number.

Examples:

Beans 50g will find an exact match.

Beans* will find Beans 50g, Beans 100g, Beans - Special, Beans - barbecue, etc.

Be??? will find Beans and Beers.

Beans ##? will find Beans 50g, Beans 75g, etc.

Cut, Edit and Paste

- To cut data, highlight it and use <Ctrl + X>.
- To copy data, highlight it and use <Ctrl + C>.
- To paste previously selected data, position the cursor where you want the text to appear and use <Ctrl + V>.

Colored Rows

The data is selected from the database by custom SQL. If the custom SQL includes a column named RGB, then the row is colored using the value in the column. This allows certain rows to be highlighted, which could be used to indicate high performing products or planograms, or simply indicate which products have already been placed.

Contact **Oracle Technical Support** for more information.

Configuration

The **Configuration** module allows various Macro Space Management operations to be set to suit the user. It also allows directory paths and file paths to be specified.

The current configuration profile is shown above the tabs. Changes made to configuration options are stored in this profile.



Configuration Profile

The current profile can be changed in the Profiles tab.

The effect of changing some of the options is global – changes made affect all users of Macro Space Management. The effects of changing some of the options are local, that is, changes made only affect the performance of Macro Space Management on the individual user's machine. Current settings for individual users are stored in their active Profile.

The Configuration Module can be accessed from the following components within Macro Space Management:

- Admin Module
- Data Import Module
- Fixture Studio
- Merchandiser
- Planner
- Product Studio
- Report Studio

Making Changes in the Configuration Module

A number of Configuration Module changes significantly affect the way Macro Space Management operates. Some of these changes not only affect the user's machine, but also affect all other computers running Macro Space Management.

Note: It is recommended that changes are only made if the expected effects are understood. If necessary, discuss the intended changes with your System Administrator, or consult Oracle's Technical Support team.

Recommendation: If making major changes in the Configuration Module, it is recommended that all modules are closed with the exception of the Administration Module. The Configuration module can then be called from the Administration module.

Basic Concepts

Profile

A **Profile** contains a defined set of preferences that is set using the Configuration module. These preferences and changes made to the Configuration Module are stored in the current profile. You can store multiple user profiles in Macro Space Management and can switch from one set of standard settings to another.

An example might be the use of two profiles; one for normal operation, and one where the user is experimenting with an alternative configuration for Macro Space Management. The Profile in use is known as the Current profile.

Global Change

A **Global Change** is a change made to Macro Space Management that affects all users simultaneously – typically a change will be made to parameters stored in the central database.

If, for example, the Update Database option is used in the Configuration Module to change the name of a specified database, then all Macro Space Management users will read and write information to that new database.

A record of all current settings is stored in a Profile.

Local Change

A **Local Change** is a change made to Macro Space Management that affects only the user's computer. Local changes are often made to customize the operation of the software so that it meets the user's individual preferences. An example of this would be enabling or disabling Sounds in the Configuration Module.

A record of all current settings is stored in a Profile.

Accessing options using the Control Key

Some commands are accessed by simultaneously pressing the <Ctrl + A>.

Trusted connection

SQL Server

A Trusted Connection for SQL Server users is one where access rights are assigned to individual users when the connection is first configured. Each subsequent time Macro Space Management is opened, SQL Server verifies that the Windows User Name and Password currently active is authorized to access the designated server. This removes the need for a User Name and Password to be entered into the Database Tab in the Configuration module.

If a connection is not designated as trusted, then a SQL Server user will need to enter a valid User Name and Password in the appropriate fields in the Database Tab to connect to the database. These will be saved and allow access to the central database each subsequent time Macro Space Management is used.

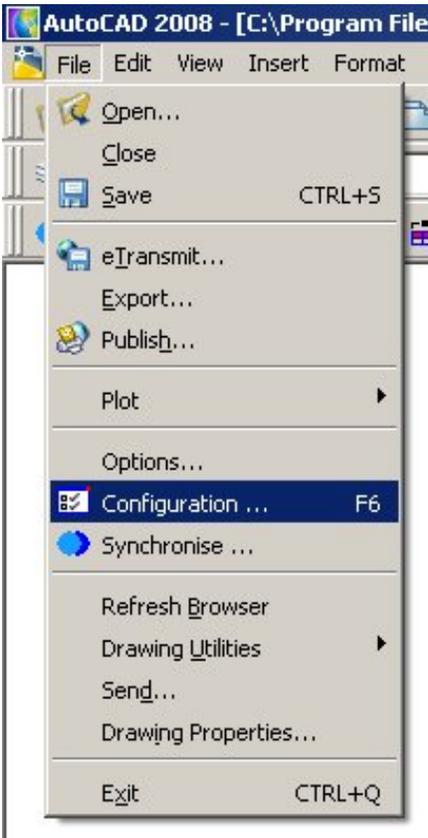
Oracle Databases

User ID and Passwords will always be required for Oracle databases. Again, these are entered into the appropriate fields in the Database Tab. These will be saved and allow access to the central database each subsequent time Macro Space Management is used.

Accessing the Configuration Module

Accessing the Configuration Module from the menu bar

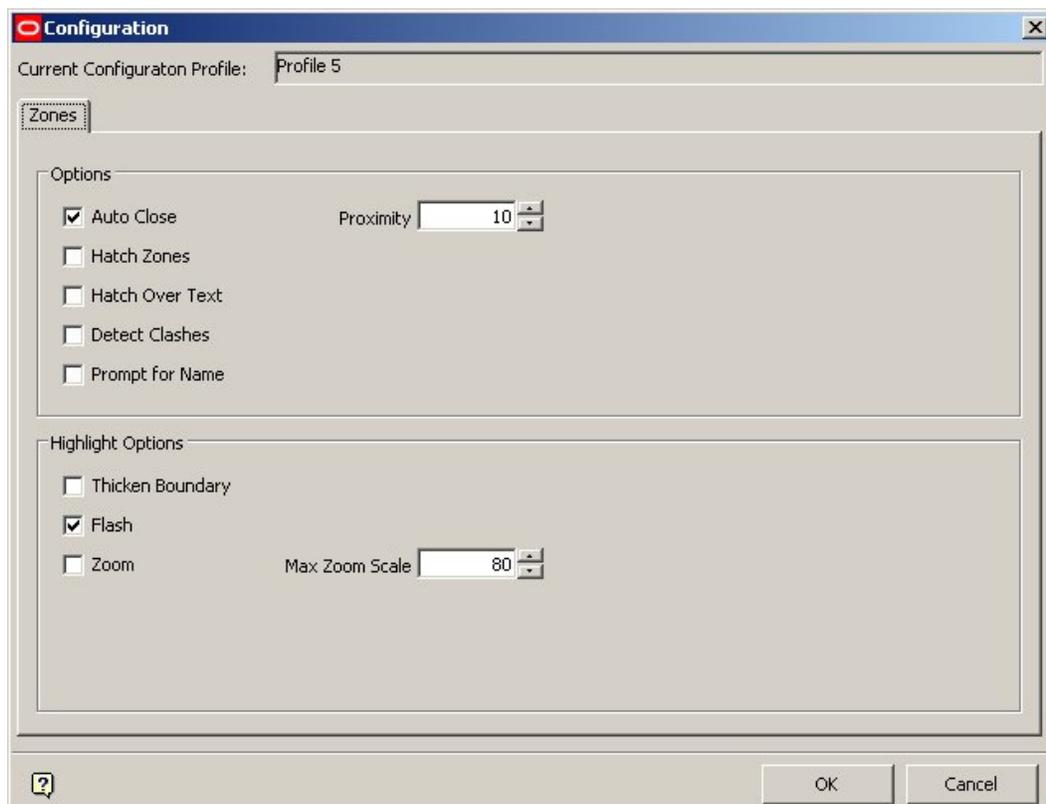
The complete **Configuration module** can be accessed from the File pull down menu in the individual Macro Space Management Components it is installed in.



Planner - Configuration

Accessing the Configuration Module from other Modules

Individual parts of the Configuration Module can be accessed from the Object Browser toolbar. For example, clicking on the Properties icon in the Object Browser Zones tool bar brings up the Zone options alone – other options cannot be accessed.



Configuration Module

Complete access is only available from the main menu bar in the respective modules.

Relationship between Configuration and Admin Modules

The **Administration** module is a part of Macro Space Management only accessible to users with Administrative privileges. It contains a series of settings that affect the operation of Macro Space Management.

Data is passed between the Configuration module and the Administration module – changes on one module reflects in the other. An example would be the Options Frame in the Merchandising tab of the Configuration module. This allows settings for the % Over Tolerance and % Under Tolerance options controlling the permissible variations between Fixture and Planogram sizes.

These settings are also reflected in the System Variable table in the Administration module. Changes in one module results in the change visible in the other module.

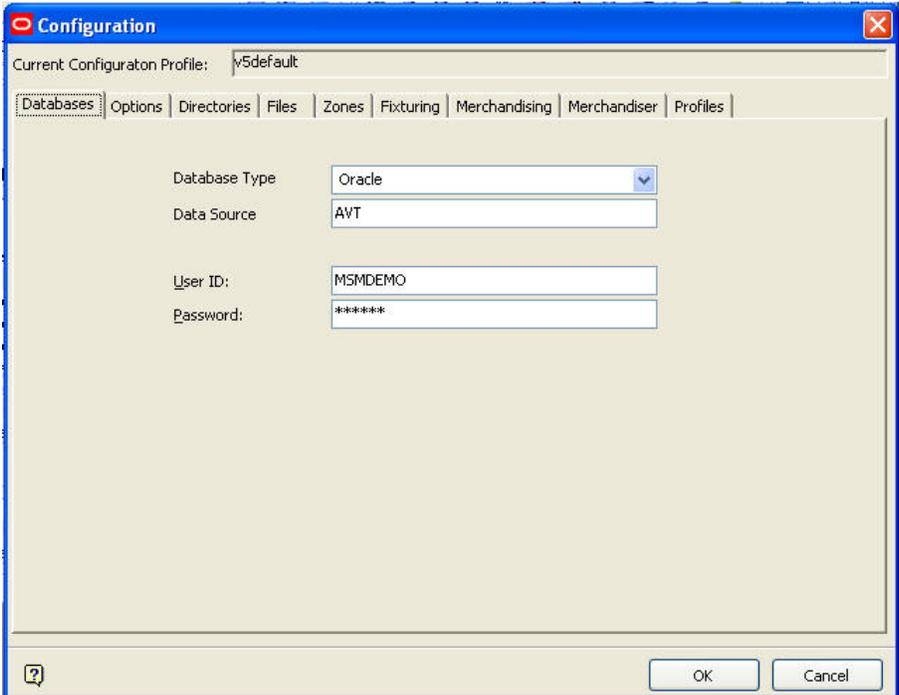
When Changes Take Effect

Changes made to Zone Types and Zone Definitions in the Administration Module are not effective immediately. They are only read when Macro Space Management starts, so for any changes to have effect, Macro Space Management must be restarted.

Configuration Module Components

The **Configuration** module contains tabs that allow changes to be made to a specific aspect of Macro Space Management operation.

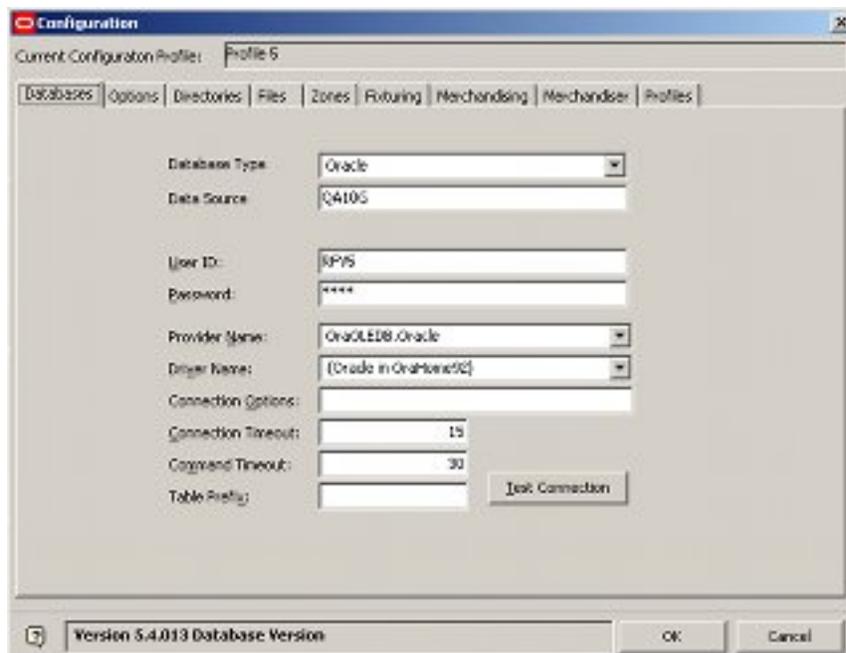
- **Databases:** The Databases tab allows details of the connections to the central database to be set up.
- **Options:** The Options tab allows some details of the interface with the software to be configured.
- **Directories:** The Directories tab allows directories where Macro Space Management stores data and files to be specified.
- **Files:** The Files tab enables you to specify where files required for the configuration of Macro Space Management are stored.
- **Zones:** The Zones tab allows the way Zones are displayed to be specified.
- **Fixturing:** The Fixturing tab enables the way fixtures are inserted into the store plan to be configured.
- **Merchandising:** The Merchandising tab enables the way Products and Planograms are selected and displayed to be adjusted.
- **Merchandiser:** The Merchandiser tab allows the way Merchandiser displays a virtual store to be customized.
- **Profiles:** The Profiles tab allows the adding, editing, renaming, and deleting of profiles.



Configuration Module

The Database Tab

The **Database** tab contains details of the database in use. The lower half of the tab is only available to Macro Space Management Administrators and is toggled into view by means of <Ctrl + A>.

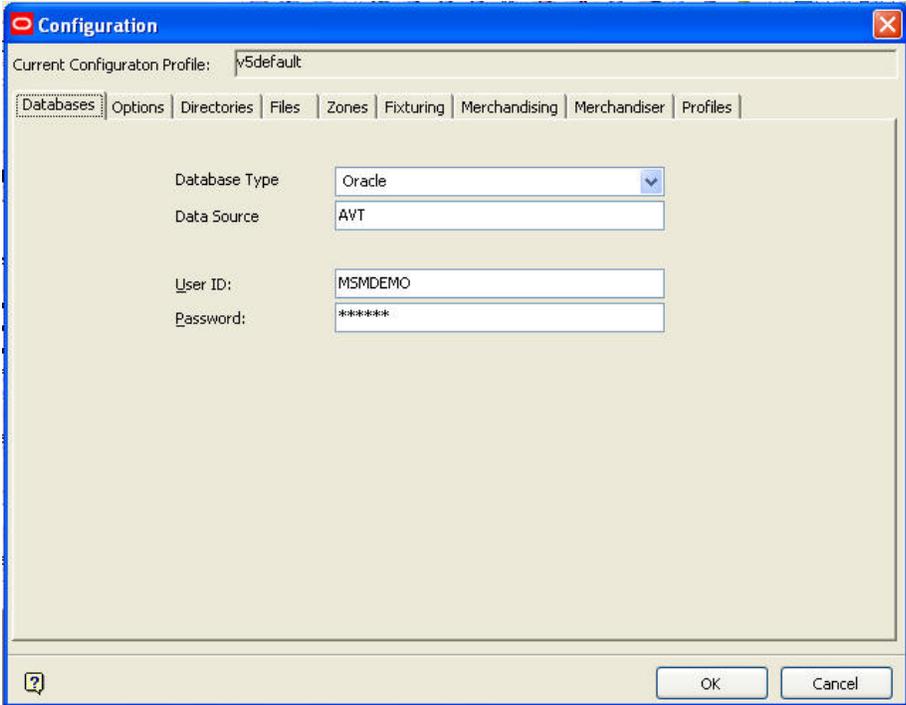


Database tab

Note: It is recommended that only administrators make changes to this tab as options such as Test Connection are only available to Administrators.

Options on the Database Tab

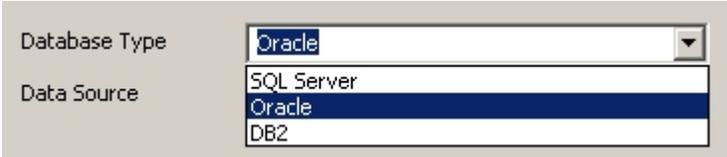
The **Database** tab contains details on databases. The lower half of the tab is only available to Macro Space Management Administrators and is toggled into view by means of <Ctrl +A>.



Database tab options

Access for Normal Users

The Database Type can be specified by means of a drop down list.



Note: If you change the connection type from SQL server to Oracle, the database name is no longer required. If you subsequently change back to SQL Server, the database name will be blank. SQL Server requires a database name.

The Database Name (if required) is typed in manually during the original set up of Macro Space Management. The User ID and Password are required if the SQL Server connection is not Trusted. User ID and Passwords will always be required for Oracle databases.

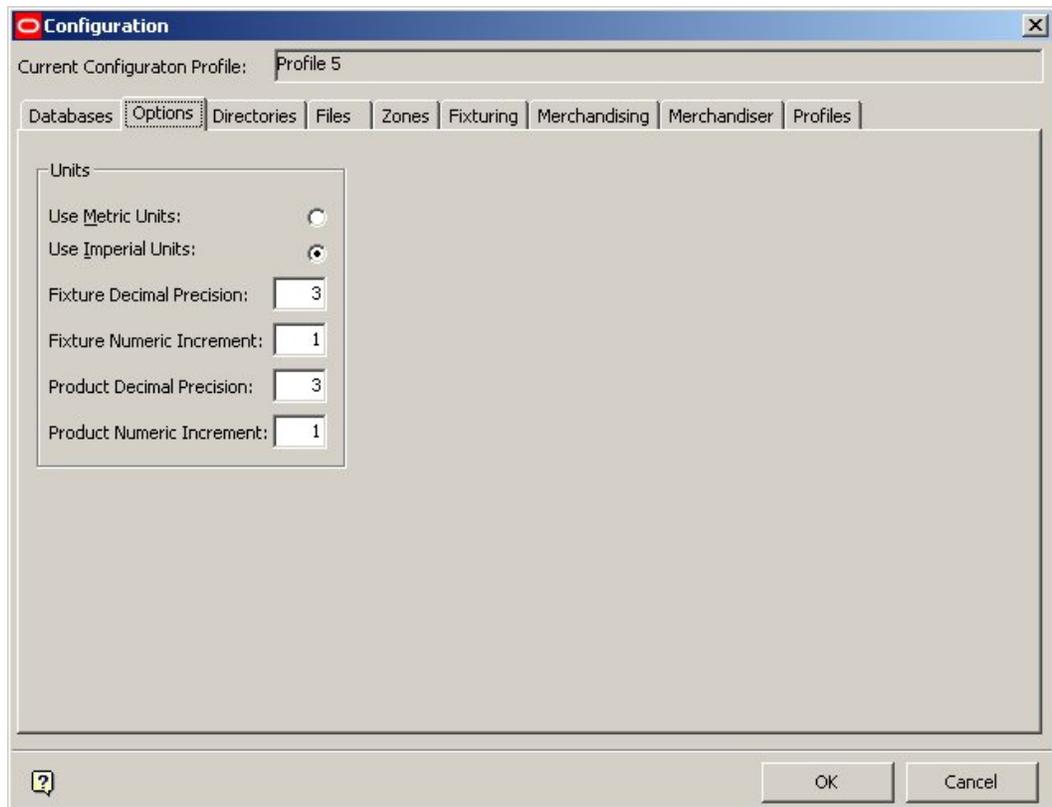
Test Connection Option

The **Test Connection** button checks that the connection to the central database is functioning correctly. Click it to bring up a message indicating whether the connection is correctly functioning or not.



The Options Tab

The **Options** tab enables a number of broad options to be set up.



Options tab

The **Units** frame allows you to specify units for Macro Space Management use as its default.

Field	Description
Units	Can be set to Metric or Imperial.
Fixture Decimal Precision	The precision used for dimensions in Fixture Studio.

Field	Description
Fixture Numeric Increment	The amount a spin control in Fixture Studio is incremented for each click on an increase or decrease arrow.
Product Decimal Precision	The precision used for dimensions in Product Studio.
Product Numeric Increment	The amount a spin control in Product Studio is incremented for each click on an increase or decrease arrow.

Although Macro Space Management can work in a variety of units, specifying the default unit affects some aspects of configuration including the units used for the default tolerances and for annotation. The default unit is also the measure used to store measurements in the database.

The Directories Tab

The default directories for Macro Space Management are specified below. They are configured by Oracle and cannot be deleted or renamed.

- **Network Directories** use a single specific location on a network so that the data in them is available to all users.
- **Local Directories** use a location specific to the user (usually on their hard drive) and normally only accessible to an individual user.

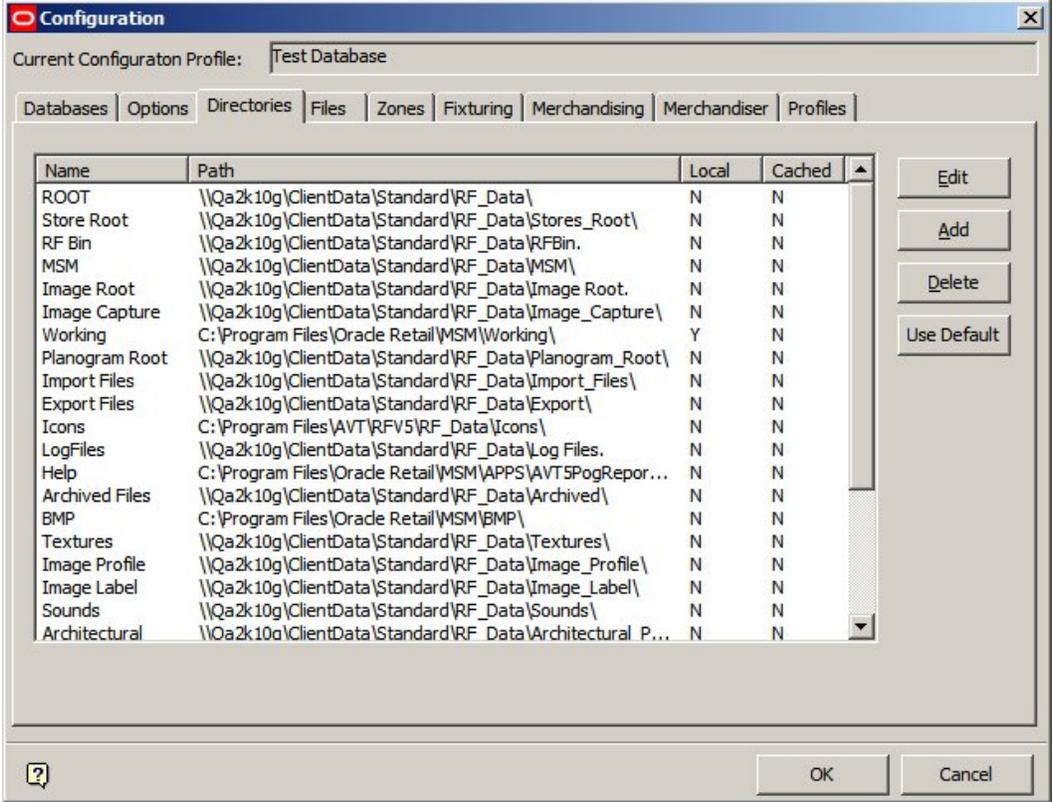
Directories should only be designated as Local if there is no possibility of the specific data stored there being used by other users.

Directory Name	Directory Type	Comment
Archived Files	Network	Directory files will be moved to after they have been imported.
BMP	Preferably local	This directory is used for the AutoCAD toolbar button bitmaps that appear in the toolbars in the Planner environment. It is normally local as the icons are part of the software installation. The local files are found at C:\Program Files\Oracle Retail\MSM\BMP.
Export files	Network or local	Location that files are exported to, for example Profiles
Icons	Network or local	Directory for additional icons used by Oracle Retail Macro Space Management. This directory will be discontinued shortly.
Image Capture	Network	Default directory for holding images captured by a scanner, digital camera, etc. These images can subsequently be imported into the software.
Image Label	Network	Directory for images that can be added to the labels associated with fixtures in the Merchandiser environment.

Directory Name	Directory Type	Comment
Image Profile	Network	Location for 2D planogram profile images. The images are used when a planogram is placed as a 2D placeholder in the Merchandiser environment.
Image Root	Network	This is the root directory for the images that will be used for photo-realistic indications of products. As product images are added, edited or deleted, the hierarchy below the image root will be modified. <u>Note: Image Root must be a UNC path if referenced by In-Store Space Collaboration.</u>
Import Files	Network	Location to which files will be imported. Data Importer looks for the files it reads in this location.
Help	Must be local	The location of the help files used by Macro Space Management. The locally installed files are found at C:\Program Files\Oracle Retail\MSM\Help. <u>Note: the directory must be local as chm type help files cannot be read across a network for security reasons.</u>
Log Files	Network or local	Log files created by the application to record events and issues
MSM	Network	Directory that holds standard blocks used by Oracle Retail Macro Space Management. It has two sub directories for imperial and for metric blocks.
RFBin	Network	This holds files that have been marked for deletion in Store Manager and moved from their location relative to the Store Root. If purged (Store Manager), they will be permanently deleted. If un-deleted, the files will be moved back to their location relative to the Store Root.
Planogram Root	Network or local	Root directory for planograms imported from third party software. This directory is not used in the standard implementation. Planograms can only be imported via the Data Importer
Root	Must be local	Root directory for the application. For files such as the AutoCAD line style or hatch style files

Directory Name	Directory Type	Comment
Store Root	Network	This is the root directory for the directories and files that make up the hierarchy specified in Store Manager. As stores, floors, revisions and files are added, edited or deleted, the hierarchy below the store root will be modified. <u>Note: Store Root must be a UNC path if referenced by In-Store Space Collaboration.</u>
Textures	Network	Directory for Textures. Used for specifying the textures for walls, ceilings, etc in Merchandiser
Working	Normally local	Directory for temporary files, including temporary graphics images created in Merchandiser. The pre-installed local directory can be found at C:\Program Files\Oracle Retail\MSM\Working

The **Directories** tab contains the list of directories where Macro Space Management stores its information.



Directories tab

These directories may be:

- **Default:** mandatory directories required by the software and configured by Oracle. These cannot be renamed or deleted.
- **User Defined:** non-mandatory directories defined by the user and used to hold information on (for example) fixtures. These can be added to meet customer requirements.

Note: take care when specifying directories as local - the majority of system directories need to be available to all users.

These directories may be located as follows:

- **Central:** in a single specific location on a network so that the data in them is available for all users.
- **Local:** in a location specific to the user (often on their hard drive) and normally only accessible to that user.

The path to the directory may be specified as either a:

- **Mapped drive:** the path name is relative to a folder that has been 'mapped' using Windows tools.
 - **UNC (Uniform Naming Convention) path:** the full path to the directory.
 - **Local Drive:** the user's local hard drive.
- Mapped drives and UNC paths are only supported if the appropriate option is checked.

Note: The directories referenced by In-Store Space Collaboration must always be UNC paths - the ISSC service does not recognize mapped drives.

Information on directory paths may be stored as:

- **Default:** the standard path to the directory used as the default for all users.
- **User Specific:** a path to the directory specific to that user. User specific paths can only be set for user defined directories and not for system directories.

Note: UNC paths are better for Central paths. This is because not everyone will have mapped to the same directory, whereas a UNC path is common to all users.

The Directories tab enables Administrators to configure this information.

Central Path

A central path is for a directory on a server.

Local Path

The definition of a Local Path depends on whether it is being created by an Admin or non-Admin User.

- If created by an Admin User it is normally a generic path to a directory on all local drives, for example the help file directory that is installed at C:\Program Files\Oracle Retail\MSM\Help.
- If created by a Non-Admin User, it is a path to a User Defined directory. This sort of path can refer to a directory on a user's computer or a directory on a network.

Overview of Directory Paths

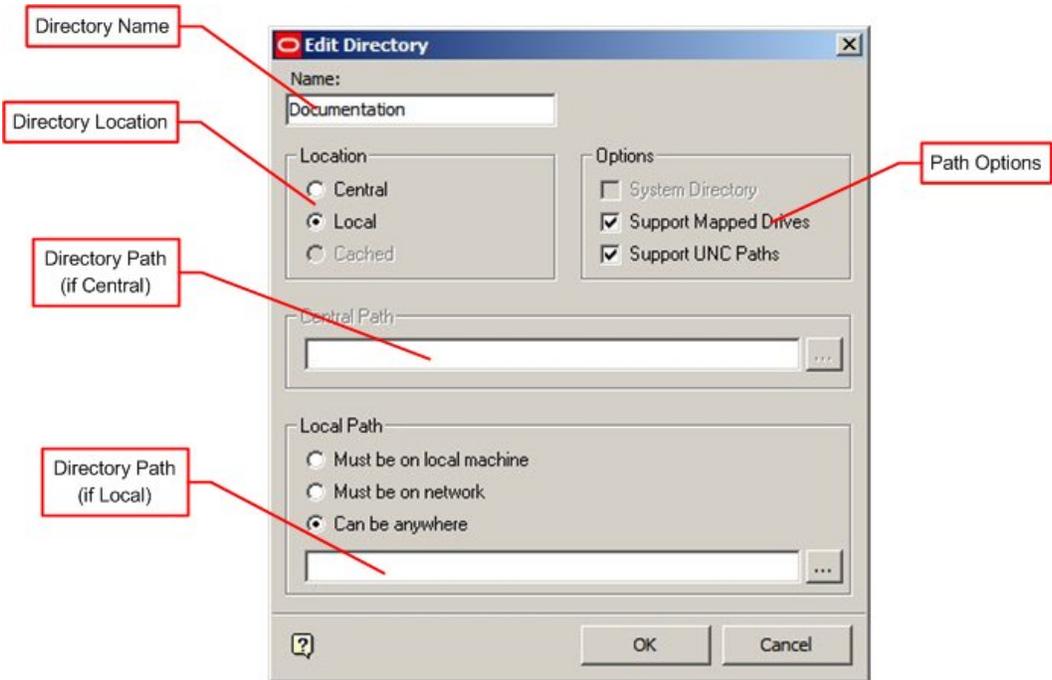
General

Directories may be either System or User Defined.

- System directories cannot be deleted and can only have their paths changed.
- User Defined directories are additional to the system directories. They can be added, edited, and deleted.

Both are set using the Add Directory or Edit Directory dialog box from the Directories tab of the Configuration module.

Note: Changing a User Specified directory path will only change the path for that user. Changing a Default directory path will change that path for all users. Accordingly, changing the Default directory path should be done with caution.



Directory Name

- If the directory is a system directory, the directory name is not available for editing.
- If the directory is a user defined directory, the directory name can be edited.

Path Options

The paths to the directories can take three forms:

- Mapped drives
- UNC (Uniform Naming Convention) Paths
- Local Drives

Mapped drives and UNC paths are only supported if the appropriate option is checked.

Location

Directories can be:

- Central - on a server, so they are available for all users
- Local - on a user's hard drive, so they are normally only available to that user

Note: take care when specifying directories as local - the majority of system directories need to be available to all users.

Central Path

A central path is for a directory on a server.

Local Path

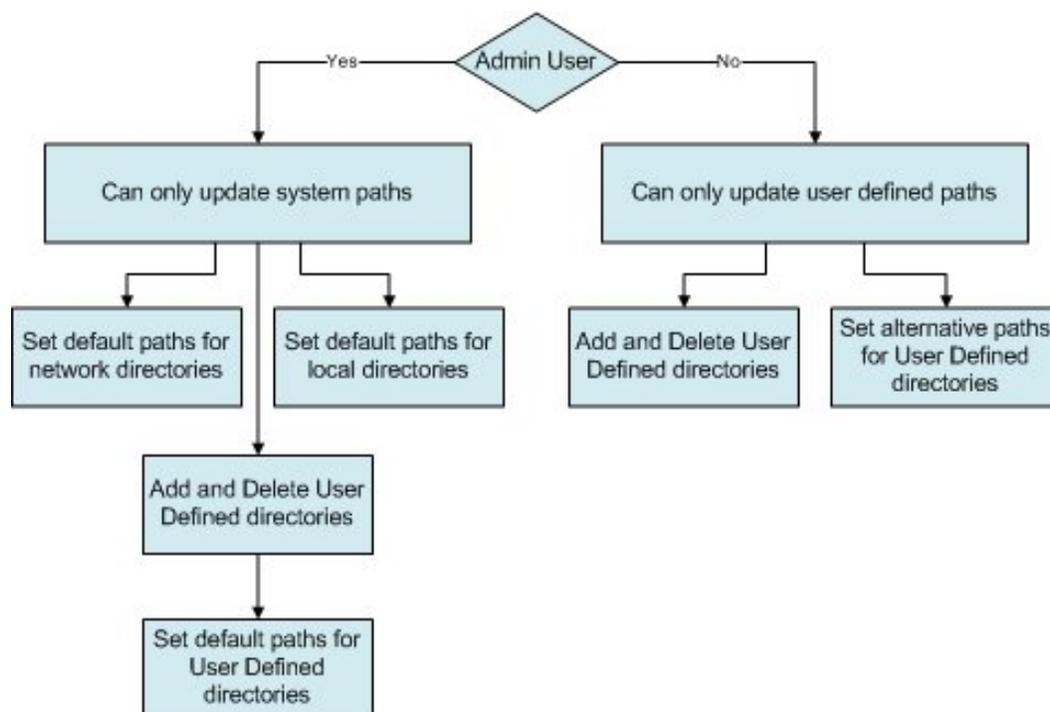
The definition of a Local Path depends on whether it is being created by an Admin or non-Admin User.

1. If created by an Admin User it is normally a generic path to a directory on all local drives, for example the help file directory that is installed at C:\Program Files\Oracle Retail\MSM\Help.
2. If created by a Non-Admin User, it is a path to a User Defined directory. This sort of path can refer to a directory on a user's computer or a directory on a network.

Effect of User Group on Directory Paths

The User Group is used to group users with different access and privileges.

- If the User belongs to the Admin (Administrators) User Group, if they change a directory path in the configuration module, they change the default path for that directory.
- If the user does not belong to the Admin (Administrators) User Group, if they change a directory path, they will create an alternative (personal) path that is specific to them. (They can revert to the default path at any time by clicking the 'Default' button in the directories tab of the Configuration Module).



Admin User

Admin Users can:

- Set the default paths for system directories located on the network.
- Set the default paths to (common) system directories located in individual hard drives. (An example would be the help directory - located at C:\Program Files\Oracle Retail\MSM\Help on every user's hard drive).
- Add and Delete User Defined directories.
- Set the default paths to User Defined directories.

Non Admin User

Non Admin Users can:

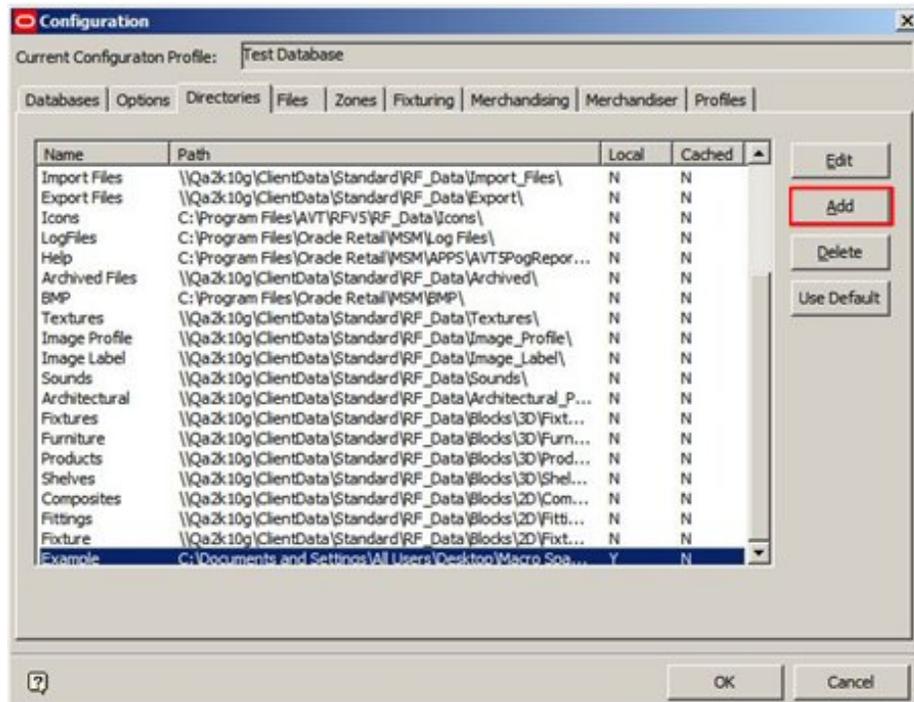
- Add and Delete User Defined directories.
- Set alternative (personal) paths to User Defined directories.

Important Note: at present Non-Admin users can also set the default paths for system directories. Inadvertent changing of default directories may cause significant problems with the system. Non-Admin users should be careful to only change the local paths to User Defined Directories. (See the section on setting directory paths).

Adding, Editing and Deleting Directories

Adding Directories

Only User Defined directories can be added. This is done by clicking the **Add** button on the Directories tab.



Add Directories

The Add Directory dialog box comes up.

Add Directory

Name:
Example

Location

Central
 Local
 Cached

Options

System Directory
 Support Mapped Drives
 Support UNC Paths

Central Path
Example\Example

Local Path

Must be on local machine
 Must be on network
 Can be anywhere

OK Cancel

Add Directory dialog box

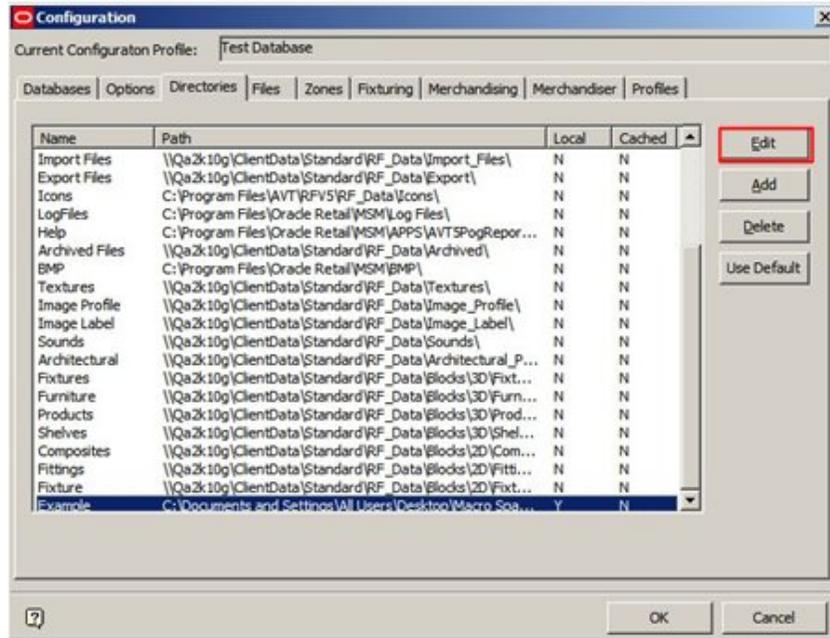
This allows configuring details for User Defined directories including:

- Directory Name
- Where local or central
- Path to directory

Note: the specified path for the directory must reference a directory in the Windows directory structure.

Editing Directories

You can edit directories by highlighting the required directory in the list of directories and click the **Edit** button.

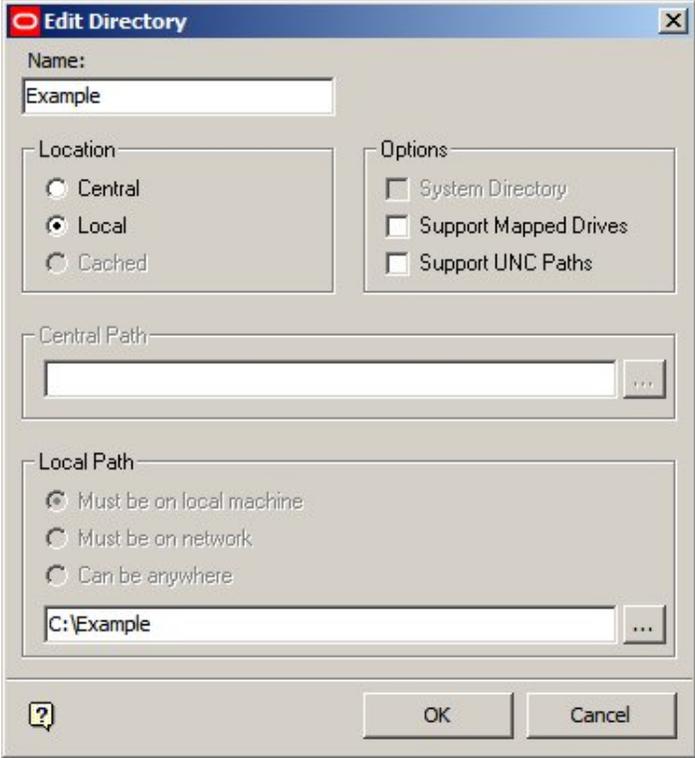


Edit Directories

What can be edited depends on whether the directory is a System or User Defined directory.

- If a System directory, only the path to the Windows directory can be edited
- If a User Defined directory, the name the directory is identified by and the path to the directory can be edited.

Note: System Directory names are not available for editing.

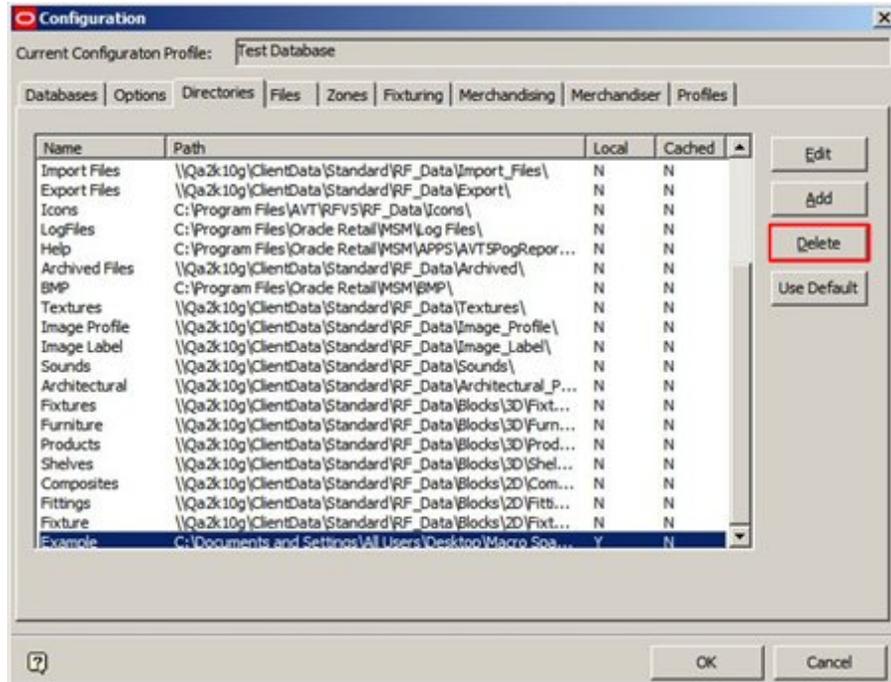


If the directory is User Defined, the name used to identify it can be edited. For both System and User Defined directories, the path can be set to be either central or local.

Note: Care should be taken if editing system directory paths - changing the path may significantly affect functionality within Macro Space Management. Paths to directories are referenced by other modules – for example Fixture Studio. Changing a path may affect the operation of these modules.

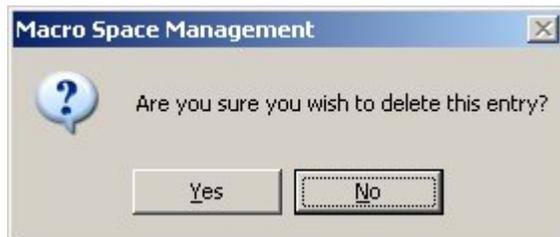
Deleting Directories

To delete a User Defined directory, highlight the directory Name and click the **Delete** button. (System directories cannot be deleted).



Configuration Module - Directories

A dialog box comes up asking for confirmation the directory is to be deleted.



Click **Yes** to delete the directory.

User Defined Directories and User Specified Paths

User Defined Directories are used in conjunction with system directories. The purpose of the User Specified directories is to hold customer specific information. Some examples of information held in such directories include:

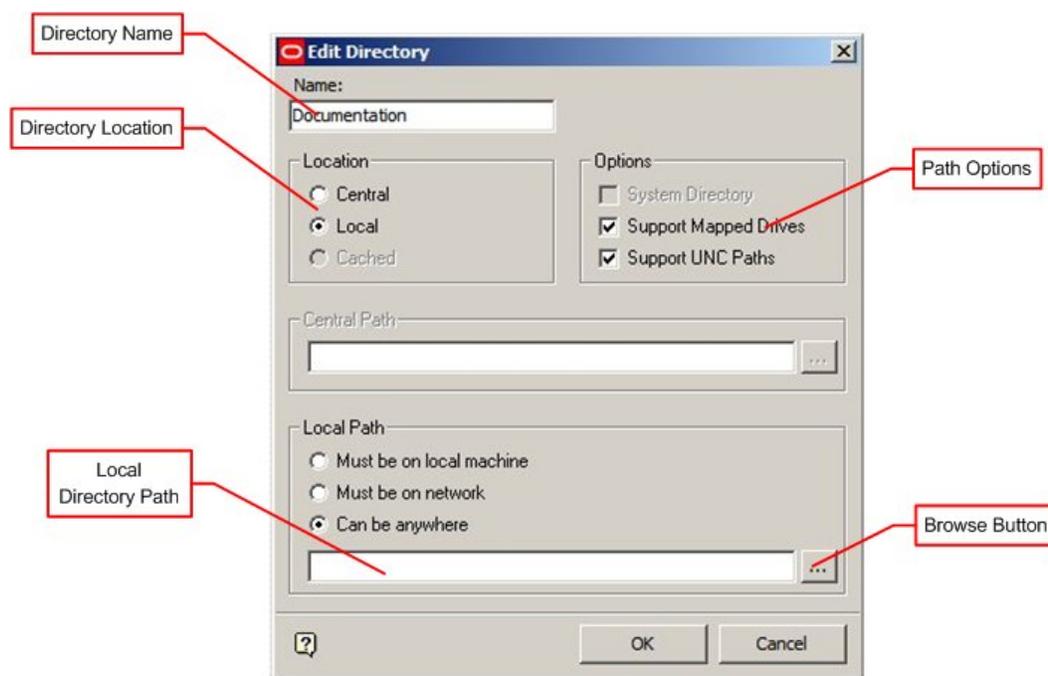
- Architectural plans to be copied or linked into Store Manager
- Blocks used to represent fixtures, etc, referenced by Fixture Studio
- Reports and other output from Macro space Management

Unlike system directories, User Specified directories can be added, edited and deleted. They can also have user specific paths.

Note: When adding custom directories, care should be taken to determine whether they should be local (specific to a user) or system (available to all users). Most custom directories will need to be system directories as (for example for blocks) they will need to be available to all users of Macro Space Management.

Setting paths to User Defined Directories

Important Note: Non-Admin users should not set (or reset) the paths for any system directories. These are directories where the directory name is not available for edit and the System Directory check box is selected in the options frame. If Non-Admin users reset the paths to system directories, system may crash.



Default and User Specific Paths

- If the (Non-Admin) user is creating a directory as well as setting the path, the path will become the default path for other users.
- If the directory has already been created, the (Non-Admin) user will create an alternative path specific to that user.

Setting Paths

To set the path to the User Defined directory:

- Set the directory location to Central or Local as required.
- Ensure the appropriate 'Support Mapped Drives' or 'Support UNC Paths' check boxes are ticked in the Options frame if required.

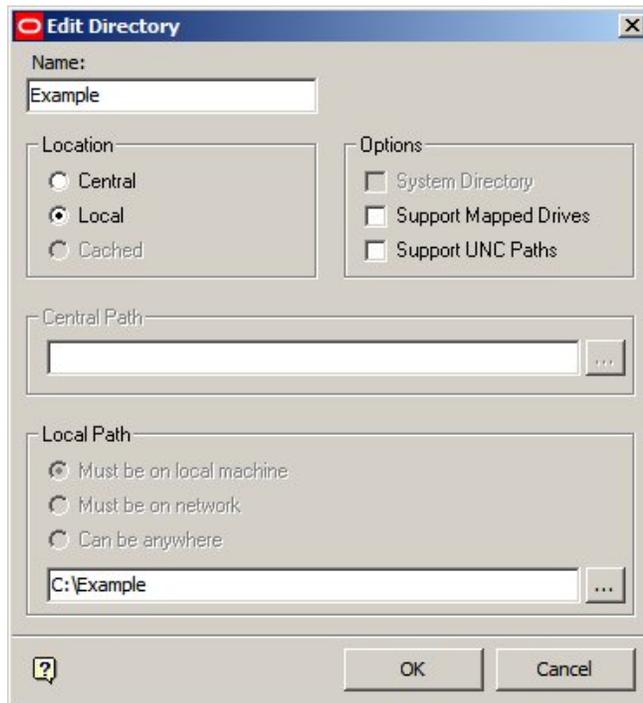
- If necessary, use the radio button on the local frame to set the option to 'Must be on Local Machine', 'Must be on Network' or 'Can be Anywhere'
- Click the **Browse** Button and navigate to the required directory. Click the **OK** button to return to the Edit Directory dialog box.
- Click the **OK** button at the bottom of the Edit Directory dialog box to add the path.

User Specified Paths

Non-Admin Users can set alternative paths to User Defined Directories by using the Edit Directory dialog box (providing the directory has already been defined and a default path exists in the database).

Note: Admin Users can only set the default path for all users.

This is done by highlighting the required directory on the Directories tab of the Configuration module and clicking the Edit button to bring up the Edit Directory dialog box.



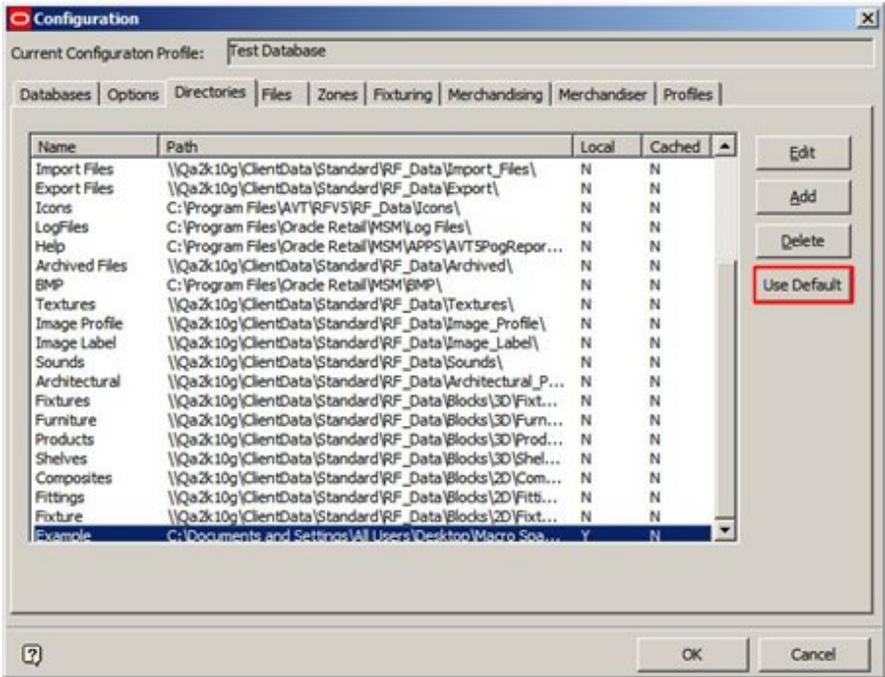
Edit Directory window

The non-Admin User can then set their alternative path to the User Defined Directory. On clicking OK, this alternative path will be stored in the central Macro Space Management database.

Note: Ensure the alternative path is set carefully. This may result in information stored using the alternative path becoming unavailable to other users.

Reverting to the Default Path

To change back to the default path, highlight the required User Defined directory and click the Default button on the Directories tab.



Configuration - Default Path

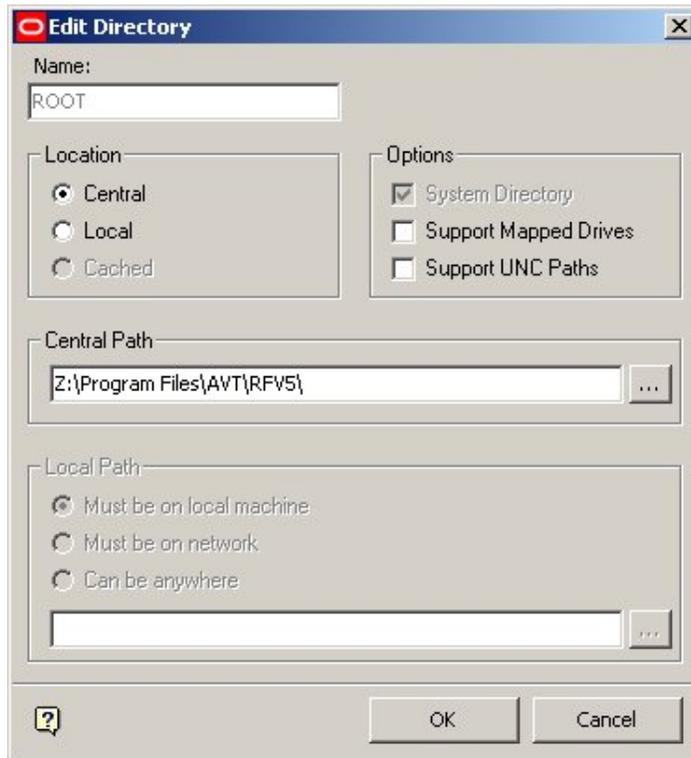
- If there is a difference between the default path and the user specific path in the tables, the default button will be enabled. Clicking the button will change the User Specific path back to the default one.
- If there is no difference between the default path and the user specific path in the tables, the default button will be grayed out and unavailable.

Changing multiple directory paths

Multiple directory paths can be changed at the same time. This method is based on the path in the Root directory.

Name	Path
Working	C:\Program Files\AVT\RFV5\Working\
Image Root	q:\Image Root\
Image Capture	q:\Image Capture\
Help	c:\Program Files\AVT\RFV5\Help\
Export Files	c:\Program Files\AVT\RFV5\Export files\
RF Bin	q:\RFBin\
Store Root	q:\Stores Data\
ROOT	C:\Program Files\AVT\RFV5\
LogFiles	r:\Program Files\AVT\RFV5\
Import Files	c:\Program Files\AVT\RFV5\Import Files\
Icons	c:\Program Files\Retail Focus\Icons\
RF	q:\RF\
Planograms Root	q:\
Archived Files	c:\Program Files\AVT\RFV5\

In this example, some files are stored on the Z: rather than the C: drive. Accordingly the path to the Root is changed.



Configuration – Edit Directory

After the path to the Root is changed, other directory paths to be changed are selected by holding down the Control key <Ctrl> and left clicking on the desired directory names to highlight them.

Name	Path
Working	C:\Program Files\AVT\RFV5\Working\
Image Root	q:\Image Root\
Image Capture	q:\Image Capture\
Help	c:\Program Files\AVT\RFV5\Help\
Export Files	c:\Program Files\AVT\RFV5\Export Files\
RF Bin	q:\RF Bin\
Store Root	q:\Stores_Data\
ROOT	Z:\Program Files\AVT\RFV5\
LogFiles	c:\Program Files\AVT\RFV5\
Import Files	c:\Program Files\AVT\RFV5\Import Files\
Icons	c:\Program Files\Retail Focus\Icons\
RF	q:\RF\
Programs Root	q:\
Archived Files	c:\Program Files\AVT\RFV5\

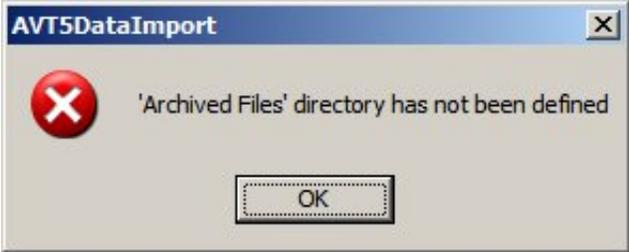
Using <Ctrl + R> then changes all the selected paths.

Name	Path
Working	C:\Program Files\AVT\RFVS\Working\
Image Root	q:\Image Root\
Image Capture	q:\Image Capture\
Help	C:\Program Files\AVT\RFVS\Help\
Export Files	C:\Program Files\AVT\RFVS\Export Files\
RF Bin	q:\RFBin\
Store Root	q:\Stores_Data\
ROOT	Z:\Program Files\AVT\RFVS\
LogFiles	Z:\Program Files\AVT\RFVS\RFVS
Import Files	Z:\Program Files\AVT\RFVS\Import Files
Icons	Z:\Program Files\AVT\RFVS\Icons
RF	q:\RF\
Planograms Root	q:\
Archived Files	C:\Program Files\AVT\RFVS\

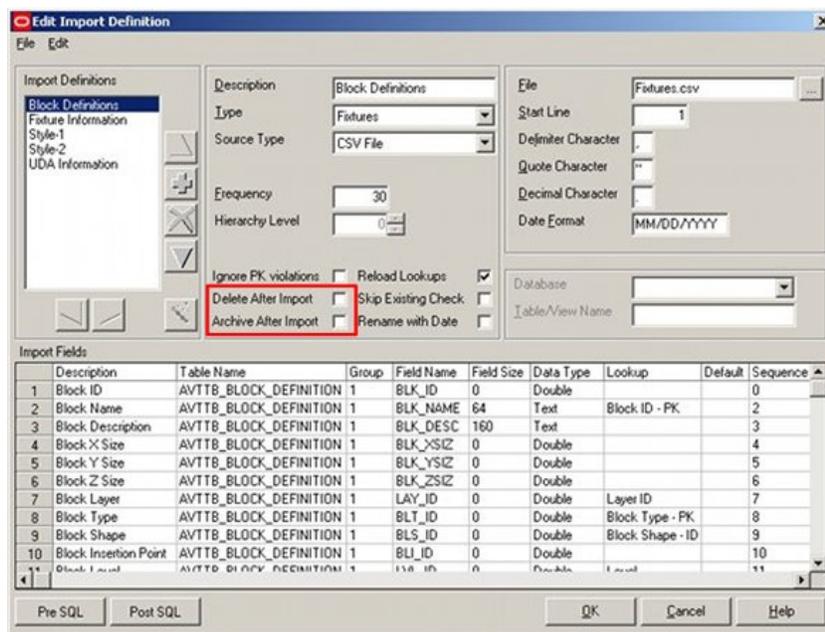
Directories

The Archive Directory

The Archive Directory is used to hold files that have been processed by Data Importer. If the Archive Directory is absent, you will be warned on starting up Data Importer.



Files for Data Importer are initially placed in the Import Directory. When using Data Importer, you can set two options in the Import Definitions dialog box.

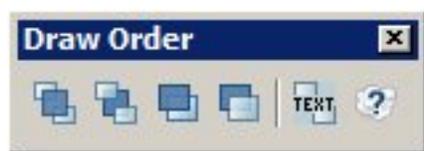


- If you select the checkbox **Archive After Import** a copy of the processed file is placed in the Archive directory.
- If you select the checkbox **Delete After Import** and **Archive After Import**, a copy of the processed file is placed in the Archive directory and the original is deleted from the Import Directory.

The BMP (Bit Map) Directory

The Bit Map Directory is used to hold the bitmaps used for the toolbars in the Planner module. The directory should be on your local computer. The local files are found at C:\Program Files\Oracle Retail\MSM\BMP.

If bit maps are missing from this directory, the toolbars will have a question mark signifying the missing bit maps.

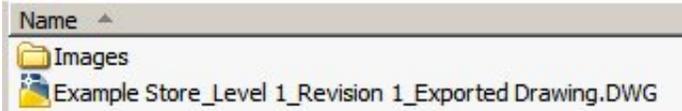


The Export Directory

The Export Directory is the specified location to export files. Objects that can be exported include:

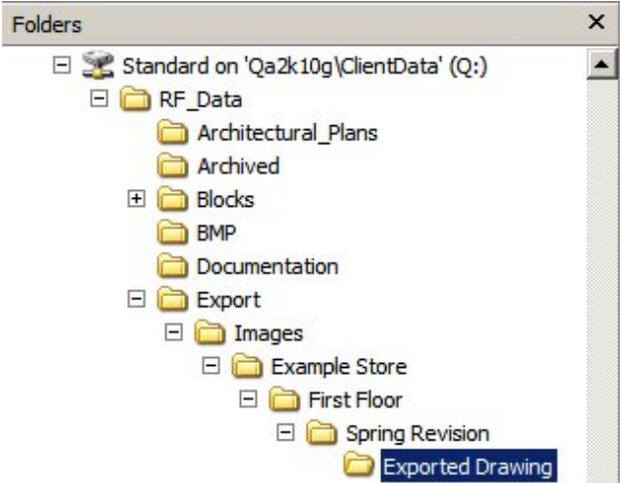
Profiles: Profiles can be exported by clicking the **Export** button of the Profiles tab in the Configuration module.

Store Plans: Store plans can be exported from Store Manager by selecting the store plan and then using the **Export** option in the right click menu.



The file naming convention is *Store Name_Floor Name_Revision Name_Drawing_Name.dwg*, enabling the file to be identified.

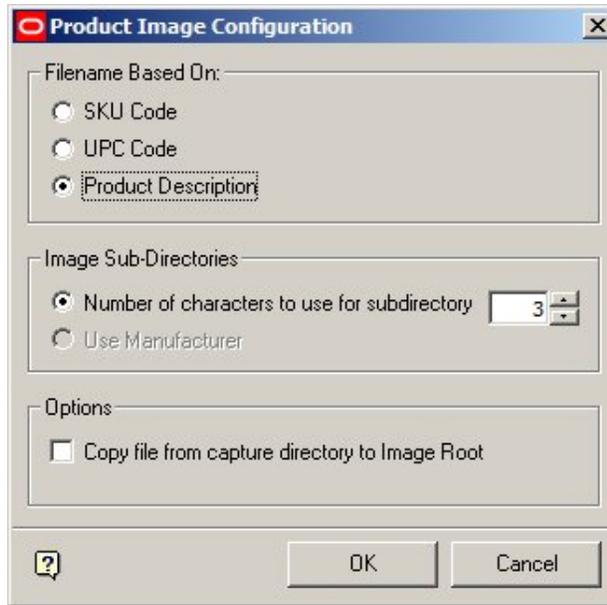
Snapshots: Snapshots are images of the current Merchandiser drawing taken using the Snapshot option on the view menu. Snapshots are stored in a hierarchy that starts in the image directory that is a sub directory of the export directory. A hierarchy is created below the images directory that mirrors that of the store hierarchy.



The Image Capture Directory

The Image Capture directory holds the images to be imported into Product Studio and subsequently used in Merchandiser (if required) as photographic representations of the products on the shelves. The Image Capture directory can either be set to be on a server (network) or on the user's hard drive (local). If on a local drive, the images are available to that user only.

When the image is used, whether it is moved or copied to the Image Root directory depends on the settings in the Product Image Configuration dialog box (called from the View menu).



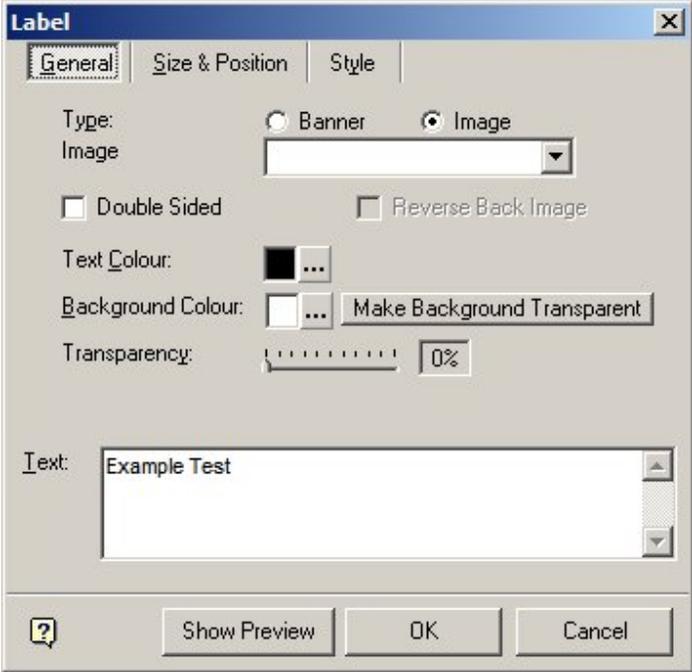
- If the **Copy file from capture directory to Image Root** option is checked, the image is copied from the Image Capture directory to the appropriate sub-directory in the Image Root directory.
- If the **Copy file from capture directory to Image Root** option is not checked, the image is moved from the Image Capture directory to the appropriate sub-directory in the Image Root directory.

The Image Label Directory

The Image Label Directory is used to store images that are added as labels to fixtures in the Merchandiser module. The images can be of *.bmp*, *.jpg* or *.png* format. The images can be inserted in Merchandiser by using the **Add** (or **Edit**) options from the formatting toolbar.



The Labeling dialog box appears.



Label Dialog Box

Images that are in the Image Label directory can be selected from the Image drop down list and added to the highlighted fixture.

Note: This functionality is not working correctly at present.

The Image Profile Directory

The Image Profile Directory is used to hold 2D images of planograms. These are generated during the planogram design process in the Merchandiser module.



These images are displayed in the Merchandiser module if:

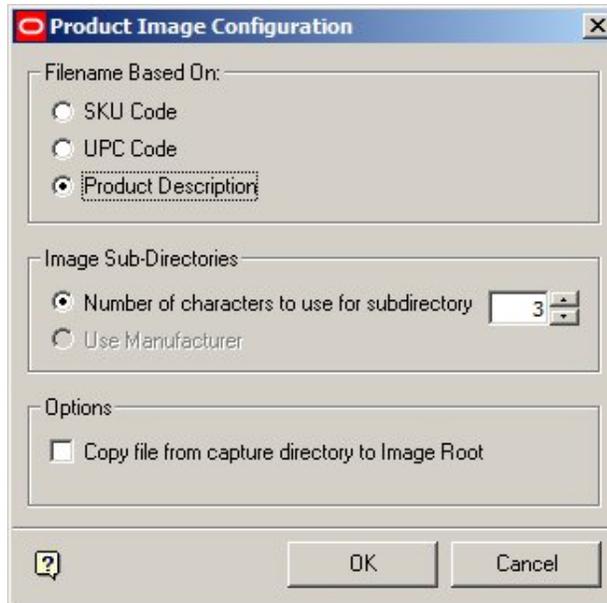
- The default mode of placing a planogram has been set to 2D in the **Merchandising** tab of the Configuration module.
- Planograms have been toggled to 2D mode using the **Implode** option on the Directions and Product Text toolbar in the Merchandiser module.

The Image Root Directory

The Image Root directory holds sub-directories containing the images assigned to products in the Product Studio module and subsequently displayed when the appropriate settings are selected in Merchandiser.

Note: In-Store Space Collaboration references the information in the Image Root for Front Graphical View. It needs the path to be specified in UNC format.

The names of the sub-directories (and associated images) are dependent on settings in the Product Image Configuration dialog box called from the View menu in Product Studio.



Product Image Configuration dialog box

Note: Information on directories and filenames is not stored in the MSM database. It is implied from the settings in the Product Image Configuration dialog box. Accordingly, changing settings in this dialog box may cause problems in locating images imported into Product Studio using earlier settings.

Sub Directory Name

- SKU Code

If the SKU code is selected, any value between 0 and 3 can be selected. If 0 is selected, all images are put into the image root without using sub-directories. If a value between 1 and 3 is selected, the sub directory is named after the requisite number of characters from the start of the SKU string.

Note: There is an error in the software. At present the SKU code is reading data from the client code field in the database, not the SKU field.

- UPC Code

If the UPC code is selected, there are two options for determining the name of the sub-directories. These are selected via the radio button.

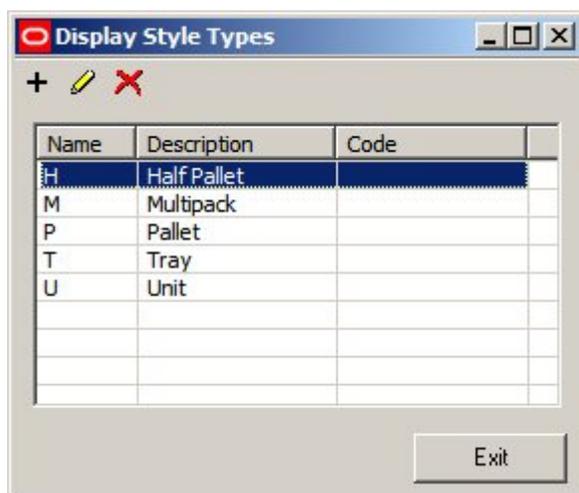
- If **Number of Characters** is selected, any value between 0 and 3 can be selected. If 0 is selected, all images are put into the image root without using sub-directories. If a value between 1 and 3 is selected, the sub directory is named after the requisite number of characters from the start of the UPC string.
- If **Manufacturer** is selected, the sub-directory is named after the first five characters of the UPC code as these denote the manufacturer. (Any leading zeros will be suppressed).

- Product Description

If Product Description is used, the directory name can be anywhere between 0 - 3 characters long. If 0 is selected, all images are put into the image root without using sub-directories. If a value between 1 and 3 is selected, the sub directory is named after the requisite number of characters from the start of the Product Description.

Image Name

- SKU codes or UPC codes: the image file name for items using either SKU codes or UPC codes is of the same format: Display Style Type/Code/Facing Direction for example, *U50781276_1.jpg*. It is assigned automatically when the images are added to the Display Styles dialog box in Product Studio. The list of Display Style Types is set in the Display style types dialog box accessed from the View menu in Product Studio.



Note: Display Style Types are assigned to specific products in the Display Styles dialog box in the Product Studio module.

The Product Code or SKU code is assigned to the product, either when it was imported, or when it was added in Product Studio (Display Styles dialog box). The view direction can be one of 6 options:

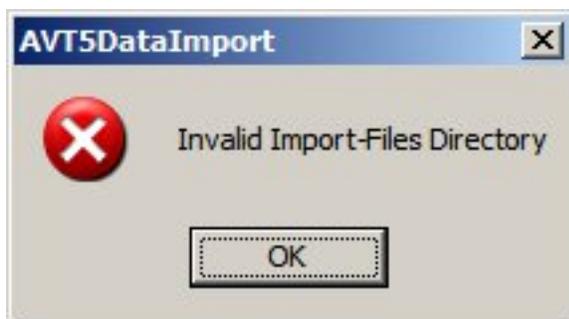
Direction	Value
Front	_1
Left	_2
Top	_3
Back	_4
Right	_5
Bottom	_6

There can be up to six images stored for each product display style if UPC or SKU codes are in use - only the suffix differing in each file name.

- **Product Description:** If images are being named after the Product description, there can only be one image stored per display style. It is named after the display style description; for example Tinned Peas - 50g.jpg.

The Import Directory

The Import Directory is used to store files for use by Data Importer. The Data Importer module can only read files from the Import Directory and cannot be modified to import files from any other location. If the Import Directory is not available, you will be warned on starting up Data Importer.



When using Data Importer, you can set options to either delete or archive the files after importing to Data Importer using the Import Definitions dialog box.

- If you select **Archive After Import** a copy of the processed file is placed in the Archive directory.
- If you select **Delete After Import** and **Archive After Import**, a copy of the processed file is placed in the Archive directory and the original file is deleted from the Import Directory.

The Help File Directory

The Help File Directory contains the *.chm* (Compiled HTML) files used for the on-line help for Macro Space Management. The directory must be the local computer as *.chm* help files cannot be read across a Microsoft Windows network. The local files are found at C:\Program Files\Oracle Retail\MSM\Help.

The Log Directory

The Log Directory holds text versions of the logs maintained by Macro Space Manager.

Name ^	Size	Type
AVT5 Store Manager.log	12 KB	Text Document
AVT5Controls.log	14 KB	Text Document
AVT5Legacy.log	2 KB	Text Document
Macro Space Management.log	24 KB	Text Document
Store Manager.log	12 KB	Text Document

This directory may be either local or network.

- If local, each user will have information written to a user specific help file.
- If network, all users will write information to a common help file.

These log files can be used by Support personnel to diagnose problems with the software.

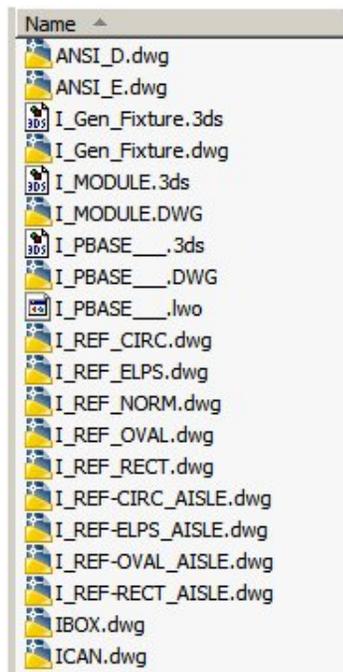
Note: Other logs are written to tables in the database.

The MSM Directory

The MSM Directory is used to hold standard blocks used by the application. There are Imperial and Metric directories and the default directory.



These standard blocks include:



- Blocks used for annotating aisles (i.e. REF-CIRC_AISLE, REF_ELPS_AISLE, etc)
- Blocks used for annotating bay numbering (i.e. REF_CIRC, REF_ELPS, etc)
- Blocks used to represent modules [2 dimensional blocks used for placing merchandise directly on the floor] (I_MODULE)
- Product Bocks used to represent products on fixtures (i.e. I_PBASE__, IBOX, etc)

- Title Blocks used for drawing borders (i.e. ANSI_D, ANSI_E, etc)

Note: Imperial Blocks have a prefix of I_, metric blocks do not have a prefix.

These blocks can be different file types:

DWG	File used in the Planner (AutoCAD environment)
3DS	Basic graphics file used in the Merchandiser environment
LWO	More advanced graphics file used in the Merchandiser environment

The Planogram Root Directory

The Planogram Root directory is the Root directory for planograms imported from third party software. This directory is not used in the standard implementation. Planograms can only be imported via the Planogram Import module.

Note: The Planogram Import Module is found in the APPS directory of a standard install.

The Root Directory

The Root Directory holds files that are essential to the operation of the software. Most files are directly referenced by the software and do not need the path specified by the Root directory.

Note: The DLLs are dependency DLLs referenced by the software. Acad.err, DLINE.LSP, ACAD.fas are referenced by AutoCAD.

The RFBin Directory

The RFBin Directory holds files from Store Manager that have been marked for deletion, but not yet purged from the database. When files are marked for deletion in Store Manager the physical files and directories are moved from under the Store Root to the RFBin. At the same time, the files are renamed from Filename.dwg to <FIL_ID>.dwg. (The FIL_ID is the primary key in the database).

If the files are not deleted, they are moved back to the Store Root and the FIL_ID changed back to the file name. If files are deleted, all entries are removed from the database and all physical files and directories removed from the Windows file structure.

Note: At present files are not being moved to the RFBin when marked for deletion. When purged, the physical directories and files are not being removed from the Windows file structure.

The Sound Directory

The Sound Directory is used to hold *.wav* sound files that can be used to give audible warnings for problems within Macro Space Management. The sounds are not user configurable but must be set up by Oracle using the OracleTB_EVENT_SOUND table in the database.

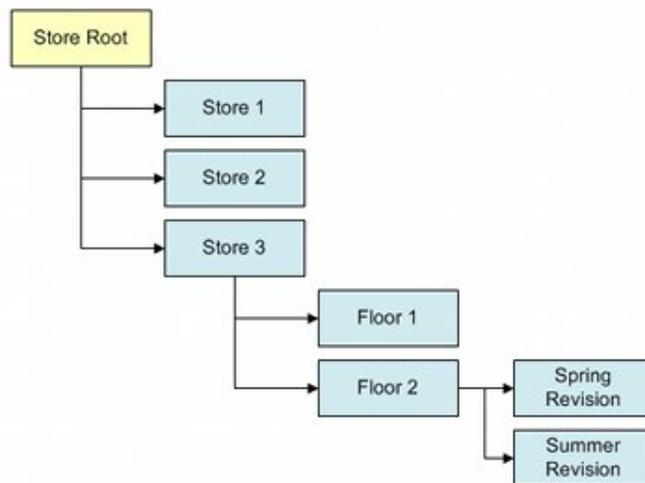
Note: WAV files are a standard format file used for playing Audio only sounds.

The Store Root and its Child Directories

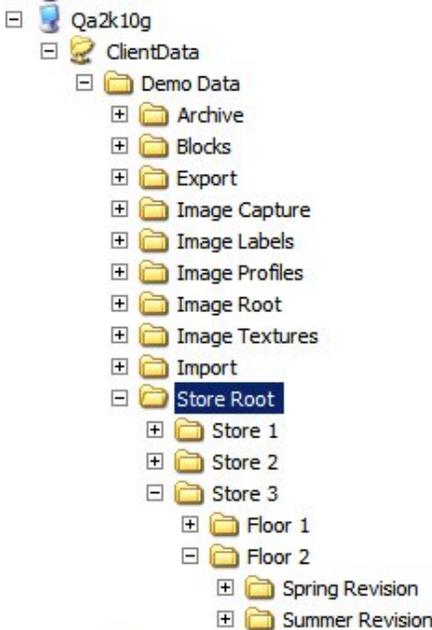
The Store Root serves as the starting point for a hierarchy of folders containing information on the stores within Retail Group. It must be located in a location accessible to all users of Macro Space Management and In-Store Space Collaboration.

Note: In-Store Space Collaboration uses DWF files (a special form of an AutoCAD drawing) to show the architectural plan for a store. This allows ISSC users to see where the fixtures and fittings are located relative to the structure of the store.

Stores, floors, and revisions are created relative to the store root. Stores are direct children of the store root, floors are children of their parent stores, and revisions are children of their parent floor.



As stores, floors, and revisions are created, physical directories are created relative to the store root.



When the physical directory is being created, it is named according to the information in the description field of the Add Floor dialog box. If the store, floor, or revision is subsequently renamed, it is renamed in the database only.

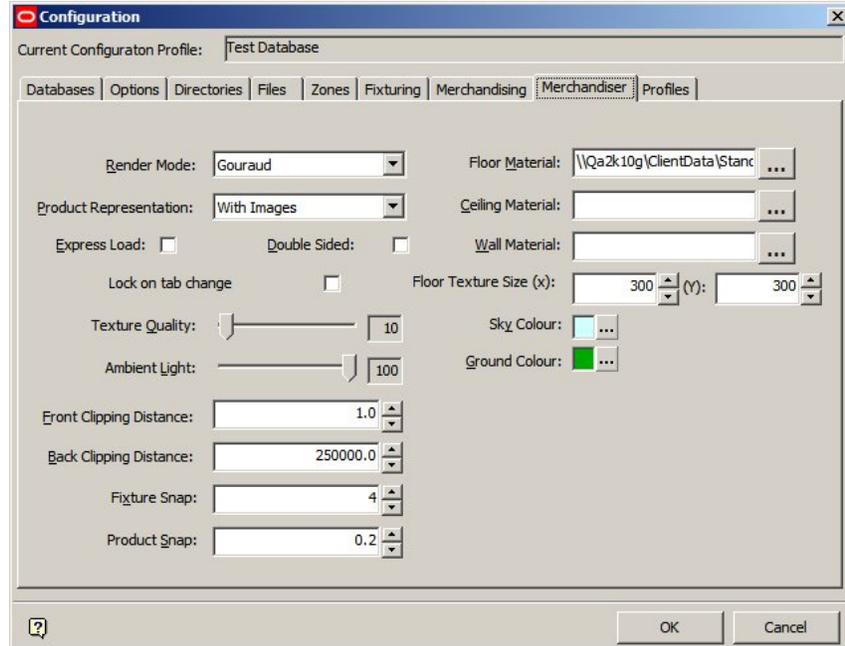
In the example below, when the floor was created it was called Level 1 and the directory named accordingly. The floor has subsequently been renamed 'First Floor' and the information changed accordingly in the database.



The database retains a link between the original directory name and the new name assigned in the description, so if the floor (or store or revision) is deleted from the database, the physical directory is also deleted.

The Textures Directory

The Textures Directory holds jpg files used to specify the materials for the floor and ceiling of the store in Merchandiser. These materials can be selected for use in the Merchandiser tab of the Configuration Module (Floor Material and Ceiling Material options).



Note: At present the Configuration module attempts to select materials from the Image Root directory.

It also holds jpg files used as the basis for creating lightwave objects (lwo files) for fixtures. In the example below a 'wood grain' effect has been used to make a pallet more realistic.



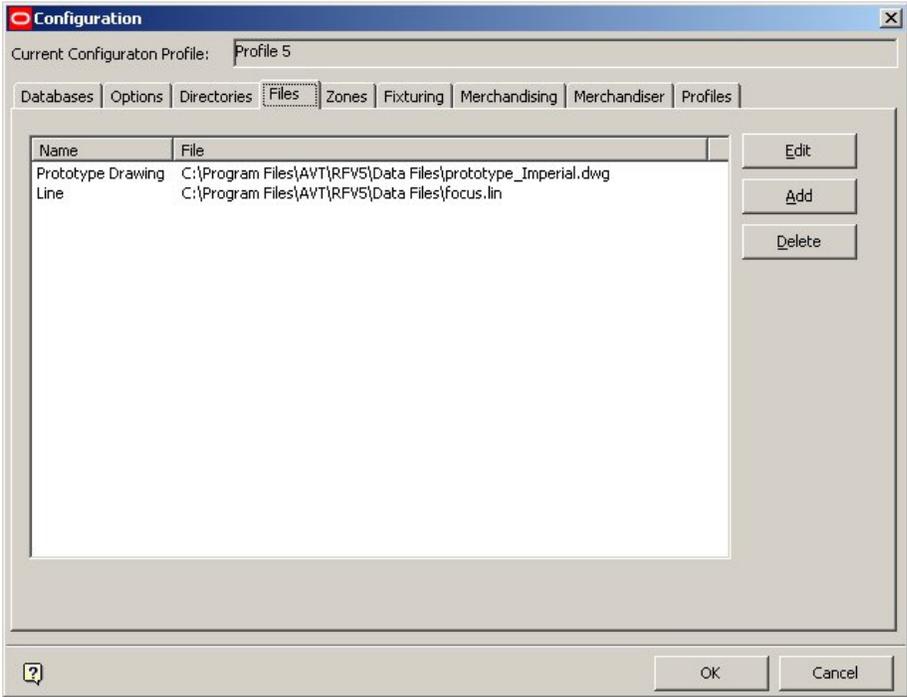
Note: A LWO file is a graphics file that gives a more detailed image than a 3DS file. The option to set up the LWO file is invoked in Merchandiser by right clicking on a Fixture and selecting 'Edit Materials'.

The Working Directory

The Working Directory stores temporary files used by the software and is always on the local computer. For example, the temporary graphics used to show products as 3D boxes are held in the Working directory.

The Files Tab

The **Files** tab contains information on a number of essential files. These files are shown in the File List.

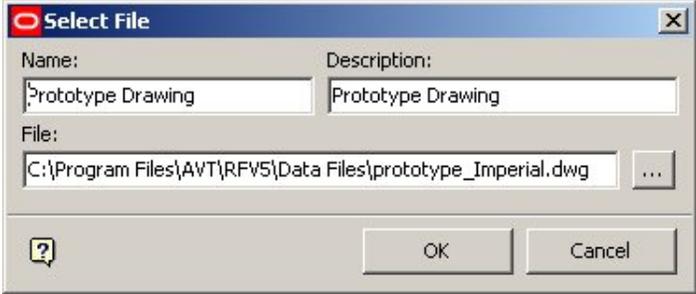


Files tab

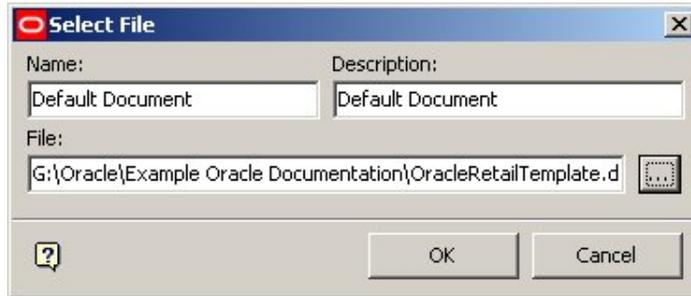
The **Prototype Drawing** file is the drawing that is copied each time Store Manager is used to create a new drawing. The **LIN** file contains information on line weights (thicknesses) for AutoCAD drawings.

To edit a file path:

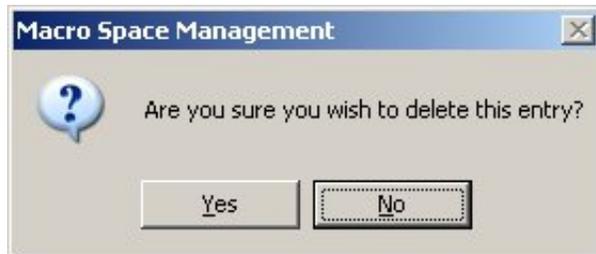
1. Select the directory name.
2. Click the **Edit** button. This brings up the Select File dialog box.



3. Browse to the new directory and click **OK**.
4. To add a directory, click the Add button.



5. Type in a name and description for the new file. Browse to the new file and click **OK**.
To delete a file:
6. Select the file name and click the **Delete** button.
7. A dialog box comes up asking for confirmation.



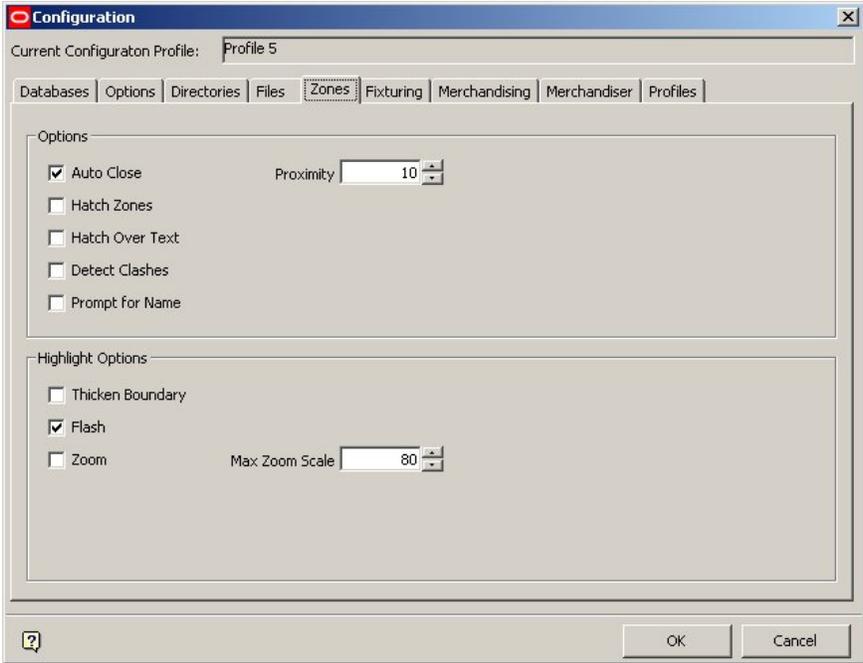
8. Click **Yes** to delete the file.

Note: Mandatory files cannot be deleted.

Note: The Prototype drawing and LIN files are found in the 'Data Files' directory in the standard installation:
C:\Program Files\Oracle Retail\MSM\Data Files.

The Zones Tab

The Zones tab contains basic options for Zones.

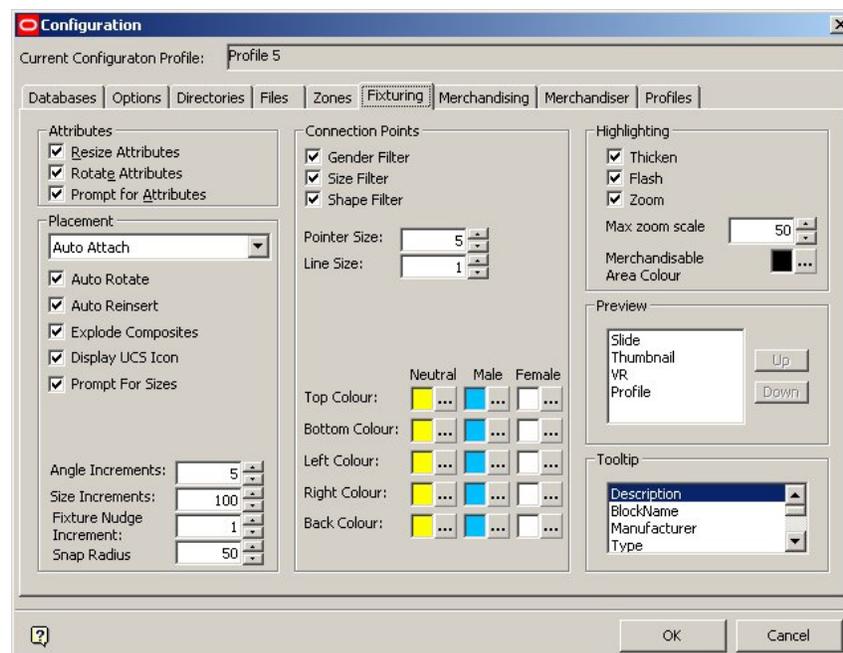


Zones tab

Field	Description
Auto Close	Automatically closes a zone when clicked within the proximity of the point where drawing the zone commenced.
Hatch Zones	Determines whether different zone types are drawn with a colored or transparent background.
Hatch Over	Text determines whether the Hatch Pattern will go over the top of any annotation.
Detect Clashes	Determines whether clashes between overlapping zones are highlighted during Zone placement. Note: Only Zones on the same aliased layer can be shown as clashing.
Prompt for Name	Prompts a dialog box to allow zone to be renamed locally when inserted into drawing.
Thicken Boundary	Increases the thickness of the boundary of the zone as visible on the drawing.
Flash	The selected Zone flashes briefly when selected from the hierarchical tree.
Zoom	Zone increases in size when selected. The physical size of the Zone does not change, only the scale it is displayed on the screen. Zoom only affects drawings opened in the AutoCAD environment, not in Merchandiser.
Max Zoom Scale	Active when the Zoom check box is selected. It sets the amount a zone zooms when selected.

The Fixturing Tab

The **Fixturing** tab contains a series of options primarily concerned with fixture placement. These options can affect how fixturing behaves in Planner, Merchandiser or both.

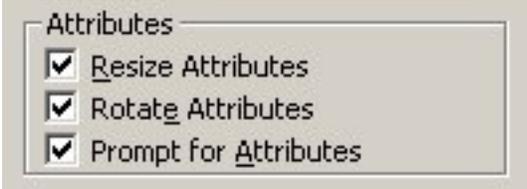


Fixturing tab

- **Attributes** frame specifies which features (attributes) of the fixture or fitting are active when it is placed into the drawing.
- **Placement** frame specifies which options are available when a fixture or fitting is placed into a drawing. For example, if the Clash Detection check box is ticked, then a warning is given if one fixture is placed overlapping another.
- **Connection Points** frame specifies a series of options that determine how two fixtures/ fittings with connection points join together. For example, if the Layer Filter option check box is ticked, then fixtures or fittings on different aliased layers cannot be connected.
- **Highlighting** frame determines how fixtures or fittings selected via the Fixtures tool bar display when selected.
- **Preview** frame determines how Fixtures and Fittings show in the Preview window on the Object Browser.
- **Tooltip** frame determines the information that shows when the mouse pointer is held over the fixture/fitting name, for example in Merchandiser.

The Attributes Frame

The **Attributes** frame is used to set AutoCAD attribute options to an AutoCAD Block. These settings take effect when blocks are inserted in the Planner module.



Note: Attributes are customizable annotations specific to particular types of object, for example fixtures. They are typically assigned to an AutoCAD object using the ATTDEF command, generally before the block is imported into Macro Space Management. For more information on Attributes and Blocks see the AutoCAD help files.

In the example below, the attribute is used to specify the material for the fixture.



Steel

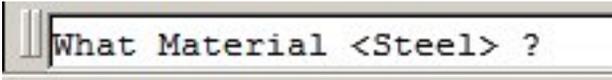
- **Resize Attributes** results in the attribute being resized if the size of the object to which the attribute is attached changes. This applies to stretchable (re-sizable) blocks where you can specify dimensions when the block is placed in the drawing. If this option is not checked then the attribute stays the same size when the size of the object is changed.
- **Rotate Attributes** results in the attribute being rotated to stay in a readable orientation when the object to which the attribute is assigned is changed to another orientation. If this option is checked, the attribute is 'flipped' so that it can be read when the block is rotated 180°. If the option is not checked, the attribute appears upside down when rotated 180°.

In the example below the Rotate Attributes checkbox has not been checked. When the block is placed in the Planner module and rotated 180°, the attribute text is upside down.

Steel



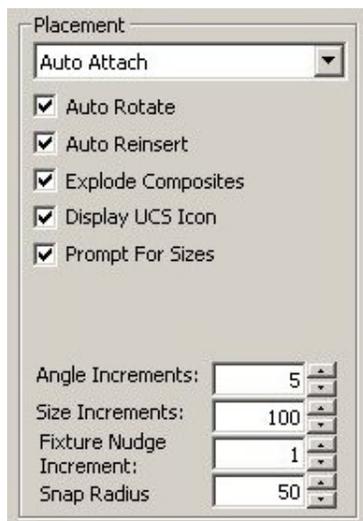
- **Prompt for Attributes** results in the user being prompted to edit the attribute when the object is inserted. The prompt appears in the AutoCAD command line in the Planner module.



Note: If the Prompt for Attributes option is checked, you have to specify an attribute before the Add Fixtures dialog box appears.

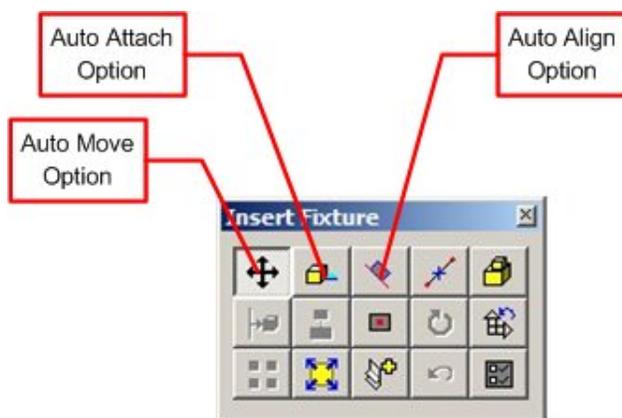
The Placement Frame

The **Placement** frame is used to specify how fixtures place in the drawing. Some options apply to the Planner module, some to both the Planner and the Merchandiser module.

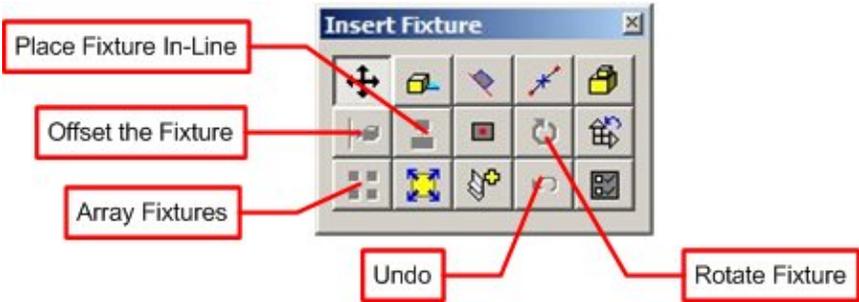


Select the options from the drop down list, by selecting the check boxes. The drop down list at the top of the frame gives you the option to set the default for the Add Fixture dialog box in the Planner module.

- **Auto Attach** enables the fixture being inserted to be snapped to an existing fixture (if suitable connection points exist).
- **Auto Move** enables the fixture to be moved to a different position than the original insertion point.
- **Auto Align** automatically aligns the fixture being inserted with the nearest existing fixture.



- **Auto Rotate** automatically requires you to specify the rotation angle of the block when inserting into the drawing.
- **Auto Reinsert** enables you to insert further examples of the fixture without re-selecting it from the hierarchy by pressing <Enter>. If either Auto Rotate or Auto Reinsert is selected, it renders some of the options in the Add Fixture dialog box temporarily unavailable.



The unavailable options are Place Fixture In-Line, Offset the Fixture, Array Fixtures, and Rotate Fixture. Undo is also temporarily unavailable because there are no actions to undo until the fixture has been placed.

- **Explode Composites** results in composite blocks separating into their constituent parts when inserted into the drawing.

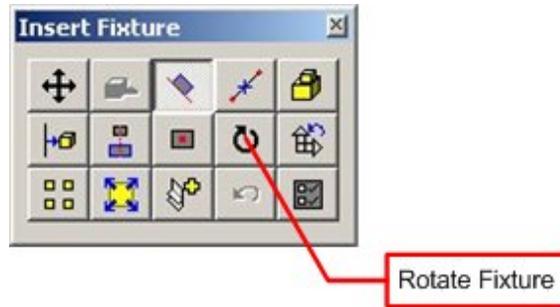
Note: This option is an MSM command and differs from the AutoCAD Explode command. The AutoCAD Explode command explodes the composite into its constituent parts, but does not write the individual blocks into the MSM database. (This requires Synchronization). The MSM Explode explodes the composite into its constituent blocks and writes the individual blocks into the MSM database - synchronization is not required.

- **Display UCS icon** determines whether the Planner UCS (Universal Co-ordinate System) icon is displayed when fixtures are inserted. If the box is not selected, the UCS icon is temporarily suppressed while a fixture is being placed.
- **Prompt for Sizes** activates a dialog box that prompts you to specify the dimensions for sizable fixtures. If selected, when the fixture is stretchable, it causes a prompt dialog box to appear when the fixture is placed.

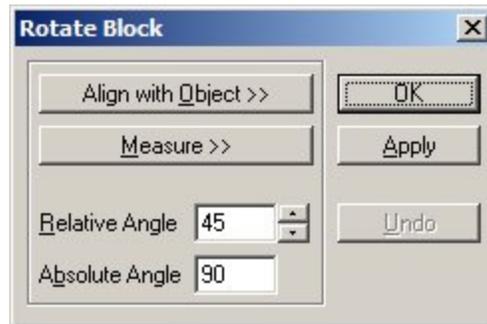


Note: if the Prompt for Sizes checkbox is not enabled, it will not be possible to specify the size of stretchable fixtures when inserting them in the drawing.

- **Angle increments** set the increments by which a fixture can be rotated during insertion into Planner.



Clicking on the Rotate Fixture option in the Add Fixture dialog box brings up the Rotate Block dialog box.



The Angle Increments option in the Fixturing tab of the Configuration Module determines the increments the Relative angle increases or decreases when the spin controls for Relative Angle are used.

- **Size Increments** sets the increments by which a fixture can be nudged during insertion.

Note: this functionality is not working at present.

- **Fixture Nudge Increment** sets the amount a selected fixture is nudged in the Merchandiser module each time a cursor key is pressed. If set to 1 in an imperial database, then the fixture is moved equivalent of one inch every time a cursor key is pressed. (The equivalent would be one centimeter in a metric database).
- **Snap Radius** determines how close a fixture has to be to another in the Planner Module before the connection points snap together. The larger the value, the greater the distance one fixture snaps to another from.

Note: For fixtures to connect together, their connection points must have compatible settings. See Fixture Studio help file for more detailed information.

The Connection Points Frame

The **Connection Points** frame is used to specify details of connection points that join one fixture to another.

Connection Points

Gender Filter

Size Filter

Shape Filter

Pointer Size:

Line Size:

	Neutral	Male	Female
Top Colour:	<input type="color" value="#ffff00"/>	<input type="color" value="#00bfff"/>	<input type="color" value="#ffffff"/>
Bottom Colour:	<input type="color" value="#ffff00"/>	<input type="color" value="#00bfff"/>	<input type="color" value="#ffffff"/>
Left Colour:	<input type="color" value="#ffff00"/>	<input type="color" value="#00bfff"/>	<input type="color" value="#ffffff"/>
Right Colour:	<input type="color" value="#ffff00"/>	<input type="color" value="#00bfff"/>	<input type="color" value="#ffffff"/>
Back Colour:	<input type="color" value="#ffff00"/>	<input type="color" value="#00bfff"/>	<input type="color" value="#ffffff"/>

The options are selected by selecting the check boxes or by using the spin controls.

- **Gender Filter** sets whether male connections can only connect to female connections, or whether one connection can connect to another irrespective of gender. If off, any gender connects to any gender.
- **Size Filter** sets whether connections have to be of compatible sizes to mate, or whether one connection can join to another irrespective of size. If off, any size of connection connects to any other size.
- **Shape Filter** sets whether connections have to be the same shape to mate. If off, any shape connects to any other shape.



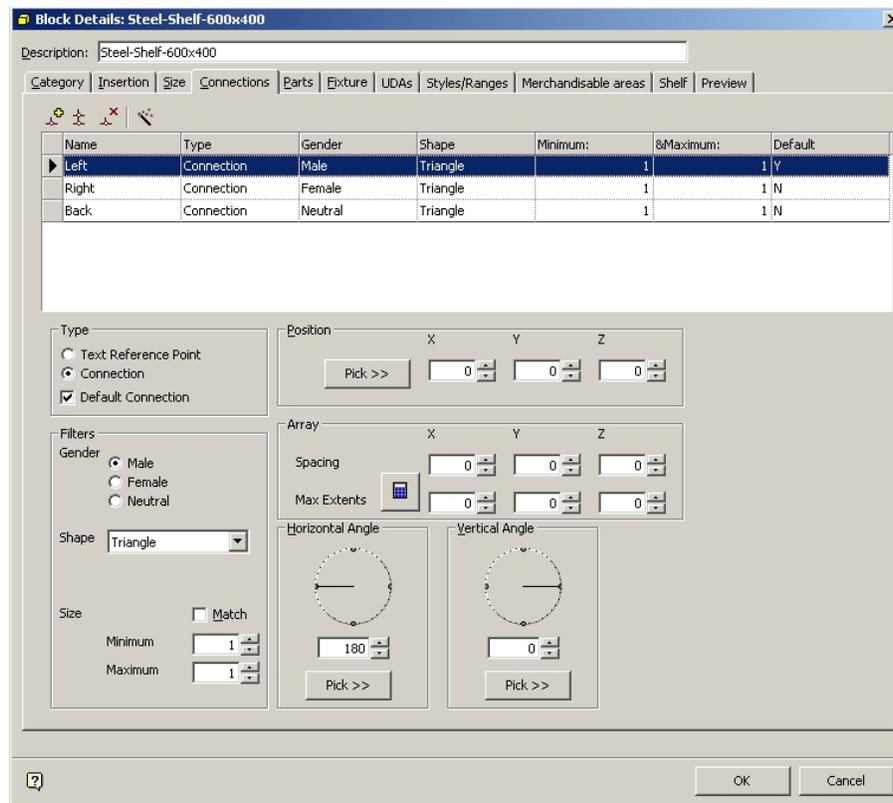
- **Pointer Size** is used to set the size the connection points visually appear in the Planner, Merchandiser and Fixture Studio environments. In Planner, the connection points appear when the 'Attach' option is selected in the Add Fixture dialog Box. In Merchandiser, the connection points appear when Connections are toggled On in the status bar. In Fixture Studio, the connection points can be seen in the Preview Tab of the Block Details dialog box - select the 'Connection Points' check box to display them.
- **Line Size** is used to set the thickness of lines associated with connection lines in the Merchandiser module and in the Preview tab of the Block Details dialog box - select the 'Connection Points' check box to display them.

- **Colors** are used to set the color for the connection points used in the Planner and Merchandiser environment.

Note: It is recommended Neutral, Male and Female connection points are given different colors.

The Connection Points Frame and Fixture Studio

Connection points are specified within the Block Details dialog box in Fixture Studio.



The Connections tab allows you to specify the Connection Name, Type, Gender, Shape, Size, and the default connection. Filters set in the Connection Points frame of the Fixturing tab in the Configuration Module determine which connection points can connect with which. For example, if the Gender filter is On, male connections cannot connect with other male connections; if the Gender filter is Off, they can. (See the Fixture Studio Help file for more information).

The Highlighting Frame

The **Highlighting** frame is used to specify how fixtures appear when highlighted in the drawings in the Planner module and to specify the color of the merchandisable area in Merchandiser and Fixture Studio

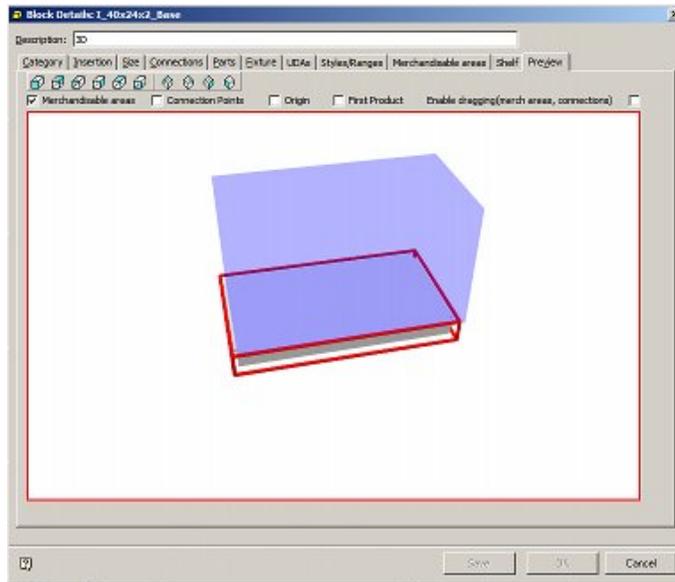


The option is activated in Planner by clicking the Highlight in Drawing option in the fixturing toolbar. When a fixture present in the drawing is highlighted in the fixture hierarchy it is highlighted in the drawing according to the selected options.



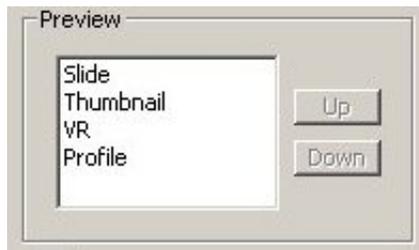
- **Thicken** increases the thickness of the lines denoting the fixture as visible on the drawing.
- **Flash** causes the selected Fixture to flash three times when selected from the hierarchical tree.
- **Zoom** determines how much a Fixture changes in apparent size when selected. The physical size of the Fixture does not change, only the scale it is displayed on the screen. If there are multiple fixtures in the drawing, the drawing zooms until all fixtures of that type are visible.
- **Max Zoom Scale** is only active when the Zoom check box is selected. It sets the amount a fixture zooms when selected.
- **Merchandisable Area Color** indicates the color merchandisable areas appear in the Preview tab of Fixture Studio and if displayed in the Merchandiser module.

In the example below from Fixture Studio, the Merchandisable area color is set to blue.



The Preview Frame

The **Preview** frame is used to set the order of priority that previews display in the preview window in the Object Browser.



Each option in the list of those available can be moved up and down in the window by clicking the Up or Down buttons. If a direction is not available then the appropriate movement button is not available.

The Tooltip Frame

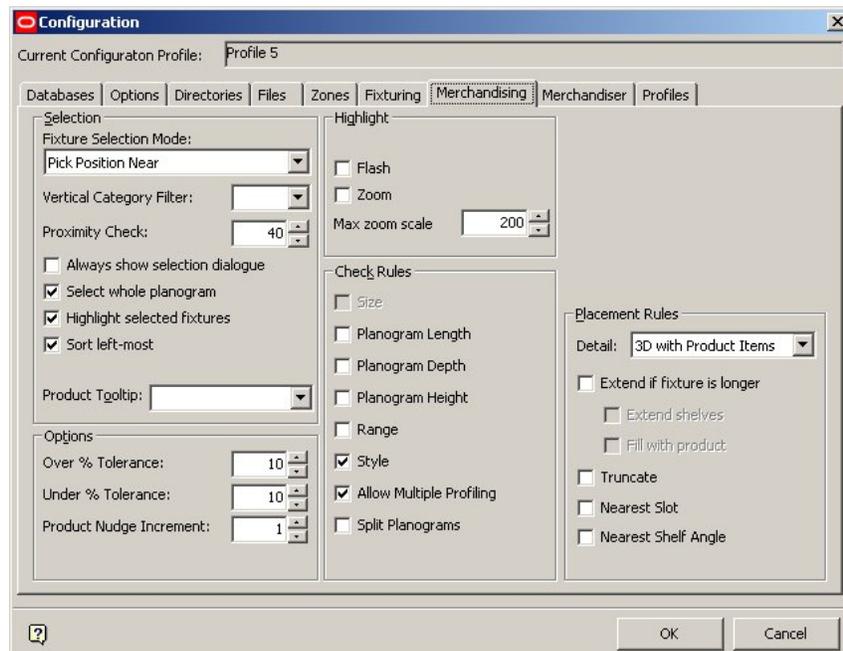
The **Tooltip** frame is used to select the tooltip that is displayed when the mouse pointer is held over a fixture.



The required tooltip can be selected by using the scroll bar to find the required tooltip in the list of those available, then clicking on it to highlight it.

The Merchandising Tab

The **Merchandising** tab contains settings that affect how Products and Planograms are placed on fixtures.



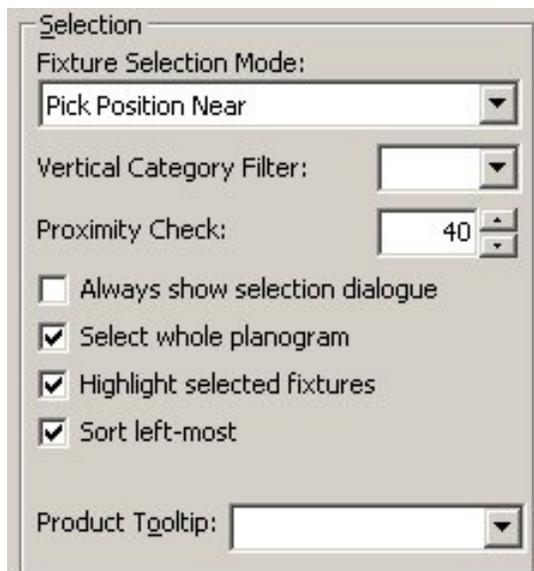
Merchandising tab

- The **Selection frame** specifies a series of options determining how fixtures are selected for placement of Products or Planograms.
- The **Options frame** determines what tolerances are allowed for over or undersize planograms when placing them – planograms outside these tolerances trigger an error message.
- The **Highlight frame** specifies how selected fixtures display in the Planner module when the Highlight in Store option is used.
- The **Check Rules frame** sets criteria by which Planograms are filtered for display.
- The **Placement Rules frame** determines how the planogram is placed on the selected fixture.

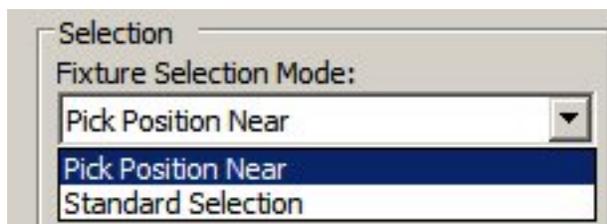
The Selection Frame

The **Selection** frame specifies a series of options determining how fixtures are selected for placement of Products or Planograms.

Note: Changes in these settings may have a considerable effect on how fixtures are selected. Users may experiment to find settings that suit their requirements.



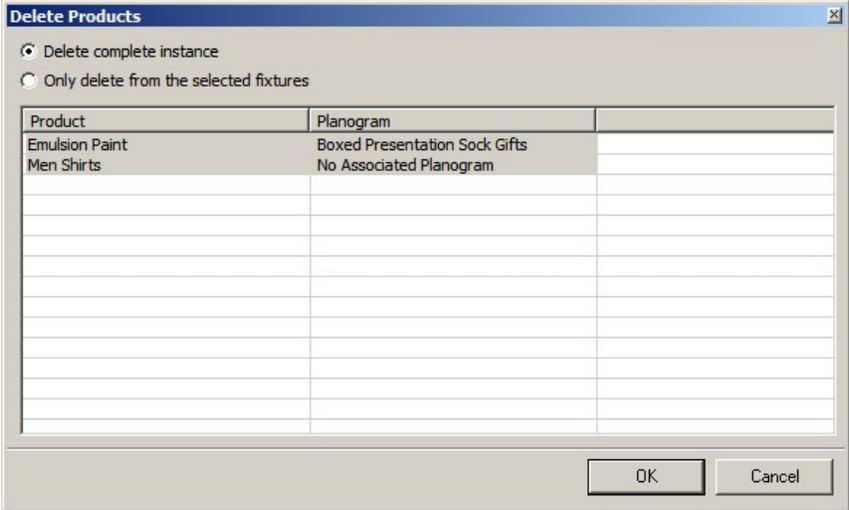
- **Fixture Selection Mode** is selected from a drop down list. It only affects the Planner module.



1. **Standard Selection** allows you to use all the usual AutoCAD selection methods, for example windows selection boxes and fences.
 2. **Pick Position Near** gives an additional method of selection. Providing no fixtures are currently selected, when the Add Product or Add Planogram buttons are clicked on the Object Browser, you may select fixtures to merchandise by clicking adjacent to them. A sequence of fixtures may be selected, the selection sequence being completed by right clicking.
- **Vertical Category Filter** enables you to select Planograms that have been previously assigned to a vertical category. This allows you to select planograms that have been designated for placement in fixtures above floor level.

Note: This functionality is not fully implemented

- **Proximity Check** sets the tolerance for the Planner cursor when Standard selection is in use. If the value is large you may click further away from the fixture and can still select it.
- **Always show selection dialog** controls display of the Delete Products dialog box when products or planograms are deleted in the Planner module. If this option is not enabled, then the dialog box only appears if multiple products or planograms are selected. A single instance of a product or planogram is deleted without further confirmation. If this option is enabled, then the dialog appears even if a single product or planogram is deleted.



Delete Products dialog box

- **Select whole planogram** allows you to select a single fixture associated with a multi-bay planogram and delete the whole planogram when the Delete Planogram command is used.

Note: This functionality is not yet working.

- **Highlight selected fixtures** highlights fixtures in the drawing suitable for the currently selected planogram in the Object Browser.

Note: this functionality is not yet working.

- **Sort Left-most** controls whether fixtures are populated in the sequence they are selected or whether they are sorted into a sequence starting with the leftmost fixture. If Soft Leftmost is Off, then the fixtures are populated in the sequence they are selected. If Sort Leftmost is On, then the fixtures are populated leftmost first relative to the front of the fixtures.

In the diagram below, the effects can be seen of having Sort Leftmost Off and On. The effect of front direction can also be seen.

As Selected

1	3	4	2
Front	Front	Front	Front

Populated with Sort Leftmost Off

1	3	4	2
Front	Front	Front	Front

Populated with Sort Leftmost On

1	2	3	4
Front	Front	Front	Front

As Selected

Front	Front	Front	Front
1	3	4	2

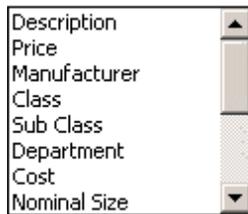
Populated with Sort Leftmost Off

Front	Front	Front	Front
1	3	4	2

Populated with Sort Leftmost On

Front	Front	Front	Front
4	3	2	1

- **Product Tooltip** specifies the type of tooltip to be displayed when a mouse cursor is hovered over a product in a Planner or Merchandiser Store Plan.



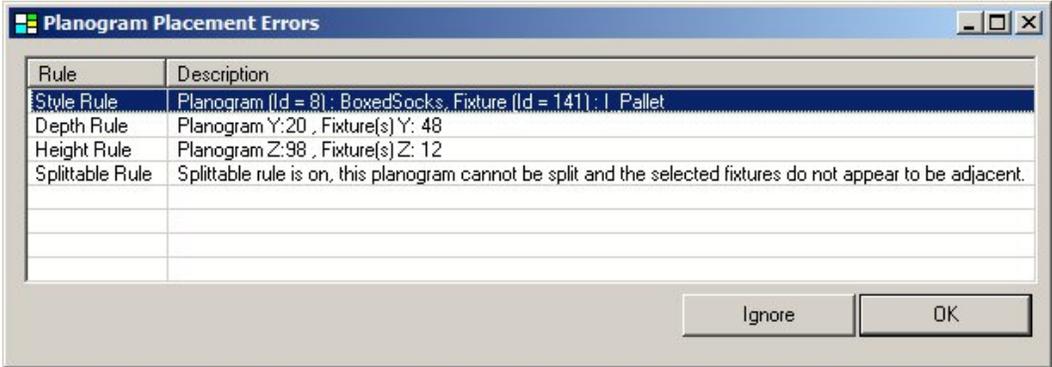
The Options Frame

The **Options** frame determines what tolerances are allowed for planogram length when placing them onto fixtures before a warning is generated. It functions for both Planner and Merchandiser.



The tolerances can be set to 0 - 50% for fixtures that are both Over and Undersize for length relative to the selected planogram. For example, selecting -25% for undersize fixtures and +10% for oversize fixtures would allow a 48" planogram to be placed on fixtures that varied between 36" to 52.8" in length.

Any fixtures outside this range of lengths would still trigger the Planogram Placement Errors dialog box, providing the Planogram Length warning is selected in the Check Rules frame of the Merchandising tab.

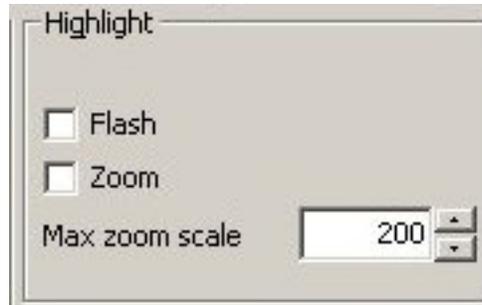


Product Nudge Increment sets the amount a product is nudged in Merchandiser each time a cursor key is pressed. If set to 1 in an imperial database, then the product is moved equivalent of one inch every time a cursor key is pressed. (The equivalent would be one centimeter in a metric database).

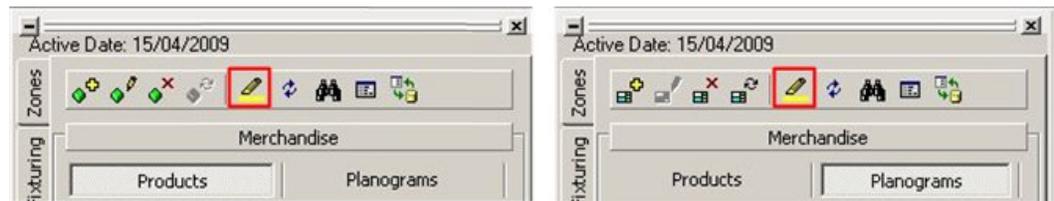
(There is no effect in the Planner environment).

The Highlight Frame

The **Highlight** frame specifies how selected merchandise display in the Planner Module.



The option is activated in Planner by clicking the Highlight in Drawing option in the fixturing toolbar - when a fixture present in the drawing is highlighted in the fixture hierarchy it is highlighted in the drawing according to the selected options.



Highlight Option

- **Flash** causes the selected merchandise to flash three times when selected from the hierarchical tree.
- **Zoom** causes the merchandise to change in apparent size when selected. The physical size of the Fixture does not change, only the scale it is displayed on the screen. If there are multiple fixtures in the drawing, the drawing zooms until all fixtures of that type are visible.
- **Max Zoom Scale** is only active when the Zoom check box is checked. It sets the amount a fixture zooms when selected.

The Check Rules Frame

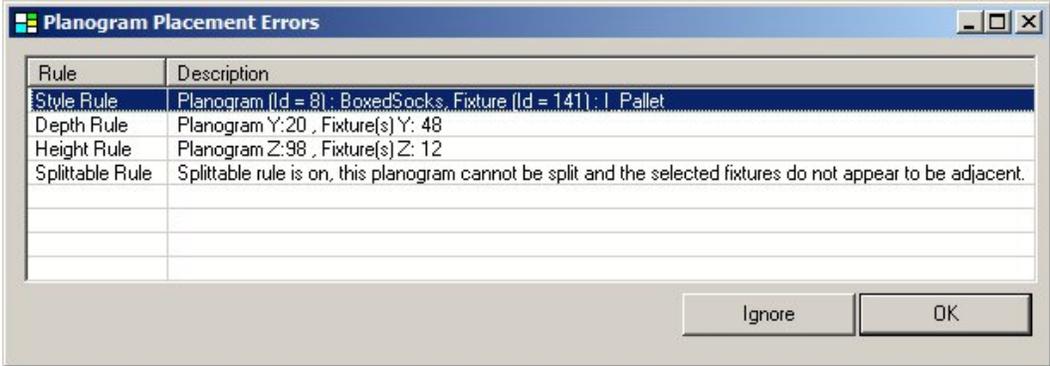
The **Check Rules** frame sets criteria by which warnings are given for Planograms being placed in both the Planner and Merchandiser modules.



Check Rules Frame

When a planogram is designed in Merchandiser or imported into the MSM database, the planogram definition contains information about the fixtures it is designed to be placed on. The check rules compare information on the fixtures selected in the drawing with the information on fixtures held in the planogram definition.

If there is a difference between the selected fixtures and the defined fixtures for the currently active rules, a Planogram Placement Errors dialog box appears in both Merchandiser and Planner environment.



Planogram Placement errors

The check boxes generate the following warnings if selected:

- **Size** is not available for selection. When it was active it turned the Size Rule On or Off in the Merchandiser module.

Note: The Size Rule can be turned On or Off using the controls in the Merchandiser module.

- **Planogram Length, Planogram Depth** and **Planogram Height** trigger warnings if the selected fixtures do not match the sizes specified in the planogram definition
- **Range** triggers a warning if the Planogram to be added has properties that do not fall within specified temperature or weight ranges.

Note: The Range option is currently not active in Merchandiser.

- **Style** triggers a warning if the Planogram to be added has a specified style that does not match the styles for the specified fixtures.
- **Allow Multiple Profiling** allows adding a planogram to a fixture already containing merchandise if the checkbox is selected.

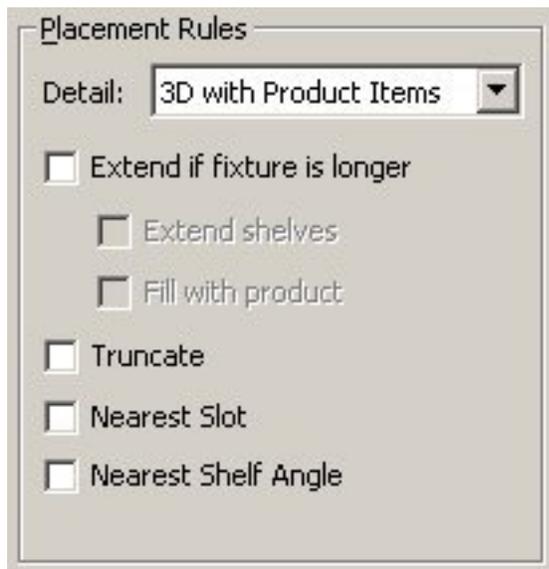
Note: Ensure this checkbox is not selected if you want to be warned about multiple profiling.

- **Split Planograms** triggers a warning if a planogram has been placed on fixtures that are not adjacent, that is, fixtures with a distinct gap between them and the planogram has not been designated as being able to split.

Note: This warning does not currently operate in Merchandiser - although it does in the Planner module.

The Placement Rules Frame

The **Placement Rules** frame determines how the planogram is placed on the selected fixtures. Some options cater for if the parameters in the planogram definition differ from those of the selected fixtures.



Placement Rules

Detail brings up a pull down list specifying the default level of detail the planogram is drawn in.



- 2D places a simple placeholder to represent the planogram. No shelves or products are drawn.

- 3D draws the shelves in the planograms but represents the products by placeholders on the individual shelves.
- 3D with Product Items shows the shelves with individual products drawn.

Note: This option has a considerable impact on the amount of data storage capacity required. Choosing the 2D option results in a significantly smaller quantity of data being stored than if the 3D with Product Items option is selected.

Note: The Detail drop down list sets the amount of default level of detail planograms are drawn in. It is possible to change the level of detail in an individual store plan by clicking the **Implode** or **Explode** icons in the Directions and Product Text toolbar.



The remaining options determine what happens if the fixtures selected to place the planogram on differ from those specified in the planogram definition held in the database.

The **Extend if fixture is longer** option comes into effect when planograms are shorter than the fixture. The two subsidiary options are not available until the 'Extend if fixture is longer' option is selected.

- **Extend Shelves** increases the shelf length (and depth) on the planogram until it matches that of the fixture.
- **Fill with product** puts additional product onto the shelf (or fixture) for the additional length (and depth) of the fixture.

Truncate shortens the Planogram length to that of the fixture if it is longer. This means that both the shelves and their associated products are reduced for both length and depth as required.

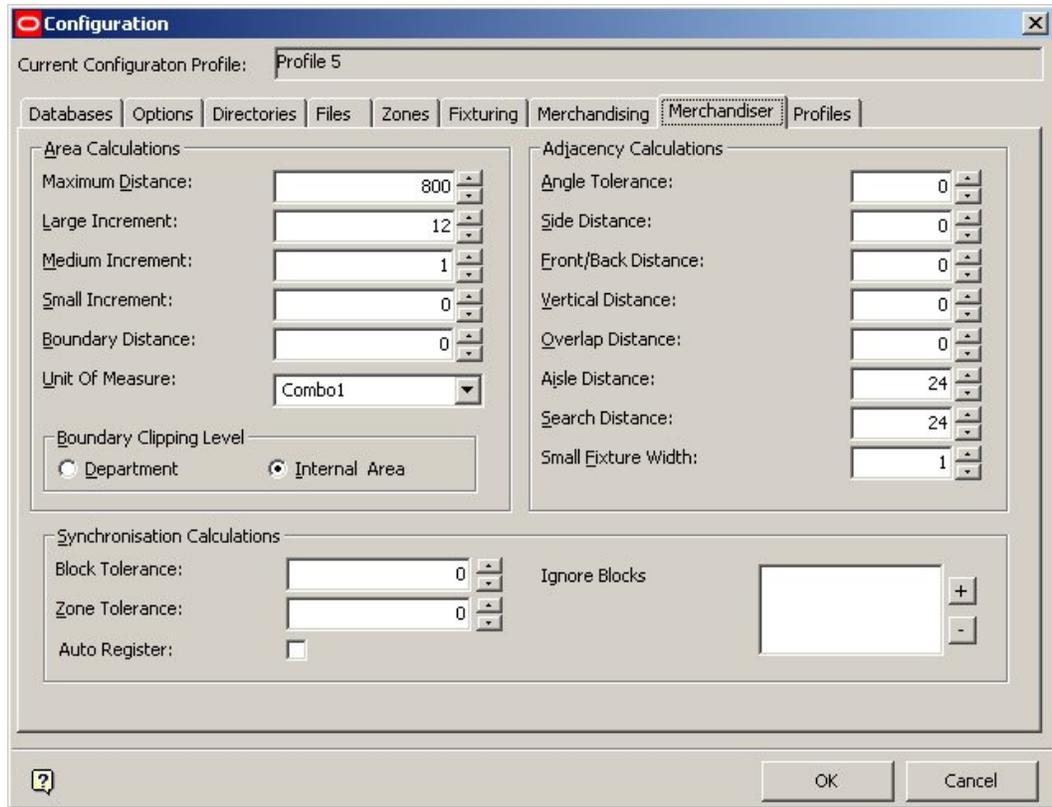
Nearest Slot changes the slot heights in the Planogram to match that of the fixture if the fixture does not permit the slot heights specified in the Planogram.

Nearest Shelf Angle changes the shelf angles in the Planogram to match those of the fixture if the fixture does not permit the shelf angle specified in the Planogram.

Note: The functionality for extending and truncating planograms is not yet fully implemented.

The Merchandiser Tab

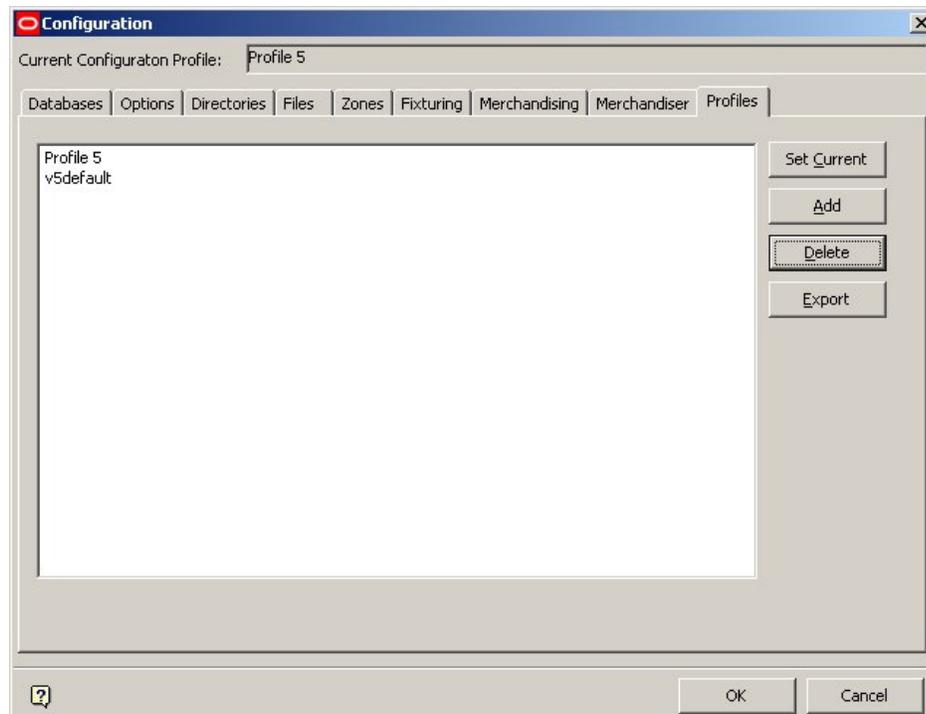
The **Merchandiser** tab contains a series of settings that affect how area and adjacency calculations are carried out in the Merchandiser module.



Merchandiser tab

The Profile Tab

Each Profile contains a defined set of preferences that have been set using the Configuration module. The Profile in use is known as the Current profile. The preferences and changes made to the Configuration module are stored in the current profile. Oracle Retail Macro Space Management allows you to store multiple profiles, allowing them to switch from one set of standard settings to another.



Profile Tab

- The Profile List is a list of all currently available profiles.
- **Set Current** makes a highlighted profile current.
- **Add** takes a copy of the current profile and stores it under a different name. It also makes the new profile current.
- **Delete** deletes the highlighted profile.

Note: If the profile to be deleted is current, it cannot be deleted – another profile has to be set to current first.

Before the profile can be deleted, it has to be conformed.



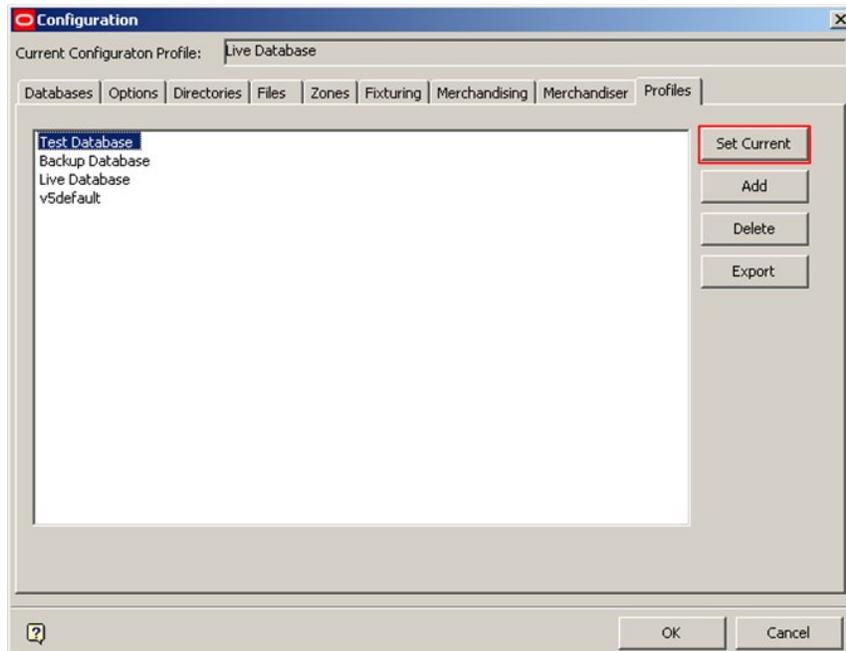
- **Export** exports the highlighted profile to the Export directory, putting up a confirmatory message at the same time.



Note: The Export directory is specified in the directories tab.

Switching Profiles

Each **Profile** holds a complete user specific list of settings for Macro Space Management. This allows users to swap from one list of settings to another at the click of a button.



In order to do this, highlight the profile it is wished to change to then click the Set Current button.

In the above example, the user is in the process of switching from the Live Database (shown as the Current Configuration Profile) to the Test Database.

Current Configuration Profile

The **Current Configuration Profile** is shown above the tabs. Changes made to configuration options are stored in this profile.



Current Configuration Profile

The current profile can be changed in the Profiles tab.

Synchronization

Storing Data in Planner

Data is stored in two ways within the Planner environment. Data stored in an AutoCAD drawing is retained in the .DWG file that contains all the pertinent information. Macro Space Management also stores information in its central database. Macro Space Management is integrated with AutoCAD. However, some AutoCAD tools can modify AutoCAD drawings in ways that are not registered by Macro Space Management's central database. For example, if AutoCAD tools are used to move or delete fixtures or gondolas from the drawings, this does not alter the information held in the Macro Space Management database.

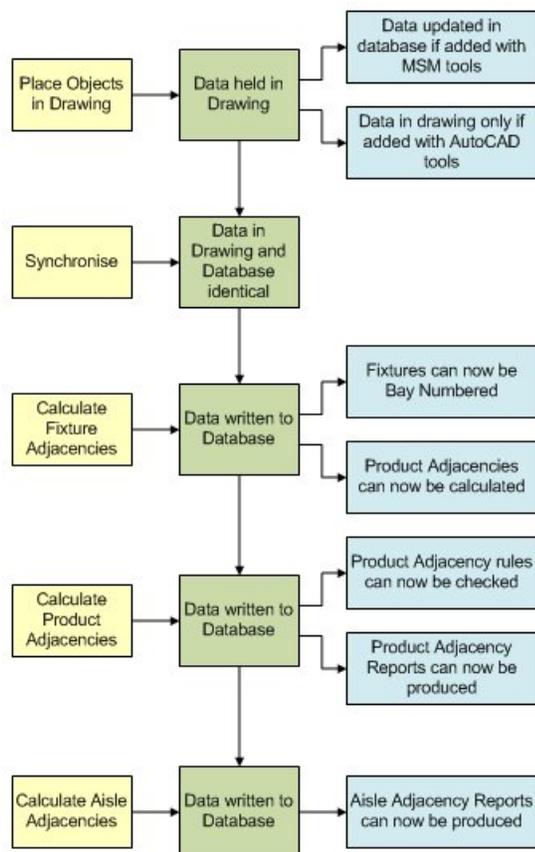
Potential differences between the AutoCAD drawing and the information held in Macro Space Management must be resolved. This is done using the Synchronization option. After data has been synchronized, the information held in the AutoCAD drawing is identical to that held in the Macro Space Management central database.

Storing Data in Merchandiser

Merchandiser only operates on data held within Macro Space Management's central database. If a drawing is worked on the Merchandiser environment, any changes will not be reflected in the drawing when it is next opened in the Planner environment. Accordingly, when a drawing is opened in the Planner environment after being worked on in the Merchandiser environment, it must be 'synchronized to database' in order to bring the drawing up to date with the changes made in Merchandiser.

Adjacency Calculations

Adjacency calculations are used to establish the relationships of fixtures and merchandise to each other. Before running adjacency calculations, it is good practice to run Synchronization. This ensures that the information in the drawing matches that in the database and hence any adjacency calculations will be correct.



Relation between Adjacency and Synchronization

Saving and Synchronization

Each time a Macro Space Management command is used, the information is written directly to the database at the same time as a change is made in the drawing. (These commands are also held in temporary memory so that 'undo' commands can be used).

Each time an AutoCAD command is used, changes are made to the drawing, but are not written to the central Macro Space Management database. This can lead to differences between drawing and database.

When working in Planner, it is therefore good practice to synchronize the drawing immediately before saving and exiting.

For more information refer the chapter on Synchronization.

Store Manager

Oracle Retail Macro Space Management application combines the traditional merchandising approach with store planning, construction, operation, and inventory management. It is designed to maximize profitability and returns by enabling the optimum layout and mix of products to be efficiently planned right across an organization's range of retail outlets.

Macro Space Management contains large amounts of information. This can be as specific as the current contents of a shelf in a single store or as general as the floor plans to be

implemented business wide within a specified time period. This mass of information has to be organized and administered. Within Macro Space Management this is achieved by the Store Manager module.

Store Manager operates in a similar way to Windows Explorer. It has been designed to be easy to use and allows information to be grouped in a way that reflects the structure of the organizations.

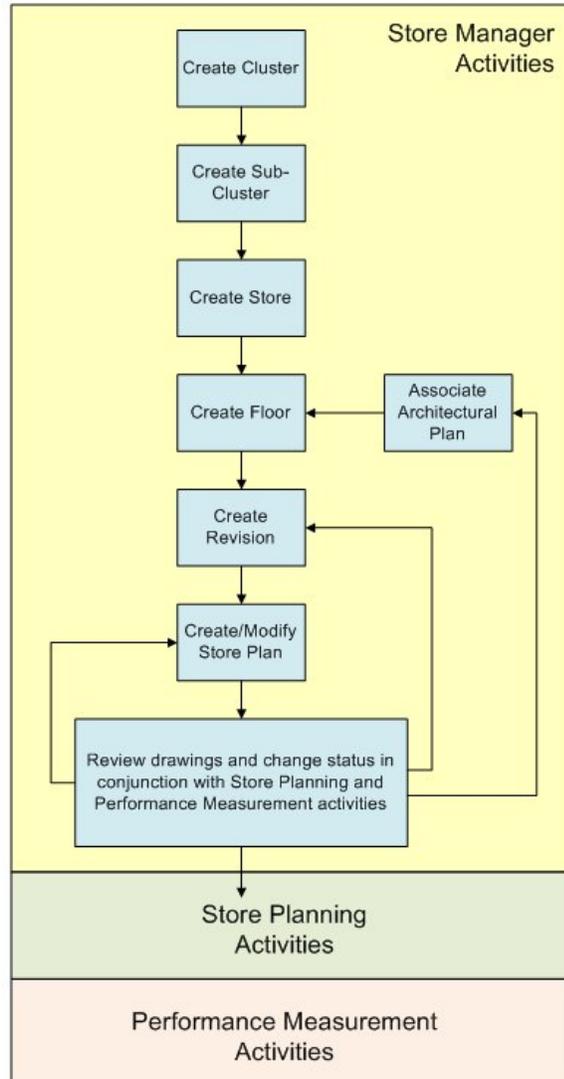
Using Store Manager you can:

- Assign your retail outlets to logical groupings, allowing comparisons and analysis of sales to be made between individual stores or groups of stores.
- Assign or change floor plans for stores, allowing the effects of differing store layouts or merchandising mixes to be evaluated.
- Carry out routine administration on the files used within Macro Space Management.
- Get reports on the data used within Macro Space Management.
- Interface with external programs allowing import and export of data to and from those programs.

Note: In-Store Space Collaboration, a web-based module of Macro Space Management, can be used to access and edit drawings held in the central Macro Space Management database.

Store Manager Flowchart

The Store Manager flowchart explains the store manager activities in the sequential order:



The Store Manager module contains the following sections:

- Basic Concepts
- Accessing Store Manager
- System Variables
- Setting up Store Manager
- Maintaining Store Manager
- Advanced Administration

Basic Concepts of Store Manager

Overview of Objects

There are varying types of data used within Store Manager. Each distinct type of data is described as an Object. Objects include:

- Clusters

- Sub-clusters
- Stores
- Floors
- Revisions
- Files

For administrative purposes, these objects are organized within a hierarchy. They often have a status and their use is governed by rules.

Cluster

A Cluster is a logical grouping of Sub-clusters or Stores that meet specified criteria. Examples of possible groupings for Clusters include sub-clusters or stores that are:

- In the same country.
- In the same region.
- Of the same size.
- Of the same turnover.
- Of the same internal layout.

Clusters of a specific type can be further divided into sub-clusters. A cluster is purely used as a container to arrange groupings of stores and behaves in the same way as a folder within Windows Explorer.

Sub-cluster

A **Sub-cluster** is a sub-division of a Cluster. Sub-clusters are used to allow a finer level of detail when analyzing the performance of groups of stores. For example the cluster of stores labeled England might be further sub-divided into sub-clusters called north, central and south.

If necessary, this process could be continued further, with the north sub-cluster being further divided into, for example, city and suburban sub-sub-clusters.

Prototype store

In some implementations of Macro Space Management a **Prototype Store** is a store that is used as a basis for comparison for other stores within the Store Manager hierarchy. Prototype Stores can be theoretical, in that they can be designed by marketing staff as an exemplar of what a store should be. They can also be practical examples selected from operational stores.

There can be many Prototype Stores, but each operating store can only have a single Prototype Store assigned to it at one time. Prototype status can be assigned to a store by editing its properties.

Stores

A **Store** is the unique description of a specific retail outlet. Stores are made up of one or more floors. Stores are normally associated with one or more clusters; although they can, (less usually), be directly associated with the Store Root.

Stores can be associated with more than one cluster. However, this multiple association is merely a series of links to the same store within the central database. Stores act as containers for floors and their associated files.

Floor

A **Floor** is a distinct physical level within a store. A Floor can contain one or more revisions, (arrangements of fixtures and fittings), associated with it.

Revision

Revision is the name given to a version of the arrangement of fixtures and fittings on a floor. Floors can have many revisions. For example a floor could have Spring, Summer, Autumn and Winter revisions, each representing a planning arrangement to be used at the appropriate time.

Revisions are often color coded to show their status. Floors can also have different revisions showing different marketing mixes, fixture arrangements, etc. Only one Revision can be active at any one time.

Files

A **File** is a general description for a category of records. Stores, floors and revisions are all types of file. Note that files can be of different types. For example, a Planogram might be a Planner drawing, while an architectural drawing might have been produced using a different form of software.

Hierarchical structure

A **Hierarchical Structure** is one where objects are organized in levels in the form of a tree. This allows objects to be set out in a logical relationship to each other. The more fundamental data is close to the trunk, while the more dependent data is further out on the branches. The most fundamental part of the hierarchical structure is the Store Root.



Hierarchical Structure

Parent-child relationships

Some objects within Store Manager are linked together in such a manner that changes to one object may result in changes to other objects linked to it. Such objects are described as being in a parent-child relationship. The object that has dependent objects associated with it is known as the parent, while the objects that are associated with the parent object are known as the children.

In a hierarchical structure, children of one parent can be parents of their own children in turn.

When the status of a parent object is changed; it can often result in changes to the status of child objects. Similarly, the status of parent objects can sometimes only be changed when the status of the appropriate child object is correct. When a parent object is deleted, it affects all the associated child objects. Conversely, a child object can often be deleted without affecting the parent.

Status

Status defines the current standing of an object within the system. For example, Stores and Floors generally have three statuses.

Edit Store

At the beginning of the process, the Store or floor has a Proposed status as it is only at the design status. When the store (or floor) has been built, its status will change to *Open*. Finally, if the store (or floor) has reached the end of its useful life, it will be assigned Closed status.

Similarly, an arrangement of fittings for a floor layout can be defined as either a Proposal, (at the design stage), Authorized, (approved for use in the future), Current, (in use), or Historical, (taken out of service).

The status of an object thus changes as Macro Space Management users move through the business cycle.

Publish dates and Effective dates

Publish and **Effective** dates are associated with the status of the drawing of a floor plan in some implementations of standard Macro Space Management and the automated Enterprise version of Macro Space Management. The Publish date is the date at which the drawing is issued to the stores. Drawings are typically published a number of days in advance of the time the changes are required.

The Effective date is the date at which the published drawing becomes current. Publish and Effective dates can be turned on by making changes to the OracleTB_SYSTEM_VARIABLE table in the database.

Note: It is recommended that users discuss this with Oracle's Technical Support team before making the changes.

Once enabled, Publish and Effective dates can be used to automatically change the status of revisions and drawings by making use of the UpdateStaus.exe file in the Macro Space Management/Tools sub-directory.

Note: UpdateStatus.exe can be set to run on a daily or weekly basis by the Windows task manager, allowing some degree of automation of common tasks. However, for full automation of common tasks, it is recommended that Macro Space Management users use the Enterprise version of Macro Space Management.

Birth Dates and Death Dates

Birth Dates and **Death Dates** are associated with the status of a revision. The Birth Date is the date at which the Revision becomes active, and the Death Date is the date at which the Revision ceases to become active and becomes Historical.

RFBin

The **RFBin** is Macro Space Management's equivalent of the Recycle Bin. Files marked for deletion are sent to the RFBin, but will not be permanently deleted until the Purge option is used in the Tools menu.

XREFS

XREF is a method Planner uses to link drawings. When you attach a drawing as an XREF, you link that referenced drawing to the current drawing. Any changes to the referenced drawing are then displayed in the current drawing when it is opened.

This is used within Macro Space Management where an architectural drawing can be attached as an XREF to multiple drawings at the same time. This allows a single architectural drawing to be used as a framework on which multiple arrangements of zones, fixtures, aisles and merchandise may be planned.

Note: Using XREFs reduces the quantity of data stored, as each architectural plan is only used once for each floor, not copied under multiple file names.

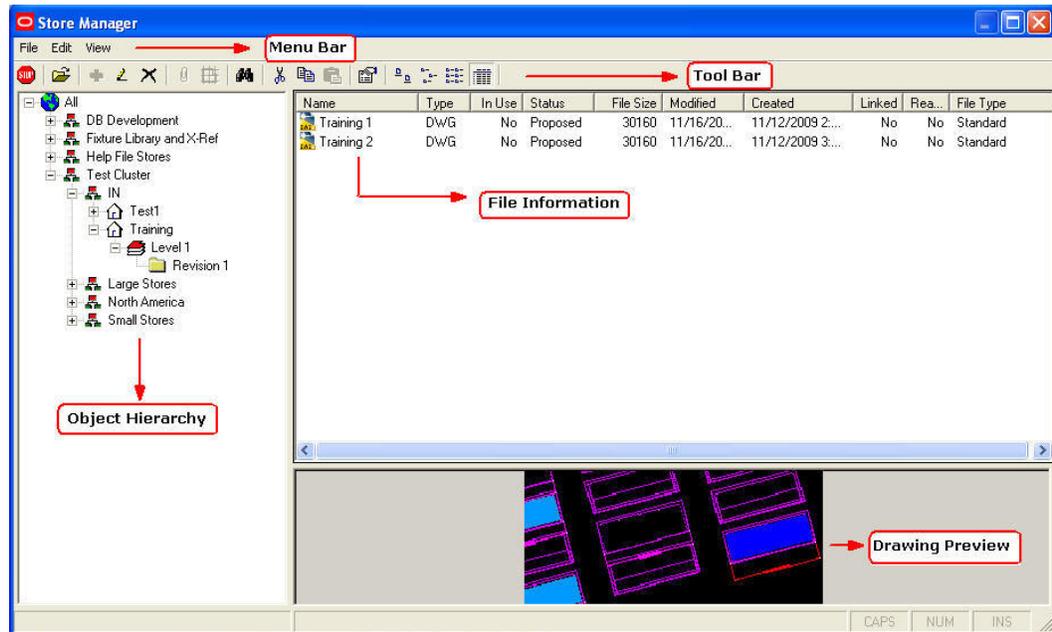
Accessing Store Manager

The **Store Manager module** is accessed by clicking the Open file option in the Macro Space Management menu bar.



Store Manager Window

After clicking the Open file icon, the Store Manager window opens.

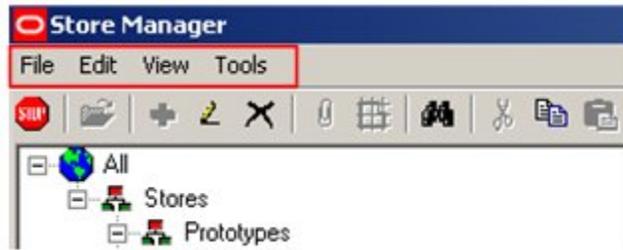


- The menu and tool bars can be seen to the top left of the window.
- A frame showing the hierarchical tree of Clusters, Stores, Floors and Revisions can be seen to the left of the window.
- The files associated with a particular Revision can be seen in the frame to the upper right.
- A preview of the drawing to be selected can be seen towards the lower right.

The Store Manager Menu Bar

The Store Manager Menu bar contains the following options:

- File Menu
- Edit Menu
- View Menu
- Tools Menu



File Menu Options

The **File** Menu option activates a pull down menu with options primarily concerned with operations on files. This menu can be used to add, edit and delete files and to associate files and architectural plans.



Add a file

1. From the File menu, select Add. Depending on the hierarchy level you are at, the corresponding Add dialog box opens. For example, if you clicked at the cluster level, Add Cluster dialog opens; from the store level, Add Store dialog opens.

Note: Some of these may be grayed out depending on the Store Manager function being used.

The 'Add Store' dialog box contains the following fields and controls:

- Store ID: (empty)
- Store Code: E123
- Store Name: Example
- Directory Name: Example
- Latitude: 0
- Longitude: 0
- Status: Open
- Opened Date: 09/03/2009
- Closed Date: 31/12/2999
- Store Prototype: Medium Prototype
- Set as Prototype:

Buttons: OK, Cancel, Help

2. Enter the Store Code and the Store Name. The Directory name is auto-populated.
3. Enter the Latitude, Longitude, and Status details of the store.
4. Select the Opened Date and Closed Date of the store.
5. On the Store Prototype field, from the list of store prototypes, select one of the options.
6. If you wish to set this store as a prototype, check the box against Set as Prototype.
7. Click OK to continue, or Cancel to cancel adding the store.

Edit a File

1. From the File menu, select **Edit**. The Edit dialog opens. Depending on the hierarchy level you are at, the corresponding Edit dialog box opens. For example, if you clicked at the cluster level, Edit Cluster dialog opens; from the store level, Edit Store dialog opens.
2. Edit the required fields and click **OK**.

Delete a File

1. From the File menu, select Delete. A confirmation message appears.



2. Click **Yes** to delete the file or **No** to cancel the deletion.

Undo Delete

The deleted files are displayed in Store Manager with the crossed symbol as shown below.



You may retrieve the deleted files by selecting the Undo Delete option.

1. Select the file that you want to retrieve.
2. Select the Undo Delete option from the File menu.

Properties

The Properties window displays detailed information on the selected file. For more information, refer sections Significance of Dates and File Identification Numbers.

Associate File

For a revision to be fully active, it needs files to be associated with it. This can be done via the file menu. For more information, refer section Associating files.

Associate Architectural Plan

Architectural Plans can be associated with Floors. For more information, refer section Associating Architectural Plans.

Edit Menu Options

The Edit Menu options allow you to cut, copy, or paste files.



Note: Some of these may not be available depending on what Store Manager function is being used.

View Menu Options

The **View** Menu options activate a pull down menu with various options controlling the way Store Manager appears. These can be used to change the way Store Manager displays information.



You can select the file display by selecting the Large icons, Small icons, List, or Detail from the View Menu option.

The **Arrange** option allows you to arrange the data displayed on the Store Manager as per your choice. You can choose to arrange the data by name, status, type or by date.

The **Find** options help you search for data in the Store Manager. The Refresh option refreshes the data in the Store Manager.

Options enable you to customize the view, editing, and performance options in the Store Manager. For more information, refer section Customizing Administration Options.

Tools Menu Options

The **Tools Menu** option is available only to administrators and is toggled on and off by using <Ctrl + A>.



It contains the following options:

- List Checked Out Files
- Purge
- Stores / Cluster View
- Directory Integrity Check

The Store Manager Toolbar



The Store Manager toolbar contains a series of options for administering the objects and files in Macro Space Management. Depending on which operation is being carried out, one or more options may be inactivated (unavailable).

Icon	Function
	Close Store Manager
	Open a Drawing
	Add an Item
	Edit an Item
	Delete an Item
	Create reports
	Associate File
	Associate Architectural Plan
	Search
	Cut
	Copy
	Paste
	Properties

Icon	Function
	Large icons for files
	Small icons for files
	List of files
	Details of files

System Variables

Some of the variables affecting how Macro Space Management and Store Manager operate can be customized. For example, if you change the status of a parent file, the status of its associated children files gets affected automatically.

Note: Changing these variables can have a significant effect on how Macro Space Management operates. It is strongly recommended that changes are made only after consulting the Oracle technical support team.

Configuring System Variables is done by accessing the Admin Module making changes using the System Variable option. Some of these system variables affect the operation of Macro Space Management Generic, others affect the operation of both the Generic and Enterprise versions of Macro Space Management.

For detailed information on configuring the system variables, refer the *Oracle Retail Macro Space Management Configuration Guide*.

Setting up Store Manager

Before Macro Space Management can be used, it is necessary to set up a hierarchical tree within Store Manager. This structure enables the stores to be arranged in logical groupings by means of Clusters and Sub-clusters. The performance of individual Stores can be compared against selected Prototype Stores, while the performance of one cluster of stores can be compared against another cluster.

The structure of this hierarchical tree should be carefully considered as it will affect the quality of information that can be produced using Macro Space Management, and hence determine the effectiveness of Macro Space Management as a tool for improving the profitability of a business.

Planning the Structure

Typical information needed to plan how individual stores should be assigned within the structure includes:

- Store Size
- Store Turnover

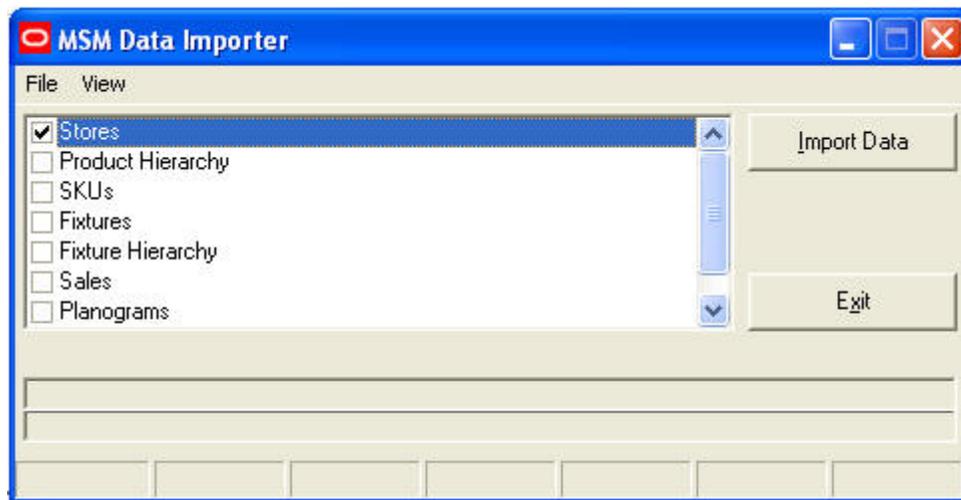
- Store Location
- Store Demographics

Criteria can then be developed as to cluster types and whether individual stores should be assigned to single or multiple clusters. For example, a store could be associated with three separate and distinctive clusters. One cluster would enable the store to be compared against those in other regions, one against stores of similar turnover, and the third against stores of similar size.

Consideration should also be given to which stores can be designated as Prototypes for comparison purposes. Correctly assigned prototype stores will allow swift and effective comparison of individual store performance against an exemplar. A correctly planned structure can significantly improve the performance of a retail organization – a poorly planned structure could prevent the full power of Macro Space Management being used.

Data Import

You can import data using the Data Import module of the Macro Space Management application. This enables data to be imported from external databases into the Macro Space Management central database.



Data Importer

To import data:

1. Open the Data Import module from Start > All Programs > Oracle Corporation > MSM > Data import.
2. Select the data that you want to import by checking the box.
3. Click **Import Data**. You can view the Log files by selecting Import Log / Import error log from the View option.
4. When done, click **OK**.

Oracle's consultants can configure the exact nature of the data import so that specified data is selected from the designated databases and imported into the required fields within Macro Space Management's central database.

Some companies set up Macro Space Management starting from scratch, manually entering all data as it is developed. Most of Oracle's customers have pre-existing data. Oracle's consultants can find the most effective way of importing this data into Macro Space Management. Methods used include:

- Taking data from an existing Windows Explorer file structure by means of pointers
- Querying an existing database
- Defining a spreadsheet and using it as an input

Please contact Oracle for further information.

Maintaining Store Manager

Useful Information

Significance of Dates

There are a series of dates associated with individual files. These can be seen both in the Store Manager file display and in the properties tab for each file.

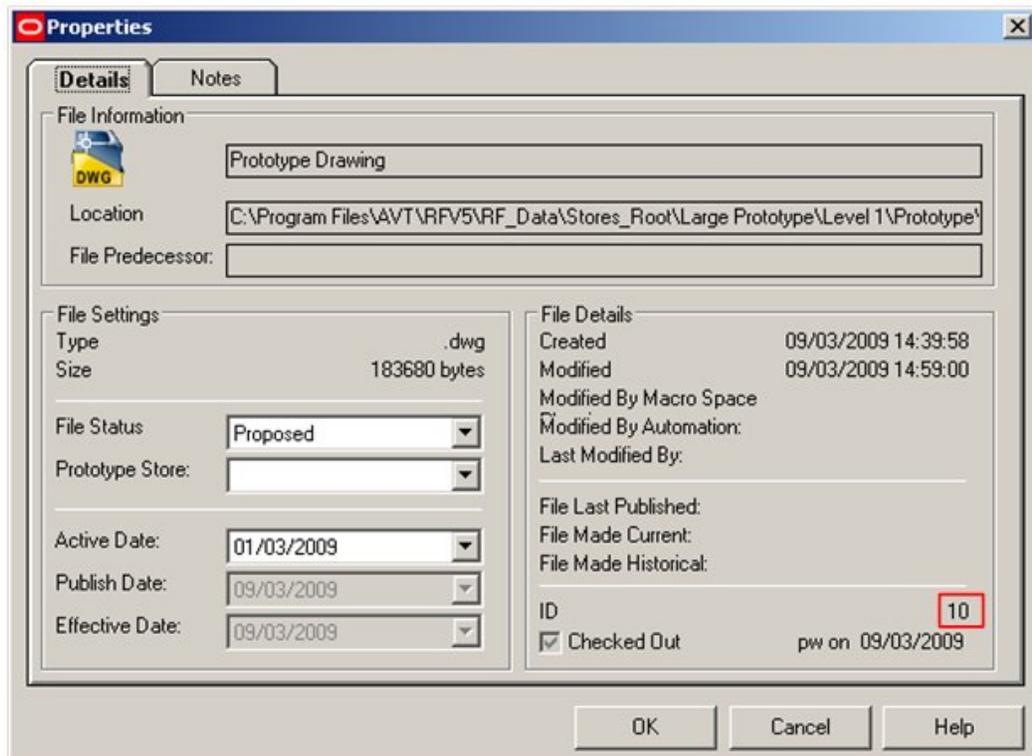
Name	Type	In Use	Status	File Size	Modified	Created	Died	Linked	Reac Only	Archive Date
0001_04V-61	DWG	No	Current	178008	11/31/2007...	18/11/2006	16/02/2007	No	Yes	
Proposed3748	DWG	No	Historical	26656	11/31/2007...	27/10/2006	16/01/2007	No	Yes	
0001_04V-611	DWG	No	Pending	178008	11/31/2007...	05/12/2006		No	No	
0001_04V-6111	DWG	No	Proposed	170006	10/31/2007	07/07/2007		No	No	



- **Created** is the date at which the file was created.
- **Accessed** is the date at which the file was last viewed (without making any changes to the file).
- **Modified** is the last date at which changes to the file were saved.
- **Last Modified by** is the user name of the last individual to modify the file.
- **Last Published** is the last date at which the file was published.
- **Archived** indicates if the file has been moved to the Archive database.
- **Publish** is the date the file is set to be published on. (If the file has been published this date will not be available for editing).
- **Effective** is the date at which the file will become current at. (If the file is Current or Historical this date will not be available for editing).
- **Died** is the date at which the file has lost or will lose current status. (This date will be in the future if the file has *Current* status, and in the past if it has *Historical* Status).

File Identification Numbers

Each drawing within Macro Space Management has a **File Identification Number**. This can be found by opening the Properties dialog box associated with that drawing. The File ID can be seen on the lower right.



Saving and back-ups

The **Planner Module** can be set to automatically save Planner drawings at regular intervals. This can be done during installation of Macro Space Management – consult Oracle’s Technical Support Team for further information.

The database for Macro Space Management should be saved at regular intervals and back-up data stored in a safe place.

Building the Structure

Adding Clusters

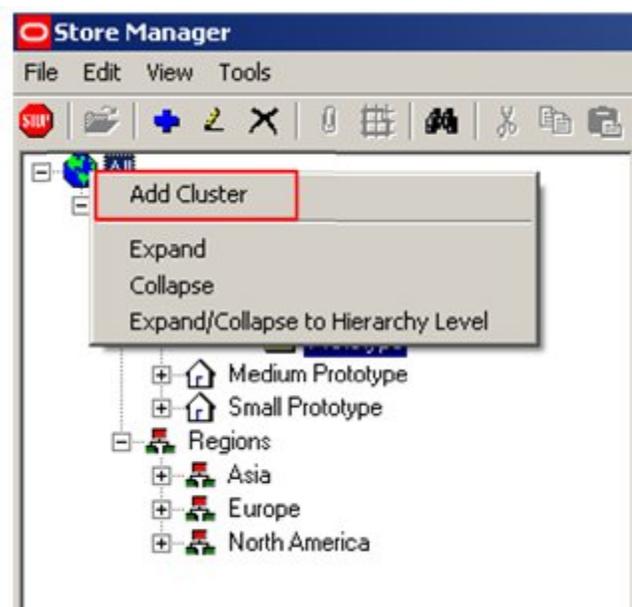
Clusters are containers used to group together stores of a specific type. For example, all stores in a geographic region, all stores of a particular size, or all stores serving a particular population demographic. Unlike stores (and their associated child objects) they do not result in a folder in the Windows file structure.

Clusters can have other clusters, called sub-clusters, as child objects.

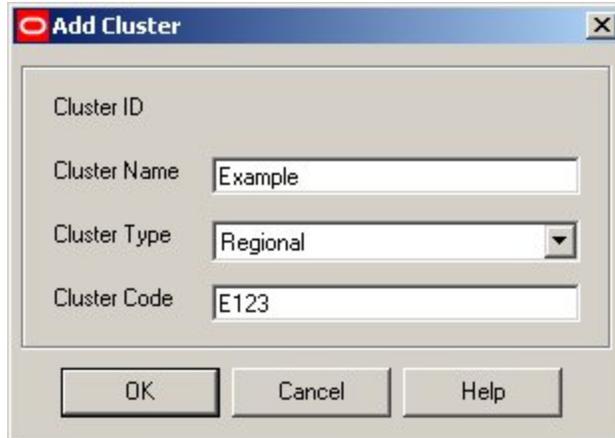
Multiple clusters improve options for reporting and manual finding of stores within the Store Hierarchy.

To add a cluster:

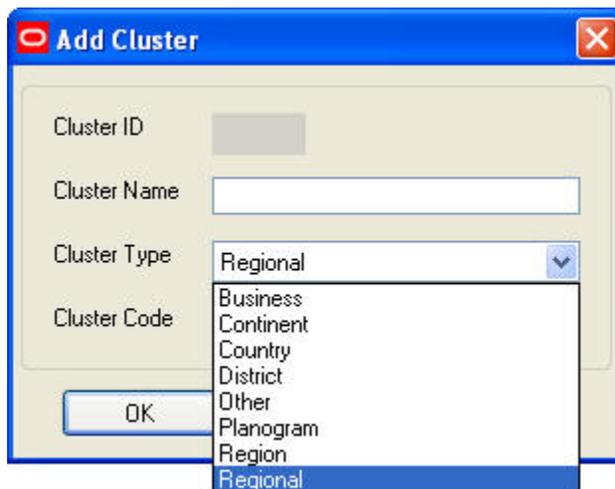
1. From the hierarchy tree in Store Manager, click the Store Root to highlight it.
2. With the mouse pointer over the Store Root icon, right click to bring up the drop down menu.



3. Select Add Cluster. The Add Cluster dialog box appears.



4. Enter Cluster Name and Code and select the Cluster Type from the drop down list. Selecting the correct Cluster Type is important as this information will be used for reporting purposes. If clusters are allocated to the wrong type, errors will occur in reporting.

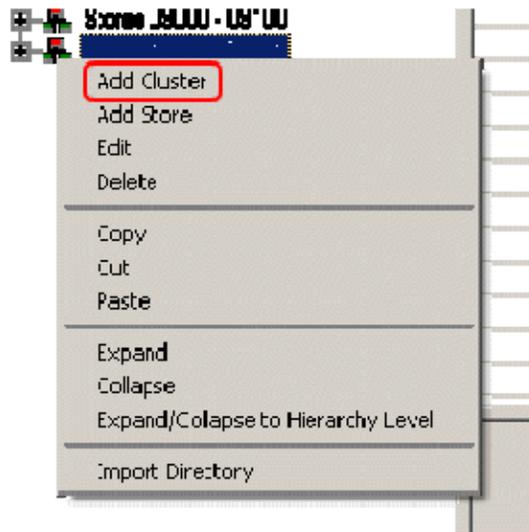


5. Click OK.

Editing Clusters

To edit a Cluster or add sub-cluster to an existing Cluster,

1. Click on the existing cluster to highlight it and right click to view the drop down options.



2. Select Add cluster. The Add Cluster dialog box appears. If you want to edit the cluster details, select Edit. The Edit Cluster dialog box appears.
3. Enter the required information and click OK.

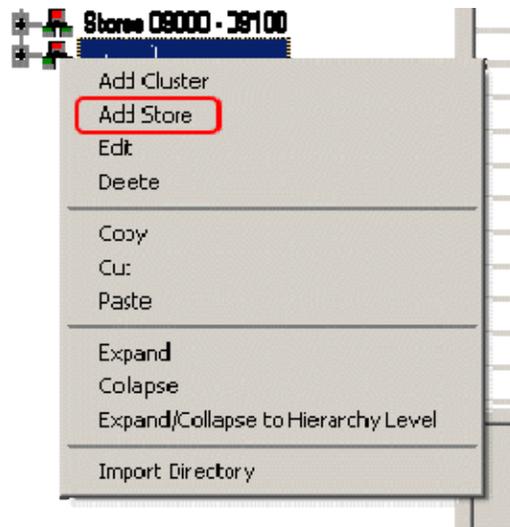
Note: The list of drop down options is customizable. Please consult Oracle's Technical Support team for information.

Adding Stores and Prototype Stores

Stores can be associated with one or multiple clusters. Stores act as containers for floors and their associated files.

To add a Store:

1. From the hierarchy tree in Store Manager, click the Cluster icon to highlight it.
2. With the mouse pointer over the cluster or sub-cluster icon, right click to view the drop down list.
Alternatively, highlight the select cluster and select Add from the File menu option or select the plus sign from the Tool bar.



3. Select the Add Store option. The Add Store dialog box appears.

 A screenshot of the 'Add Store' dialog box. The dialog has a title bar with a red 'X' icon and the text 'Add Store'. It has four tabs: 'General' (selected), 'Units', 'Address', and 'Attributes'. The 'General' tab contains the following fields:

- Store ID: (empty)
- Store Code: E123
- Store Name: Example
- Directory Name: Example
- Latitude: 0
- Longitude: 0
- Status: Open (dropdown menu)
- Opened Date: 09/03/2009 (calendar icon)
- Closed Date: 31/12/2999 (calendar icon)
- Store Prototype: Medium Prototype (dropdown menu)
- Set as Prototype:

 At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

4. On the General tab, enter the following information:
 - Store code
 - Name
 - Latitude
 - Longitude
 - Status
 - Proposed
 - Open

- Closed
 - Opened Date
 - Closed Date
 - Store Prototype If the store is not a prototype, select the Prototype Store from the drop down list at the bottom of the dialog box. If the store is designated as a Prototype, then selecting a prototype store from the drop down list is not possible.
 - Set as Prototype
5. Select on the Units tab and select the required units for Display and Input measure of units.

Note: The units set in the Units tab are for information purposes only, and will not have any direct effect in current implementations of Macro Space Management.

6. Select on the Address tab and enter the required information.
7. Select the Attributes tab and enter the value for each of the property.
8. Click OK when done.

You can edit the information for a store by selecting the Edit option.

Prototype Stores

Stores can be designated as Prototype Stores. Once designated as prototype stores, they can be assigned to other stores to act as a basis for comparison. For example when laying out zones, fixtures, and merchandise in a new store, it is possible to compare the parameters for those in the new store with those present in the prototype store.

Prototype Stores can be used in reports for comparing stores with prototype store, can be used in Summary Window in Object Browser to compare Store with Prototype and can be used in Custom SQL in Object Grid, for example to color code results.

Comparing Store to Prototype

Once a store has been assigned a prototype, comparisons can be drawn between the store and its prototype. Examples of comparisons that could be made are:

- Areas of zones
- Numbers and types of fixtures placed
- Numbers and types of merchandise placed
- Financial performance

Once a store has been assigned a prototype, there are number of ways of making comparisons. Examples include:

- Using the Object Browser
- Using KPIs
- Using external reports such as Oracles BI Publisher.

For example, the Summary Window in the Object Browser contains information on the Zones, Fixtures and Merchandise in the current store and its assigned prototype. By use of custom SQL, comparisons can be made between the area of a zone (department) in the current store and the prototype it is being compared to.

Zone Name	Gross Area (sq ft)	Net Area (sq ft)	Prototype Gross Area (sq ft)	Prototype Net Area (sq ft)
MEAT FRESH AND FROZEN	0	0	1808.11	1808.11
MENSWEAR	5318.97	5318.97	11229.39	11229.39
NON SALES AREA	2409.09	2409.09	7086.82	7086.82
OFFICES	1510.02	1510.02	4426.96	4426.96
PHARMACY	0	0	1668.71	1668.71
PRODUCE	0	0	1428.32	1428.32
SALES FLOOR SPACE	20121.59	20121.59	60337.62	60337.62
SHOES	0	0	591.46	591.46

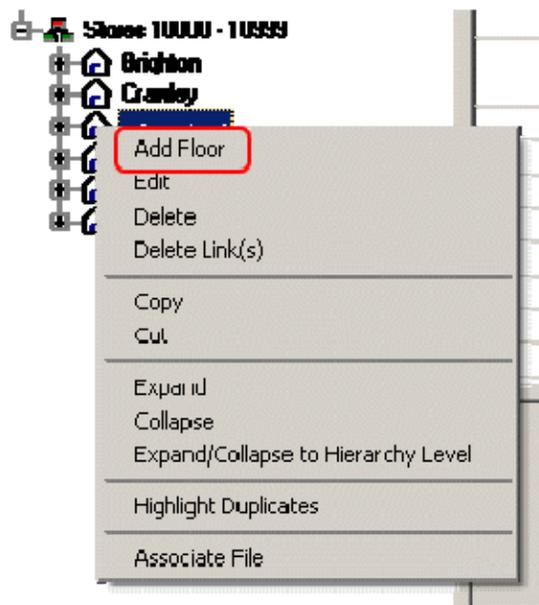
Summary Window in the Object Browser

Adding floors

A floor can only be associated with a store. Floors have types used to indicate if the floor is a ground, basement, first floor etc. A floor can contain revisions, associated files, drawings & architectural drawings.

To add a Floor,

1. From the hierarchy tree in Store Manager, select the store to which you want to add floor.
2. With the mouse pointer over the store icon, right click to view the drop down list.



3. Select the Add Floor option. A dialog box comes up. Alternatively, click on the plus sign to add an Item in the toolbar.

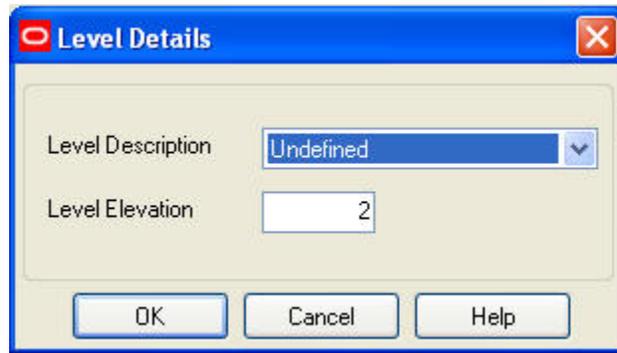
4. Select the Floor Type.

Note: The list of floor types can be configured by Oracle. Contact Oracle Technical Support for more information.

5. If you want to enter additional information, edit the Description of the floor; else you may retain the default value which is the Floor type.
6. If necessary, edit the Directory. (This is the name that will be given to the associated directory).
7. Select the Status of the floor. Available options are:
 - Proposed.
 - Existing.
 - Closed.

Note: Only one floor at each level can have Existing status at a time. If a floor at the level being added already has Existing status, a message stating "A floor already exists of this type" will appear. To give the new floor Existing status, the status of the floor with current Existing status will have to be changed.

8. Set the Allocated Area % Tolerance to any figure up to 100%. This figure is used to check the allocated area of the floor meets a specified level of efficiency. For example, setting the percentage to 95 % will result in a warning if the planning of fixtures and fittings results in less than 95% of the floor area being allocated.
9. Enter the Elevation value. The Elevation option allows the merging of floors for planning purposes.
10. Select the Edit Levels option to edit the levels. It allows fixtures to be located at higher than floor level. An example would be display cabinets placed high on the wall.



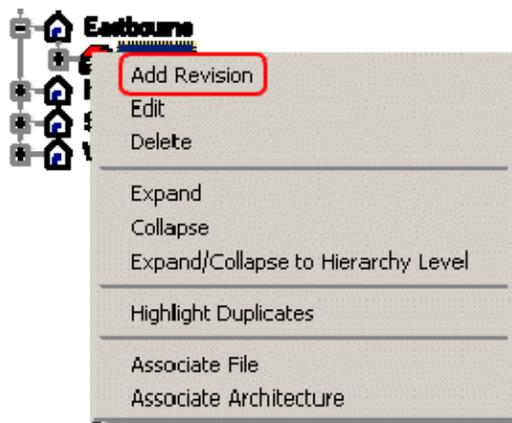
11. Click OK to add the floor.

Adding revisions

Revisions are alternative layouts for floors. Changing from one Revision to another allows the layout of a floor to be changed, (for example), from the Spring to the Summer arrangement.

To add a revision:

1. From the hierarchy tree in Store Manager, select the floor.
2. With the mouse pointer over the store floor, right click to view the drop down list.



3. Select the Add Revision option. A dialog box comes up. Alternatively, click on the plus sign on the tool bar to add an Item.

4. Enter the Revision Number. If you inadvertently select an existing revision number, the revision number will default to the next available number.
5. Enter the Revision Description and Revision Directory Name.
6. Select the status of the revision from the available options:
 - Proposal
 - Authorized
 - Current

Note: At this stage it will only be possible to set the revision status to "Proposal".

7. Set the season to one of the available options.
 - Spring
 - Summer
 - Autumn
 - Winter
 - All
8. The Birth date will automatically set to the current date. The Death date will automatically set to 31st December 9999. Neither the Birth nor Death date need changing at this stage.
9. If you want to add a proposal drawing, check the box against Add Proposal Drawing.
10. Click OK to add the Revision.

Associating Architectural Plans

Architectural Plans can only be associated with Floors. An example of a file of this type would be a Planner drawing (file extension .DWG).

To associate an Architectural Plan with a Floor,

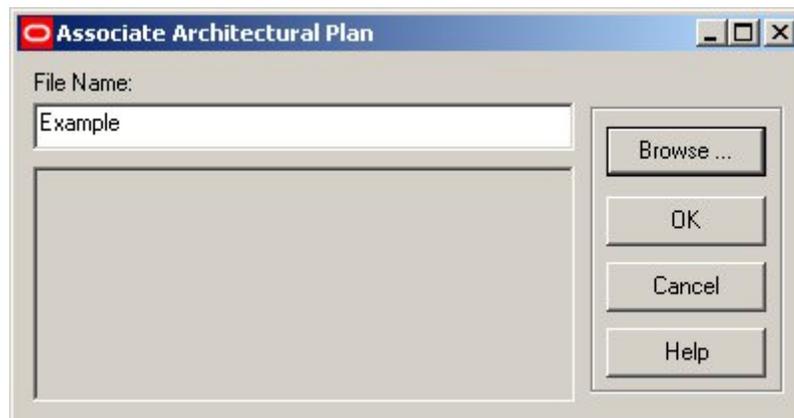
1. From the hierarchy tree in Store Manager, select the floor to which you want to associate plan.
2. With the mouse pointer over the floor, right click to view the drop down list, and select Associate Architectural Plan.



Alternatively, you can select the Associate Architectural Plan icon as shown below from the toolbar.



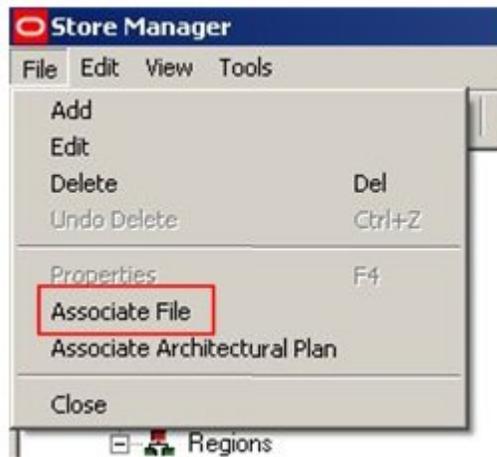
The Associate Architectural Plan dialog box comes up.



3. Click on the Browse button and select the required file.
4. Select the file and click Open to confirm. This will return you to the Architectural Plan dialog box.
5. Click OK on this dialog box to confirm the Architectural Plan to be associated.

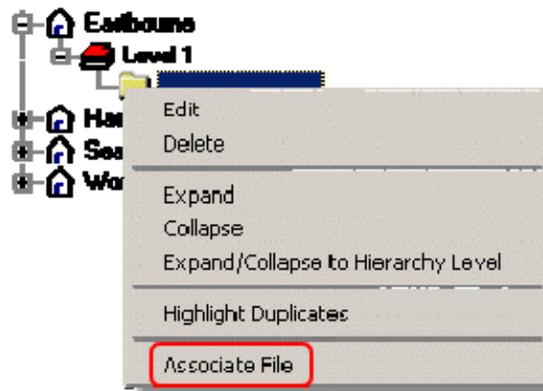
Associating files

For a revision to be fully active, it needs files to be associated with it. This can be done via the file menu.

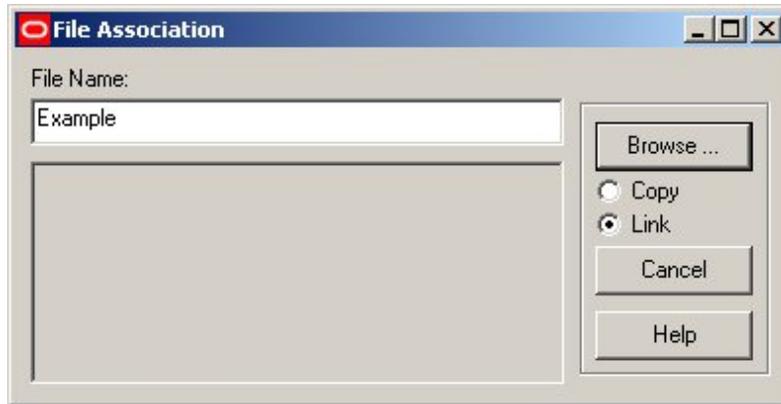


To associate a file:

1. From the hierarchy tree in Store Manager, select the revision by clicking on it.
2. With the mouse pointer over the revision, right click to bring up the drop down list. Alternatively, you can use the associate file icon on the toolbar.



3. Select the Associate File option. The File Association dialog box comes up.



4. Click the Browse button and select the required file.
5. Click OK to confirm. Or you may link or copy a file.

Note: Macro Space Management will automatically update files that are linked if they are changed or modified by an external program. Copied files updated by Macro Space Management may not have their original versions changed.

Modifying and Deleting the Structure

When deleting clusters, sub-clusters, stores, floors or revisions, it should be noted that all associated child files will be deleted along with the parent file.

These files are not permanently deleted and can be recovered by use of the purge option in the Admin functions in the Store Manager module, (accessed by <Ctrl + A>).

Changing the status of a revision may also affect the status of an associated child file.

Moving stores between clusters

To move a store from one cluster to another:

1. Select the store.
2. Click the right mouse key and select Cut.
3. Paste the store on to the required cluster.

Alternatively, you can move the store by dragging the store icon to the required cluster.

Multiple stores can be selected by using the mouse key in conjunction with the <Shift> or <Control> keys.

Putting stores into multiple clusters

A cluster, (or sub-cluster), is used to group together stores sharing a common characteristic such as size or geographical location. Stores can logically belong to more than one category when they meet more than one criterion. Accordingly, stores can be assigned to more than one cluster.

To put stores into multiple clusters:

1. Select the store from an existing cluster.
2. Click the right mouse key and select Copy.
3. Click the right mouse key and select Paste on to the second cluster or sub-cluster.

This process can be continued until the required store(s) have been put into all the appropriate clusters or sub-clusters.

Modifying and deleting clusters

Existing clusters can be modified or deleted.

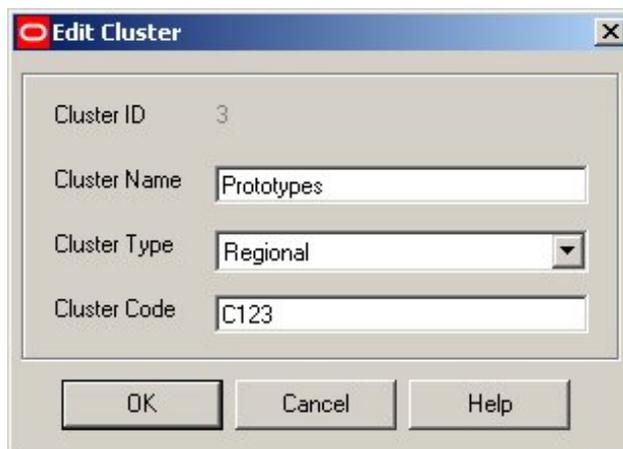
Modifying Clusters

To edit a cluster:

1. Select the cluster you want to edit.
2. Click the right key of the mouse and select the Edit option. Alternatively, you can select the Edit option from the File menu option after selecting the cluster you want to edit.



The Edit Cluster dialog box appears.



3. Enter the following details on the dialog box.

- Cluster ID: The Cluster ID is allocated on creation and cannot be changed. It is unavailable for editing.
 - Cluster Name: Enter a suitable name.
 - Cluster Type: Select the type from the drop down list.
 - Cluster Code: Enter a specific code for the cluster.
4. Click OK.

Deleting Clusters

The cluster and all its associated child files are removed from the hierarchical tree and moved to the RFBin. At this stage the files have not been permanently deleted and can be restored via the Administrator menu, (accessed via <Ctrl + A>). When deleting a cluster, all copies of the stores associated with are removed, but copies of the stores associated with other clusters are not affected.

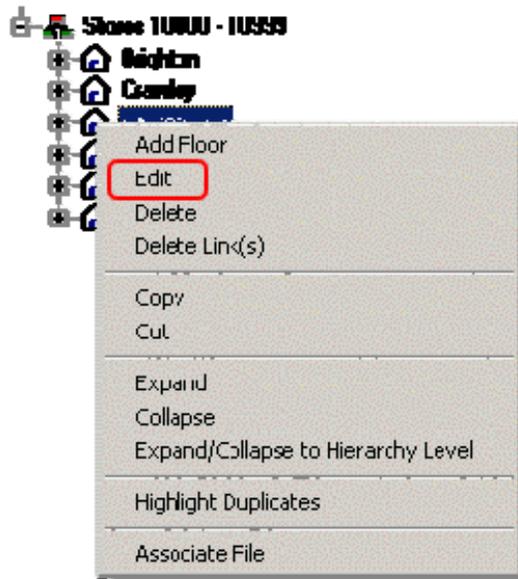
Modifying and deleting Stores

You can edit most of the characteristics of a store and may delete any existing store.

Editing Stores

To edit a store:

1. Select the store to be edited.
2. Right click on the store and select the Edit option.



The Edit Store dialog box comes up.

The screenshot shows the 'Edit Store' dialog box with the following fields and values:

- Store ID: 6
- Store Code: P3
- Store Name: Large Prototype
- Directory Name: Large Prototype\
- Latitude: 0
- Longitude: 0
- Status: Open
- Opened Date: 09/03/2009
- Closed Date: 31/12/2999
- Store Prototype: (empty)
- Set as Prototype:

3. Enter the following information:
 - The store ID is allocated on creation and cannot be changed.
 - Enter the Store Code and the Store Name. The Directory name is auto-populated.
 - Enter the Latitude and Longitude, although this information is not required at this stage.
 - Enter the Status of the store from the drop down list.
 - Select the Opened Date and Closed Date of the store.
 - On the Store Prototype field, from the list of store prototypes, select one of the options.
 - If you wish to set this store as a prototype, check the box against Set as Prototype.
 - Click OK to continue, or Cancel to cancel adding the store.

Note: The units set in the Units tab are for information purposes only, and will not have any direct effect in current implementations of Macro Space Management.

Deleting Stores

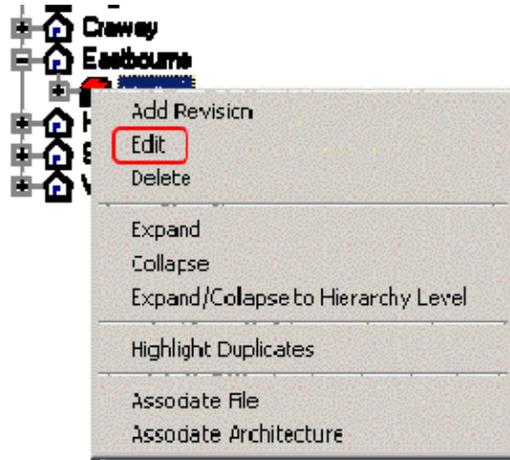
To delete a store from all the clusters it is associated with, right click and select the Delete option. The store and all its associated child files are removed from the hierarchical tree and moved to the RFBin. At this stage the files have not been permanently deleted and can be restored via the Administrator menu, (accessed via <control> A).

To remove a store from a specific cluster, left click on the store to select it. With the left mouse key held down, drag the store icon to another cluster that the store is associated with. Release the mouse key to drop the store. The store will be removed from the original cluster.

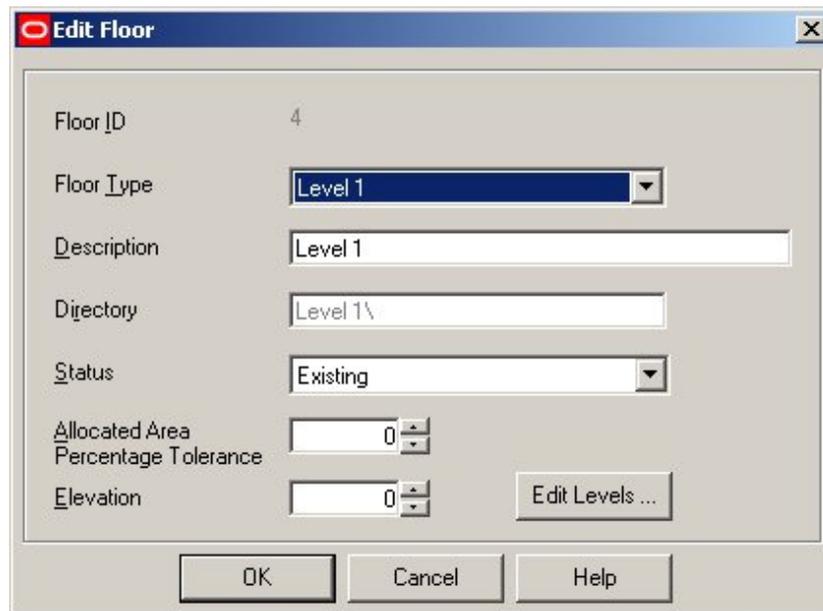
Modifying and deleting Floors

Modifying Floors

Most of the characteristics of the floor can be edited by right clicking and selecting the Edit option.



The Edit Floor dialog box comes up.



The store ID is allocated on creation and cannot be changed. Provide information in other fields and click OK.

Note: Changing the status of the floor is discussed in the section on business flows.

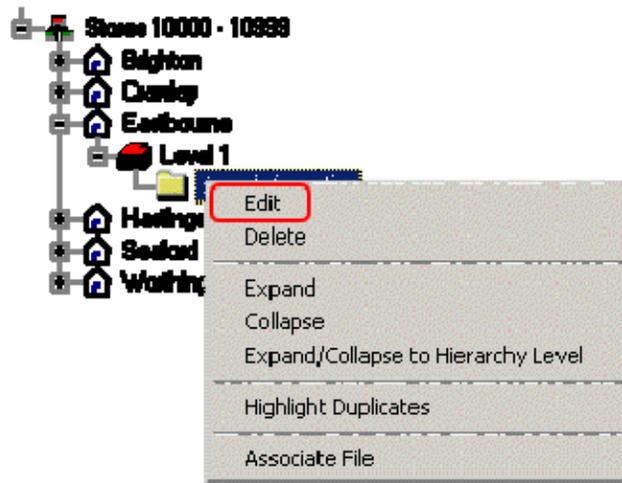
Deleting Floors

To delete a floor from the store it is associated with, right click and select the Delete option. The floor and all its associated child files are removed from the hierarchical tree and moved to the RFBin. At this stage the files have not been permanently deleted and can be restored via the Administrator menu, (accessed via <control> A).

Modifying and deleting Revisions

Editing Revisions

Most of the characteristics of a Revision can be edited by right clicking and selecting the Edit option.



The Edit Revision dialog box comes up.

The revision ID is allocated on creation and cannot be changed. Enter other information on the user interface and click OK.

Note: Changing the status of the revision is discussed in the section on business flows.

Deleting Revisions

To delete a revision, right click on the revision and select the Delete option. The revision and all its associated child files are removed from the hierarchical tree and moved to the RFBin. At this stage the files have not been permanently deleted and can be restored via the Administrator menu, (accessed via <control> A).

Modifying and Deleting Architectural Plans

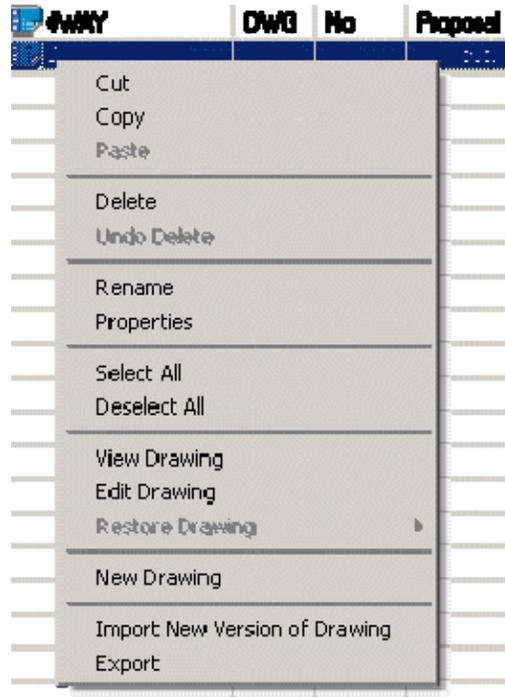
Architectural Plans can be modified or deleted.

Note: Architectural Plans can only be associated with Floors.

Note: When adding an Architectural Plan to a floor it is normally advisable to link it, rather than copy it as linked files are automatically updated within Macro Space Management when the original file is modified. Copied files remain unchanged if the original is updated.

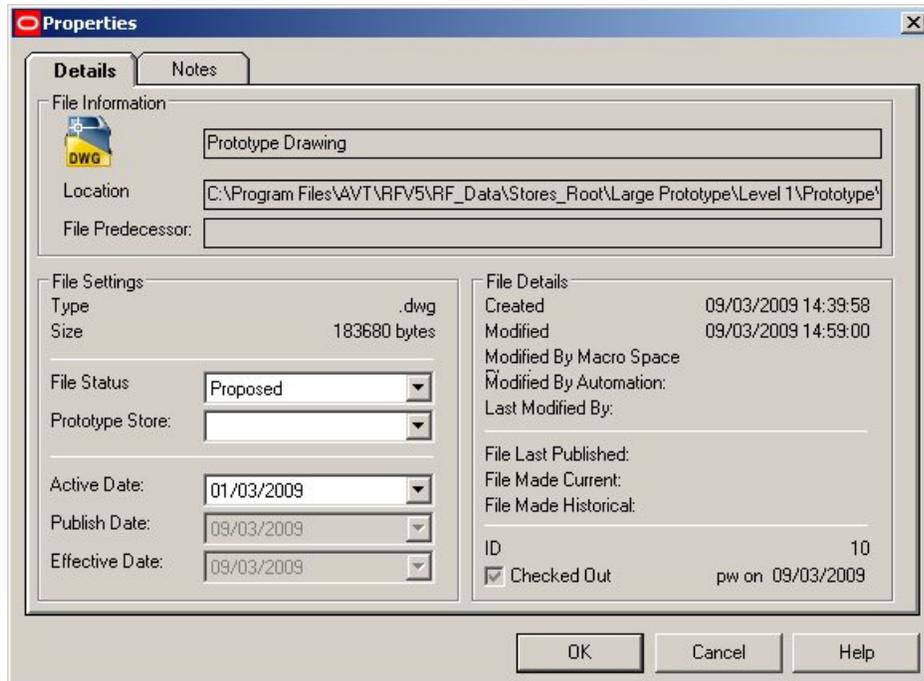
To access a list of Architectural Plans

1. Select the appropriate floor. Files on which operations are to be carried out on can be selected by use of the:
 - Select All option.
 - Deselect All option.
 - Using the mouse, (using the <Shift> or <Ctrl> keys for multiple selections).
2. Right click on a selected file in the right hand frame to bring up a list of options.



Files for external editing, (for example drawings to be changed using Planner), will be shown as Checked Out by Store Manager.

3. To modify the properties of the Architectural Plan, right click on the file and select properties. This displays the Properties dialog box.



Properties dialog box

The file attributes reflect the current status of the file. There will be checks in the appropriate check boxes if opened Read-Only or Checked Out.

Deleting Files

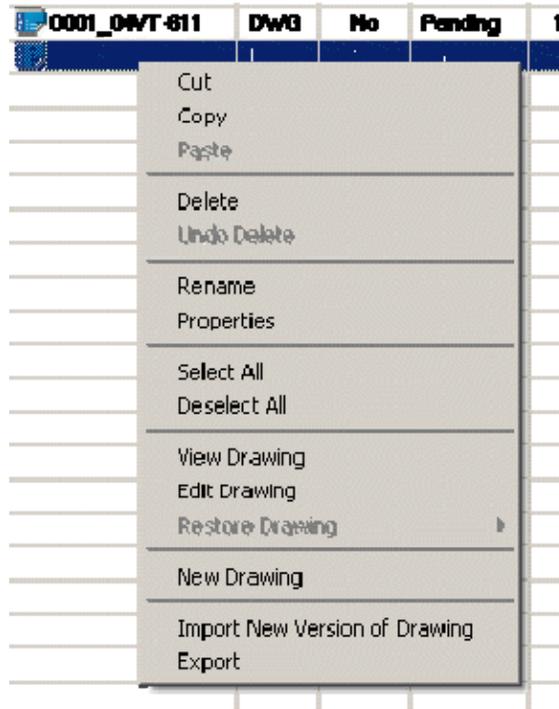
To delete an Architectural Plan, right click on it and select Delete. The file will be removed from the hierarchical tree and moved to the RFBin. At this stage the Architectural Plan has not been permanently deleted and can be restored via the Admin menu, (accessed via <Ctrl A>).

Modifying and deleting Associated Files

Associated files can be edited or deleted.

To access a list of associated files:

1. Select the appropriate revision.
2. Right click on the list of files to bring up a list of options.

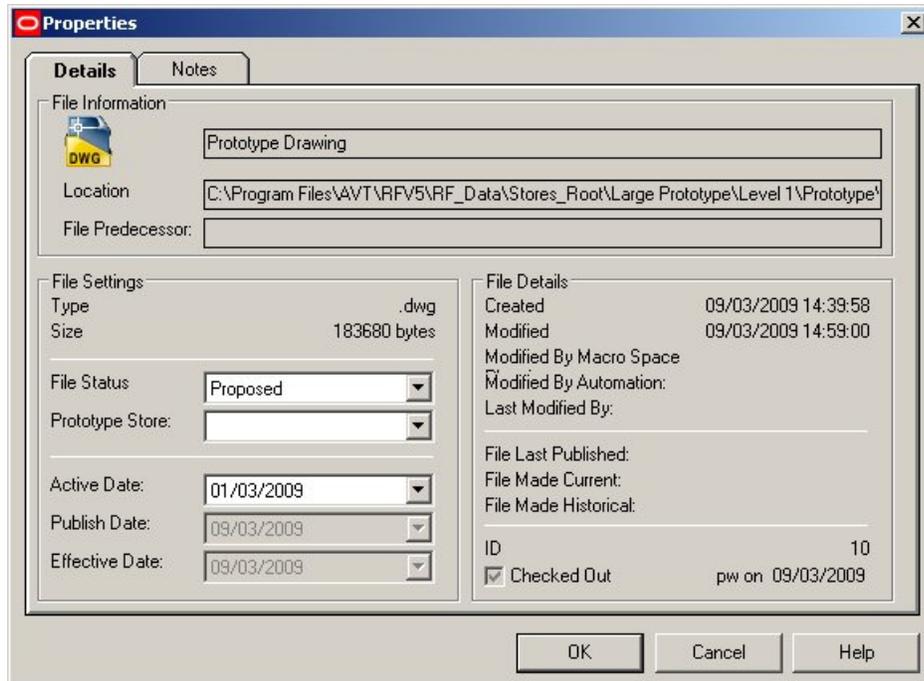


Files on which operations are to be carried out on can be selected by use of the:

- Select All option.
- Deselect All option.
- Using the mouse, (using the <Shift> or <Control> keys for multiple selections).

Files for external editing, (for example drawings to be changed using Planner), will be shown as Checked Out by Store Manager.

To modify the properties of the file, right click on the file and select properties. This brings up the Properties dialog box. The Details tab gives a series of information about the file.



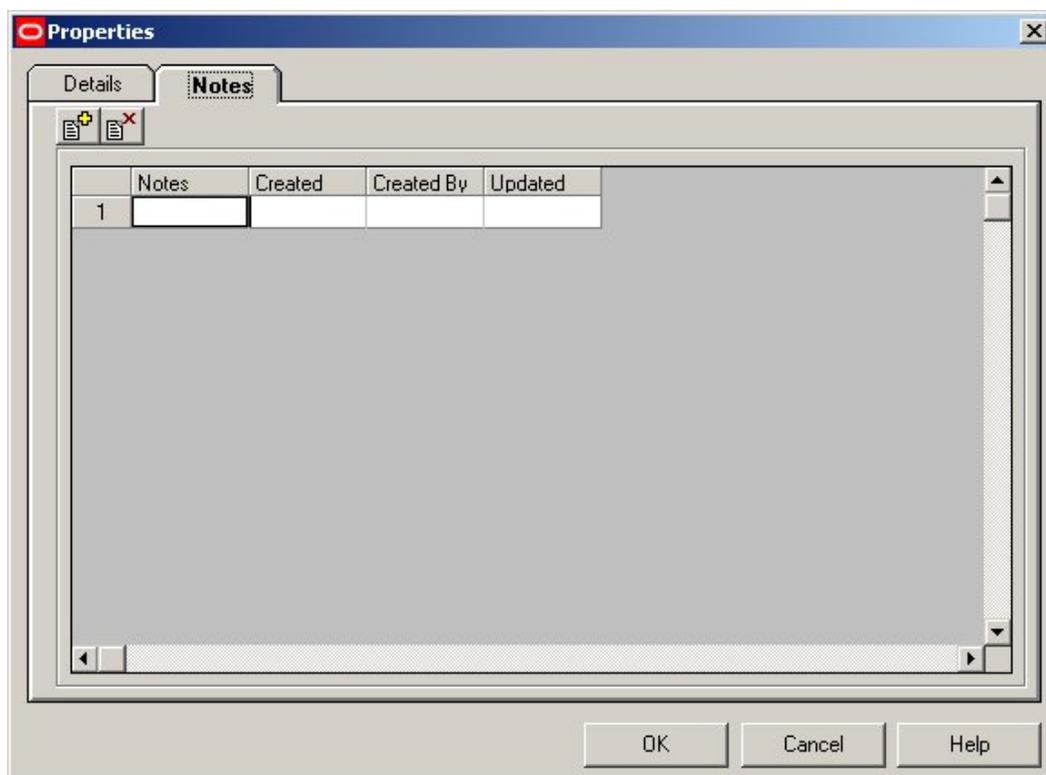
Properties dialog box - Details tab

Note: Changing the status of the file is discussed in the section on business flows.

The file attributes reflect the current status of the file. There will be checks in the appropriate check boxes if opened Read-Only or if Checked Out.

Auto-Archive and Auto-Replenish relate to Automation features.

The Notes tab can be used to store information on the changes made to the drawing.



Notes can be added and deleted using the two buttons to the upper right of the dialog box.

Deleting files

To delete a file, right click on it and select Delete. The file will be removed from the hierarchical tree and moved to the RFBin. At this stage the file has not been permanently deleted and can be restored via the Administrator menu, (accessed via <Ctrl + A>).

Business Flows

Stores can vary in status; starting from proposed, spending the bulk of their life open and finally closing. Similarly, Floors can start their lives as proposals, open for business and finally close if their purpose is changed or the Store itself closed.

However, the most common change due to the business cycle is the ever changing configuration and merchandising of a floor. The configuration and product mix on the Floor is controlled by selecting the appropriate Revision – the Revision selected being governed by its status.

The ability to revise and continually update the details of stores and their contents allows the full power of Macro Space Management to be used.

Putting together the data for a new Revision

Creating a new Revision

If necessary, create a new revision for the floor, naming it appropriately. This revision should have the status of proposed. Import or create the necessary drawings. These will also have the status of proposed. At this stage the folder icon is buff color.

Changing the Revision status to Approved

Two options are available; firstly, the revision alone can be changed to Authorized, with the drawing remaining at Proposed status. Alternatively, the drawing and then the revision can be changed to Authorized status.

If the revision alone is changed to Authorized status, then before the revision can be made Current, the drawing will have to be changed to Authorized status. For this reason, it is recommended that the drawing status be changed at the same time as the revision status.

Note: Only one drawing and one revision can have the status of Approved. If another authorized version exists, you will be prompted as to whether the previously authorized revision should be set to proposal.

On changing to approved status the folder icon changes to a green color.

Changing the Revision status to Current

Use the properties option to change the revision status to current. The drawing automatically changes to current status. On changing to current status the folder icon changes to a pink color.

Note: Only one drawing and one revision can have the status of current.

The birth date for the revision will be set to the current date.

Historical status

When the approved revision is being set to current, the previously current revision will automatically be set to historical.

Note: All drawings within a revision set to historical status are also set to historical status, irrespective of their previous status.

The death date for the revision will be set to the current date.

Status

The status of an object is continually changing as it moves through the business cycle. For example stores start as Proposed. After approval they become Open. When the store reaches the end of its life it will become Closed.

Understanding the changing status of objects is fundamental to the operation of Macro Space Management. All objects except clusters and sub-clusters have a status. Clusters and sub-clusters are administrative devices for arranging stores in logical groupings, and hence do not have status. Stores and floors have independent status and their status can

be changed without affecting the status of any objects below them in the hierarchical tree. Changing the status of a revision may affect the status of its associated child files. Changing the status of a revision may also affect the status of any other revisions for that floor.

Some status changes are reversible. For example a store can be changed from open to closed status for a major refurbishment. On completion of the refurbishment, the stores' status can then be changed back to open.

Some status changes are irreversible. For example, once a floors' status has been changed from current to historical it cannot be changed back. Whether a status is reversible or irreversible is determined when Macro Space Management is first implemented.

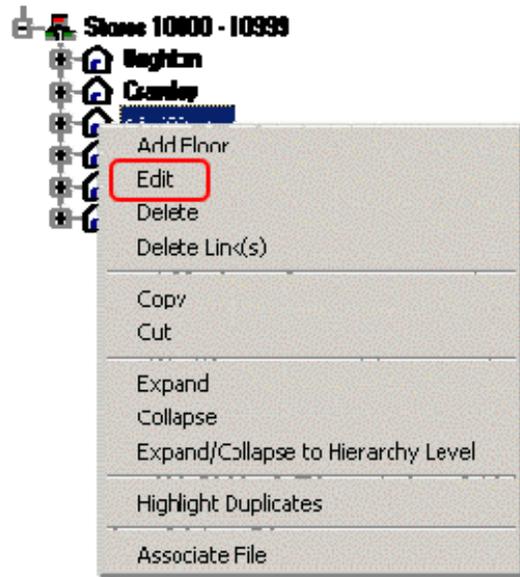
Changing the status of Stores

Stores can have the following status:

- Proposed
- Open
- Closed

They can also be set to Prototype status.

Status of a Store is changed through the Edit Store dialog box. This is accessed by right clicking on the Store icon in the hierarchical tree and selecting the Edit option.



Edit Store dialog box

The screenshot shows the 'Edit Store' dialog box with the following fields and values:

- Store ID: 6
- Store Code: P3
- Store Name: Large Prototype
- Directory Name: Large Prototype\
- Latitude: 0
- Longitude: 0
- Status: Open (dropdown menu is open showing Proposed, Open, Closed)
- Opened Date: Proposed
- Closed Date: Closed (31/12/2000)
- Store Prototype: (empty dropdown)
- Set as Prototype:

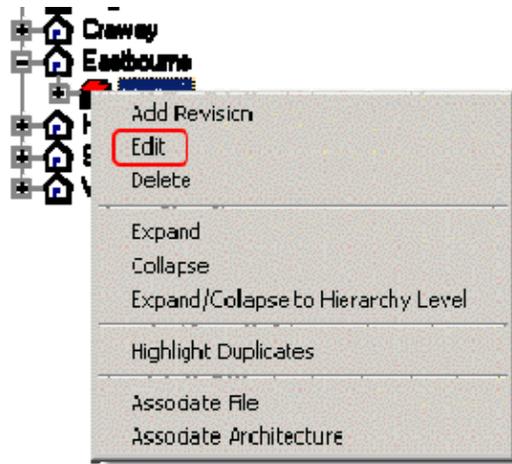
The status of the Store can be changed by means of the drop down list. A stores' status can be changed without affecting status of the floors, revisions or files below it in the hierarchy.

Changing the status of Floors

Floors can have the following status:

- Proposed
- Existing
- Closed

Status of a Floor is changed through the Edit Floor dialog box. This is accessed by right clicking on the Floor icon in the hierarchical tree and selecting the Edit option.



Edit Floor Dialog Box

A floors' status can be changed between Proposed to Existing without affecting status of the revisions or files below it in the hierarchy.

Changing the status to Closed turns any Current file to Historical status.

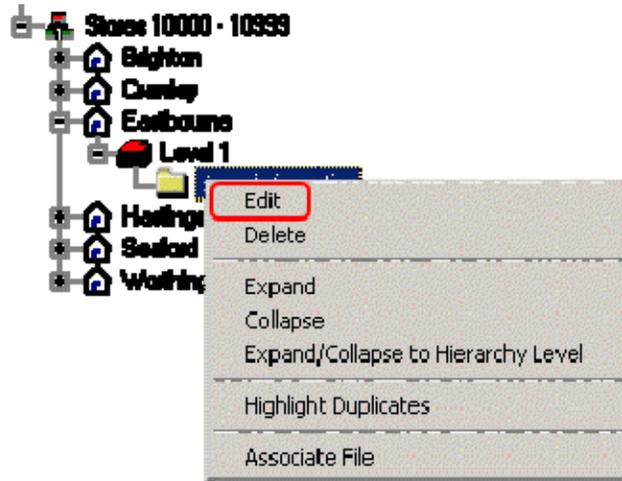
Changing the Status of Revisions

Revisions within Macro Space Management can have the following generic statuses:

- Proposal
- Authorized
- Current
- Historical

Note: Revisions cannot be directly changed to Historical status - they are automatically changed by Macro Space Management when another Revision becomes Current.

Status of a Revision is changed through the Edit Revision dialog box. This is accessed by right clicking on the Revision icon in the hierarchical tree and selecting the Edit option.



The image shows the 'Edit Revision' dialog box. The 'Revision ID' is 7. The 'Revision Number' is 1. The 'Revision Description' is 'Prototype'. The 'Revision Directory Name' is 'Prototype\'. The 'Status' dropdown menu is open, showing 'Proposal', 'Authorised', and 'Current' options. The 'Season Description' is 'Proposal'. The 'Birth Date' is '09/03/2009'. The 'Death Date' is '31/12/2999'. There are checkboxes for 'Has Sections' and 'Add Proposal Drawing', both of which are unchecked. The dialog box has 'OK', 'Cancel', and 'Help' buttons at the bottom.

Edit Revision

- Only one Revision can have the status of Authorized for a specific Store.
- Only one Revision can have the status of Current for a specific Store.

Changing the status of a Revision can affect the status of its associated child files.

Changing from	Changing to	Result
Proposal	Authorized	Children not affected by status change. If another revision has currently has authorized status, this revision will automatically have its status changed back to proposal. The change back to proposal will require confirmation by a prompt.
Authorized	Current	A revision can only be changed to current if it has only one related drawing, or if only one drawing has been given authorized status. If another revision within the same floor has a status of current, that revision will have its status changed to historical. The change to historical will require confirmation by a prompt. "Current" children of the revision which is having its status changed to historical will also have their status changed to historical. Other children of that revision could also have their status changed.
Current	Historical	This change is automatic, all pertinent children being changed automatically. This change is irreversible.

The status of a Revision can be seen from the color of its associated folder.



Store Manager

- Proposed revisions have a buff, (yellow), colored folder.
- Authorized revisions have a green folder.
- Active revisions have a pink folder.
- Historical revisions have a purple folder.

Changing the status of Files

Files can exist at the store, floor or revision level in Macro Space Management. Within Macro Space Management, files at Revision level can have a generic status of:

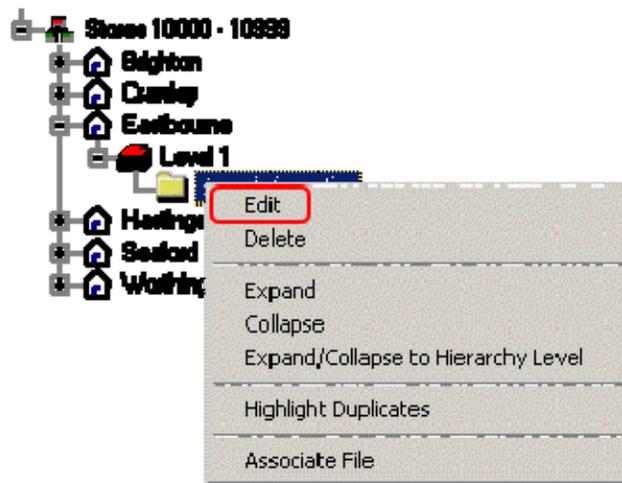
- Proposed
- Authorized
- Current
- Historical

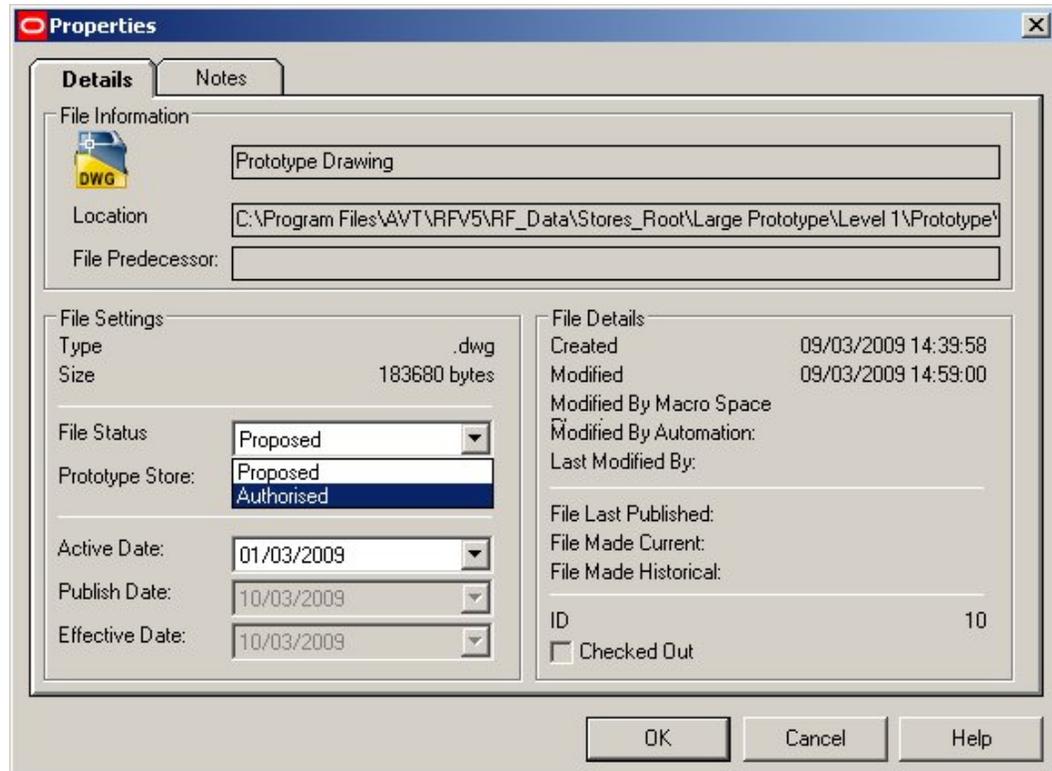
Note: Files cannot be directly changed to Historical status, they are automatically changed by Macro Space Management when another Revision becomes Current.

If Macro Space Management is being used in parallel with In-Store Space Collaboration, then other generic statuses are possible:

- Survey
- Submitted

Status of a Revision is changed through the Edit Revision dialog box. This is accessed by right clicking on the Revision icon in the hierarchical tree and selecting the Edit option.





Properties - Details

The status of a file can only be reversed if the status has been marked as reversible in the database. If the file is the child of a revision currently changing its status to current, the file automatically has its status changed. If the file is the child of a revision automatically having its status changed from current to historical, the file automatically has its status changed.

Only one drawing within a revision can have a status of authorized. If you are attempting to change a second file to authorized status, the initial file with authorized status is automatically changed back to proposed first. The automated change to of a revision to historical requires confirmation by a prompt.

Drawing in Macro Space Management Files and In-Store Space Collaboration

Two types of drawings are present in Macro Space Management and derived from the use of In-Store Space Collaboration:

- Survey drawings
- Submitted drawings

Survey Drawings are created in Macro Space Management to represent store layouts that are currently in place, but where there the information is to be updated. They consist of a building outline and dummy fixtures, fitting and gondolas. A surveyor then walks the store and updates the drawing using In-Store Space Collaboration so that it reflects the actual arrangement in place.

Fixtures, Fittings, Gondolas, Products and Merchandise can be updated on a Survey Drawing using In-Store Space Collaboration. Survey drawings start at Survey status. If

they are saved using the In-Store Space Collaboration Save option, their status remains at Survey status.

Submitted drawings are drawing that have been fully updated using In-Store Space Collaboration and are being saved back to the central Macro Space Management database with a modified status.

When they are saved using the Save Submit option within In-Store Space Collaboration, their status is automatically changed to Submitted.

Note: Other statuses can be selected using the IN_STORE_SUBMITSTATUS system variable.

Their status cannot be further changed by In-Store Space Collaboration.

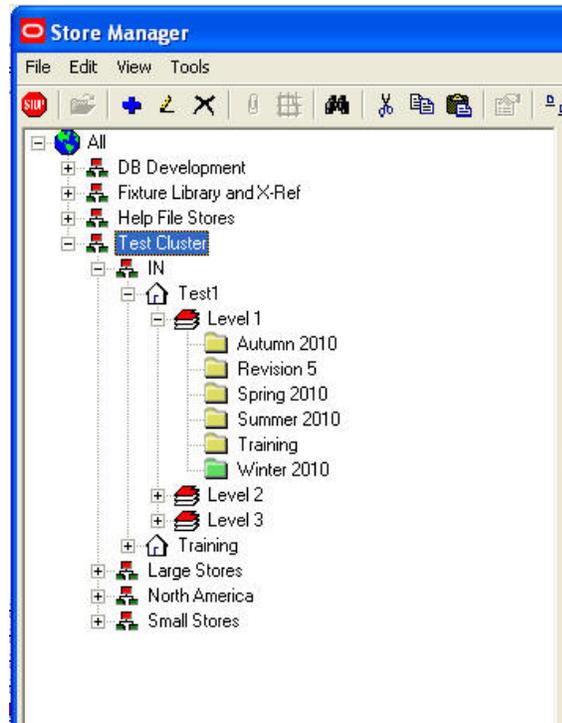
Advanced Administration

Underlying directory structure

Macro Space Management holds all the information for a retail organization. A retail organization can contain lots of information on stores. Each store may have multiple floors and each floor can have hundreds of fixtures and fittings on it. Each fixture may have multiple products or planograms placed on it.

This information must be organized in a way that you can quickly find the information you want. Macro Space Management does this by means of hierarchies. The hierarchy is split into a number of levels, each a child of the one above. The top level is the starting point for the hierarchy. It cannot be edited or deleted. Each level within the hierarchy can store files against itself, with the exception of File type objects. The general format of the directory structure is thus All/Cluster/Sub-cluster/Store/Floor/Revision/File.

Note: Clusters and sub-clusters will not have a Windows folder associated with them.



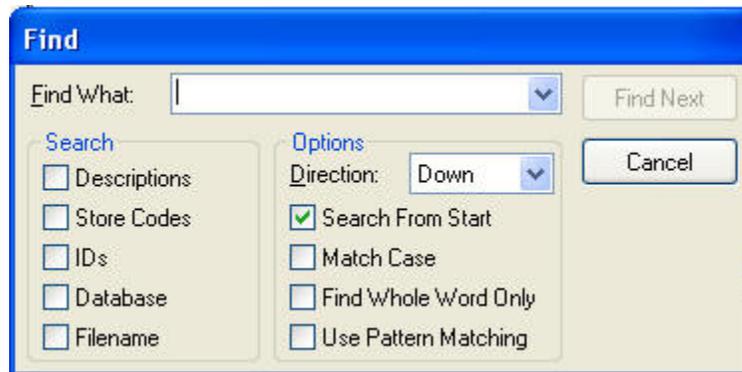
Store Manager

Searching the directory structure

The search facility can be activated by clicking the search icon on the toolbar.



This brings up a dialog box with a dialog box with a series of options. Select the required options and click OK.



Find Dialog Box

The search function in Store Manager performs an *in-string* search and does not support wild-cards. It will thus only return exact matches. The search starts from any selected node, and can be set to search up or down from that node.

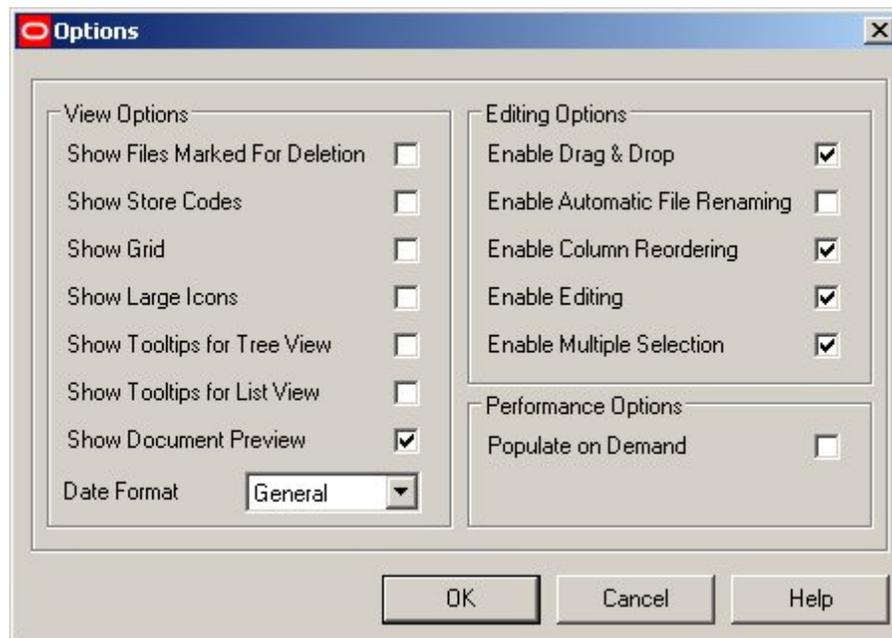
Customizing Administration Options

Some of the operations of the Admin module can be customized via the Options menu on the View menu.



Store Manager - Options

This brings up the Options dialog box.



Options dialog box

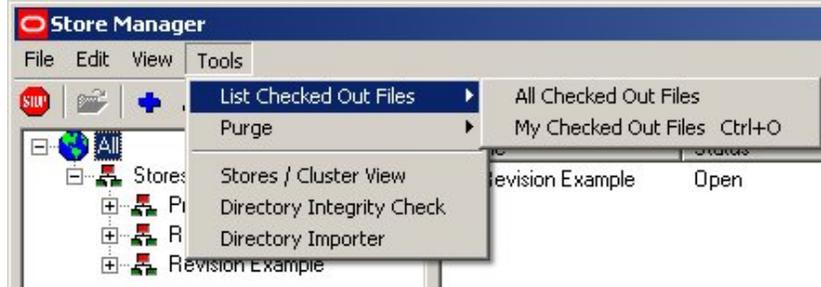
Fields	Description
Show Files Marked for Deletion	Leaves the Object Names present in the hierarchical tree, but puts a cross by them. 
Show Store Codes	Displays the store codes.
Show Grid	Puts the files displayed in the List view into a grid.
Show Large Icons	Changes the icon size.
Show Tooltips for Tree View	Displays the revision code when the mouse pointer is held over the revision.
Show Tooltips for List View	Displays the full path when the mouse pointer is held over a file.
Show Document Preview	Puts a preview of the document at the bottom of the Store Manager Window
Date Format	Brings up a drop down list that enables the form the date is displayed in to be customized.

Administrator Functions

The **Tools menu** can be toggled on and off by using <Control + A>. The menu gives access to a number of standard administrative tasks. Only users with Administrator's access right will be able to access the Tools menu.

List checked out files

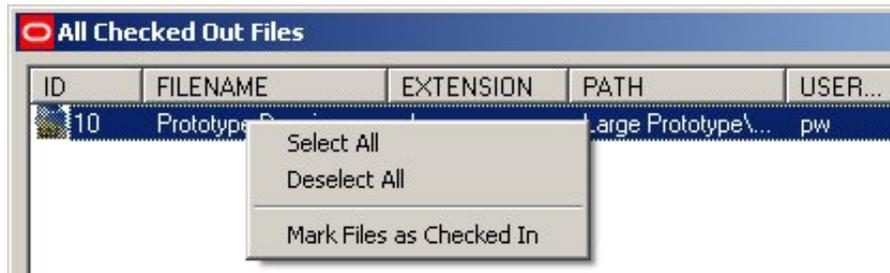
When a file is being amended or updated, it is not available for other operations within Macro Space Management. Such a file is designated as Checked Out. The List Checked Out Files functions allows the administrator to identify such files.



Store Manager - Tools

- Selecting All Checked Out Files lists every file checked out from Store Manager.
- Selecting My Checked Out Files lists the files checked out by that particular log in identity. (This can also be accessed by <Ctrl + O>).

After the option has been selected, the user has the option to check files back in.

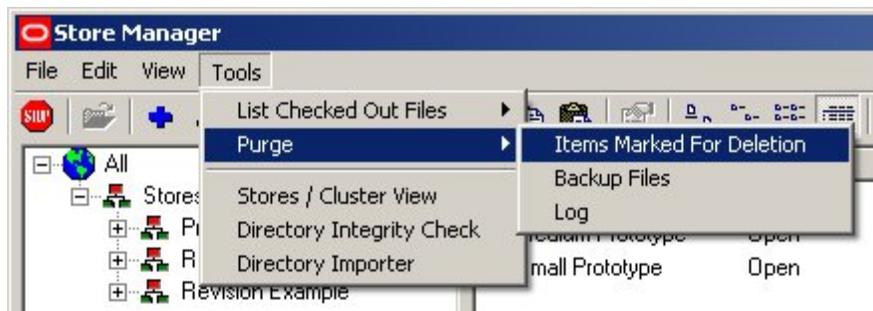


All Checked Out Files

Purging Files

When the objects are deleted, they are not completely removed from the database. They have only been marked for deletion. Such objects are moved to the RFBin, equivalent of the recycle bin, pending confirmation of deletion. Only when they are deleted from the RFBin, will they be permanently removed from the application database. Using the **Purge File** option, you can permanently remove varying types of deleted files from Store Manager.

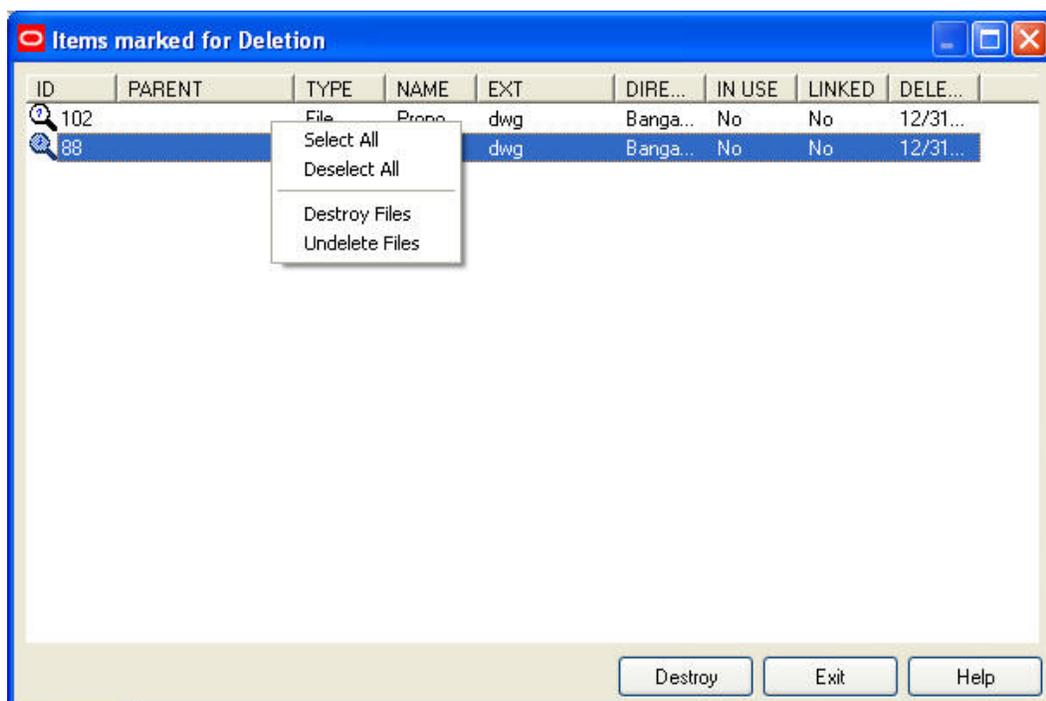
Purged files cannot be recovered, ensure that the files to be purged are no longer required.



Purging Items Marked for Deletion

On the Items marked for Deletion dialog box, select the objects you want to purge and click **Destroy**.

You can perform various operations on files deleted from the Store Manager file structure. The available functions can be accessed by right clicking the mouse.



Items Marked for Deletion

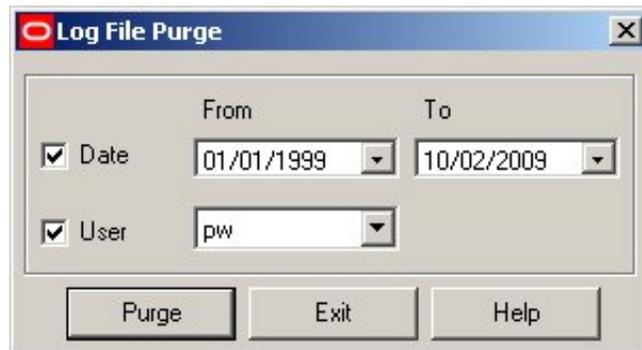
- **Select All** selects all the files chosen for deletion.
- **De-select All** un-checks all files marked for deletion. Individual files can be selected by left clicking on them with the mouse, while groups of files can be selected by left clicking with the mouse in conjunction with the <Shift> or <Control> keys.
- **Destroy Files** removes all files that have been selected for deletion.
- **Undelete Files** restores deleted files to their original place within the Store Manager file structure.

Purging .BAK files

When Planner modifies a file it saves the modified file with the file extension .DWG. The old file is saved with the file extension .BAK. As Planner files are large, these .BAK files can occupy a considerable amount of server or hard disc space. Purging the files frees up this space.

Purging Log Files

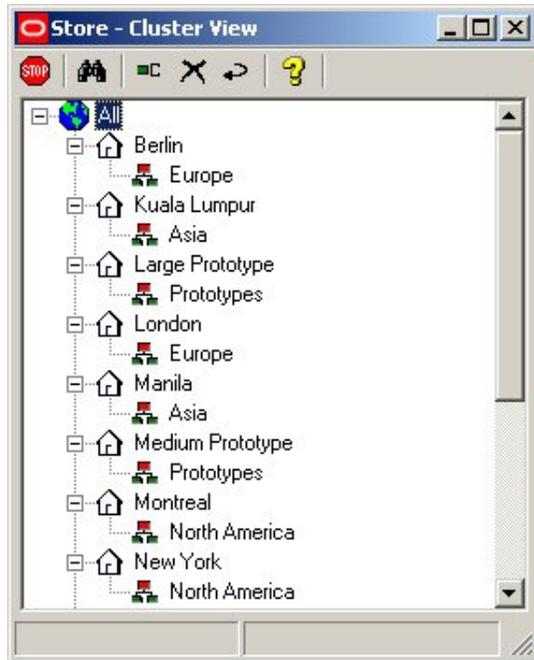
Store Manager writes a series of log files when any errors occur. These files accumulate over time. The "purge log files" allows the option of deleting these files; either between a date range, or on the user's computer.



Log File Purge Dialog Box

Store/Cluster view

Selecting the **Store/Cluster view** option brings up a window allowing an alternative way of viewing the information held within the hierarchical data structure within Store Manager. Stores are listed in the sequence determined by their unique identification code. The cluster to which the store has been allocated is displayed immediately below the store.

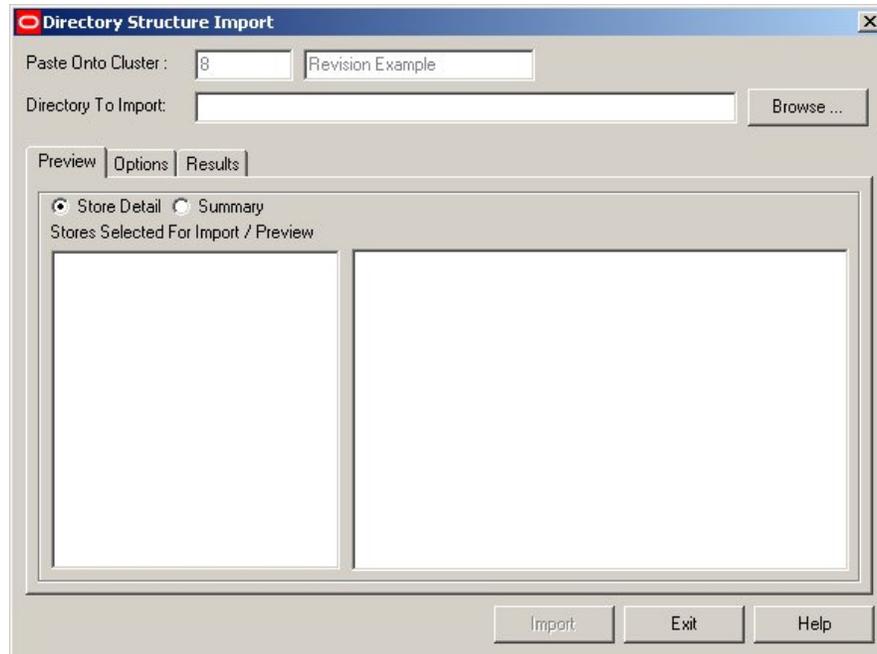


Store – Cluster View

Importing directories

The Import Directory option allows files to be imported into the Store Manager file structure and corresponding entries to be made in the Store Manager file structure. The files to be imported must have a data structure compatible with Store Manager – the files should be in the store/floor/revision/file hierarchy.

A parent cluster should be selected within the Store Manager hierarchy, (or created if required). This parent cluster will be the target for the files to be imported. The Import Directory option should then be selected from the Administrator menu. This will bring up a dialog box called Directory Structure Import. This has three options called Preview, Options and Results.



Directory Structure Import

Conformation of the cluster which the data is to be imported into will be found at the top of this box.

Clicking on the browse button will bring up a further dialog box, allowing selection of the required group of files. When the files have been selected, a list will appear in the preview pane of the Directory Structure Import box. This list can be seen either in summary or detailed form.



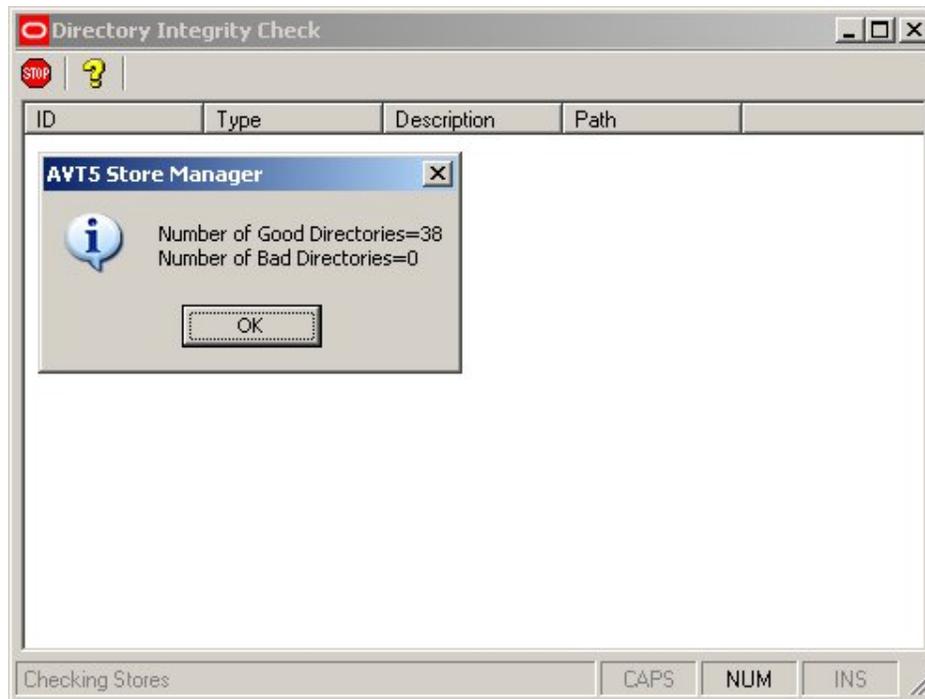
Select Directory

The Options tab in the Directory Structure Import box allows unwanted file extensions from the files to be imported to be specified. This allows the import of BAK, (back-up version of Planner drawing), LOG, (log files), and MDB, (Access database) to be prevented.

After the files have been imported the results can be seen in the Results tab of the Directory Structure Import. Any problems will be flagged for attention.

Integrity Check

The Integrity Check compares the store directory structure shown in the current display window with that registered in the database. Any errors found are displayed and should be brought to the attention of the Systems Administrator for rectification.

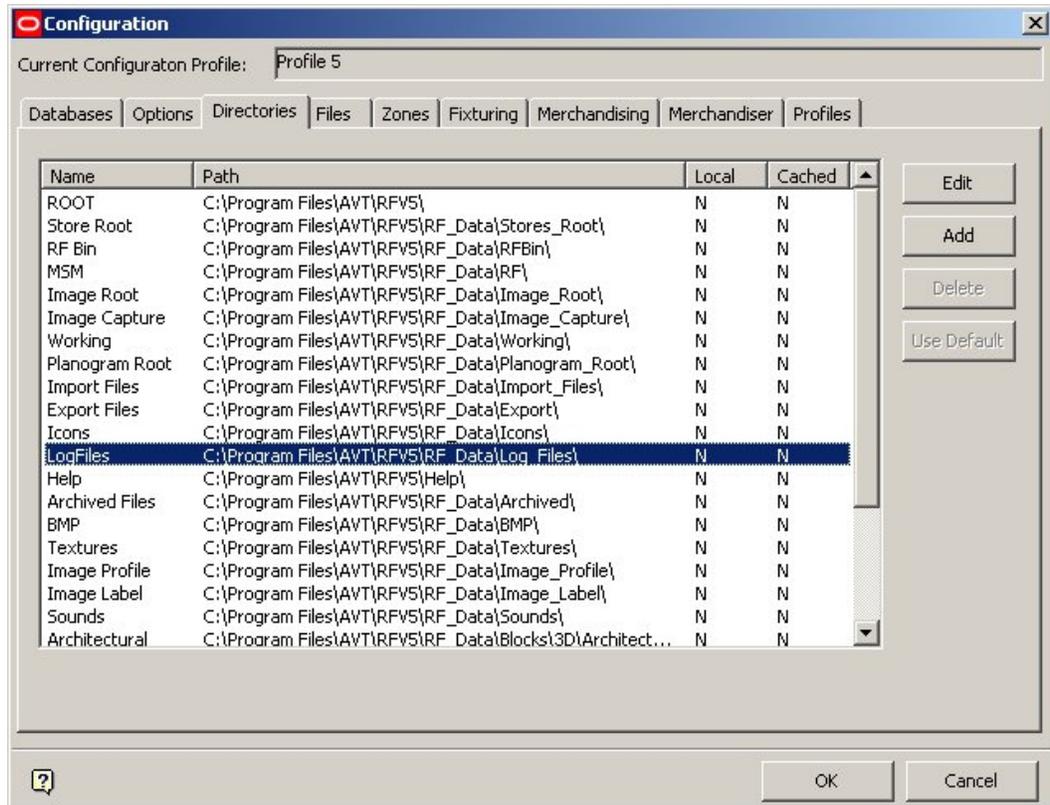


Directory Integrity Check

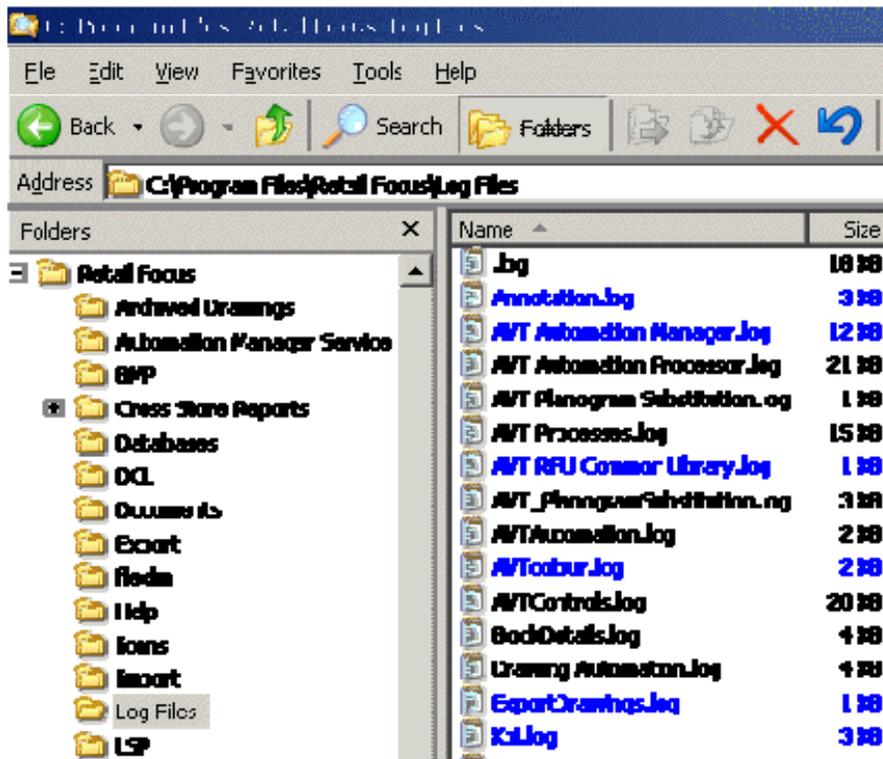
- The **ID** column contains a list of the File ID's used by Macro Space Management as references for the files. If a File ID is missing, this means a problem with the directory structure.
- The **Type** is the type of object. It can be a Store, Floor or Revision. Clusters and sub-clusters will not appear as they are folders for holding files, not files themselves.
- The **Description** is the name given to the object.
- The **Path** is the path in the directory structure to the designated object.

Log Files

Log files are files recording events and problems during operation of Macro Space Management. This enables problems to be investigated at a later date. They can be found at the location specified in the Configuration Module.



Log Files Path



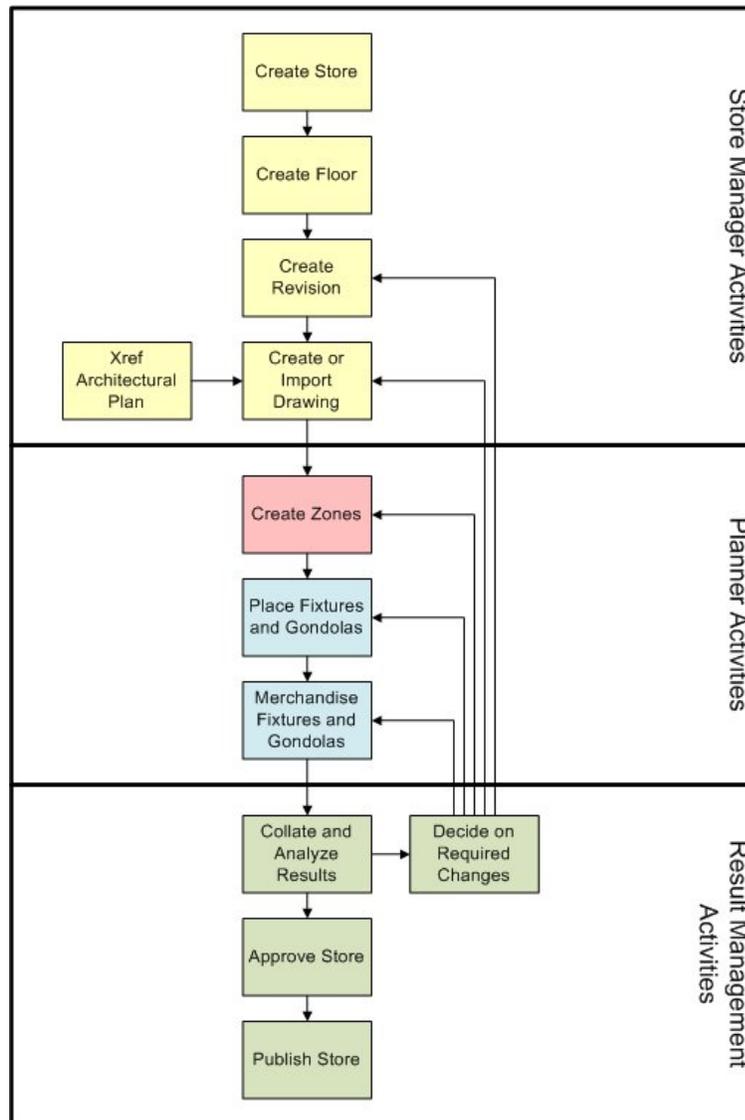
Double click a specific file to bring up a log of a particular Macro Space Management's operation.

Zones

Business Flows for Zones

A Zone defines a section of floor used for a specific and clearly defined purpose, based on the floor layout specified by an architectural drawing. The Zone might define an area used for sales or storing stock, or it might define areas used for non-sales purposes such as offices, corridors or toilets. The starting point is a layout specified by a cross-referenced architectural drawing. This sets out the boundaries defined by external and internal walls.

From a technical standpoint, a Zone is a Macro Space Management Block that allows additional information to be put into an AutoCAD architectural drawing. This subsequently allows more structured Macro Space Management reports to be produced on the associated layout of fixtures, fittings, and Planograms within that drawing.



Business Flow - Zones

A Zone is defined by an AutoCAD Polyline enclosing a specific section of floor. Further Polylines within the Zone can be used to define pillars or other obstructions. The designation of pillars and other obstacles allows taking these pillars and other obstacles into account when calculating sales areas. This results in a more accurate calculation of the area of usable floor, enabling sales performance analysis to take into account the effect of obstructions.

The Zone is used to assign a specified part of the total floor area to a specific function. Such functions include allocating to specific types of retail goods, (for example electrical goods), or designating the area as a non-sales area; for example a manager's office or a corridor. Zones thus allow the total floor area in the store to be split into sales and non-sales areas and then further sub-divided as to purpose. This sub-division of the store allows Planograms and fixtures to be filtered by Zone, allowing the store planner to rapidly establish which goods and which fixtures are in a specific part of the store.

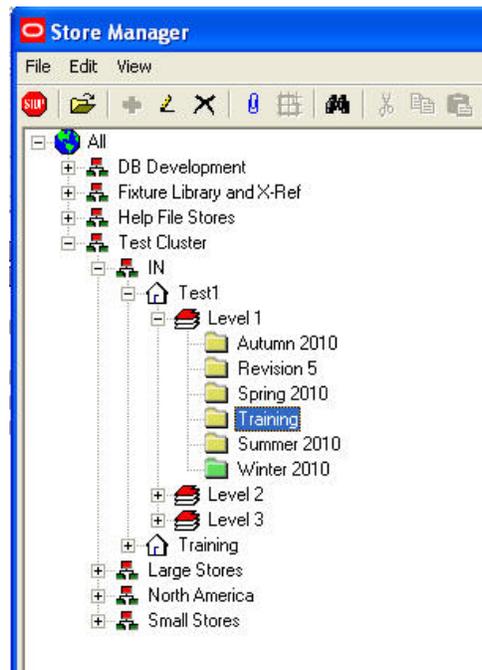
Zones can also be designated as being excluded from certain types of reports. This allows fixtures and Planograms that have been placed in a storage area to be excluded from any

calculations or reports on the performance of that part of the store. Many of the characteristics of Zones can be configured within the Administration Module.

Basic Concepts of Zones

Hierarchical Tree

A Hierarchical Tree is one where objects are organized in the form of a tree. This allows objects to be set out in a logical relationship to each other. The more fundamental data is close to the trunk, while the more dependent data is further out on the branches. The most fundamental part of the hierarchical structure is the Store Root.



Hierarchical tree

Hierarchies can be defined to any level of detail. For example, the Sales Floor Space zone can be divided into a number of broad classes, such as Hardware, Food and Drink, and Concession Area.

The Food and Drink area can further be divided into a variety of departments (zones) like Frozen Foods, Bakery, Dairy, and Meat and Fish.

Internal Area

The basis for any store plan is generally an architectural drawing. This is normally cross referenced (xrefed) to another AutoCAD drawing to act as a blueprint for the arrangement of zones, fixtures, fittings, and merchandise.

The first zone to be drawn is often the Internal Area Zone. This defines the maximum area available for sales activities. The Internal Area can include both Sales and Non-Sales areas.

It is also possible to draw both sales and non-sales Zones outside of the internal area. Any Zones outside the Internal Area will not be included in any Area Calculations.

Net Area - Zones

Net Area is the area remaining in a Zone after Holes have been taken into account.

Gross Area - Zones

The Gross Area of a Zone is the total area of a Zone before any Holes or other non-usable areas have been taken into account.

Holes, (Cut Holes)

A Hole is an area cut into a Zone to represent a pillar or similar obstruction. The hole floor area is not allocated to a zone for the purpose of merchandising. For example an area allocated to the sale of Men's Clothing might have a pillar and a stairwell in it. This area is reduced for the calculation of actual area available for retailing and is taken into account when reviewing the performance of the zone.

The area is subtracted from the Gross Area of the Zone to give the Net Area. To allow for these obstructions, the zone can be modified by cutting holes in it – each hole representing an area that cannot be used for the intended purpose of the zone.

Layers

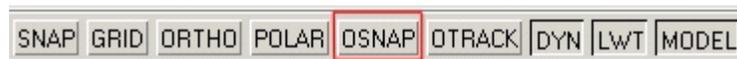
Planner drawings are often divided into layers. Each layer contains a specific type of information. For example one layer might contain information on fixtures, another data on electrical wiring.

Layers can be further sub-divided into aliases. Each aliased layer contains very specific information. For example, one aliased layer may contain details of all the fixtures capable of holding chilled goods; another all fixtures holding fruit and vegetables.

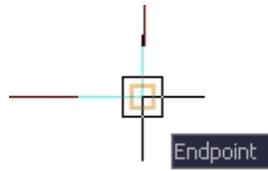
Layers are one of the methods used by Macro Space Management to filter fixtures, planograms, etc.

OSNAP AutoCAD Command

The OSNAP (Object Snap) AutoCAD command has significant effect on the way Zones are drawn. OSNAP can be turned on and off by clicking on the button at the bottom of the AutoCAD window.



If OSNAP is On, then when Zones are drawn, the lines snap to pre-specified points in any existing objects. Depending on AutoCAD setting, a series of small boxes appears as the mouse is moved about. These represent the points to which lines can be snapped.



Lines can only be drawn to these points.

If OSNAP is Off, then Zones can be drawn to any desired shape within the drawing.

Zone Type

A Zone Type is the broad class a zone falls into. Zone Types are user defined and can include:

- Internal Areas
- Departments
- Non-Sales areas

Each Zone Type is drawn onto its own AutoCAD layer – only Zones on the same layer can be detected as clashing or overlapping.

Zone Definition

After defining the Zone Types (broad classes of Zones), individual types of Zones can be defined.

Examples of Department (Sales Zones) Definitions may include:

- Chilled Goods
- Furniture
- Ladies clothing

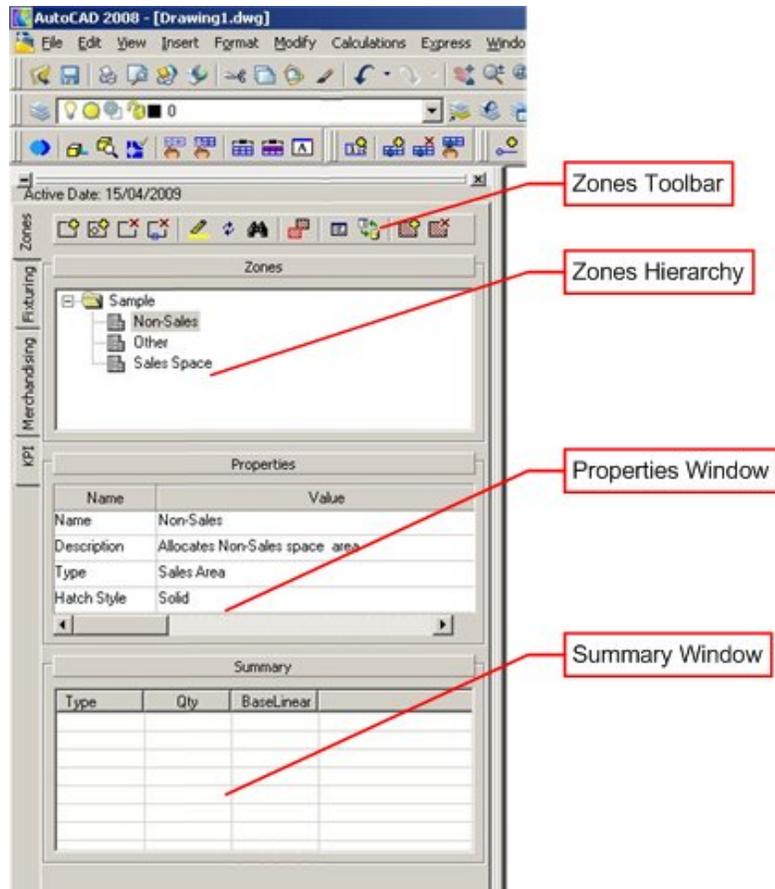
Examples of Non-Sales Zone Definitions might include:

- Corridors
- Offices
- Toilets

In addition to the name and zone type, Zone Definitions can include the type of hatching used in the drawing, the color of the hatching and a user defined code.

Zone Toolbars and Display Windows on the Object Browser

Click the Zones tab on the Object Browser to display the Zones tab that has options for adding, editing, and deleting Zones.



Zones tab on the Object Browser

The Zones Toolbar

The Zones Toolbar is found on the Object Browser.



Zones Toolbar

It contains a series of icons allowing various operations to be carried out on Zones.

Icon	Function
	Add Zone Boundary

Icon	Function
	Add Hole
	Delete all of Zone Description
	Delete Specific Zone
	Highlight Zone in Drawing
	Highlight Zone in Tree
	Find
	Detect clashes
	Configuration Options
	Refresh
	Add Hatching
	Remove Hatching

The Zones Hierarchy Window

The Zones Hierarchy Window is found immediately below the toolbar.



Zones Hierarchy Window

It contains a hierarchical tree giving a list of all the available Zone types.

Note: Zone types and descriptions can be added, edited or deleted using the Administration Module.

The Properties Window

The Properties Window gives details of the Zone Definition that has been selected in the hierarchy.



Properties Window

The Summary Window

The Summary Window shows a user defined list of fixtures placed in the drawing.

Summary		
Type	Qty	BaseLinear
Pillar	73	36.5

Summary Window

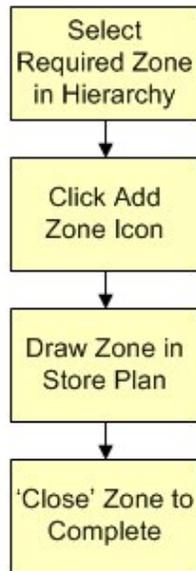
Click on a column heading to re-order that column. To reverse the sort order, click again. The Summary window can be minimized by clicking the splitter bar.



Zone Operations

Adding Zones/Boundaries

Adding zones is a simple process, initiated from the Object Browser.



To add zones:

1. Select the Zones tab on the Object Browser.
2. Select the required Zone Description from the Zones Hierarchy Window.
3. Select the Add Zone option from the toolbar.
4. Draw the required Zone shape and complete the drawing by using the 'close' command.

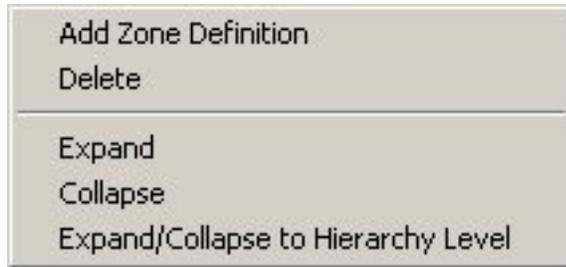
Selecting the Zone Description

The Zone Description is selected from the Zones hierarchical tree window.



Zones hierarchical tree window

The tree can be expanded or contracted by clicking the + or – signs. Alternatively right click with the mouse to bring up a menu of options.



This can be used to expand or collapse the hierarchical tree. The required Zone can then be selected by left clicking it to highlight the zone. Details of the Zone appear in the Properties window.



Properties window

This enables the Zone Description to be confirmed as correct.

Initiating Drawing a Zone

When the Zone description has been selected, the process of drawing the Zone is initiated by selecting the Add Zone option.

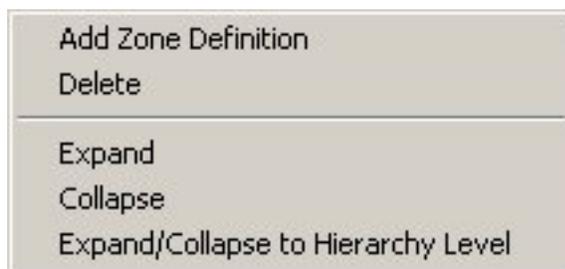
To draw a zone:

1. Select the Add Zone icon can be clicked in the tool bar to initiate drawing the Zone.



Add Zone icon

Alternatively, you can right click in the Zone Descriptions window to bring up menu options.



2. Select Add Zone Definition to initiate drawing the zone.

Drawing the Zone

After you have selected the Add Zone Boundary option, the cursor is active and ready to start specifying the Zone Boundaries.



Note: The way the Zone is drawn depends on whether OSNAP (Object Snap) has been selected or not. If selected, Lines can only be drawn to specified points. If OSNAP is off, then lines may be drawn to any location on the drawing.

OSNAP AutoCAD Command

Note: Entering 'Close' in the command line completes the Zone drawing process by turning the currently drawn line into a Polyline enclosing the Zone.

Drawing a Simple Rectangle

To draw a simple rectangle position the cursor at the required start point and left click to fix it. Draw the cursor to the diagonally opposite corner of the required rectangle and left click to fix it. Press <Escape>. A rectangle of the required dimension is immediately drawn.

Drawing Zones with OSNAP On

When OSNAP is on, a series of symbols appear as the cursor moves about. These show the available points that can be selected. Click on successive points to draw the outline of the Zone.

Note: With OSNAP on, the Polylines can only be drawn to a limited number of specified points. To draw to a wider selection of points, turn OSNAP off.

Drawing Zones with OSNAP Off

With OSNAP is off, Polylines can be drawn to any point of the drawing. Draw the required points, left clicking to fix each in turn. Entering 'Close' in the command line completes the Zone drawing process by turning the currently drawn line into a Polyline enclosing the Zone.

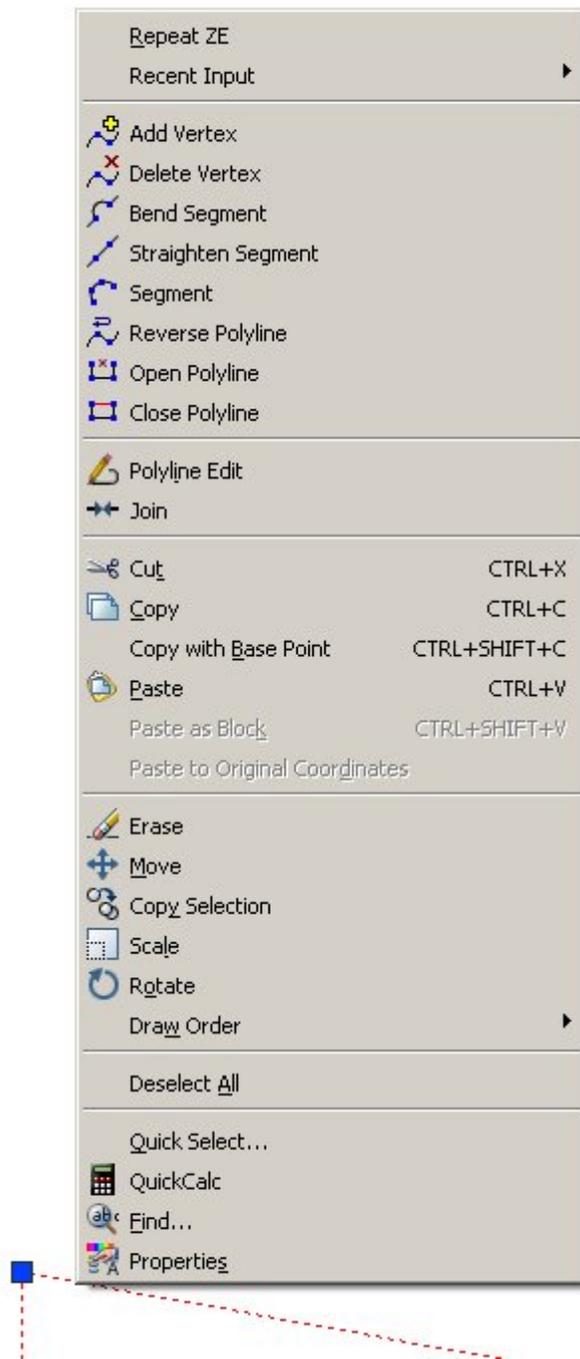
Editing Zones

Zones can be edited in two ways:

- Zone Types and Zone Definitions can be modified using the Administration Module. (This option is only available to those with Administrator's privileges).
- The physical dimensions of a zone can be altered using AutoCAD tools.

Editing Zones with AutoCAD Tools

Zone shapes and dimensions can be changed using AutoCAD tools that are available by clicking on the zone boundary to highlight it, and then right click to bring up a menu of edit options.

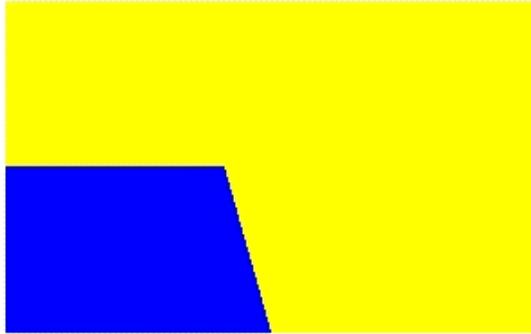


Zones - edit menu

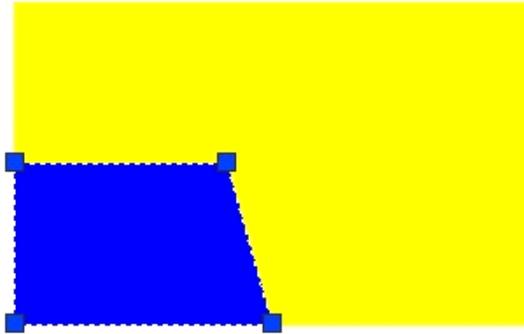
Zones can have vertices added and deleted, segments bent and straightened and segments added. See the AutoCAD help File for further information.

Editing Zones with AutoCAD

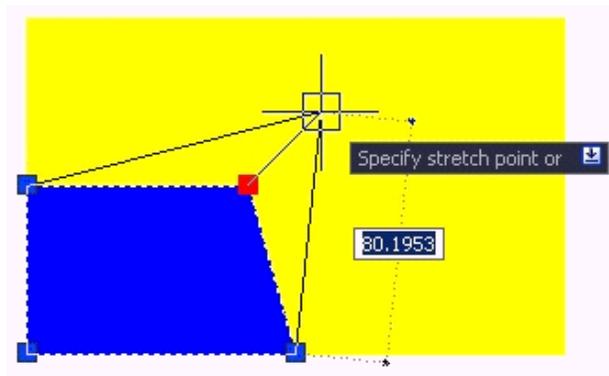
Editing a Zone in AutoCAD can be done by using the AutoCAD grip points.



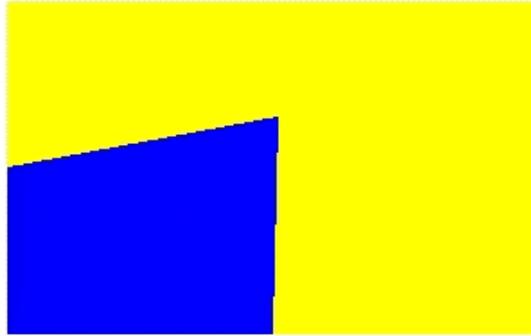
Click on the required Zone to get the grip points to show.



Click on the required grip point and move it to the desired new location.



Left click to set the new location for the grip point and <Escape> to complete the AutoCAD editing process.



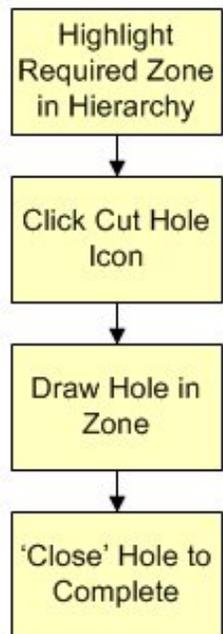
The Zone is now fixed in its new shape.

Zone Notation

If the shape of a Zone is substantially changed, the position of the notation remains in the original position. This should be selected using AutoCAD tools then dragged to a new and more appropriate position.

Cutting Holes

You can cut holes in the zones from the Object Browser.



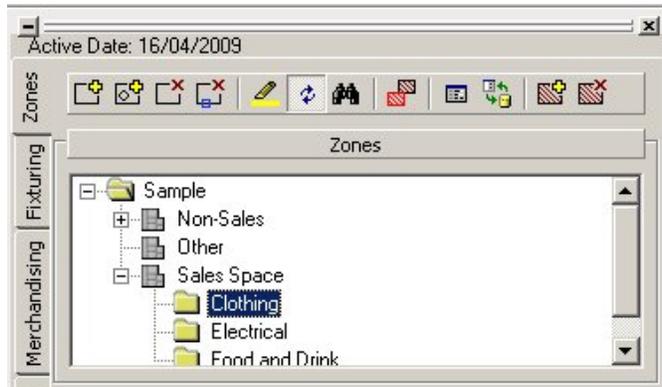
To cut holes:

1. Select the Zones tab on the Object Browser.
2. Highlight the required Zone in the Zones Hierarchy.
3. Select the Cut Holes icon, and draw the shape of the hole.
4. Enter 'Close' in the command line to complete the hole drawing process by turning the currently drawn line into a Polyline enclosing the hole.

Selecting the Zone to Cut a Hole

Note: Holes can only be cut in the Zone currently highlighted in the Zone Hierarchy

If the name of the zone is known, the appropriate Zone Description can be selected from the Zones Hierarchical Tree window.



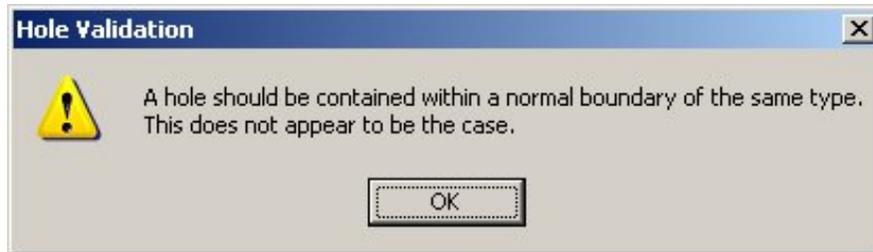
Zones Hierarchical Tree window

Alternatively, the Highlight zone in tree command can be used to select the appropriate Zone description in the Zones Hierarchy.



Zones - Highlight zone

Note: If the Zone Definition is not correctly selected before a hole is cut, the error message depicted will result.



Validation message

Initiating Drawing the Hole

When you have selected the Zone description, initiate the process of drawing the Hole by selecting the Add Hole Option. This can be done by clicking on the tool bar to initiate drawing the Hole.



Add Hole Option

Defining the Hole

After you have selected the Cut Hole option, the cursor is active and ready to start specifying the Hole Boundaries.



Note: The way the hole is drawn depend on whether OSNAP (Object Snap) has been selected or not. If selected, Lines can only be drawn to specified points. If OSNAP is off, then lines may be drawn to any location on the drawing.

OSNAP AutoCAD Command

Note: Entering 'Close' in the command line completes the hole drawing process by turning the currently drawn line into a Polyline enclosing the hole.

Drawing a Simple Rectangle

To draw a simple rectangle position the cursor at the required start point and left click to fix it. Draw the cursor to the diagonally opposite corner of the required rectangle and left click to fix it. Press <Escape>. A rectangle of the required dimension is drawn.

Drawing Holes with OSNAP On

When OSNAP is on a series of symbols appear as the cursor moves about. These show the available points that can be selected. Click on successive points to draw the outline of the hole.

Note: With OSNAP on, the Polylines can only be drawn to a limited number of specified points. To draw to a wider selection of points, turn OSNAP off.

Drawing Holes with OSNAP Off

With OSNAP off, Polylines can be drawn to any point of the drawing. Draw the required points, left clicking to fix each in turn. Entering 'Close' in the command line completes the hole drawing process by turning the currently drawn line into a Polyline enclosing the hole.

Deleting Zones and Holes using MSM tools

You can delete zones from the drawing using either of the two options:

- Delete all zones of that description
- Delete a specific zone or hole

Delete all Zones of that Description

To delete all examples of a specific Zone Description, first select the required zone in the hierarchical tree. Click on the Delete Zone icon in the toolbar to delete the Zone.



Delete Zone icon

Note: If there are multiple Zones of this type in the drawing, all Zones of this type are deleted.

Note: If you need to identify the Zone type to be deleted, use the highlight Zone in Tree option. Highlight Zone in Tree

Delete a Specific Zone or Hole

To delete a specific zone or hole, click on the Delete Boundary/Hole option on the toolbar.



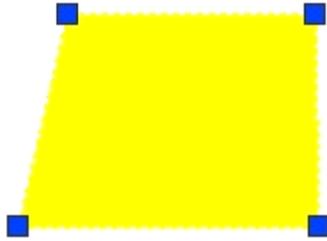
Delete Boundary/Hole option

Click on a zone or Hole in the drawing to delete that zone or hole.

Deleting Zones using AutoCAD

You can delete Zones using the AutoCAD Erase tool. However, it is recommended users delete Zones using the Macro Space Management Delete Zone option as this is a simpler

and more effective way of achieving deletion. To erase a Zone using AutoCAD tools select the zone so that the markers show.



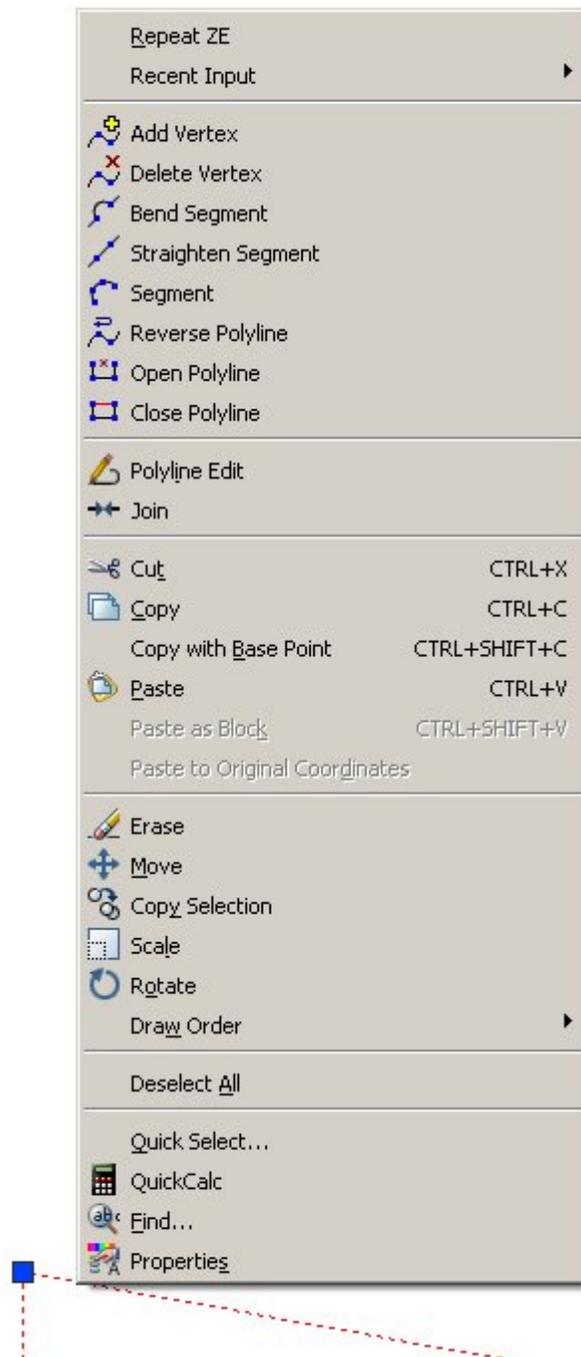
Right click to bring up the menu and click on the Erase icon.



This removes the Zone from the drawing. The Zone is not removed from the Macro Space Management database until the Synchronize tool has been used. For more information, refer the chapter Synchronization.

Editing Holes

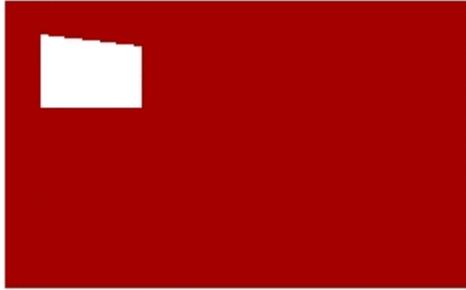
Hole shapes and dimensions can be changed using AutoCAD tools. A range of these is available by selecting the required hole, then right clicking. This will bring up a menu with a number of edit options.



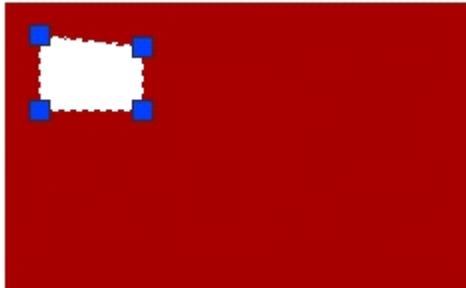
Holes – Edit Menu Options

Holes can have vertices added and deleted, segments bent and straightened and segments added. See the AutoCAD help File for further information.

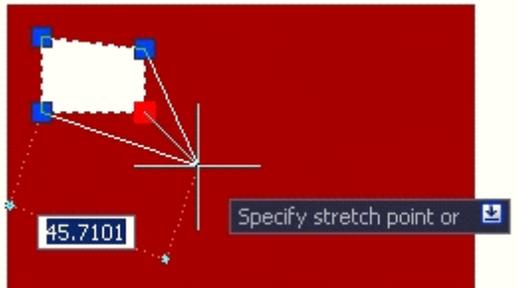
One way of Editing Holes is by using the AutoCAD grip points.



Click the required Hole to get the grip points to show.



Click the required grip point and move it to the desired new location.



Left click to set the new location for the grip point and <Escape> to complete the AutoCAD editing process.



The Hole should now be fixed in its new shape.

Highlight Zone in Drawing

The Highlight Zone in drawing icon allows the location of a zone to be identified in the drawing.



Highlight Zone

This operation can be toggled on and off by clicking the icon. When toggled on the icon appears pressed down.

When active, left clicking any Zone in the hierarchical tree causes that zone to display in the drawing.

Note: Only Zones currently in the drawing can be displayed. Selecting a zone which has not been placed has no effect. The precise way the zone highlights is determined by the setting in the Zones tab of the Configuration module.

Highlight Zone in Tree

The Highlight Zone in tree option allows you to highlight the zone boundary in the drawing.



Highlight Zone in tree

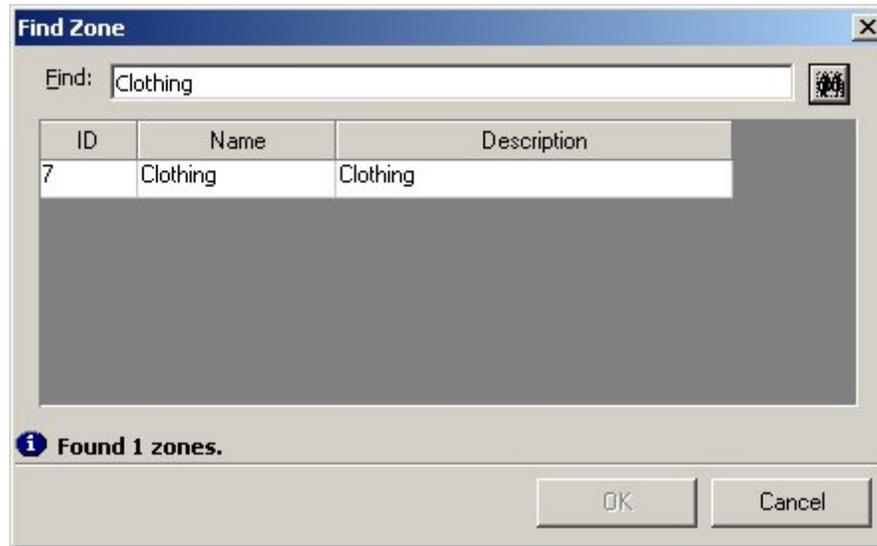
Find In Tree

Find in Tree allows you to search for Zone Names in the Zone Hierarchy.



Zones - Find

Click the icon to bring up the Find Zone dialog box.



Find Zone dialog box

To use the dialog box:

1. Type a text string in the Find text box.
2. Click on the search icon. Zone names matching the search string are listed.
3. To select a zone in the hierarchy, highlight it and click the **OK** button.

Detect Clashes

The Detect Clashes option can be accessed from the Zones toolbar.



Detect Clashes option

If this option is selected, then any Zones of the same type with overlapping boundaries are highlighted. Zones of the same type that share a common boundary are not highlighted.

Note: Zones of different type are drawn on different AutoCAD layers. Zones on different layers that overlap will not be shown as clashing.

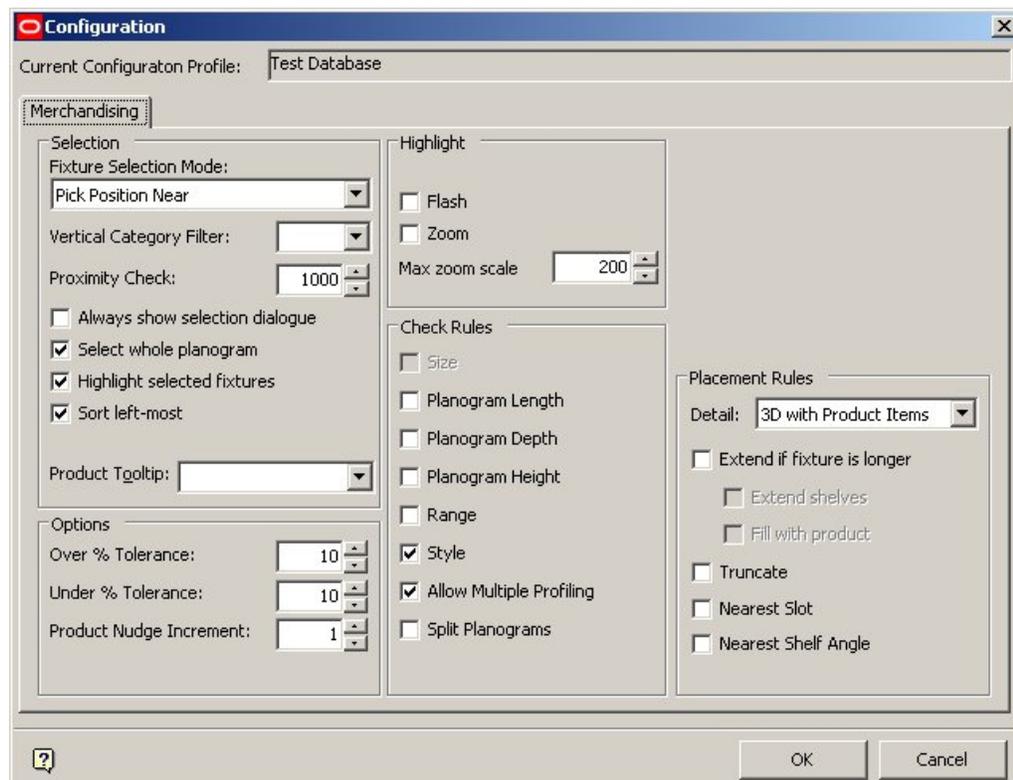
Configuration Options

The Merchandising tab in the Configuration Module can be called by clicking on the Configuration icon on the Merchandising toolbar.



Merchandising toolbar

This brings up the Merchandising tab from the Configuration Module.



Configuration Module

Refresh

The Refresh option causes the hierarchical tree in the Zones window to be updated with any Zone Definitions that have been added or edited since the Planner module was opened for the current session. (This is useful if work is being carried out in parallel in the Administration module).



Zones - Refresh

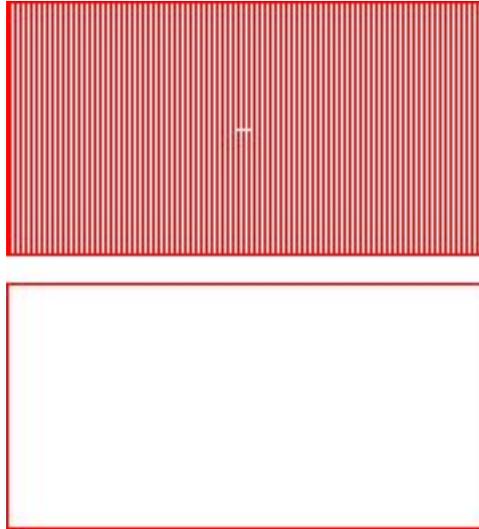
Hatching

Hatching can be added to or removed from zones using the appropriate option.



Zones - Hatching

In the example below the top zone is hatched, the bottom one is not.



Prototype Stores

If a Prototype Store has been assigned to the current store in store manager, comparisons can be made between the areas of the zones in the prototype store and the current store.

Summary				
Zone Name	Gross Area (sq ft)	Net Area (sq ft)	Prototype Gross Area...	Prototype Net Area ...
AUTOMOTIVE	580.48	580.48	555.02	555.02
BOOKS	1291.35	1291.35	1160.15	1160.15
BOYSWEAR	529.83	529.83	577.76	577.76
COMMERCIAL BREAD	0	0	1168.21	1168.21
DOMESTIC GOODS	0	0	1480.13	1480.13
DRY GROCERY	2894.05	2894.05	1138.45	1138.45
FROZEN FOOD	0	0	1131.91	1131.91
GIRLSWEAR	0	0	1214.91	1214.91

In the above example, it can be seen that (for example) the Automotive, Books and Boys' Wear zones exist in both stores, but that the Commercial Bread and Domestic Goods zones do not yet exist in the current store.

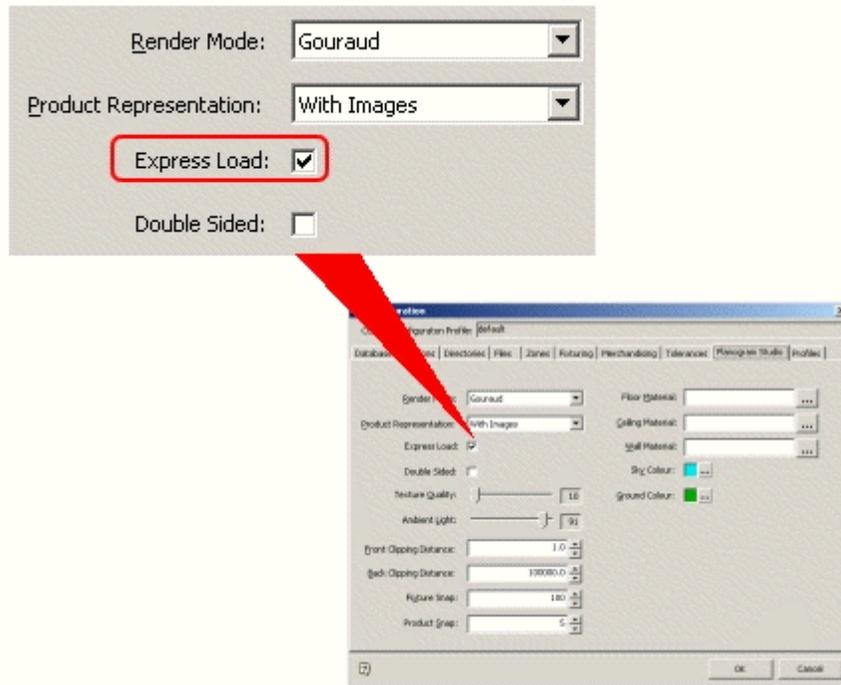
It is also possible to compare the areas of the respective zones in the Prototype and current stores, and make adjustments if necessary.

Zones and Products

When using the Object Browser, it is possible to filter products by zone. This enables the user to select products from (for example) Floral products.

Selecting Active Zones

The Express Load option in the Merchandiser tab in the Configuration Module enables to load the active zones.



Express Load

This option is not active in the AutoCAD environment and only applies to Merchandiser.

Configuring System Variables

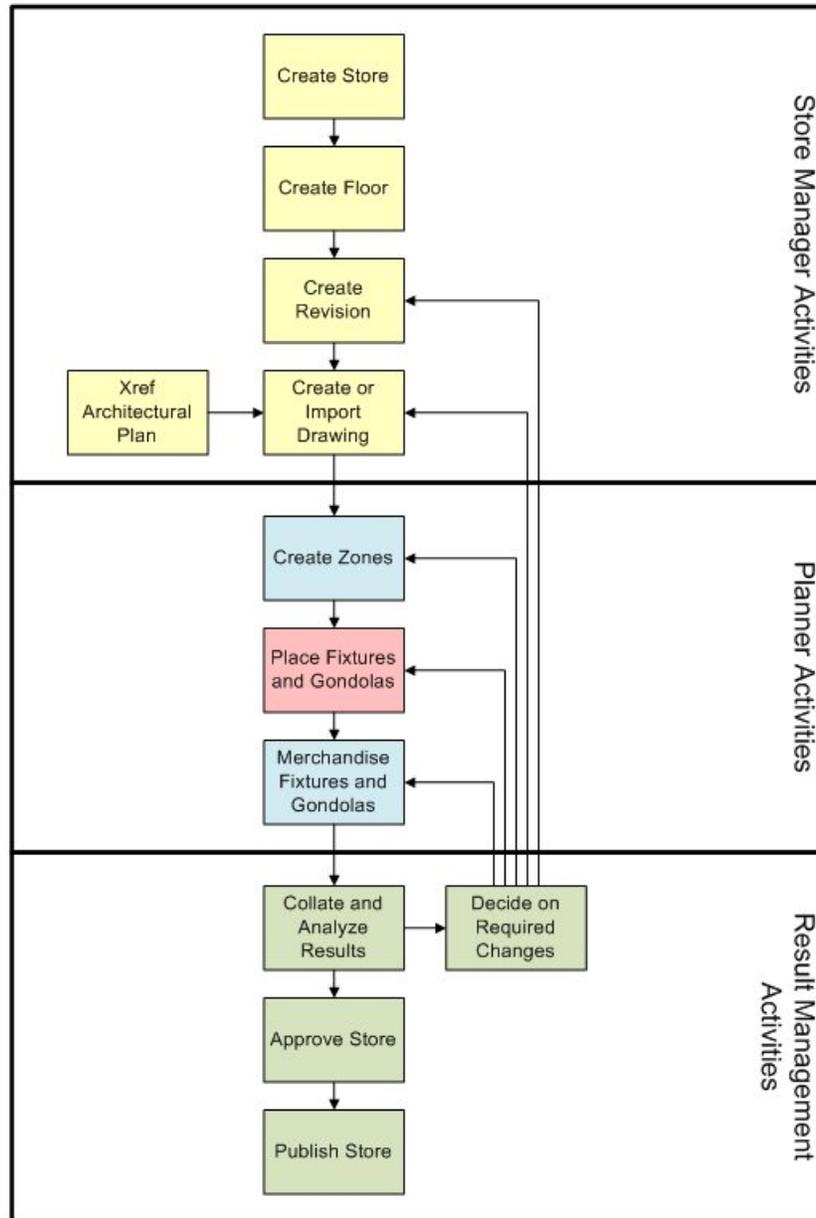
Some of the variables affecting how Macro Space Management operates can be customized. Within Macro Space Management these can be changed via the Administration Module.

Note: Changing these System Variables can have a significant effect on how Macro Space Management operates. It is recommended that any changes are made only after consulting the Oracle technical support team.

Fixturing

The Planner Module and the Business Life Cycle

The Planner module is part of the Business Life Cycle.



Store Manager Activities start the business cycle

The Store Manager enables you to add, edit, or delete stores, floors, and revisions. Revisions contain store plans. These are often associated with architectural plans so that fixtures and gondolas can be placed relative to the walls of the store. Store Manager can be accessed from both Planner and Merchandiser.

Store Planning involves the placement of zones, fixtures and merchandise. Zones can only be placed in Planner, although they can be seen in Merchandiser.

Fixtures and merchandise can be placed in both Planner and Merchandiser. It is normally more convenient to carry out fixturing operations in Planner and merchandising operations in Merchandiser).

After the floor plan has been designed, each fixture can be subsequently populated by a predetermined quantity and arrangement of sales products using the Planogram Selection and Add Product modules. After the floor has been merchandised, Macro Space Management can be used to analyze and report on the effectiveness of the layout.

Using the Fixtures module, you can:

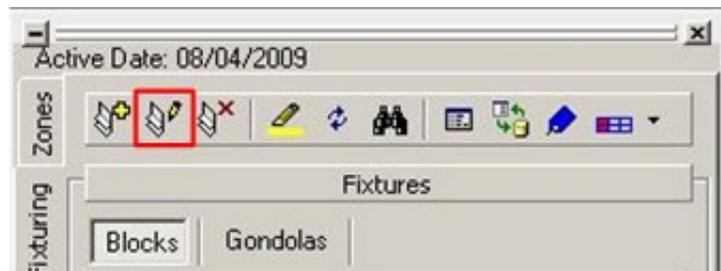
- Place single or multiple fixtures, fittings and gondolas.
- Move or rotate fixtures, fittings and gondolas.
- Erase fixtures, fittings and gondolas.
- Number bays in fixtures and gondolas.
- Calculate effective sales areas.
- Collate information on fixtures and fittings.

Result Management involves checking the completed store layout by means of Reports and Key Performance Indicators before releasing the layout to stores for implementation or starting on the next phase of planning.

About Fixture Studio

Fixture Studio is a stand alone module where fixtures and gondolas can be added, edited, and deleted. These fixtures and gondolas can be used in the Planner and Merchandiser environments. Fixture Studio can be opened from the Object Browser in the Planner module by clicking the **Edit** icon on the Fixturing toolbar.

Note: The Edit Fixture icon is activated only when working with fixtures and Edit Gondola icon when working with gondolas.



Edit Gondola option

Fixture Studio allows the properties of fixtures and gondolas to be specified. It also allows the hierarchical tree in which they are organized to be modified.

The Merchandiser module is used to design planograms and floor layouts wherein fixtures, fittings and gondolas are placed and viewed in the 3D virtual reality (VR) environment. It is not as precise as the Planner environment, but gives a more visual representation of the store plan. The Merchandiser module also enables you to populate the fixtures and gondolas shelves, products and planograms in the 3D virtual reality (VR) environment.

Note: Shelves can only be placed in the Merchandiser environment, although they can be seen in the Planner environment after Synchronization.

Note: Products can only be placed at display style level in Merchandiser. Such products are not visible in Planner.

Basic Concepts

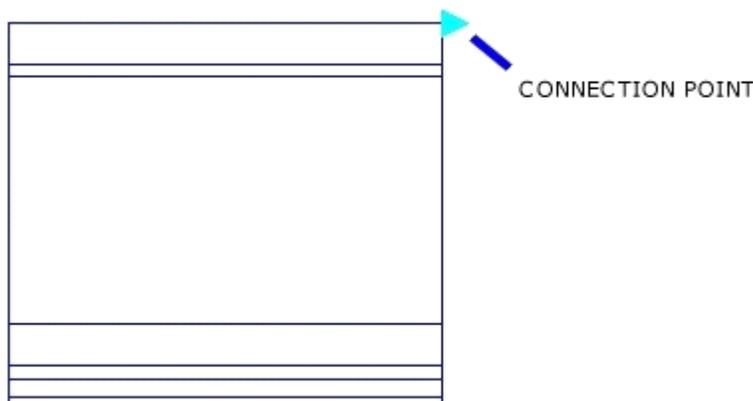
Bays

Fixtures and gondolas can be allocated bay (or gondola) numbers to simplify identifying locations. A fixture is assigned a single bay number, where as gondolas, which comprise a number of fixtures, may have multiple bay numbers associated with them.

Connection points

The **Connection Point** for a fixture or fitting is a representation of the physical connections that can be used to join one unit to another. They are typically on the left and right sides of a fixture, or on the back.

Clicking on the insertion point during addition of fixtures or fittings automatically aligns the fixture or fitting to be placed with the connection point.



Fixtures, Fittings, and Shelves

Fittings are items within a store that aid the retail effort, but do not themselves hold merchandise. For example, display material and checkout counters. Some fittings are used to support or augment fixtures. For example a shelving unit could be made up of support legs and shelves. Fittings always remain separate items on the drawing.

A **fixture** is a structure designed to hold merchandise for sale. It can take many forms including runs of shelving, display cabinets, and kiosks. A fixture can hold product directly, or via shelves. A shelf always has a parent fixture.

A **shelf** is equipment within a fixture which can hold products. For example, a backboard might hold several support bars. The support bars could in turn have rods attached. Product could then be hung from those rods. The arrangement of rods emanating from a single support bar is generically called a shelf for planning purposes. Each shelf or fixture always has a product block associated with it. This serves as a placeholder for any merchandise placed on it.

Fixtures and fittings are often color coded on purpose. For example, fixtures holding groceries might be drawn in green, fixtures holding chilled goods in blue.

Gondolas

A **Gondola** is an arrangement of two or more fixtures linked together by means of connection points or in sufficiently close proximity to meet the definition of adjacency. For example, a run of 10 fixtures placed back to back, with end caps on each end to maximize the area devoted to sales.

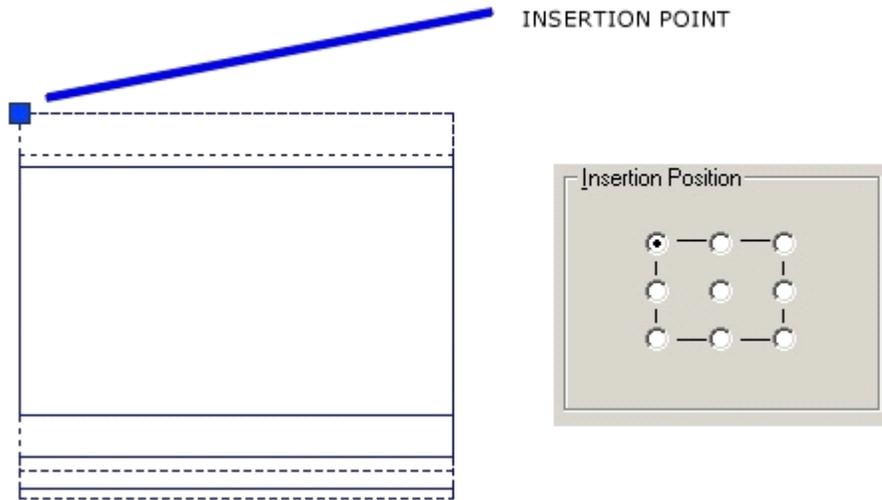
Gondolas are internally sub-divided into sections, each new section beginning where fixtures go through more than a 30° change of angle when connected. Gondolas are often color coded on purpose. For example, gondolas holding groceries might be drawn in green, fixtures holding chilled goods in blue. Note that single fixtures are numbered as gondolas if the gondola numbering option is used.

Hierarchical Tree

A Hierarchical tree is the structure of objects organized in the form of a tree. This allows objects to be set out in a logical relationship to each other. The more fundamental data is close to the trunk, while the more dependent data is further out on the branches. The most fundamental part of the hierarchical structure is the Store Root.

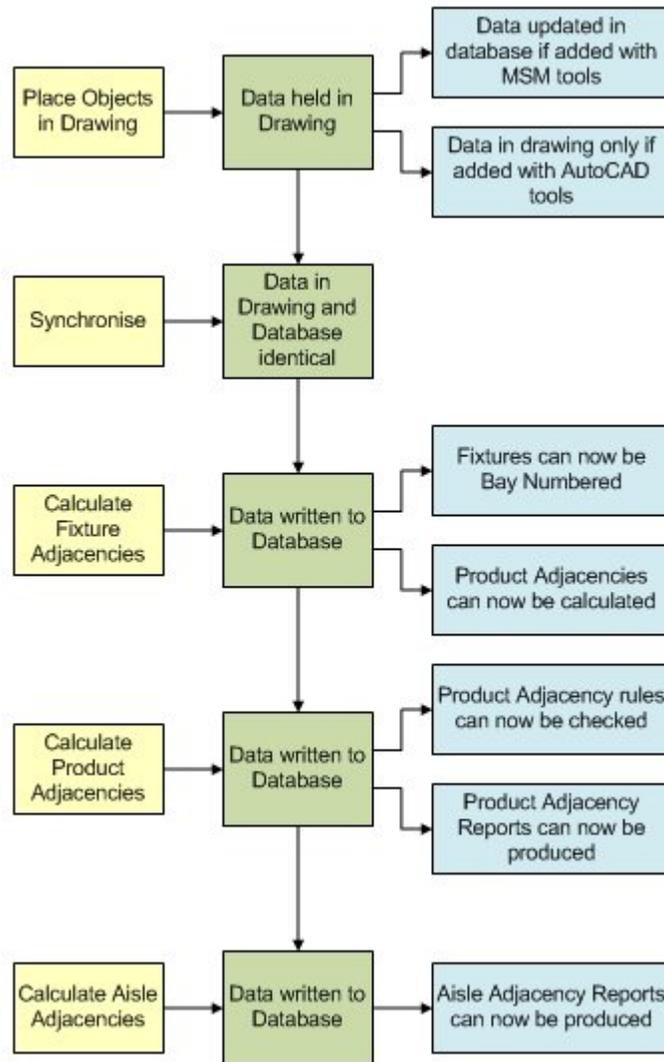
Insertion Points

The **Insertion point** is the point where a fixture, fitting, or gondola is located on the drawing. It can be designated anywhere within the fixture during the drawing stage and appears as a small blue square. Insertion points can be revealed by left clicking on any line within the drawing of the fixture, fitting, or gondola.



Synchronization

When fixtures, fittings, and gondolas are placed on the drawing, they are also sent as data to the Macro Space Management central database. If fixtures in the drawing are modified with AutoCAD tools, this changes the drawing, but not the central database. Synchronization is the process of synching the AutoCAD drawing and the Macro Space Management Central database information.



After the drawing has been synchronized with the central database, the Adjacency calculations can be run.

Fixture Adjacency calculations establish the physical relationship of one fixture to another. These relationships are used for both bay numbering and as the basis for subsequent **Product Adjacency** calculations. Product Adjacency calculations establish the relationship of one type of product to another. They cannot be run until the Fixture Adjacencies have been calculated.

About Fixturing System Variables

You can configure the **System Variables** to operate Macro Space Management to suit your requirements. Within Macro Space Management these can be changed via the Administration module.

Note: Changing these System Variables can have a significant effect on how Macro Space Management operates. It is recommended that any changes are made only after consulting the Oracle technical support team.

There is currently one System Variable **ADDITIONAL_FIXTURE_HEIGHT** affecting the operation of Fixturing. It determines the allowance made for the height of products above the top shelf. For more information, refer the Oracle Retail Macro Space Management Administration Guide.

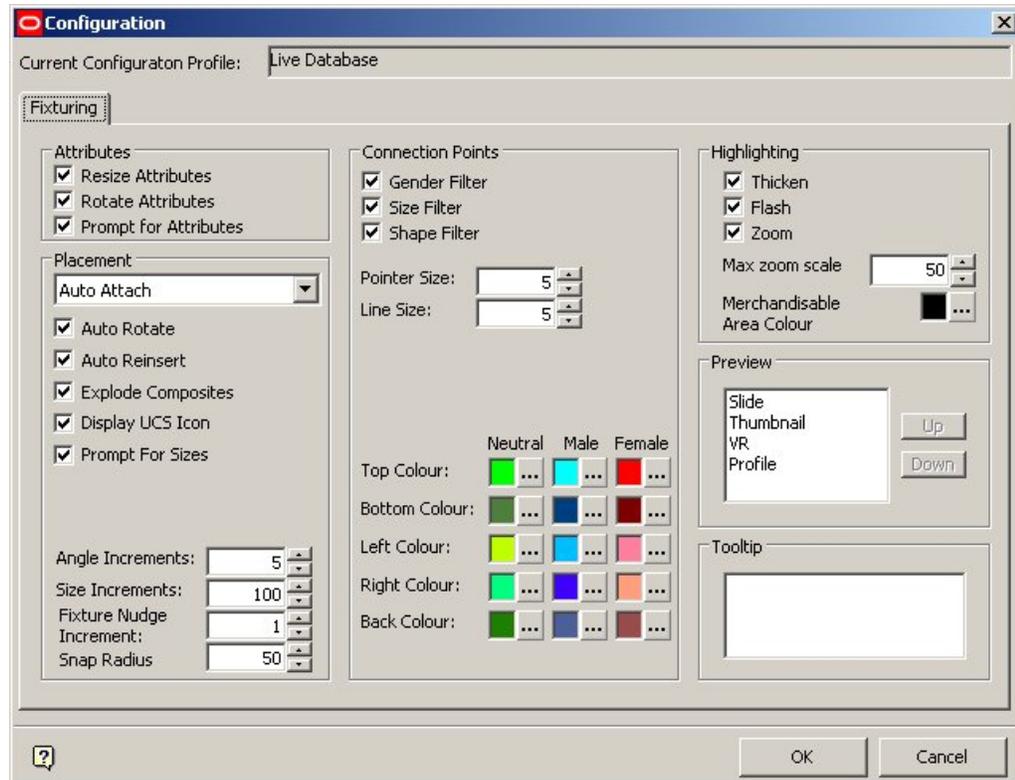
Accessing the Configuration Options

The **Configuration Options** can be accessed by clicking the Properties icon on the Fixturing toolbar.



Configuration Options

This brings up the Fixturing tab from the Configuration Module.

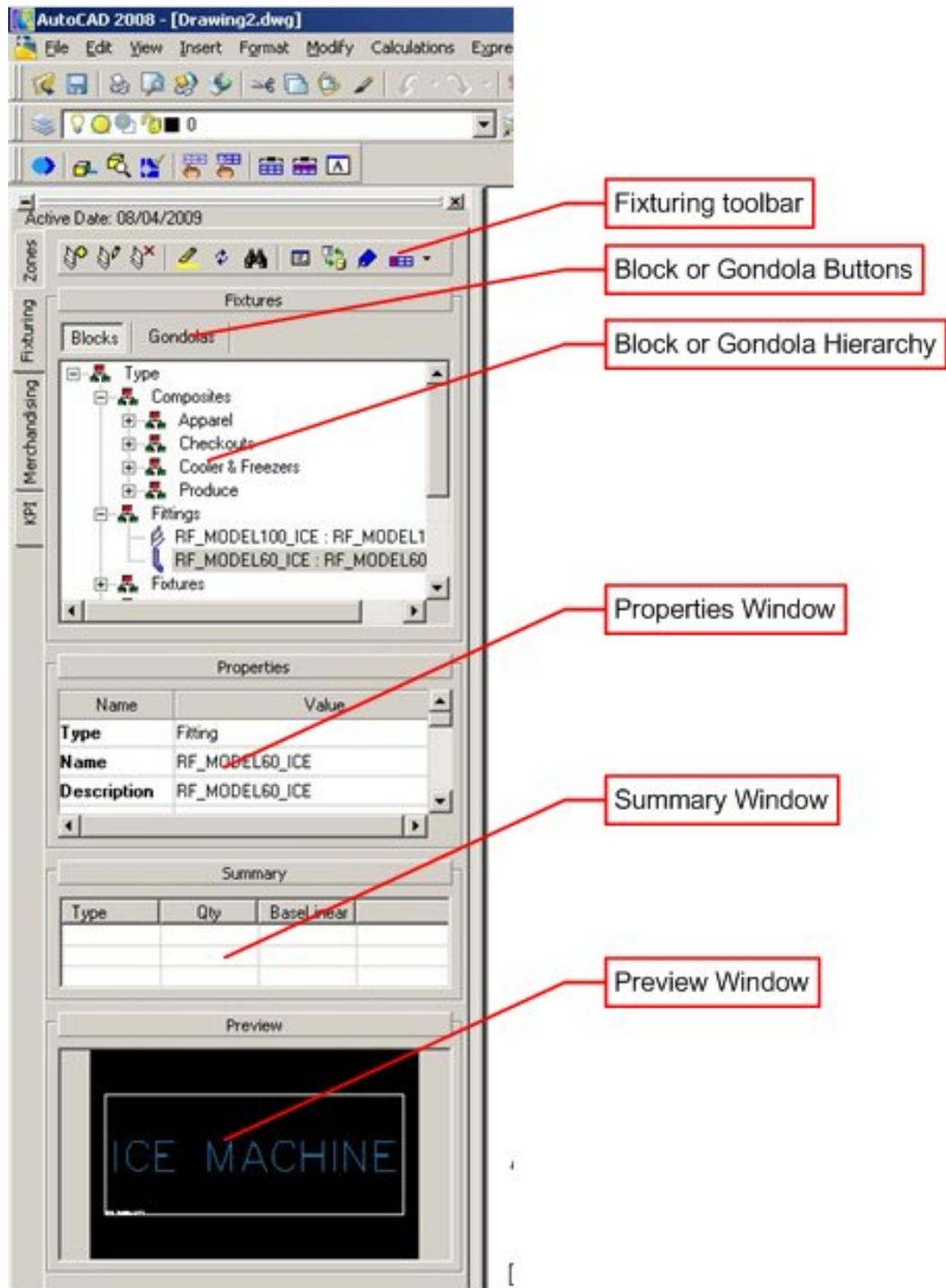


Configuration Module

Fixture Module Toolbars and Windows

The **Fixturing** tab on the Object Browser allows you to add fixtures, fittings, gondolas, and other equipments to the store plan. Fixtures and fittings can be placed one at a time if required. Fixtures, fittings, and other equipments that are placed one at a time are known as blocks.

Click the Fixturing tab on the Object Browser to bring up a series of options for adding, editing, and deleting fixtures and gondolas.



Fixturing tab on the Object Browser

- **Toolbar** gives access to a series of options concerning fixtures.
- **Buttons** allow you to toggle between Fixtures (Blocks) and Gondolas.
- **Hierarchy Window** allows you to select fixtures (or gondolas) from the list available.
- **Properties Window** shows the properties assigned to the selected fixture.

- **Summary Window** shows the number of instances of the selected fixture placed in the drawing.
- **Preview Window** shows a preview of the selected Fixture

The Fixturing Toolbar

The **Fixturing** toolbar is found on the Object Browser. It is selected by clicking Blocks in the Fixturing window.



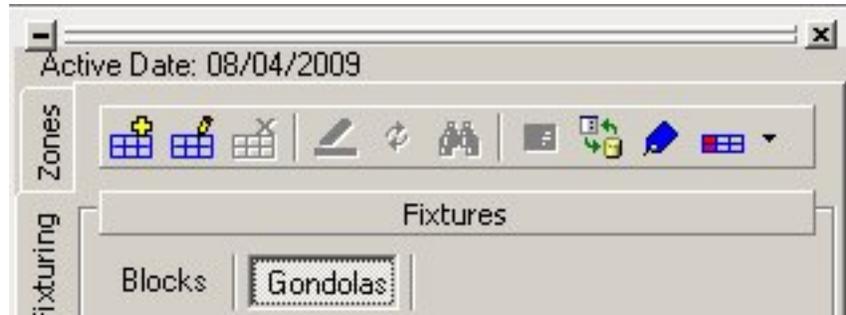
Fixturing toolbar

It contains a series of icons allowing various operations to be carried out on fixtures. Some of the icons may not be available for use.

Icon	Function
	Add Fixture
	Edit Fixture
	Delete Fixture
	Highlight selected item in view
	Highlight selected item in tree
	Search
	Configuration Options
	Refresh
	Attributes
	Promotional Fixtures On or Off

The Gondolas Toolbar

The **Gondolas** toolbar is found on the Object Browser. It is selected by clicking Gondolas in the Fixturing window.



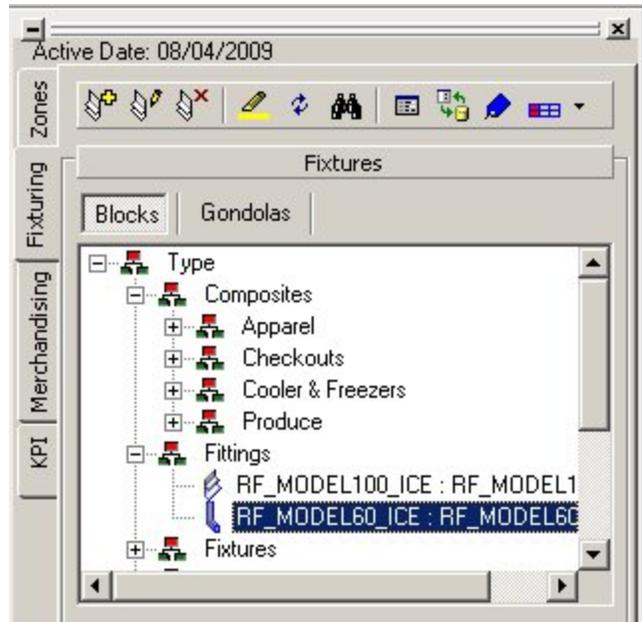
Gondolas toolbar

It contains a series of icons allowing various operations to be carried out on fixtures. Some of the icons may not be available for use.

Icon	Function
	Add Gondola
	Edit Gondola
	Delete Gondola
Not available for Gondolas	Highlight selected item in view
Not available for Gondolas	Highlight selected item in tree
Not available for Gondolas	Search
Not available for Gondolas	Configuration Options
	Refresh
	Attributes
	Promotional Fixtures On or Off

The Fixtures Hierarchy Window

The **Fixtures Hierarchies** window shows a hierarchical tree of all the available fixtures or gondolas.



Fixtures Hierarchies window

The tree can be expanded or contracted by clicking on the + or – icons. The Fixturing window can be minimized by clicking on the splitter bar.



The Blocks or Gondolas buttons immediately above the window determines whether the hierarchical tree shows fixtures or gondolas. The hierarchical tree can be configured in Fixture Studio using the Add Group, Edit Group, and Delete Group icons on the toolbar.

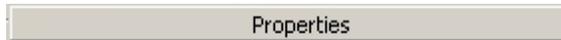
The Properties Window

The **Properties** window shows the properties for the currently selected fixture.

Properties	
Name	Value
Type	Fixture
Name	Podium-1200-1200-H200
Description	Podium L1200 W1200 H200
Imgs Code	-
Manufacturer	-
Block Level	Floor Level
Layer Alias	TALL-RACKING
Width	1200
Depth	1200
Height	200
Material	-

Properties window

The Properties window can be minimized by clicking on the splitter bar.



The Summary Window

The **Summary** Window shows a user-defined list of products or planograms placed in the drawing.

Summary			
Type	Qty	BaseLinear	

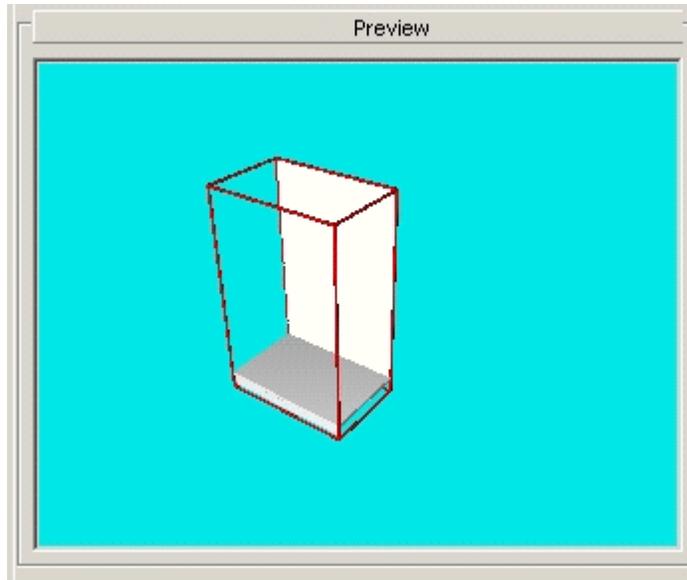
Summary Window

Click on a column heading to re-order the column. Click again to reverse the sort order. The Summary window can be minimized by clicking on the splitter bar.



The Preview Window

The **Preview** window shows a low resolution image of the fixture selected in the hierarchical tree.



Preview window

The window can be resized in the horizontal plane by dragging the edge of the Object Browser with the mouse. It can be resized in the vertical plane by dragging the bottom of the window with the mouse. The Preview window can be minimized by clicking on the splitter bar.



The image can be rotated by positioning the mouse pointer in the screen and holding down the left mouse key. The position of the mouse cursor determines the direction of rotation, while the distance of the mouse cursor from the object determines the speed of rotation.

The image can be moved up and down using the central wheel on the mouse. The image can be resized by holding down the <Ctrl> key, then left clicking the mouse and dragging the object.

Fixture Module Operations

Restructuring the Drawing

Restructuring the drawing can be initiated from the Retail Toolbar. This enables users to select blocks in a drawing, then carry out one or more operations on those blocks. These results in the blocks being reset to match the latest definitions associated with that block.



Options include:

Option	Effect
Redefine Blocks from Disc	Update the drawing with the latest version of the block (.dwg file) that is held on disc.
Explode Composite Blocks	Explodes any composite blocks into their individual parts.
Reset Level	Changes the level the block is placed to the level currently defined in Fixture Studio.
Reset color, Line Type and Line Weight to BYLAYER	Resets the block properties to BYLAYER - i.e. it resets the block color, line type and line weight to the defaults for that layer.
Reset Layer	Changes the layer the block is currently placed on to the one currently defined in Fixture studio.
List Unknown blocks	Lists any blocks in the drawing that are not registered in the central database.

Selecting Blocks for Restructuring

Selecting Blocks for Restructuring is done by using the varying selection options and building up a list of blocks for the Restructuring operations to be carried out on.

Each selection is added to the current list (Add to Selection radio button) or removed from the current list (Remove from Selection radio button). A list containing several types of blocks can thus be built up - the total number of blocks currently selected being shown in the dialog box.

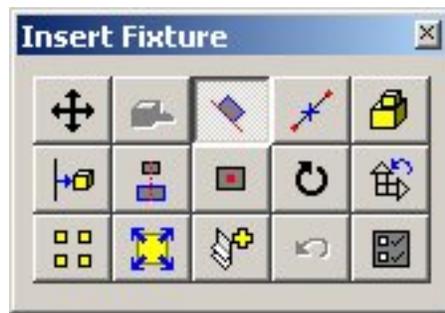
Clicking on the Select button temporarily hides the Restructure Drawing dialog box and takes the user to the drawing. The required blocks can be individually selected by left clicking on each individual block. When all the blocks have been selected, the selection process is completed by right clicking in the drawing.

Clicking on the Select by Block button temporarily hides the Restructure Drawing dialog box and takes the user to the drawing. The required type of blocks can be selected by left clicking on an example. All other blocks of that type on the drawing will then be selected. Multiple types of blocks can be selected before the selection process is completed by right clicking in the drawing.

Clicking on Select All Blocks will select all blocks in the drawing. The OK button will remain grayed out until one or more options are ticked in the Options frame.

Restructuring Options

Once the blocks have been selected, varying **restructuring options** can be chosen.



Redefine blocks from Disk

It is possible to edit the block definition of a specific block within the drawing. The block properties will not then match the generic block details held in the .dwg file stored within Macro Space Management.

Redefine Blocks from Disk compares each block definition selected in the drawing and, if different from the .dwg file stored in Macro Space Management, changes the block definition in the drawing to match that stored in the software.

Note: Block names will be ignored if they are not registered in the database.

Explode Composite Blocks

This option will take any selected blocks and determine if they are composite (made up of two or more previously combined blocks).

If any blocks are composite, they will be separated into their component blocks and any connection points associated with the composite blocks removed. (If individual blocks within the composite have connection points assigned, these will not be affected).

Note: Composite blocks cannot be reassembled after this operation, except by means of an 'undo' command.

Reset Level

This option results in any selected blocks being reassigned to the level they are assigned to in the block Definition in Fixture Studio.

If the level is set to 'undefined', no changes will be made in the level for the block.

Note: Both shelves and products should be on undefined levels and should not be affected by this command.

Reset color, Line Type and Line Weight to BYLAYER

If the colors, line types and line weights of any selected block are different from the default properties of the layer on which they have been placed, the properties of the selected blocks will be set to those defaults.

Reset Layer

If the selected block is on a different layer to that defined for that block in Fixture Studio, the block will be moved to that layer in the drawing.

List Unknown Blocks

It is possible for blocks to exist in the drawing, but not be registered in Fixture Studio. These sorts of blocks are shown in the Processing Blocks dialog box that appears when the drawing is being restructured.

The Retail Layers Toolbar

The Retail Layers toolbar enables you to quickly control which layers pertinent to Retailing are visible.



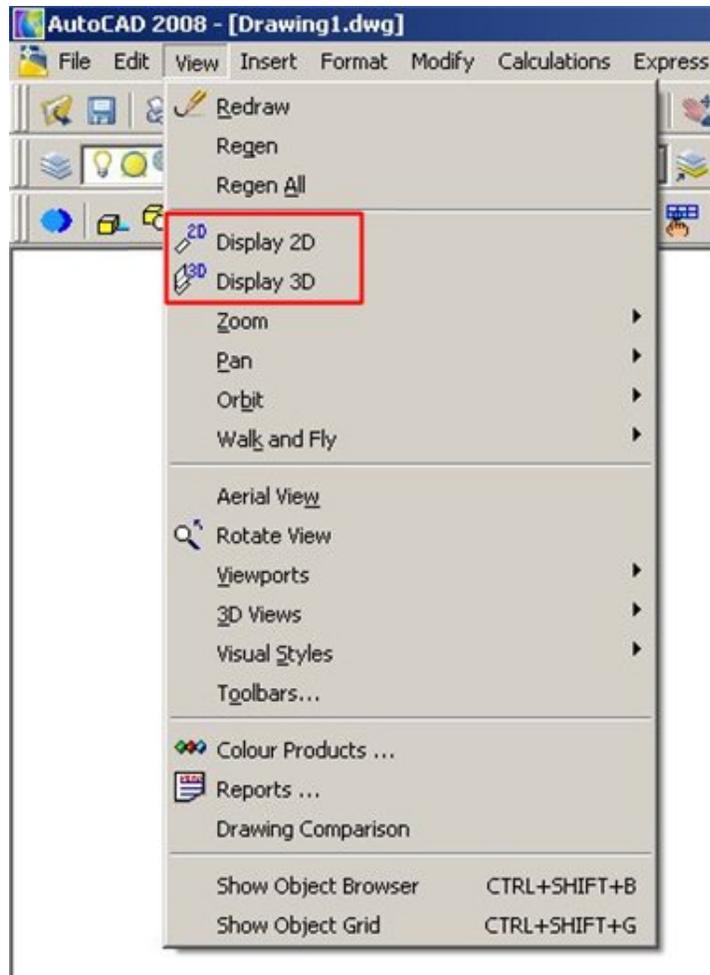
Retail Layers toolbar

Buttons	Description
	Turns on all zones, zone text and aisles / boundary layers
	Turns off all zones, zone text and aisles / boundary layers
	Turns on all fixtures (but not fittings)
	Turns off all fixtures (but not fittings)
	Turns on all fittings (but not fixtures)
	Turns off all fittings (but not fixtures)
	Turns on all products, shelves and associated annotation

Buttons	Description
	Turns off all products, shelves and associated annotation
	Turns on all general notes, markups and general dimension lines
	Turns off all general notes, markups and general dimension lines
	Toggles fixtures to 2D layer (if set up for this)
	Toggles fixtures to 3D layer (if set up for this)

Display 2D and 3D

The Display 2D and Display 3D options are available from the View menu.



Planner - View menu

They are also available from the Retail Layers toolbar.

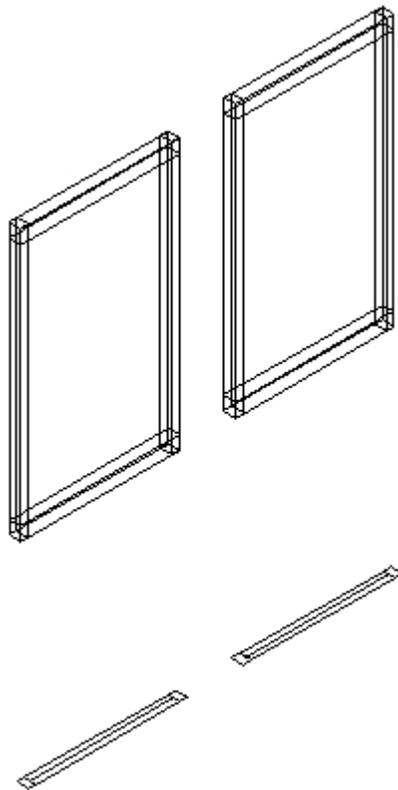


Retail Layers toolbar

This command works on fixtures that have had their drawing (dwg) file configured to have the base on the 2D layer and the remainder of the drawing on the 3D layer.

- If Display 2D is selected, only the base of the fixture will be displayed, giving an outline plan view.
- If display 3D is selected, all of the fixture will be displayed, giving a three dimensional view if the drawing is viewed from an oblique angle.

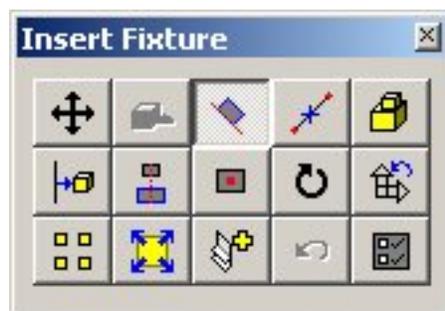
The advantage of display 2D over the AutoCAD plan view is that it displays a simple outline of the fixture. If seen in plan in 3D mode, all the construction lines are visible. This may make the plan view look much cluttered when the drawing is printed out. This can be seen in the example below where the fixture can be seen in both 3D (top) and 2D (bottom).



Placing Fixtures

Insert/Edit Feature Dialogue Box

The **Insert/Edit Fixture** dialog box appears when the Add Fixture icon is clicked on the Fixtures toolbar.



Insert/Edit Fixture dialog box

This dialog box contains a series of options for manipulating the fixture during placement.

Icon	Function
	Move Fixture
	Attach Fixture to Another
	Move and Align Fixture
	Move Fixture to be between others
	Place Fixture on Top of Another
	Offset the Fixture
	Place Fixture In-Line with Another
	Change Justification
	Rotate the Fixture
	Rotate the UCS
	Create an Array of Fixtures
	Change the Size of the Fixture
	Add the same fixtures as the last added
	Undo the last change
	Modify the Options for this Fixture

Click on each button to activate the required option. When fixture placement options are satisfactory; complete insertion by clicking on the cross in the upper right corner of the Insert/Edit Fixture dialog box, or press <Escape>.

Note: The availability of some of these options depends on settings within the Fixturing tab of the Configuration Module. For example the arraying option is not available if the Auto Reinsert option is checked.

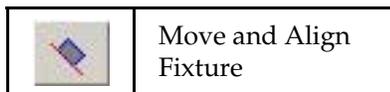
Move Fixture option

The Move Fixture option is active when the Insert/Edit Fixture dialog box appears. It enables you to insert the fixture in the drawing at a point determined by the mouse cursor. Moving is completed by clicking on the x in the upper right part of the Insert/Edit Fixtures dialog box, or pressing <Escape>.

Attach Fixture to Another option

The Attach Fixture button allows you to attach one (or more) fixtures to another when both have compatible connection points. If the connection points are not compatible, the fixtures cannot be attached.

To use this option, place a fixture and then click the Attach Fixture to another icon. The fixture can then be moved around and snaps to any compatible connection points.

Move and Align Fixture option

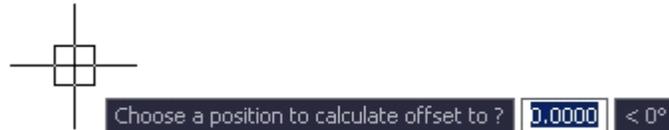
The Move and Align fixture option allows you to move the fixture to another position and, if necessary, align with an existing fixture.

Move Fixture Between Others option

Click the Move Fixture icon to bring up a dialog at the cursor asking for the start position of the line on which the fixture is placed at the midpoint.



Left click to select the start point. The dialog then asks for the endpoint of the line on which the fixture is placed at the midpoint.



Left clicking results in the fixture being placed at the midpoint of the selected line.

Place Fixture on Top of Another option



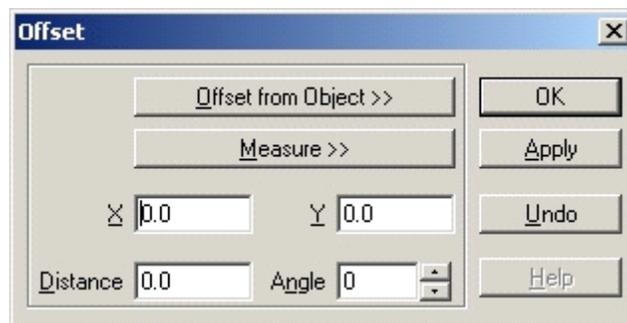
The Place Fixture button allows one fixture to be placed on top of another when both have compatible connection points.

Note: At present this feature is not enabled in Macro Space Management.

Offset the Fixture option



Click the Offset fixture icon to bring up the Offset dialog box.



Offset dialog box

To select the object to be offset from, click the **Offset from Object** button. Click on an object to select it. The fixture is temporarily placed at this point. There are then two ways of determining the offset.

- When the fixture is first positioned in the drawing, a dialog box appears giving the offset from the selected fixture:

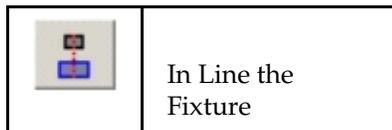


This can be used to select the required offset. Left click to return to the Offset dialog box, which now has the X, Y, Distance and Angle co-ordinates showing.

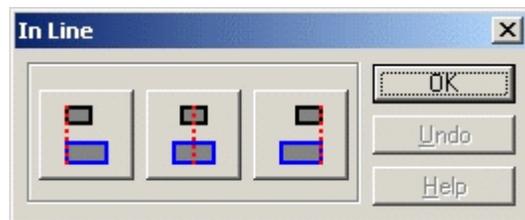
- Alternatively, when the fixture is selected, press <Escape> to return directly to the Offset dialog box. The X and Y coordinates of the offset can then be input. (Alternatively, they can be entered as a distance and an Angle).

Click **Apply** or **OK** places the fixture at the desired offset.

In-Line the Fixture option



Click the In-Line fixture option to bring up the In-Line dialog box.

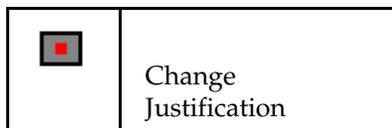


Click the appropriate button to select how the fixture being inserted is placed relative to the selected fixture. On clicking the button for the first time, you are invited to select a fixture.

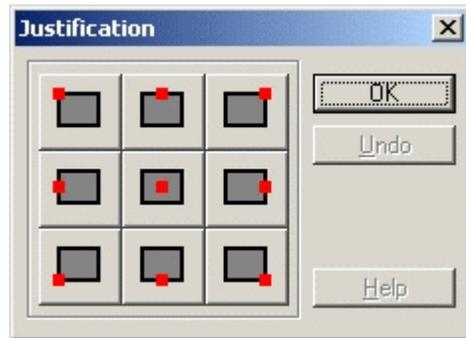
Select an object.

On selecting the fixture, you are returned to the dialog box. Click **OK** to complete the process.

Change Justification option

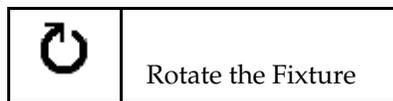


Click the Change Justification icon to bring up the Justification dialog box.

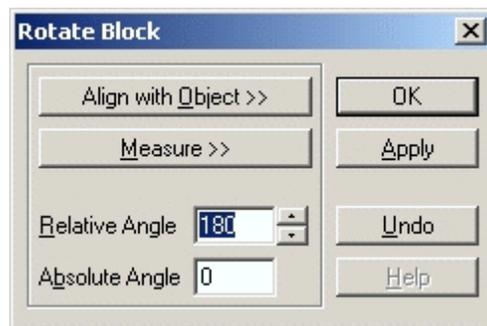


Click the appropriate button to change the justification of the annotation for that particular type of fixture.

Rotate the Fixture option



Click the Rotate fixture icon to bring up the Rotate Block dialog box.



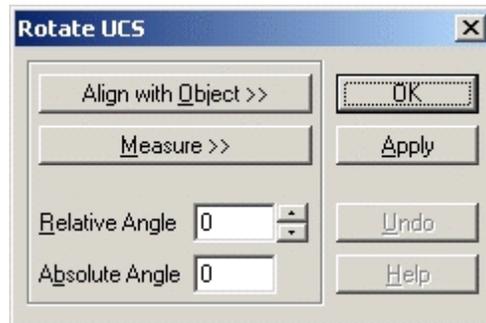
Rotate Block

Click the **Align with Object** button to enable you to select a previously placed fixture. The new fixture is placed at the same angle as the selected fixture. Alternatively, the angle required for the fixture being placed can be entered directly into either the Relative Angle or Absolute Angle boxes.

Rotate the UCS option



Click the Rotate the UCS icon to enable the orientation of the Universal Co-ordinate System (UCS) to be changed.



WCS (World Co-ordinate System) and UCS (Universal Co-ordinate System)

MSM AutoCAD has two coordinate systems: a fixed system called the World Co-ordinate System (WCS) and a movable system called the User Co-ordinate System (UCS). The UCS is useful for entering coordinates, defining drawing planes, and setting views. Changing the UCS does not change your viewpoint. It changes only the orientation and tilt of the coordinate system.

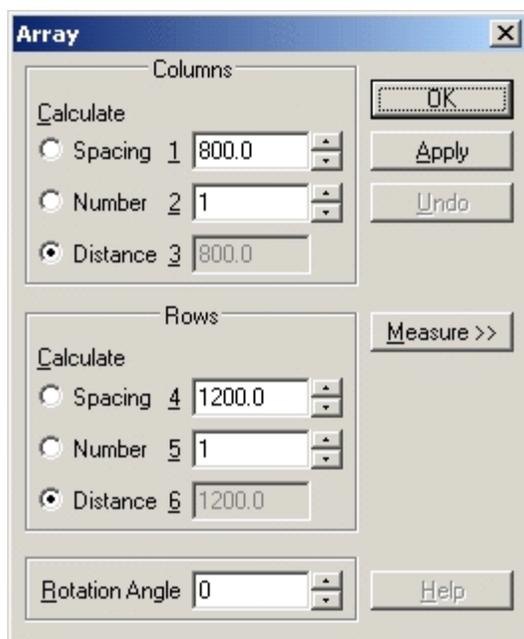
If you are working in a drawing, you can continually relocate the UCS to simplify your work. For example, if you have created a 3D object, you can edit each of its six sides easily by aligning the UCS with each side as you edit it.

If you change the UCS relative to the WCS, you can always make the two align again by using the World option of the UCS command.

Create an Array of Fixtures option



Click the Create an Array icon to bring up the Array dialog box.

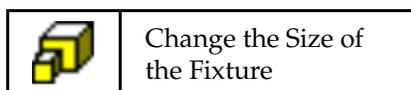


Array dialog box

The usual method is to select the numbers of row and columns for the array by means of the number radio buttons. Alternatively, click the **Measure** button to define a rectangle. Left click returns you to the dialog box where the number of rows and columns are defined.

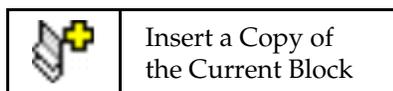
Click **OK** or **Apply** completes the process.

Change the Size of the Fixture option



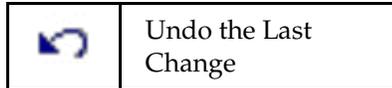
This button will allow the fixture to change in size during insertion. This option will only work for fixtures that are stretchable - it will not work for non-stretchable ones.

Insert the Same Fixture as Last Added



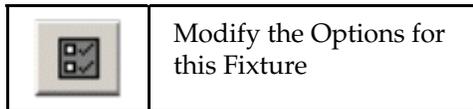
The Insert a Copy option allows you to insert another instance of the last block to be inserted by clicking the icon.

Undo the Last Change option

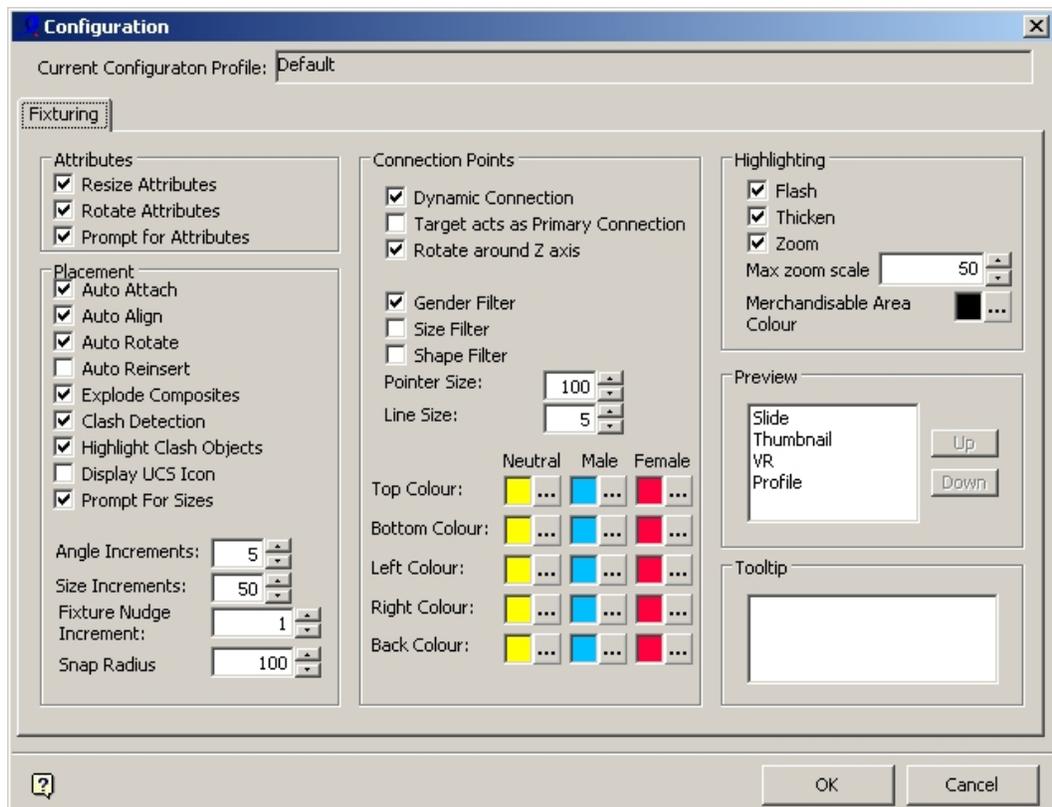


The Undo the Last Change option undoes the effect of the last action.

Modify the Options for this Fixture



Selecting this option brings up the Fixturing tab from the Configuration Module.



Configuration Module

This allows you to configure some options as to how fixtures behave.

Editing and Deleting Fixtures

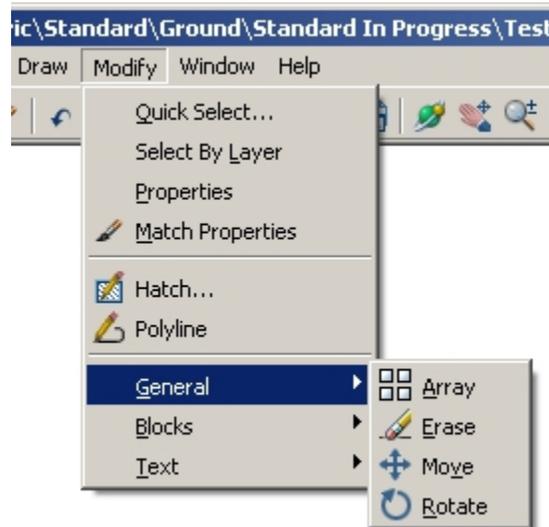
Fixtures can be edited and deleted from the drawing using AutoCAD tools in addition to editing and deleting them using Macro Space Management tools.

Note: Editing and deleting using AutoCAD tools does not write the changes into the Macro Space Management database. This must be done using the Synchronize option.

The properties of fixtures can be also modified using the fixture editing capabilities of Fixture Studio.

Editing and Deleting Fixtures using AutoCAD Tools

Fixtures can be edited using AutoCAD tools. These can be accessed from the Modify > General drop down menu options.



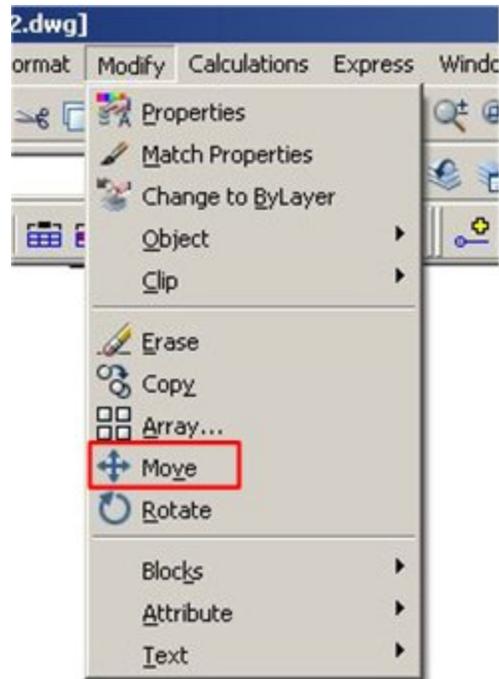
General menu options

This allows objects to be erased, moved or rotated.

Note: Objects manipulated using the AutoCAD tools do not have those changes registered in Macro Space Management's central database. The Synchronization option has to be run before the central database is updated.

Moving Fixtures

Moving Fixtures can be done by selecting the **Move** option from the Modify pull down Menu.



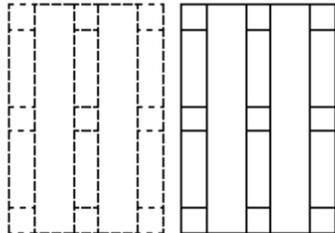
Modify Menu

This brings up a prompt asking you to select the fixtures to be moved.

□

Select objects:

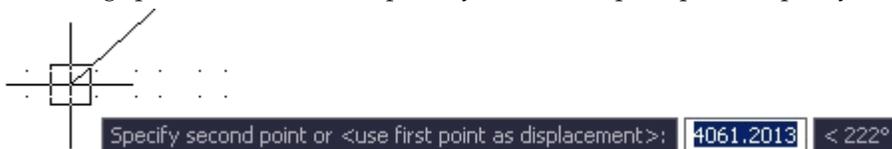
Any objects selected changes from solid to dotted lines.



Right click to complete the selection process. You need to specify a base point.



Following specification of a base point, you are now prompted to specify a second point.

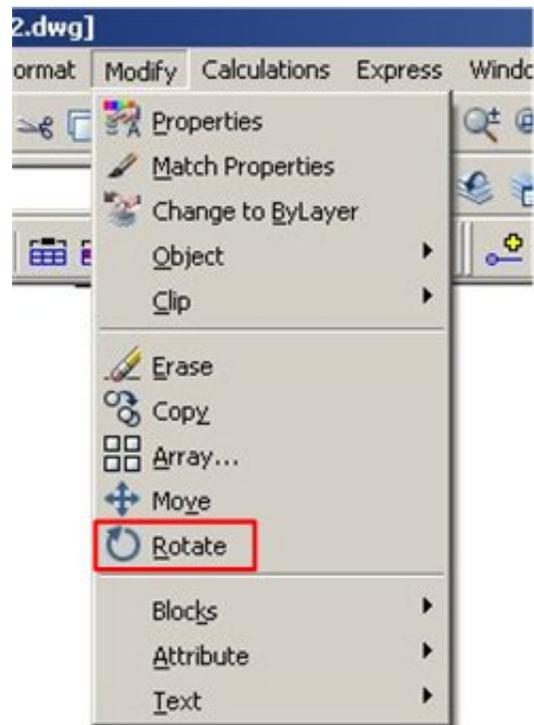


In both cases the points can be specified either by left clicking, or by typing in the X and Y coordinates. The two points specified define a vector. This indicates how far and in what direction the selected fixtures are to be moved.

Note: Using MSM AutoCAD tools changes the drawing, without the changes being recorded in the central Macro Space Management database. Run Synchronize then Adjacencies to ensure the central database contains the effects of all AutoCAD changes.

Rotating Fixtures

To rotate a fixture select the **Rotate** option from the Modify menu.



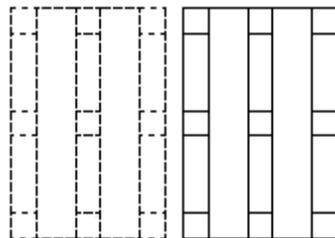
Modify menu

This brings up a prompt asking you to select the fixtures to be rotated.

□

Select objects:

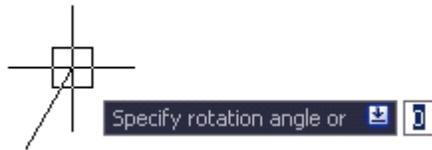
Selected objects change from solid to dotted lines.



Right click to complete the selection process. Now, specify a base point. The point can be specified either by left clicking, or by typing in the X and Y coordinates.



Following this, you are asked to specify a rotation angle.

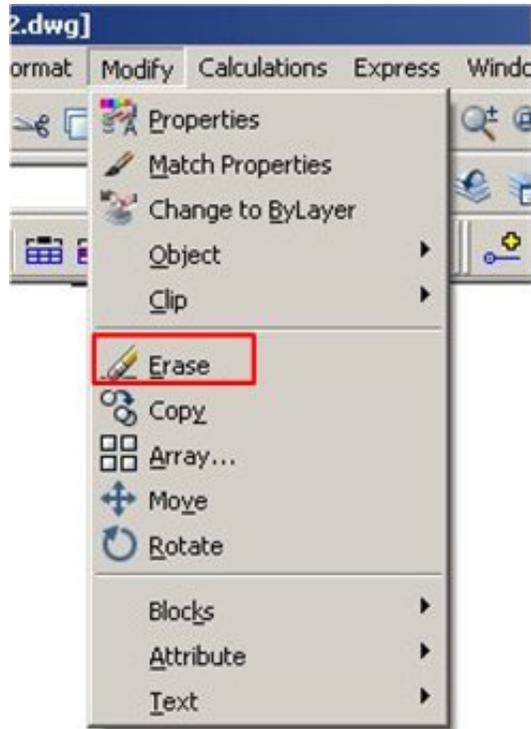


The rotation angle can be specified by typing it in. Alternatively, the mouse cursor can be used to draw a line at the required angle. Left click to cause the specified objects to be rotated.

Note: Using AutoCAD tools changes the drawing, without the changes being recorded in the central Macro Space Management database. Run Synchronize then Adjacencies to ensure the central database contains the effects of all AutoCAD changes.

Erasing Fixtures

To erase a fixture select the **Erase** option from the Modify menu.



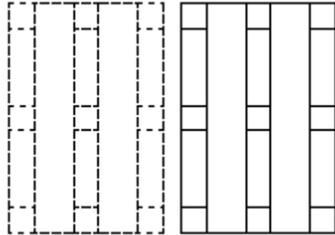
Modify menu - Erase

This brings up a prompt asking you to select the fixtures to be erased.

□

Select objects:

Selected objects change from solid to dotted lines.

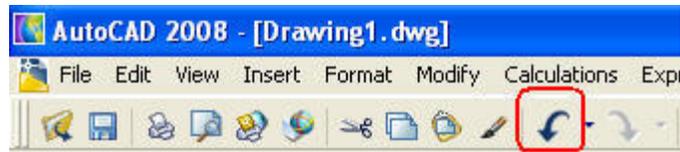


Right click to complete the selection process; the selected objects are removed from the drawing.

Note: Using AutoCAD tools changes the drawing, without the changes being recorded in the central Macro Space Management database. Run Synchronize then Adjacencies to ensure the central database contains the effects of all MSM AutoCAD changes.

Undoing changes

Moved, rotated, or erased fixtures can generally be restored to their original position by making use of the **Undo** command on the AutoCAD toolbar.

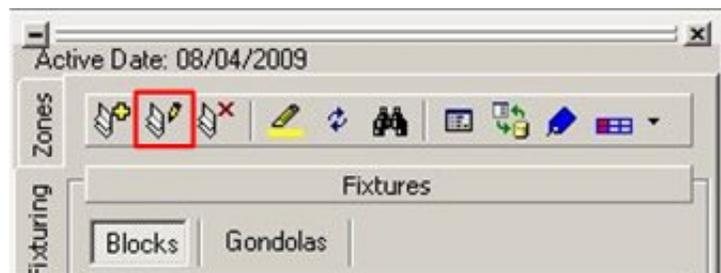


AutoCAD toolbar

Note: Using MSM AutoCAD tools changes the drawing, without the changes being recorded in the central Macro Space Management database. Run Synchronize then Adjacencies to ensure the central database contains the effects of all AutoCAD changes.

Editing Fixtures using Fixture Studio

Fixture Studio allows the properties of a fixture of fitting to be edited. It is accessed from the Object Browser by clicking on the **Edit Fixture** icon on the Fixturing tool bar.

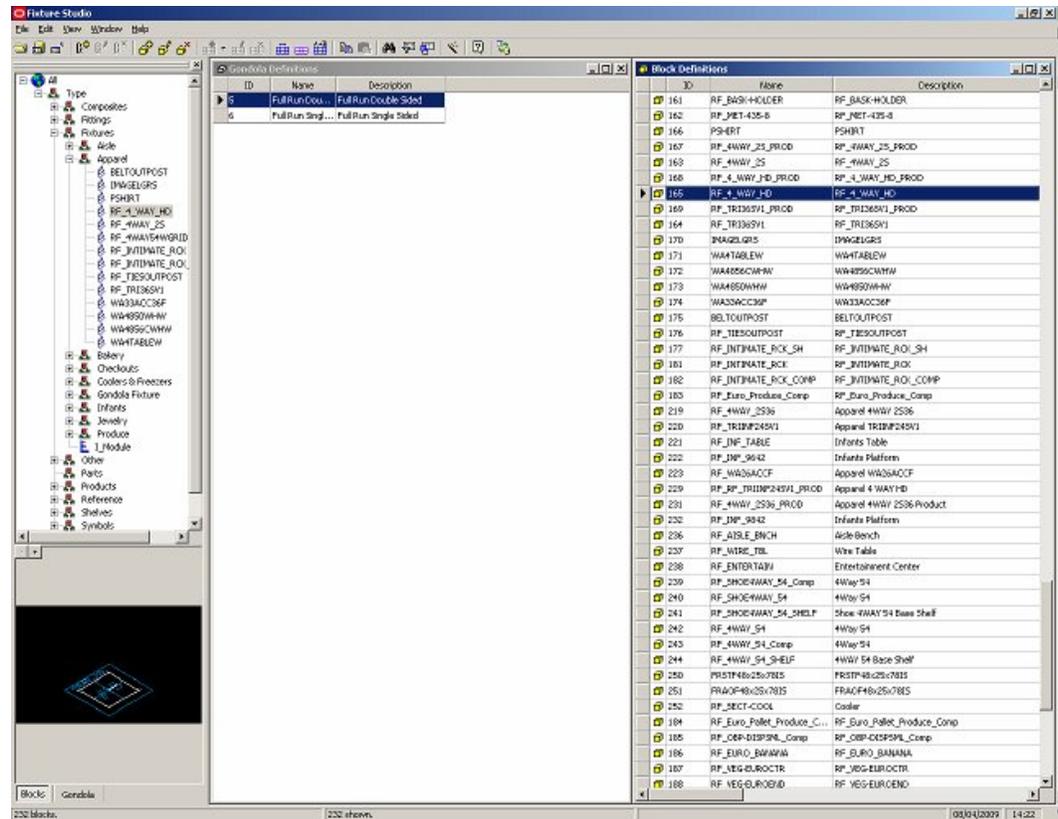


Fixturing tool bar

In Fixture Studio a wide range of properties for the selected fixture or fitting can be customized. These include:

- Insertion points
- Size
- Connection points
- Parts
- Shelving
- Merchandisable areas

Changes made to a fixture or fitting in Fixture Studio affects all blocks of that type. The Fixture Studio window contains two main parts.



Fixture Studio

On the left is a hierarchical tree of all the available gondolas, on the right window you can customize the block details of the currently selected gondola.

Deleting Fixtures

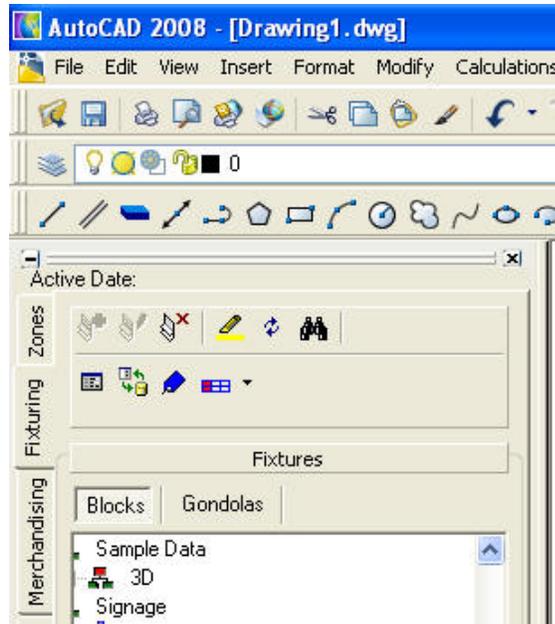
It is recommended that fixtures are deleted using Macro Space Management tools. This can be achieved by means of the **Delete Fixture** option on the Fixturing toolbar.



To delete fixture(s) click on the fixtures required. Alternatively, use the AutoCAD selection tools.



The outline of the fixture(s) turns to dotted and the insertion point shows. At the same time the Delete icon changes from inactive to active button, while the Add Fixture and Edit Fixture icons are inactivated.



Planner – Delete Blocks

Click the Delete icon to remove all selected fixtures (and gondolas).

Fixture Operations

Highlighting Selected Item in View

The Highlight option highlights the selected item in view and can be accessed by clicking the Highlight icon in the Blocks toolbar of the Object Browser.



Blocks toolbar

This option can be toggled On and Off by selecting it. When toggled on, the button is pressed down. When the Highlight Selected Item in View option is selected, clicking a fixture in the hierarchical tree of fixtures results in that type of fixture in the visible portion of the drawing being highlighted.

Highlighting Selected Item in Tree

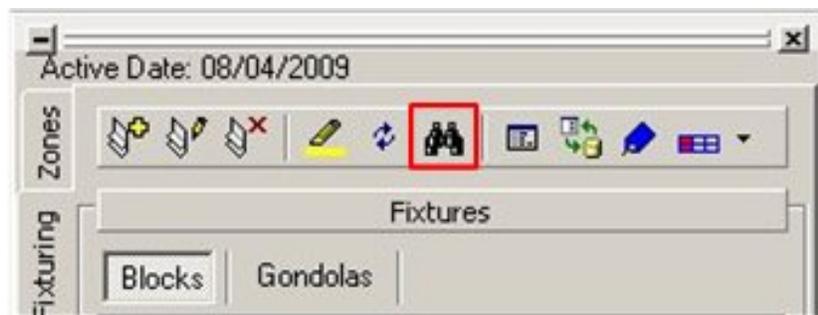
The Highlight option highlights the selected item in the hierarchical tree. This option is only available in the Blocks toolbar and not activated in the Gondolas toolbar.



Gondolas toolbar

Using the Find Function

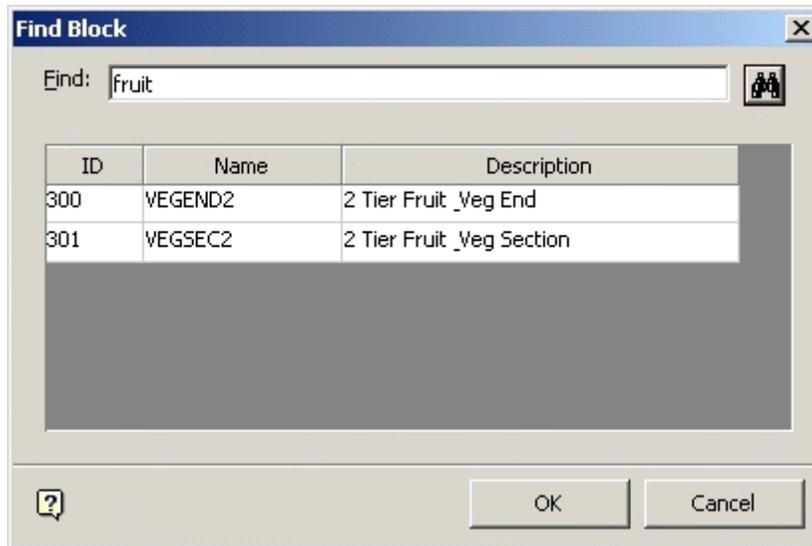
The **Find** function is used to search for blocks or gondolas in the drawing and can be accessed by clicking the Find icon in the Fixturing toolbar.



Fixturing toolbar - Find

To search for blocks:

1. Click the **Find** icon to bring up the Find Block dialog box.



Find Block dialog box

2. In the Find field, type the required search string and click the Find icon to the right of it. This brings up a list of any blocks matching the search string.
3. Left click on any result to return to the Fixtures window, where the selected block is highlighted in the hierarchy tree.

Refreshing

The **Refresh** icon refreshes both fixtures and gondola information in the respective hierarchical trees.



Fixturing toolbar - Refresh

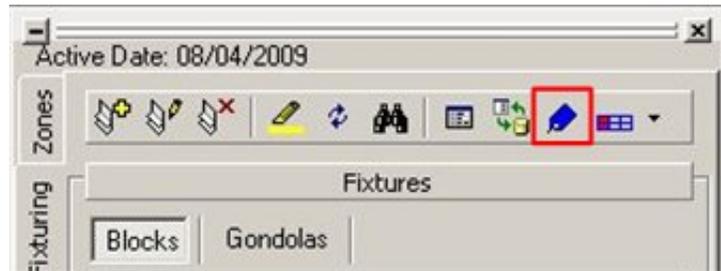
Click the **Refresh** button in the Gondolas tab to load the latest gondola information from the database into the gondola hierarchy. At the same time, the latest fixture information from the database is also refreshed in the fixture hierarchy.

Dragging and dropping a gondola from the appropriate hierarchy after the refresh button is pressed adds that gondola to the drawing using the latest definition from Fixture Studio. Similarly, using the **Add** button adds a gondola to the drawing using the latest definition from Fixture Studio.

If a drawing is already open then gondolas already placed in the drawing do not use any changes loaded during the refresh operation until the drawing is closed and reopened. However, new gondolas added to the open drawing use the new data.

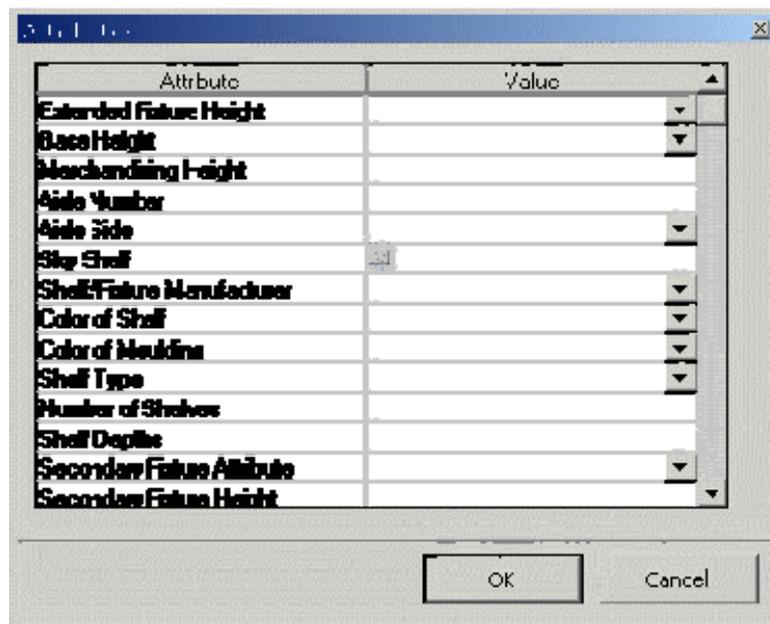
Fixture Attributes

Fixture Attributes can be set by selecting a fixture or fixtures and clicking on the Fixture Attribute icon in the toolbar.



Fixturing toolbar – Fixture Attribute

The Fixture attributes dialog box appears when clicked on the Fixture Attributes icon.



Fixture attributes dialog box

This enables you to add or edit fixture information. If multiple fixtures are selected, only fields with common data display information. These attributes are configurable in Fixture Studio, for detailed information, refer chapter Fixture Studio.

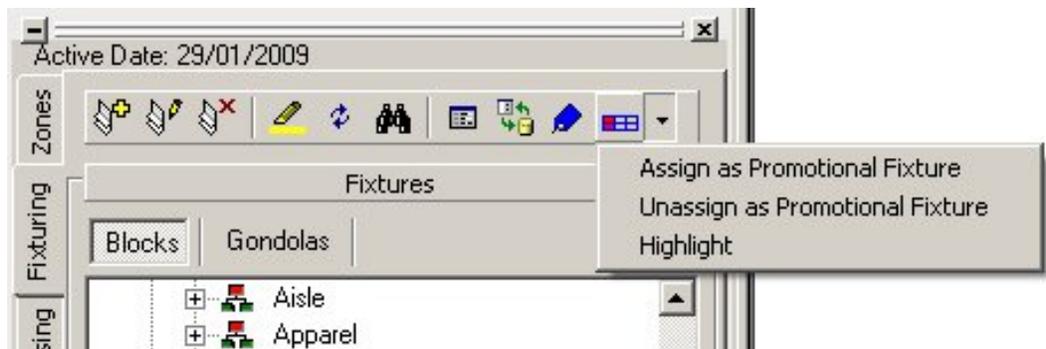
Promotional Fixtures

Promotional Fixtures are fixtures that can be allocated for the specific purpose of rapidly changing offers. Promotional Fixtures are normally used for reporting purposes.



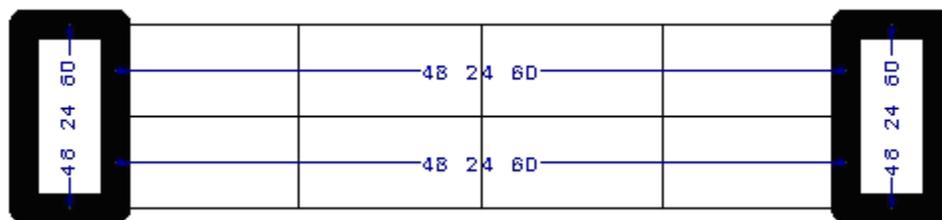
Fixturing toolbar – Promotional Attribute

It can be assigned by selecting a fixture or fixtures and selecting the **Fixture Attribute** icon in the toolbar. You can assign, unassign and highlight the fixture used for promotional purpose.



Fixturing toolbar – Promotional Attribute

Fixtures designated as Promotional can be identified by using the **Highlight** option. The fixtures are highlighted in the drawing by the configured method in the Configuration tab.

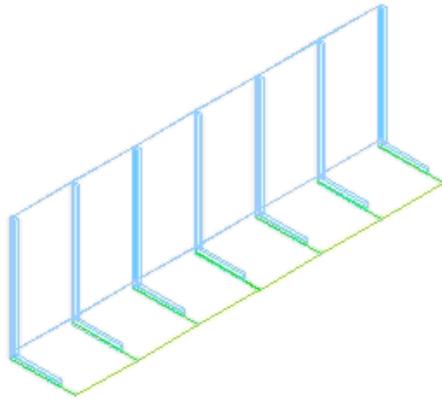


In the above example, Thicken has been used as the highlight option.

Alternatively, they can be identified by running a report on the drawing or by using a KPI.

Placing Gondolas

A Gondola is a collection of fixtures and fittings placed in a predetermined arrangement such as bases and spines. This enables long runs of fixtures to be placed very quickly. They can either be placed as an island, (away from a store wall), or as a perimeter run, (against a wall).



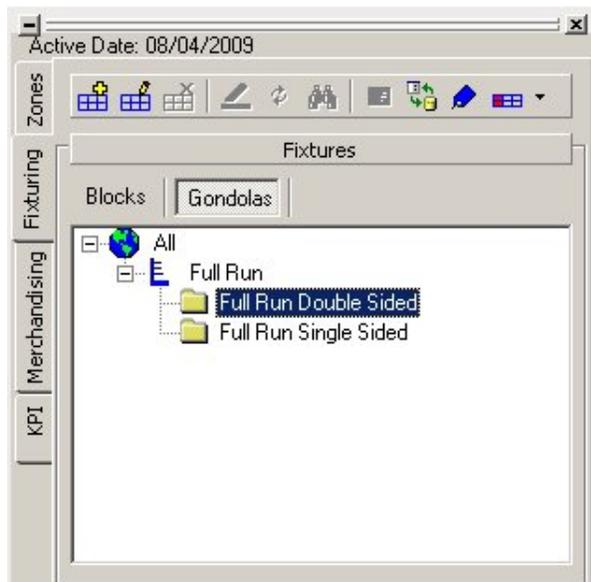
Gondolas

Gondola placement is in two stages:

- gondola selection and
- gondola insertion

Gondola Selection

Gondolas are selected from the hierarchical tree in the Fixturing tab.

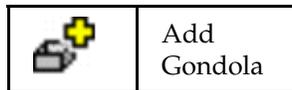


Gondolas selection

Gondola Insertion

Once the Gondola is selected in the hierarchical tree it can be placed in the drawing in one of two ways:

- The required gondola can be dragged and dropped in the AutoCAD drawing.
- The **Add Gondola** icon can be clicked on the toolbar.



After selecting an insertion point, the Gondola Run dialog box comes up, you can customized the gondola being placed.

 A screenshot of a software dialog box titled "Gondola Run - Full Run Double Sided". The dialog box is divided into several sections:

- Full Run Length:** A list box containing "48 in". Below it is a "Match >>" button.
- Full Run Depth:** A list box containing "12 in", "15 in", "18 in", "19 in", and "24 in". Below it is a "Match >>" button.
- Full Run Height:** A list box containing "54 in", "60 in", "66 in", "78 in", and "90 in". Below it is a "Match >>" button.
- Options:** A list box containing "Start Cap" and "End Cap", both with checked checkboxes.
- Row:** A section with several controls:
 - Number:** A numeric input field with "12" and a "Measure >>" button.
 - Angle:** A numeric input field with "0" and a "Measure >>" button.
 - Starting Point:** Two numeric input fields with "1344" and "4512" respectively, and a "Measure >>" button.
 - Attach >>** A button.
 - Start Position:** Radio buttons for "Left" (selected) and "Right", and a checked "Annotate" checkbox.
 - Extend:** A checked checkbox.
 - Best Fit:** An unchecked checkbox.
 - Extension:** A dropdown menu set to "Place at start".

 At the bottom of the dialog box, there is a help icon (question mark in a square), an "OK" button, and a "Cancel" button.

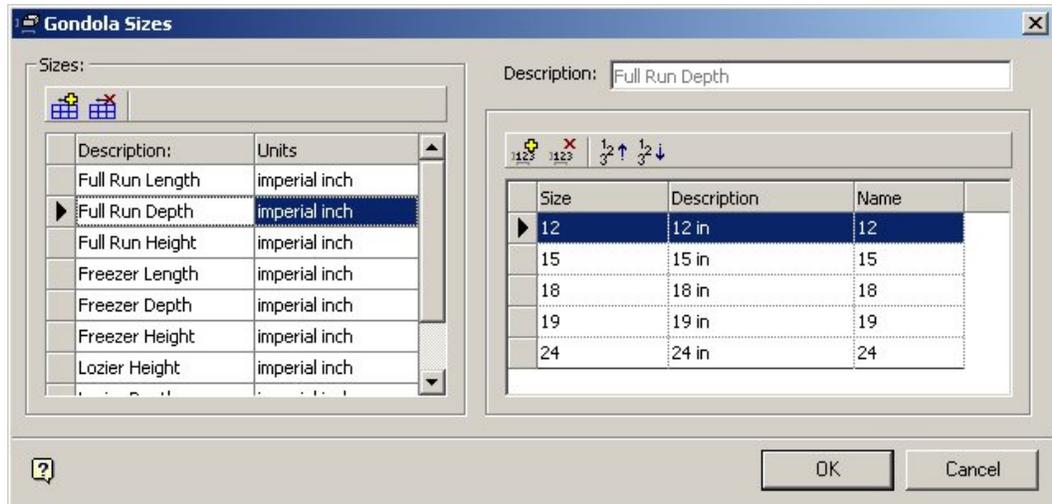
Gondola Run dialog box

The Gondola Run dialog box appears after the start point for the gondola run has been selected. The exact form of the dialog box that appears depends on how the gondola was specified.

Note: Gondolas are specified in Fixture studio.

Dimensions

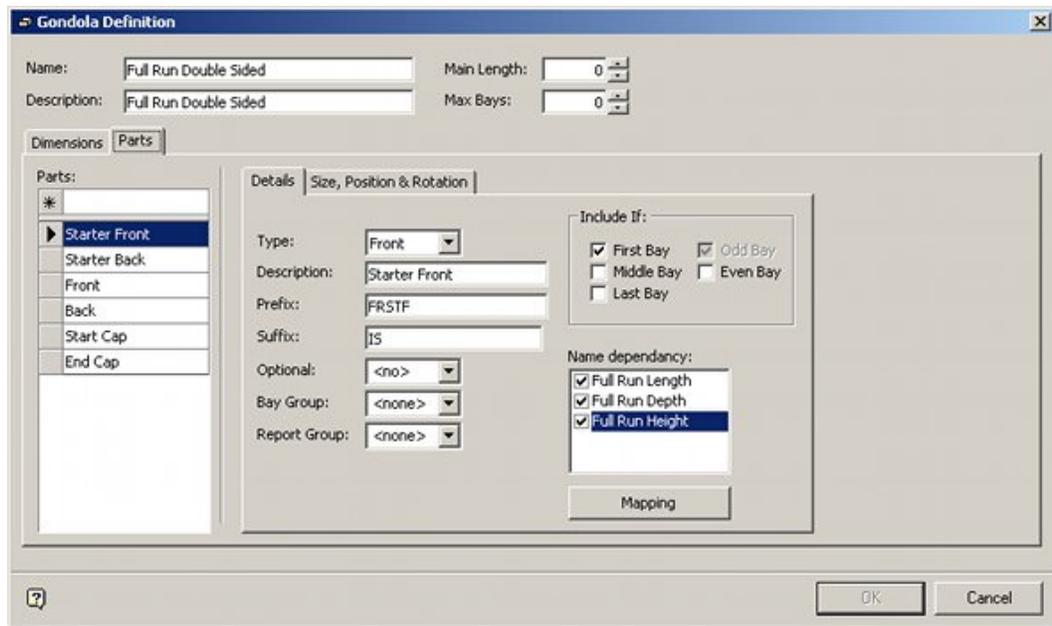
The dimensions allow parameters such as Width, Height, Number of Bays, Placement angle, etc to be specified. Most of the options available to be selected are predetermined when the Gondola is defined in Fixture Studio.



Gondola Sizes

Gondola Parts and Positions

Gondola parts and positions are specified in the Gondola definition dialog box.



Gondola definition dialog box

Gondola Dimensions

The dimensions allow parameters such as Width, Height, Number of Bays, Placement angle, etc to be specified. Most of the options available to be selected are predetermined when the Gondola is defined in Fixture Studio.

The **Dimensions** displays a list of sizes that can be selected for that particular gondola.

Gondola Run - Full Run Double Sided

Full Run Length	Full Run Depth	Full Run Height
48 in	12 in	54 in
	15 in	60 in
	18 in	66 in
	19 in	78 in
	24 in	90 in

Match >> Match >> Match >>

Options

- Start Cap
- End Cap

Row

Number: 12 Measure >>

Angle: 0 Measure >>

Starting Point: 1344 4512 Measure >>

Attach >>

Start Position: Left Right Annotate

Extend Best Fit Extension: Place at start

OK Cancel

The number of dimensions displayed is determined by those specified in the Gondola Definition dialog box in Fixture Studio. The actual dimensions available are defined in the Gondola Size dialog box in Fixture Studio. Dimensions can either be selected from the available list, or selected using the Match button.

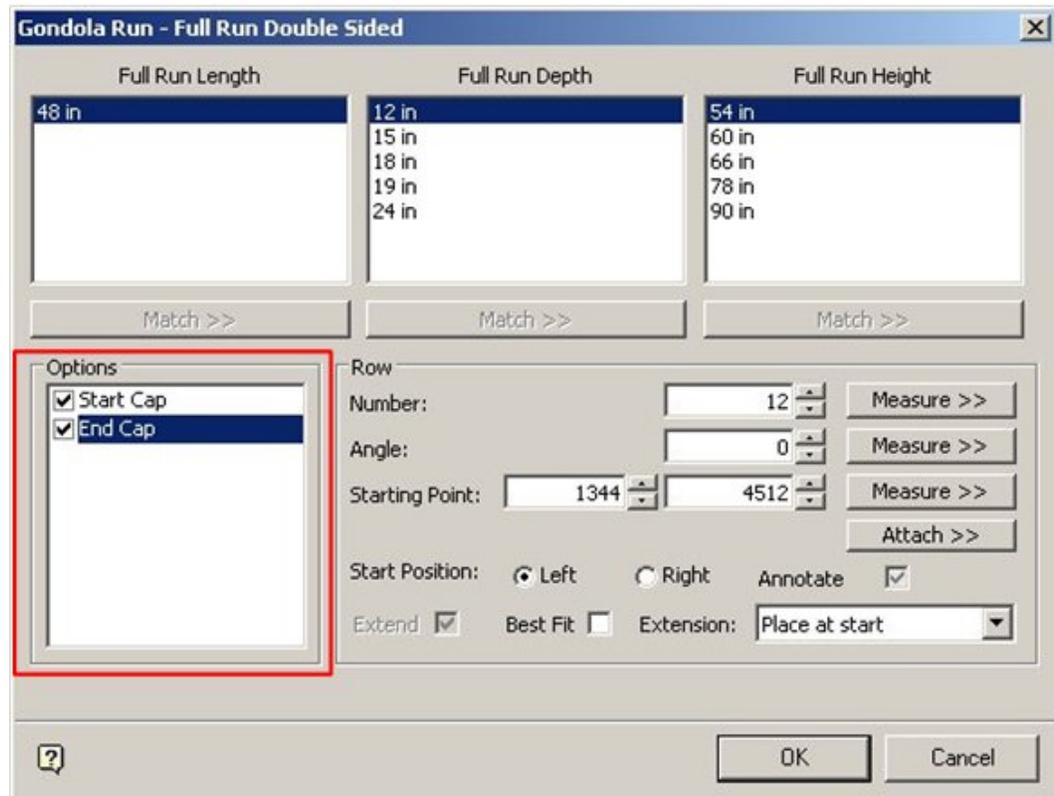
Clicking on the **Match** button temporarily hides the dialog box and takes you to the drawing. You are prompted to measure a distance on the drawing. The Gondola Run dialog box then is re-displayed with the dimension closest to that measured highlighted.

Note: Adding a gondola requires the blocks corresponding to the chosen combination of sizes to be present in the database. If a block is not present, the gondola cannot be drawn and an error message is displayed.



The Options Frame

The Options Frame displays a list of parts that are optional for that particular gondola.



Gondola Run - Options Frame

Ticking the appropriate check box ensures the optional parts are included in the gondola when it is placed in the drawing.

Note: Optional parts are specified in the Gondola Definition dialog box in Fixture Studio.

Gondola Definition

Name: Full Run Double Sided Main Length: 0
Description: Full Run Double Sided Max Bays: 0

Dimensions Parts

Parts:

- * []
- Starter Front
- Starter Back
- Front
- Back
- ▶ Start Cap
- End Cap

Details Size, Position & Rotation

Type: Start Cap
Description: Start Cap
Prefix: FRSTF
Suffix: IS
Optional: Start Cap
Bay Group: <none>
Report Group: <none>

Include If:

- First Bay Odd Bay
- Middle Bay Even Bay
- Last Bay

Name dependency:

- Full Run Length
- Full Run Depth
- Full Run Height

Mapping

OK Cancel

Gondola Definition dialog box

The Row Frame

The Row Frame allows the number of bays, placement angle, start position, etc, to be specified.

Gondola Run dialog box

Number can be any integer greater than 0. This number can be changed using the spin control.

Note: The maximum number of bays permissible may be restricted by settings in Fixture Studio.

If you click the **Measure** button, you are prompted to pick a second point in the Planner drawing. This point is relative to the previously selected insertion point of the gondola. The distance between the two points determines the length of the gondola run, as well as its direction. Based on the length of the gondola run, Macro Space Management calculates the number of full bays that fit into the measured distance.

Note: The distance occupied by the number of full bays is often less than the distance measured. To add another bay, check the Extend option.

- **End caps** are additional to the number of bays calculated using measure.
- A calculated **angle** based on the displacement between the two points is calculated. (Angle is measured in degrees from East anticlockwise). Alternatively, an angle can be input. The direction bays added are dependent on the insertion angle. A gondola with an insertion angle of 180 degrees will be facing in a different direction to a gondola an insertion angle of 0 degrees.

- **Start Position** determines whether the specified number of bays is added to the left or right of the insertion point.
- The **Extend** option is primarily used when placing island gondolas, (i.e. away from walls). The number of bays calculated is normally less in length than the measured distance.
- The **Best Fit** option is only enabled if the length dimension on the gondola definition contains more than one size. It is primarily used when placing a run of gondolas against a wall. It uses the selected length of the gondola for all but one fixture. The program selects an extension piece of the best practical length to fill the remaining space. The Extend option is only available if the Best Fit option is enabled. A drop down list enables you to choose whether to place the extension piece at the start of the gondola run, in the middle, or at the end.

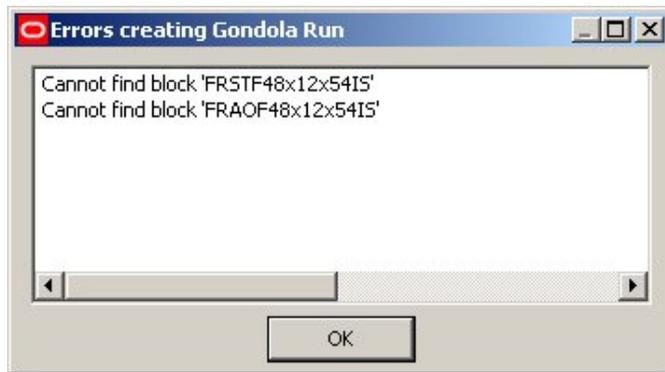
Completing Insertion

Insertion is completed by clicking the **OK** button at the bottom of the Gondola Run dialog box.

Gondola Run dialog box

Alternatively, the insertion can be aborted by means of the **Cancel** button.

Note: Adding a gondola requires the blocks corresponding to the chosen combination of sizes to be present in the database. If a block is not present, the gondola cannot be drawn and an error message is displayed.



Gondola Run - Error

Editing and Deleting Gondolas

Gondolas can be edited and deleted from the drawing using AutoCAD tools.

Note: Editing and deleting using AutoCAD tools does not write the changes into the Macro Space Management database. This must be done using the Synchronize option.

The properties of Gondolas can be modified using the Gondola editing capabilities of Fixture Studio. Gondolas can be deleted from the drawing using Macro Space Management tools.

Editing and deleting Gondolas using AutoCAD

Gondolas can be edited using AutoCAD tools. These can be accessed from the Modify > General drop down menu options.



Planner – General Menu

This allows objects to be erased, moved or rotated.

Moving Gondolas

Gondolas can be moved by selecting the **Move** option from the Modify pull down menu.



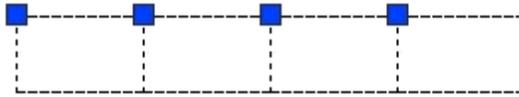
Planner – General Menu > Move

When you select the Move option, a prompt asks you to select the gondolas to be moved.

□

Select objects:

When selected, the selected object changes from solid to dotted lines.



Right click to complete the selection process. Now specify a base point by left clicking or by typing in the X and Y coordinates.



After the base point, you are prompted to specify a second point by left clicking or by typing in the X and Y coordinates.



The two points specified define a vector. This indicates how far and in what direction the selected fixtures are to be moved.

Note: Using MSM AutoCAD tools, changes made in the drawing are not automatically recorded in the central Macro Space Management database. To update the changes in the database, run Synchronize and Adjacencies to ensure the central database contains the effects of all MSM AutoCAD changes.

Rotating Gondolas

You can **rotate** a gondola in the drawing by selecting the **Rotate** option from the Modify pull down menu.



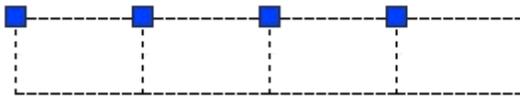
Planner – General Menu > Rotate

When you select the Rotate option, a prompt asks you to select the fixtures to be rotated.

□

Select objects:

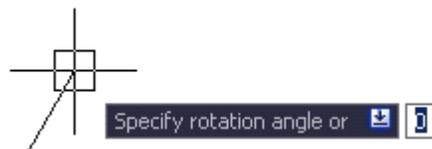
When selected, the selected object changes from solid to dotted lines.



Right click to complete the selection process. Next, specify a base point by left clicking or by typing in the X and Y coordinates.



After the base point, specify the rotation angle. The rotation angle can be specified by typing it in.

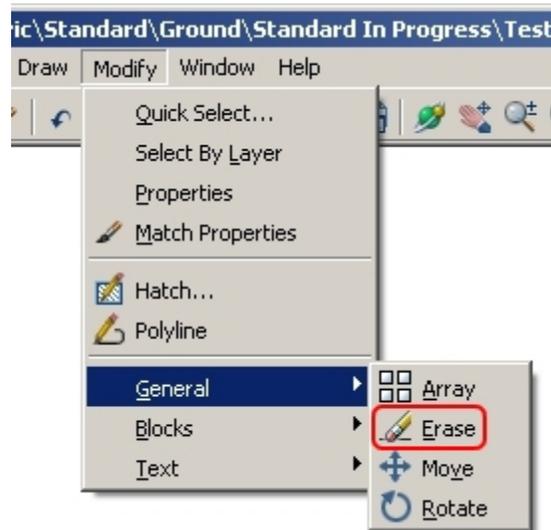


Alternatively, use the mouse cursor to draw a line at the required angle. Left click to rotate the specified objects.

Note: Using MSM AutoCAD tools, changes made in the drawing are not automatically recorded in the central Macro Space Management database. To update the changes in the database, run Synchronize and Adjacencies to ensure the central database contains the effects of all MSM AutoCAD changes.

Erasing Gondolas

You can erase a gondola from the drawing by selecting the Erase option from the Modify pull down menu.



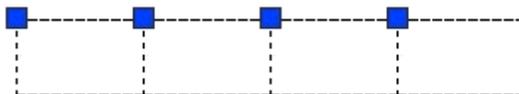
Planner – General Menu > Erase

When you select the Erase option, a prompt asks you to select the fixtures to be erased.

□

Select objects:

When selected, the selected object changes from solid to dotted lines.

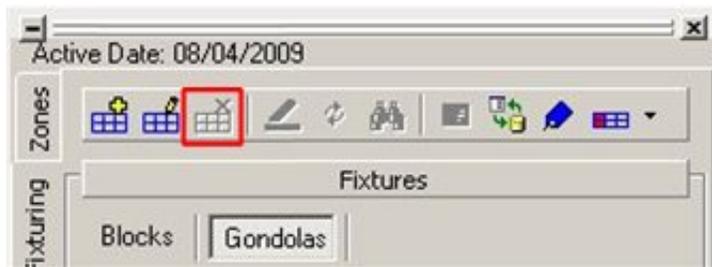


Right click to complete the selection process, after the selection the selected objects are removed from the drawing.

Note: Using MSM AutoCAD tools, changes made in the drawing are not automatically recorded in the central Macro Space Management database. To update the changes in the database, run Synchronize and Adjacencies to ensure the central database contains the effects of all MSM AutoCAD changes.

Deleting Gondolas

Gondolas can only be deleted using AutoCAD tools as the Delete Gondola option is not available for use in the Gondolas toolbar.



Delete Gondola option

Note: After using AutoCAD tools, the drawing must be synchronized so that the changes are written to the central Macro Space Management database.

Undoing Changes

Moved, rotated, or erased gondolas can generally be restored to their original position by making use of the **Undo** command on the Planner toolbar.

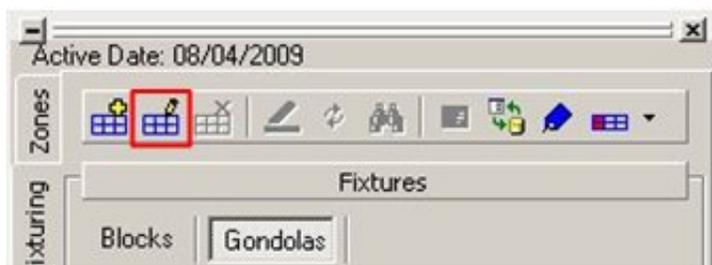


Planner toolbar

Note: Using MSM AutoCAD tools, changes made in the drawing are not automatically recorded in the central Macro Space Management database. To update the changes in the database, run Synchronize and Adjacencies to ensure the central database contains the effects of all MSM AutoCAD changes.

Editing Gondolas using Fixture Studio

Fixture Studio allows the properties of a gondola to be edited. It can be accessed from Planner by clicking the **Edit Gondola** icon on the Fixturing tool bar.



Fixturing tool bar - Edit

While in Fixture Studio a wide range of properties for the selected gondola can be customized. These include:

- Sizes
- Fixture Positions
- Whether parts are optional or not

Changes made to a Gondola while in Fixture Studio affects further placements of that type.

Gondola Operations

Highlighting Selected item in Tree

The **Highlight Selected Item in Tree** option enables you to highlight the selected item in the hierarchy tree by clicking the icon in the Blocks toolbar. Although the option is not available in the Gondolas toolbar, when selected from the Blocks toolbar, it highlights the selected item in the tree.



Fixturing tool bar - Highlight

This button can be toggled On and Off by clicking on it. When toggled on, the button appears pressed down. When the option is toggled on, clicking on any fixture in the drawing results in that fixture type being highlighted in the hierarchical tree.

Note: Some of the options are not available in the Gondola toolbar such as **Highlight Selected Item in View, Find, and Options.**

Refreshing

The **Refresh** option refreshes both blocks and gondola information in the respective hierarchical trees.



Fixturing tool bar - Refresh

Click the **Refresh** button in the Blocks tab to load the latest fixture information from the database into the fixture hierarchy. At the same time, it will load the latest gondola information from the database into the gondola Hierarchy.

Dragging and dropping a fixture or using the Add button to add a fixture to the drawing from the appropriate hierarchy after the refresh button is selected adds that fixture to the drawing using the latest definition from Fixture Studio.

If a drawing is already open then fixtures already placed in the drawing do not use any changes loaded during the refresh operation until the drawing is closed and reopened. However, new fixtures added to the open drawing use the new data.

Note: Some of the options are not available in the Gondola toolbar such as **Highlight Selected Item in View, Find, and Options.**

Gondola Attributes

Attributes only apply to fixtures.



Fixturing tool bar - Attributes

To get information in individual fixtures within a gondola, select the required fixtures within the gondola and click on the attributes icon.

Note: Some of the options are not available in the Gondola toolbar such as **Highlight Selected Item in View, Find, and Options.**

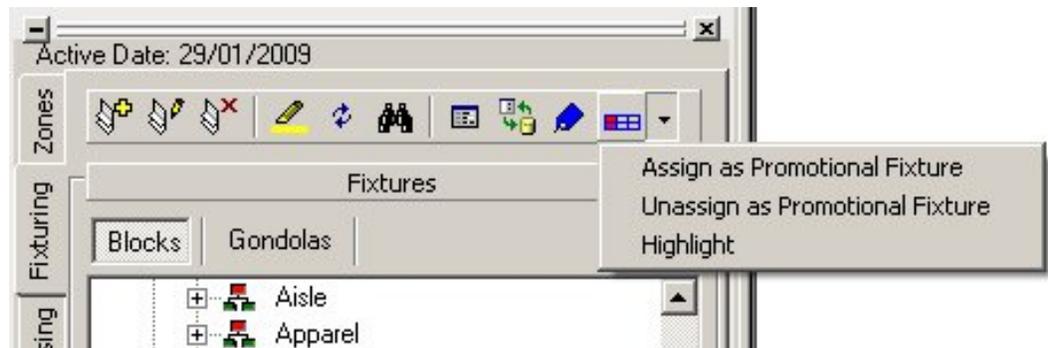
Promotional Fixtures

Promotional Fixtures are fixtures that can be allocated for the specific purpose of rapidly changing offers. Promotional Fixtures are normally used for reporting purposes.



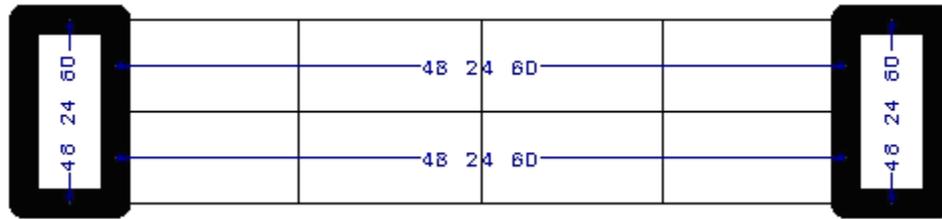
Fixturing tool bar – Promotional Fixtures

It can be assigned by selecting a fixture or fixtures and selecting the **Fixture Attribute** icon in the toolbar. You can assign, unassign and highlight the fixture used for promotional purpose.



Fixturing tool bar – Promotional Fixtures

Fixtures designated as Promotional can be identified by using the **Highlight** option. The fixtures are highlighted in the drawing by the configured method in the Configuration tab.

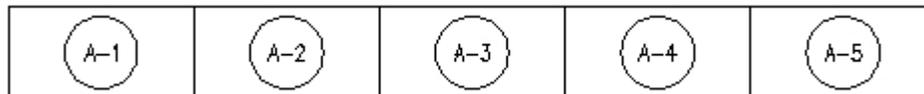


In the above example, Thicken has been used as the highlight option.

Alternatively, they can be identified by running a report on the drawing or by using a KPI.

Bay Numbering

Bay numbering assigns a unique identification code to each fixture within the drawing for reporting and identification purposes.

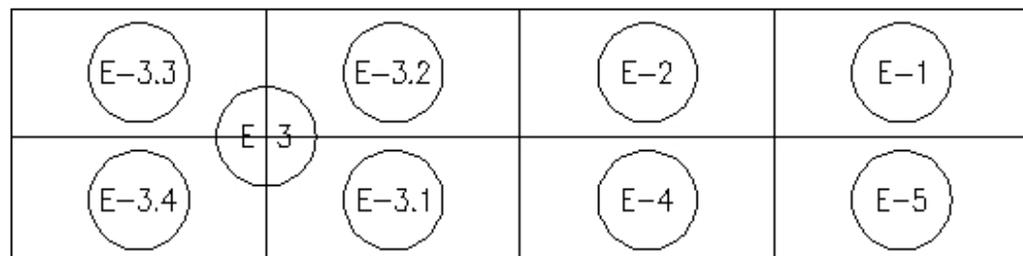


Bay numbering is based on either fixture or gondola:

- Fixture based bay numbering numbers each fixture in an incremental sequence starting from a designated number.
- Gondola based bay numbering numbers fixtures within a gondola with a four part sequential code unique to the drawing.

Before Bay Numbering can be carried out, the Synchronization module must be run to ensure the information from the drawing has been fully transferred to Macro Space Management's central database. Following this, the Adjacency option must be run so the central database has up to date information on which fixture is next to which fixture.

Bay Groups are where two or more fixtures have been linked together for bay numbering purposes.

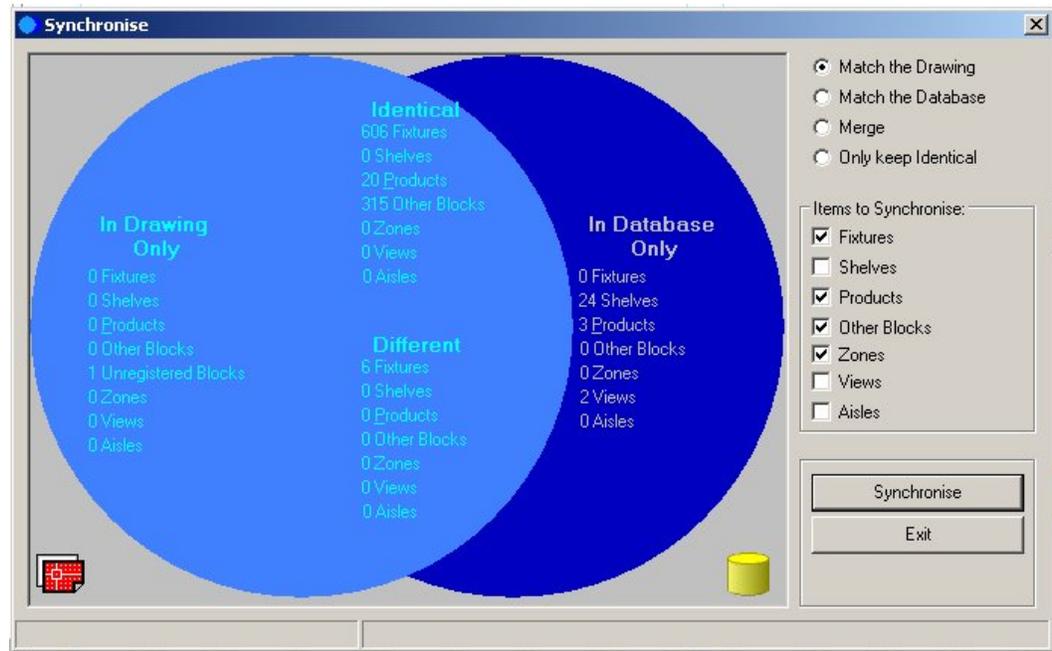


Bay groups can contain any number of fixtures, but care should be exercised in using this feature. The Bay Number appears in the geometric centre of the selected fixtures, causing it to appear in an unpredictable place if the fixtures selected occupy too wide an area.

Preparations – Before Bay Numbering

Synchronization

To synchronize the drawing, select the Synchronize option from the File menu or from the toolbar. This brings up the Synchronize dialog box.

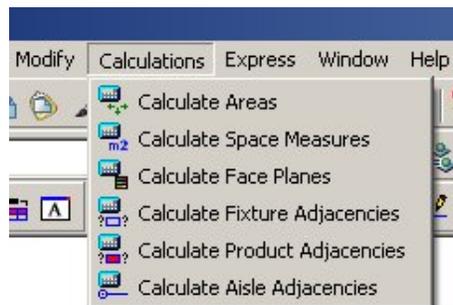


In the Synchronize dialog box, select the **Match the Drawing** option (under the Action section), Fixtures, Other Blocks, and Zones check boxes (under the Items to Synchronize section), and then click the **Synchronize** button.

Fixture Adjacency

Fixture Adjacency is used by the Planner application to calculate the fixtures that are adjacent to each other. If they are within a specified distance (usually just a few mm), they are treated as part of a gondola; otherwise they are treated as individual fixtures. If fixture adjacency is not run, then fixtures may have bay numbers in an odd sequence.

To run Fixture Adjacency, select the Calculate Fixture Adjacencies option from the Calculations menu or toolbar.

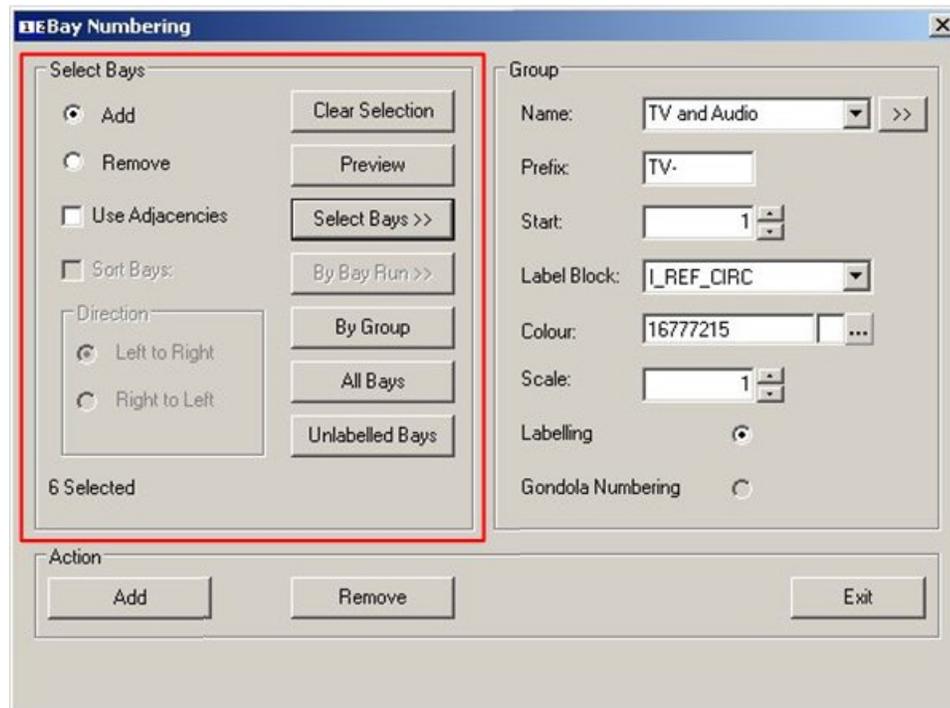


Calculations - Options

Bay Numbering Dialogue Box

Select Bays Frame

The **Select Bays** frame provides options to select fixtures for bay numbering.



Bay Numbering – Select Bays

- The **Add** or **Remove** radio buttons determine whether fixtures are added or removed from the list for bay numbering. The number selected is shown immediately below.
- **Clear Selection** removes all fixtures from the list of those selected.
- **Preview** shows the fixtures selected for bay numbering – these briefly blink on the drawing.
- **Select Bays >>** enables you to select fixtures from the drawing. Multiple selections can be made by using AutoCAD selection techniques. The selected bays flash in the drawing three times.
- **By Bay Run** enables you to select gondolas for bay numbering. You are returned to the drawing to select a gondola by left clicking on it. A dialog box appears.

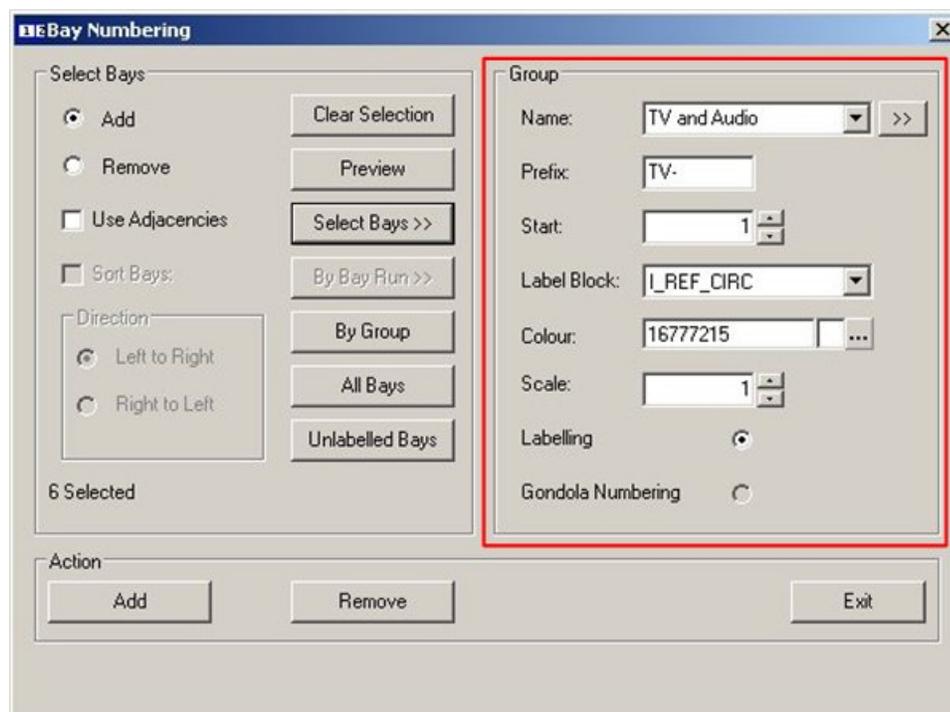
If the **Whole Run** option is selected, every fixture in the gondola will be selected. If the whole run is not included, then only part of the gondola will be included; you will be asked to specify a stop position. This option should only be used by Macro Space Management users who understand the numbering sequence within gondolas. This option may also be used to select fixtures that have been placed individually. The selected bays flash in the drawing three times.

- **By Group** enables fixtures to be selected that have already been designated as belonging to a Group. The selected bays flash in the drawing three times.

- **All Bays** selects all fixtures on the drawing.
- **Unlabelled Bays** selects all fixtures that have not been allocated a bay number.
- **Sort Bays** when checked causes fixtures to be numbered according to the adjacency rules. It is inactivated unless the **Sort Adjacencies** option is checked. If Sort Bays is checked, the Direction radio buttons become available, allowing you to select the numbering direction. If Sort Bays is unchecked, then fixtures can be numbered using the sequence defined by a user specified AutoCAD option.

Group Frame

The **Group** frame enables you to specify a number of options concerning Bay Numbering.

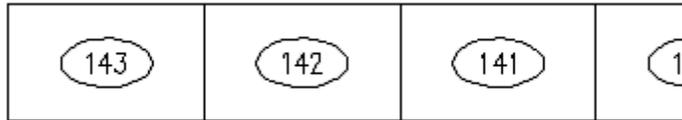


Bay Numbering - Group

- **Name** enables a specified selection of fixtures to be given a collective name. This must be entered prior to labeling the selected fixtures. For example, a group of fixtures designated for electrical sales might simply be named Electrical. Whenever this group is selected in the future, all fixtures that were designated as part of it are selected.
- **Prefix** is added to any bay number as it is applied. For example, choosing a prefix of E- results in all selected fixtures being labeled E-1, E-2, E-3, etc. Prefixes are useful for giving visual indication that a fixture belongs to a specific group.
- **Start** specifies the number at which bay numbering is to commence. This is important where grouping has been used, as it enables overlapping ranges of bay numbers to be avoided.
- **Label Block** brings up a list of label blocks. These enclose the actual bay numbers.

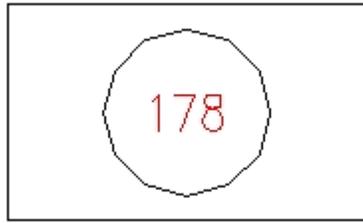
ref-circ ref-elps ref-norm ref-oval ref-rect
--

For example, choosing ref-elps encloses all bay numbers in an elliptical shape.



- **Color** enables bay numbers to be assigned a color. Clicking on the button with the ellipsis will bring up a color pallet.

The selected color is then applied to all selected bays.

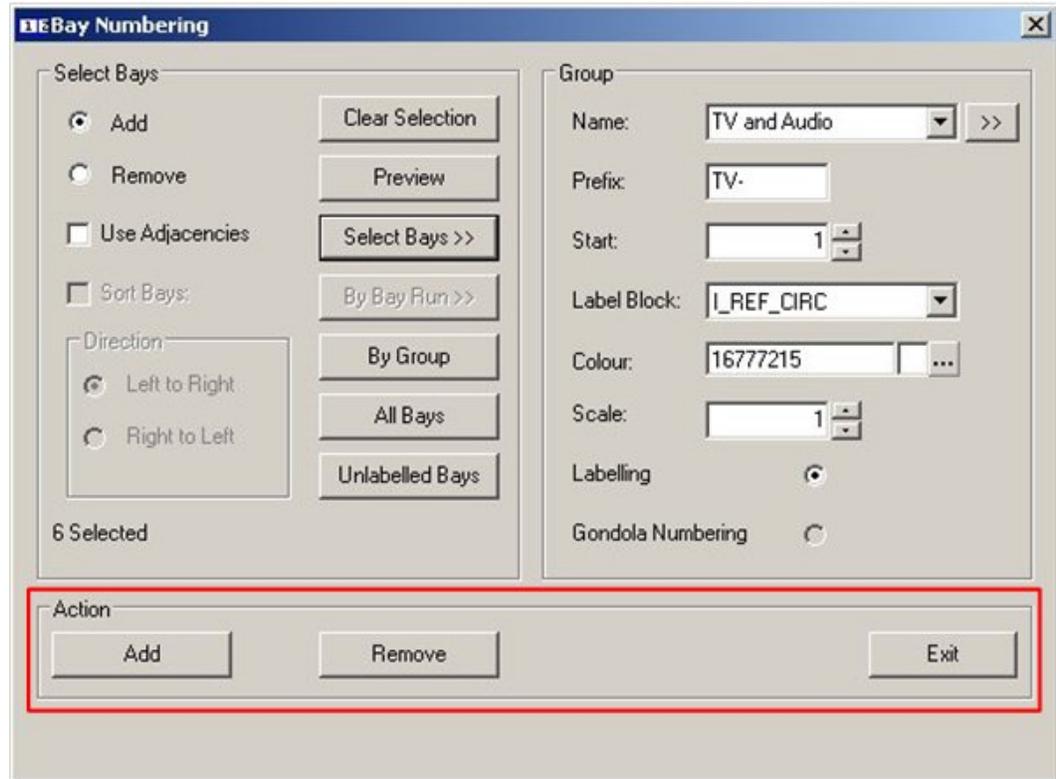


This is useful for color coding bays assigned to different groups.

- The **Labeling** and **Gondola Numbering** buttons allow you to select whether Bay or Gondola numbering is used. (Gondola numbering uses a slightly different logic from Bay Numbering).

Action Frame

The **Action** frame completes the bay numbering process.

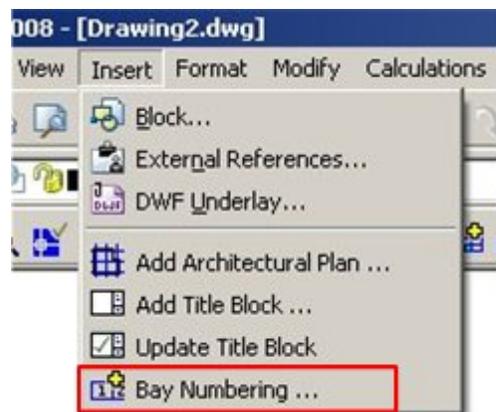


Bay Numbering - Action

- **Add:** adds numbering to any selected fixtures.
- **Remove:** removes any existing numbers from any selected fixtures.
- **Exit:** enables you to leave the bay numbering routine, having completed all required actions.

Accessing the Bay Numbering Options

Bay numbering is accessed from the **Insert** pull down menu.



Bay Numbering - Insert menu

The Bay Sequence Numbering dialog box comes up.

Bay Numbering

Select Bays

Add Remove

Use Adjacencies

Sort Bays:

Direction

Left to Right Right to Left

Clear Selection

Preview

Select Bays >>

By Bay Run >>

By Group

All Bays

Unlabelled Bays

0 Selected

Group

Name: Food and Drink >>

Prefix: F-

Start: 1

Label Block: L_REF_CIRC

Colour: 16777215 ...

Scale: 1

Labelling

Gondola Numbering

Action

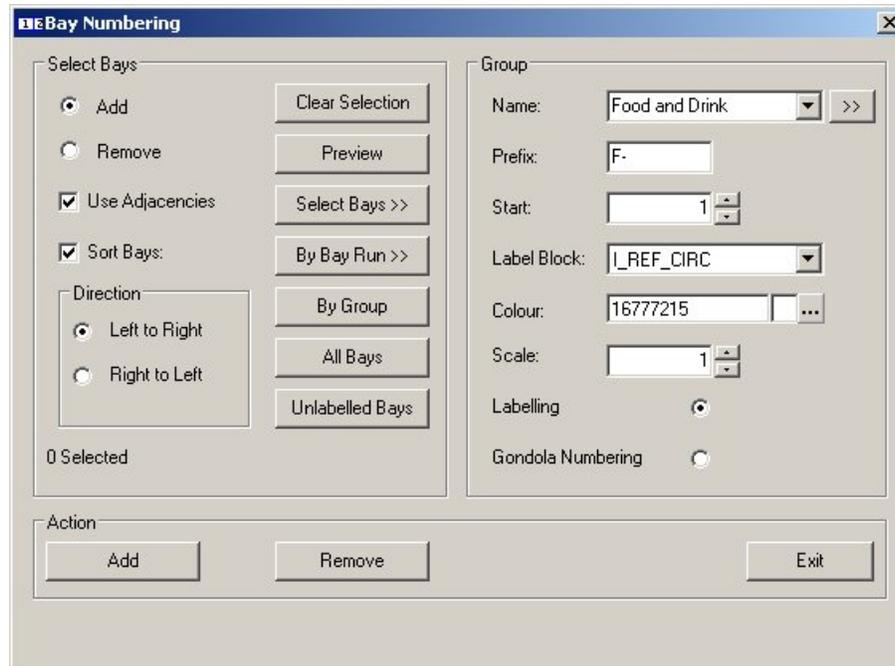
Add Remove Exit

Bay Sequence Numbering dialog box

Adding Basic Bay Numbering

To add basic bay numbering:

1. Select the **Bay Numbering** option from the **Insert** menu. The Bay Numbering dialog box appears.

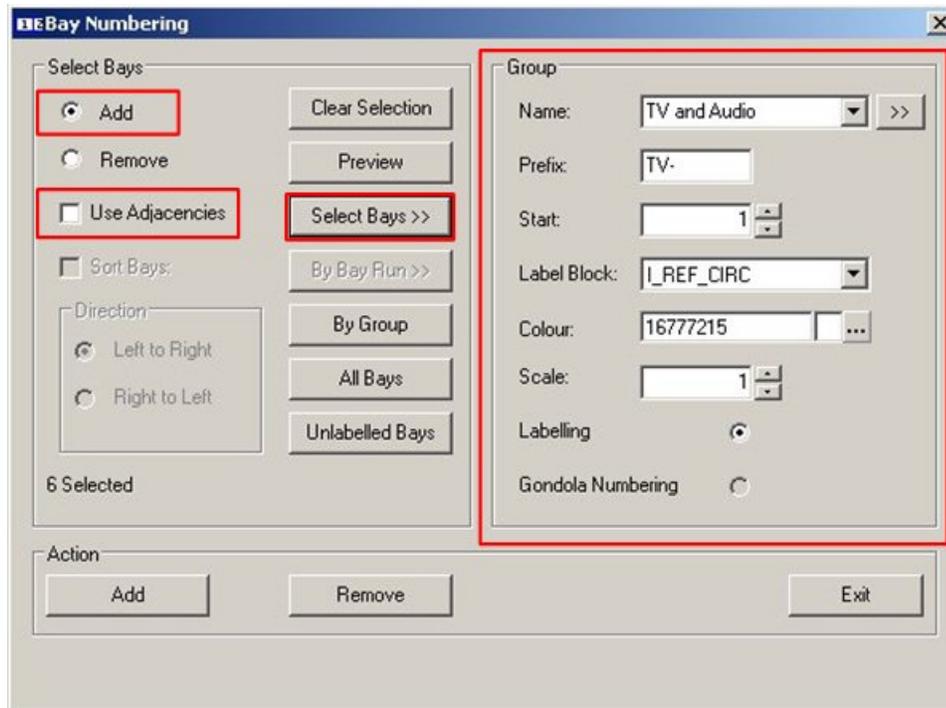


Bay Numbering dialog box

2. The **Select Bays** section allows you to select the bays that will be numbered. Within the **Select Bays** frame, specify your selection:
 - Check the **Add** radio button
 - Check the **Use Adjacencies** check box
 - Check the **Sort Bays** check box
 - The **Direction** area specifies the direction bay numbering will operate in, select **Left to Right** radio button.
 - Click the **All Bays** button. This selects all fixtures in the drawing.
3. The **Group** section controls the notation that will be added. In the **Group** frame, set the following options:
 - Give the selected fixtures a collective name by typing in the **Name** text box.
 - Add a prefix in the **Prefix** text box. This will be added to all the bay numbers.
 - Select the **Start** number in the Start drop down list. The bay numbering will start from this value.
 - Select the shape of the block from the **Label Block** drop down list.
 - Select the color of the text from the **Color** dialog box.
 - Scale
 - Labeling determines what form of labeling will be applied.
 - Gondola Numbering
4. In the **Action** frame, click the **Add** button. The Bay Numbers are added.

Advanced Bay Numbering

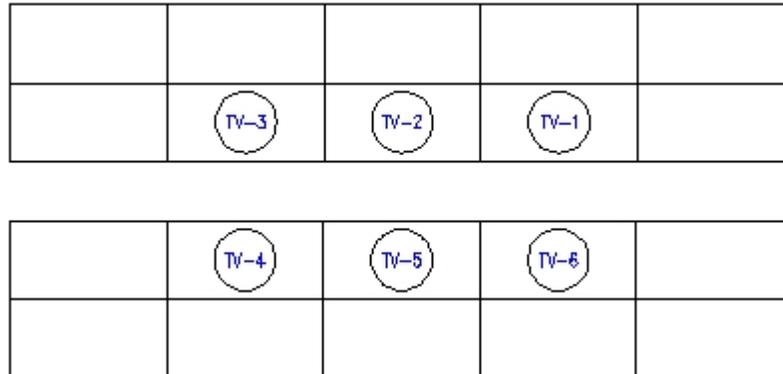
There are several ways of carrying out more advanced bay numbering. The example used here uses a Fence selection method to select both the fixtures to be bay numbered and the sequence they are to be numbered in.



Bay Numbering dialog box

3. In the **Group** frame, set the following options
 - a. In the **Name** field, type in the required name for the group of fixtures to be selected.
 - b. In the **Prefix** field, type in the prefix that will precede the bay numbers.
 - c. In the **Start** drop down list, set the start number for the numbering.
 - d. In the **Label Block** drop down list, select the shape of the Label Block that will be used for bay numbering
 - e. In the **Color** dialog box, select the color for the bay numbering text.
 - f. Scale
 - g. Select the Labeling radio button.
4. In the **Select Bays** frame, click the Select Bays button. The cursor will appear in the drawing.
5. Type in **Fence** and then press enter.

- When all the points in the fence have been drawn, press enter until the Bay Numbering dialog box reappears.
- Click the **Add** button in the Action frame. The selected bays are numbered.



The above figure shows the bays numbered in the sequence specified by the fence.

Removing Bay Numbering

You can remove the bay numbering from the fixtures.

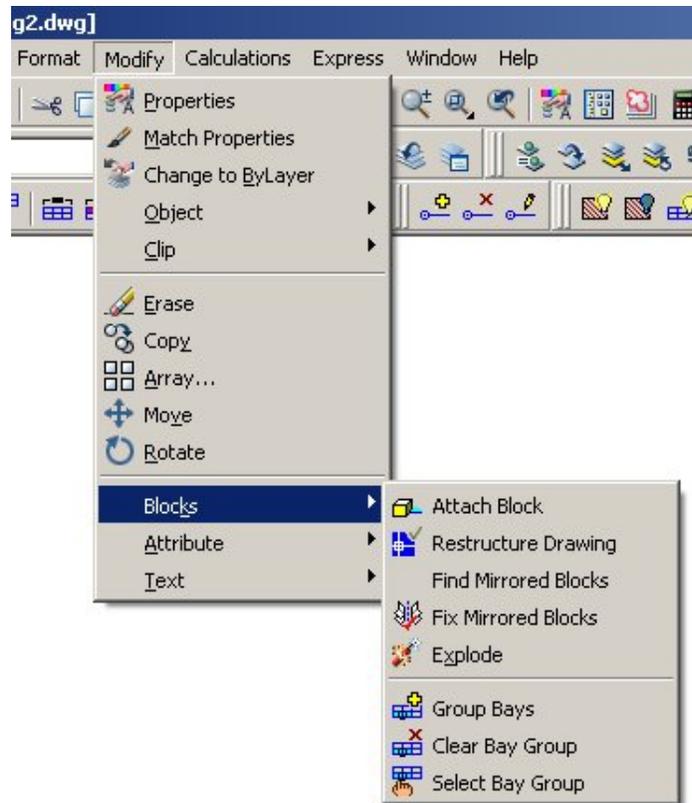
To remove bay numbering:

- From the **Insert menu**, select the **Bay Numbering** option. This brings up the **Bay Numbering** dialog box.
- Click the **Select Bays** button to have bay numbering removed from specific bays, or select the **All Bays** button to remove bay numbering from all bays.
- Click the **Remove** button, and Bay Numbering is removed.

Defining Bay Groups

Accessing the Bay Groups option

The **Bay Group** options can be accessed from the **Modify > Blocks** option on the menu bar.



Bay Groups - Blocks

They can also be accessed from the **Bay Numbering** toolbar.

- **Group Bays** allows you to select fixtures to group together a number of fixtures into a single bay.
- **Clear Bay Group** converts grouped fixtures back into fixtures that will receive individual bay numbers.
- **Select Bay Group** causes other members of a bay group to be highlighted when an individual fixture within the bay group is selected.

Making Fixtures into Bay Groups

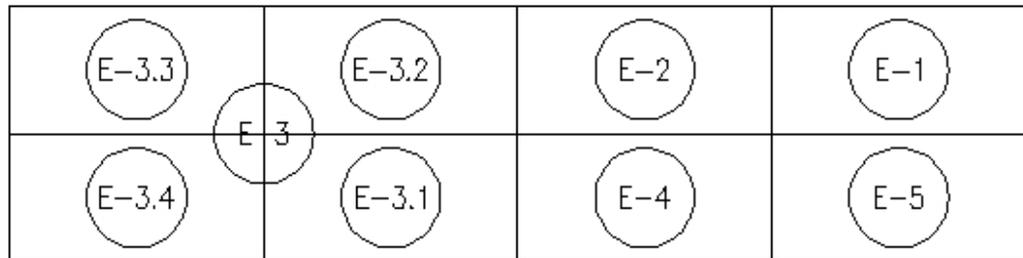
To make Bay Groups from fixtures:

1. From the **Modify > Blocks** menu, click the **Group Bays** option. Alternatively use the Group Bays option from the Bay Numbering toolbar.
A prompt appears next to the cursor to select the required fixtures.

□

Select objects:

2. Select the objects by left clicking on the required fixtures, or by a fence.
3. Complete the selection by a right click. The selected Bay Group is numbered as such when the fixtures are bay numbered.

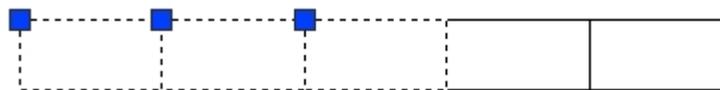


In the above example, there are a number of normally numbered bays and four Grouped Bays. The grouped bays have a master bay number and sub-bay numbers.

Removing Bay Groups

To remove fixtures in a bay group:

1. Select the **Remove Bay Group** option from the Modify > Blocks menu or from the Bay Numbering toolbar. A prompt appears next to the cursor to select the blocks to remove from the group.
2. Select a block from the bay group. All the blocks of the bay group are selected.

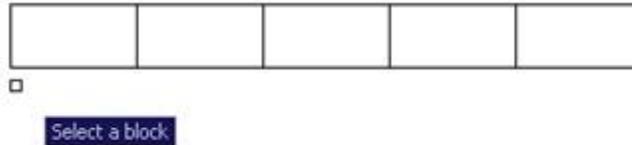


3. Right click to complete the selection, the blocks are removed from the group.

Showing Bay Groups

To show all the fixtures in a bay group:

1. Select the **Show Bay Group** option from the **Bay Numbering** toolbar or the **Modify** menu. A prompt appears next to the cursor to select a block.



2. Select a Block Prompt.
3. Select any block in the bay group and the other blocks are selected.



Merchandising

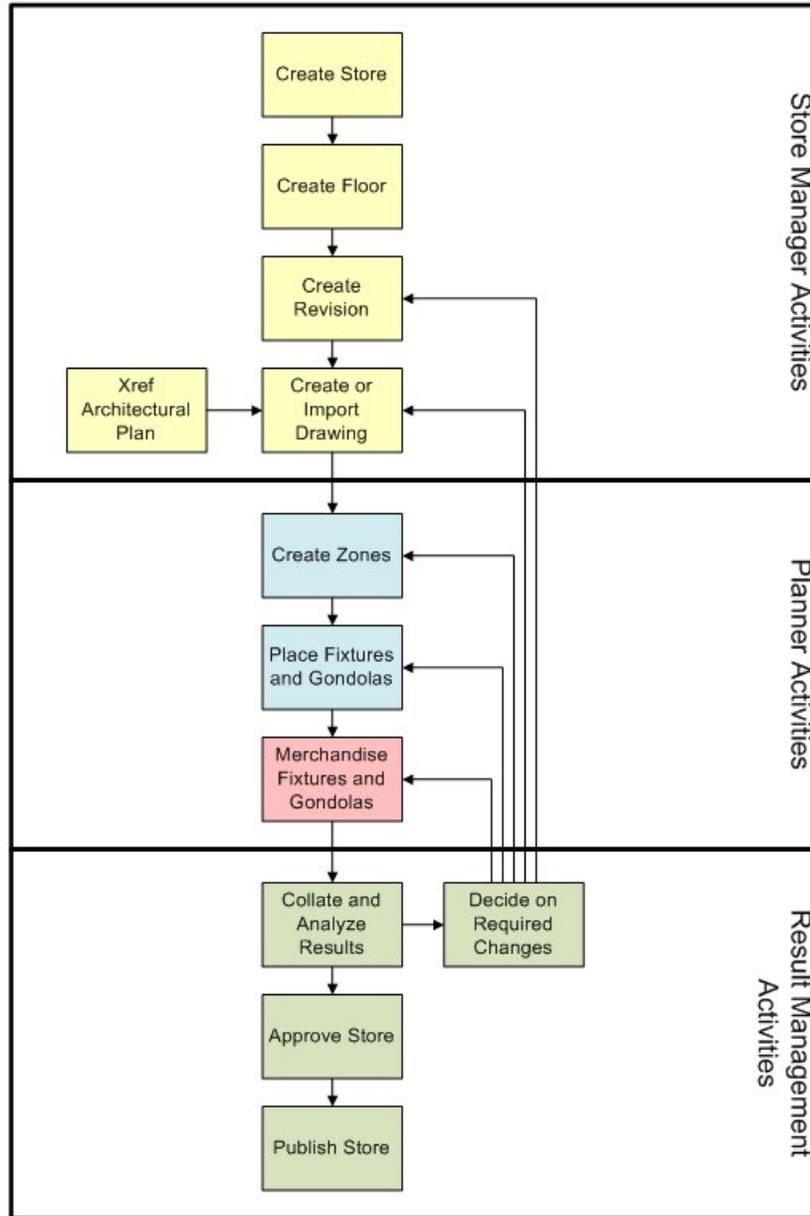
Business Flows in Merchandising

You need to have detailed information on the stores for Macro Space Management to operate effectively. The starting point is the Store Manager module. This allows stores to be organized into a logical structure and individual stores to be sub-divided into floors. Details of the floors can then be imported into Macro Space Management as Planner drawings. These floors can be subdivided into Zones dedicated to sales of particular product lines.

The Fixtures module within Macro Space Management then allows the detailed layouts of the floors to be planned (multiple plans for a floor within a store being administered by Store Manager). Each fixture can subsequently be populated by a predetermined quantity and arrangement of sales products using the Merchandising Tab on the Object Browser.

Within the Merchandising Tab, you can:

- Select single or multiple bays to be populated with merchandise.
- Quickly and efficiently select the required merchandise.
- Substitute merchandise as required.



Business Flow - Merchandising

You can see information on the effectiveness of the merchandising plan by switching to Merchandiser and looking at the Key Performance Indicators (KPI). After the floor has been merchandised, Macro Space Management Reports can be used to analyze and report on the effectiveness of the layout. These are available from the Report Studio standalone module.

Basic Concepts

Fixtures, Fittings, and Shelves

Fittings

Fittings are items within a store that aid the retail effort, but do not themselves hold merchandise. Examples are display material and checkout counters. Some fittings are used to support or augment fixtures. For example a shelving unit could be made up of support legs, (a fitting), and shelves, (a fixture). Fittings always remain separate items on the drawing and can be hidden from view using the Hide Fittings command.

Fixtures

A fixture is a structure designed to hold products for sale. It can take many forms including runs of shelving, display cabinets, and kiosks. A fixture can hold product directly, or via shelves. A shelf always has a parent fixture. A shelf can be used as a generic description as equipment within a fixture which can hold product.

For example a backboard might hold several support bars. The support bars could in turn have rods attached. Product could then be hung from those rods. The arrangement of rods emanating from a single support bar is generically called a shelf for planning purposes.

Shelves

Each shelf or fixture always has a product base associated with it. This serves as a placeholder for any merchandise placed on it. Fixtures and fittings are often color coded as to purpose. For example, fixtures holding groceries might be drawn in green, fixtures holding chilled goods in blue.

Layers

AutoCAD drawings are often divided into Layers. Each layer contains a specific type of information. For example, one layer might contain information on fixtures another data on electrical wiring. Layers can be further sub-divided into aliases. Each aliased layer contains very specific information. For example, one aliased layer might contain details of all the fixtures capable of holding chilled goods; another all fixtures holding fruit and vegetables.

Layers are one method used by Macro Space Management to filter fixtures, planograms, etc.

Product

A Product is a single specific category of merchandise. For examples, baked beans, television sets, and dining tables.

Planograms

Planograms are blocks within Macro Space Management that hold details of merchandise to be placed into the fixtures within a store. Planograms define the type, quantity, and arrangement of the sales goods to be placed in the bay(s). These are designed to maximize sales revenue by placing the optimum combination of products into the available sales space.

Planograms are infinitely flexible and can be configured to hold any combination of products. Planograms are placed in fixtures and gondolas, but must be of suitable configuration for that specific fixture or gondola.

Gondolas

A Gondola is an arrangement made up from two or more fixtures linked together by means of connection points (or in sufficiently close proximity to meet the definition of adjacency). An example of a gondola might be a run of 10 fixtures placed back to back, with end caps on each end to maximize the area devoted to sales.

Gondolas are often color coded to differentiate from one to another. For example gondolas holding groceries might be drawn in green, fixtures holding chilled goods in blue. Note that single fixtures are numbered as gondolas if the Gondola Numbering option is used.

Configuration

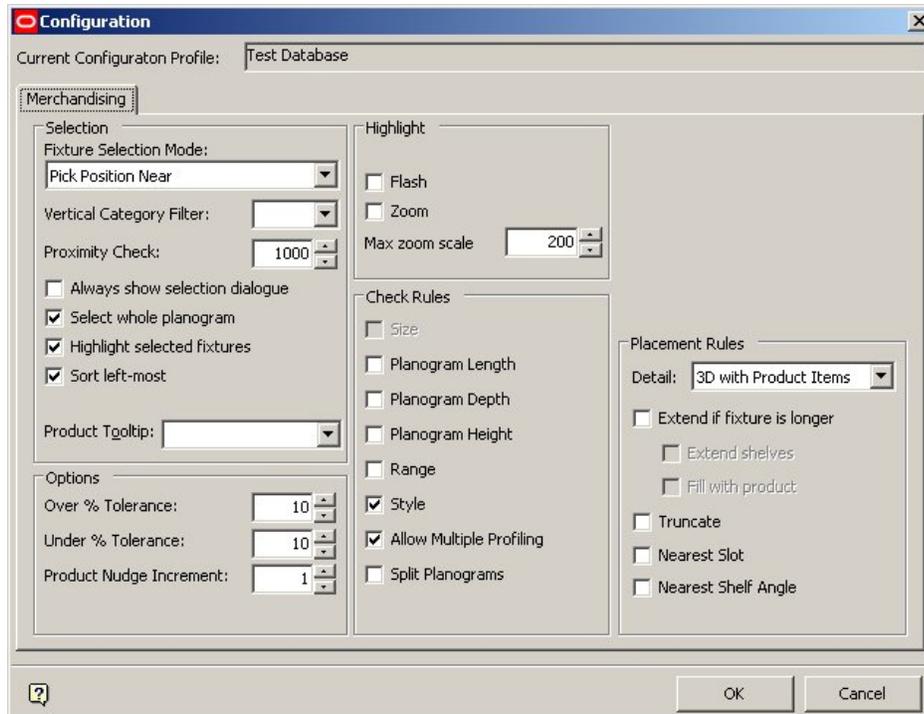
Accessing the Configuration Options

The Configuration options can be accessed by clicking on the Properties icon on the Merchandising toolbar. (This is available when either Products or Planograms are selected).



Merchandising toolbar - Configuration

This will bring up the Merchandising Tab from the Configuration Module.



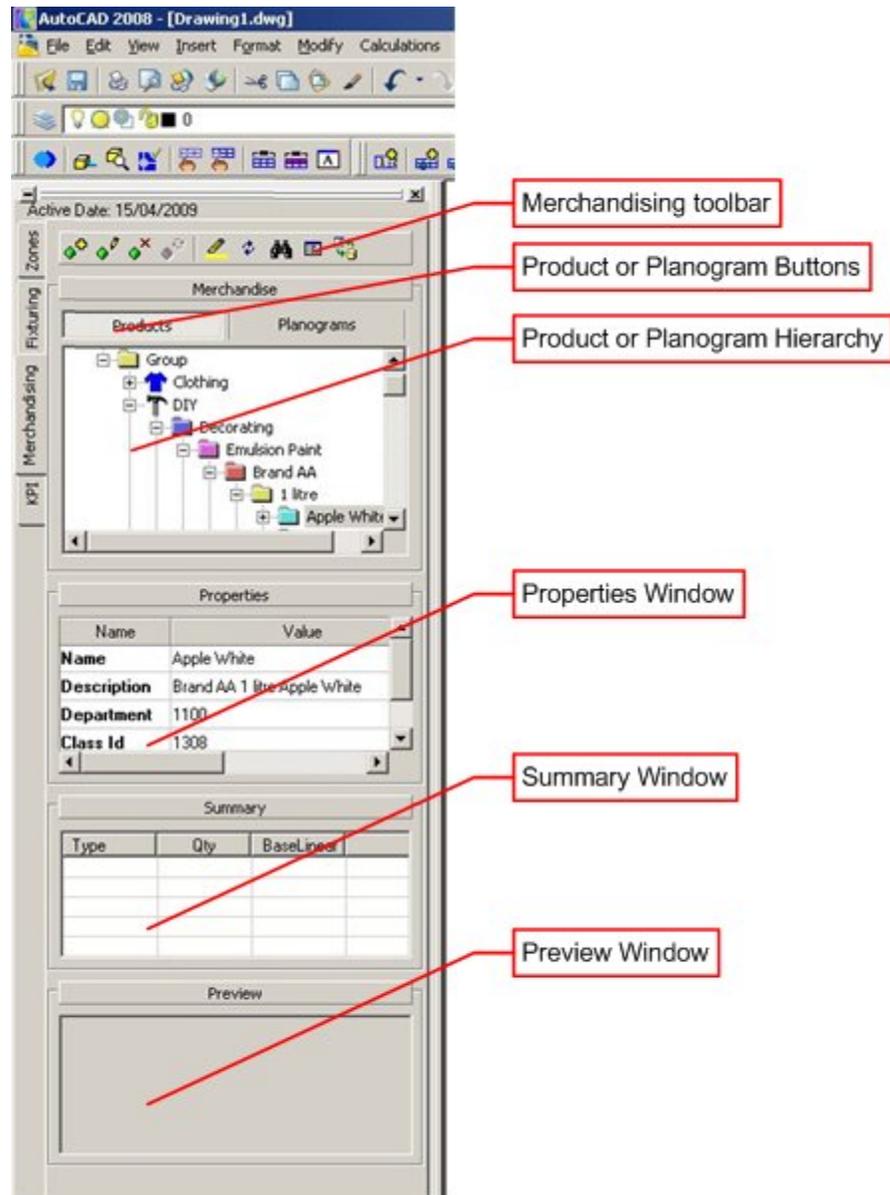
Configuration Module

Fields	Description
Selection	<p>Fixture Selection Mode is selected from a drop down list.</p> <p>Vertical Category Filter enables the user to select Planograms that have previously been assigned to a vertical category within an aliased layer.</p> <p>Always show selection dialog permanently turns on the selection dialog window when planograms are deleted. If this option is not enabled, then the dialog will only show when multiple planograms are selected – single planograms will be deleted without the need for confirmation.</p> <p>Select whole planogram is used when a Planogram requires multiple bays to be placed.</p> <p>Highlight selected fixtures highlights fixtures previously selected using Macro Space Management tools.</p> <p>Sort left-most sorts selected fixtures in a left to right order. If this option is not enabled, then fixtures are selected in the order they were placed on the drawing.</p> <p>Product tooltip enables the type of tooltip to be selected from a drop down list.</p>
Highlight	Enables to highlight a fixture in the drawing by flashing or zooming to a set value.
Options	Enables to set the tolerance levels.
Check Rules	Enables to set the check rules for planograms.
Placement Rules	Defines the placement rules.

Merchandising Toolbar and Display Windows

Merchandising on the Object Browser

Clicking on the **Merchandising** tab on the Object Browser brings up a series of options for adding, editing, and deleting Products and Planograms.



Merchandising Toolbar

The Product Toolbar

The **Product** toolbar is found on the Merchandising Tab of the Object Browser. It is active when the Product button is selected.



Product toolbar

It contains a series of icons allowing various operations to be carried out on Products.

Icon	Function
	Add to Selected Fixture
	Edit Definition
	Remove from Fixture
	Move between Fixtures
	Highlight where used in store
	Highlight Selected Item in Tree
	Find Product or Planogram
	Show Merchandising Options
	Refresh

The Planogram Toolbar

The **Planogram** toolbar is found on the Merchandising Tab of the Object Browser. It is active when the Planogram button is selected.



Planogram toolbar

It contains a series of icons allowing various operations to be carried out on Planograms.

Icon	Function
	Add to Selected Fixture
Not available for Planograms	Edit Definition
	Remove from Fixture
	Reverse Planogram Placement Direction
	Highlight where used in store
	Highlight Selected Item in Tree
	Find Product or Planogram
	Show Merchandising Options
	Refresh

The Merchandising Hierarchy Window

The **Merchandising** window shows a hierarchical tree of all the available products or planograms.



Merchandising window

The tree can be expanded or contracted by clicking on the + or – icons. The Merchandising window can be minimized by clicking on the splitter bar.

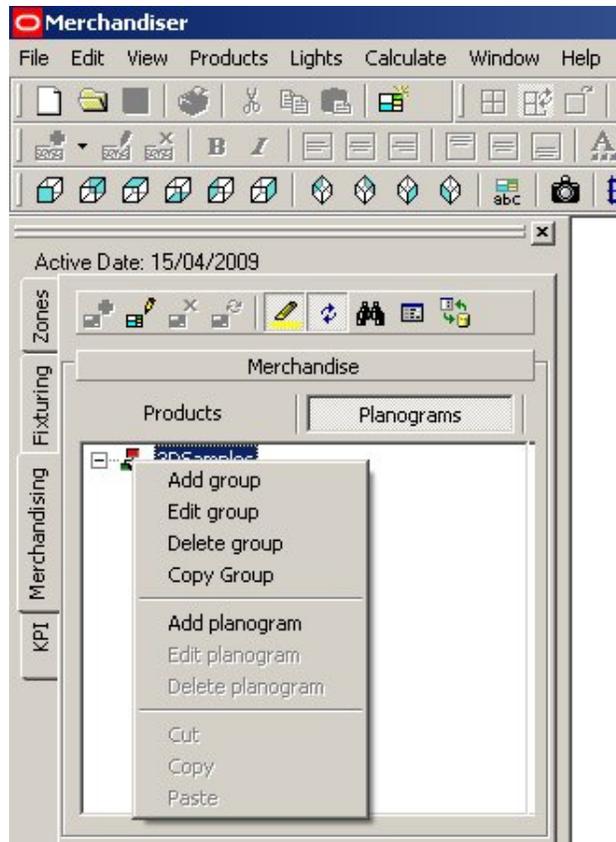


The Products or Planograms buttons determine whether the hierarchical tree shows products or planograms. The Products hierarchical tree can be configured in Product Studio using the Add Product, Edit, and Delete options on the menu available by right clicking.



Product Studio Window

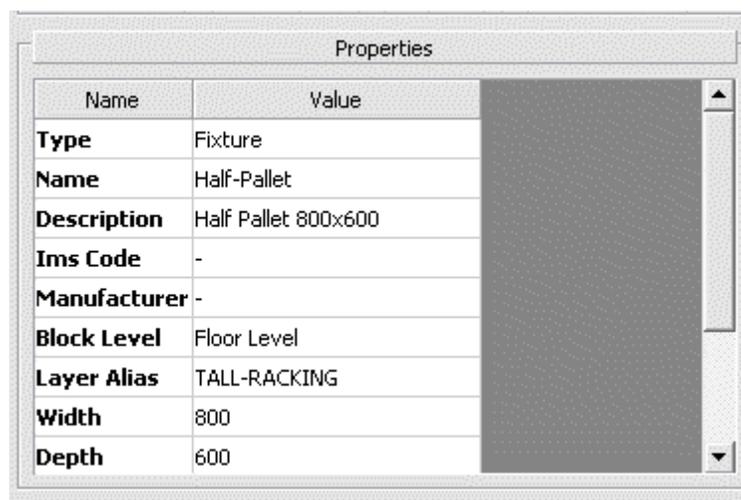
The Planograms hierarchical tree can be configured in the Merchandiser module using the Add, Edit, and Delete options on the menu available by right clicking.



Merchandiser module

The Properties Window

The **Properties** Window shows the properties for the currently selected product or planogram.

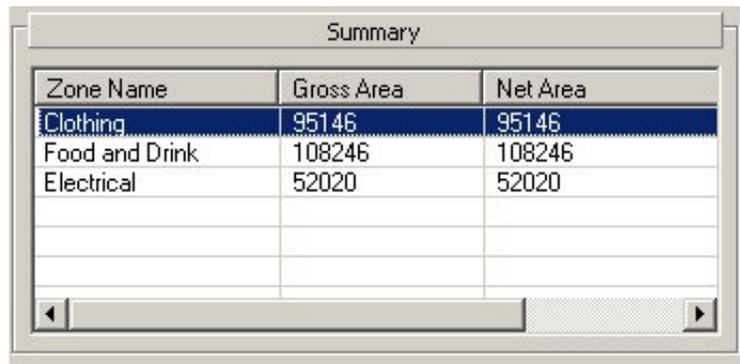


Properties Window

The Properties window can be minimized by clicking on the splitter bar.

The Summary Window

The **Summary Window** contains details of Zones within the currently active drawing.



Zone Name	Gross Area	Net Area
Clothing	95146	95146
Food and Drink	108246	108246
Electrical	52020	52020

Summary Window

The information typically includes Zone Name, Zone Description, and Gross and Net Areas.

Note: Information displayed can be customized by Oracle – contact Technical Support if necessary.

Zone Names and Zone Descriptions can be sorted by clicking on the column headings. If a zone has been selected in the drawing, it will be highlighted in the summary of zone properties.

The Preview Window

The **Preview Window** shows an image of the product or planogram selected in the hierarchical tree.



Preview Window

The window can be resized in the horizontal plane by dragging the edge of the Object Browser with the mouse. It can be resized in the vertical plane by dragging the bottom of the window with the mouse.

The Preview window can be minimized by clicking on the splitter bar.

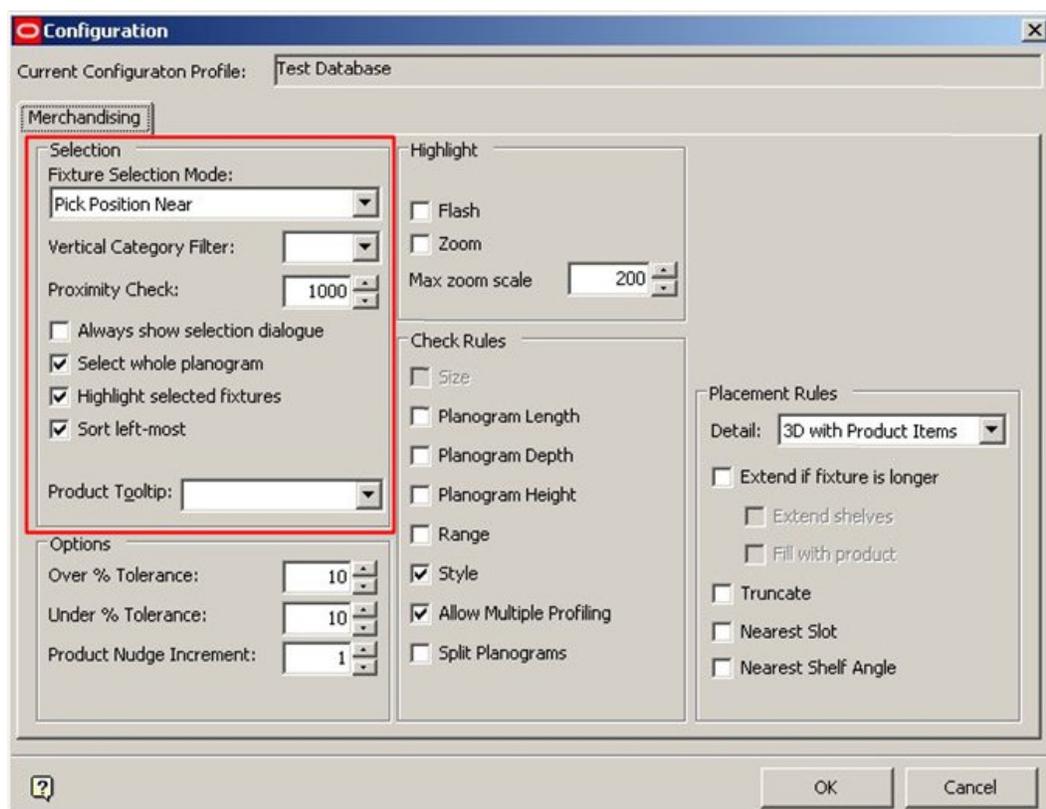
Preview

Merchandising Operations

Configuring Merchandising Methods

Selection Methods for adding Products or Planograms to Fixtures

The Selection frame in the Merchandising Tab of the Configuration Module specifies a series of options determining how fixtures are selected for placement of Products or Planograms.



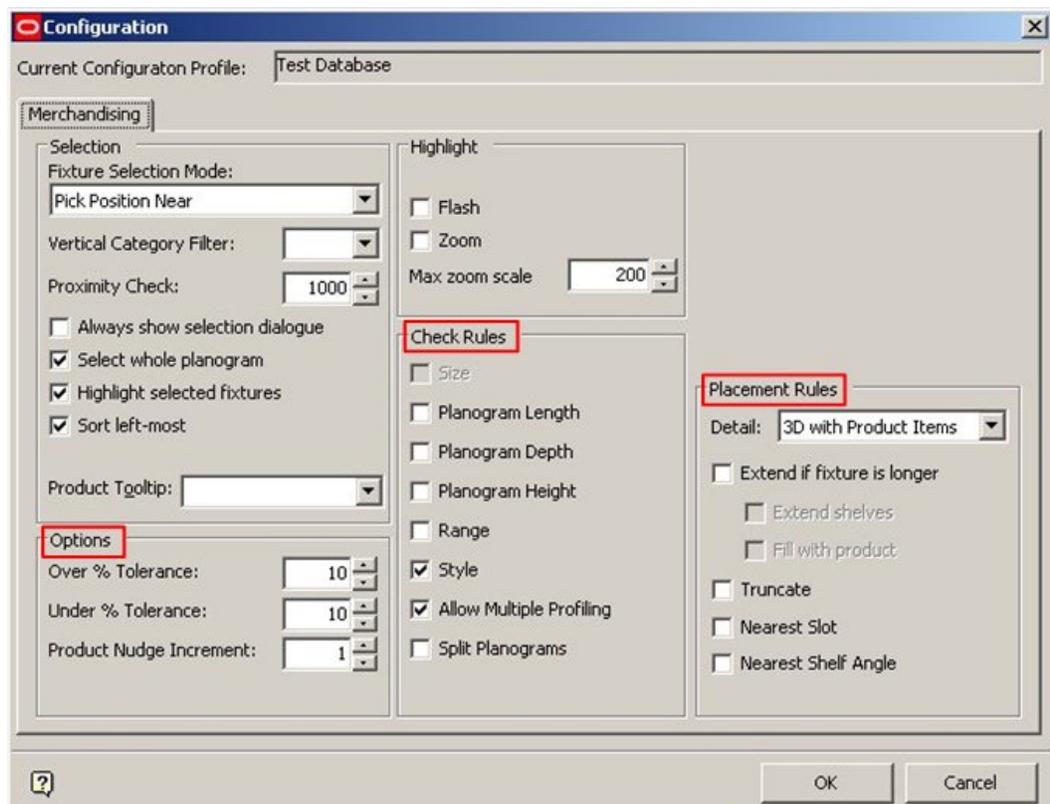
Configuration Module - Merchandising Tab

- **Fixture Selection Mode** is selected from a drop down list.
 - Pick Position Near selects the nearest position from a range of fixtures previously selected using Macro Space Management tools.
 - Standard Selection uses the standard Planner selection boxes to pick the fixture(s).
- **Vertical Category Filter** enables you to select Planograms that have previously been assigned to a vertical category within an aliased layer.
- **Always show selection dialog** permanently turns on the selection dialog window when planograms are deleted. If this option is not enabled, then the dialog only shows when multiple planograms are selected – single planograms are deleted without the need for confirmation.

- **Select whole planogram** is used when a Planogram requires multiple bays to be placed.
- **Highlight selected fixtures** highlights fixtures previously selected using Macro Space Management tools.
- **Sort left-most** sorts selected fixtures in a left to right order. If this option is not enabled, then fixtures are selected in the order they were placed on the drawing.
- **Product Tooltip** enables the type of tooltip to be selected from a drop down list.

Planogram Placement Options

The **Configuration Module** also contains a series of options concerning how planograms are placed.

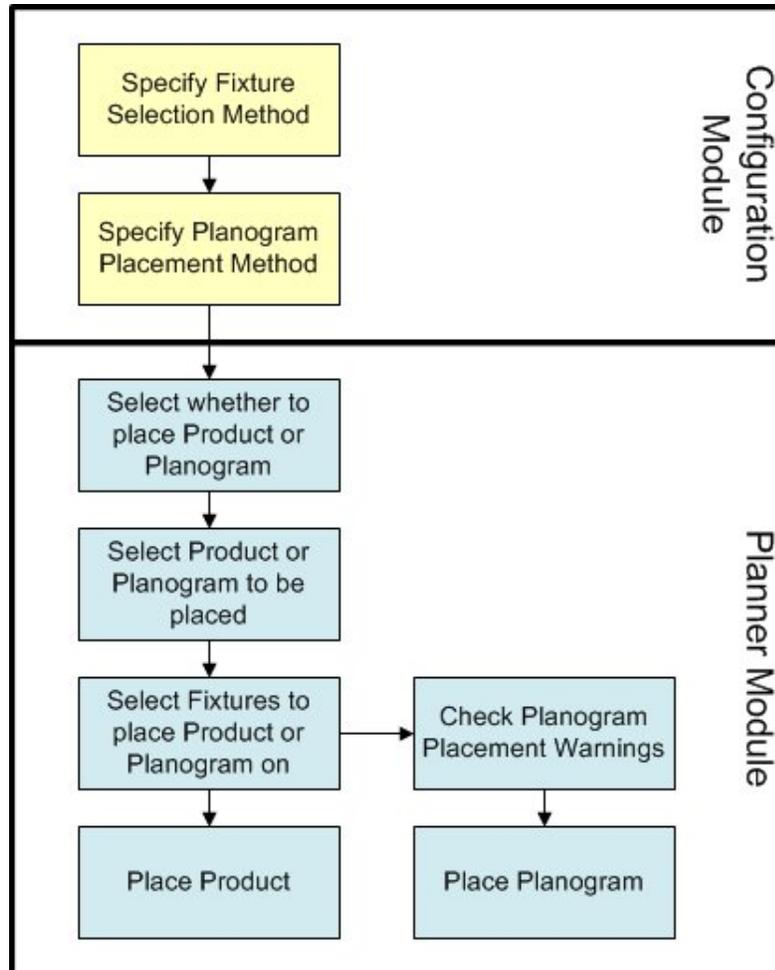


Configuration Module - Merchandising Tab

- **Check Rules** specify what warnings are given if the selected fixtures do not match the data specified in the planogram definition.
- **Options** allow you to specify the tolerance allowed if the dimensions of the selected fixtures do not match that specified in the planogram definition.
- **Placement Rules** specify what happens if the planogram is longer or shorter than the selected fixtures.

Adding Products or Planograms to Fixtures

The flowchart below specifies the sequence of actions required to place Products or Planograms on Fixtures.



Workflow - Placing Products/Planograms on Fixtures

Actions in the Configuration Module

- Specifying the Fixture Selection Method enables you to choose how fixtures for population are selected.
- Specifying the Planogram Placement method enables you to choose what options control how planograms are placed.
- The options are specific to a user.

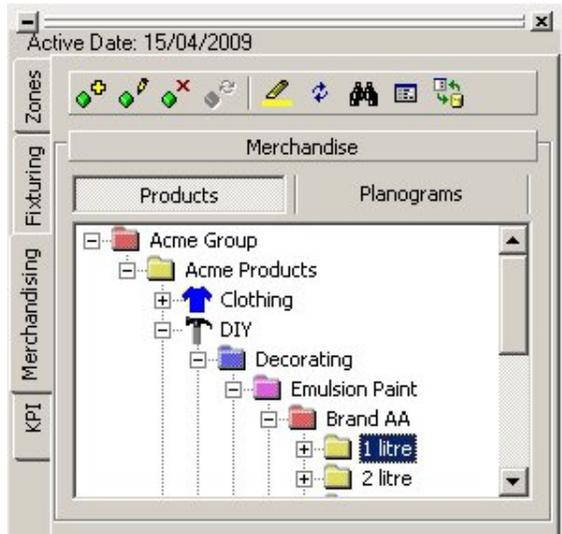
Actions in the Merchandising Module

- Clicking on the appropriate button toggles between the Product and Planogram hierarchical trees, allowing you to select the class of object to be placed.
- The required Product or Planogram can then be found in the hierarchical tree.
- The Fixture on which the Product or Planogram is to be placed is selected.
- The Product or Planogram is placed.

- If a planogram is placed, you may receive one or more warnings if the selected fixtures do not match the details in the planogram definition.
- You may chose to override the warnings, in which case the planogram will place.

Selecting Whether to Add Products or Planograms

Whether Products or Planograms are added will depend on whether you have selected the Product or Planogram hierarchical tree.

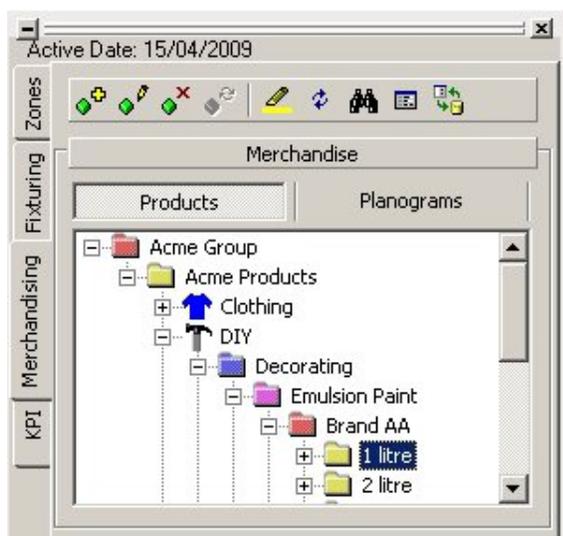


Product hierarchical tree

In the above example, the Products hierarchical tree has been selected.

Selecting the Product or Planogram Required

There are two ways of finding the Product or Planogram required for merchandising a fixture. The first is to select the required Product or Planogram directly from the hierarchical tree. This can be done by clicking on the + or – sign to expand or contract the hierarchical tree as required, then highlighting the required Product or Planogram.



Product hierarchical tree

The second is to use the Find option in the merchandising toolbar. 

- Type the required search string into the Find Product dialog box. The result brings up a list of any blocks matching the search string. Left click on any result will return to the *Merchandising Window*, where the selected Product or Planogram is highlighted in the hierarchy tree.
- When the required Product or Planogram has been found, it can be selected for insertion into the drawing in one of three ways:
 - The Product or Planogram can be 'dragged' from the hierarchical tree and 'dropped' into the drawing.
 - The Product or Planogram can be double clicked to activate it for insertion.
 - You can click on the Add Product or Add Planogram icons.

	Add Product to Selected Fixture
	Add Planogram to Selected Fixture

Constraints on Products that can be Added

Product Effective or Product Expired dates outside File Effective date

When a drawing is created, Store Manager allows you to set an effective date for when that file will become active. Products that have a Product Effective Date (when they become current) after the File Effective Date will not be capable of being added to that drawing.

Products that have a Product Expired Date (when they become historical) before the File Effective Date will not be capable of being added to that drawing. This will prevent products that will not be current or will be historical at the date of implementation of the Store Plan being added to that drawing.

Products those are not current for the active store plan will be grayed out in the Object Browser and the Object Grid.

Note: If a file has not been given an effective date, all products will be available. If products are copied from one drawing to another, they will be placed in the drawing even if their product dates are not valid for this file.

Note: This functionality does not apply to planograms, which have parallel mechanisms for version change and planogram substitution.

Placed Products Expiring before File is Effective

Placed products that have Product Expired Dates (dates when the product will revert to historical status) before the File Effective Date will be transparent and colored grey in the graphic for the Merchandise Report and Merchandising window. The row in the Merchandise Report that refers to the expired product will also be grayed.

This will allow you to readily identify placed products that have become historical and need replacement.

Selecting the Required Fixture(s)

The exact method of selecting the required fixtures will depend on the settings within the Configuration Module.

Pick Near Position selects the nearest position from a range of fixtures previously selected using Macro Space Management tools.

- If there is more than one bay to be placed, then you are prompted to pick another point to indicate the direction of placement.
- If one of the bays adjacent to the first selected fixture is already populated, that direction is automatically excluded as a possibility and the opposite direction selected.
- If both fixtures adjacent to the first selected fixture are already populated, you are prompted to select another bay – the process continuing until the whole planogram has been placed.

You can cancel the product or planogram placement at any time by pressing <Enter>, <Escape> or right clicking.

Standard Select uses the standard Planner selection boxes to pick the fixture(s). If this method is used, Planner filters by layer, eliminating any fixtures that are not on the required layer. It will then determine groups of runs from fixture adjacencies and start placement at the leftmost fixture.

For all selection methods, selected fixtures change from solid to dotted outlines, and the insertion point will show as a small blue square.

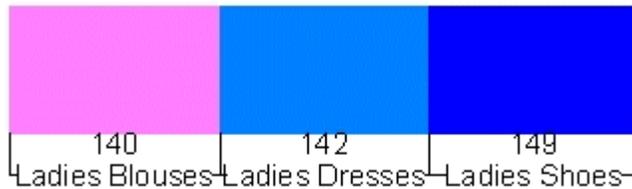


Placing the Products or Planograms

Once the required fixtures have been selected, together with the required products or planograms, clicking on the add product or add planogram icon results in the fixture(s) being populated.

	Add Product to Selected Fixture
	Add Planogram to Selected Fixture

The fixture(s) will be annotated with the number and description of the product or planogram placed.



Editing Definitions of Products or Planograms

Editing Product Definitions

Clicking on the **Edit Definitions** icon in the Products toolbar opens Product Studio.



Products toolbar - Edit Definitions

If Product Studio is already open, it will be made the active window. The currently selected product is displayed for editing.

Product SKU - Apple White

Details | Physical | Financial | Custom

Name: Apple White

Description: Brand AA 1 litre Apple White

UPC Type: Anything

Code: -1

UPC:

Manufacturer: Generic

Supplier: Generic

Status: Active

Icon: Product SKU

Brand:

Client Code:

Client Barcode:

OK Cancel

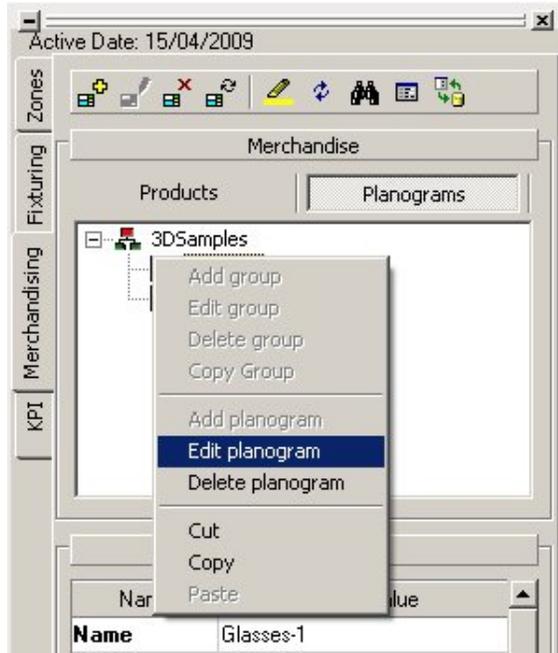
Product Studio - Edit

Note: The Product Studio dialog box that opens depends on what level in the product hierarchy has been selected.

Once changes have been made and saved, they can be used within Merchandising after the Refresh option has been used on the Object Browser.

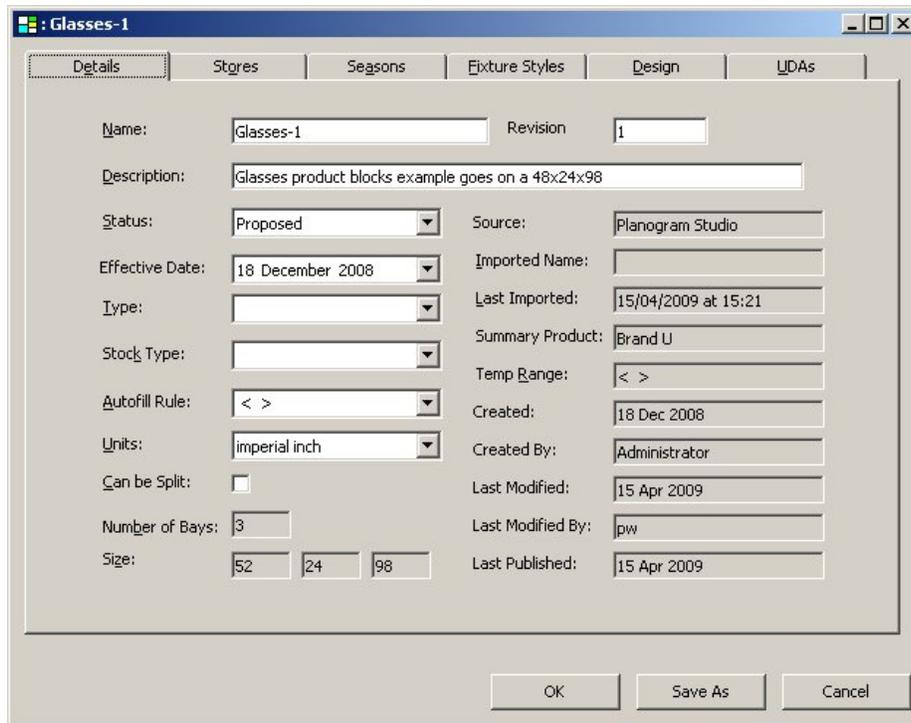
Editing Planogram Definitions

To Edit a Planogram, highlight the required planogram in the hierarchy and right click to bring up the pop-up menu.



Planograms toolbar - Edit Planogram

If the merchandiser module is already open, it will be made the active window. The currently selected Planogram is displayed for editing.



Planogram - Edit

Once changes have been made and saved, they can be used within Merchandising after the Refresh option has been used on the Object Browser.

Removing Products or Planograms from Fixtures

Products or planograms can be removed from fixtures using the remove icons.

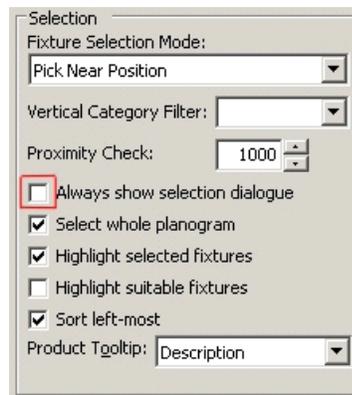
	Remove Product from Fixture
	Remove Planogram from Fixture

Option that is currently active depends on whether you have selected Products or Planograms in the Merchandising hierarchical tree.

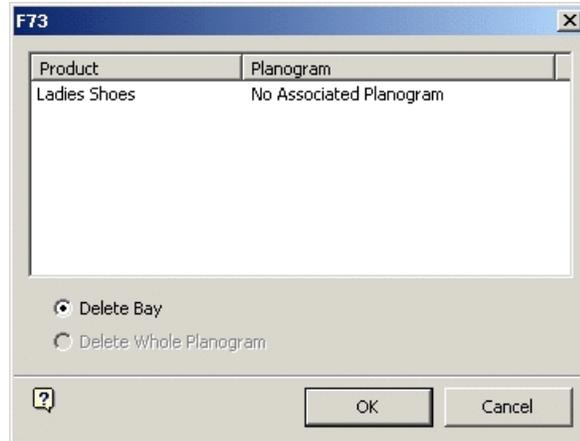
To remove a product or planogram:

1. Select the fixture from where they are going to be removed.
2. When all required fixtures have been selected, click on the appropriate remove icon.

If the **Always show selection dialog** is enabled in the Merchandising tab of the Configuration module, then a dialog box is displayed to confirm the items to be removed. If the Always show selection dialog is not enabled, then the dialog box is displayed if more than one fixture is selected.



Merchandising tab - Always show



The number at the top of the dialog box is the fixture number. Options available on the dialog box to delete bay and planogram are mutually exclusive options selected by a radio button.

- Delete Bay removes the planogram from the selected bay only.
- Delete Whole Planogram removes the planogram from all bays that it has been placed in.

When the selection has been made, click OK to remove the product or planogram, or cancel to retain it.

Reverse Planogram Population Direction

	Reverse Planogram Placement Direction
	Reverse Planogram Placement Direction

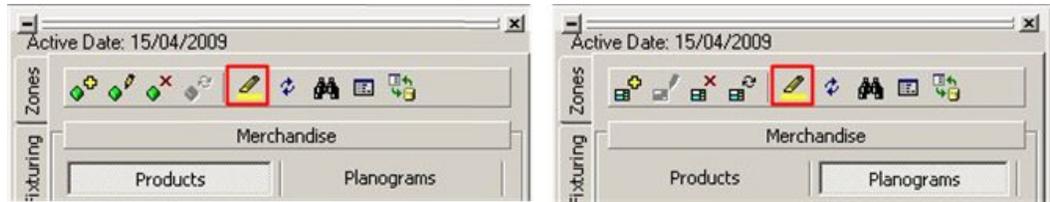
Option that is currently active depends on whether you have selected Products or Planograms in the Merchandising hierarchical tree.

When placing the planogram, it reverses the order of the profiles, and within each profile, it reverses the positions of the products. A left justified planogram is right justified, and vice versa.

Product and Planogram Operations

Highlight Where Used in Store

The **Highlight where used in Store** icon enables products or planograms selected from the appropriate hierarchical tree to be highlighted on the drawing.



Highlight Options

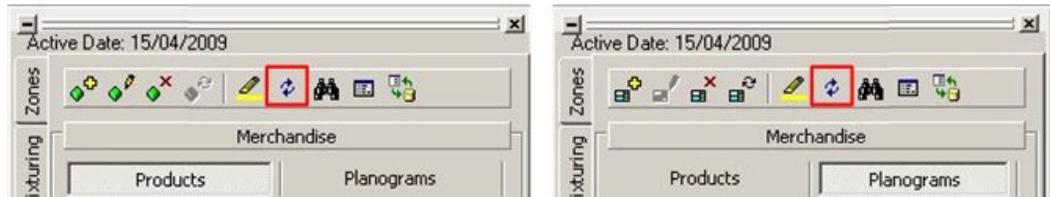
You can toggle this option On or Off. To toggle the option on, click the icon, which shows as pressed on the toolbar. To toggle the option off, click the icon again. When off, the icon is not pressed in.

Note: It is recommended this option be only selected when required. When activated, (toggled on), it takes up processing capacity. Leaving this option toggled on when not required will slow other operations.

To highlight a product or planogram find the required item in the hierarchical tree and click on it. The item is highlighted in the drawing – the exact method of highlighting depending in the options selected in the Configuration Module.

Highlight Selected Item from Tree

The **Highlight Selected Item from Tree** option enables products or planograms selected from the appropriate hierarchical tree to be highlighted when they are selected in the drawing.



Highlight Options

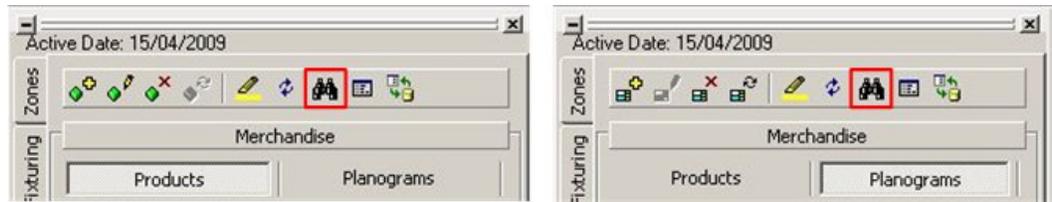
You can toggle this feature On or Off. To toggle the option on, click on the icon, which then shows pressed on the toolbar. To toggled the option off, click on the icon again. When off, the icon is not pressed in.

Note: It is recommended this option be only selected when required. When activated, (toggled on), it takes up processing capacity. Leaving this option toggled on when not required will slow other operations.

To highlight a product or planogram find the required item in the drawing and click on it. The item is highlighted in the hierarchical tree – the exact method of highlighting depending in the options selected in the Configuration Module.

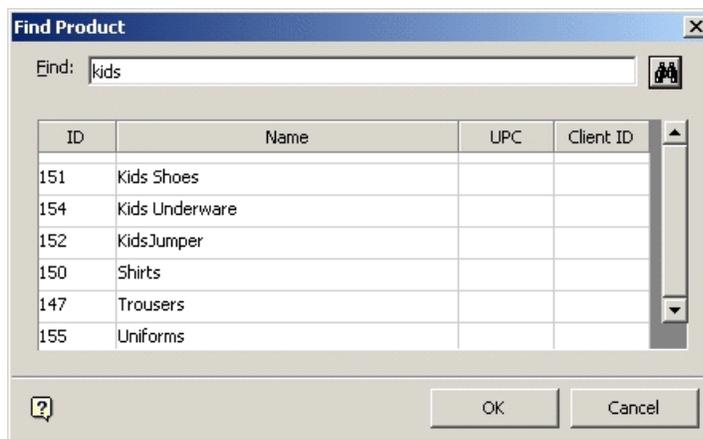
Find Product or Planogram

The **Find Product/Planogram** function is accessed by clicking on the Search icon in the Merchandising toolbar.



Find Product/Planogram

This brings up the Find Product (or Find Planogram) dialog box.



Find Product dialog box

Type the required search string into the Find box and click the Search icon. This will bring up a list of any blocks matching the search string.

Left click on any result to return to the Merchandising Products Window, where the selected Product or Planogram will be highlighted in the hierarchy tree.

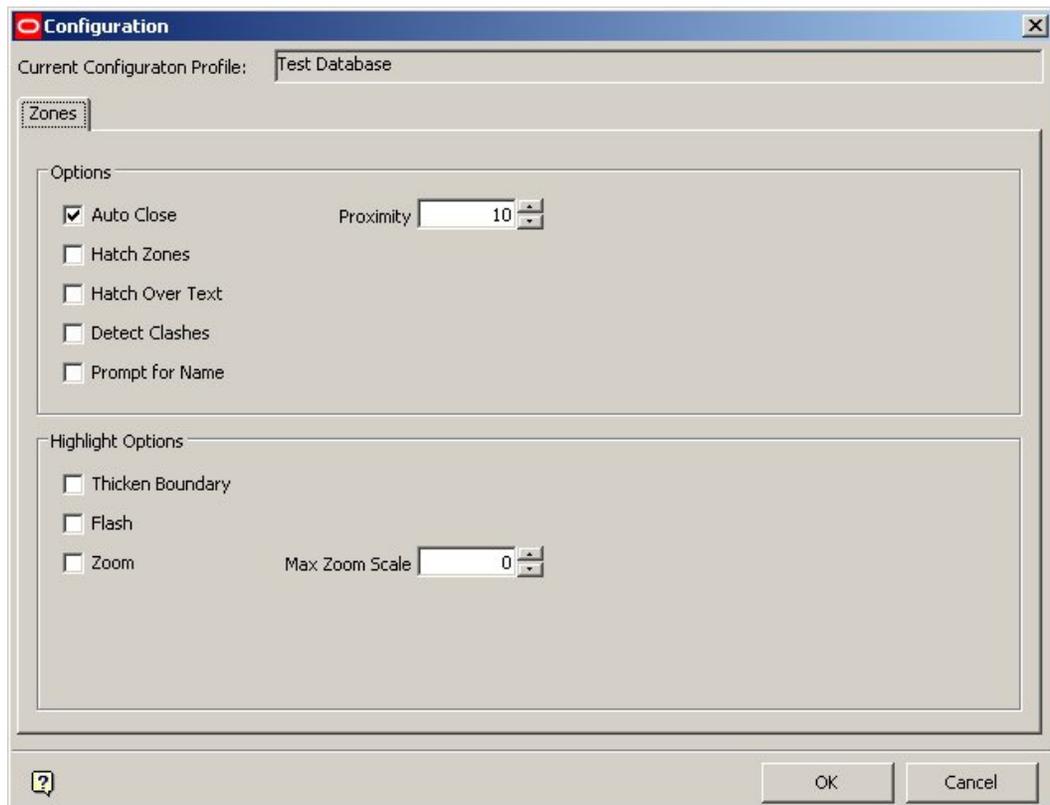
Configuration Options

The **Zones** tab in the Configuration module can be called by clicking on the Configuration icon on the Zones toolbar.



Zones toolbar - Configuration

This brings up the Zones Tab.



Configuration - Zones Tab

This dialog box contains a series of check boxes controlling the way Zones display.

Options

- **Auto Close:** if a point in the zone being drawn is within the specified Proximity of the first point drawn, the zone will automatically close or complete drawing.
- **Hatch Zones:** determines whether the Zones drawn are color coded or not when the zone is first drawn. Hatching may be added later using the hatch commands.

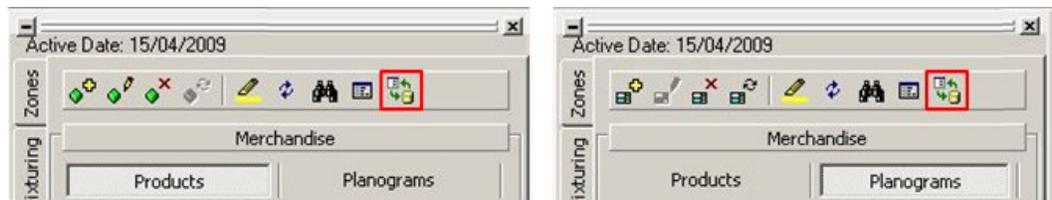
- **Hatch over Text:** determines whether the hatch pattern leaves a gap for the zone text or not.
- **Detect Clashes:** determines whether Zones on the same layer, (i.e. the same type), overlap each other.
- **Prompt for Name:** allows to locally rename the zone when first drawn.

Highlight Options - determines how the zone highlights in the drawing if the 'highlight in drawing' option is selected in the Object Browser.

- **Thicken Boundary:** increases the thickness of the Polyline used to draw the Zone.
- **Flash:** makes the Zone boundaries to flash.
- **Zoom:** when the Zone is selected, it zooms, (expand) either to the limits of the drawing, or by the scaling factor set in the Max Zoom Scale parameter.

The Refresh Option

The Refresh icon refreshes both Planogram and Product information in the hierarchical tree.

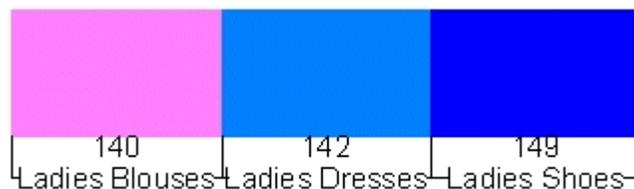


Products Tab - Refresh

Using Refresh ensures that the information is brought up to date with any changes made in Merchandiser or Product Studio, both to the hierarchical tree and to any products or planograms added to, edited, or deleted from it.

Annotation

Annotation is used to label fixtures within a drawing.

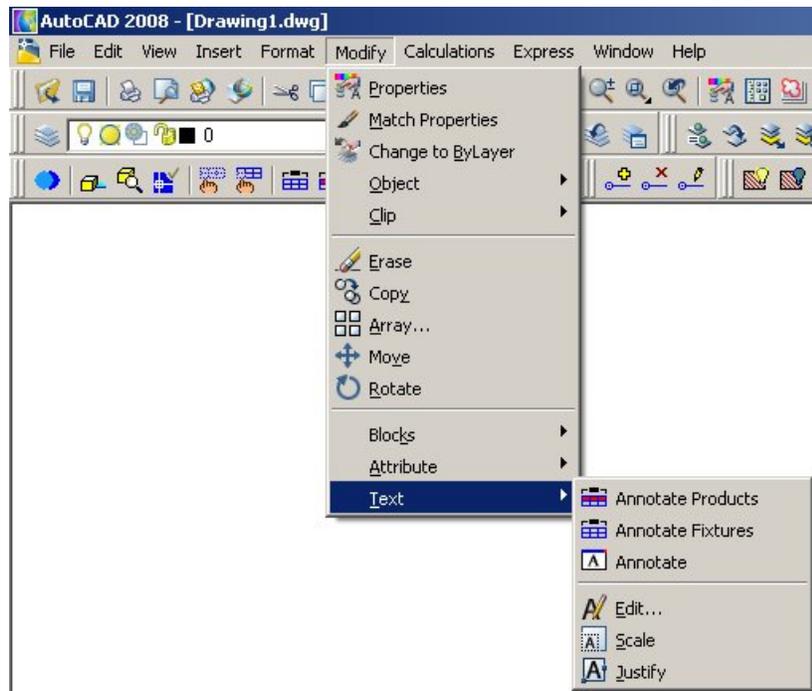


The number is the product or planogram identification code. Annotation also displays the name of the product or planogram. Products or planograms are annotated when placed, but the annotation requires refreshing when they are moved or deleted.

Refreshing Annotation

To refresh annotation in the drawing:

1. From the Modify menu, select the Text options.
2. Select the required objects in the drawing.
3. Right click to stop selecting objects. All selected objects will be re-annotated.

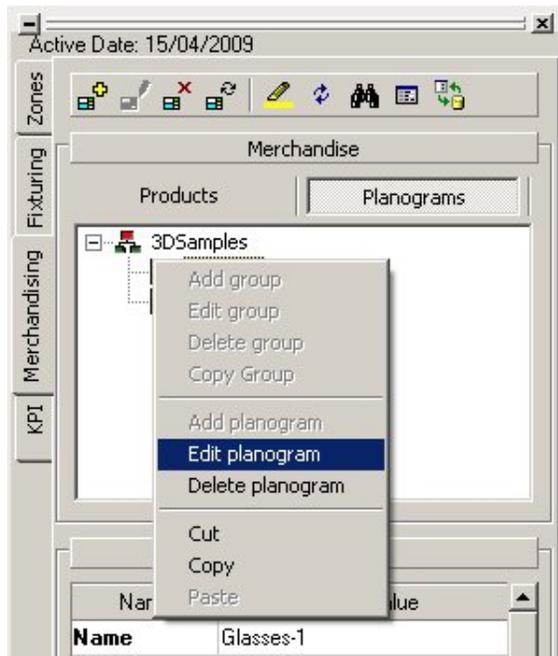


Planner - Annotate

Planogram Studio

Merchandiser

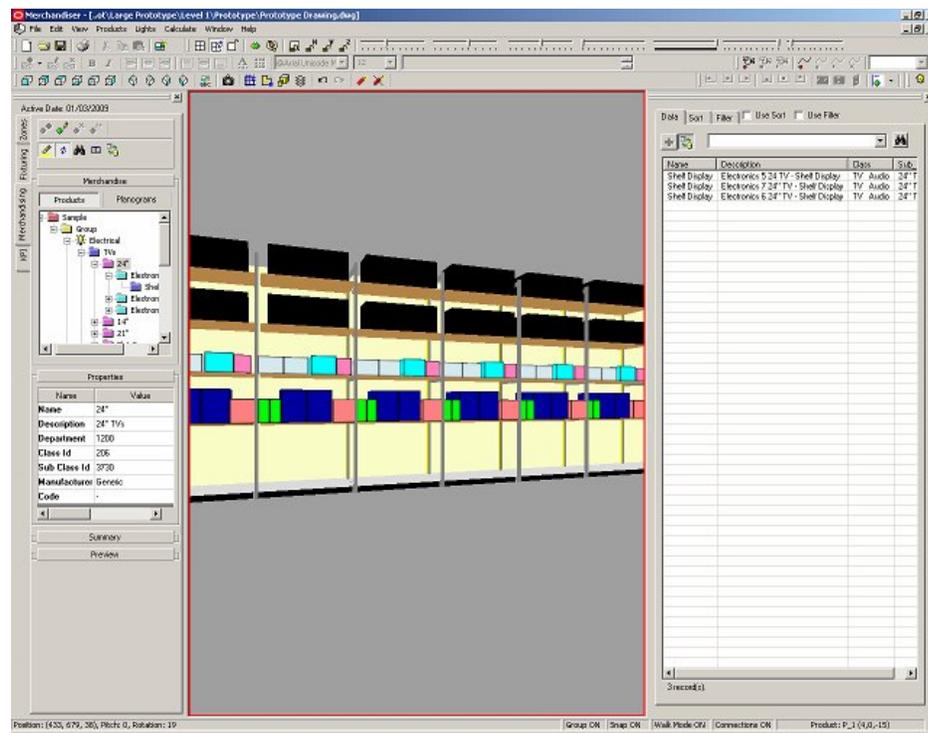
Merchandiser module can be accessed from the Edit Planogram option from the pop-up menu in the Object Browser.



Merchandising - Edit Planogram

Merchandiser allows the planograms and the fixtures on which they have been placed, to be viewed in a Virtual Reality (VR) 3D environment. Using the provided controls, you can move around the VR store.

Merchandiser is also used to design and edit planograms and to place them in a 3D environment.

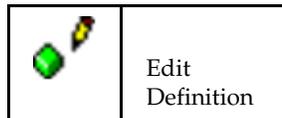


Merchandiser Module

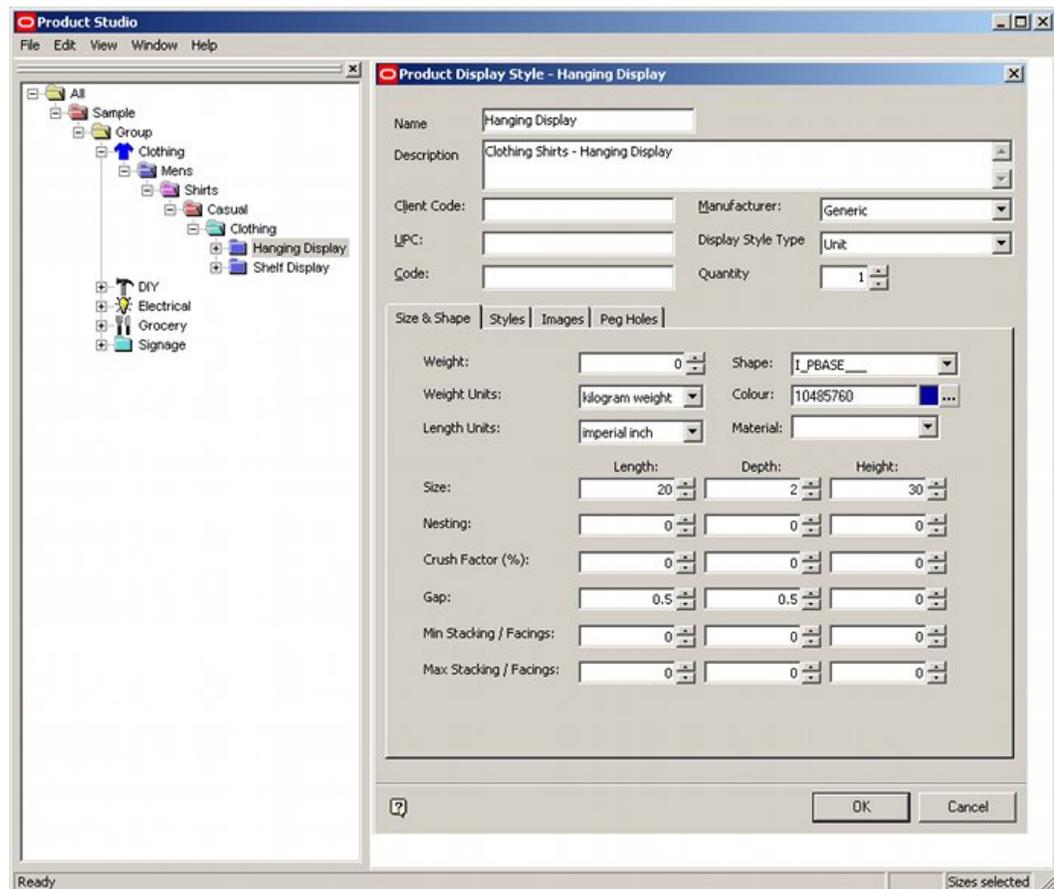
Planograms can be designed in varying levels of detail. These planograms can be arranged in a hierarchy and subsequently used to populate a store.

Product Studio

Product Studio module can be accessed using the Edit Definition option in the toolbar in the Merchandising tab of the Object Browser.



Product Studio allows the design and editing of product images. These images can be arranged in a hierarchy and subsequently used to populate a store. Options within the module allow attributes to be assigned to each product, giving it intelligent properties.



Product Studio

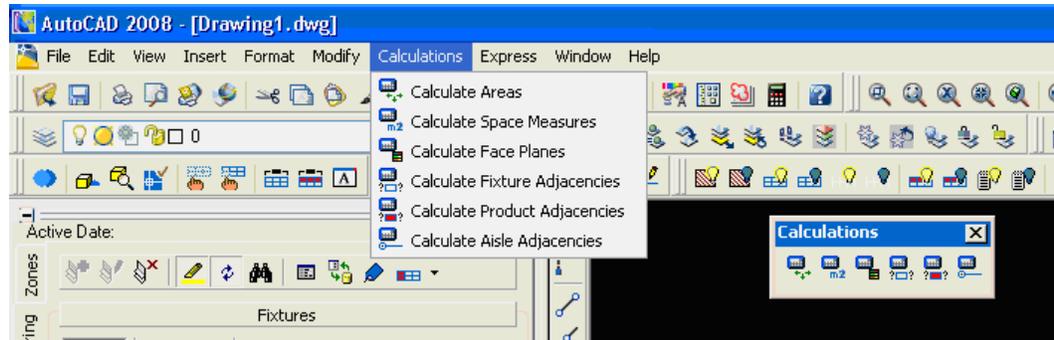
Measuring Performance - Key Performance Indicators

Key Performance Indicators (KPI) allows the performance of a merchandised layout to be evaluated. Click the **KPI** tab in the Merchandiser Object Browser to view the hierarchy of

Key Performance Indicators. KPIs color-code the drawing according to configurable criteria. This allows views to see the performance of merchandised layout at a glance.

Calculations

Macro Space Management provides for the manual initiation of a series of calculations. Some of these assist functionality in the drawing. Others are useful for reporting purposes. They can be initiated from the Calculations menu or the Calculations toolbar.



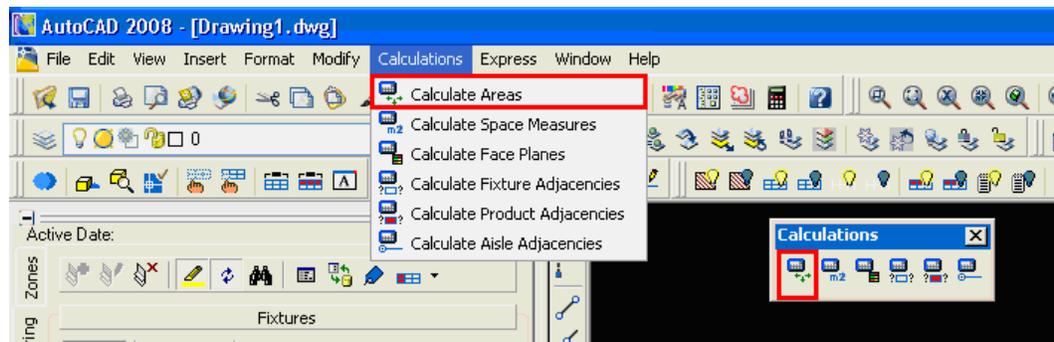
Calculations menu

Macro Space Management provides the following types of calculations:

- Area Calculations
- Space Measures
- Face Planes
- Fixture Adjacency
- Product Adjacency
- Aisle Adjacency

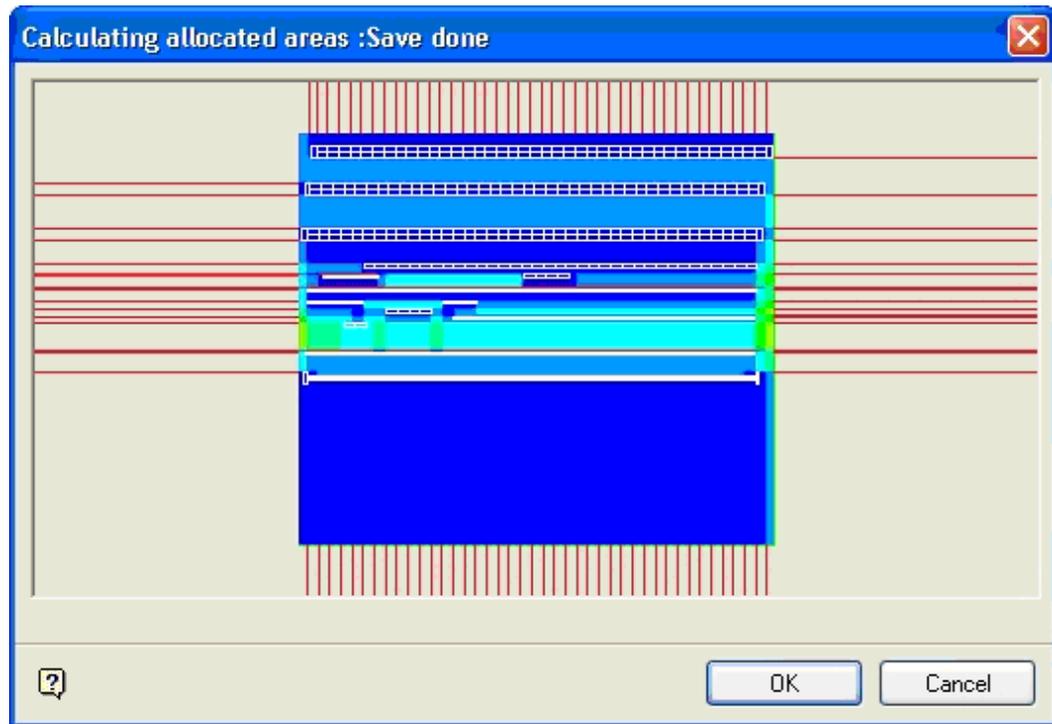
Area Calculations

Area calculations are used to apportion the area enclosed by the Total Building (Internal Area) zone to specific fixtures. Area calculations are initiated by selecting the Calculate Areas option from the Calculations menu or the Calculations toolbar.



Calculations menu - Area calculations

A window appears showing the progress of the calculation.



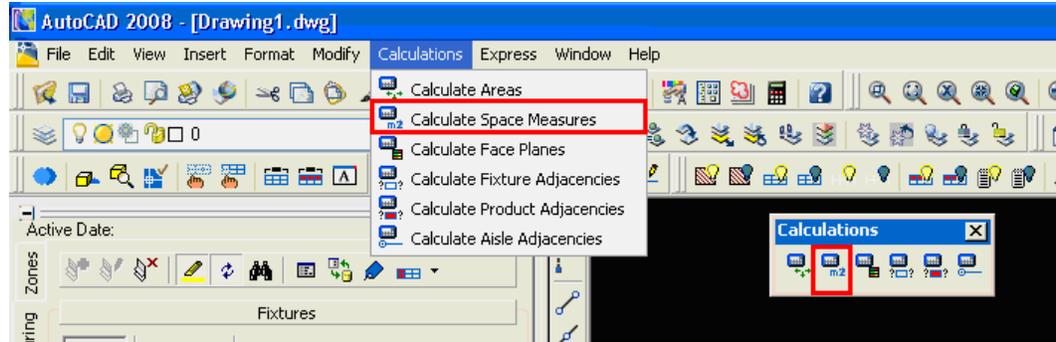
Window Showing Calculation Progress

Once area calculations have been carried out, they can be used for several purposes:

- Area apportioned to fixtures can be used to color a drawing using the appropriate KPI. This will show by means of color coding the area in square feet apportioned to each fixture.
- Areas apportioned to fixtures can be output in the form of a tabulated report via the Reporting tool.
- Areas apportioned to fixtures can be used for other calculations, for example to show the profit per square foot of allocated area for that fixture, via the Reporting tool.

Space Measures

Space Measures are used for reporting purposes. Space Measure calculations are initiated by selecting the Calculate Space Measures option from the Calculations menu or Calculations toolbar.



Calculations menu - Calculate Space Measures

A confirmation message appears when the calculation is complete.

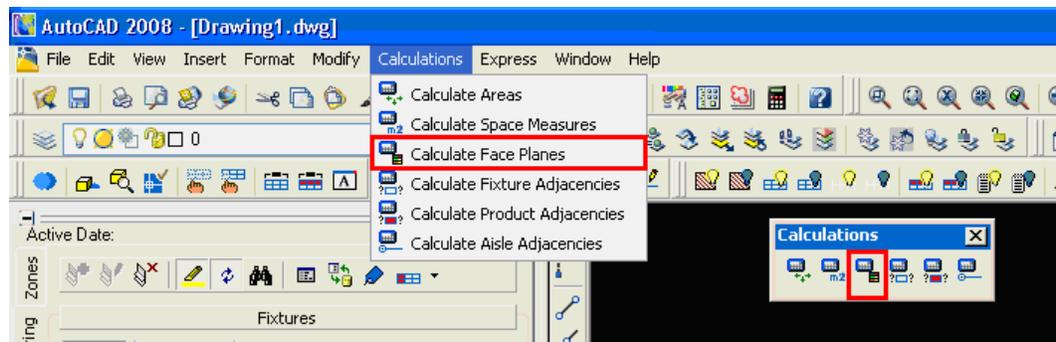
The information can then be used in the Reporting tool to report such information as:

- Base Linear for products
- Shelf Linear for products
- Product display volumes

Face Planes

Face Planes are used to calculate the area (in percentage) each product (SKU) takes in a planogram when viewed from the front. For example, the Men's Shirts planogram might have a frontal area of 16 square feet, with Walmart Own Brand shirts taking up 15% of the available space.

Face Planes are used for reporting purposes. Face Plane calculations are initiated by selecting the Calculate Face Planes option from the Calculations menu or Calculations toolbar.



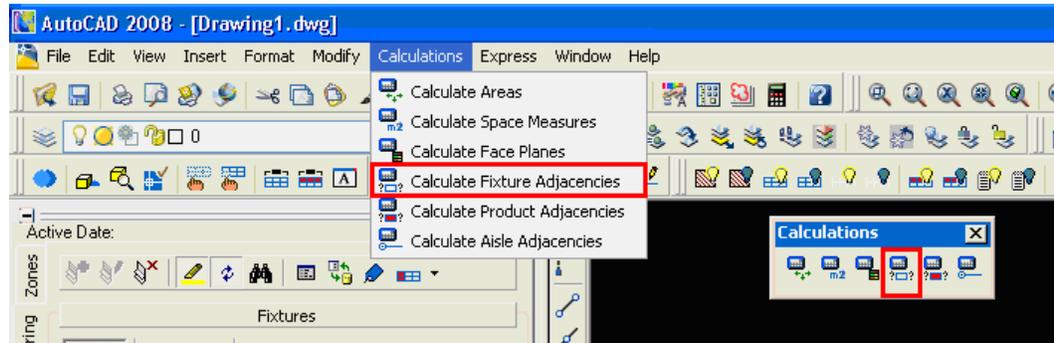
Calculations Menu - Calculate Face Planes

Fixture Adjacency

When fixtures (blocks) are first inserted into a drawing the data is written into the central database. As yet the database contains no information on the physical relationship of one fixture to another.

Note: If fixture positions are being modified or if fixtures are being deleted using AutoCAD tools, then the Synchronization Module must be run at intervals to ensure the information held in the Macro Space Management central database is the same as that held in the drawing.

When the fixtures adjacent to each other are known, the nature of the relationship of adjacent fixtures is further specified. They can then be defined as being to the left or right or a specific fixture. The calculation of Fixture Adjacency is initiated by selecting the Calculate Fixture Adjacencies option from the Calculations menu or Calculations toolbar.



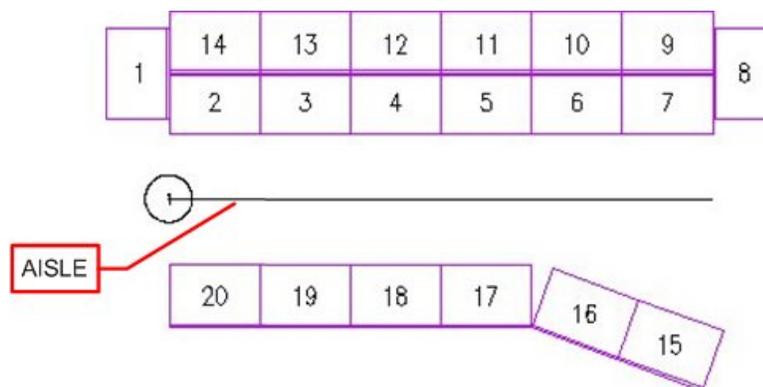
Calculations Menu - Calculate Fixture Adjacencies

Once the relationships of fixtures are known relative to one another, this information can be used for several purposes. These include:

- Determining what arrangements of fixtures should be treated as gondolas.
- Bay Numbering and Bay Groups.
- As a preparation for Product and Aisle Adjacency calculations.

Aisle Adjacency

Aisle Adjacency allows you to determine which fixtures (and hence which products) share an aisle. This information is used for reporting purposes.

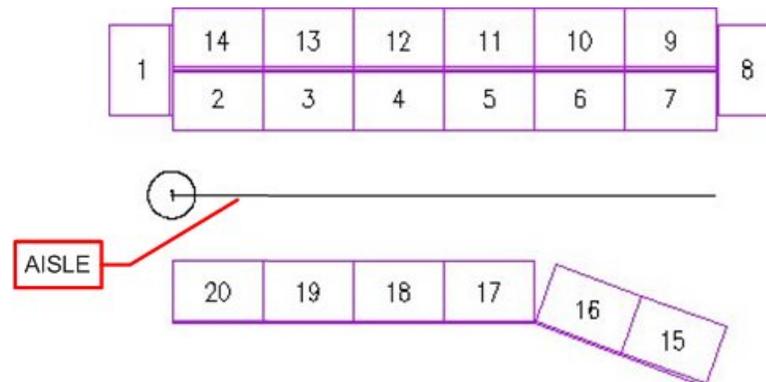


Aisle Adjacency is used as follows:

1. Aisles are drawn in a store plan. (This can only be done in the Planner module).
2. The Aisle Adjacency option is run from the Calculate Menu.
3. Reports are used to establish which products or planograms share an Aisle.

ADJACENCY_AISLESIZE System Variable

The **ADJACENCY_AISLESIZE** system variable is used to establish a distance tolerance from an Aisle. Fixtures within this distance from an aisle are regarded as adjacent to it, fixtures outside this distance are not. The **ADJACENCY_AISLESIZE** System Variable can be set in the Admin Module.



Depending on the setting of the **ADJACENCY_AISLESIZE** system variable, Fixtures 15 and 16 may or may not be regarded as adjacent to the Aisle. It is then possible to determine which products are on the fixtures adjacent to the aisle, and hence which products share the aisle.

Note: Aisle adjacencies are calculated relative to the front direction of the fixture. Fixtures 1,8 and 9 - 14 will not be shown as adjacent to the drawn aisle because a line drawn out perpendicular from the front face of the fixtures will not intersect the aisle.

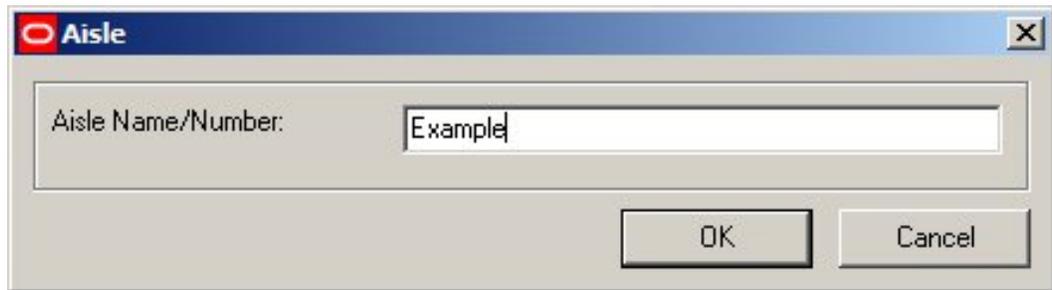
Adding, Editing and Deleting Aisles

Aisles can only be added, edited, and deleted in the Planner Module. This is done using the Aisles toolbar.



Adding an Aisle

To Add an Aisle click on the **Add Aisle** option in the Aisles toolbar. This brings up the Aisle dialog box.

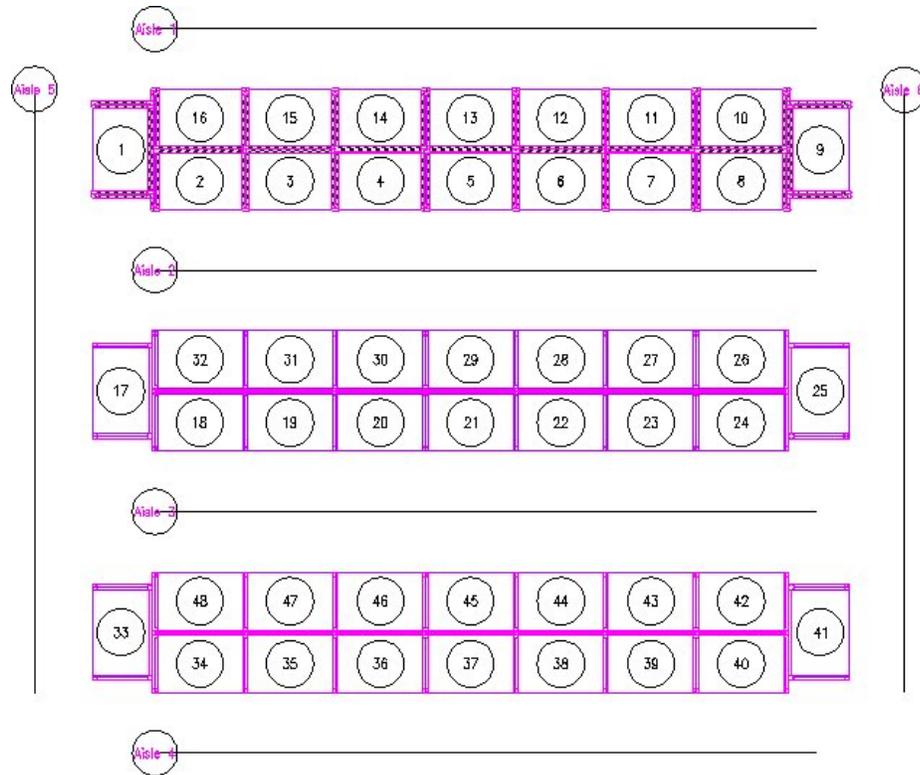


Aisle dialog box

Enter an Aisle name and click **OK**. This Aisle name must be unique within a store plan; else, a warning message is displayed.



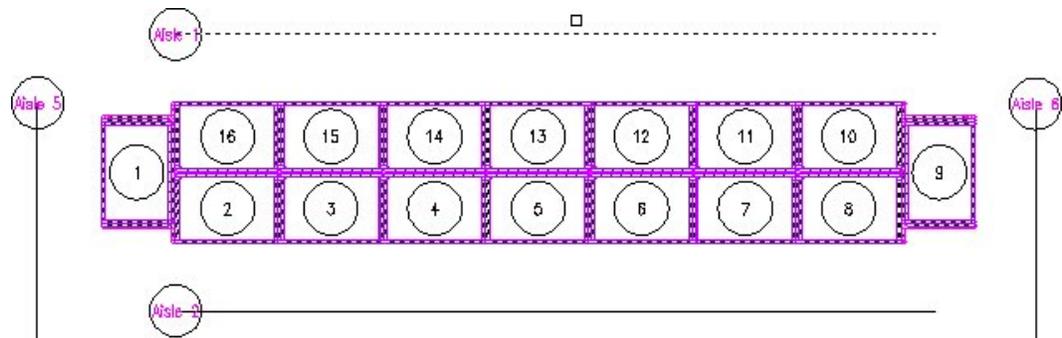
If the Aisle name is unique, the user will be taken to the drawing. The line representing an Aisle can be drawn using standard AutoCAD methods. Pressing <Enter> will complete drawing the aisle.



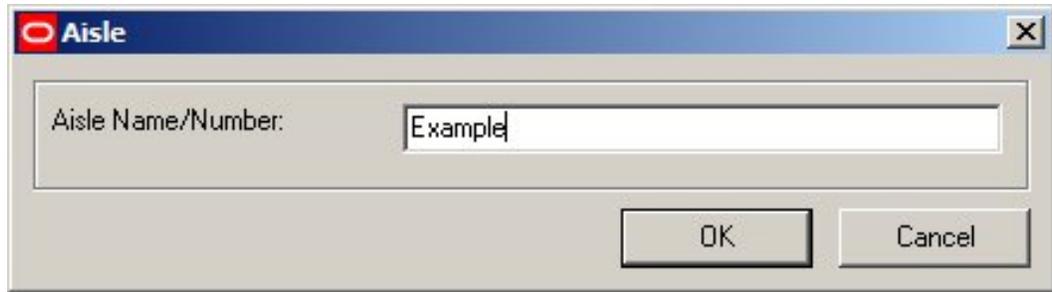
In the above example six Aisles have been drawn. Each fixture will belong to one (and only one aisle).

Editing an Aisle

To edit an Aisle, click on the **Edit Aisle** option in the Aisles toolbar. The cursor in the store plan will change to a box. Click on the required Aisle to select it. The outline will turn to dotted.



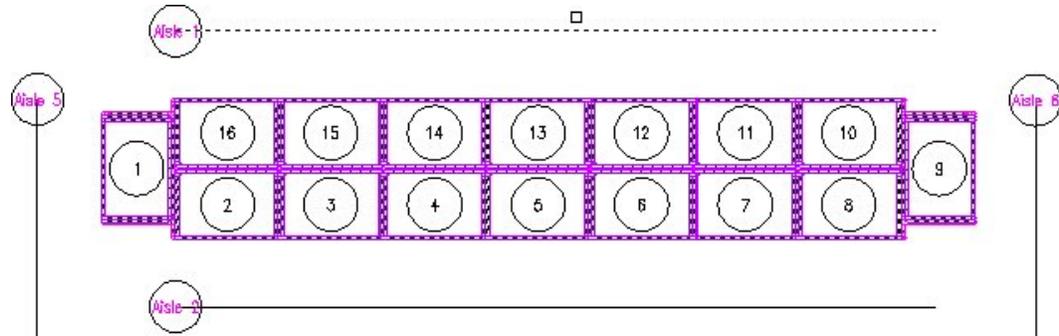
Right click to complete the selection process. The Aisle dialog box appears.



The name of the Aisle can then be edited. On clicking **OK**, the aisle name will be changed (but must still remain unique).

Deleting an Aisle

To delete an Aisle, click on the **Delete Aisle** option in the Aisles toolbar. The cursor in the store plan will change to a box. Click on the required Aisle to select it. The outline will turn to dotted. (Aisles can be multi-selected with successive left clicks).



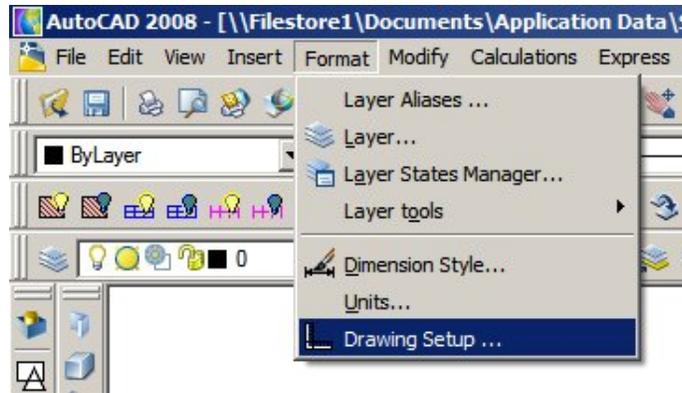
Right click to complete the selection process. The selected Aisles will then be deleted without any further confirmation.

Aisle Annotation and Scales

Each Aisle has annotation at the start. The size of the annotation is controlled by the Scale set for the drawing/store plan.

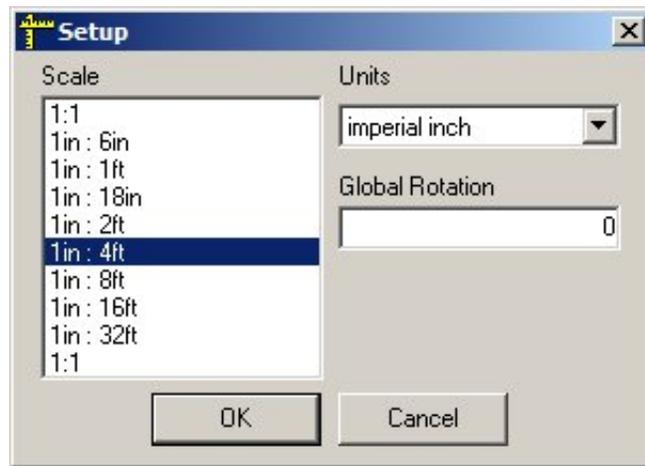


To set the scale for the drawing, select the **Drawing Setup** option from the Format menu.



Format menu - Drawing Setup

This will bring up the Setup dialog box.

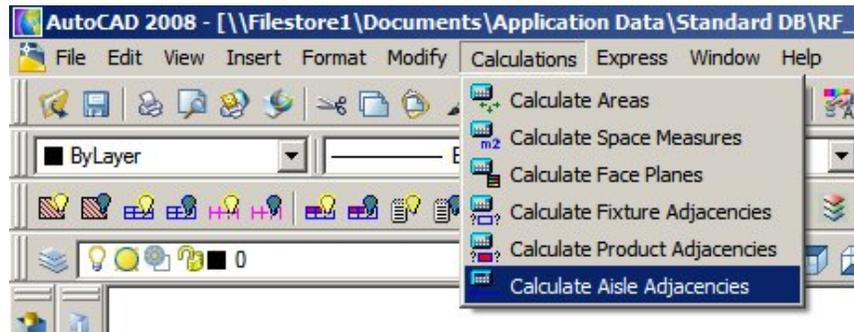


Setup dialog box

Select a scale that will be appropriate when the store plan is set up for printing in paper space.

Running the Aisle Adjacency Calculation

The **Aisle Adjacency calculation** can currently only be run in the Planner Module. To do this first ensure the store plan has been synchronized as appropriate to ensure the drawing matches the database. Then select the Calculate Aisle Adjacencies option from the Calculations Menu.



Calculations Menu - Calculate Aisle Adjacencies

The Aisle Adjacency calculations will then run and the results will be stored in the database. When complete, a confirmatory dialog will appear.

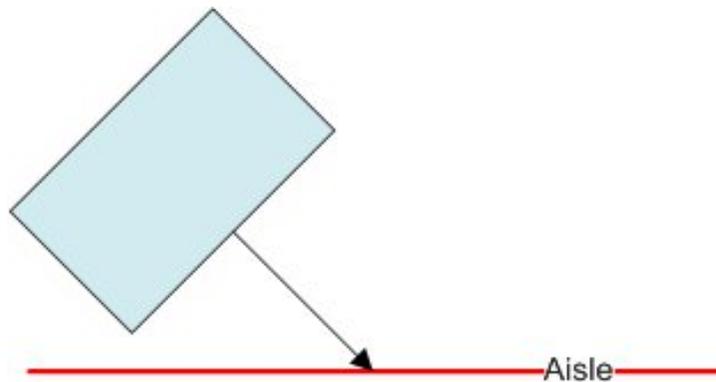


The results can then be accessed via a report - for example via a tool like BI Publisher.

Aisle Adjacency Calculation Technicalities

The following criteria apply to Aisle Adjacency Calculations:

- Only Fixtures are included in Aisle Adjacency Calculations. Fittings and shelves are excluded from the calculations.
- Each fixture can only be associated with a single aisle in a store plan. If there are multiple aisles within the distance specified by the ADJACENCY_AISLESIZE system variable, the fixture will be associated with the aisle within the shortest distance.
- Fixtures are associated with an Aisle if the distance from the front of the fixture is within the distance set in the ADJACENCY_AISLESIZE System Variable. The ADJACENCY_AISLESIZE System Variable (set using the System Variables option on the General Menu in the Admin Module) determines the maximum distance a fixture can be from an aisle and still associated with it.

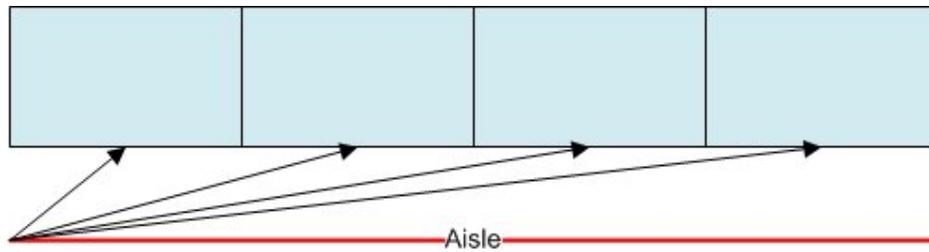


The distance to the Aisle is measured perpendicular to the centre of the front of the fixture. If the fixture is at an angle to the Aisle (as in the diagram above) the distance from the fixture to the Aisle may exceed the value set in the System Variable.

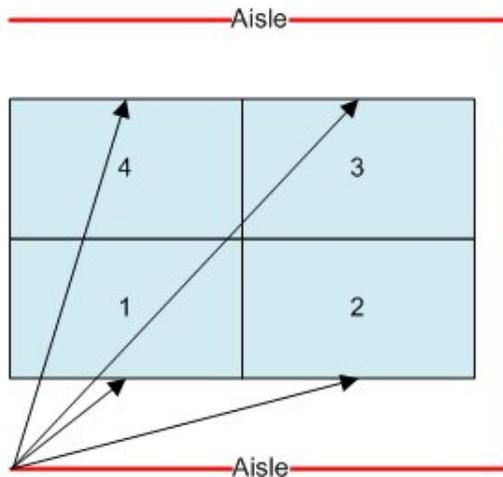
Note: the Front Direction of the fixture is set on the Insertion Tab of the Block details dialog box in Fixture Studio.

Distance from Start of Aisle

Distance from the start of the aisle and distance from the aisle are measure relative to the centre of the front of the fixture. For a straight, single segment aisle, 'distance from start of aisle' is measured as follows. Note how the distance does not increase by linear increments.



For a multi-segment aisle, the situation is more complex.

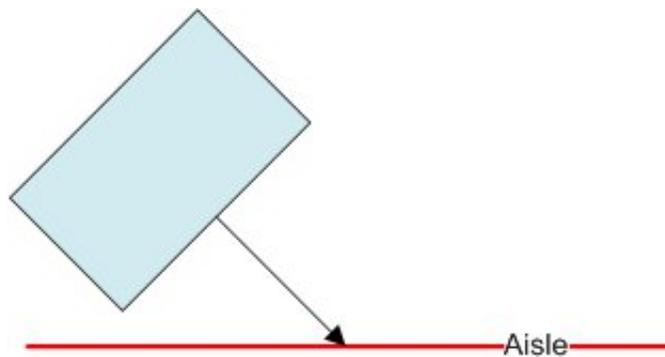


The distance is still measured from the start of the aisle, but may be deceptive. In the above example, Fixture 4 may show as closer to the start of the aisle than Fixture 3.

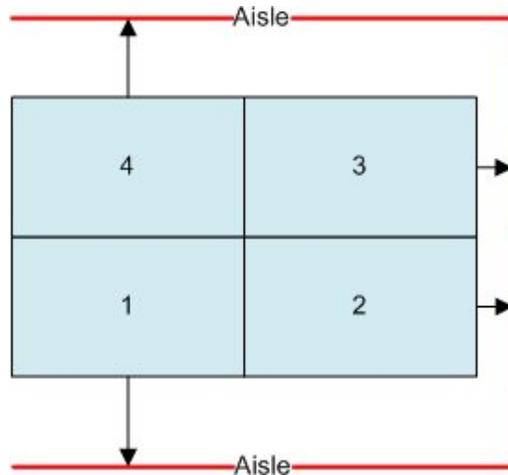
Distance from Aisle

For a single segment aisle, the distance to the aisle is measured perpendicular to the centre of the front face of the fixture.

Note: if the distance from the Aisle is greater than that set in the ADJACENCY_AISLESIZE System Variable, the fixture will not be shown as belonging to the aisle.



For a multi-segment aisle, the distance is measured from the nearest face.



Note how Fixtures 2 and 3 will have the distance measured to the second segment of the aisle.

AVTTB_AISLE_ADJACENCY Table

The results are stored in the AVTTB_AISLE_ADJACENCY table

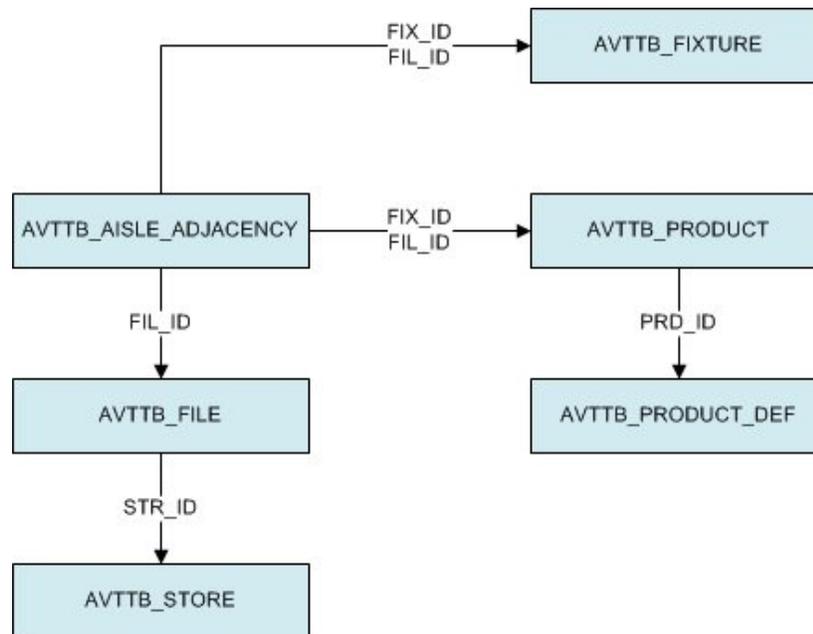
Column Name	ID	Pk	Null?	Data Type
FIL_ID	1	1	N	NUMBER (10)
FIX_ID	2	2	N	NUMBER (10)
AIL_NAME	3		N	NVARCHAR2 (64)
AIL_SEGMENT	4		N	NUMBER (5)
AIL_ONRIGHT	5		N	NUMBER (10)
AIL_DISTANCE_FROM_START	6		N	FLOAT
AIL_DISTANCE_FROM_AISLE	7		N	FLOAT

Field	Comment
FIL_ID	ID for the file (store plan)
FIX_ID	ID for the Fixture
AIL_NAME	Name of the Aisle
AIL_SEGMENT	Number of the segment if the Aisle is multi-segment
AIL_ONRIGHT	Flag showing whether the fixture is on the left or right of the Aisle
AIL_DISTANCE_FROM_START	Distance the fixture is from the start of the Aisle
AIL_DISTANCE_FROM_AISLE	Distance the fixture is from the aisle

Setting Up Aisle Adjacency Reports

Generating reports on Aisle Adjacency requires extracting information from the database. A simplified version of the table structure is shown below for Administrators wishing to customize reports. (Suggested fields for joins are indicated).

Note: Refer Oracle Retail Macro Space Management Data Model for more information.



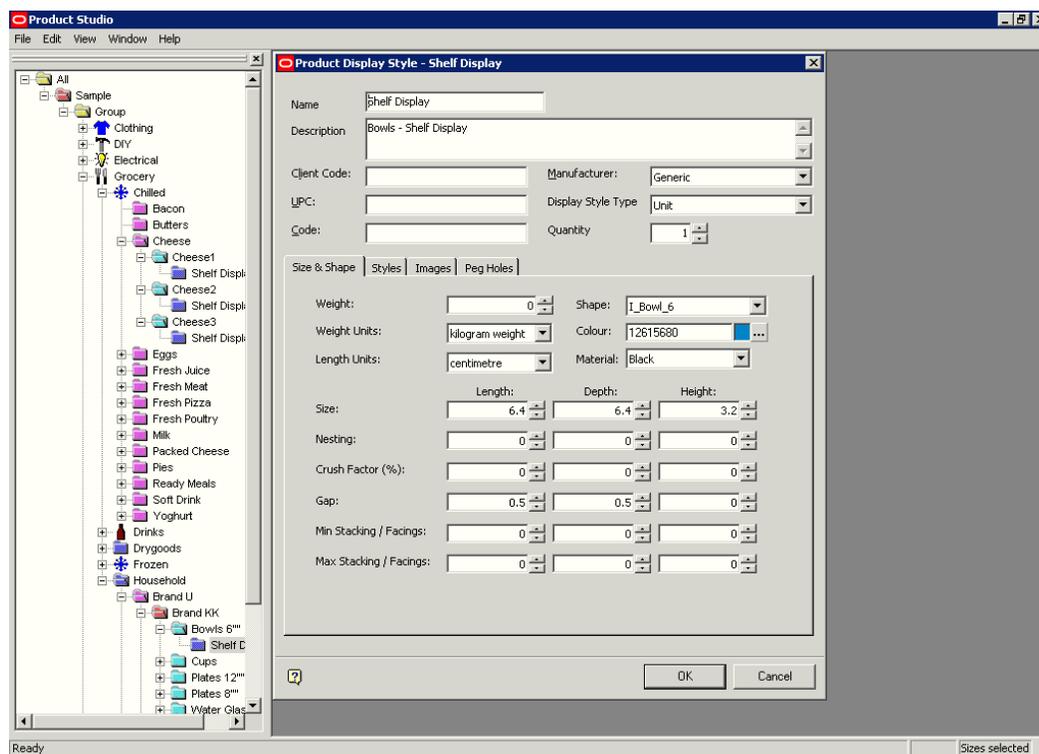
- The **AVTTB_AISLE_ADJACENCY** table contains details of which fixtures are assigned to which Aisle.
- The **AVTTB_FIXTURE** table contains further details of the Fixtures within the drawing. In particular, if Bay Numbers have been assigned, it is possible to include those in a report.
- The **AVTTB_PRODUCT** table links Products to their parent Fixtures.
- The **AVTTB_PRODUCT_DEF** table contains full details of the products (such as product name, product EAN/UPC codes, etc).
- The **AVTTB_FILE** table contains further details of the store plan including its name, last user to modify it, etc.
- The **AVTTB_STORE** table contains Store Names and other information.

With the correct use of SQL and a reporting tool (for example BI Publisher) you can create a report containing (for example):

- Store Name
- File Name
- Bay Number of Fixture
- Distance the Fixture is from the Start of the Aisle
- Aisle Name the Bay Number is associated with
- Whether the Fixture is on the Left or Right of the Aisle
- Names of the Products on a Fixture with a specific Bay Number
- EAN/UPC codes of the Products on a Fixture with a specific Bay Number

Product Studio

Product Studio allows you to maintain a hierarchy of products. This hierarchy can be used for a variety of purposes including supplying placeholders for Planner and Merchandiser. It can also supply 3D Virtual Reality images for Merchandiser. Data can be imported from third party software, data can be manually entered, or some combination of the two can be used.



Product Studio

Placeholders, SKUs and Display Styles

A Placeholder is used as an indication of what form of product occupies a section of shelving or equipment. Placeholders can be used in Planner and can occupy the following levels in the hierarchy:

- Company
- Group
- Division
- Department
- Class
- Sub-class
- Style

- Item

For example a placeholder could be placed at department level to indicate that a specific section of equipment has been allocated for the sale of men's clothing. Alternatively, a placeholder could be placed at class level to indicate a specific section of equipment has been allocated for the sale of men's shirts.

A **SKU** (Stock Keeping Unit) is a description of a specific item of merchandise - for example Men's shirts, white.

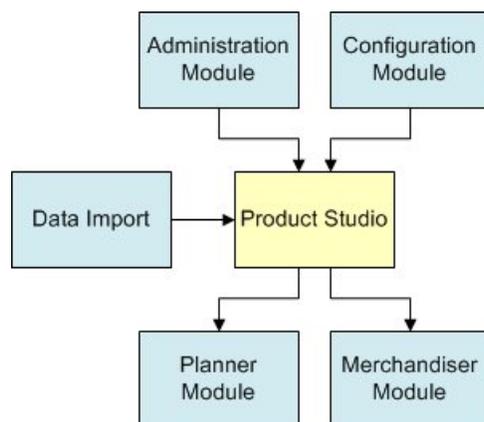
A **Display Style** indicates a specific way of displaying a SKU. Example of display styles for shirts includes Boxed, Folded, and Hung.

Placeholders can be used in both Planner and Merchandiser. Display styles can only be used in Merchandiser.

Note: If Display Style level products are placed in Merchandiser, they will not appear in Planner.

Product Studio and Other Modules

Product Studio interacts with other modules.



Administration Module

A number of lists used in Product Studio are configured in the Administration Module. Products marked for deletion can only be permanently purged using the Purge option in the Administration Module.

Configuration Module

The locations of the directories for Image Capture and Image Root are specified in the Directories tab in the Configuration Module.

Data Import

Data can be imported from third party software. It can then be configured with additional information required by Macro Space Management.

Planner

The Product Hierarchy appears in the Object Browser and can be searched/selected from using the Object Grid. Products can be placed down to the SKU level as placeholders.

Merchandiser

The Product Hierarchy appears in the Object Browser and can be searched/selected from using the Object Grid. Products can be placed down to the SKU level as placeholders or as Display styles.

Administration Module

A number of lists used in Product Studio are configured in the Administration Module. In addition, Products marked for deletion can only be permanently purged using the Purge option in the Administration Module.

Option	Comment
Manufacturers	Allows the user to configure the list of manufacturers (and suppliers) used to specify products.
Product Code Types	Allows the user to specify the masks for UPC's.
Ranges	Allows the user to configure the ranges for temperature scales and weights that can be allocated to a product.
Tax Codes	Allows the user to configure the list of available Tax Codes that can be allocated to a product.
Styles	Allows the user to add, edit or delete styles for products.
Units	Allows users to configure the units used for defining products.
User Defined Attributes	Allows users to specify the User Defined Attributes required for products.

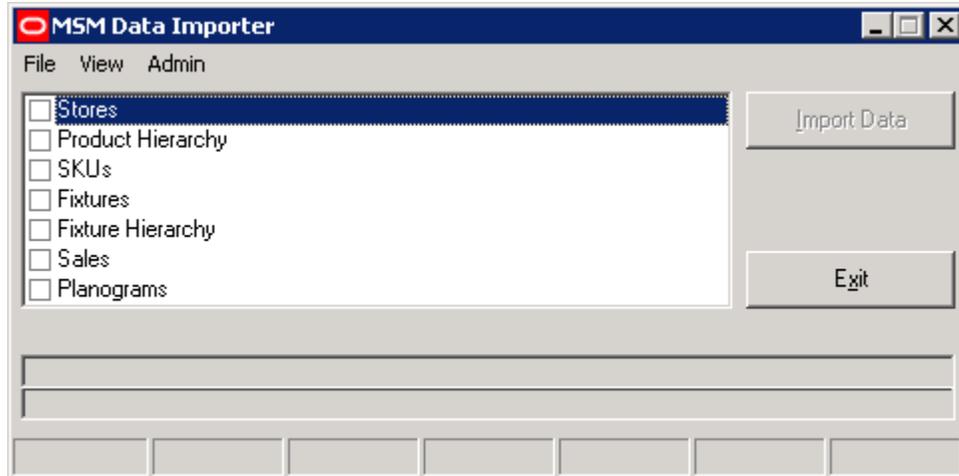
Configuration Module

The locations of the directories for Image Capture and Image Root are specified in the Directories tab in the Configuration Module.

- **Image Capture** is where imaged are stores after being captured by a camera.
- **Image Root** is the starting point for storage of images after they have been assigned to a product.

Data Import

Macro Space Management provides a specialized Data Import module. This allows product details to be imported from third party software.



Data Import module

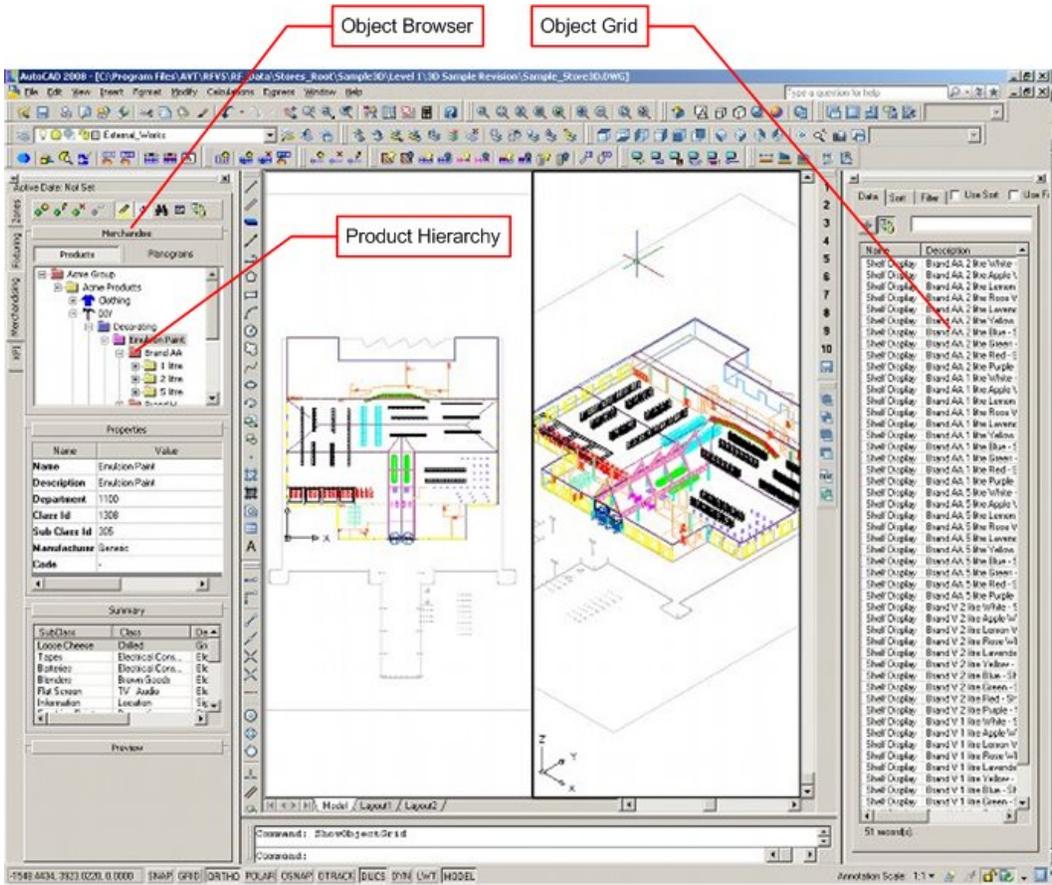
Macro Space Management users may have to add other information to the imported data. This could include information such as dimensions, style relationships or images for 3D Virtual Reality representation in Merchandiser.

Note: It is not generally possible to import Display Style information from third party databases, as this represents an additional level of information to that normally present in those databases.

Planner and Merchandiser

Planner

The Product hierarchy appears in the Object Browser in Planner. It can also be searched using the Object Grid.

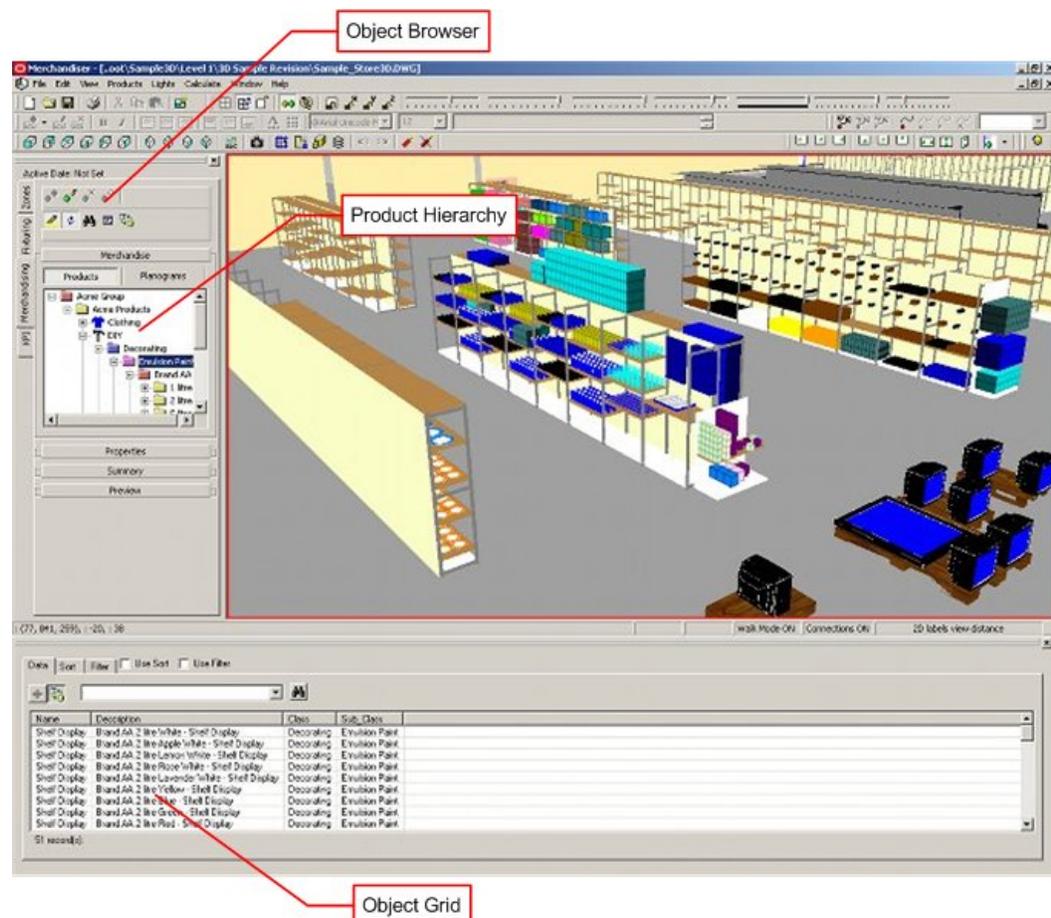


Planner Module

Products can then be placed down to SKU level as placeholders.

Merchandiser

Like Planner, the Product hierarchy appears in the Object Browser in Merchandiser. It can also be searched using the Object Grid.



Merchandiser Module

The Product hierarchy can either be placed as placeholders, or as 3D Virtual Reality objects at the Display Style level.

Setting up Product Studio

Identify the Product

Before the hierarchy is set up in Product studio, it must first be planned. Failure to plan the hierarchy properly may result in inefficient use of Macro Space Management.

When setting up the Product hierarchy, it is important to have a single, unique way of identifying the product. This is generally determined by how the product is indexed in other software used by a retailer. For example, their stock control and/or re-ordering systems might refer to the product by its UPC or by its SKU Code.

It is important that Macro Space Management use the same method of identification. If date is imported into the product hierarchy, this information will be included automatically. For manual entry, this is set by the UPC Type drop down list in the SKU dialog box. The mask for these is set in the Administration Module.

The screenshot shows a 'Product SKU' dialog box with the following fields and values:

- Name: [Empty text box]
- Description: [Empty text box]
- UPC Type: Anything
- Code: [Empty text box]
- UPC: [Empty text box]
- Manufacturer: Generic
- Supplier: Generic
- Status: Active
- Icon: Product SKU
- Brand: [Empty text box]
- Client Code: [Empty text box]
- Client Barcode: [Empty text box]

Buttons: OK, Cancel

Product SKU Dialog Box

Product Identification and EPOS data

It is important to use a unique method of identification as in other software used by a retailer. For example, some retailers use UPCs and others use SKU codes. Macro Space Management can use the Data Import module to import other forms of data (for example EPOS data). This EPOS data can then be used to color code the Macro Space Management drawings so that sales performance can be seen at a glance.

This color coding (Key Performance Indicators or KPIs) relies on the EPOS data having the same method of identification (UPC's or SKU codes) as the data in the Product hierarchy.

Structure of the hierarchy

The generic hierarchy can have up to 10 levels, 5 of them mandatory:

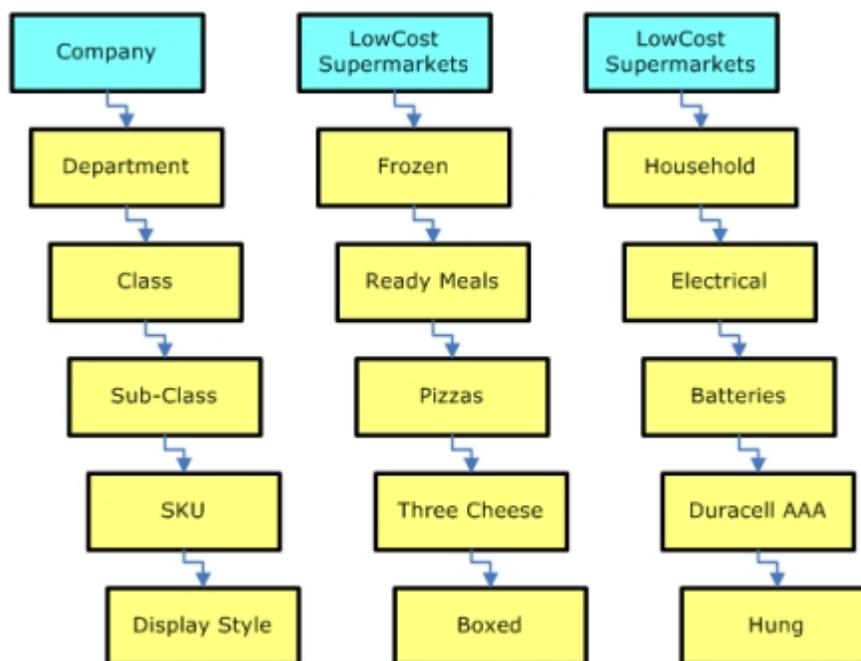
Level	Comment
Company	
Group	
Division	
Department	Mandatory
Class	Mandatory
Sub-Class	Mandatory

Level	Comment
Style	
Item	
SKU	Mandatory
Display style	Mandatory

As product data will be generally imported from third party software, the required Macro Space Management hierarchy should be planned before the first import so that data is imported into a standardized hierarchy.

Making the Hierarchy User Friendly

The Product Hierarchy consists of a series of levels which should be laid out in a way convenient for and familiar to store planners.



Configuring the hierarchy in the optimum manner can save considerable time and effort when products are being placed in Macro Space Management store plans.

Note: Any level in the hierarchy can be renamed to customer requirements by Oracle.

Using Data Importer

Macro Space Management contains a Data Import module. This allows importing information from third party databases. Once the data import routine is set up, it is possible to repeatedly import data into the Product Studio hierarchy. However, before this import routine is set up, it is first necessary to decide whether to use UPCs or SKUs

as the basis for indexing products. It is also necessary to determine the number of levels in the hierarchy as this cannot be readily varied once data import has started.

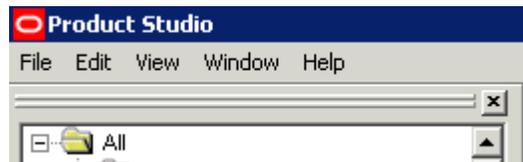
Data import from third party software works as follows:

- Data is exported from the third party software into a spreadsheet saved in a CSV format. This data is structured in a standardized format with specific columns holding specific items of information.
- Macro Space Management Data Importer is configured to accept data from this structured CSV format spreadsheet.
- Data Importer then inserts the data in the structured CSV format spreadsheet into the central Macro Space Management database.
- Data Importer can import a variety of data including:
- Alphanumeric Information on objects at all levels in the hierarchy including Names, descriptions, UPC's, financial, physical and other data.
- Product Images (providing they have been named in accordance with Macro Space Management conventions beforehand).

Menu Options

Menu Bar

The **Menu** bar has the following options.

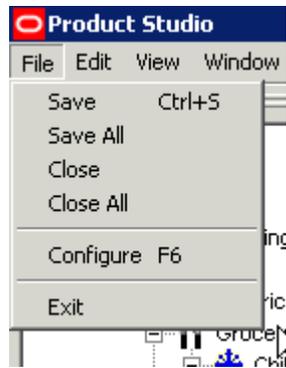


Product Studio - Menu bar

- File menu allows you to save or close files or configure Product Studio.
- Edit menu gives you access to add or edit products or import products.
- View menu allows you to display the product information and search products.
- Window allows you to configure the display of open Product dialog Boxes
- About gives access to Help and the version of the software.

File Menu

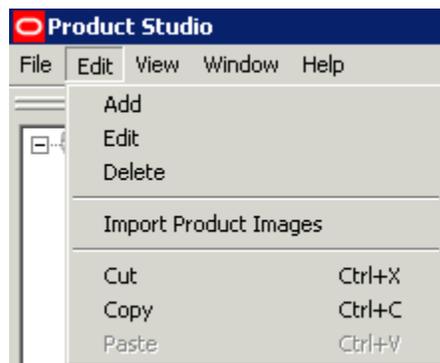
The **File** menu gives you access to various saving and exit options.

**Product Studio - File Menu**

- Save - saves the currently active product definition.
- Save All - saves all currently open product definitions.
- Close - closes the currently active product definition.
- Close All - closes all currently open product definitions.
- Configure (F6) - opens the Configuration Module
- Exit - closes Product Studio.

Edit Menu

The **Edit** menu allows you to modify the hierarchy.

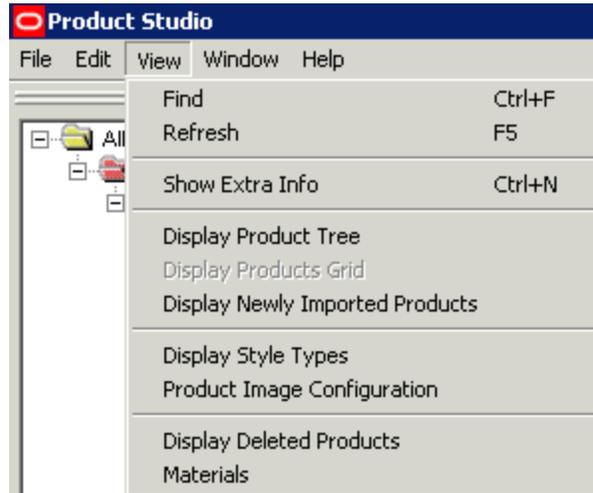
**Product Studio - Edit Menu**

- Add - adds another level to the hierarchy, adding a child object to the currently selected node.
- Edit - opens the currently selected node in the hierarchy for editing.
- Delete - deletes the currently selected note in the hierarchy.
- Cut (<Ctrl + X>) - removes the selected item from the hierarchy and puts it on the clipboard.
- Copy (<Ctrl + C>) - copies the selected item in the hierarchy and puts it on the clipboard.

- Paste (<Ctrl + V>) - takes the current item on the clipboard and pastes it as a child object to the currently selected node.

View Menu

The **View** menu gives you access to varying information.

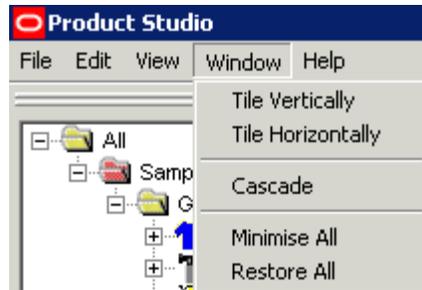


Product Studio - View Menu

- Find - calls the Find dialog box. [More Info](#)
- Refresh - refreshes the hierarchy with the latest information from the database.
- Show Extra Info - toggles the Product Description into view as well as the Product Name.
- Display Product Tree - toggles the Product Tree on or off.
- Display Newly Imported Products - display a list of recently imported products. [More Info](#)
- Display Deleted Products - displays a list of products that have been deleted from the Product Tree. [More Info](#)
- Materials - allows users to configure the way products display in Box or Textured Box form in Merchandiser. [More Info](#)

Window Menu

The **Window** menu allows you to arrange any dialog boxes open in Product Studio.



Product Studio - Window Menu

- Tile Vertically - aligns all open product dialog boxes vertically.
- Tile Horizontally - aligns all open product dialog boxes horizontally.
- Cascade - aligns all open product dialog boxes diagonally.
- Minimize All - minimizes all open product dialog boxes.
- Restore All - maximizes all open product dialog boxes.

About Menu

The **About** menu calls the help files and allows you to verify the version of the software in use.



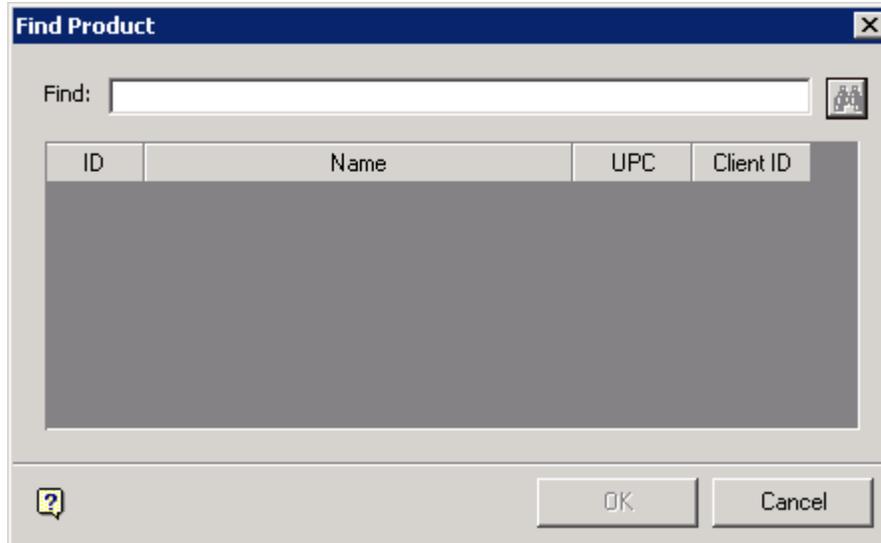
Product Studio - About Menu

Options for Menus

Find Option

The **Find** option can be accessed from the View menu or by pressing <Ctrl + F>. To use the Find option, complete the following steps:

1. In the **Find** field, enter a value (wild cards such as ? are allowed).
2. Click the Search icon to bring up a list of products matching the search string.
3. Highlight the required item in the result list, and click **OK** to open the relative dialog box.



Find Product

Newly Imported Products

The Newly Imported Products dialog box allows you to find recently imported products. These often require editing if imported from an external database. This is because products defined in an external system may lack information required by Macro Space Management such as dimensions or images.

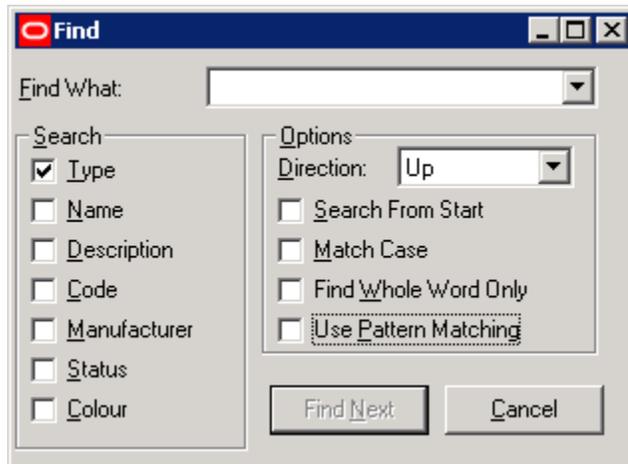
It can be accessed from the View menu and will populate upon being selected with all products that have not been modified since the last import date.

Type	Name	Description	Code	Colour
	BEEF STOCK CUB...	BEEF STOCK CUB...	28	16711680
	BEEF STOCK CUB...	BEEF STOCK CUB...	27	
	Oats 1kg	Oats 1kg	-1	
	SIMPLY STOCK B...	SIMPLY STOCK B...	34	
	SIMPLY STOCK C...	SIMPLY STOCK C...	35	
	SIMPLY STOCK V...	SIMPLY STOCK V...	36	
	VEGETABLE STO...	VEGETABLE STO...	38	
	1 litre	Brand AA 1 litre		
	1 litre	Brand V 1 litre		
	14"	14" TVs		
	2 litre	Brand V 2 litre		
	2 litre	Brand AA 2 litre		
	5 litre	Brand AA 5 litre		
	750g Brand F	Brand F 750g	-1	
	Apple Juice	Apple Juice		
	Australian Red Wine	Australian Red W...		
	Australian Sparkli...	Australian Sparkli...		
	Australian White ...	Australian White ...		

Imported Products

The toolbar allows you to close the dialog, edit a selected item, find an item or refresh the list with the latest information from the database.

The Find dialog box is called from the toolbar.

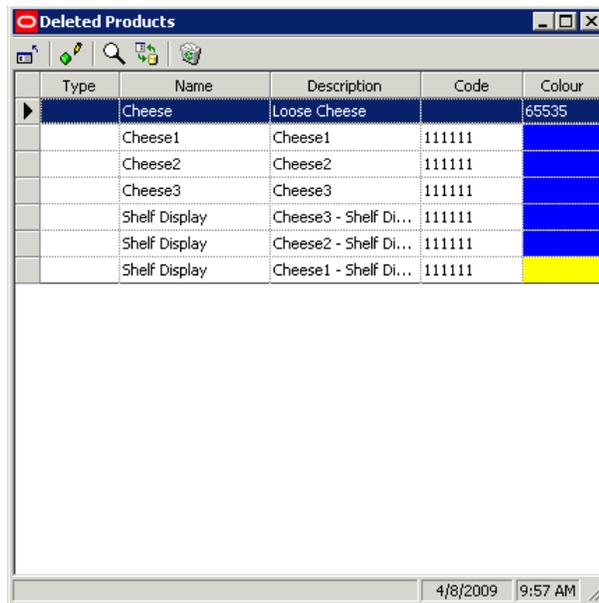


Find dialog box

It allows you to find items in the list of newly imported products.

Deleted Products

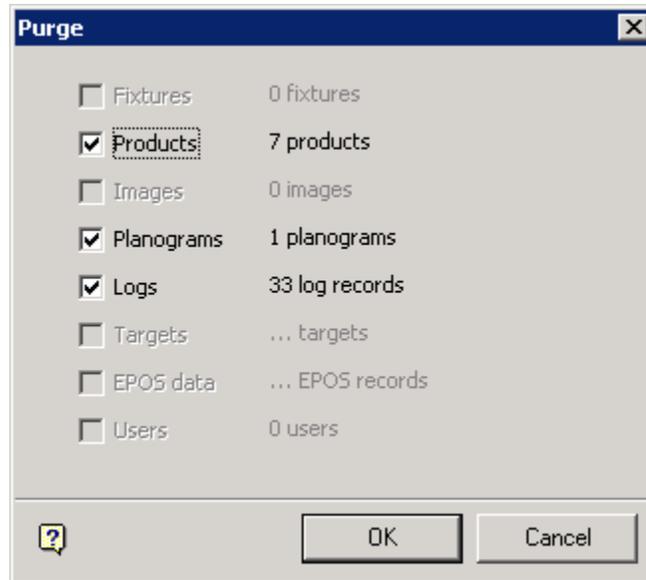
The Deleted Products dialog box contains the list of all products marked for deletion. The toolbar allows you to close the dialog box, edit a selected product, find a product, refresh the list of deleted products with the latest information from the database or restore a deleted product to the product hierarchy.



Deleted Products

Purging Deleted Products

Deleted products can only be permanently removed from the database in the Administration Module. From the Administration Module, select Tools > Purge. This will bring up the Purge dialog as follows:



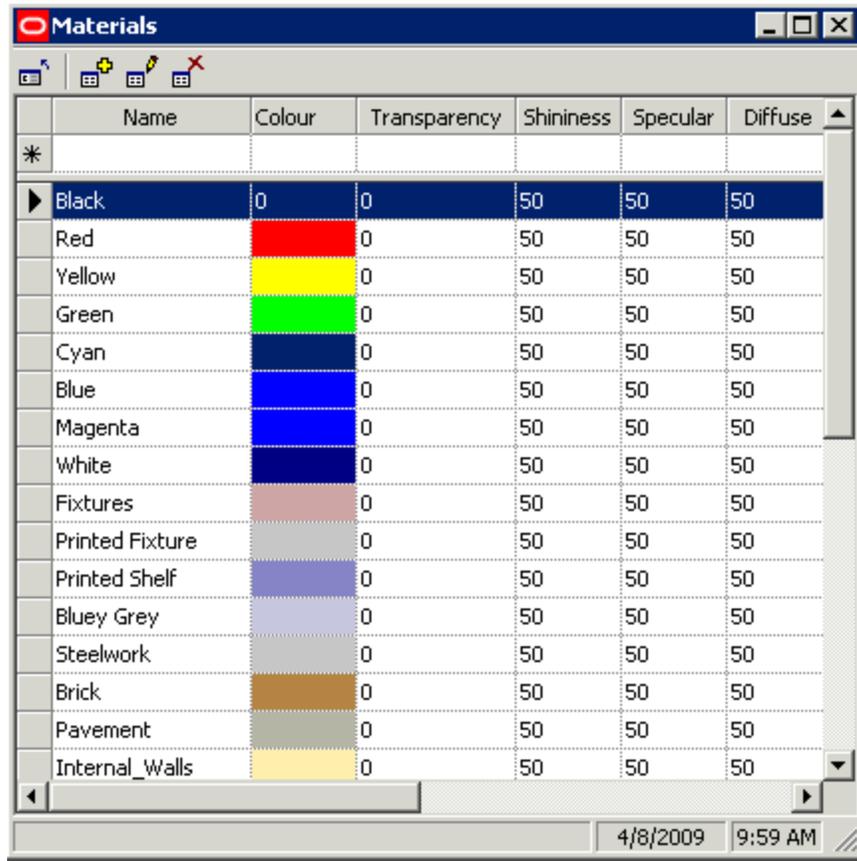
Purge Deleted Products

Checking the Products option will result in products in the deleted items list being permanently removed from the central Macro Space Management database.

Materials

The **Materials** option allows you to configure the Materials using color products. It is accessed from the View menu.

- Material colors can be added, edited or deleted using the toolbar.
- Transparency can range between 0 (opaque) to 100 (fully transparent).
- Shininess can range between 0 (matt) to 100 (shiny).
- Specular values can range between 0 (light only reflects in one direction) to 100 (light reflects in all directions).
- Diffuse values can range between 0 (light is not diffused) to 100 (light is diffused in all directions).



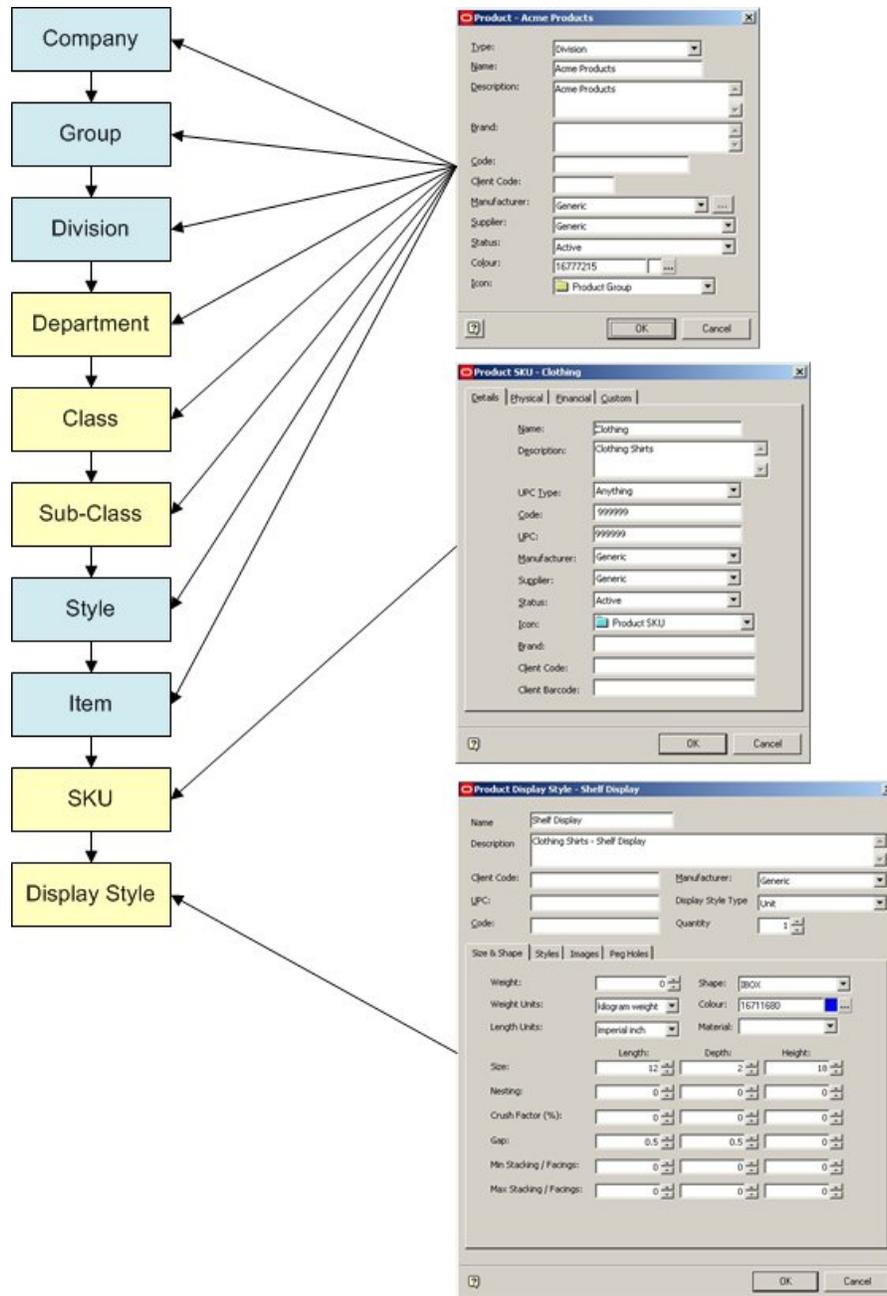
The screenshot shows a window titled "Materials" with a toolbar and a table of material properties. The table has columns for Name, Colour, Transparency, Shininess, Specular, and Diffuse. The materials listed include Black, Red, Yellow, Green, Cyan, Blue, Magenta, White, Fixtures, Printed Fixture, Printed Shelf, Bluey Grey, Steelwork, Brick, Pavement, and Internal_Walls. The status bar at the bottom shows the date 4/8/2009 and time 9:59 AM.

Name	Colour	Transparency	Shininess	Specular	Diffuse
*					
Black	0	0	50	50	50
Red	0	0	50	50	50
Yellow	0	0	50	50	50
Green	0	0	50	50	50
Cyan	0	0	50	50	50
Blue	0	0	50	50	50
Magenta	0	0	50	50	50
White	0	0	50	50	50
Fixtures	0	0	50	50	50
Printed Fixture	0	0	50	50	50
Printed Shelf	0	0	50	50	50
Bluey Grey	0	0	50	50	50
Steelwork	0	0	50	50	50
Brick	0	0	50	50	50
Pavement	0	0	50	50	50
Internal_Walls	0	0	50	50	50

Materials Dialog box

Hierarchy

The Product hierarchy can be built up using a series of levels. Some levels are mandatory (yellow) and some are optional (blue).



Product hierarchy

When constructing the hierarchy, there are three dialog boxes involved.

Dialog box	Associated levels
Product	Company, Group, Division, Department, Class, Sub-Class, Style and Item
SKU	SKU
Display Style	Display Style

The hierarchy is set up relative to the Product Root. It is set up in stages:

Stage	Action
1	Set up Company, Group, Division and Department Levels
2	Set up Class
3	Set up Sub-Class
4	Set up Style, Item and SKU Levels
5	Set up Display Styles

Each child is added by clicking on the parent level and selecting 'Add Product' from the right click menu.

Setting up Company, Group, Division, and Department Levels

Company, Group, Division and Department levels are set up based on the Product Root and set up using the Product dialog box. (Use right click menu to add).

Product dialog box

The Hierarchy Level Type can be set using the Type drop down list. The options are in the following sequence:

- Company (Optional)

- Group (Optional)
- Division (Optional)
- Department (Mandatory)

Once a level has been added, its child will only be available from those levels below it in the hierarchy.

Only when a Department is added that the Class option be available in the drop down list of Hierarchy Level Types.

Setting up Class and Sub-Class Levels

A class level in the products hierarchy can only be set up as a child of a Department and a **Sub-class** level in the products hierarchy can only be set up as a child of a class. Both levels are mandatory in the hierarchy, and both are configured by means of the Products dialog box.

The screenshot shows the 'Product' dialog box with the following fields and values:

- Type: Sub Class
- Name: (empty)
- Description: (empty)
- Brand: (empty)
- Code: (empty)
- Client Code: (empty)
- Manufacturer: Generic
- Supplier: Generic
- Status: Planned
- Colour: 16383
- Icon: Product SubClass

Buttons at the bottom: OK, Cancel.

Product dialog box

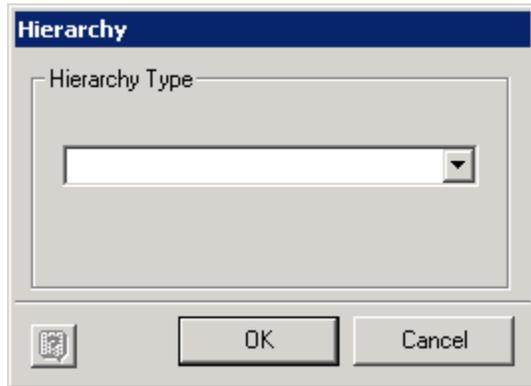
Only when a Sub-class id added, the next three options will be available in the drop down list of Hierarchy Level Types.

Setting up Style, Item, and SKU Levels

Style, Item, and SKU levels are set up based on the sub-class level in the hierarchy. To add a hierarchy level, complete the following steps:

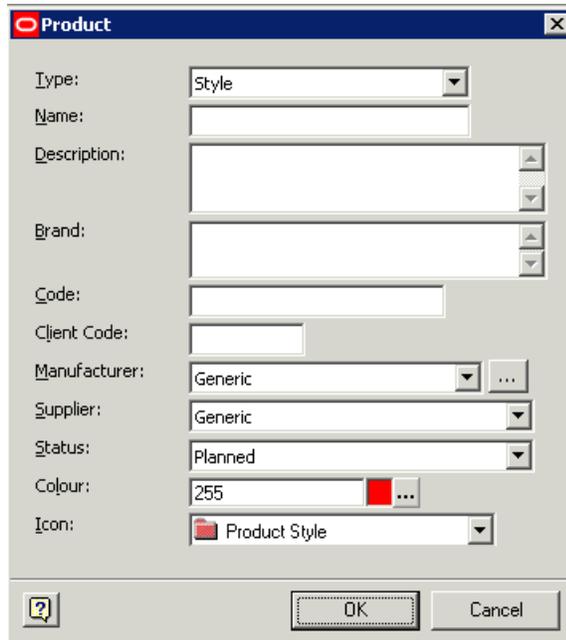
1. Right-click and select **Add**. The Hierarchy Level dialog box opens.
2. Using the drop down list, select one of the following Hierarchy Level Types:
 - Style (Optional)
 - Item (Optional)

- SKU (Mandatory)



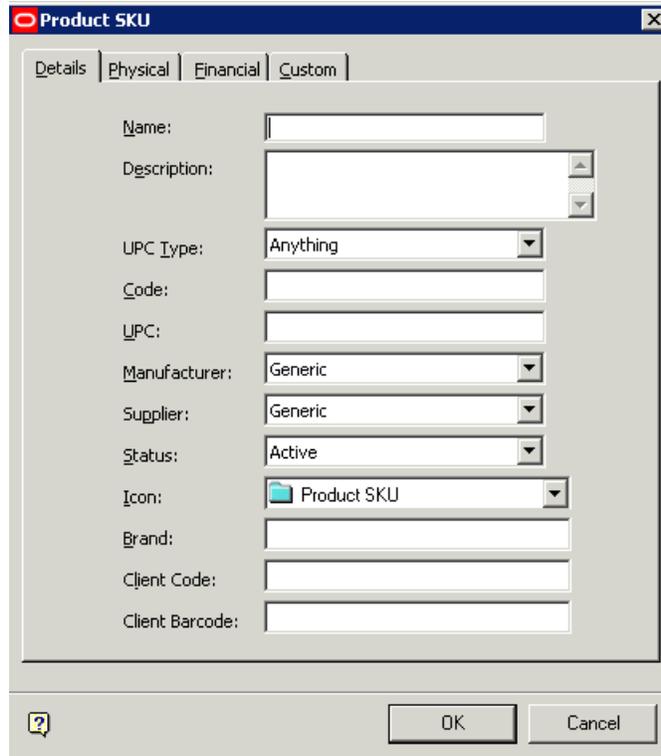
Hierarchy Types

3. Once a level has been added, its child will only be available from those levels below it in the hierarchy. Only when a SKU has been added, the Display Style option will be available in the drop down list of Hierarchy Level Types.
4. If the style or item levels are added in the hierarchy, the Product dialog box appears.



Product dialog box

If a SKU level item is added, the SKU Dialog box appears.



The image shows a dialog box titled "Product SKU" with a standard Windows-style title bar (minimize, maximize, close buttons). The dialog has four tabs: "Details", "Physical", "Financial", and "Custom", with "Details" selected. The "Details" tab contains the following fields:

- Name: [Text input field]
- Description: [Text input field with scrollbars]
- UPC Type: [Dropdown menu with "Anything" selected]
- Code: [Text input field]
- UPC: [Text input field]
- Manufacturer: [Dropdown menu with "Generic" selected]
- Supplier: [Dropdown menu with "Generic" selected]
- Status: [Dropdown menu with "Active" selected]
- Icon: [Dropdown menu with a folder icon and "Product SKU" selected]
- Brand: [Text input field]
- Client Code: [Text input field]
- Client Barcode: [Text input field]

At the bottom of the dialog, there is a help icon (question mark in a square) on the left, and "OK" and "Cancel" buttons on the right.

SKU Dialog box

Setting up Display Styles

Display Styles are set up based on the SKU level in the hierarchy. Right click and select **Add** to set up a display style. The Display Style dialog box opens.

Product Display Style -

Name:

Description:

Client Code: Manufacturer:

UPC: Display Style Type:

Code: Quantity:

Size & Shape | Styles | Images | Peg Holes

Weight: Shape:

Weight Units: Colour:

Length Units: Material:

	Length	Depth	Height
Size:	<input type="text" value="70"/>	<input type="text" value="15"/>	<input type="text" value="100"/>
Nesting:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Crush Factor (%):	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Gap:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Min Stacking / Facings:	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
Max Stacking / Facings:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

? OK Cancel

Display Style dialog box

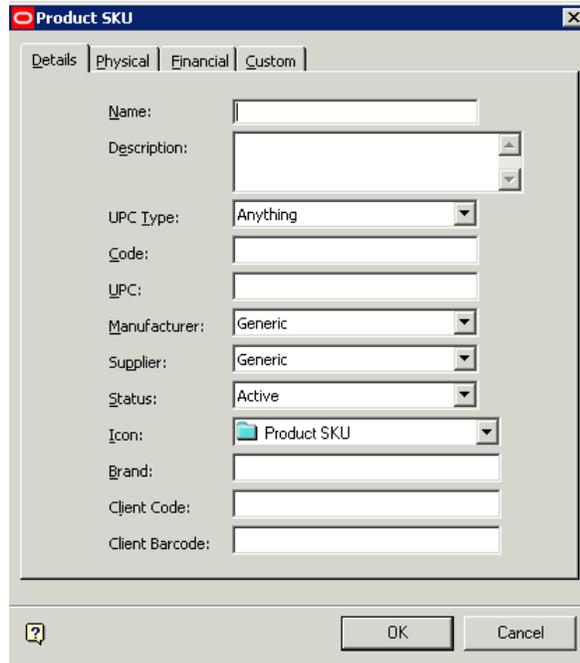
Hierarchy Information

Hierarchy Information can be added at the Company, Group, Division, Department, Class, Sub-Class, Style, and Item levels.

Parameter	Comment
Type	Can select Company, Group, Division, Department, Class, Sub-Class, Style and Item levels.
Name	Enterable by user.
Description	Enterable by user.
Brand	Enterable by user.
Code	Enterable by user.
Client code	Enterable by user.
Manufacturer	Selectable from a drop down list. The list can be configured using the Manufacturers option in the Administration Module.
Supplier	Selectable from a drop down list. The list can be configured using the Manufacturers option in the Administration Module.
Status	Selectable from a drop down list. The available statuses are configured using the Status option in the Administration Module.
Color	Selectable from a standard color pallet.
Icon	Selectable from a drop down list. The icon will default to a color specific to each level, but can be manually overridden.

SKU Information

The SKU Information is used to configure the information for a specific unit of sale.



The image shows a software dialog box titled "Product SKU". It has a tabbed interface with four tabs: "Details", "Physical", "Financial", and "Custom". The "Details" tab is currently selected. The dialog contains several input fields and dropdown menus:

- Name: A text input field.
- Description: A text area with scrollbars.
- UPC Type: A dropdown menu with "Anything" selected.
- Code: A text input field.
- UPC: A text input field.
- Manufacturer: A dropdown menu with "Generic" selected.
- Supplier: A dropdown menu with "Generic" selected.
- Status: A dropdown menu with "Active" selected.
- Icon: A dropdown menu with a small icon and the text "Product SKU" selected.
- Brand: A text input field.
- Client Code: A text input field.
- Client Barcode: A text input field.

At the bottom of the dialog, there is a help icon (a question mark in a square) on the left, and "OK" and "Cancel" buttons on the right.

Product SKU Dialog Box

Details Tab

The **Details** tab is used to configure the details for the product.

The screenshot shows a 'Product SKU' dialog box with the following fields and values:

- Name: [Empty text box]
- Description: [Empty text box]
- UPC Type: Anything (dropdown)
- Code: [Empty text box]
- UPC: [Empty text box]
- Manufacturer: Generic (dropdown)
- Supplier: Generic (dropdown)
- Status: Active (dropdown)
- Icon: Product SKU (dropdown)
- Brand: [Empty text box]
- Client Code: [Empty text box]
- Client Barcode: [Empty text box]

Buttons at the bottom: '?', 'OK', 'Cancel'.

Products SKU - Details Tab

Parameter	Comment
Name	The SKU name
Description	A description of the SKU
UPC Type	UPC type can be set from a drop down list. The list can be configured using the Product Code Type option in the Administration Module.
Code	The Code for the product.
UPC	The UPC for the product - it must conform to the mask set in UPC type option.
Manufacturer	Selected from the drop down list - the list can be configured using the Manufacturers option in the Administration module.
Supplier	Selected from the drop down list - the list can be configured using the Manufacturers option in the Administration module.
Status	Selected from the drop down list - the list can be configured using the Status option in the Administration module.
Icon	Selected from the drop down list.
Brand	The Brand for the product.
Client Code	The Client Code for the product.
Client Barcode	The Client Barcode for the product.

Physical Tab

The **Physical** tab is used to specify details concerning the physical aspects of the SKU.

The screenshot shows a 'Product SKU' dialog box with the 'Physical' tab selected. The fields are as follows:

- Pack Size: 1
- Pack Units: Pure number
- Colour: 16711680
- Nominal Colour: Blue
- Nominal Size: Medium
- Temperature range: <NONE>
- Min: 0
- Max: 40
- Units: degrees Centigrade

Products SKU - Physical Tab

Parameter	Comment
Pack size	The pack size is the number of items in a pack of the product - it can be set to any positive numerical value.
Pack Units	Set from a drop down list - the list can be configured using the Units option in the Admin Module.
color	The display color in the drawing - set from a color pallet.
Nominal color	For information purposes only.
Nominal Size	For information purposes only.
Temperature Range	This feature is not implemented yet.
Max, Min and Units	This feature is not implemented yet.

Financial Tab

The **Financial** tab is used to record financial information on the SKU.

The screenshot shows a dialog box titled "Product SKU" with a close button (X) in the top right corner. Below the title bar are four tabs: "Details", "Physical", "Financial" (which is selected and highlighted), and "Custom". The main area of the dialog contains several input fields and dropdown menus:

- Price: A text input field.
- Cost: A text input field.
- Lead Time: A dropdown menu showing "1 Week".
- Days of Supply: A spinner control showing "0".
- Item Movement: A spinner control showing "50".
- Cost Basis: A dropdown menu showing "Item".
- Tax Code: A dropdown menu showing "None".

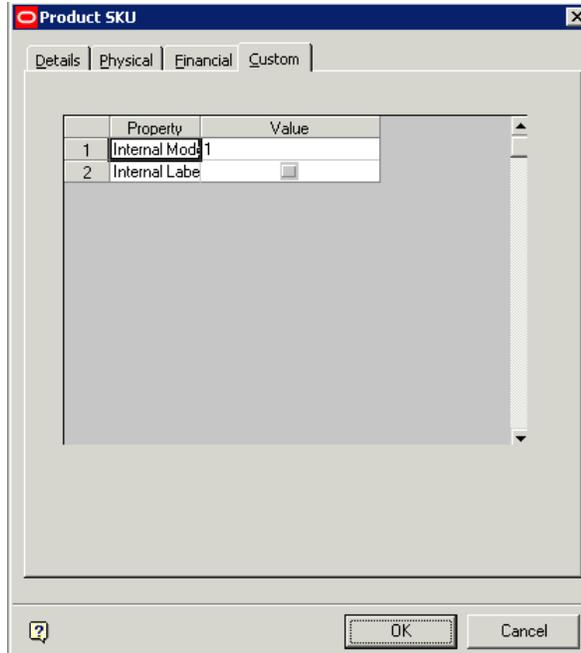
At the bottom of the dialog, there is a help icon (question mark in a square) on the left, and "OK" and "Cancel" buttons on the right.

Products SKU - Financial Tab

Parameter	Comment
Price	The sales price of the item
Cost	The purchase cost of the item.
Lead Time	The lead time between placing an order and receiving it.
Days of Supply	The number of days of supply the system should hold.
Item Movement	The rate at which the item is consumes
Cost Basis	Cost Basis can be selected from a drop down list.
Tax Code	Tax code can be selected from a drop down list. The options are configured using the Tax Code option in the Administration Module.

Custom Tab

The **Custom** tab can be configured to hold customer specific items of information. The list of items displayed can be configured using the User Defined Attributes option in the Administration Module. A maximum of 15 items can be assigned.



Products SKU - Custom Tab

Display Styles

Display Styles can only be used in the Merchandiser module. They allow products to be represented on equipment or shelves with differing degrees of accuracy ranging from a simple box to a virtual reality image.

Editing an Image

Images can be edited by right clicking on an assigned image in the **Images** tab. This brings up a pop-up menu. Selecting **Edit** brings up the Image editor.

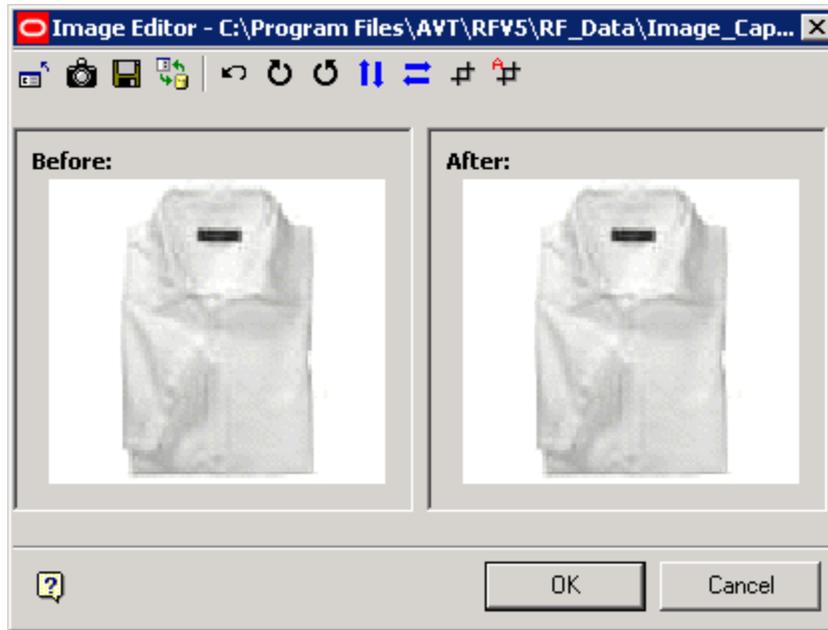


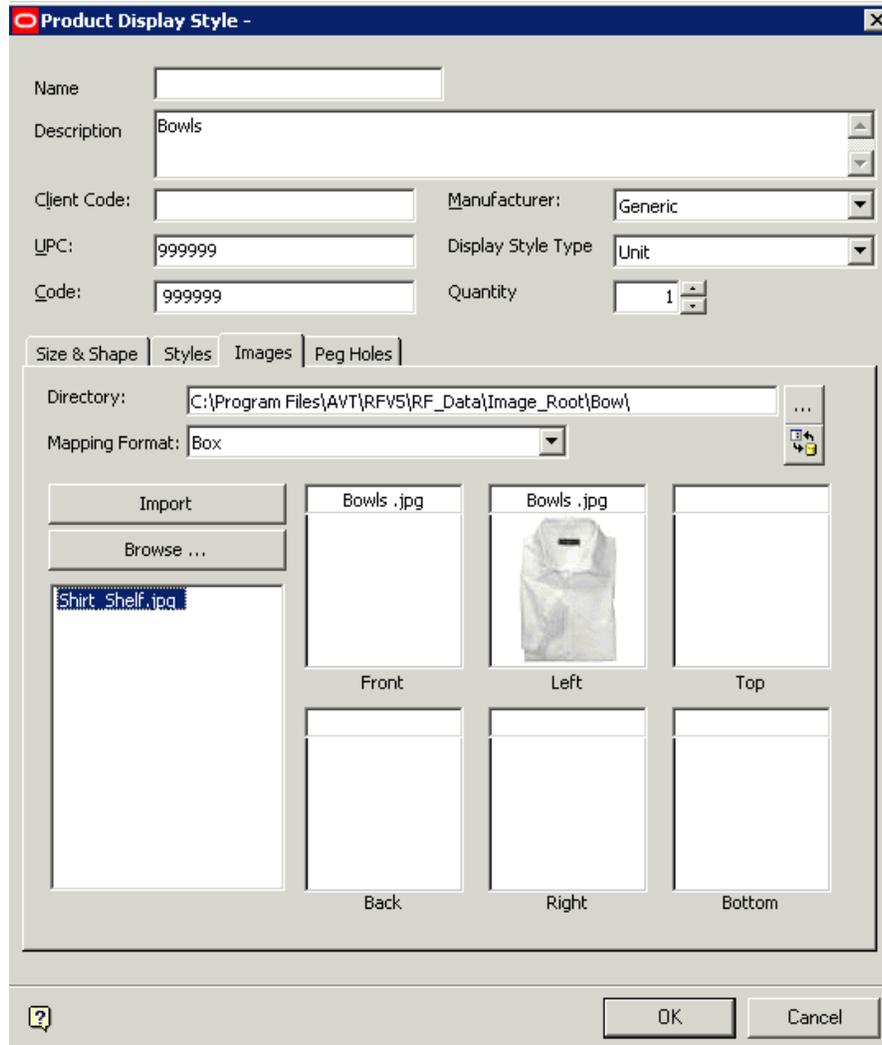
Image Editor

The toolbar at the top allows basic editing operations including rotating, flipping vertically and horizontally and cropping. The edited image can be saved back to the Image Root.

Images Tab

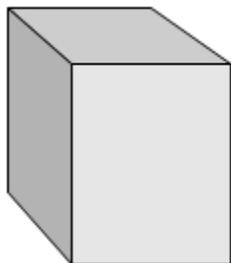
The **Images** tab allows you to specify the Images associated with the product. These will display when the product is placed in Macro Space Management Merchandiser if the Draw Products as Graphical option is selected to display the product.

Images can be imported into Macro Space Management (via Data Importer) or manually selected from the Image Capture directory specified in the Configuration Module.

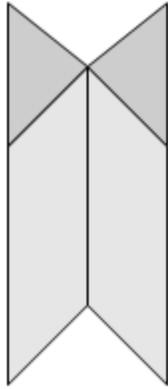


Display Style Dialog Box

The Directory is the directory that the image is held in. The Mapping format specifies whether the images are to be shown using a box or a cross format.



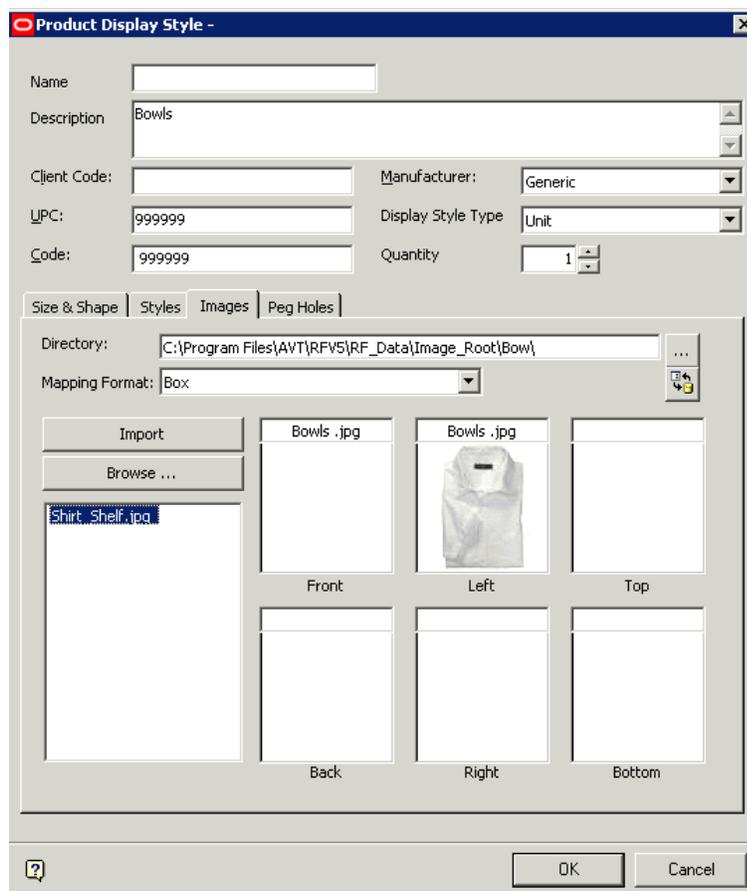
In a Box format, the images are placed on each of the six sides of a cuboid, so the left, right, front back, top and bottom images can be seen depending on which direction the product is being viewed from.



In a Cross format, the images are placed on the sides of a vertically aligned cross. This allows you to see images when rotating around it in the horizontal axis, but not when viewing it from above or below. Images that can be associated with a product are found in the Image Capture directory (specified in the Configuration Module). When assigned, they are stored in the Image Root and its associated sub-directories.

Locating and Storing Images

For an image to be added manually to the product, it must be located in the Image Capture directory specified in the Configuration Module.



Display Style Dialog Box

Clicking on the Browse button will take you to this directory, where an image can be selected and placed in the list of available images in the dialog box. The image can be dragged and dropped so it shows on the front, back, left, right, etc of the product.

On clicking **OK**, a copy of the image will be saved in the image root. This will preserve all images allocated to the varying positions on the product, but images selected from the Image capture directory and not allocated to a position on the product will not be saved when the dialog box is closed.

Images allocated to the product can be edited or deleted by right clicking and selecting the appropriate option.

Peg Holes

The **Peg Holes** tab allows you to specify the Peg Holes associated with the product.

Product Display Style -

Name:

Description:

Client Code: Manufacturer:

UPC: Display Style Type:

Code: Quantity:

Size & Shape | Styles | Images | **Peg Holes**

	Width	Depth	Height	Style Filter
1				
2				
3				
4				
5				

Width Offset (X):

Depth Offset (Y):

Height Offset (Z):

Style Filter:

Top Down View

Y

X

OK Cancel

Display Style Dialog Box - Peg Holes

The Peg Hole Toolbar allows you to add a new peg hole to the product, or to delete an existing, highlighted one. The Peg Hole Settings allow you to define the position of the peg hole. This may be done either using the radio buttons, or by using the spin controls to set the X, Y or Z offsets.

The Defined Pegs Holes show the settings defined for each peg hole. In this example, two peg holes have been defined; one at the left top of the product and one at the right top.

Size and Shape Tab

The **Size and Shape** tab allows you to specify the Size and Shape of the product.

Product Display Style -

Name:

Description:

Client Code: Manufacturer:

UPC: Display Style Type:

Code: Quantity:

Size & Shape | Styles | Images | Peg Holes

Weight: Shape:

Weight Units: Colour:

Length Units: Material:

Size: Length: Depth: Height:

Nesting:

Crush Factor (%):

Gap:

Min Stacking / Facings:

Max Stacking / Facings:

OK Cancel

Display Style Dialog Box - Size and Shape

Parameter	Comment
Weight	Can be set to any positive numerical value - the units are specified in 'Weight Units' below.
Weight Units	Units are selected from a drop down menu and can be set to metric or imperial units.
Length Units	Units are selected from a drop down menu and can be set to metric or imperial units.
Shape	Shape is selected from a drop down list. It specifies the Product Block used for the product, and hence the general type of shape that will be displayed - box, cylinder, etc.
color	This is the color used for simple representations of the product. It can be selected from a standard pallet.
Material	This is the coloring form used when products are represented when shown as textured boxes. It is selected from a drop down list. (Materials are configured via the view pull down menu)
Size	Length, depth can be set to any positive numerical value - the units being specified in 'Length Units' above

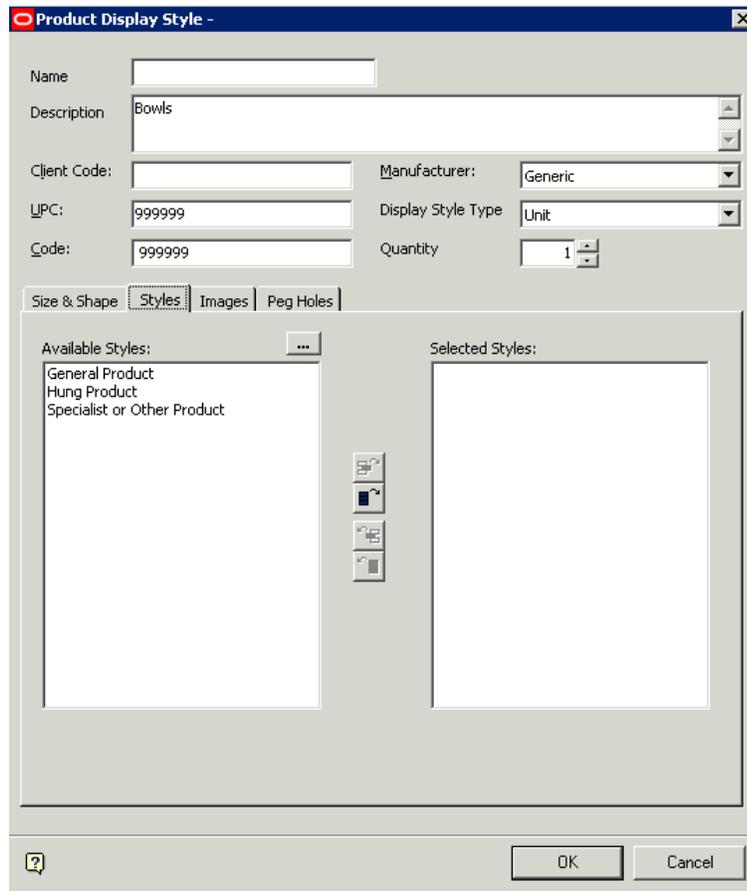
Parameter	Comment
Nesting	This specifies the degree to which one unit can be stacked inside each other. It is entered as a positive numerical value. (For example, 5 vases of height 300 mm and a nesting height of 50 mm would have a total height of 500 mm).
Crush Factor %	This specifies how much the dimensions of soft items (such as cushions) can be compressed when stacked. Crush factor does not apply to the top item in the stack as it is not being compressed. (Three items of 100 mm height with a crush factor of 25% would have a combined height of 250 mm: 75 mm + 75 mm + 100 mm).
Gap	This is the gap between multiple instances of a product. It can be set to any positive numerical value - the units being specified in 'Length Units' above. Half the gap is normally applied to each side of the product. Items stacked on top of each other will not normally have a height gap.
Min Stacking/Facings	This is the minimum number of products that can be placed in the facing, depth and height orientations.
Max Stacking/Facings	This is the maximum number of products that can be placed in the facing, depth and height orientations.

Styles Tab

The **Styles** tab allows you to specify the Style(s) associated with the product. These in turn determine which fixtures and shelves the product can be placed on. A product must have at least one style assigned before it can be placed - and that style must be compatible with the style on the object on which it is being placed.

Parameter	Comment
Available Styles	This is the list of styles that can be assigned to the product
Selected Units	This is the list of styles that have been assigned to the product.

Styles are selected or de-selected using the Selection Option buttons. Styles can be configured in the Administration Module. The Style Configuration button allows you to access this option.



The image shows a software dialog box titled "Product Display Style -". It contains several input fields and dropdown menus. The "Description" field is filled with "Bowls". The "Manufacturer" dropdown is set to "Generic". The "Display Style Type" dropdown is set to "Unit". The "Quantity" spinner is set to "1". Below these fields are four tabs: "Size & Shape", "Styles", "Images", and "Peg Holes". The "Styles" tab is active, showing two lists: "Available Styles" and "Selected Styles". The "Available Styles" list contains three items: "General Product", "Hung Product", and "Specialist or Other Product". There are four icons between the two lists. At the bottom of the dialog are "OK" and "Cancel" buttons, and a help icon on the left.

Name:

Description:

Client Code: Manufacturer:

UPC: Display Style Type:

Code: Quantity:

Size & Shape | **Styles** | Images | Peg Holes

Available Styles:

- General Product
- Hung Product
- Specialist or Other Product

Selected Styles:

Display Style Dialog Box - Styles

Merchandiser

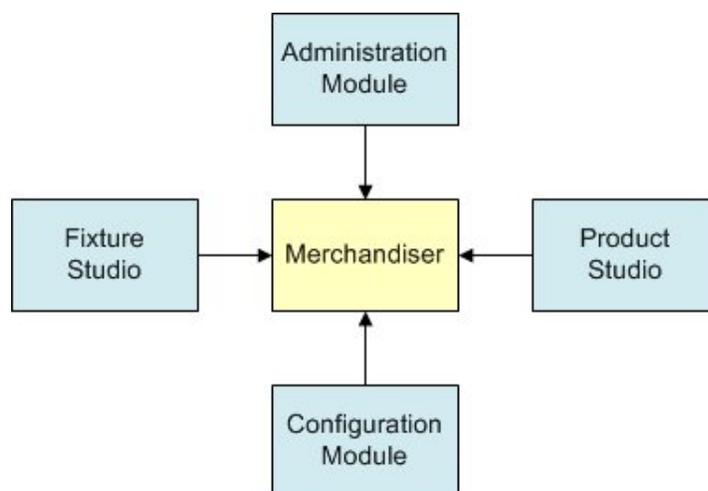
Merchandiser allows you to work in a 3D virtual reality environment and allows details to be seen at a greater level of granularity such as the shelf and display style.

Using the Merchandiser module, you can use store plan from Planner, fixtures from Fixture Studio, products from Product Studio and planogram definitions either imported or from Merchandiser. You can functions of the Merchandiser are:

- Ability to link to Store Manager to allow management of store plans.
- Laying store plans using fixtures, fittings and gondolas.
- Populate fixtures and gondolas with products or planograms.
- Populate fixtures with shelves, pegs, and other equipment.
- Populate fixtures, shelves, pegs and other equipments with SKU products in the appropriate display style.
- Annotate drawings with information.
- Display information such as sales areas allocated to fixtures.

Overview of Relationships between other Modules

The settings made within Merchandiser are affected by and interact with settings made within other modules within Macro Space Management.



Administration Module

The following can be configured within the Admin Module:

- Available Status
- List of possible Styles
- User Defined Attributes

Configuration Module

The following can be configured within the Configuration Module:

- Connection Point Appearance
- Connection Point Filters
- Merchandising Check Rules
- Settings affecting how the Merchandiser environment displays.

Fixture Studio

The following can be configured within the Fixture Studio Module:

- Fixture and Gondola Hierarchies
- Visual appearance of Fixtures
- Fixture Definitions
- Gondola Definitions
- Connection Points
- Fixture and Shelf Styles

Product Studio

The following can be configured within the Product Studio Module:

- Product Hierarchy
- Visual appearance of Products
- Styles
- Peg Holes

Difference between Merchandiser and Planner

Some of the differences between the Planner and Merchandiser modules are:

- Zones are read-only in Merchandiser
- Shelves can only be added in Merchandiser
- Products can be added at Display style level in Merchandise. In Planner they can only be added as placeholders.
- Merchandiser allows details to be seen at a greater level of granularity. In Planner, you can only see data at Fixture Level and SKU. In Merchandiser, you can see data at shelf and display style level.

Merchandiser Controls

Shortcut Keys

These shortcut keys provide alternatives to call the required function from the pull down menus of toolbars. Some of the shortcut keys are listed below.

- General Shortcuts
- Editing Shortcuts
- Display Shortcuts

General Shortcuts

Shortcut Keys	Also available from	Function
<Ctrl> + O	File pull down Menu or Standard Toolbar	Open Drawing (Via Store Manager)
<Ctrl> + P	Standard Toolbar	Show Print Preview
<Ctrl> + <Shift> + C	File pull down menu	Show Configuration Module
<Ctrl> + S	File pull down menu	Save Drawing
<Ctrl> + Q	File pull down menu	Quit Application
<Ctrl> + N	File pull down menu	Create New Planogram
F8	View Menu	Show/Hide Object Browser
Delete	N/A	Delete all selected objects

Display Shortcuts

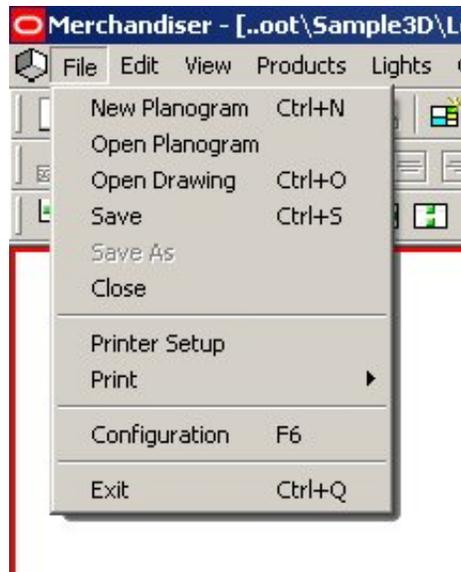
Shortcut Keys	Also available from	Function
<Ctrl> + F	Edit pull down menu	Display Find Dialogue
<Ctrl> + L	Directions and Product Text Toolbar	Display Layers Dialogue
F12	View Menu	Take snapshot of Virtual Reality Store

Editing Shortcuts

Shortcut Keys	Also available from	Function
<Ctrl> + G	Edit pull down menu	Toggle Group On or Group Off
<Ctrl> + A	Edit pull down menu	Select All
<Ctrl> + E	Edit pull down menu	Empty selected fixture/shelf of products
<Ctrl> + C	Edit pull down menu	Copy the Selected Products to the Clipboard
<Ctrl> + X	Edit pull down menu	Cut the Selected Products and Paste on Clipboard
<Ctrl> + V	Edit pull down menu	Paste the Selected Products onto the selected fixture/shelf
<Ctrl> + Z	Edit pull down menu	Undo last action
<Ctrl> + D	Edit pull down menu	Deselect all selected objects
<Shift> + up or down cursor keys	N/A	Move selected shelf up or down on parent object

Menu Bar**File Options Menu**

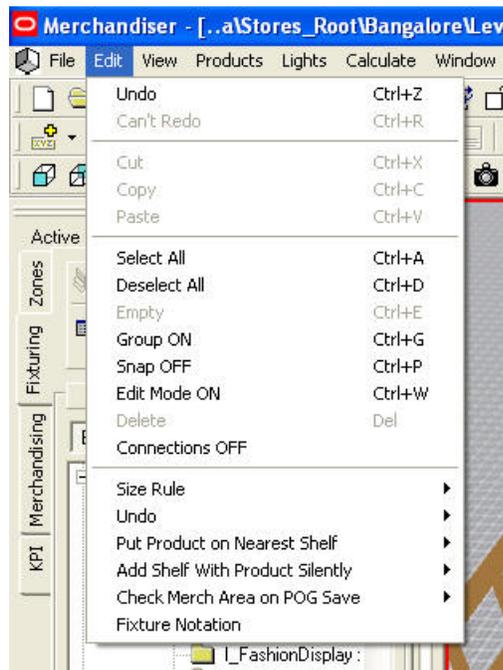
The **File** menu gives access to creating and editing of planogram definitions, accessing Store Manager, Printing and accessing the Configuration module.



Merchandiser - File Menu

Edit Options Menu

The Edit menu gives access to various editing options.



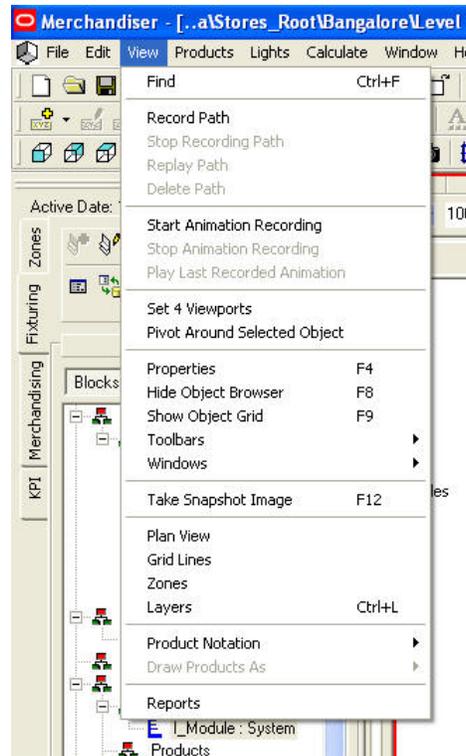
Merchandiser - Edit Menu

- The Undo and Redo options allow you to undo or redo recent actions.
- Cut, Copy and Paste allows you to carry out those operations on objects in the drawing.

- Select all, De-select all, Empty and Delete enables you to carry out bulk operations on the drawing.
- Group On or Snap Off determines how Families and Groups are selected.
- Edit Mode ON
- Connections OFF
- Size Rule allows you to specify if the product size has to be taken into account when placing products on shelves.
- Undo
- Put Product on Nearest Shelf
- Add Shelf With Product Silently
- Check Merch Area on POG Save
- Fixture Notation

View Options Menu

The **View** menu options allow you to specify a number of options affecting the view on screen.



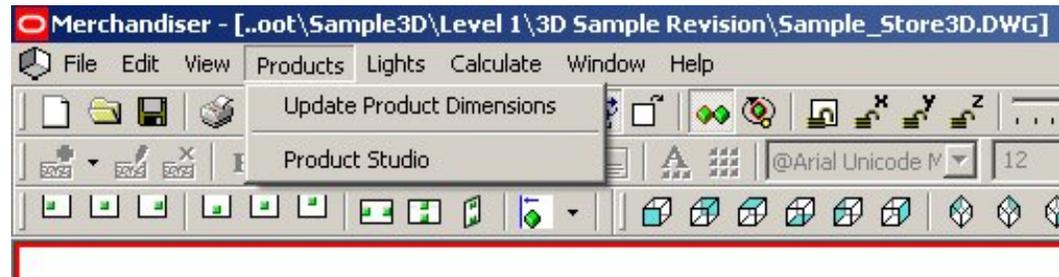
Merchandiser - View Menu

- **Find** enables you to find an object in the drawing.
- **Record Path, Stop Record Path, Replay Path** and **Delete Path** allow you to configure a path specified though the drawing for the purpose of making a Virtual Reality movie of the store layout.

- **Start Animation Recording, Stop Animation Recording and Replay Last Recorded Animation** are options concerned with Virtual Reality movies of the store layout.
- **Set 4 ViewPorts** determines how many views of the virtual store are available.
- **Pivot Around Selected Object** enables you to select an object in the drawing to rotate around.
- **Properties**
- **Hide/Show Object Browser** enables you to either hide or show the Object Browser.
- **Show Object Grid**
- **Toolbars** allows you to turn the display of specific toolbars On or Off.
- **Windows** enables you to select the Move, Rotate, Views or Camera window dialog boxes.
- **Take Snapshot Image** allows you to take a printable image of the Virtual Reality store.
- **Plan View, Grid Line, Zones and Layers** all affect display options in the Virtual Reality environment.
- **Product Notation and Display Products** As also affect display options in the Virtual Reality environment.
- **Reports** brings up Quick Reports

Product Options Menu

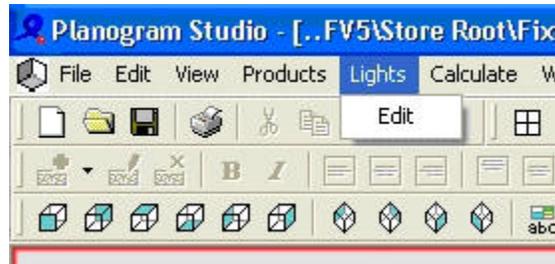
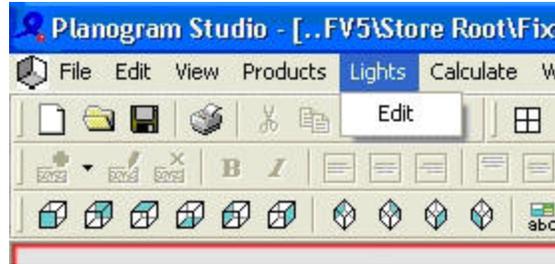
The **Product menu** Options enables you to update Product Dimensions. It also allows access to Product Studio.



Merchandiser - Products Menu

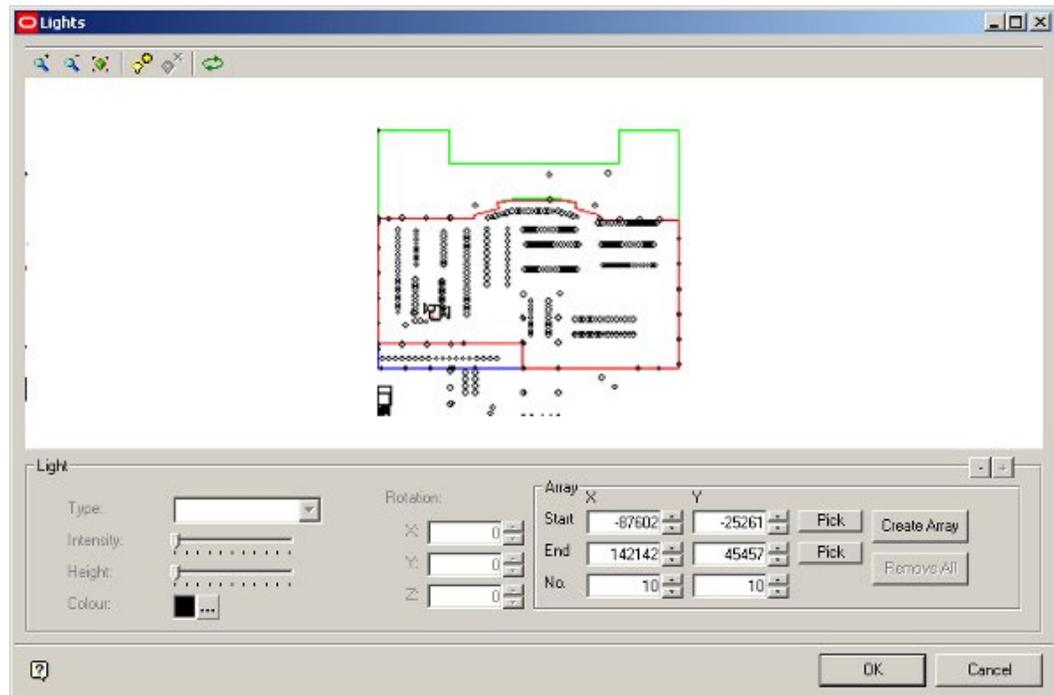
Light Options Menu

Light sets the light intensity level in the Store Plan. Light levels can be increased or decreased by using the slider on the Merchandiser toolbar. The effect depends on whether the light is generic, or has been set up using the Edit Lights option.



Merchandiser - Lights Menu

The Lights menu allows you to specify the light arrangements for the store. This allows you to specify the lighting arrangements for the store. This dialogue box may also be called from the Lights Toolbar.

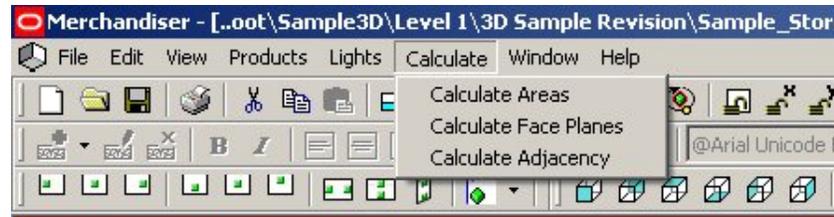


Light Menu

Using the Lights Dialog box, you can add, delete, zoom in, zoom out, zoom to fit, and refresh the information in the drawing.

Calculation Options Menu

The **Calculate** menu Options gives you access to area, Face Plane, and Adjacency calculations.

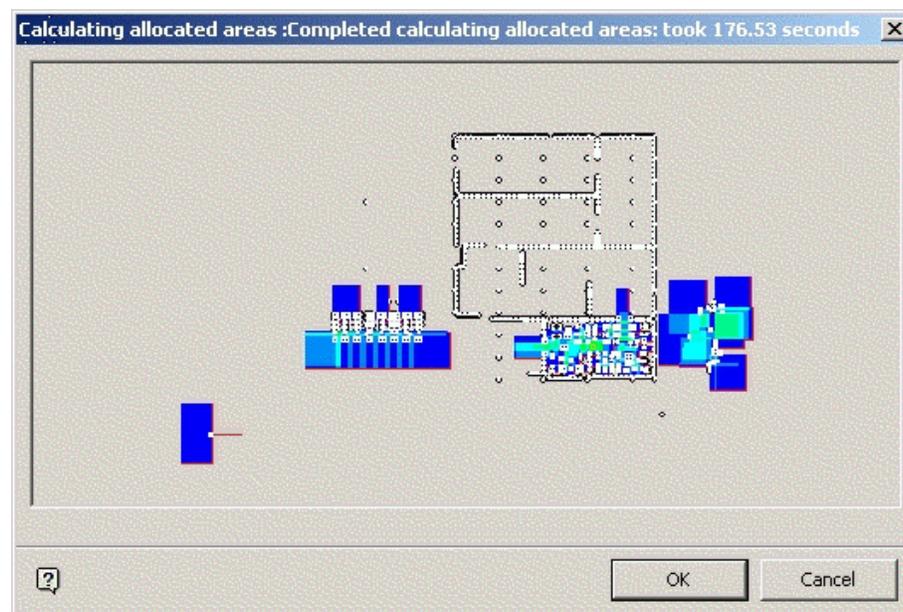


Merchandiser - Calculate Menu

Calculate Areas

Calculate Areas gives a visual indication of how efficiently space in the store has been allocated. Each registered fixture definition defines the directions in which it faces North, South, East, or West relative to the block. For each fixture, it will create a boundary around it in each direction until it hits another fixture or until it reaches its defined tolerances.

Selecting this option brings up the Area Calculation window.



Area Calculation window

Calculate Face Planes

Calculate Face Planes looks at space from a front view perspective, so that if there were two categories on a fixture, it determines what proportion of space is given to each category.

Calculate Face Planes is a customer specific requirement, and may not be enabled in generic implementations of Merchandiser.

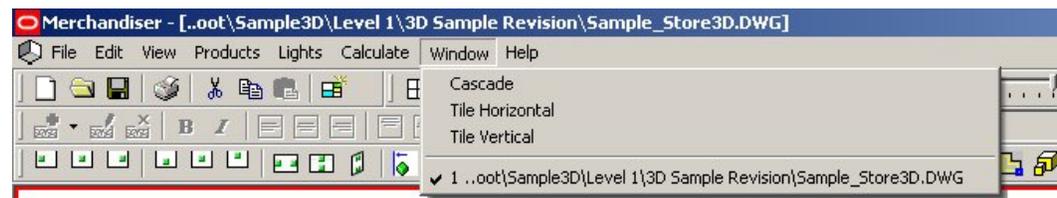
Calculate Adjacencies

Calculate Adjacencies calculates which fixtures and which products are adjacent to each other determines. Having determined which other fixtures are adjacent it then works out whether it is to the right, to the left, in front, behind, above, below or opposite. Next it will work out sequence numbers, and group fixtures together by giving them the same number.

While the calculation is in progress, a window will give a visual indication of the stage it has reached.

Window Options Menu

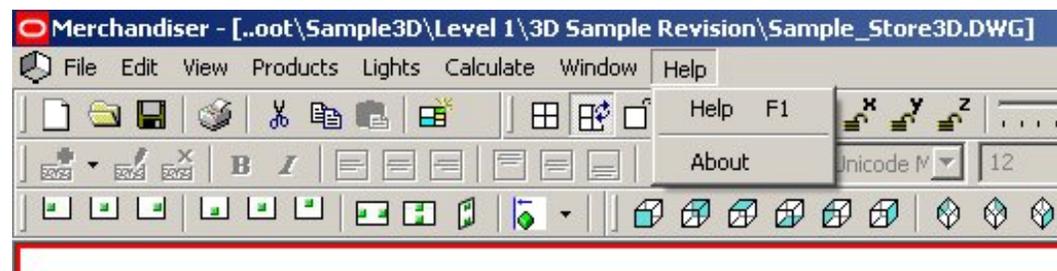
The **Window** menu options allows you to arrange multiple store plans (if open) and select the which store plan you wish to be active.



Merchandiser - Window Menu

Help Options Menu

The **Help** menu options gives access to the online help file and check the version of the software.



Merchandiser - Help Menu

Toolbars

The Animation Toolbar

The **Animation Toolbar** enables you to define store walk through paths for taking movies. It also allows you to record movies of the store layout in the Virtual Reality Environment.



Icon	Function
	Start Recording AVI
	Stop Recording AVI
	Play Recorded AVI
	Start Recording Path
	Stop Recording Path
	Replay Path
	Delete Path
	Available Recorded Paths

The varying Path options allow you to set, edit, or delete a path along which a recording takes place.

The Recording options allow you to make movies of the Virtual Reality store, either by controlling the camera directly, or by setting it to follow a predefined path.

The Directions and Product Text Toolbar

The **Directions and Product Text** toolbar is mainly concerned with views of selected objects.



Icon	Function
	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
	Show product text
	Show product text
	Show gridlines form
	Show zones form
	Size rule (Toggle On or Off)
	Layers
	Undo
	Redo

Icon	Function
	Explode
	Implode

After an object (or objects) has been selected it may be viewed from any of six axis or four isometric directions. Other options specify whether zones, gridlines, etc., display.

The Formatting Toolbar

The **Formatting** toolbar has a whole series of options concerning the appearance of annotation in the Virtual Reality store.

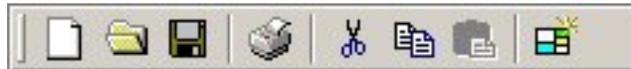


Icon	Function
	Add Label
	Edit Selected
	Delete Selected Label
B	Bold Text
<i>I</i>	Italic Text
	Left Justify Text
	Centre Justify Text
	Right Justify Text
	Top Justify Text
	Middle Justify Text

Icon	Function
	Bottom Justify Text
	Text color
	Background color
	Font Type
	Font Size
	List of Current Labels

The Standard Toolbar

The **Standard** toolbar enables you to carry out a series of common actions.



Icon	Function
	New Planogram
	Open Store Manager
	Save Drawing
	Print Options
	Cut
	Copy
	Paste
	AutoFill

The View Toolbar

The **View** toolbar enables you to set varying options for viewing the Virtual Reality environment.



Icon	Function
	Toggle between 1 and 4 ViewPorts
	Synchronize
	Next view
	Clash detection
	Pivot around selected object
	Lock view position
	Lock X axis movement
	Lock Y axis movement
	Lock Z axis movement
	Set movement speed
	Set texture quality
	Set level of detail
	Set front clipping plane

Icon	Function
	Set back clipping plane
	Light Intensity
	2D Label Viewing Distance

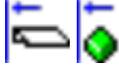
Note: There are no tooltips for the Movement Speed, Texture Quality, Level of Detail, Front Clipping Plane and Back Clipping Plane sliders. Instead, they show as prompts towards the right hand end of the status bar.

The Align Products Toolbar

The **Align Products** toolbar allows shelves or products to be aligned.



Icon	Function
	Align Left
	Align Centre
	Align Right
	Align Front
	Align Middle
	Align Back
	Justify in X plane

Icon	Function
	Justify in Y plane
	Justify in Z Plane
	Select shelf or product to justify (icon toggles)

Movement in the Drawing

Moving in the drawing can be done in several ways. These are:

- General movement with the mouse
- Pivoting about a selected object
- Viewing objects from selected directions

In addition you can select a plan view, to choose the general section of the Virtual Reality environment to view.

General movement with the mouse

- Holding down the left mouse key enables you to move viewpoint forward and back and to rotate left and right.
- Holding down the right mouse key enables you to move viewpoint up and down and left and right.
- Using the mouse wheel enables you to rotate their viewpoint up and down.

Pivoting about a selected object

This option allows you to circle around a selected object in the drawing.

Viewing objects from selected directions

This option allows you to view an object from one of ten perspectives by selecting it, then clicking on the appropriate icon.

Plan View

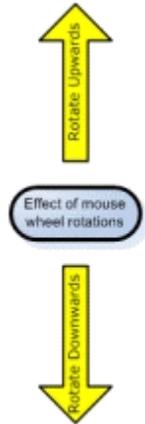
The plan view is a simplified overhead view of the Virtual Reality store. The mouse position within the store can be changed by 'dragging and dropping' the camera icon within this view.

Mouse Wheel

The mouse wheel behaves differently depending on whether movement within the Virtual Reality environment is Normal or Pivoting about an Object.

Normal Movement

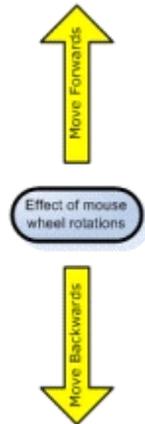
The Mouse wheel is used to change the pitch of the Virtual Reality View.



Rotating the wheel forward increases the angle of pitch, tilting the camera view upwards. Rotating the wheel backwards decreases the angle of pitch, tilting the camera view downwards.

Pivot around object

The mouse wheel is used to move forward towards or back from the selected object.

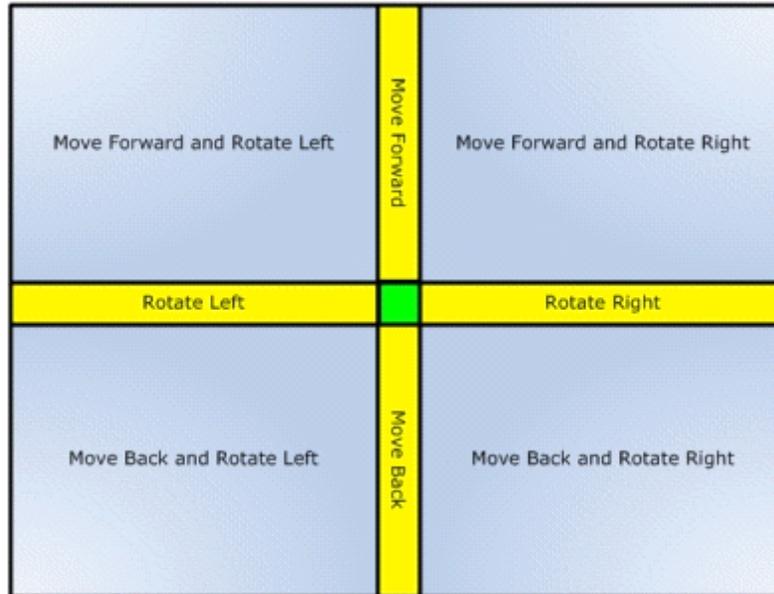


 Pivot around selected object
This option is toggled on and off using the View toolbar.

Mouse Buttons

Left Mouse Button

Normal movement while holding down the left mouse button allows movement in the X, Y plane. The viewpoint may be moved either forward or backward or rotated left and right.



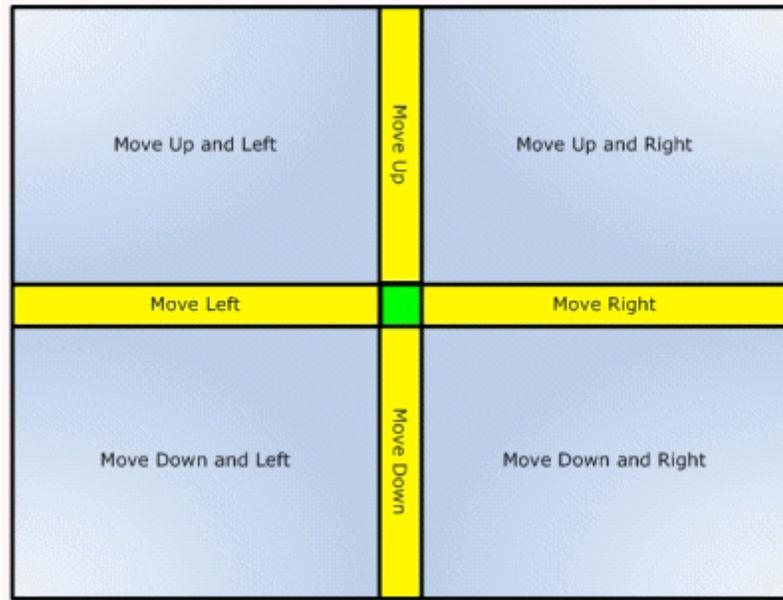
The position of the mouse cursor relative to the centre of the drawing determines the type of motion. The further from the centre, the more rapid the motion.

Note: General motion speed can be set using the appropriate slider control in the view toolbar.

Note: Pivoting around an object will change left mouse button behavior.

Right Mouse Button

Normal movement while holding down the right mouse button allows movement in the Y, Z plane. The viewpoint may be moved either left or right or back or moved up and down.



The position of the mouse cursor relative to the centre of the drawing determines the type of motion. The further from the centre, the more rapid the motion.

Note: General motion speed can be set using the appropriate slider control in the view toolbar.

Note: Pivoting around an object will change left mouse button behavior.

Locking Movement in Planes

The **View** toolbar contains several controls for restricting the available movement in the drawing.



Icon	Function
	Lock View Position
	Lock X Axis Movement
	Lock Y Axis Movement

Icon	Function
	Lock Z Axis Movement

The options can be toggled on and off by clicking them.

- **Lock View Position** will freeze the drawing with no movement possible
- **Lock X Axis Movement** will freeze the drawing with respect to left and right movement.
- **Lock Y Axis Movement** will freeze the drawing with respect to forward and back movement.
- **Lock Z Axis Movement** will freeze the drawing with respect to vertical movement.

Pivoting About a Selected Object

The **Pivot About Selected Object** option in the View toolbar enables you to rotate about a specific point in the drawing. It is toggled On and Off by clicking it.



Click on an object to select it. If the Pivot About Selected Object option has been selected, all movement will be relative to the selected object. Only the left mouse button and the mouse wheel will be enabled when this option is selected. The right mouse button will be disabled.

Note: If Pivot About Selected Object is enabled, the selected object will always remain in the centre of the selected field of view.

Viewing Objects from Specified Directions

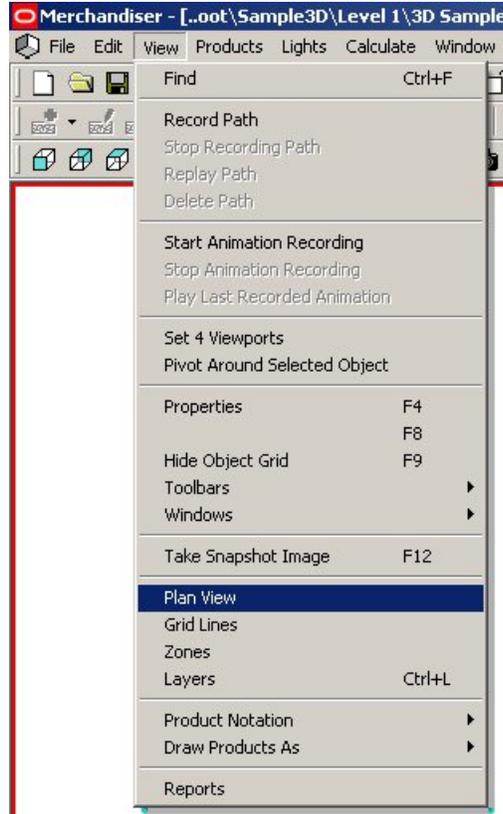
Objects can be viewed from specified directions by clicking on the appropriate icons on the Directions and Product Text toolbar.



First select the objects to be shown by <Ctrl> and left clicking with the mouse. Next, click on an icon to show the specified viewpoint. Depending on the icon selected, the selected objects can be shown from the front or back, above or below, or left and right. They can also be shown from one of four isometric views.

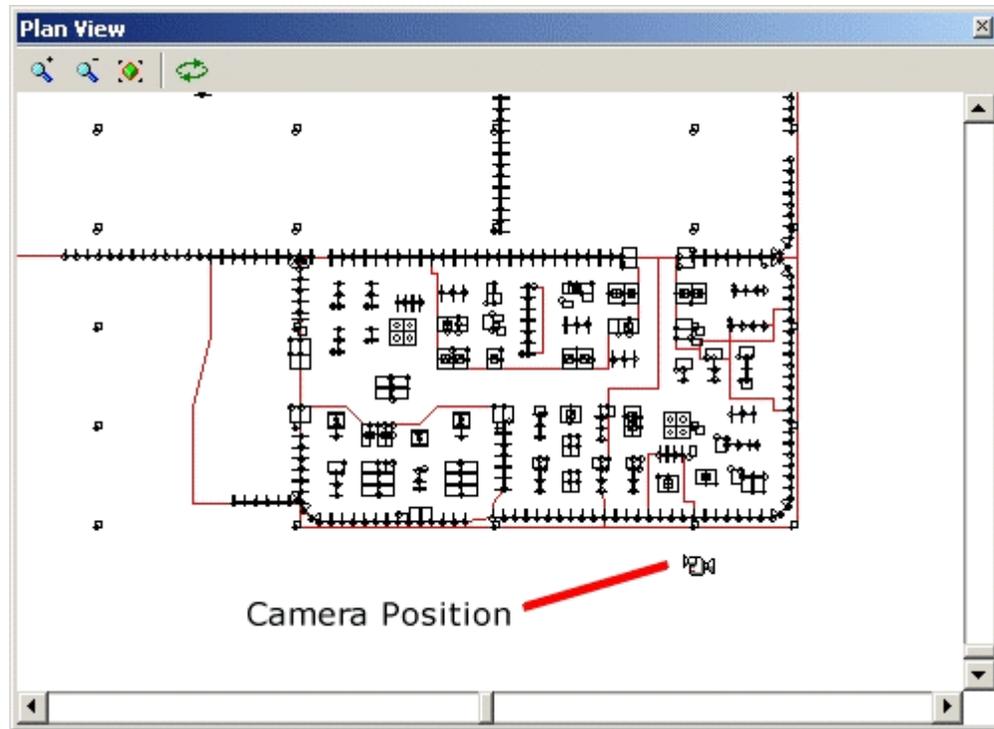
Plan View

The **Plan View Option** can be activated from the Plan View option on the View Menu.



Merchandiser – Plan View

This brings up the Plan View window.



Plan View

This shows a plan view of the store and the current position of the camera within the store. The camera position can be repositioned by holding down the left mouse key and dragging it to its new position.

Selecting with the Mouse

One or more objects in the drawing can be selected for editing or deleting. The objects chosen are known as a Selection set.

- If the chosen objects are not in a Group or Family they are known as a Simple Selection Set.
- If the objects selected have previously been included in a Group they are known as a Group Selection Set.
- If the objects selected have previously been included in a Family they are known as a Family Selection Set.
- The selection status of selected objects can be seen from their colors.
- Simple Selection Sets are shown in red and blue.
- Family and Group Selection Sets are shown in yellow and green (and sometimes cyan).

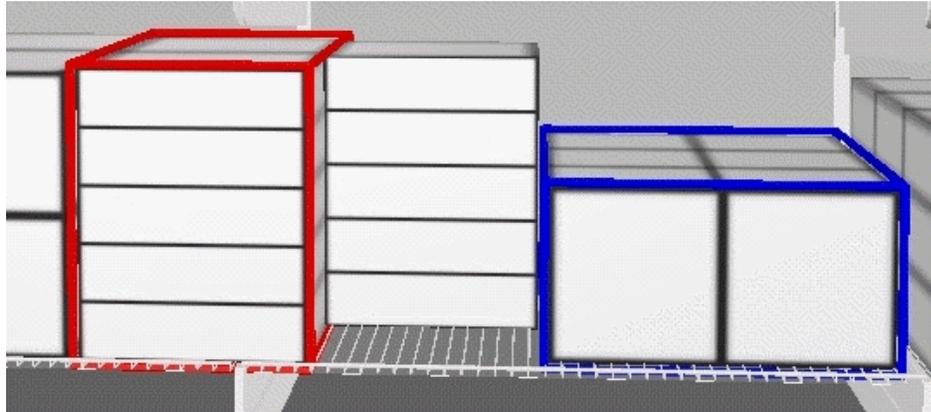
The behavior of the selected objects sometimes varies depending on whether they are in Simple, Family or Group Selection Sets.

Selecting and De-selecting Objects

Objects can be selected by holding down the <Ctrl> key and left clicking on them with the mouse.

Standard Selection Set

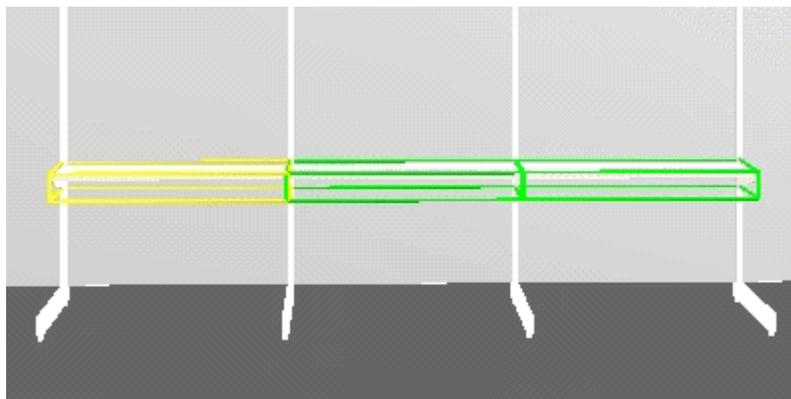
Standard Selection Sets occur when the objects are not in a Group or Family. The first object selected for a Standard Selection Set is enclosed in a red frame. Subsequent objects selected for a set of objects are enclosed in blue frames.



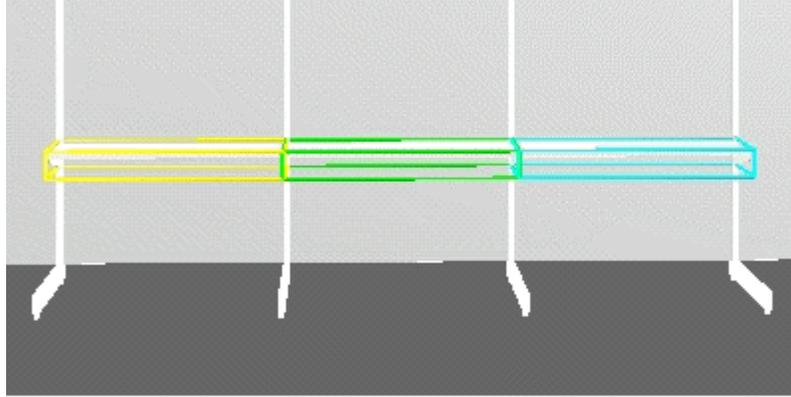
Individual objects can be de-selected by holding down the <Ctrl> key and left clicking on them with the mouse for a second time. All objects in the Standard Selection Set can be de-selected by holding down the <Ctrl> key and clicking on the red frame for a second time.

Family and Group Selection Sets

Objects that have been put into Families or Groups are enclosed by yellow and green frames.



If Grouping is Off it is also possible that cyan frames are visible.



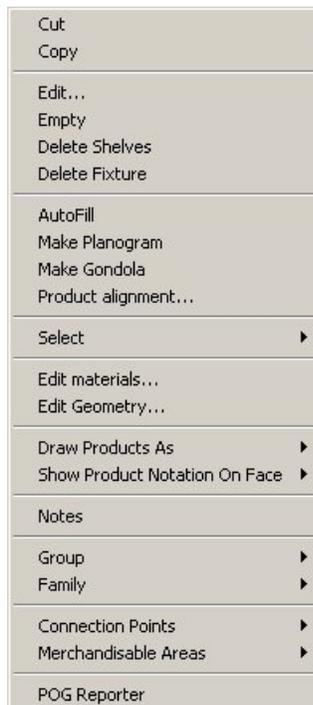
If Grouping is On, then all objects in the set can be selected or de-selected by clicking on any member of the set. If Grouping is Off, individual objects can be de-selected by holding down the <Ctrl> key and left clicking on them with the mouse for a second time. All objects in the set can be de-selected by holding down the <Ctrl> key and clicking on the yellow frame for a second time.

General De-Selection

All currently selected objects can be de-selected by <Ctrl + D>.

Editing Objects

Objects can be edited by holding down <Ctrl> and right clicking on them with the mouse. This brings up the Editing menu.



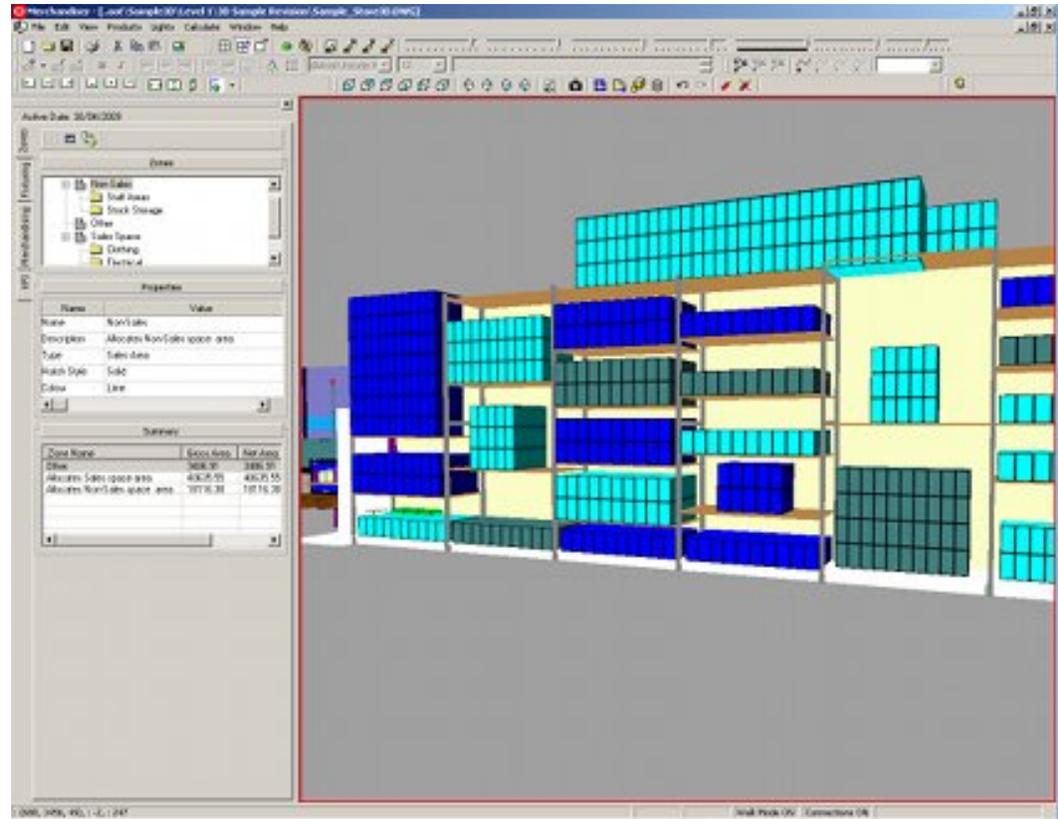
Editing menu

This gives access to a wide range of options.

Viewing the Objects

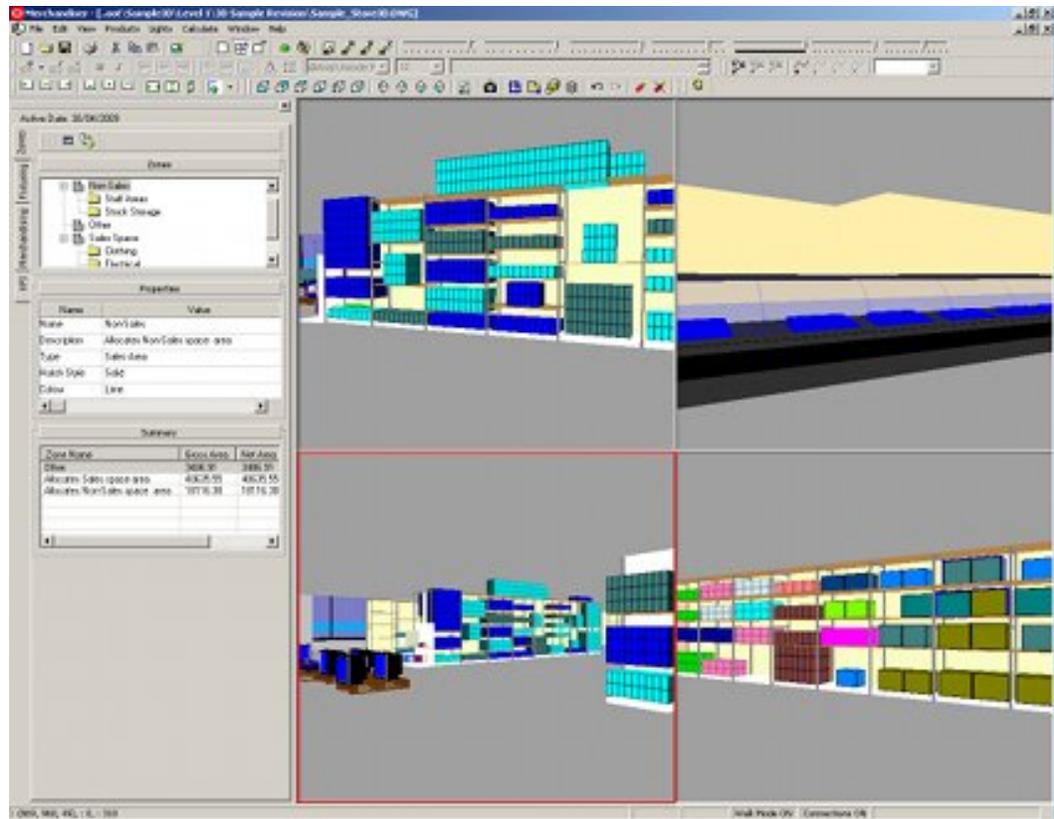
Viewports

Merchandise can be viewed using **single or multiple ViewPorts**. A single ViewPort shows one image of the Virtual Reality Store.



Single ViewPort

Changing to 4 ViewPorts shows four images of the Virtual Reality store.

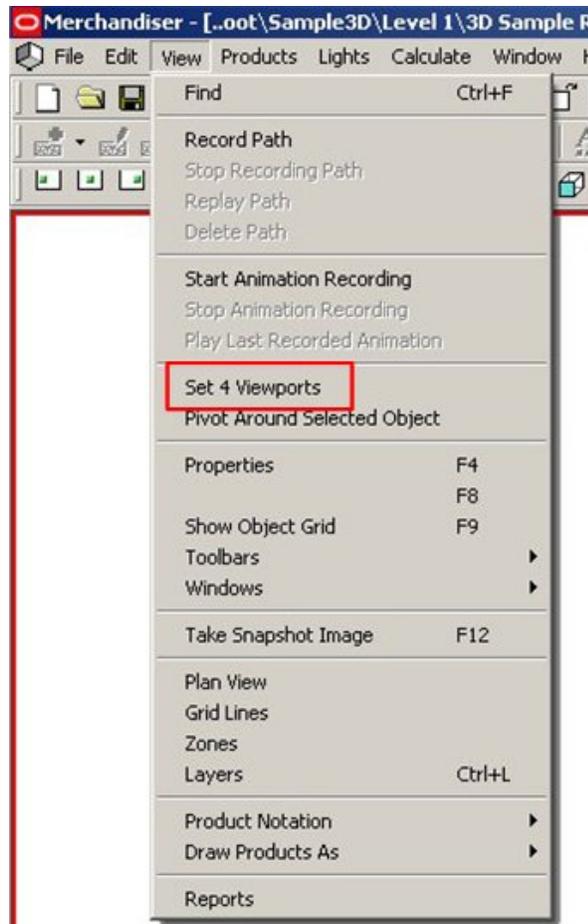


These 4 ViewPorts can either be treated as separate entities or they can be synchronized. If used as separate entities, they can be used, for example, to move merchandise from one set of shelves to another. If used when synchronized, they can be used, for example, to show three different KPIs (Key Performance Indicators), for the same part of the store.

Setting Up and Switching Between ViewPorts

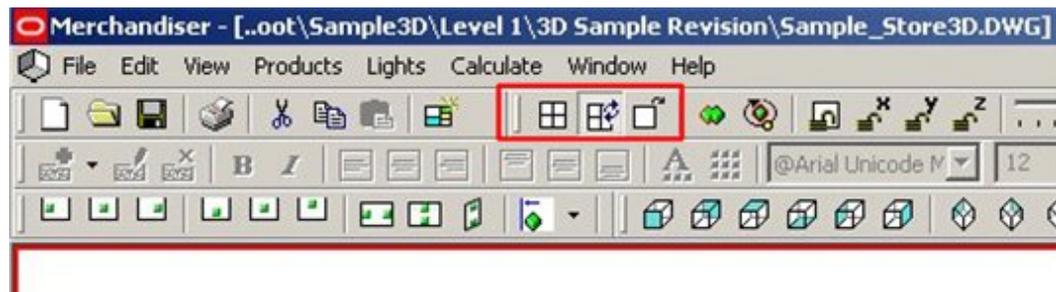
When the drawing opens, it shows a single view of the store plan. If 4 ViewPorts are enabled when the drawing was last saved and closed, the top left ViewPort is displayed when the drawing is re-opened. Starting/returning to the 4 ViewPorts option can be achieved using the menus or toolbars. If using the View pull down menu, clicking on Set 4 ViewPorts changes the display from one to four viewpoints.

If you are already using four viewpoints, then the pull down menu reads Set 1 view point, enabling you to toggle back to a single view point.



View Menu - Viewport Options

Alternatively, you can click on the appropriate icon in the toolbar. You can toggle between Show 4 ViewPorts and Show 1 viewport. The Next View icon toggles between the available views.



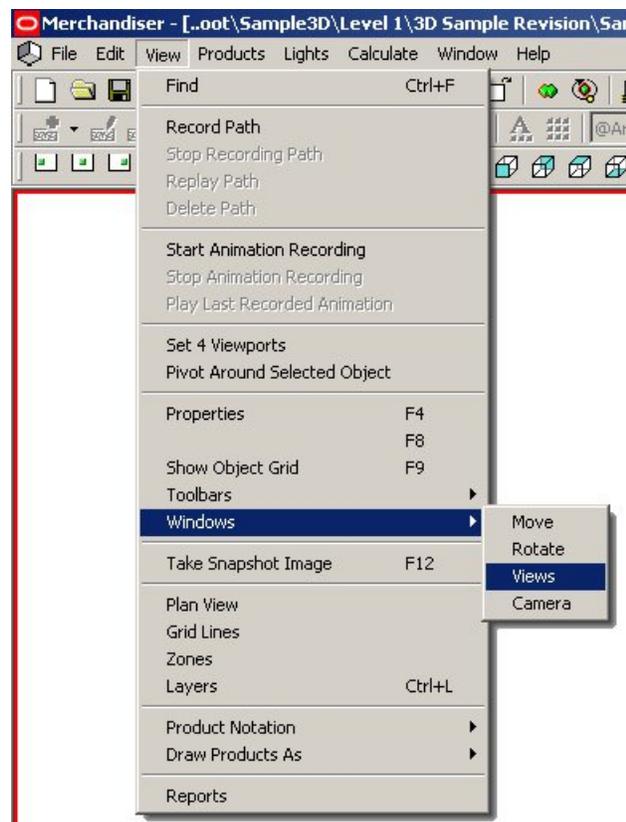
ViewPorts

Icon	Function
	Switch to 4 ViewPorts

Icon	Function
	Switch to 1 ViewPort
	Next view

Saving and Restoring ViewPorts

While working in a Virtual Reality store, it is possible to save **ViewPorts** for later restoration. To do this, select the Windows > Views option from the View pull down menu.



View menu

This brings up the Views dialog box.

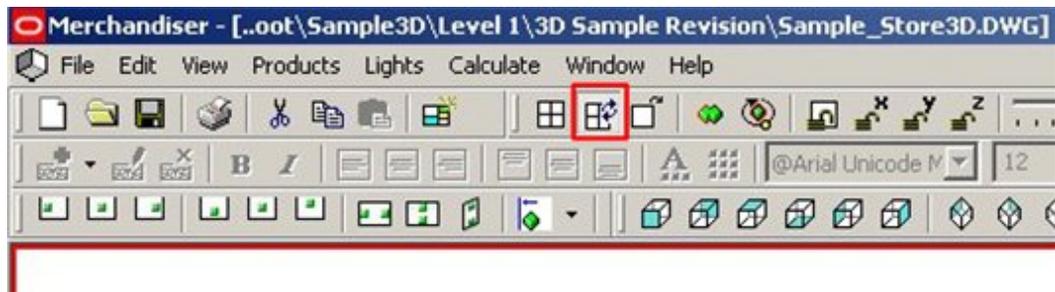


Views dialog box

This enables you to either save or restore specific ViewPorts.

Synchronizing ViewPorts

The views in the 4 ViewPorts can be **synchronized** if required. This is achieved from the toolbar.



Synchronize Viewports

Click the Synchronize icon immediately switches all four viewpoints to mirror the viewpoint in the currently active window. Click the Synchronize icon again desynchronizes the four viewpoints so that they can be manipulated independently.

Note: If you have toggled from Show 1 Viewport to Show 4 ViewPorts and 3 Viewports are blank, clicking on the synchronize icon is a quick way of populating the blank ViewPorts with views.

Changing the Visibility of Objects

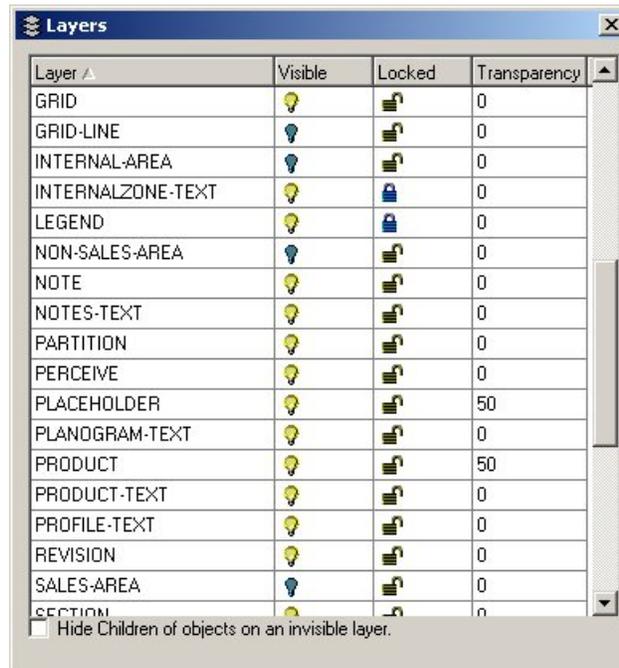
The way objects display in a store plan can be changed in three ways in Merchandise. The drawing is subdivided into layers and each class of object (fixture, fitting, product, etc), has its own specific layer. By changing the properties of the layer, you can change the display of objects on that layer.

- **Locking the Layer** - Locking the layer prevents objects on that layer being moved or deleted.
- **Changing the Visibility** - It is possible to turn layers on or off. If a layer is turned on, objects on it are visible. If a layer is turned off, they are hidden.
- **Changing the Transparency** - The transparency values for a layer (and the objects on that layer) can be changed anywhere within a range of 0% - 100%. If the

transparency is set to 0%, objects are completely opaque. If the transparency is set to 100% objects are completely transparent.

Locking the Layers

It is possible to lock objects so that they cannot be altered when in place in the Merchandiser environment. This is done by using the locking option in the Layers dialog box, accessible from the View toolbar.



This shows the layers and whether they are locked or not.

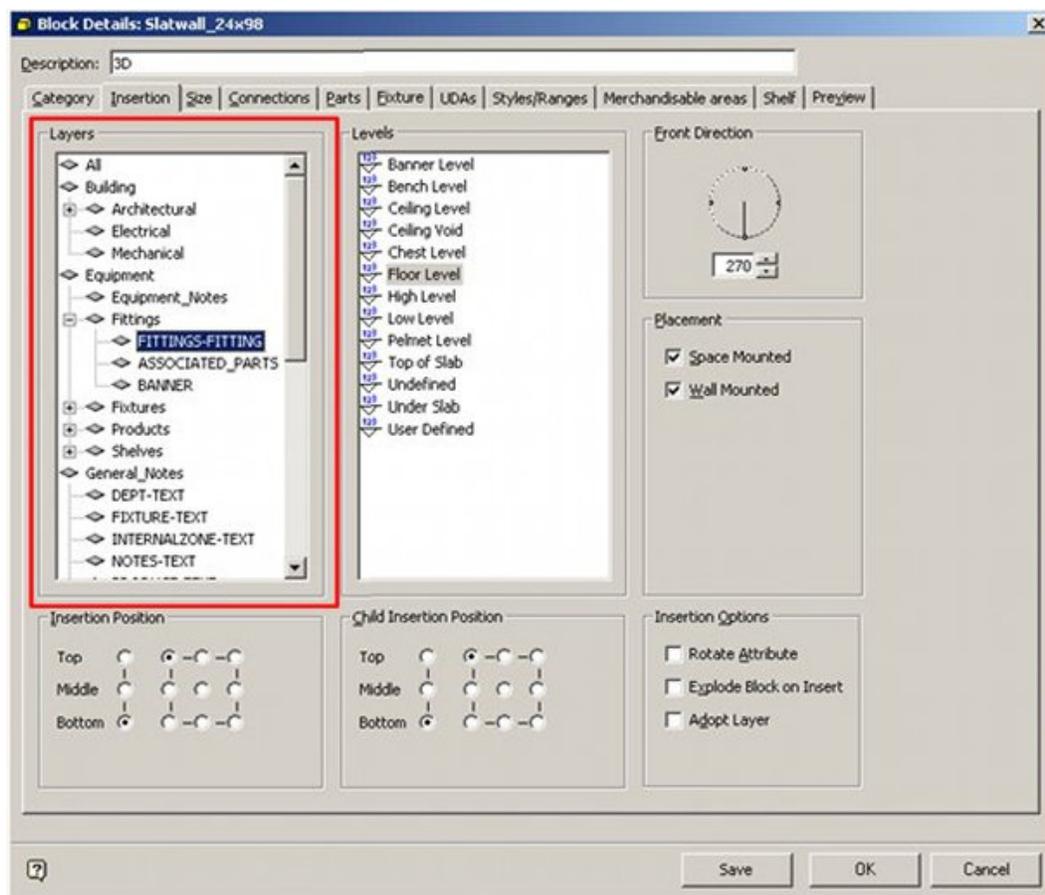
	Layer unlocked
	Layer locked.

The lock for each layer can be toggled on or off by clicking on the appropriate icon.

Note: Depending on the system variable settings, some layers are automatically locked depending on which Object Browser tab you are in.

If the system variable is enabled, when in the Fixturing Tab, all layers associated with merchandising are locked. Similarly, when in the Merchandising Tab, all layers associated with fixturing are locked.

Locking of specific classes of objects is achieved by locking the layers that those objects are placed on. The layer for the majority of objects, such as fixtures, fittings and shelves, are determined when the object is created in Fixture Studio.



Block Details

Note: Layers selected for classes of objects should be consistent. If they are not then only some of the class of objects is locked when a specific layer is turned off.

Layers for zones are determined by the Zone Type. Fixtures and fittings must be placed on specifically defined and consistent layers. Products are placed on their own specific layer.

Locking layers is particularly useful for any object that is on the building layer, that is, pillars, which should not be modified in the Merchandiser environment. Locked objects can still be selected, so that properties can be determined.

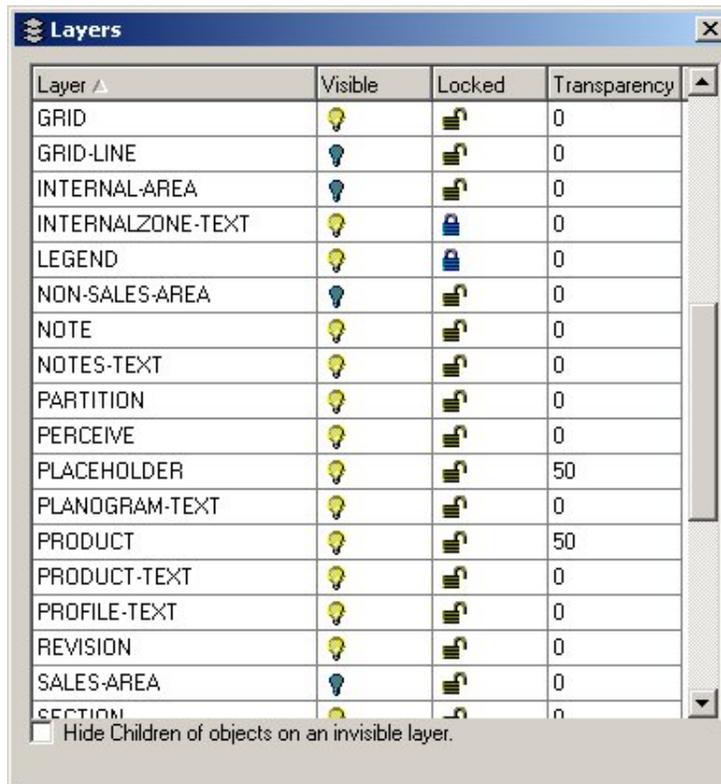
When locked objects are selected, a warning message appears at the bottom of the screen.



Note: If objects are locked, then they cannot be deleted, moved, etc. If it is desired to do this, the layer must first be unlocked.

Changing the Visibility of Objects

The visibility of objects can be changed so that they show or are hidden from view in store plans. This is done by using the Visibility option in the Layers dialog box, accessible from the View toolbar



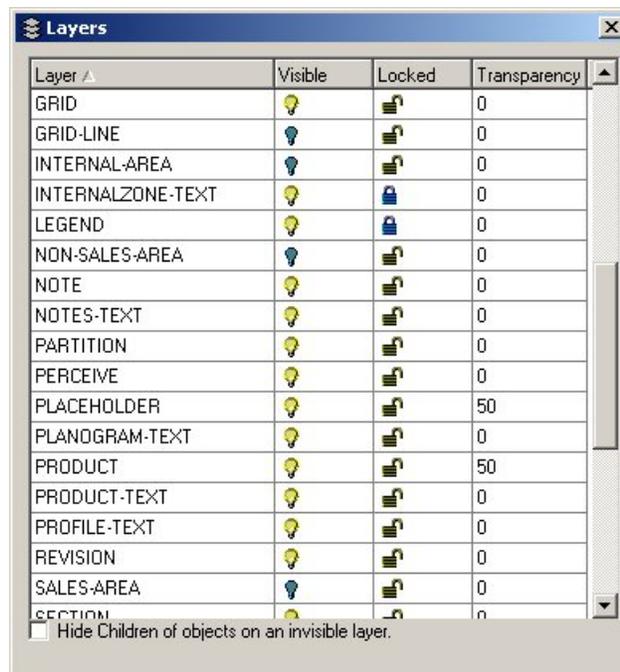
This shows the layers and whether they are visible or not.

	Layer visible
	Layer not visible

The visibility for each layer can be toggled on or off by clicking on the appropriate icon. If the layer is not visible, all objects on the layer will be hidden.

Changing the Transparency of Objects

It is possible to change the transparency of objects so that they become more or less opaque when in place in the Virtual Reality environment. This is done by using the Transparency option in the Layers dialog box, accessible from the View toolbar.

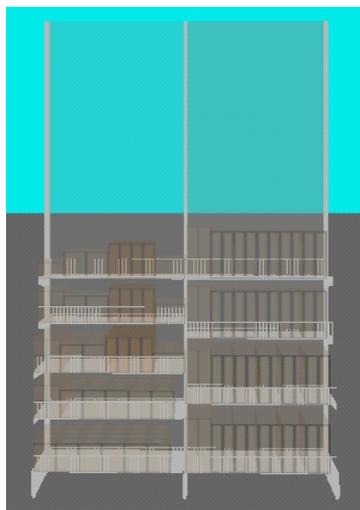


The degree of transparency for each layer can be set anywhere within a range of 0% - 100%. If the transparency is set to 0%, objects are completely opaque. If the transparency is set to 100% objects are completely transparent.

In the example below, the transparency is set to 0% - opaque.



In the example below, the products and back panels have been set to 75% transparency.



Groups and Families

Groups and Families are two ways of linking similar objects together and to associate combinations of objects together. The advantages of groups and families are:

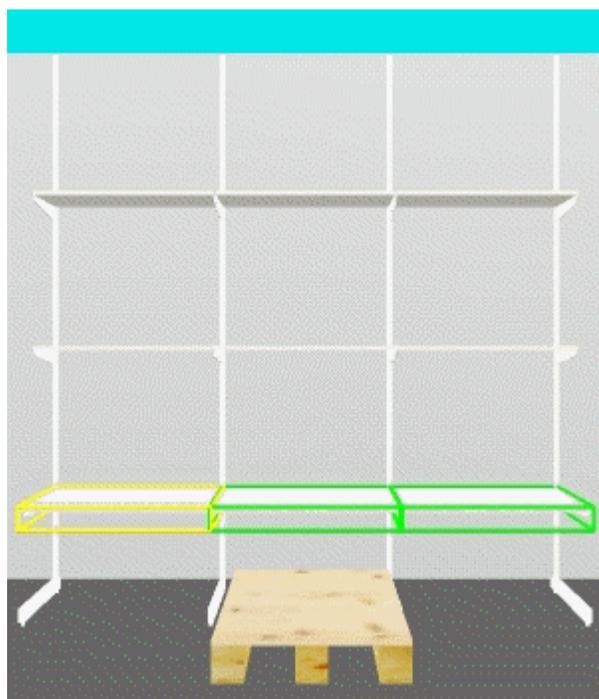
- All objects in these combinations can then be selected and de-selected in a single operation.
- Objects in Groups or Families can be collectively manipulated using operations such as move, rotate or delete.
- The spatial relationship between objects in Groups and Families taken into account by Macro Space Management when carrying out changes in fixturing or

merchandising. This means (for example) entire runs of shelves can be merchandised at once.

Groups and Families operate differently depending on whether the objects involved are Fixtures, Shelves, or Products.

Groups

Groups are objects that share a horizontal alignment. Only objects of the same type can be grouped, for example, fixture with fixture, shelf with shelf and product with product. Groups can be Fixture Groups, Shelving Groups and Product Groups. They are used for operations on similar objects, such as shelves at the same level that span multiple fixtures.



Object Groups

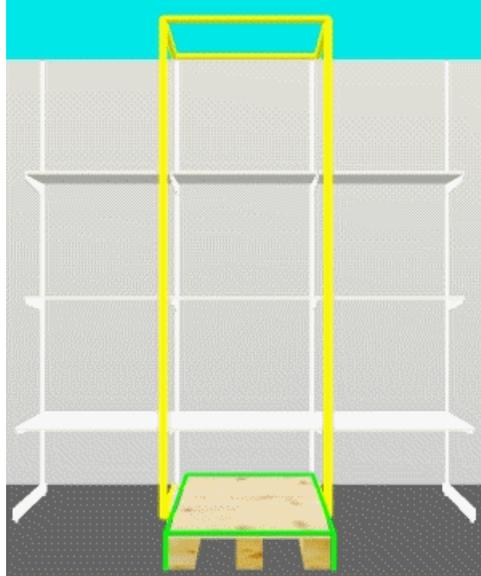
An example is the shelf group above, which spans three fixtures and can now be treated as one long shelf for merchandising purposes.

Note: Objects in Groups will have their horizontal alignments taken into account by **Macro Space Management**.

Families

Families are objects that share a vertical alignment. Families are used when grouping vertical combinations of objects and act as a parallel version of grouping. Families can be Fixture Families or Product Families. Shelves cannot be incorporated into Families. For instance, pallets may be placed in front of back panels, and made into a family. Their vertical alignments and interferences are taken into account. With products, families can

be made of different (but probably broadly similar) products, for example, a family of small, medium and tall vases stacked in a vertical plane.



An example is the back panel and its associated shelves. This forms a family with the pallet. This means that when the pallet is merchandised, Macro Space Management will automatically calculate the clearance to the shelf above it, and adjust the amount of merchandise it places on the pallet accordingly.

Note: Objects in Families will have their vertical alignments taken into account by Macro Space Management.

Sets

A Set is an array of products that has been ungrouped. Grouped product can be turned into sets, but the process is not reversible.

Note: Do not un-group products unless necessary. Un-grouping cannot be reversed. Too many un-grouped products will significantly increase the amount of calculation required by Macro Space Management and may degrade performance.

Multiple Associations

Objects can only belong to one Group at a time. Similarly, objects can only belong to one Family at a time. However, there are circumstances where objects can belong to both a Group and a Family. When objects with multiple associations are selected for being part of a Group, horizontal alignments will be taken into account. When selected for being part of a Family, vertical alignments will be taken into account.

Turning Grouping On or Off

Grouping can be turned On or Off in one of three ways; the keyboard, the status bar and from the pull down menus. Turning Grouping On and Off turns both Groups and Families On and Off.

Keyboard

Grouping can be toggled On or Off using <Ctrl> + G.

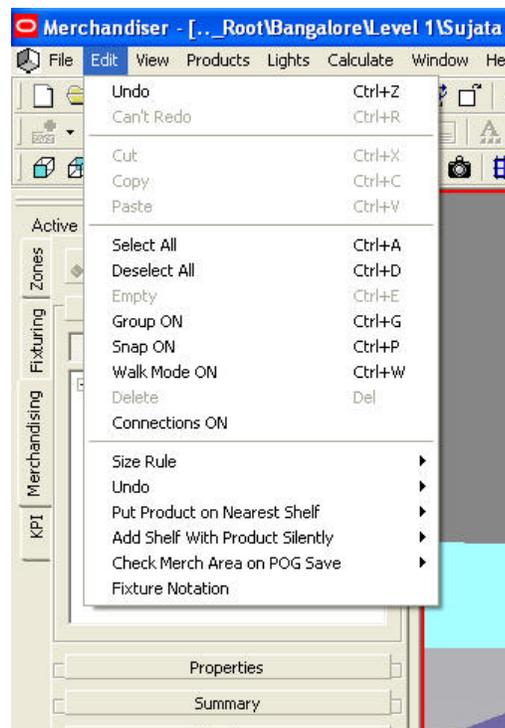
Status Bar

Grouping can be toggled On or Off by clicking on the Grouping option on the Status Bar.



Pull Down Menu

Grouping can be toggled On or Off by clicking on the Grouping option in the Edit pull down menu.



Edit menu - Grouping On or Off

If Grouping is enabled, then if an object is selected that belongs to a Group or Family, then all other objects in that Group or Family will be automatically selected or de-selected. If Grouping is not enabled, then selecting or de-selecting on object in a Group or Family will have no effect on the other members of that Group or Family.

Turning Grouping On is not retrospective – the option must be enabled before selecting all the members of a Group or Family. If Grouping is turned On after an individual

member of a Group or Family has been selected, it will not result in the selection of the remaining members of that Group or Family.

Note: If Grouping is Off, then clicking on the first member of the Group or Family (the yellow fixture) will still de-select the whole Group or Family. However, re-clicking on this yellow fixture will not re-select all members.

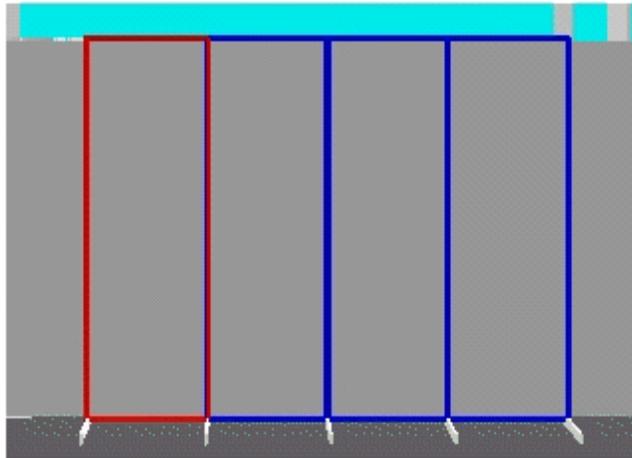
This is because with Grouping Off, the yellow fixture is acting like the first fixture in a normal (ungrouped) selection set.

Selection of Objects

Objects are selected by means of <Ctrl> and left click. They are de-selected by using <Ctrl> and left click.

Initial Selection of Objects

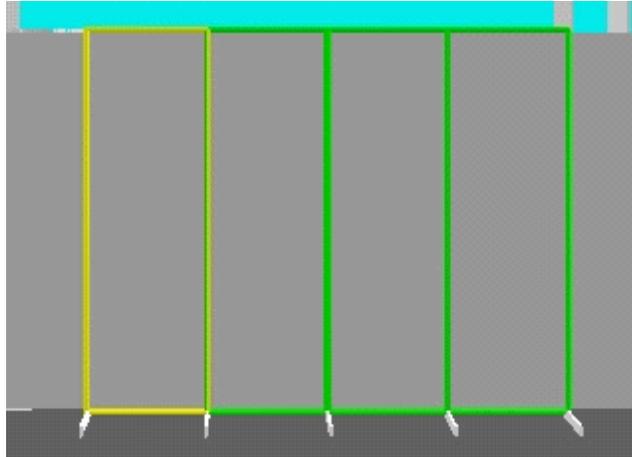
When objects are initially selected for Groups or Families, the first object selected is outlined in red, and all subsequent selections are outlined in blue.



Object Groups

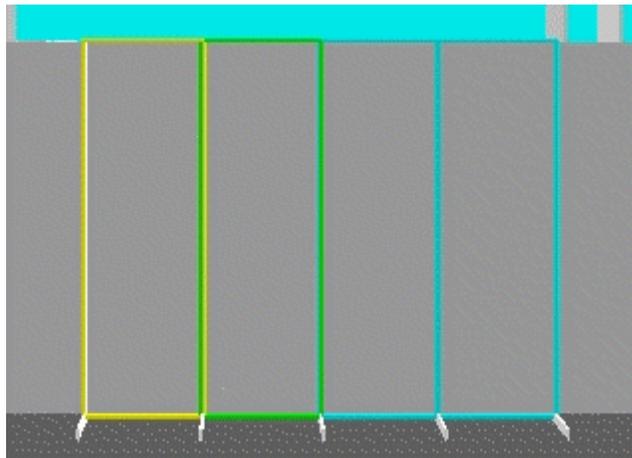
Note: In the selection set, re-selecting the first object selected (outlined in red) deselects all objects in the selection set. Re-selecting any of the subsequent selections (outlined in blue) only deselects that object.

After objects have been selected and added to a Group or Family, the initially selected object is outlined in yellow, and all subsequent selections are outlined in green.



Note: While Grouping is turned on, clicking on any object in the set selects or deselects the set as appropriate.

If Grouping is turned Off and objects are de-selected then re-selected by <Ctrl> + left clicking, then the re-selected objects are outlined in cyan.



Unselected objects remain in yellow (first selected object) and green (subsequent objects).

Note: In the selection set, re-selecting the first object selected (outlined in yellow) deselects all objects in the selection set. Selecting any of the subsequent selections (outlined in yellow or cyan) only deselects that object.

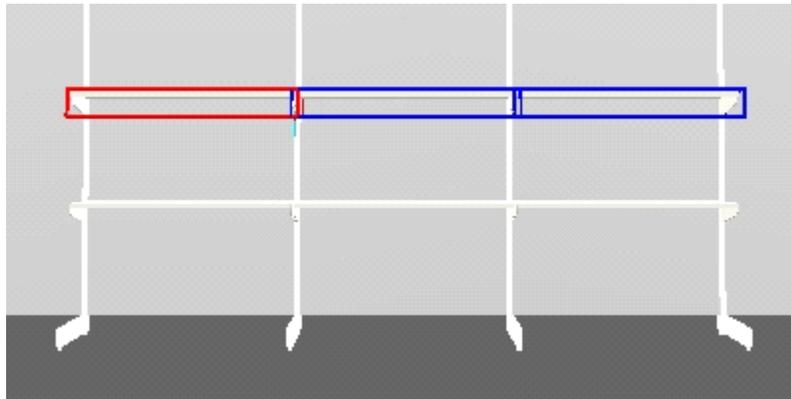
With Grouping turned Off, individual objects in the Group or Family can be manipulated as separate objects. However objects remain in the group, and can be selected or de-selected collectively once Grouping is turned back On.

Making Objects into Groups

Objects can be made into Groups if they are of similar type. Thus shelves can be made into Groups and products can be made into Groups, but a Group may not contain both shelves and products. Grouped objects are in Horizontal alignments.

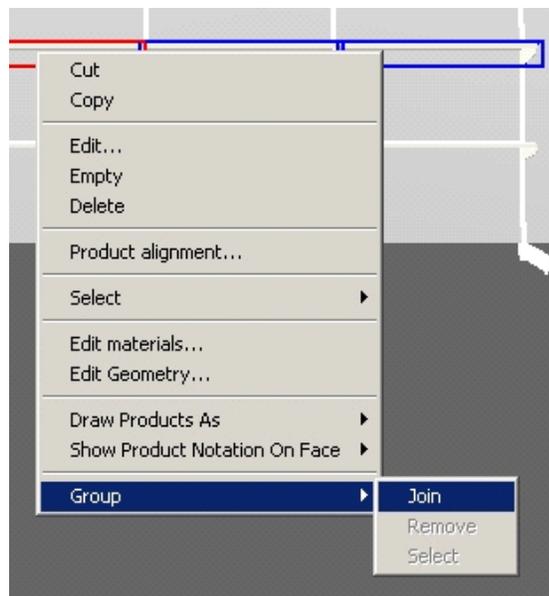
Making and Removing Groups is only possible when the appropriate Tab has been selected in the Object Browser:

- For Fixtures this must be the Fixturing tab.
- For Shelves this may be either the Fixturing or Merchandising Tabs.
- For Products this must be the Merchandising Tab.



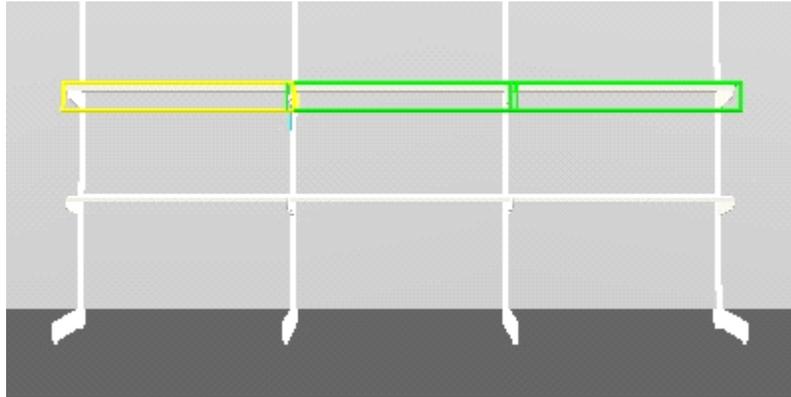
To make a Group:

1. Select the objects required. The initial object selected is in red, subsequent objects in blue.
2. When all objects have been selected, hold down <Ctrl> and right click to bring up the pop-up menu.



Group Menu - Join

3. Select the Join option and the selected objects will be made into a Group.



This is signified by the initially selected object from the selection set turning to a yellow color and subsequently selected objects turning to a green color.

Fixture Groups

Fixture Group Operations

The primary purpose of Fixture Groups is to form combinations of fixtures that can then be manipulated collectively. Fixture Groups can be selected or de-selected by clicking on any fixture within the group (as opposed to individually selecting the fixtures each time they are required).

Fixture Groups can then be manipulated (moved, rotated or edited) collectively.

Gondolas, Fixtures and Fittings

When Gondolas are placed, they are automatically designated a Fixture Group.

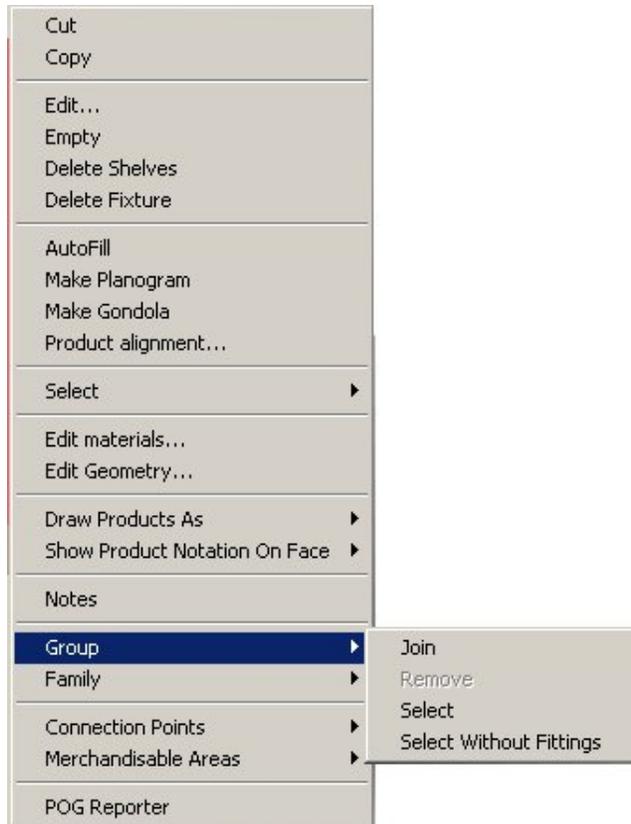
When Fixtures and Fittings are placed they are not included in any groups and have to be selected and designated a Fixture Group before they can be collectively manipulated.

Group Members

Fixtures and fittings can only belong to one group at a time. Fixture Groups cannot contain different types of objects such as shelves.

Group Functions

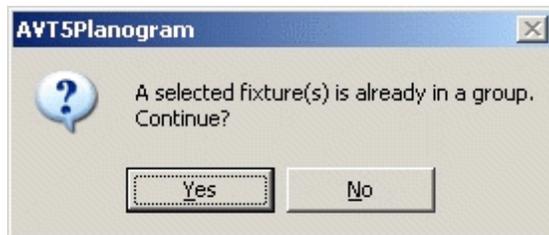
Group Functions are accessed from the Group option on the pop-up menu accessed by <Ctrl> and right clicking.



Group Functions

Join Group

Join Group creates a group from the selected fixtures. If a fixture belongs to a group already, then it is removed from that group and added to the new group. A confirmation message appears before the group is created.



Note: If the objects selected are not compatible for forming a Group, the Join option is not activated.

Remove from Group

Remove from Group allows you to remove fixtures from the selected group. If Grouping is turned On, all objects are removed from the group.

If Grouping is turned Off, then individual objects can be removed from the group by first de-selecting all members of the Group, then re-selecting the objects it is desired to

remove. Clicking on Remove then removes those objects from the group. A confirmation message appears before the object(s) are removed.



Select

Select serves two functions.

- It reverses the effect of the Select Without Fixtures command and the group will now have both Fixtures and Fittings active.

If Grouping is Off, then selecting any single member of the Group and using the Select option will result in the other members of the group being selected.

If Grouping is On then all members of the family will automatically be selected by clicking on any member of it.

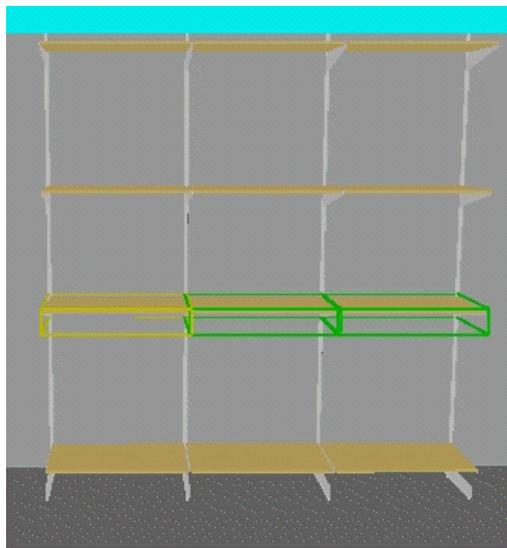
Select Without Fittings

Select Without Fittings selects only the fixtures within the group. All subsequent operations only affects these fixtures until the fittings are included again using the Select command.

Note: Care should be taken in manipulating the Group while the Select Without Fixtures command is active. For example, only the fixtures will be moved, leaving any fittings in their original position.

Shelf Groups

Shelf Groups are groups of shelves that are at the same height, at the same angle and form a continuous run.



Shelf Groups

Shelves can be added to Shelf Groups providing they are adjacent and their height and angle match the existing members of the group. Grouped shelves allow you to treat adjacent shelves as one long shelf. This enables you to place products that span more than one shelf.

Grouping can be applied to any type of shelf objects, such as open shelves, rods, bars, pegs, dividers etc.

Group Members

Fixtures and fittings can only belong to one group at a time. Fixture Groups cannot contain different types of objects such as shelves.

Group Functions

Group Functions are accessed from the Group option on the pop-up menu accessed by <Ctrl> and right clicking.

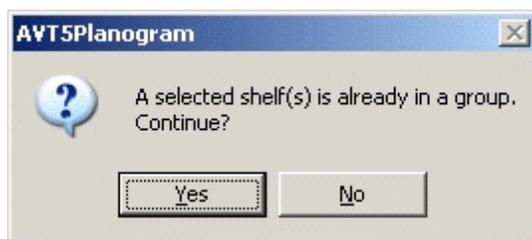


Group Options

The following functions are available:

Join Group

Join Group option creates a group from the selected shelves. If a shelf belongs to a group already, then it removes the shelf from that group and adds to the new group. A confirmation message appears before the group is created.



Note: If the objects selected are not compatible for forming a Group, the Join option is not activated.

Remove from Group

The Remove from Group option allows you to remove shelves from an existing group. If Grouping is turned On, all objects are removed from the group.

If Grouping is turned Off, then individual objects can be removed from the group by first deselecting all members of the Group, then re-selecting the objects to remove. Click

Remove to remove those objects from the group. A confirmation message appears before the object(s) are removed.

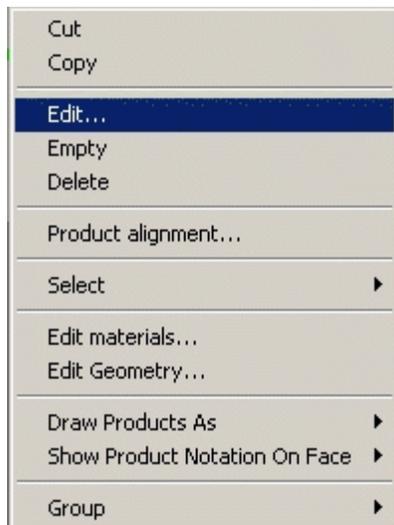


Select

If Grouping is Off, then selecting a shelf and selecting this command causes all other shelves in the shelf group to be selected and displayed.

Editing Grouped Shelves

Grouped Shelves can be edited by selecting the Edit option from the right click pop-up menu.



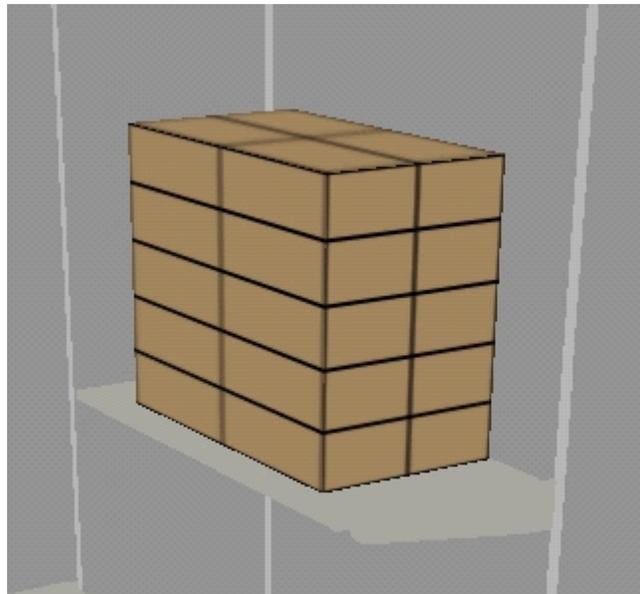
This brings up the Edit Shelf dialog box. This can be used to make changes to the Grouped Shelves.

Edit shelf			
Position:	Slot:	Angle:	Size: <input type="button" value="Default"/>
X: <input type="text" value="0"/>	<input type="text" value="0"/>	X: <input type="text" value="0.0"/>	X: <input type="text" value="900.00"/>
Y: <input type="text" value="0.00"/>		Y: <input type="text" value="0.0"/>	Y: <input type="text" value="385.00"/>
Z: <input type="text" value="573"/>	<input type="text" value="10"/>	Z: <input type="text" value="0.0"/>	Z: <input type="text" value="30.00"/>
Fixture - Height: 2900 Slots: 61 First Slot: 123 Spacing: 45 Width 900 Slots: 900 First Slot: 0 Spacing: 0			
Material:	<input type="text" value="White Shelf"/>		
Preferred Style:	<input type="text" value="(None)"/>		
<input type="button" value="?"/>		<input type="button" value="OK"/>	<input type="button" value="Cancel"/>

Edit Shelf dialog box

Product Groups

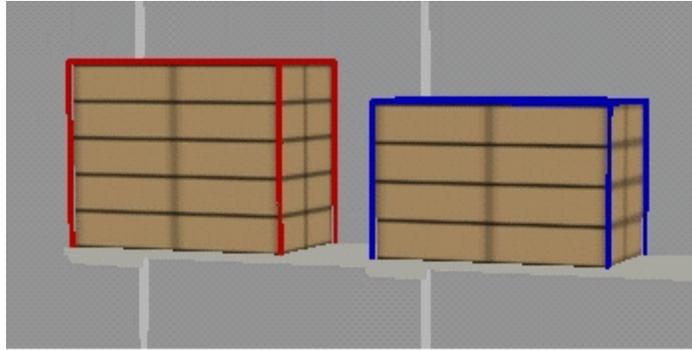
Product Groups are organized stacks of products.



Product Groups

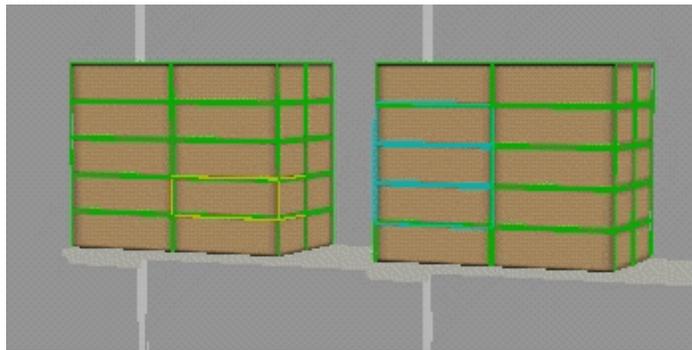
Product Groups are automatically generated when products are placed in the Virtual Reality environment as an array.

While Products are grouped, all the products within the Group can be treated as a single object that can be rotated, moved or deleted. Product Groups are highlighted using red and blue selection boxes.



Product Groups

If products are ungrouped, they become a set and can be manipulated as individual or collective items. Sets are highlighted using yellow and green selection boxes (if Grouping is On) and yellow, green or cyan selection boxes (if Grouping is Off).



Product Groups

Un-grouping is carried out by selecting in single product group by holding down <Ctrl> and right click to bring up the pop-up menu.

**Product Ungroup Dialog Box**

Un-grouping is a one-way action; products cannot be regrouped once they have been ungrouped.

Note: Un-grouping cannot be carried out if two separate product groups have been selected simultaneously.

Note: Do not un-group products unless necessary. Un-grouping cannot be reversed. Too many ungrouped products will significantly increase the amount of calculation required by Macro Space Management and may degrade performance.

Editing Grouped Products

Grouped Products can be edited by selecting the edit options from the right click pop-up menu.



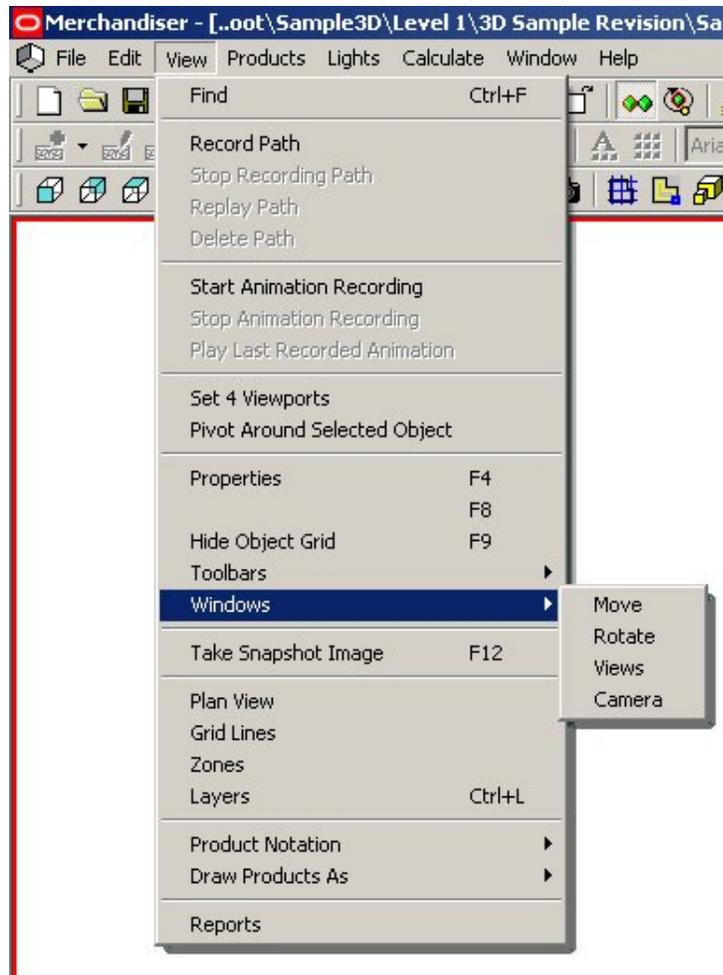
Edit Group Dialog Box

Edit allows the spatial orientation of the product group to be changed. Edit Group allows the number of instances of the product placed to be altered.

Group Operations

Moving and Rotating Families

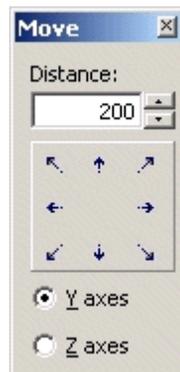
Objects in Families can be moved or rotated by using the View > Windows menu. In addition they may be moved and rotated using <Ctrl> and the mouse keys.



Move Groups

Move

Selecting the Move option brings up the Move dialog box.



This enables objects to be moved horizontally (Y axes) or vertically (Z axes).

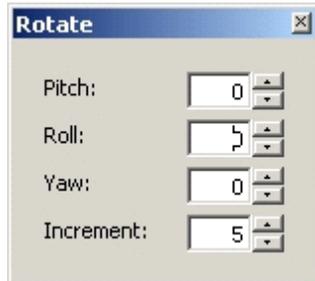
If fixtures are to be moved then the Fixturing tab must be selected on the Object Browser.

If products are to be moved then the merchandising tab must be selected on the Object

Browser. Shelves can be moved with either the Fixturing or Merchandising tabs selected on the Object Browser.

Rotate

Selecting the Rotate option brings up the Rotate dialog box.



Rotate dialog box

This enables objects to be rotated in all three axes.

If fixtures are to be rotated then the fixturing tab must be selected on the Object Browser. If products are to be rotated then the merchandising tab must be selected on the Object Browser. Shelves can be rotated with either the fixturing or merchandising tabs selected on the Object Browser.

Using <Ctrl> and the Mouse Keys

Moving Fixture Groups

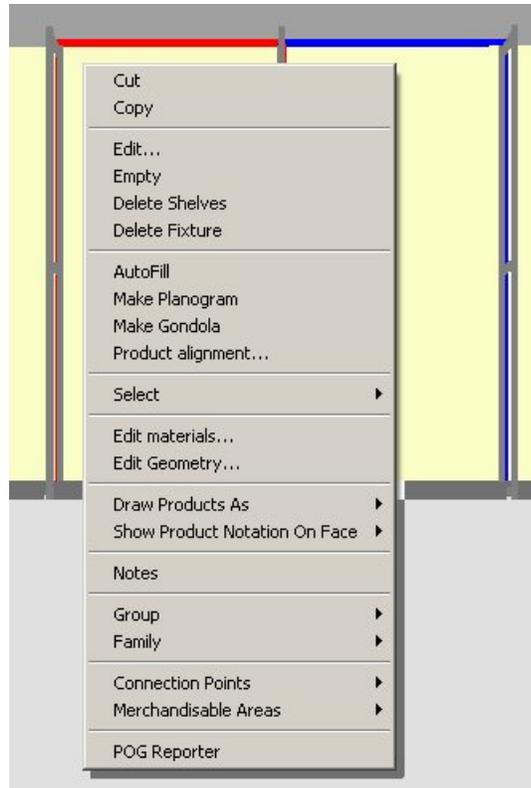
To move a Fixture Group, first ensure that the Fixturing Tab is selected in the Object Browser. Now move the Fixture Group by holding down the <Ctrl> and left mouse key. The selected Group follows the mouse cursor.

Rotating Fixture Groups

Rotating Fixture Groups by using the <Ctrl> and right mouse key is only available for individual fixtures.

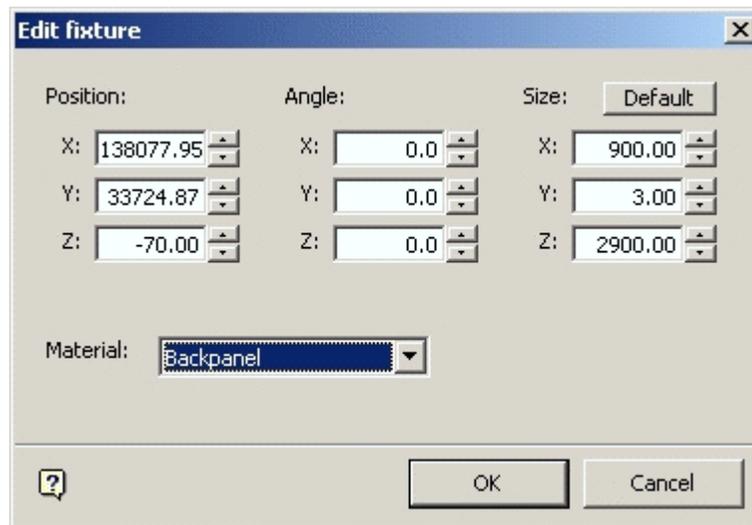
Editing Fixtures

The properties of a specific fixture or fixtures by selecting those required. This is done by holding down the <Ctrl> key and left clicking on the desired fixtures. The first instance of a selected fixture is highlighted in red, subsequent ones in blue. Holding down the <Ctrl> key and right clicking then brings up the pop-up Menu.



Edit Fixtures

Click on the Edit option to bring up the Edit Fixture dialog box.

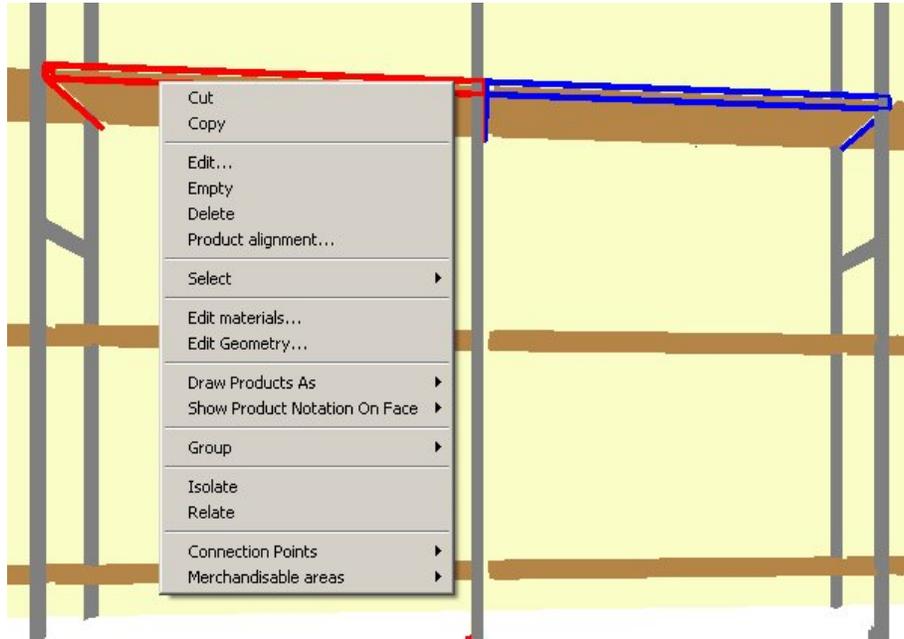


Edit Fixture dialog box

This can be used to set the preferences for that specific fixture or fixtures. If different types of fixtures have been included in a multiple fixture selection, only options common to the different types are shown. If there are no common options, then the affected fields are blank.

Editing Shelves

You can edit the properties of a specific shelf or shelves by selecting those required. This is done by holding down the <Ctrl> key and left clicking on the desired shelves. The first instance of a selected shelf is highlighted in red, subsequent ones in blue. Holding down the <Ctrl> key and right click then brings up the pop-up Menu.



Click on the Edit option to bring up the Edit Shelves dialog box.

 A screenshot of the 'Edit shelf' dialog box. The dialog has a title bar with a close button. It contains several sections:

- Position:** X: 0, Y: 0.00, Z: 933
- Slot:** 0
- Angle:** X: 0.0, Y: 0.0, Z: 0.0
- Size:** Default (with a dropdown arrow)
- Fixture - Height:** 2900 **Slots:** 61 **First Slot:** 123 **Spacing:** 45
- Width:** 900 **Slots:** 900 **First Slot:** 0 **Spacing:** 0
- Material:** (none) (dropdown)
- Preferred Style:** (None) (dropdown)
- Buttons: ? (help), OK, Cancel

Edit Shelves dialog box

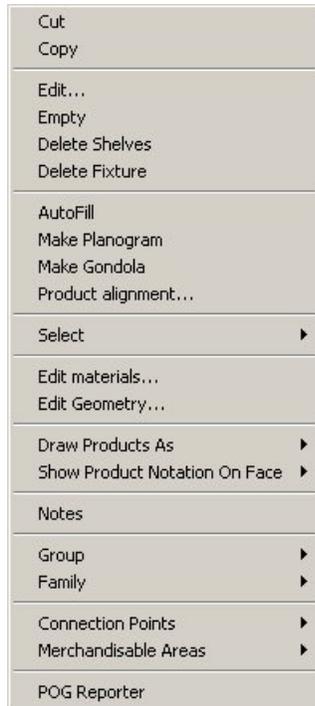
This can be used to set the preferences for that specific shelf or shelves. If different types of shelves have been included in a multiple shelf selection, only options common to the

different types will be shown. If there are no common options, then the fields in the preferences box will be blank.

Editing Products

Products can be edited from the Merchandising tab in the Object Browser. Holding down <Ctrl> and right click brings up the pop-up menu.

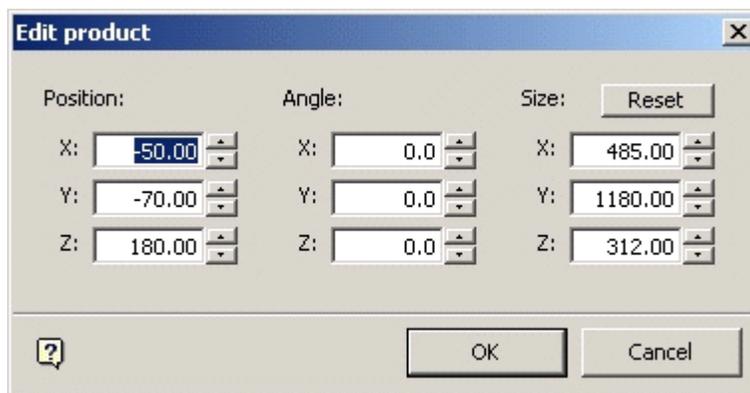
There are two options: Edit and Edit Group.



Edit Products

Edit

The Edit dialog enables a product to be edited for Position, Angle and Size.



Note: If dissimilar products are selected as part of the Group, only options that are common to those products are available for editing.

Edit Group

The Edit Group dialog enables the Quantity, Alignment, Detail, Orientation and Properties of a Product Group to be edited.



Note: If dissimilar products are selected as part of the Group, only options that are common to those products are available for editing.

Making Objects into Families

Similar type objects can be made into Families. Thus fixtures and products can be made into Families, but a Family may not contain both fixtures and products.

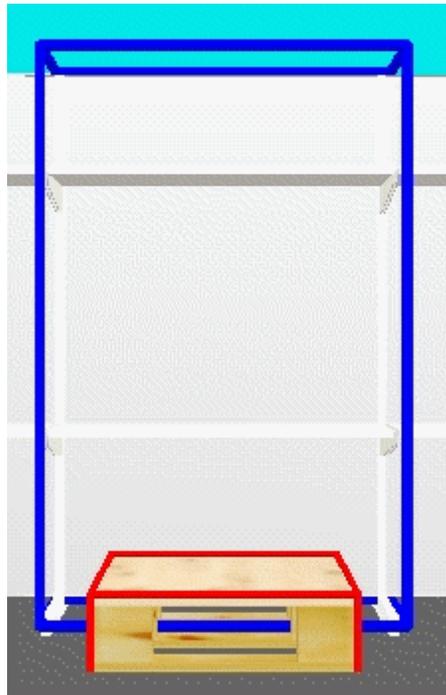
Families of objects are normally in Vertical alignments. Product families can be made from horizontally or vertically grouped products. Shelves may not be made into Families.

- For Fixtures, use the Fixturing tab.
- For Products, use the Merchandising Tab.

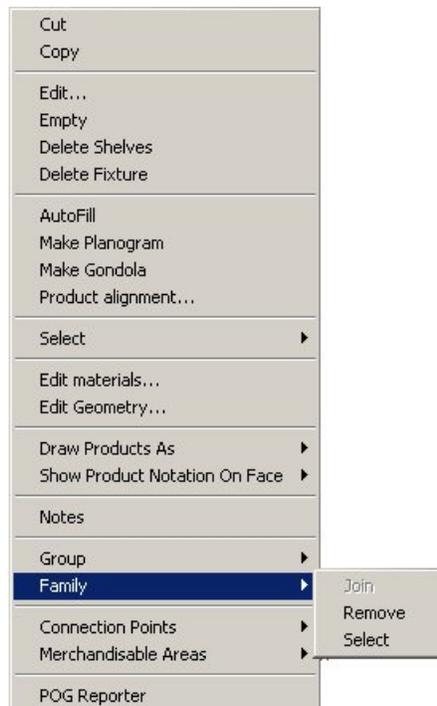
Note: Making and Removing Families is only possible when the appropriate tab has been selected in the Object Browser.

To make a Family:

1. First select the required objects from the Object Browser. The initial object selected will be in red, subsequent objects in blue.

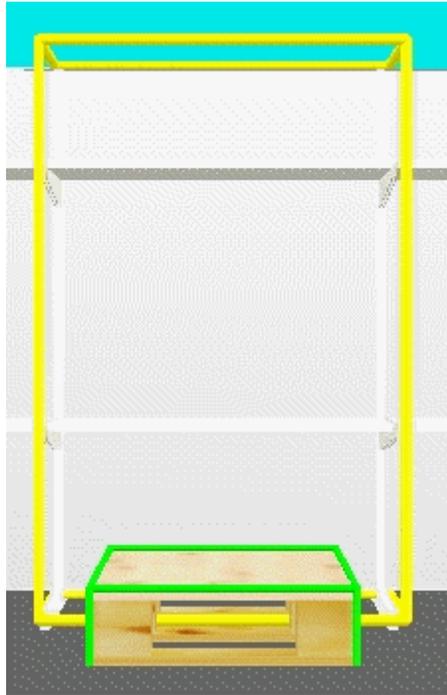


2. When all objects are selected, hold down <Ctrl> and right click to bring up the pop-up menu.



Family Options

3. Select the Join option and the selected objects are made into a Family.

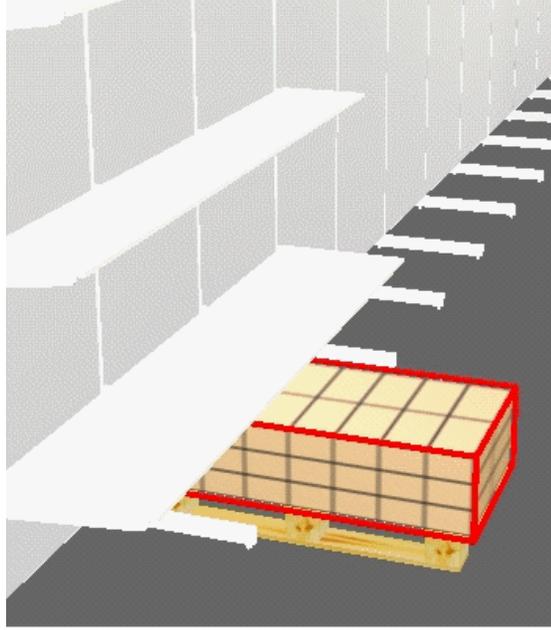


This will be signified by the initially selected object from the selection set turning to a yellow color and subsequently selected objects turning to a green color.

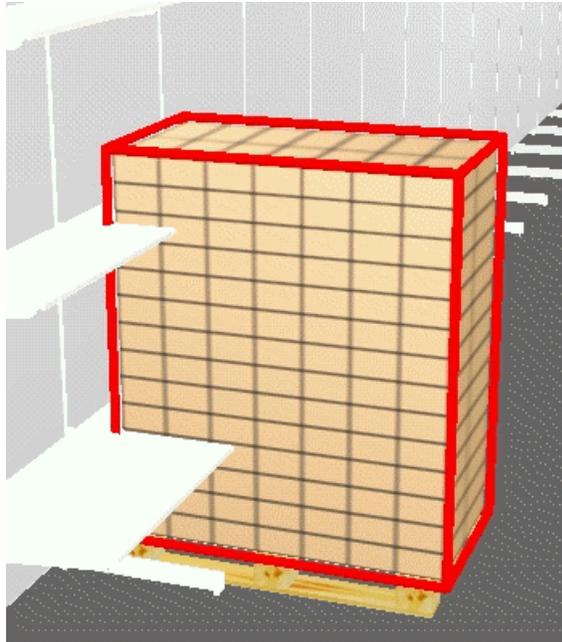
Avoiding Alignment Problems with Families

Fixture Families are used to establish relationships between fixtures where vertical alignment is important. Once fixtures are associated in families, Macro Space Management calculates the spatial relationship between the fixtures in the family.

In the example below the pallet and the shelves on the back panel behind it belong to the same family. When product is placed on the pallet, the vertical height is automatically restricted to that of the shelf above the pallet.



If the pallet and the shelves on the back panel behind it do not belong to the same family, then Macro Space Management does not take into account the spatial relationship between the two fixtures. When product is placed on the pallet, it is inserted to the full dimensions allowed by the pallet block details. This can result in product being positioned so that it clashes with the shelves.



Fixture Families

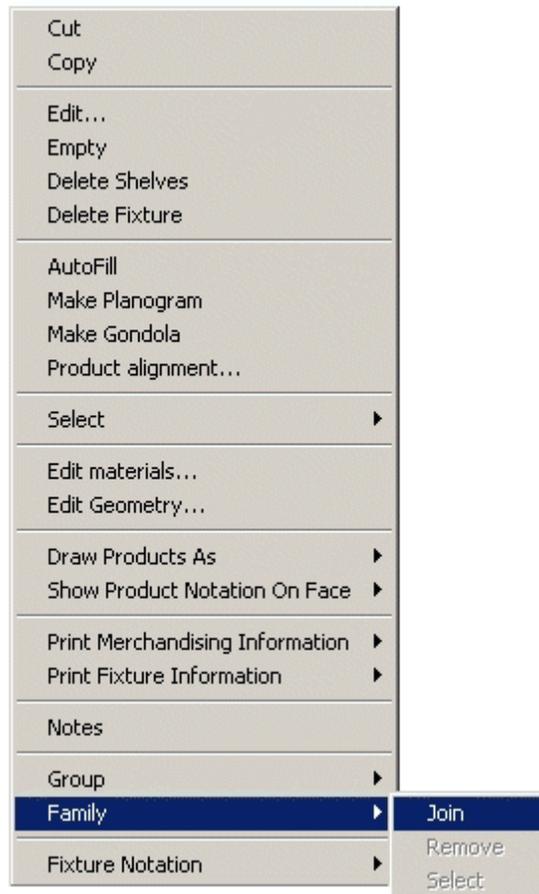
The primary purpose of Fixture Families is to form combinations of fixtures that can then be manipulated collectively. Fixture Families can be selected or de-selected by clicking on any fixture within the Families (as opposed to individually selecting the fixtures each time they are required). Fixture Families can then be moved, rotated or edited collectively. They can also be used to prevent vertical alignment problems for fixtures and products within a specific family.

Family Members

Fixtures and fittings can only belong to one Family at a time. Fixture Families cannot contain different types of objects such as products.

Family Functions

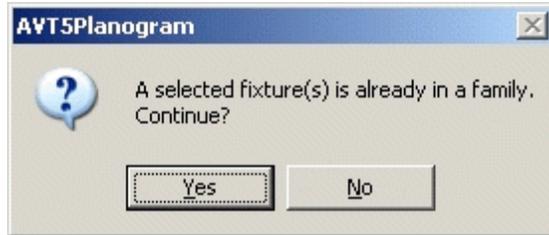
Family Functions are accessed from the Family Option on the pop-up menu accessed by <Ctrl> and right click.



Family Options - Join

Join Families

Join option from the Family menu creates a Family from the selected fixtures. If a fixture belongs to a Family already, then it is removed from that Family and added to the new Family. A confirmation message is displayed before the Family is created.



Note: If the objects selected are not compatible for forming a Family, the Join option is not activated.

Remove from Family

Remove option allows you to remove fixtures from the selected Families. If Grouping is turned On, all objects are removed from the Family. If Grouping is turned Off, then individual objects can be removed from the Family by first de-selecting all members of the Family, then re-selecting the objects that need to be removed.

Click on Remove to remove objects from the Family. A confirmation message is displayed before the object(s) are removed.



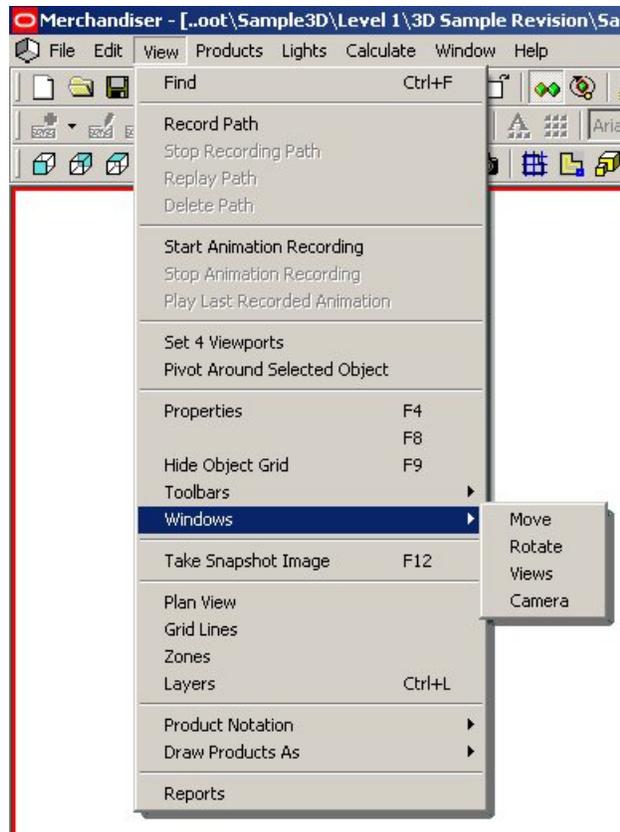
Select

When Grouping is Off, selecting any single member of the Group and using the Select Option results in other members of the group being selected. If Grouping is On, all members of the family are automatically selected by clicking on any member.

Family Operations

Moving and Rotating Families

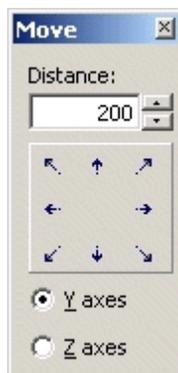
You can move or rotate Objects in Families by using the View > Windows menu. Or they may be moved and rotated using <Ctrl> and the mouse keys.



Rotate Objects in Families

Move

You can move the objects horizontally (Y axes) or vertically (Z axes) using the Move option. Select the Move option to bring up the Move dialog box.



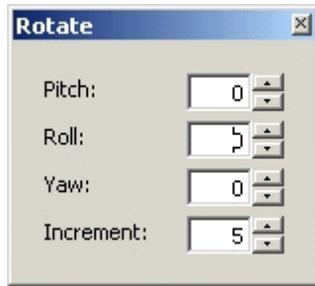
- If you want to move the fixtures, then the Fixturing tab must be selected on the Object Browser.
- If you want to move products, select the Merchandising tab on the Object Browser.
- If you want to move shelves, use either the Fixturing or Merchandising tabs on the Object Browser.

Moving Fixture Groups

If you want to move a Fixture Group using the Control key, select the Fixturing Tab on the Object Browser. Now move the Fixture Group by holding down the <Ctrl> and left mouse key. The selected Group follows the mouse cursor.

Rotate

Using the Rotate option, you can rotate the objects in all three axes. Select the Rotate option to bring up the Rotate dialog box.



Rotate dialog box

- If you want to rotate the fixtures, use the Fixturing tab on the Object Browser.
- If you want to rotate the products, use the Merchandising tab on the Object Browser.
- If you want to rotate the shelves, use either the Fixturing or Merchandising tabs on the Object Browser.

Rotating Fixture Groups

Rotating Fixture Groups by using the <Ctrl> and right mouse key is only available for individual fixtures.

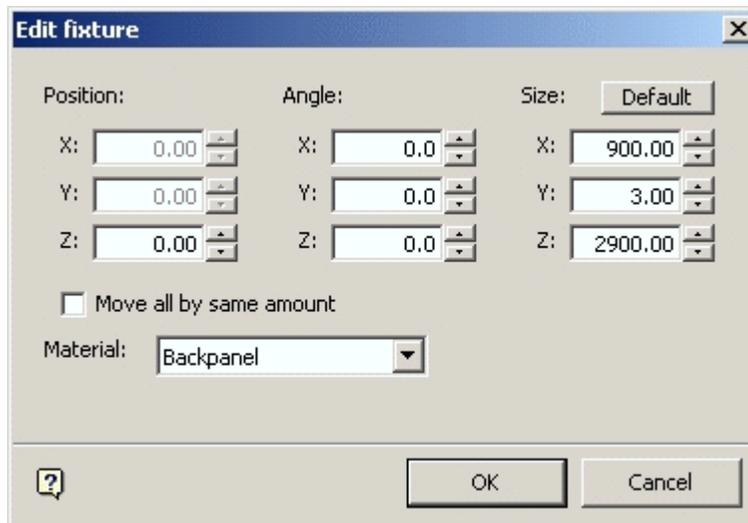
Editing Fixtures

Fixtures can be edited from the Fixtures tab on the Object Browser. Hold down <Ctrl> and right click to bring up the pop-up menu.



Edit Fixtures

Click on the edit option to bring up the Edit Fixture dialog Box.



This allows the Position, Angle, and Size of the fixtures to be edited.

Note: If dissimilar fixtures have been selected as part of the Group, only options that are common to those fixtures will be available for editing.

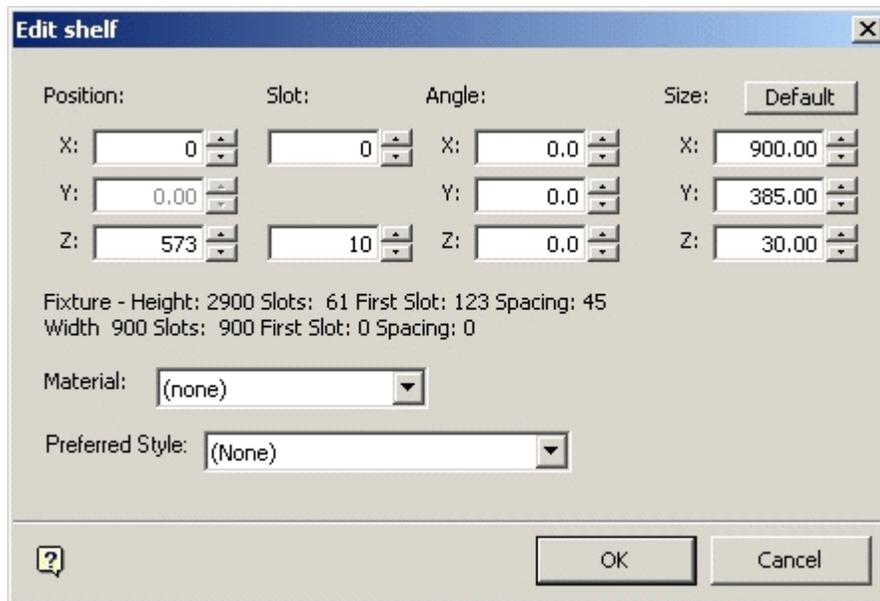
Editing Shelves

Shelves can be edited from either the Fixtures or Merchandising tabs on the Object Browser. Hold down <Ctrl> and right click to bring up the pop-up menu.



Edit Shelves

Click the edit option to bring up the Edit Shelves dialog Box.



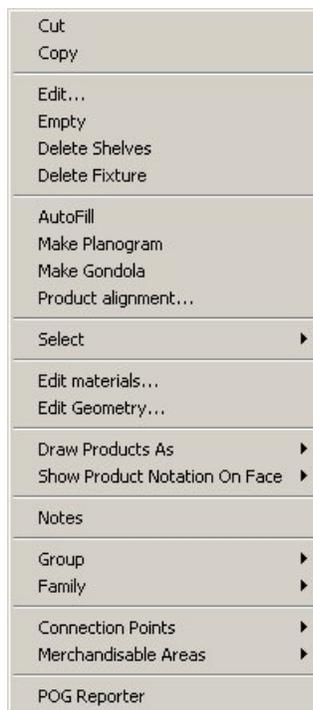
Edit Shelves dialog Box

This allows the Position, Slot Number, Angle, and Size of the shelves to be edited.

Note: If dissimilar shelves have been selected as part of the Group, only options that are common to those shelves will be available for editing.

Editing Products

Products can be edited from the Merchandising tab on the Object Browser. Hold down <Ctrl> and right click to bring up the pop-up menu.

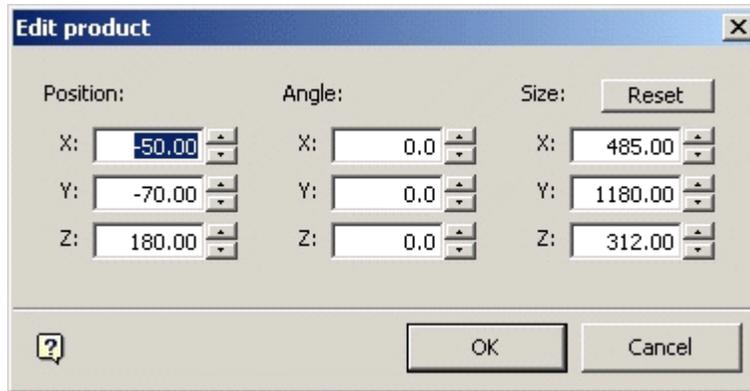


Edit Products

There are two options: Edit and Edit Group.

Edit

You can edit the Position, Angle and Size of the product using the Edit dialog box.



Edit dialog box

Note: If dissimilar products are selected as part of the Group, only options that are common to those products will be available for editing.

Edit Group

The Edit Group dialog enables you to edit the Quantity, Alignment, Detail, Orientation, and Properties of a Product Group.



Edit Group dialog box

Note: If dissimilar products are selected as part of the Group, only options that are common to those products will be available for editing.

Calculations

The purpose of calculations is to determine various metrics against data in a drawing and save these results in the database. Calculations can be run from the Calculate menu option located in the Merchandiser module of the Macro Space Management application. The various types of calculations are as follows:

- Calculate Areas
- Calculate Face Planes
- Calculate Adjacency

Calculate Areas

Area calculations are used to apportion the area enclosed by the Total Building (Internal Area) zone to specific fixtures. Area calculations are initiated by selecting the Calculate Areas option from the Calculations menu.

Calculate Areas gives a visual indication of how efficiently space in the store has been allocated. Each registered fixture definition defines the directions in which it faces North, South, East, or West relative to the block. For each fixture, it creates a boundary around it in each direction until it hits another fixture or until it reaches its defined tolerances.

Selecting this option brings up the Area Calculation window.

Calculate Face Planes

You can calculate Face Planes to calculate the space each product occupies in a planogram. It looks at space from a front view perspective, so that if there were two categories on a fixture, it determines what proportion of space is given to each category. For example, the Men's Shirts planogram might have a frontal area of 16 square feet, with Walmart Own Brand shirts taking up 15% of the available space.

Calculate Face Planes is a customer specific requirement, and may not be enabled in generic implementations of Merchandiser.

Calculate Adjacency

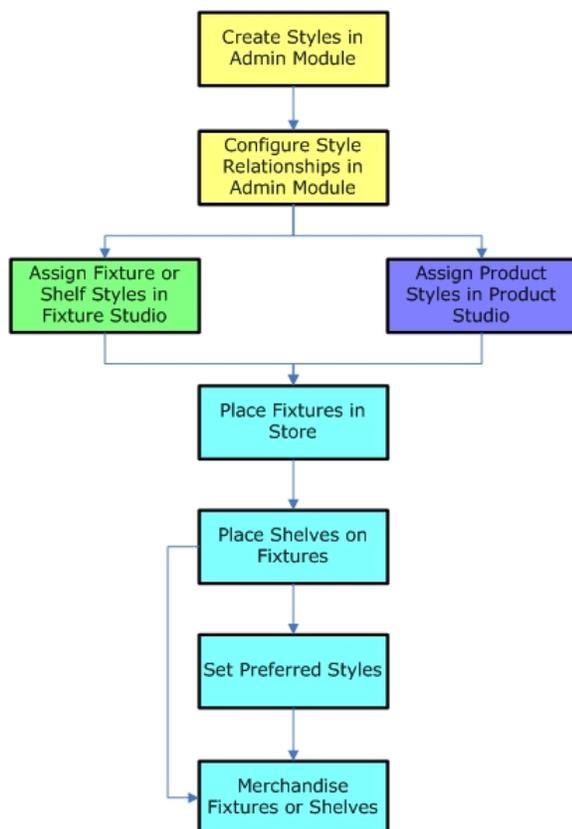
Calculate Adjacency calculates which fixtures and which products are adjacent to each other. Having determined which other fixtures are adjacent it then works out whether it is to the right, to the left, in front, behind, above, below or opposite. Next it works out sequence numbers, and groups fixtures together by giving them the same number.

While the calculation is in progress, a window gives a visual indication of the stage it has reached.

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 can be placed on a shelf.

Using Styles in Merchandiser requires settings to be configured in the Administration, Merchandiser, Fixture Studio, and Product Studio modules.



Each of these steps is discussed in more detail.

Assigning Fixture, Shelf, and Product Styles

Types of Styles

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

- Fixture styles
- Shelf styles
- Product styles

In additions there are:

- Joints

FIXTURE

Fixture style

Fixtures must have one or more fixture styles.
The Fixture Style Relationships determine what shelves and products it can accept.

Shelf style

If shelving is to be placed on the fixture then a style relationship must exist between the assigned fixture style and the required shelf style.

Product style

For products to be placed a fixture, a style relationship must exist between the assigned Fixture Style and the required Product Style.

SHELF

Fixture style	Shelf style	Product style
For shelves to be placed on a fixture, a style relationship must exist between the assigned Shelf Style and the required Fixture Style.	Shelves must have one or more Shelf Styles. The Shelf Style Relationships determine what equipment the shelf can be placed on and what products it can accept.	For products to be placed on the shelf, a style relationship must exist between the assigned Shelf Style and the required Product Style.

PRODUCT

Fixture style	Shelf style	Product style
For products to be placed a fixture, a style relationship must exist between the assigned Fixture Style and the required Product Style.	For products to be placed on the shelf, a style relationship must exist between the assigned Shelf Style and the required Product Style.	Products must have one or more product styles. The Product Style Relationships determine what equipment and shelves the product can be placed on.

Note: Products can only be assigned styles at the Display Level. They cannot be assigned styles at SKU level and above.

JOINT

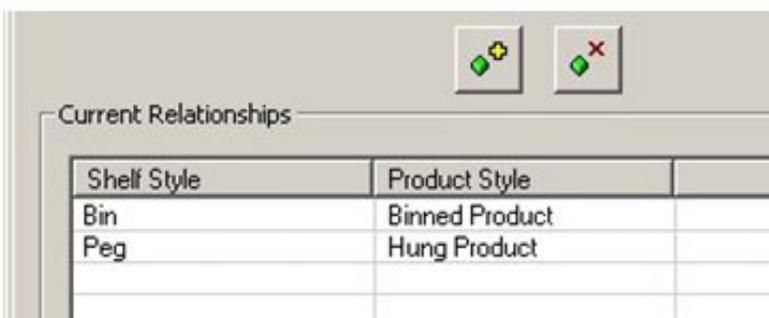
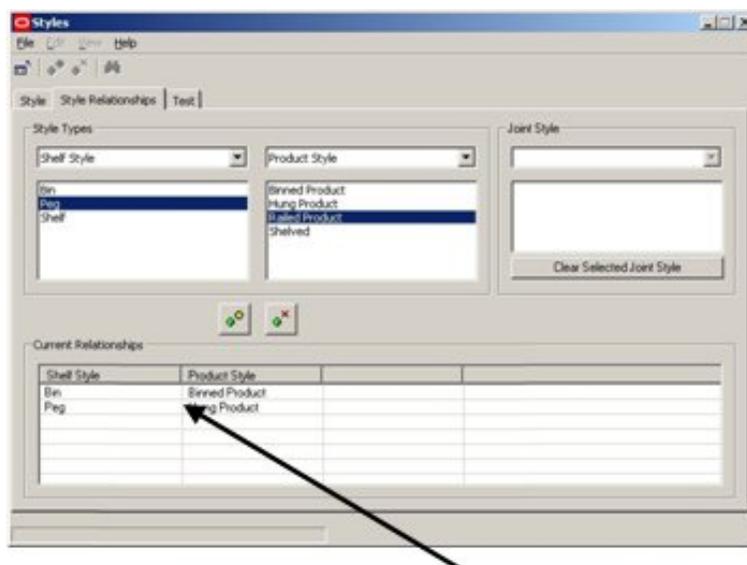
Allows products to be placed directly on fixtures, placing at the same time the associated shelf object.

Fixture style	Product style	Shelf style
For products to be placed a fixture, a style relationship (using a joint) must exist between the assigned Fixture Style and the required Shelf style.	For products to be placed on the shelf, a style relationship (using a joint) must exist between the assigned Shelf Style and the required Product Style.	Products must have one or more product styles. The Product Style Relationships determine what equipment and shelves the product can be placed on.

When creating a joint, if a fixture-shelf style relationship similar to the type being defined already exists it must be deleted before the joint (a combination of fixture, product and shelf styles) can be created.

Example:

In the following Style Relationship (created in Admin) fixtures that have a Fixture Style of Metal assigned can accept shelves that have had an Open Shelf, Heavy Duty Shelf or Lateral Rod Shelf Style assigned.



Style Dialog Box

Conversely, if a shelf has only had a Peg Slatted Style assigned it cannot be placed on a Fixture that has only has a Fixture Style of Metal assigned.

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

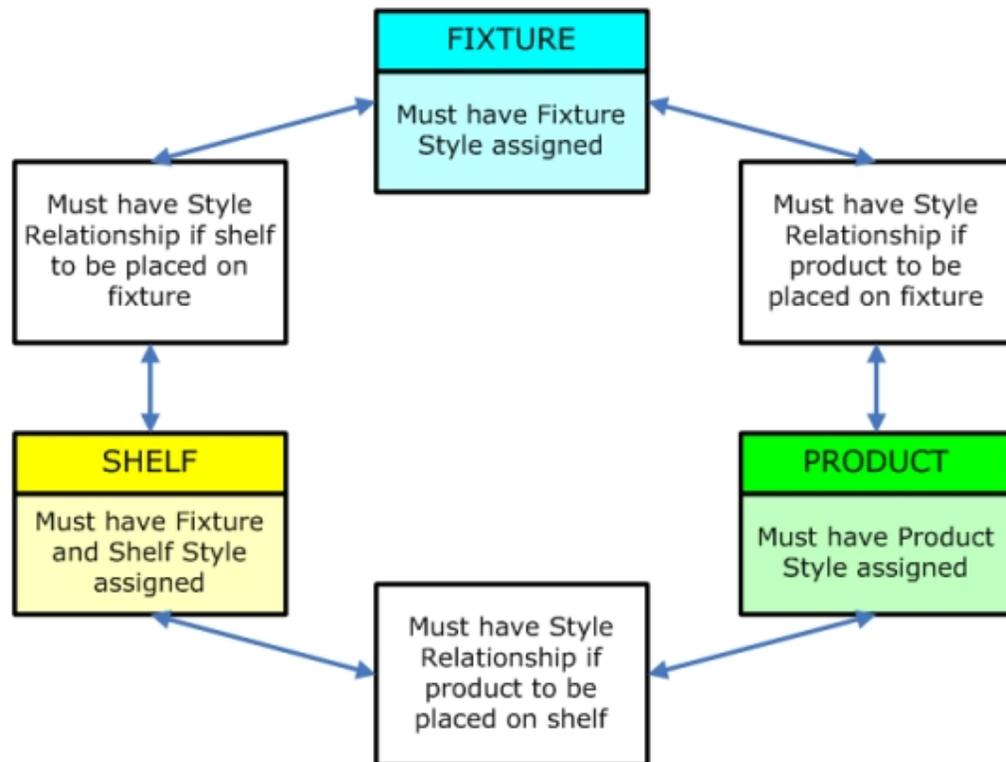
Each product must be associated with one or more product styles. These product styles will determine the compatible shelves the product can be placed on. For example shirts could be available in both Hung and Folded Product (Display) Styles.

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.

Summary of Style Requirements and Style Relationships

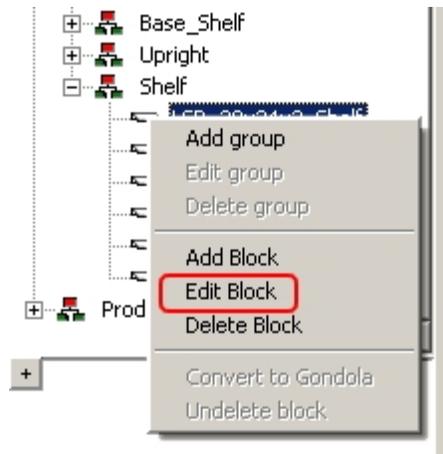
Style Requirements and Style Relationships may be summarized as follows:



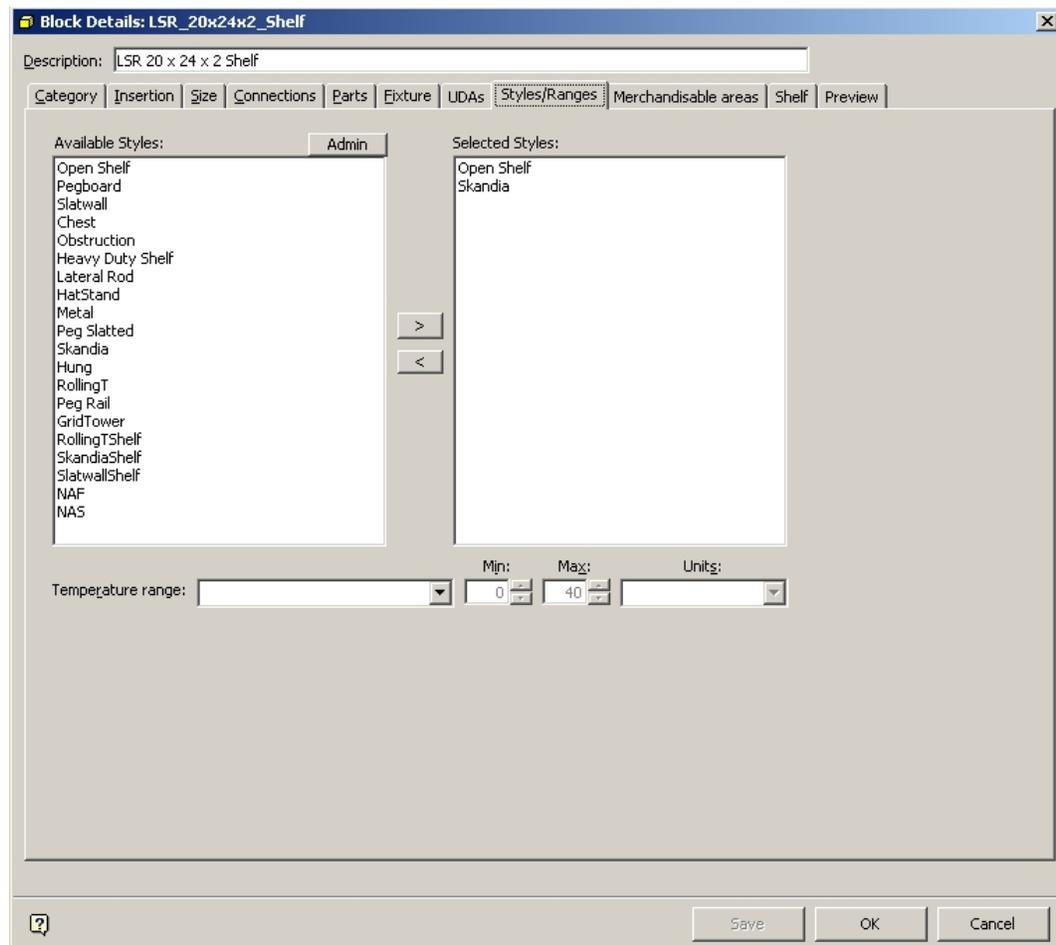
Joints allow products to be placed on fixtures simultaneously with shelf objects.

Assigning Fixtures and Shelf Styles

Styles can be assigned to fixtures and shelves from Fixture Studio by highlighting them in the hierarchy and right clicking to bring up the pop up menu.



Click the Edit Block to bring up the Block Details dialog box. The Styles/Ranges tab can then be used to specify the available styles for a particular object.



Block Details - Styles/Ranges

Styles can then be assigned or removed using the < and > arrows.

Note: A shelf object will require a fixture style to ensure it can be assigned to fixtures, and a shelf style to allow product to be assigned to it.

Assigning Product Styles

Note: Products can only be assigned styles at the Display Level. They cannot be assigned styles at SKU level and above.

Styles can be assigned to Products from within Product Studio by highlighting them in the hierarchy and right clicking to bring up the pop up menu.



Click the Edit option to bring up the Product Display Style dialog box. The Styles tab can then be used to specify the available styles for a particular product.

Product Display Style dialog box

Styles can then be assigned or removed using the appropriate icons.

Using Styles in Merchandiser

Placing Fixtures

Primary Fixtures can be placed without reference to their assigned Styles. The only criteria for placing fixtures are that they have been assigned a primary object that places at floor level.

Placing Shelf Objects

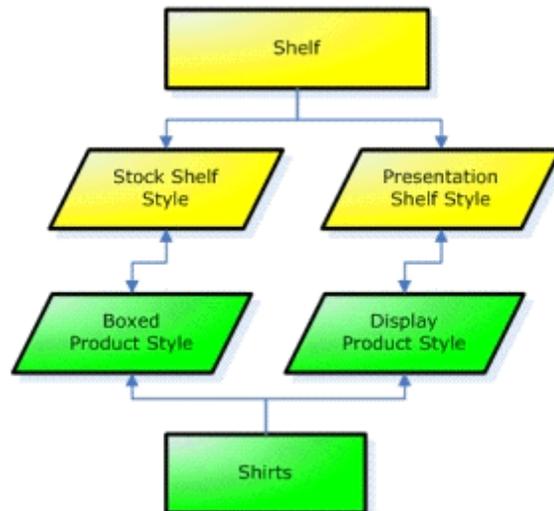
Shelf Objects can only be placed if they meet two criteria.

Connection Points	The connections points assigned to the shelf must be compatible with the connection points assigned to the fixture it is to be placed on.
Styles	The Fixture Style assigned to the shelf must be compatible with the Fixture Style assigned to the fixture it is to be placed on.

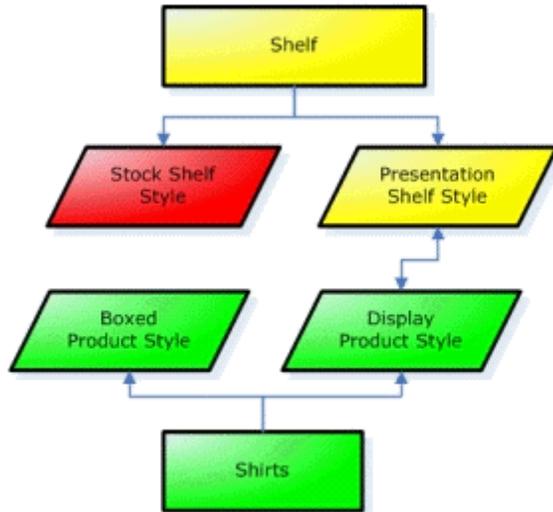
Setting Preferred Styles

Some objects can be associated with multiple styles; specific instances of shelves within the drawing can be given preferred styles. 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.

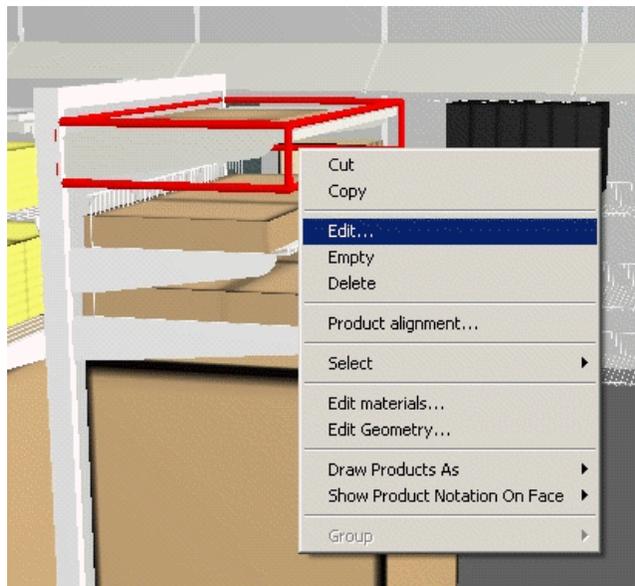


However, the user would be able to indicate the preferred style for a particular instance of a shelf as being Presentation, which would force the Display product to be placed for that particular shelf.



Using Preferred Styles

Preferred styles can be specified for a specific shelf or shelves by selecting those required. This is done by holding down the <Ctrl> key and left clicking on the desired shelves. The first instance of a selected shelf will be highlighted in Red, subsequent ones in blue.



Hold down the <Ctrl> key and right click to bring up the pop-up Menu. Click the Edit option to bring up the Edit Shelves dialog box.

Edit shelf

Position: X: 0 Y: 0.00 Z: 573

Slot: 0

Angle: X: 0.0 Y: 0.0 Z: 0.0

Size: Default

Fixture - Height: 2900 Slots: 61 First Slot: 123 Spacing: 45
Width 900 Slots: 900 First Slot: 0 Spacing: 0

Material: (none)

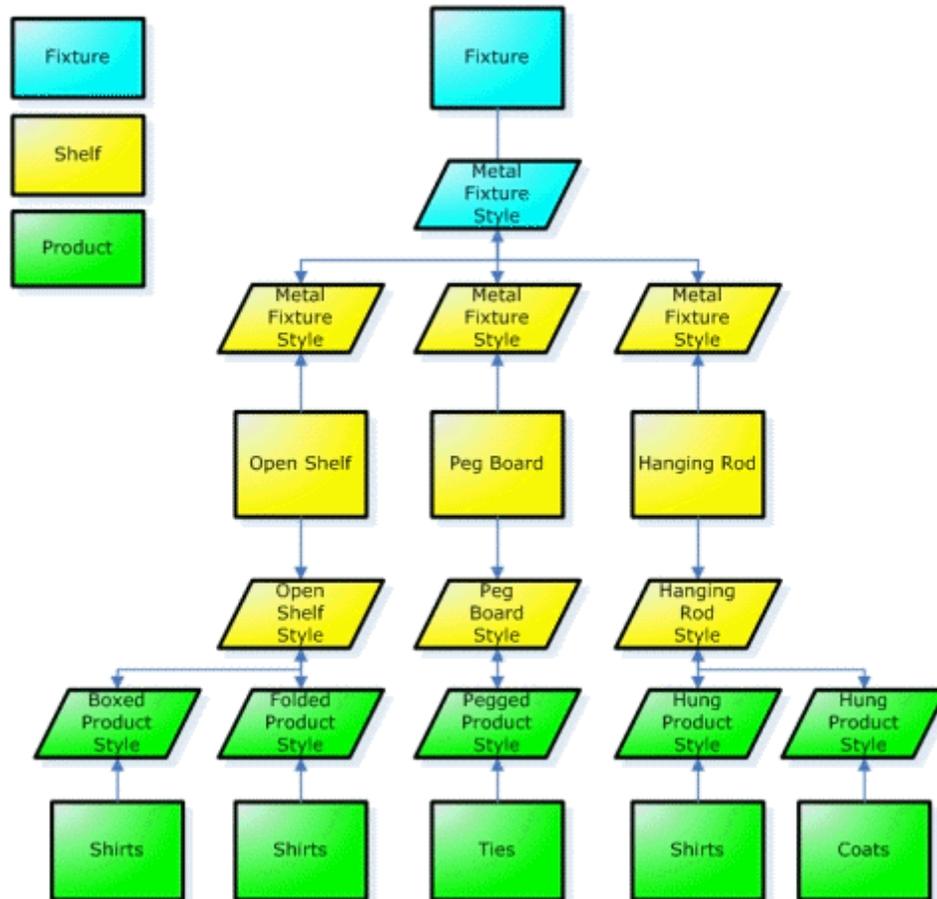
Preferred Style: (None)

? OK Cancel

This can be used to set the preferences for that specific shelf or shelves. If different types of shelves have been included in a multiple shelf selection, only preference types common to the different types will be shown. If there are no common preference types, then the field in the preferences box is blank.

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 back panel) 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 shirt 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.

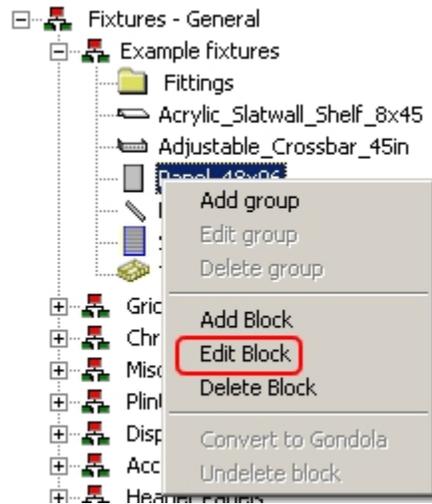
Note: Where an object has multiple styles they can set in order of preference using preferred styles.

Practical Use of Styles

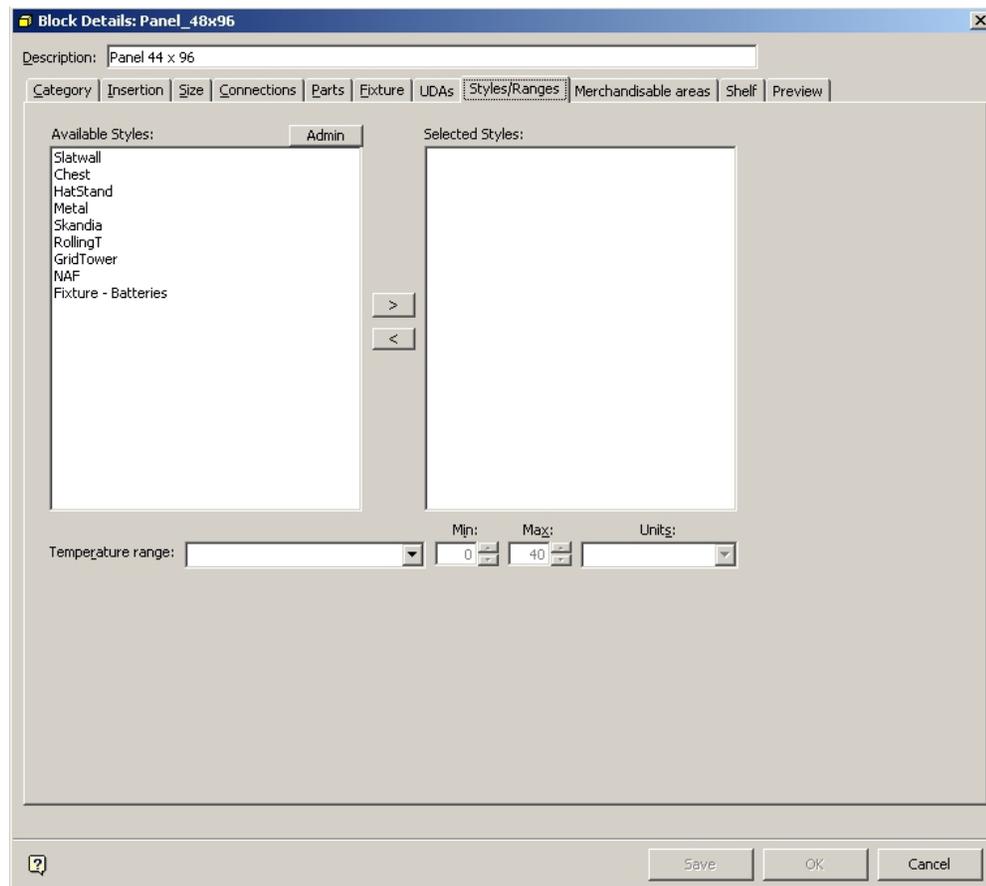
Adding Style to Fixture in Fixture Studio Module

To add a Fixture Style to a fixture:

1. Open the Fixture Studio module.
2. Select the required fixture and right click to bring up the pop-up menu.

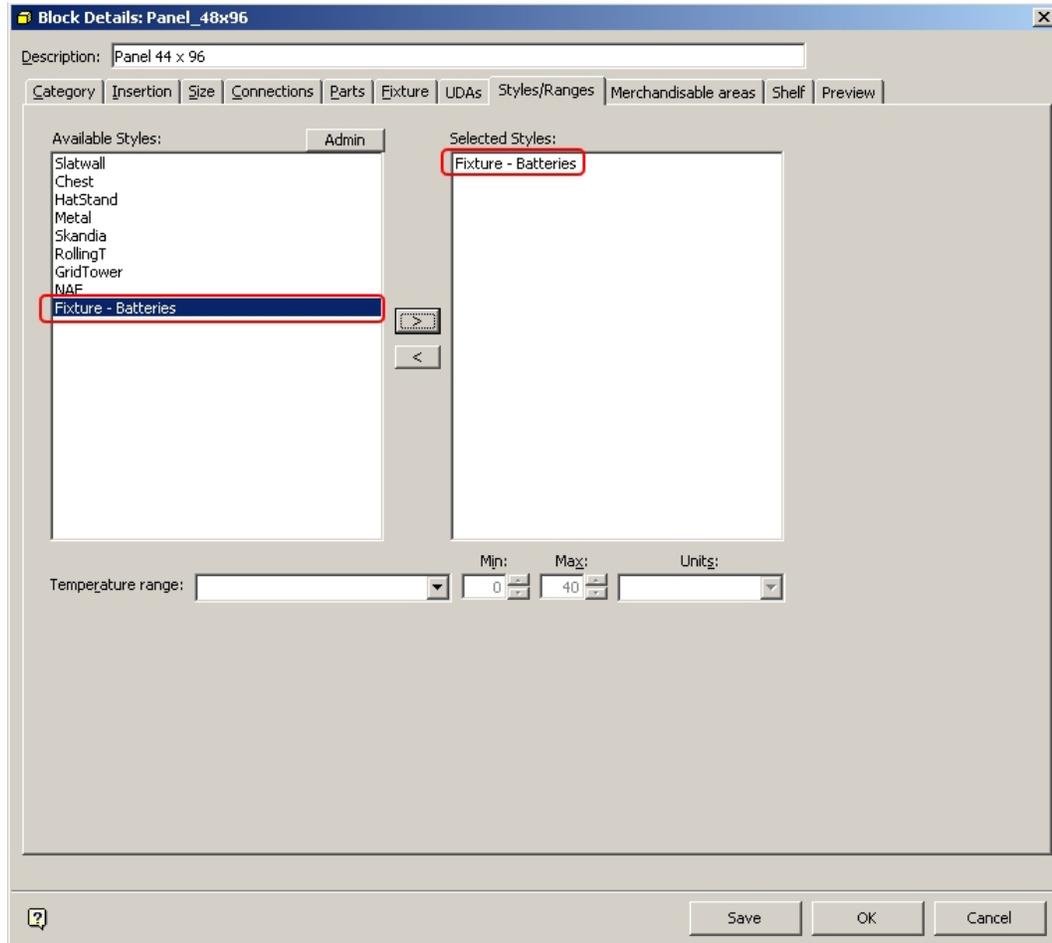


3. Click the Edit Block option. The Block details dialog box opens.
4. Select the Styles/Ranges Tab.



Styles/Ranges Tab

- To add a Fixture Style (or styles) select the required style(s) from the list of available styles and click the right arrow > to move it over to the list of selected styles.



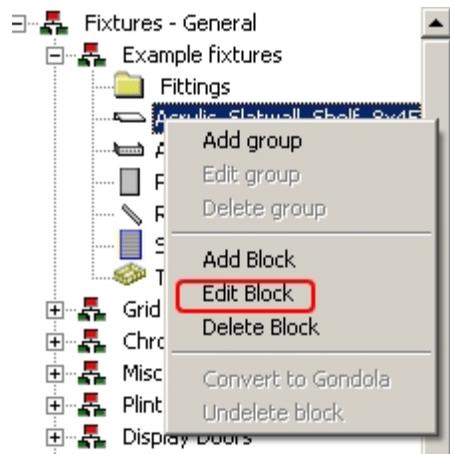
Add Fixture Style

In the example above, the fixture will now accept any shelves or products that have Style Relationships with the Fixture - Batteries Fixture Style.

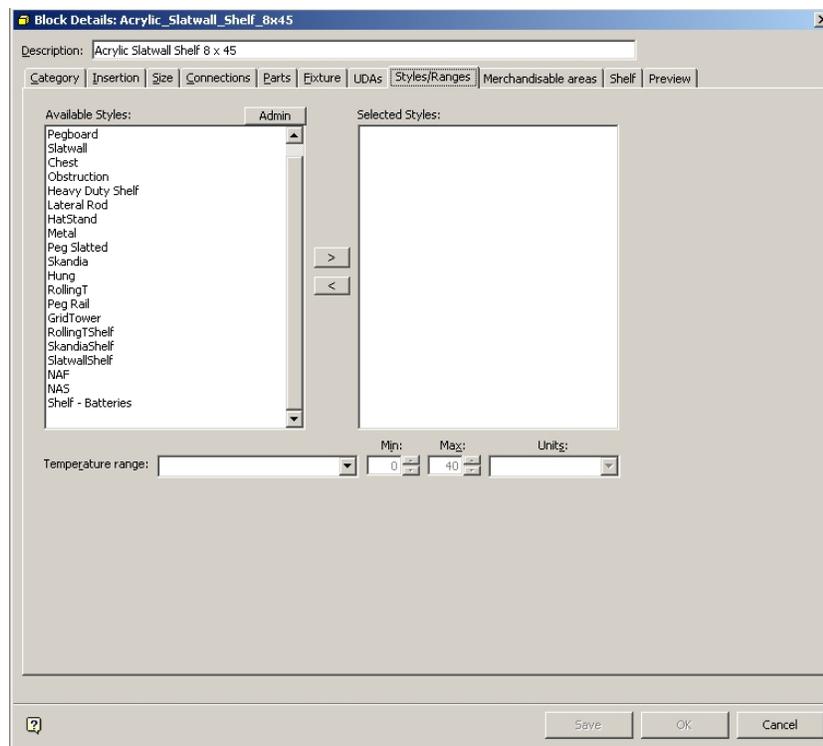
Adding Styles to Shelf in Fixture Studio Module

To Add Fixture and Shelf Styles to a shelf:

- Open the Fixture Studio module.
- Select the required shelf and right click to bring up the pop-up menu.

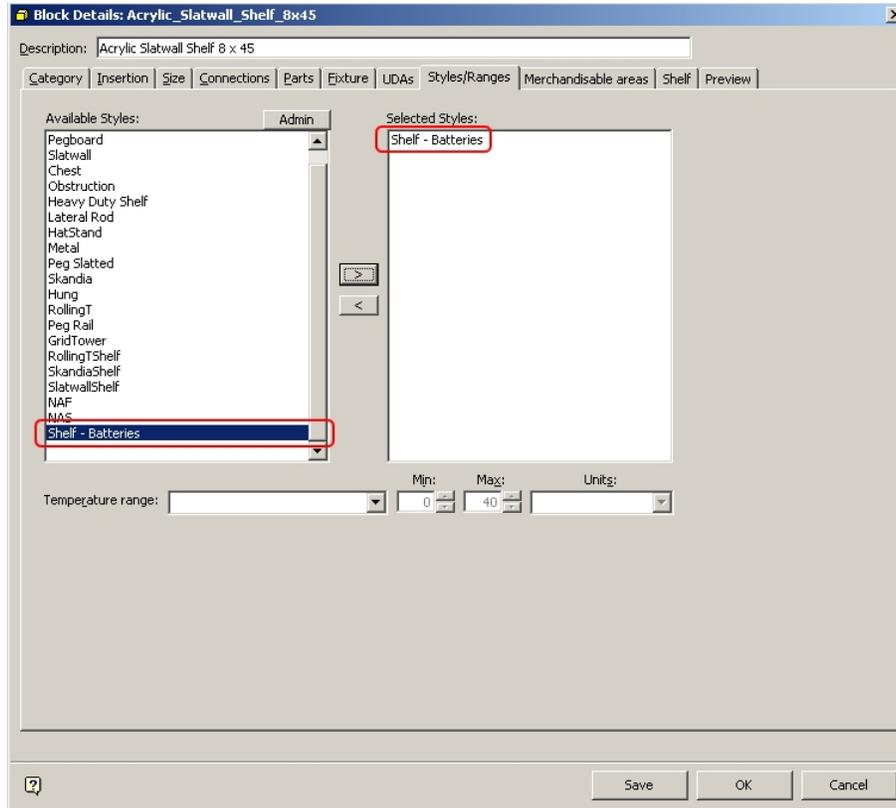


3. Click the Edit Block option to bring up the block details dialog box.



Block details dialog box

4. Select the Fixture/Styles Tab.
5. To add a Fixture Style (or styles) and a Shelf Style (or styles) select the required style(s) from the list of available styles by using the right arrow > to move it over to the list of selected styles.



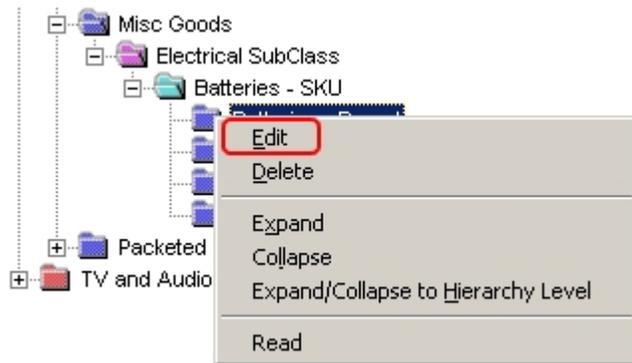
Add Styles to Shelf

This shelf will now accept any fixtures or products that have style relationships with the Shelf - Batteries Shelf Style. Similarly, a Fixture style can be selected to determine what fixtures the shelf can be placed on.

Adding Style to Product in Product Studio

To Add a Product Style to a product:

1. Open Product Studio. Select the required product and right click to bring up the pop-up menu.



Note: Products can only be assigned styles at the Display Level. They cannot be assigned styles at SKU level and above.

2. Click Edit to bring up the Product Display Style dialog box. Select the Styles Tab.

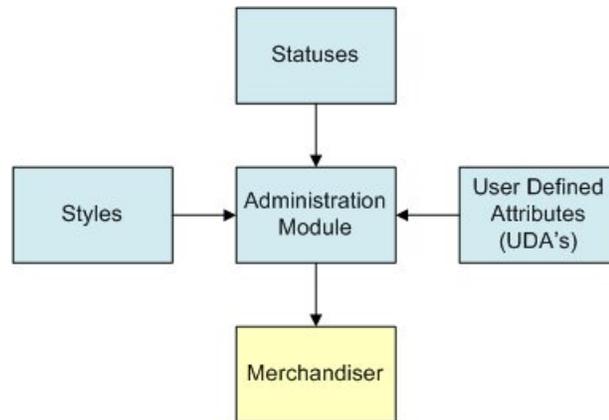
Product Display Style dialog box

3. To add a Product Style (or styles) select the required style(s) from the list of available styles and move it over to the list of selected styles using the appropriate icon.

Relationships between Merchandiser and Other Modules

Merchandiser and the Admin Module

Some Administration Module settings determine how Merchandiser behaves.



Styles

Styles determine which fixtures, shelves and products are compatible with each other.

Statuses

Statuses determine which fixtures, planograms and products appear in the hierarchies in the Object Browser.

UDAs (User Defined Attributes)

UDAs determine what customer specific information can be associated with fixtures, shelves and products.

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 Statuses

The list of Statuses can affect which fixtures, planograms and products appear in their respective hierarchies in the object browser. Objects of Proposed or Historical status may not appear.

The list of available Statuses can be configured using the Status option on the General menu in the Admin Module. For more information refer the *Oracle Retail Macro Space Management Administration Guide*.

Configuring the List of Styles

The List of Styles is used to determine which fixtures, shelves and products are compatible with each other. Objects with incompatible styles are not allowed to be placed on each other.

The List of Styles can be configured using the Styles option on the Merchandising menu of the Admin Module. For more information refer the *Oracle Retail Macro Space Management Administration Guide*.

Configuring User Defined Attributes

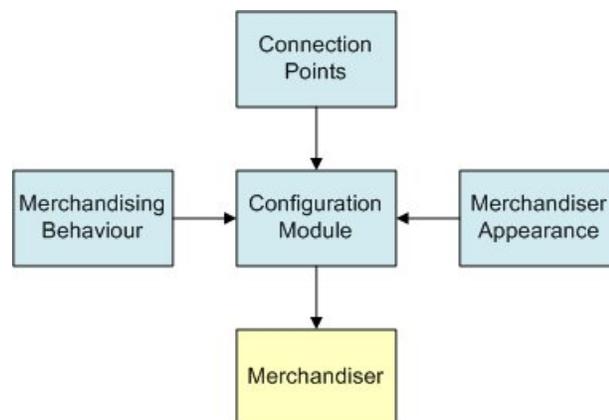
The list of User Defined Attributes is used to add user specific information to fixtures, shelves and products. The List of User Defined Attributes (UDAs) can be configured using the User Defined Attribute option on the Edit Pull down menu of the Admin Module.

For more information refer the *Oracle Retail Macro Space Management Administration Guide*.

Configuration

Merchandiser and the Configuration Module

Settings in the Configuration Module affect how connection points and merchandising operate. They also determine some aspects of the visual appearance of Merchandiser.



Connection Points

The visual appearance of connection points can be changed in the Configuration Module, as can the filters determining whether one connection can mate to another.

Merchandising behavior

Filters determining merchandising behavior can be set in the Configuration Module.

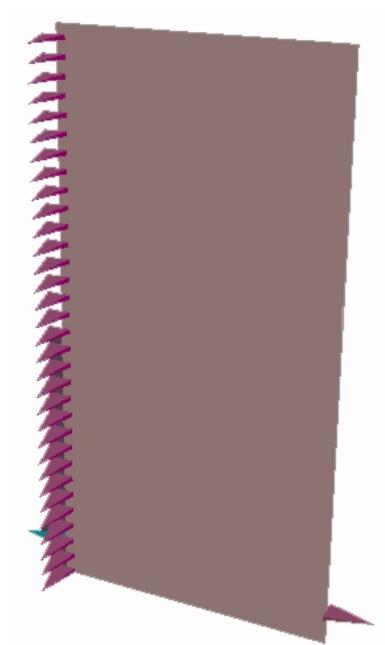
Merchandiser Appearance

A number of parameters affecting how Merchandiser appears on screen can be set in the Configuration Module.

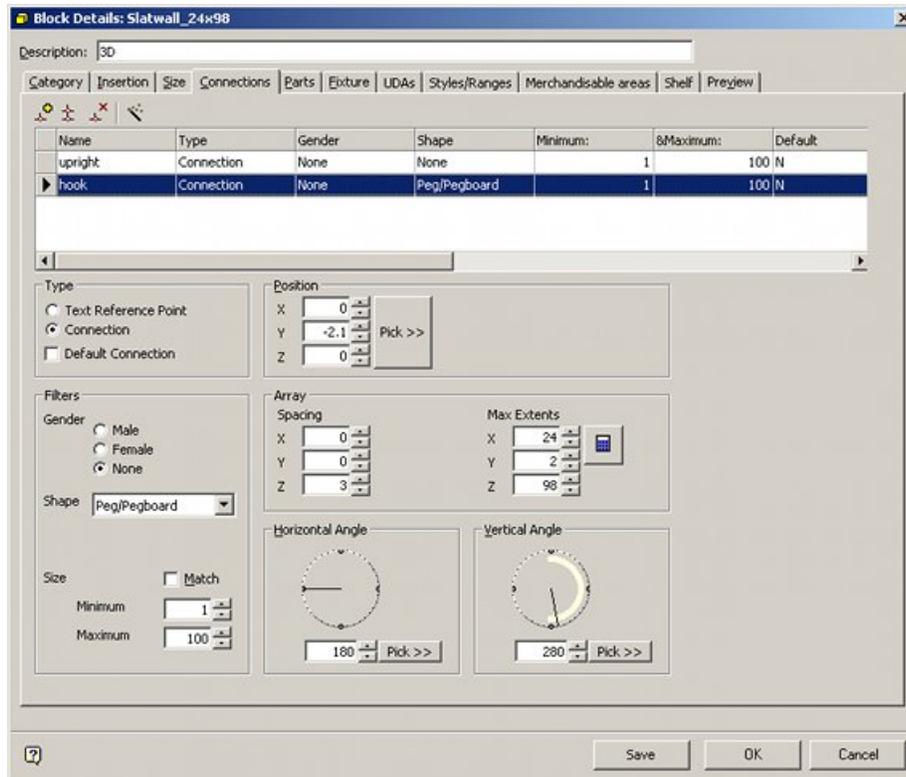
Note: For more information consult the Configuration Module Help File.

Connection Points

Connection Points determine how one piece of equipment connects to another.



They are configured in the Connections tab of the Block Details dialog box in Fixture Studio.



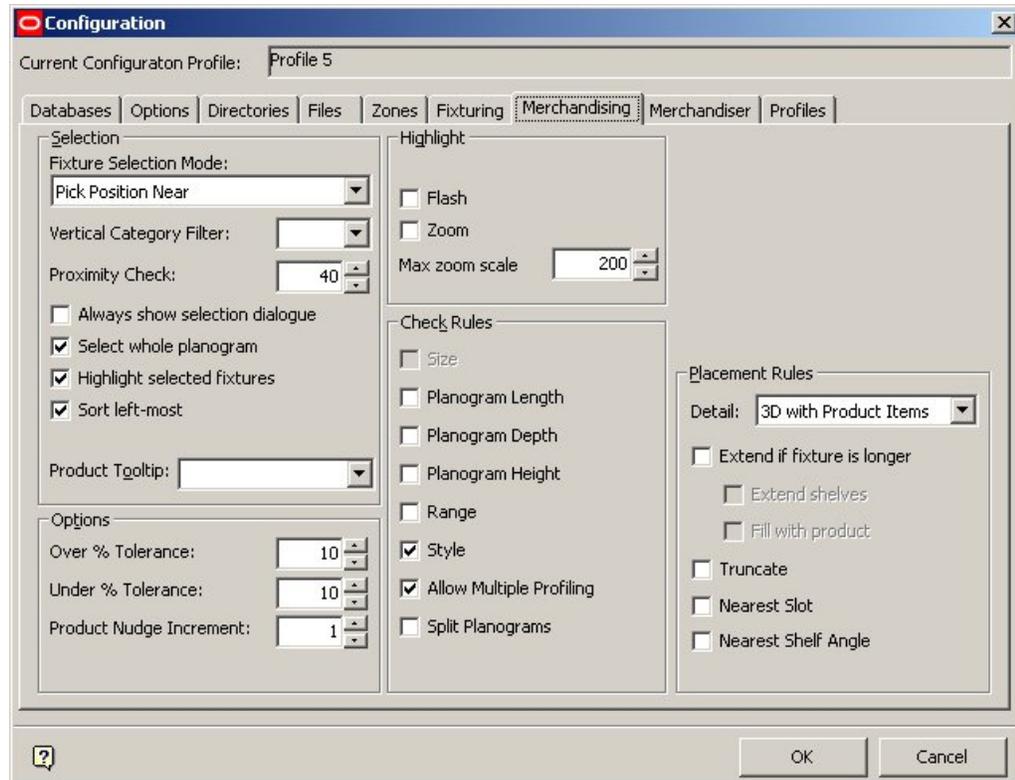
Block Details dialog box

Connection point details can only be changed in Fixture Studio.

Note: For more information consult the Fixture Studio Help File.

Merchandising

Some details of how Merchandising operates are determined by settings in the Configuration Module.

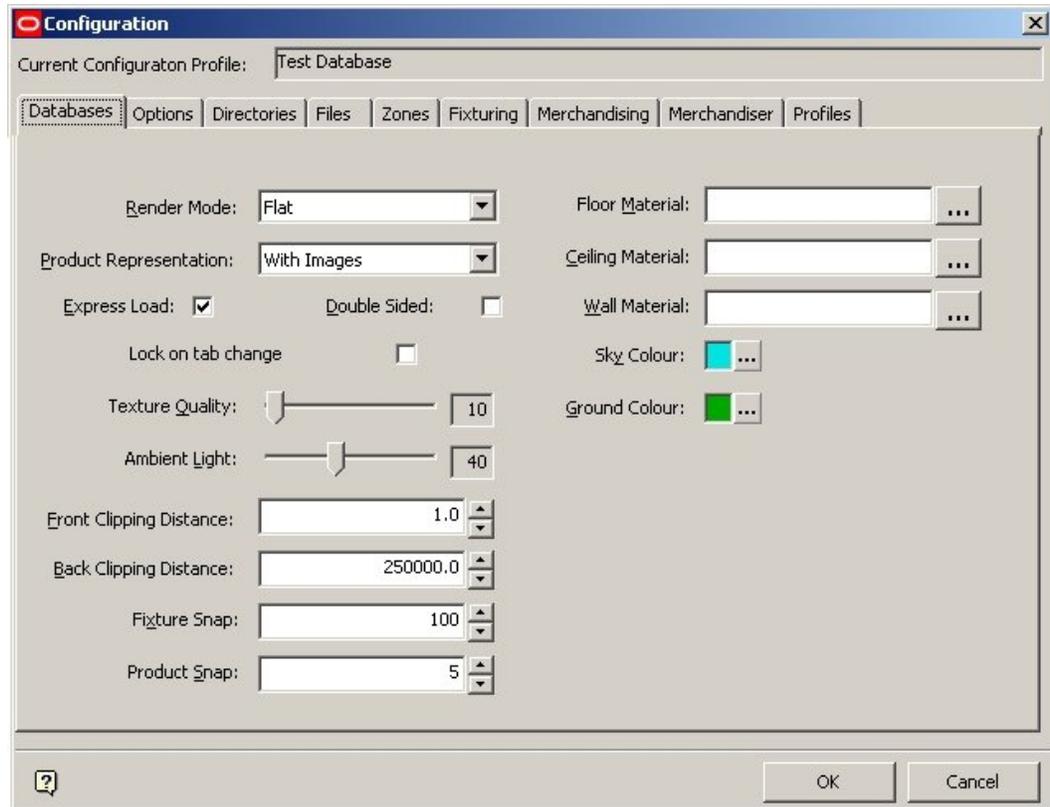


Configuration Module

Specifically, some options in the Check Rules frame can be turned on or off. These include Size, Range and Style.

Merchandiser

Some aspects of the visual appearance of Merchandiser are determined by settings in the Configuration Module.



Configuration Module

These include:

- Whether express load (only load specific zones) is active.
- Whether changes can be made to equipment and merchandise when not in the specific tab (lock on Tab Change).
- Default settings for front and back clipping distances.
- Colors for Sky, Ground, etc.

For more information refer the Oracle Retail Macro Space Management Configuration Guide.

Zones

A Zone defines a section of floor that is used for a specific and clearly defined purpose, based on the floor layout specified by an architectural drawing. The Zone might define an area used for sales, it might define an area used for storing stock, or it might define areas used for non-sales purposes such as offices, corridors or toilets.

Important Note: Zones can only be added, edited, and deleted in the Planner environment. Zones can be viewed but not edited in Merchandiser.

From a technical standpoint, a Zone is a Macro Space Management block that allows additional information to be put into a Store Plan. This subsequently allows more structured Macro Space Management reports to be produced on the associated layout of fixtures, fittings and Planograms within that drawing. A Zone is defined by a Planner Polyline enclosing a specific section of floor. Further Polylines within the Zone can be used to define pillars or other obstructions. The designation of pillars and other obstacles allows them to be taken into account when calculating sales areas. This results in a more accurate calculation of the area of usable floor, enabling sales performance analysis to take into account the effect of obstructions.

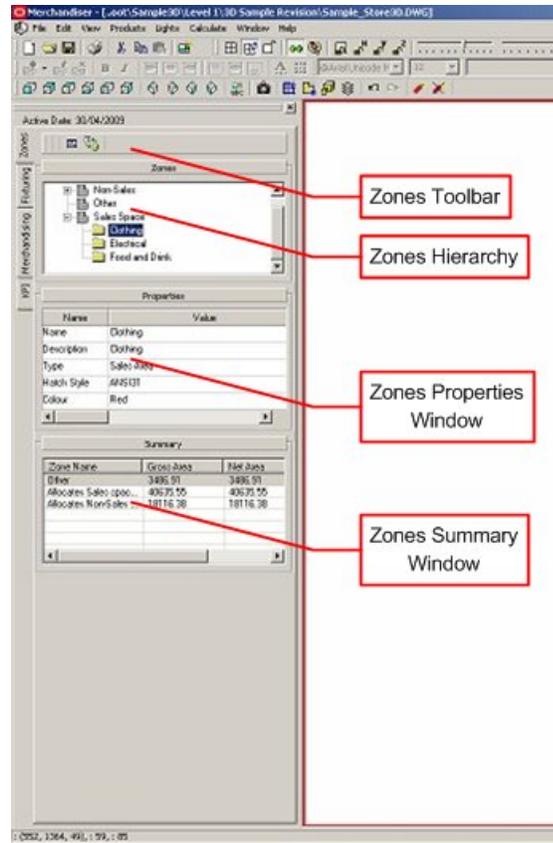
The Zone is used to assign a specified part of the total floor area to a specific function. Such functions include allocating to specific types of retail goods, (for example electrical goods), or designating the area as a non-sales area; for example a manager's office or a corridor. Zones thus allow the total floor area in the store to be split into sales and non-sales areas and then further sub-divided as to purpose. This sub-division of the store allows Planograms and fixtures to be filtered by Zone, allowing the store planner to rapidly establish which goods and which fixtures are in a specific part of the store.

Zones can also be designated as being excluded from certain types of reports. This allows fixtures and Planograms that have been placed in a storage area to be excluded from any calculations or reports on the performance of that part of the store.

Many of the characteristics of Macro Space Management Zones can be configured within the Admin Module.

Zone Toolbar and Display Windows on the Object Browser

Click the Zones Tab on the Object Browser to bring up the toolbar and information window for Zones.

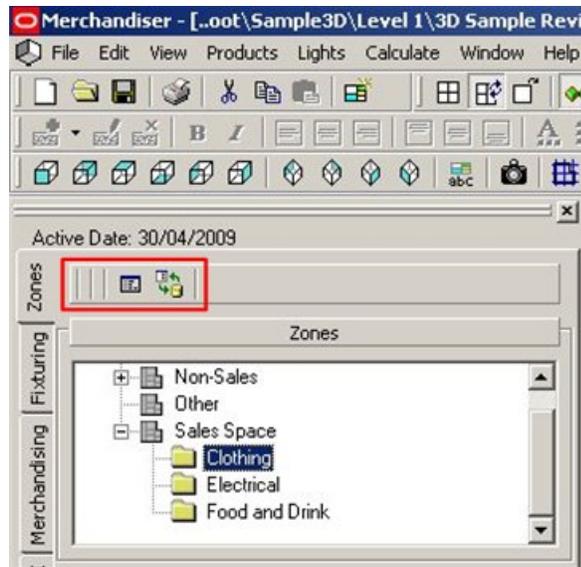


Zones Tab

- The **Zones Toolbar** allows you to refresh and configure Zones.
- The **Zones Hierarchy** contains a list of all the zone types currently configured in the Administration Module.
- The **Zone Properties Window** contains information on the currently selected zone.
- The **Zones Summary Window** contains brief information on all zones currently present in the drawing.

The Zones Toolbar

The **Zones Toolbar** is found on the Object Browser.



Zones Toolbar

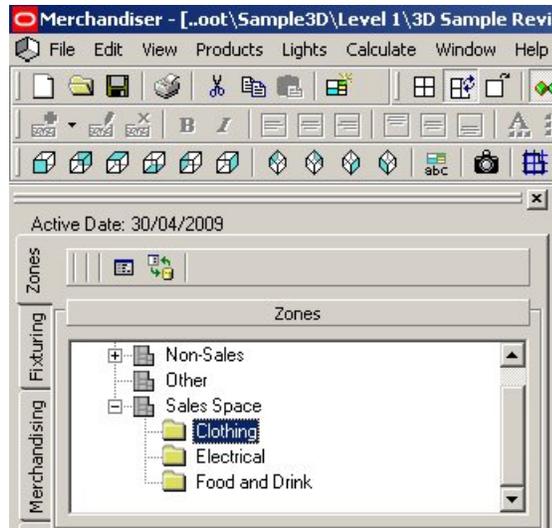
It contains two icons allowing operations to be carried relative to Zones.

	Configuration Options
	Refresh

Configuration button allows you to configure Zones. The Refresh button allows you to refresh the Zones Hierarchy information to reflect any changes made in the Admin Module since Merchandiser was opened for the current session.

The Zones Hierarchy Window

The **Zones Hierarchy Window** is found below the toolbar.



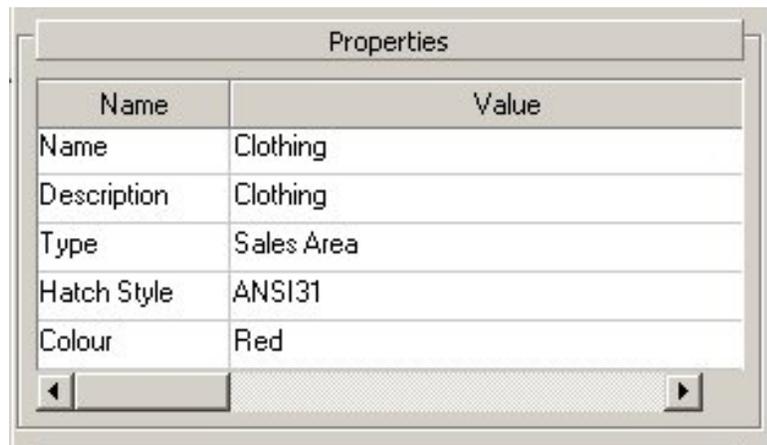
Zones Hierarchy Window

It contains a Hierarchical Tree giving a list of all the available Zone types. A zone selected in the drawing is highlighted in the hierarchical tree.

Note: Zone types and descriptions can be added, edited, or deleted using the Admin module.

The Properties Window

The **Properties Window** gives information on the selected Zone Definition.



Properties Window

The Zone Type and Area Properties are read only and cannot be edited.

The Summary Window

The **Summary Window** contains details of Zones within the drawing.

Summary			
Zone Name	Gross Area	Net Area	Zone Type
Other	3486.91	3486.91	Sales Area
Allocates Sales space area	40635.55	40635.55	Sales Area
Allocates Non-Sales space area	18116.38	18116.38	Sales Area

Summary Window

The information typically includes Zone Name, Zone Description, and Gross and Net Areas. Zone Names and Zone Descriptions can be sorted by clicking the column headings.

Note: Information displayed can be customized by Oracle – contact Technical Support if necessary.

Express Loading

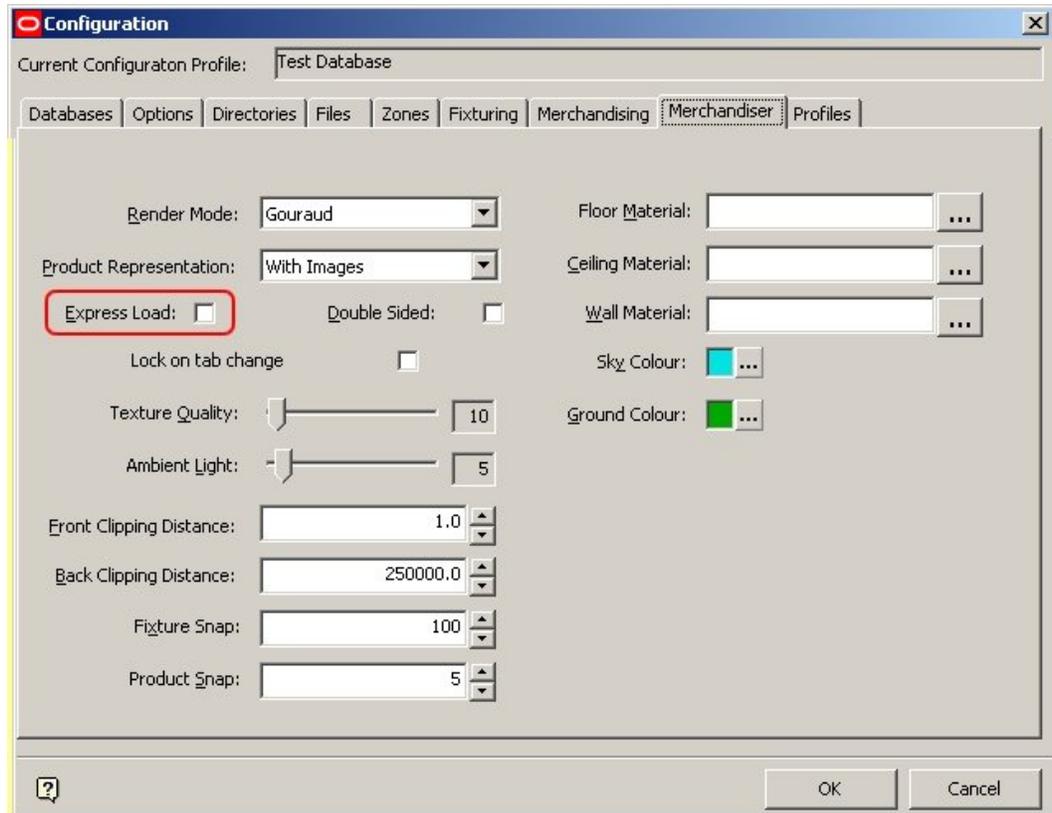
Express Loading is used to load only some of the zones available in the drawing. This allows Macro Space Management users to load just the sections of the store plan that are of interest to them. This reduces the amount of detail in the drawing that the user has to view.

Express Loading also helps the performance of the application as less data is being processed in the user's viewpoint moves.

Drawings that are express loaded with only some of the available Zones is displayed as checked out by the user, preventing anyone else from working on the Zones that have not been loaded.

Activating Express Loading

Express Loading can be enabled in the Merchandiser tab of the Configuration Module.

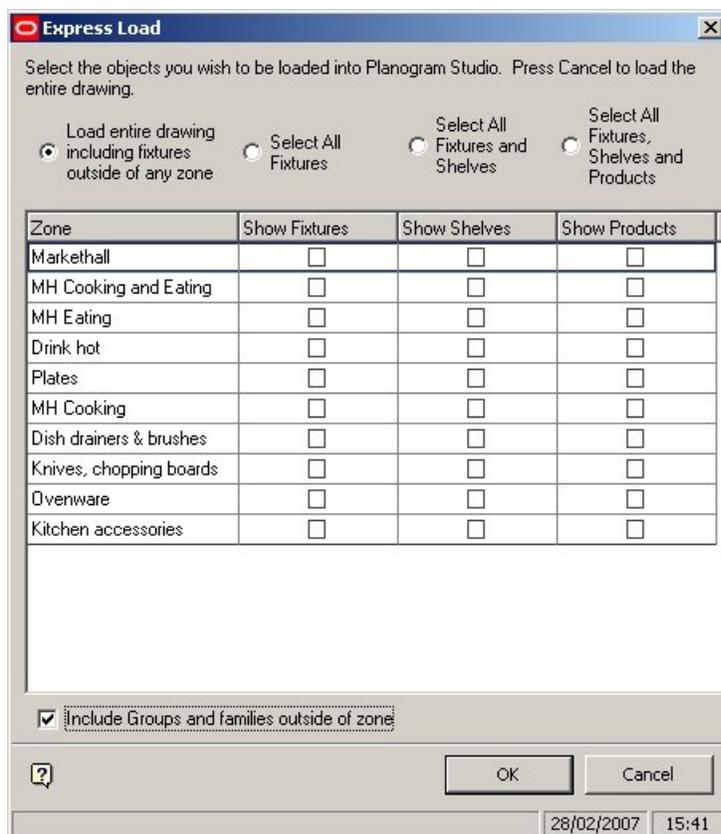


Express Load

On the Merchandiser tab, Express Load checkbox can be checked to enable Express Loading. If the check box is not ticked, all zones are loaded into the selected drawing.

The Express Loading dialog box

The Express Load dialog box allows you to select which Zones, Fixtures, Shelves and Products are loaded.



Express Load dialog box

The four radio buttons at the top of the dialog box control what is loaded in the selected zones:

- **Load entire drawing** results in every zone in the drawing being loaded. This includes any fixtures not included within a zone.
- **Select all Fixtures** selects the fixtures in every zone in the drawing.
- **Select all Fixtures and Shelves** selects the fixtures and shelves in every zone in the drawing.
- **Select all Fixtures, Shelves and Products** selects the fixtures, shelves, and products in every zone in the drawing.

Note: Using the **Select all Fixtures**, **Select all Fixtures and Shelves** and **Select all Fixtures, Shelves and Products** options, application will not select from Fixtures, Shelves or Products that are not in the zone.

Alternatively, the requirements for Individual Zones can be set by checking or unchecking the respective boxes for Fixtures, shelves and Products for those zones. Objects that are not at floor level (for example banners) are still associated with the zone they are within and is displayed accordingly. The level of an object does not affect whether it is associated with a zone.

The **Include Groups and Families outside of the Zone** checkbox (if selected) will result in all fixtures (and their associated shelves and products) belonging to a group or family

that extend outside the selected zones being displayed. If this option is not checked, then only fixtures (and their associated shelves and products) that cross the boundary of the selected zones is displayed.

Objects crossing Zone Boundaries

If only some of the available zones are enabled, some fixtures and fittings from the non-enabled zones may overlap with the boundaries of the selected zones. You can see these overlapping fixtures and fittings, together with their associated shelves and products. These overlapping fixtures, fittings, shelves and products are not locked, and you can edit, move or modify these objects.

Fixtures

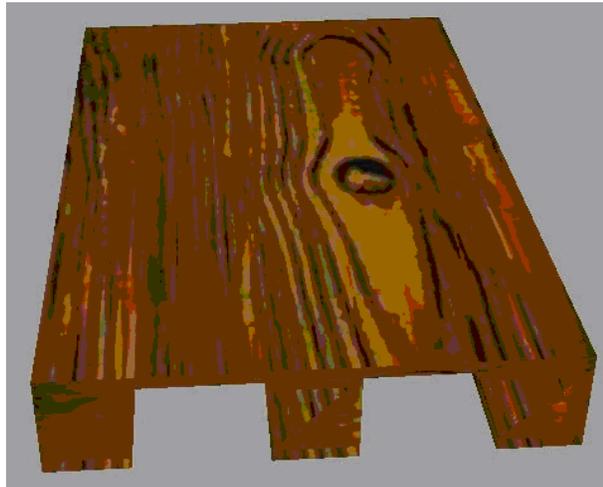
Fixturing is the addition of equipment to a store plan. There are two ways that equipment can be added:

- As individual fixtures
- As Gondola Runs

The properties of fixtures and gondolas are defined in Fixture Studio.

Individual Fixtures

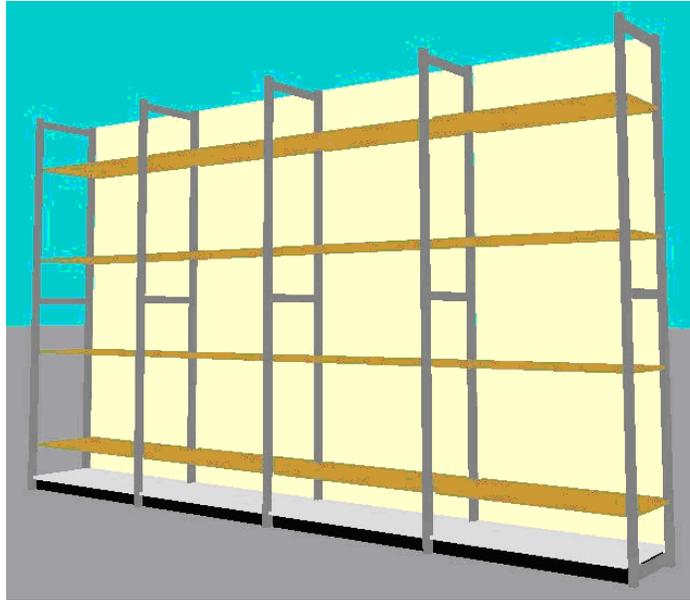
Fixtures can be placed as one-off's (or as simple arrays). In the example below, a pallet has been placed using photo realistic quality.



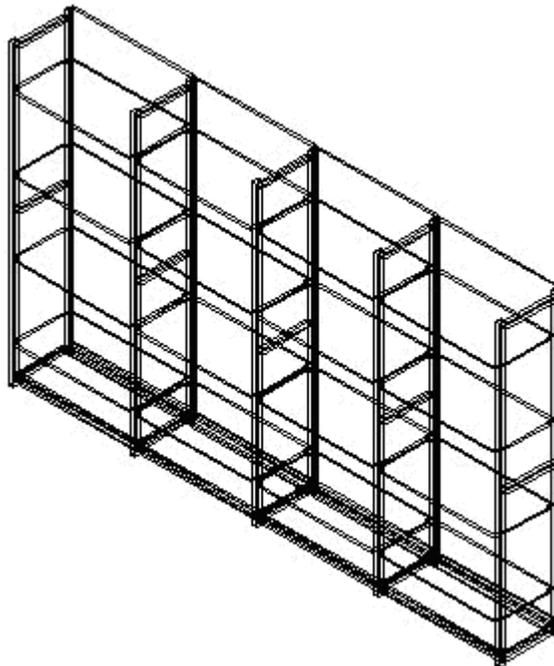
Gondola Runs

Gondola runs are predefined arrangements of fixtures that can be placed in variable sizes, variable parts and with variable numbers of bays determined at the moment of insertion.

Here a 4 bay 48" x 26" x 60" gondola has been placed and shelving added.

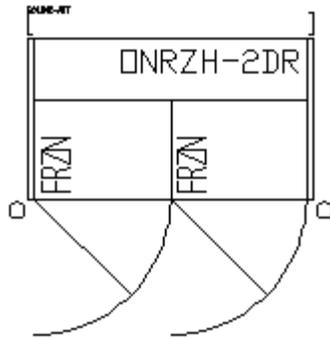


Note the difference in appearance from the same gondola shown in the Planner Module environment.



Composites

Composites are predetermined arrangements of fixtures that cannot be varied. Their main use is for placing standardized assemblies of fixtures.



Composites can only be placed in the Planner Module environment. Accordingly, although their parent fixture group may be visible in the Object Browser fixture hierarchy, any composites will be hidden from view.

Adding Fixtures using the Object Browser

You can add fixtures in the drawing from the Fixturing tab of the Object Browser. The Fixturing tab has two buttons Blocks and Gondolas which you can select to view the available blocks or gondolas.

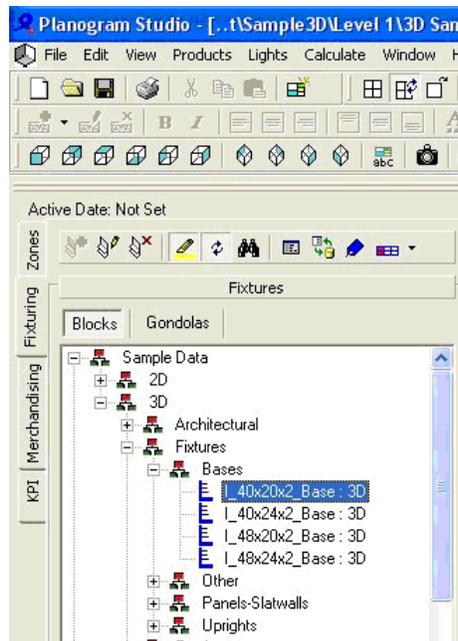
The available fixtures or gondolas are shown in the hierarchy. The properties of the currently highlighted fixture can be seen in the Properties window. Any available information on blocks or fixtures placed in the drawing can be seen in the Summary Window. (This information can be customized to user requirements). A preview of the currently highlighted fixture can be seen in the Preview Window.

There is a significant difference in the way fixtures are added in the Planner and the Merchandiser environment.

Planner Module Environment	Merchandiser Environment
Fixtures can be added by clicking on the Add icon or by dragging and dropping	Fixtures can be manipulated on addition by means of the Add Fixtures dialog box
Fixtures can only be added by dragging and dropping	Fixtures are placed immediately on being 'dropped' – the Add Fixtures dialog box does not appear.

To add fixtures:

1. Select the required fixture in the blocks hierarchy by highlighting it.



Block Hierarchy

2. Holding down the left mouse button, then drag it to the drawing and drop it.
The preview window in the object Browser contains an image of the selected fixture.

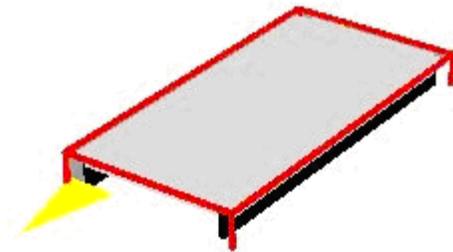
Moving a Fixture

There are two ways to move a fixture:

- Cursor Keys
- Edit dialog box

Moving using the Cursor Keys

To move a fixture, select it in the plan. It is highlighted.

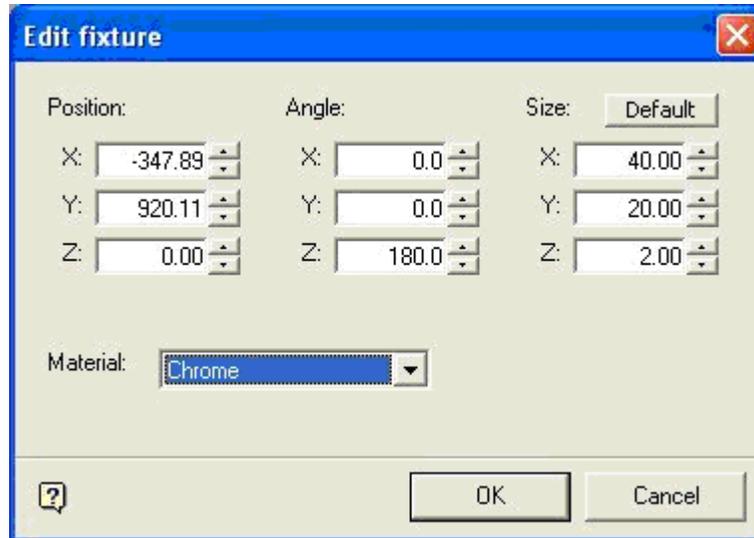


It can then be moved left, right, forward, and back using the cursor keys. If multiple fixtures have been selected, they are simultaneously moved.

Note: The direction the selected fixture moves in the field of view will depend on whether the viewpoint has been rotated.

Moving by means of the Edit Dialog Box

To move (or rotate a fixture) by means of the Edit dialog box, double click the fixture to bring up the Edit Fixture dialog box.



Edit Fixture

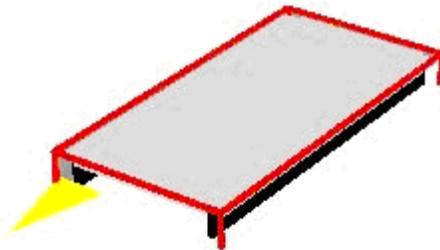
This allows the following changes to be made to the fixture:

- **Position:** Allows the position of the fixture to be changed to a specific point in the drawing.
- **Angle:** Allows the fixture to be rotated in the X, Y, or Z planes.
- **Size:** Allows the size of the fixture to be changed.
- **Material:** Allows the material (color) of the fixture to be changed.

Note: It is recommended that the sizes be left unchanged. If they are changed, they can be restored to the original size by clicking on the default button.

Deleting a Fixture

Fixtures in the drawing can be deleted by highlighting them.



Pressing the delete key deletes the fixture from the drawing.

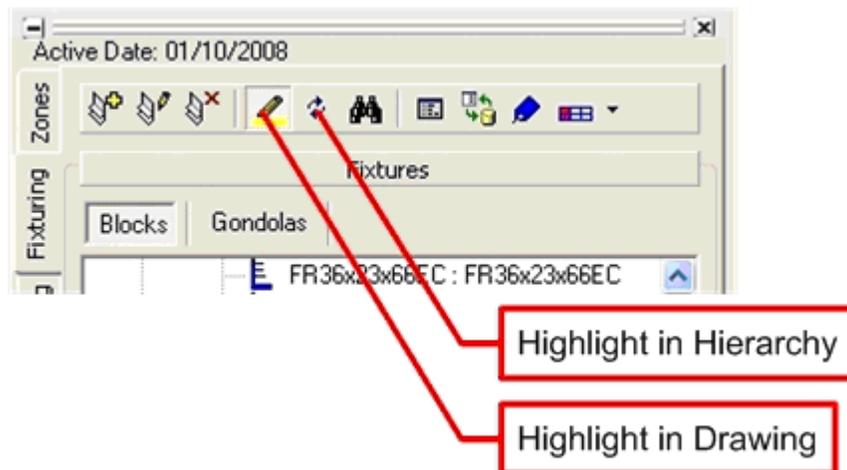
Fixturing Toolbar

The Fixturing toolbar has the following options:

- Highlight
- Find
- Options
- Refresh
- Attributes
- Promotional Fixtures

Highlighting Options

The **Highlight Selected Item in View** and **Highlight Item in Tree** option enables you to find items in the drawing and hierarchy. When the highlight option is selected in the toolbar, it is active.



Highlight Options

Find Option

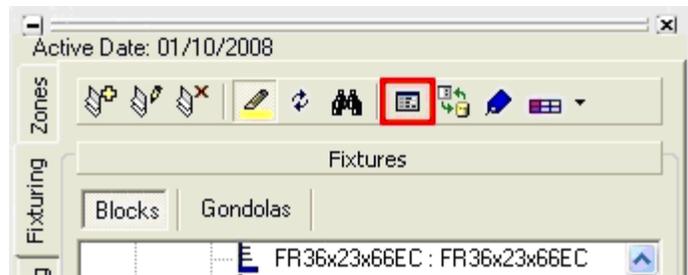
The Find function enables you to search blocks in the drawing.



On the Find Block dialog box, enter the required search string and click the Search icon. This brings up a list of any blocks matching the search string. Highlight any result and click OK to return to the Object Browser, where the selected block is highlighted in the hierarchical tree.

Options

The Options function enables you to configure the fixturing options.



Refresh

The Refresh icon refreshes both Fixture and Gondola information in the respective hierarchical trees.



Click the Refresh button tab to load the latest gondola information from the database into the Gondola hierarchy. At the same time, it loads the latest fixture information from the database into the Fixture Hierarchy. This means that adding a fixture or gondola from the appropriate hierarchy after the refresh button has been pressed uses the latest definition from Fixture Studio.

If a drawing is already open then fixtures or gondolas already placed in the drawing will not use any changes loaded during the refresh operation until the drawing is closed and reopened. However, new fixtures or gondolas added to the open drawing uses the new data.

Attributes

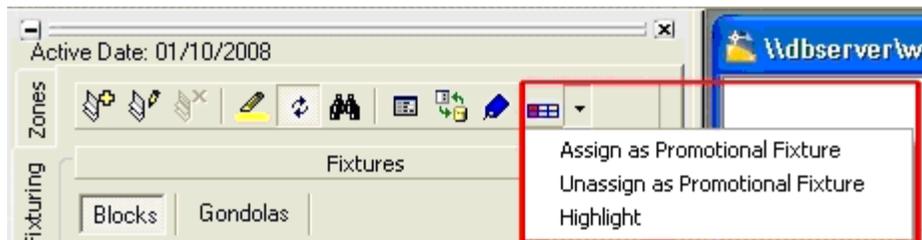
The Attributes function enables you to view the user defined attributes of the selected block. Select the Attributes icon from the Blocks and Gondolas toolbar.



Some fixtures may not have any attributes assigned.

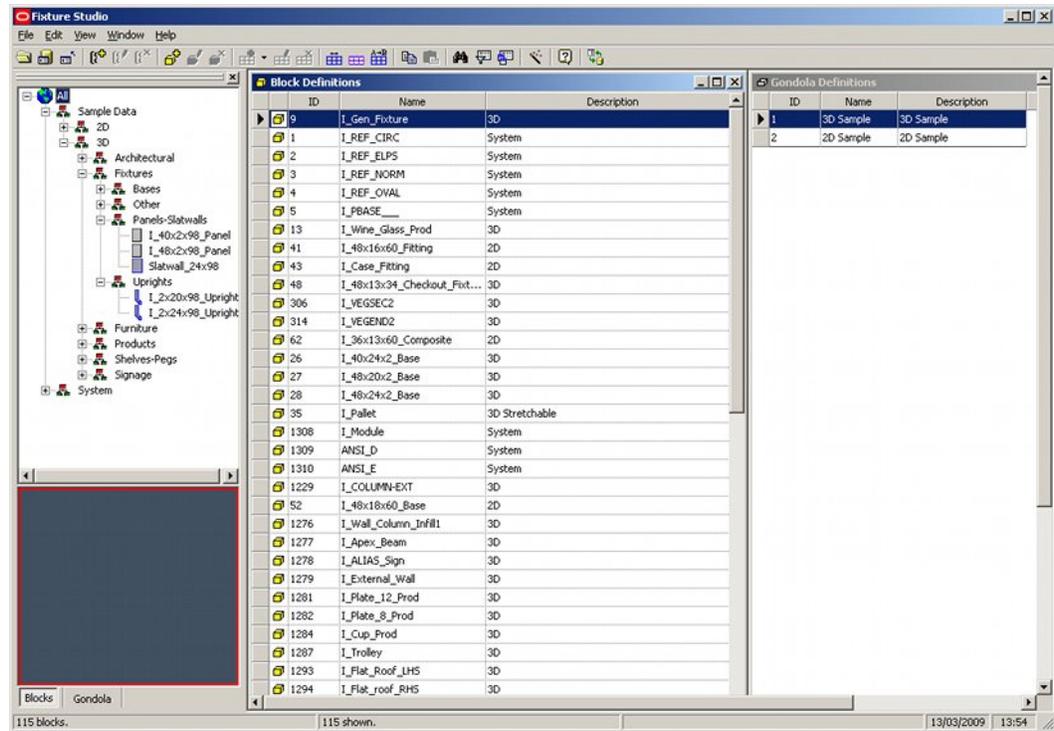
Promotional Fixtures

Promotional Fixtures are fixtures that can be allocated for a specific purpose of rapidly changing offers.



Fixture Studio

Fixture Studio is a module of Macro Space Management where you can configure fixtures and gondolas.



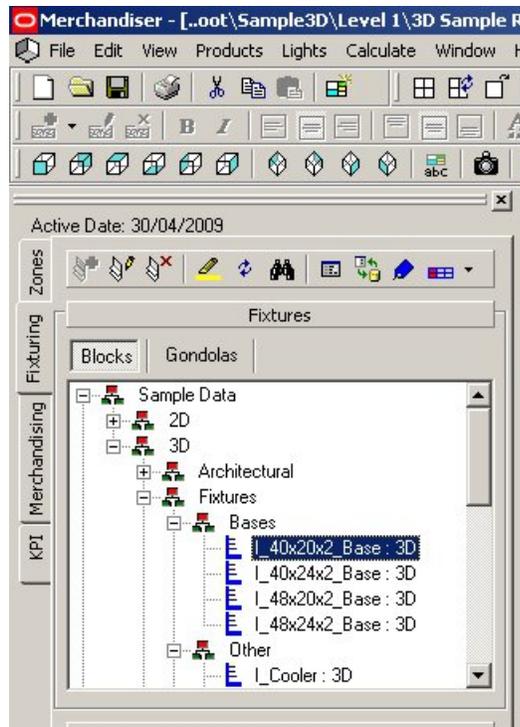
Fixture Studio Module

Activities in Fixture Studio have a significant influence on Merchandise.

- The hierarchies of Fixtures and Gondolas that display in the Object Browser in Merchandise are configured in Fixture studio.
- Fixture properties are configured in Fixture Studio.
- Gondolas are defined in Fixture Studio.

Gondola and Fixture Hierarchies

Gondolas and Fixtures for use in Merchandise are selected from a hierarchy in the Object Browser.



Fixturing tab

There is hierarchy for fixtures and gondolas. You can switch between the two by clicking on the Blocks or Gondolas button while in the Fixturing tab. They are made up of groups and fixtures (or gondolas). Groups are the equivalent of windows folders and serve to hold fixtures (or gondolas) of a specific type.

The fixture and gondola hierarchies cannot be altered in Merchandiser, you can modify the hierarchy only in Fixture Studio. In Fixture Studio groups, fixtures, and gondola definitions can be added, edited, and deleted. This allows the hierarchy to be customized to suit the user.

Fixture Properties

Fixture Properties are defined in the Block Details definition box in Fixture Studio.

Block Details definition box

It contains a series of tabs that allow intelligent properties to be assigned to the graphic that appears in the drawing.

Tab	Function
Category tab	Basic parameters for the fixture including data on materials, manufacturer, how products fit onto the equipment, etc.
Insertion tab	How the fixture is inserted into the drawing including the height above floor level and what direction the front of the fixture faces.
Size tab	The dimensions of the fixture, including additional floor area assigned to allow for extra equipment to be placed on the fixture.
Connections tab	Specifies which equipment can be connected to what other equipment.
Parts tab	Specifies a list of parts for the equipment; for example bolts and castors required.
Fixture tab	
UDAs tab	Allows User Defined Attributes (text based information) to be assigned to the fixture. These UDAs can then be viewed in Merchandiser.
Styles/Ranges tab	
Merchandisable Areas tab	Defines the volume that merchandise is allowed to occupy.

Tab	Function
Shelf tab	Sets the default angle for any shelving to be attached to the equipment
Preview tab	For use within Fixture Studio - it allows users to visually check connection points, merchandisable areas, etc.

Gondola definitions

Gondola Definitions are managed in Fixture Studio.



Gondola Definitions

The settings assigned in the Gondola Definitions dialog box are reflected in the Gondola Run dialog box when a gondola is placed in Planner or Merchandiser.

Gondola Definitions dialog box

Settings affected by the Gondola Definitions dialog box include the available dimensions and whether any parts of the gondola are optional.

Overview of Macro Space Management Equipment

A Store in the Merchandise environment is populated by equipment. This can include fixtures, fittings, shelves and many other items of store furniture. The way these items behave is affected by the properties they have been assigned, how they are grouped together for collective manipulation and by what the System variables are set to.

Object Properties

Each of these items of equipment has been initially created as a graphic (using for example AutoCAD). The graphic contains basic properties such as dimensions and an insertion point. The graphic has then been imported into Macro Space Management and turned into a Macro Space Management Block. During this process, the Macro Space Management Block is assigned additional properties that allow it to act in an 'intelligent' manner when in the Macro Space Management CAD and Virtual Reality Environments. Knowledge of how these 'Intelligent Properties' affect the behavior of equipment within Macro Space Management is important in understanding the behavior of the software. Some of these properties are:

Property	Function
Insertion Points	Determine the locations at which equipment and merchandise is placed in Merchandiser
Child Insertion Points	Determine the justification which products are placed on fixtures and shelf objects
Connection options	Determines how one item of equipment connects to another.
Placement Options	Determines the alignment, etc, when product is placed onto open shelves, pegs and other shelf objects
Styles	Determines which items of equipment are compatible with another. Also determines which shelf objects products can be placed on.
Alignments	Determines how groups of products on shelf objects can be aligned (justified) relative to that shelf object.
Product Orientations	Individual product items can be placed in specified orientations, for example with the front, side or top of the packaging facing forward on the shelf object.

Grouping of Objects

Multiple objects (collections of either equipment or products) can be selected for collective operation. This is done by:

- Selection sets: used for a single collective operation.
- Groups: sets of objects in horizontal alignment that can repeatedly manipulated
- Families: sets of objects in vertical alignment that can repeatedly manipulated

System Variables

In addition there are a number of System Variables that affect Macro Space Management. These may be set to different values – each of which will cause a modification to the behavior of the Macro Space Management environment.

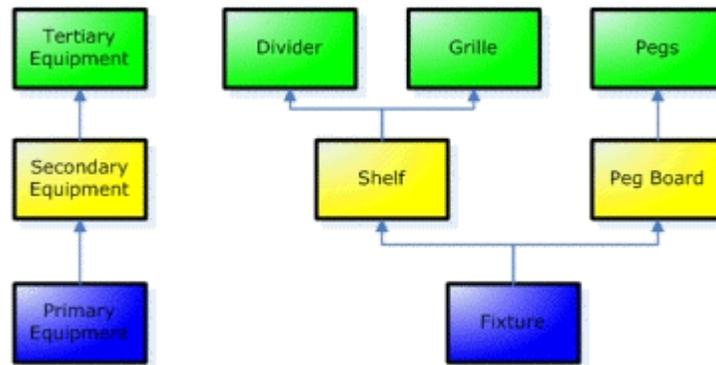
Equipment Types and Connection Points

The equipment used in building a store layout falls into three categories: Primary, Secondary and Tertiary.

Primary Equipment indicates the most fundamental form of equipment. All Primary Equipment is capable of being placed directly on the floor. Some Primary Equipment is capable of accepting subsidiary equipment, (Secondary Equipment). Only Primary Equipment has an Insertion Point that is directly placed in the floor plan of a store.

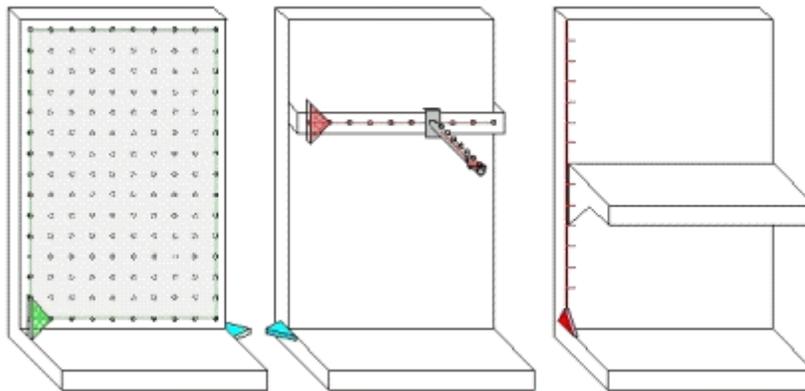
Secondary Equipment indicates items of equipment that attach directly to Primary Equipment. Secondary equipment cannot be placed directly on the floor. Some Secondary Equipment is capable of accepting further subsidiary equipment, (Tertiary Equipment). Secondary Equipment has an insertion point relative to the insertion point of its parent Primary fixture.

Tertiary Equipment indicates equipment that is attached to Secondary Equipment. Equipment can therefore be arranged in a hierarchy, as in the example below.



Within the Merchandiser environment, store furniture can be assembled in standard or custom configurations by joining together items of equipment. For example, a back panel could be placed directly on the floor. This back panel could then have runs of shelving attached, and the shelves in turn have dividers placed on them.

Macro Space Management's internal rules determine exactly how items of equipment can connect together. Within the Merchandiser environment, connection points give visual indications as to how individual items of equipment can be assembled.



Location and Coordinate Systems

The central Macro Space Management database holds information on the location (and dimensions) of all objects placed on the floor of the Virtual Reality store. These normally are a limited number of fixtures and fittings such as legs, pallets, etc. Each object will be inserted at a specific Insertion Location with coordinates expressed in terms of X, Y and Z coordinates.

Each object to be inserted has two Insertion Points; a Graphical Insertion Point and a Macro Space Management Insertion Point. The graphical insertion point is created when the graphic is drawn (in for example AutoCAD). When the graphic is imported into Macro Space Management, the coordinates of the graphical insertion point are manually entered into the object details held by Macro Space Management. This manually entered data must match the original graphical insertion point, or misalignments will occur in the Virtual Reality environment.

All other objects, (equipment of merchandise) are connected to the fixtures and fittings that have been placed on the floor. These objects are known as children of their parent objects.

Children have their own insertion locations specified relative to the insertion location of their parent objects. They also have their own individual graphical and **Macro Space Management** insertion points. Again, these must match to prevent misalignments.

Connection and Placement Options

Objects in Macro Space Management can be split into several broad categories. Two of these categories are Equipment and Products. They connect together in slightly different ways.

Equipment

Equipment connects together using Connections. These may be either points (which simply snap two items of equipment together), lines (which allow equipment to be connected at intervals defined along a line), or planes (which allow equipment to be connected at intervals defined in a 2 dimensional grid).

Products

Products connect together using Placement Options. These may be either Continuous Placement (where products can be placed anywhere within a specified boundary, for example an open shelf), or Point Placement (where products can be placed in clearly specified places, for example on an array of pegs).

Styles

Styles are used to specify which items of equipment are compatible with another, and which types of product can be placed on which shelf. Equipment has Fixture Styles. Only equipment with compatible styles can be connected together.

Shelves have both Fixture Styles and Shelf Styles. The Fixture style must be compatible with the equipment it is being placed on. The shelf style must be compatible with the product that can be placed on it.

Product has a Product Style. The Product Style must be compatible with the shelf on which it is being placed or placement will not be allowed.

Alignments

When objects are placed on shelf objects, they may not be in the best possible alignment to display them, or there may be gaps between products leading to inefficient use of shelf space.

Macro Space Management has a series of alignment options so that selected products on pre-determined shelves can be aligned (justified) to customer specified requirements such as the left of the shelf, the back of the shelf, etc.

Product Orientations

Products are normally placed with the front of the packaging facing the front of the shelf object. However, placing products in this orientation may not fill the shelf to its maximum capacity.

Macro Space Management thus allows products to be placed in other orientations, for example on their side, so that the number of products placed on a particular shelf object can be maximized.

Products placed in orientations other than the main one are known as caps.

Equipment Details

Equipment Types

Equipment is categorized under three types:

Fixtures: Equipment that can be placed on the floor and can be populated with shelves and/or products.

Fittings: Equipment that can be placed on the floor, but can't be populated.

Shelves: Equipment that is placed on a fixture and can optionally hold product.

In addition, there is a fourth class of objects:

Other: Any other item that is not equipment, e.g. an architectural column.

Attachment Options

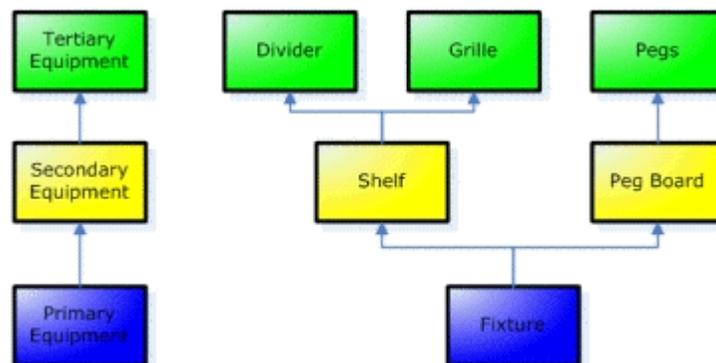
The equipment used in building a store layout falls into three categories: Primary, Secondary and Tertiary.

Primary Equipment indicates the most fundamental form of equipment. All Primary Equipment is capable of being placed directly on the floor. Examples of Primary Equipment include Metal Uprights, Back Panels, Pallets and Fittings, (such as legs). Some Primary Equipment is capable of accepting subsidiary equipment, (Secondary Equipment).

Secondary Equipment indicates items of equipment that attach directly to Primary Equipment. Secondary equipment cannot be placed directly on the floor. Examples of Secondary Equipment include shelves, peg boards and slatted back panels. Some Secondary Equipment is capable of accepting further subsidiary equipment, (Tertiary Equipment).

Tertiary Equipment indicates equipment that is attached to Secondary Equipment. Examples of Tertiary Equipment include pegs, rods and dividers.

Equipment can therefore be arranged in a hierarchy.



All Secondary Equipment must have an item of Primary Equipment as a parent. Similarly, every item of Tertiary Equipment must have an item of Secondary Equipment as its respective parent. Depending on the design, some items of Primary, Secondary and Tertiary Equipment can accept merchandise. Others cannot.

Equipment Placement Options

The following table indicates how Macro Space Management fixtures and fittings can be inserted into the drawing and connected to each other.

	Shelf Style Name	Can be placed on floor	Attaches to Fixture	Attaches to Shelf	Accepts Equipment
Back Panel		X			X
Basket Shelf	Basket			X	X
Booster Shelf				X	
Crossbars, Lateral Rod	Crossbar		X		X
Divider	Divider			X	
Fittings, i.e. legs			X		
Gravity Feed			X		
Grille/Riser	Grille			X	
Hanging Bar	Bar		X		X
Metal Upright		X			X
Obstruction, i.e. cross brace	Obstruction		X		
Pallet	Pallet	X			
	Pegboard		X		X
Pegboards					
	Peg				
Pegs				X	

	Shelf Style Name	Can be placed on floor	Attaches to Fixture	Attaches to Shelf	Accepts Equipment
Products				X	
Rods	Rod			X	
Shelves	Open Shelf		X		X
Slatted Back Panels	Slatted Back Panel		X		X
Space Holder	Space		X	X	

Can be placed on floor indicates equipment that can be placed directly on the floor. All other equipment must be attached to and supported by these types of equipment. All equipment that places directly on the floor is Primary Equipment.

Attaches to Fixture indicates items of equipment that can be directly attached to a fixture. All equipment that cannot be placed directly on the floor and requires attaching to a fixture is Secondary Equipment.

Attaches to shelf indicate equipment that can only be placed on a shelf. All equipment that needs to be placed on a shelf is Tertiary Equipment.

Accepts equipment indicates that this item can have subsidiary items of equipment attached to it. For example, fixtures can accept shelves, shelves accept dividers and grilles and pegboards accept pegs.

Equipment Merchandising Options

Macro Space Management equipment can be merchandised as follows.

(Fittings cannot hold products – only fixtures and shelves can hold merchandise).

	Shelf Style Name	Can Populate with Placeholder	Can Populate with SKU
Back Panel		X	
	Basket		
Basket Shelf		X	X
Booster Shelf		X	X
Crossbars, Lateral Rod	Crossbar		

	Shelf Style Name	Can Populate with Placeholder	Can Populate with SKU
Divider	Divider		
Fittings, i.e. legs			
Gravity Feed		X	X
Grille/Riser	Grille		
Hanging Bar	Bar		
Metal Upright		X	X
Obstruction, i.e. cross brace	Obstruction	X	X
Pallet	Pallet		
Pegboards	Pegboard		
Pegs	Peg	X	X
Products			
Rods	Rod	X	X
Shelves	Open Shelf	X	X
	Slatted Back Panel		
Slatted Back Panels			
Space Holder	Space		

Both fixtures and shelves (Open Shelves, Hanging Bars, etc) can be populated with products. Other fixtures, such as back panels, cannot be populated with products directly but can hold shelves – which in turn can hold product.

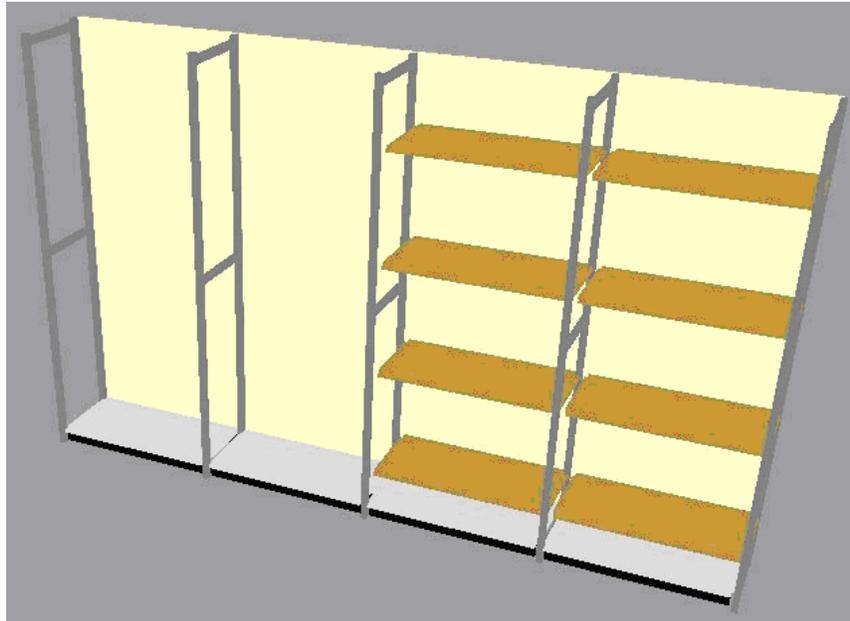
Can Populate with Placeholder indicates that a placeholder can be placed on the fixture. Placeholders allow the user to indicate the fixture can be used for a general class of

merchandise (for example men's clothing) than a more specific SKU (for example blue men's shirts).

Can Populate with SKU indicates that individual items of merchandise (SKU's or Stock Units) can be placed on the fixture.

Gondolas

A Gondola is a collection of fixtures and fittings placed in a predetermined arrangement. This enables long runs of fixtures to be placed very quickly.



When gondolas are placed, they do not contain shelves. The left hand two bays consist of a base unit, leg and back panel and that is how the gondola look on insertion. The right hand two bays have had shelves added.

Note: adding a gondola in Merchandiser is very similar to adding a gondola in Planner.

Adding a Gondola

To Add a Gondola:

1. From the Object Browser, highlight a gondola in the hierarchy and 'drag and drop' it onto the drawing. The Add Gondola dialog box appears.

Add Gondola dialog box

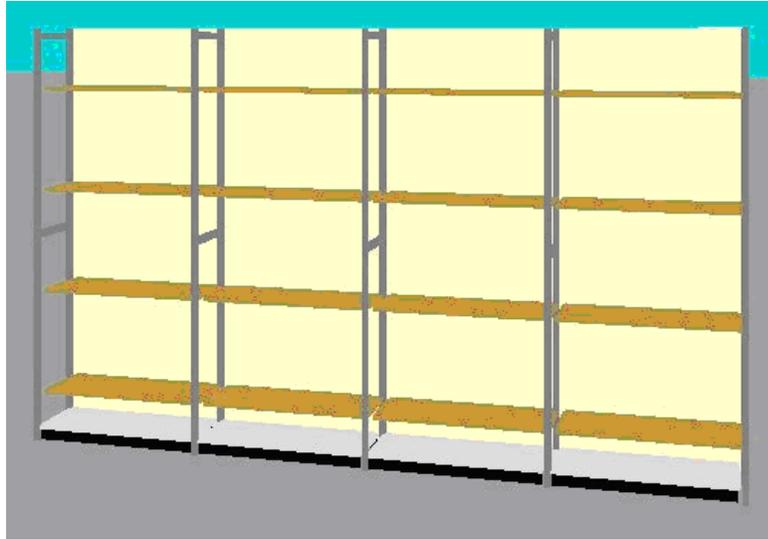
2. Select the dimensions from the Options at the bottom left of the dialog box – depending on what is configured in Fixture Studio selections can be made from up to 6 options. In the above example, a variety of depths and heights can be selected. Options are used to select optional parts of the gondola – in this example the Start Cap and End Cap can be included or omitted depending on the user's choice.
3. Set the Number and Angle of the gondola. Alternatively, clicking on the appropriate measure button enables dimensions to be selected in the drawing.

Note: The Angle is particularly important for single sided gondolas. When the angle is 0o, the front of the gondola is pointing south (down the drawing). It can be changed to east (90o) north (180o) or west (270o) simply by inputting in an alternative angle

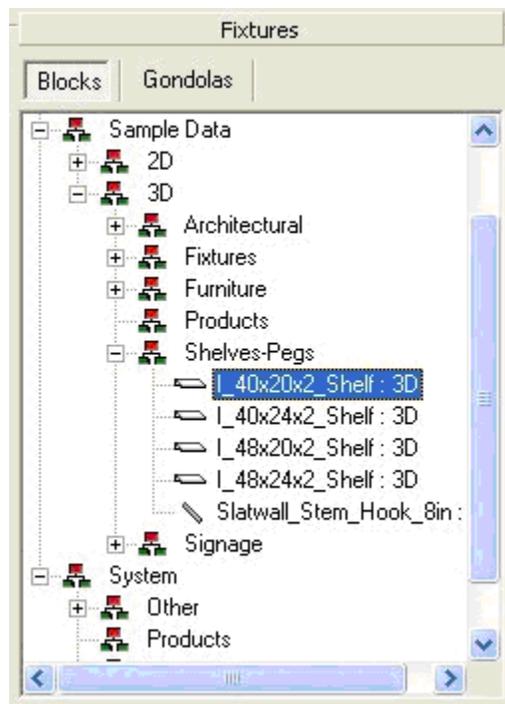
4. Set the Start Position (left or right), whether the first bay of the gondola is drawn starting from the left or the right. This is useful when drawing a gondola starting from a corner.
5. When all the parameters have been set in the Add Gondola dialog box, click the **OK** button to draw the gondola.

Adding Shelves to Gondolas

Shelves can only be added in Merchandiser. They can be seen and deleted in the Planner Module environment after the information has been synchronized.



Shelves are added by highlighting the required shelf in the Object Browser.



Note: the shelf selected should be compatible with the equipment being placed. For example the shelves should be the same width as the back panels on which they are being placed.

Once the shelf has been highlighted it can be 'dragged and dropped' onto the required fixtures.

- If no fixtures are selected, the shelves are added to the fixture onto which they have been 'dropped'.
- If fixtures have been individually selected, shelves are added to the selected fixtures (even if the fixtures are not adjacent).
- If a group of fixtures has been selected, shelves are added to all the fixtures in the group.

Once the shelf has been 'dropped' onto the required fixtures, the Add Shelves dialog box appears. It appears in its condensed form; click the Array button to expand the dialog box.

The 'Add shelves' dialog box is shown in its expanded state. It features a blue title bar with the text 'Add shelves' and a close button. The main area is divided into several sections:

- Input Fields:** Height (60), Width (0), Depth (0), Angle (0), Shelf (3D), Preferred Style ((None), Slot (4), X Slot (0), and Y Slot (0). Each field has a small arrow icon for adjustment.
- Buttons:** An 'Add' button is located to the right of the Slot field. There is also a small 'X' icon in a box.
- Array Details:** A section on the right side with fields for Z Quantity (4), Z First Shelf (12), Z Spacing (24), X Quantity (1), X First Shelf (0), X Spacing (0), Y Quantity (1), Y First Shelf (0), and Y Spacing (0). Each field has a small arrow icon for adjustment.
- Table:** A table with columns Slot, Height, Width, Depth, and Angle. The table is currently empty.
- Status Bar:** At the bottom, there is a status bar with the text: Height 110 Slots: 8 First Slot: 12 Spacing: 12, Width 0 Slots: 0 First Slot: 0 Spacing: 0, Depth 0 Slots: 0 First Slot: 0 Spacing: 0.
- Buttons:** 'OK' and 'Cancel' buttons are located at the bottom right.

Add Shelves dialog box

To add shelves set the quantity, height of the lowest shelf, spacing between shelves, and then click **Add**. The slots and heights can be edited if required. Click the **OK** button to add the shelves to the selected fixtures.

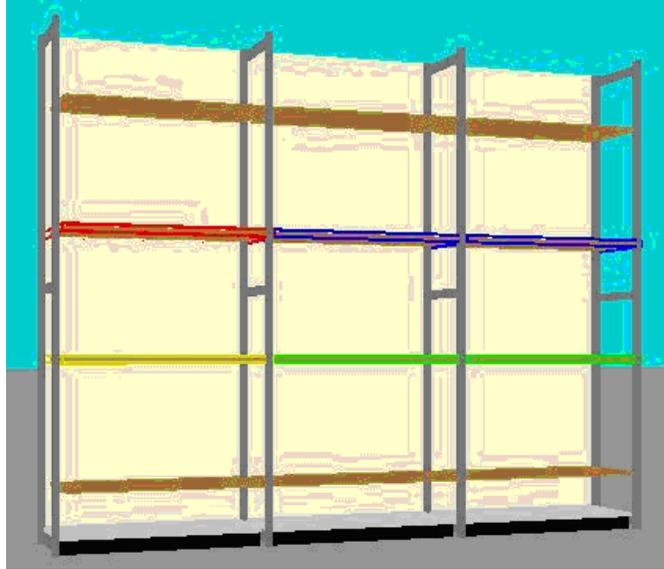
Deleting Shelves

You can delete shelves in two ways:

- Using the <Delete> key.
- Using the Empty Shelves command.

Using the Delete Key

One way of deleting shelves is to select the required shelves, then click the <Delete> key.



If the selected shelves are not in a group, they will be highlighted in red or blue. If the shelves are in a group (and grouping is on) they will be highlighted in yellow and green.

Using the Empty Shelves Command

To empty shelves:

1. Select the parent fixture. The highlight color for the fixtures depends on whether the fixtures are in a Group or not and whether Grouping is on or not.
2. Select the Empty shelves command from the right click pop-up menu.



The shelves are removed from the selected fixtures.

Insertion Points

There are two types of insertion points; **Insertion Points** and **Child Insertion Points**. Insertion Points are used to locate objects in the Planner or Merchandiser environments. Child Insertion Points are used to locate objects onto already placed objects. An example would be the location of merchandise onto a shelf.

Each fixture or fitting used in Macro Space Management has an insertion point. This is a single set of co-ordinates that specify the point on the block that Macro Space Management uses to locate it in the Planner or Merchandiser environments. The graphics for the block have an AutoCAD insertion point. These are fixed when the AutoCAD objects are designed and cannot be changed from within the Macro Space Management environment.

It is important to specify an insertion point that matches the existing AutoCAD insertion point, because the AutoCAD insertion point cannot be changed. Failure to do so can lead to misalignments in the drawing.

Note: Insertion Positions are set in Fixture Studio.

Child Insertion Points

Child insertion points define how merchandise places onto that onto specific item of equipment. This is because products are not directly assigned an insertion point, but adopt those specified for the fixture they are being placed on.

If the fixture has an insertion point of Bottom Front Left any products will be placed with this point on the product used as a datum. Similarly, products with insertion points of Top Back Centre or Bottom back left will be placed using different datum points for those products.

If a shelf object (for example a open shelf) was intended to take boxed products, it might have its Child Insertion Position set to Bottom Back Left as the boxed products will sit on top of the shelf.

If a shelf object (for example a hanging rod) was intended to take products hanging from it, it might have its Child Insertion Position set to Top Back Centre so the products appear to hang from the rod when placed on it.

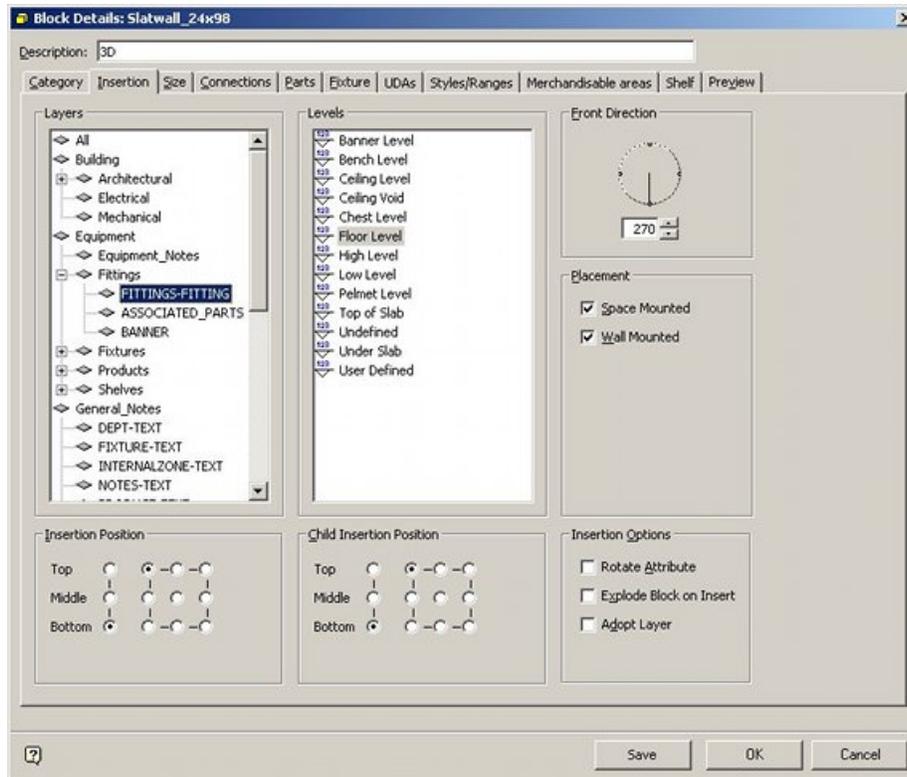
Note: Child Insertion Positions are set in Fixture Studio.

These points can be changed within Macro Space Management so it is important that a consistent convention is adopted for the position of Child Insertion Points.

Specifying Insertion Points

Insertion points can be specified within Fixture Studio.

1. Select the block to be modified.
2. Select the Edit Block command. This opens the block Details dialog box. The Insertion Tab allows the Insertion Position and Child Insertion Position to be specified.



Block Details dialog box

Note: The Insertion Position in this dialog box is a Macro Space Management insertion position. The original insertion position is an AutoCAD or 3D Studio graphics insertion position and the Macro Space Management Insertion Position is specified to match.

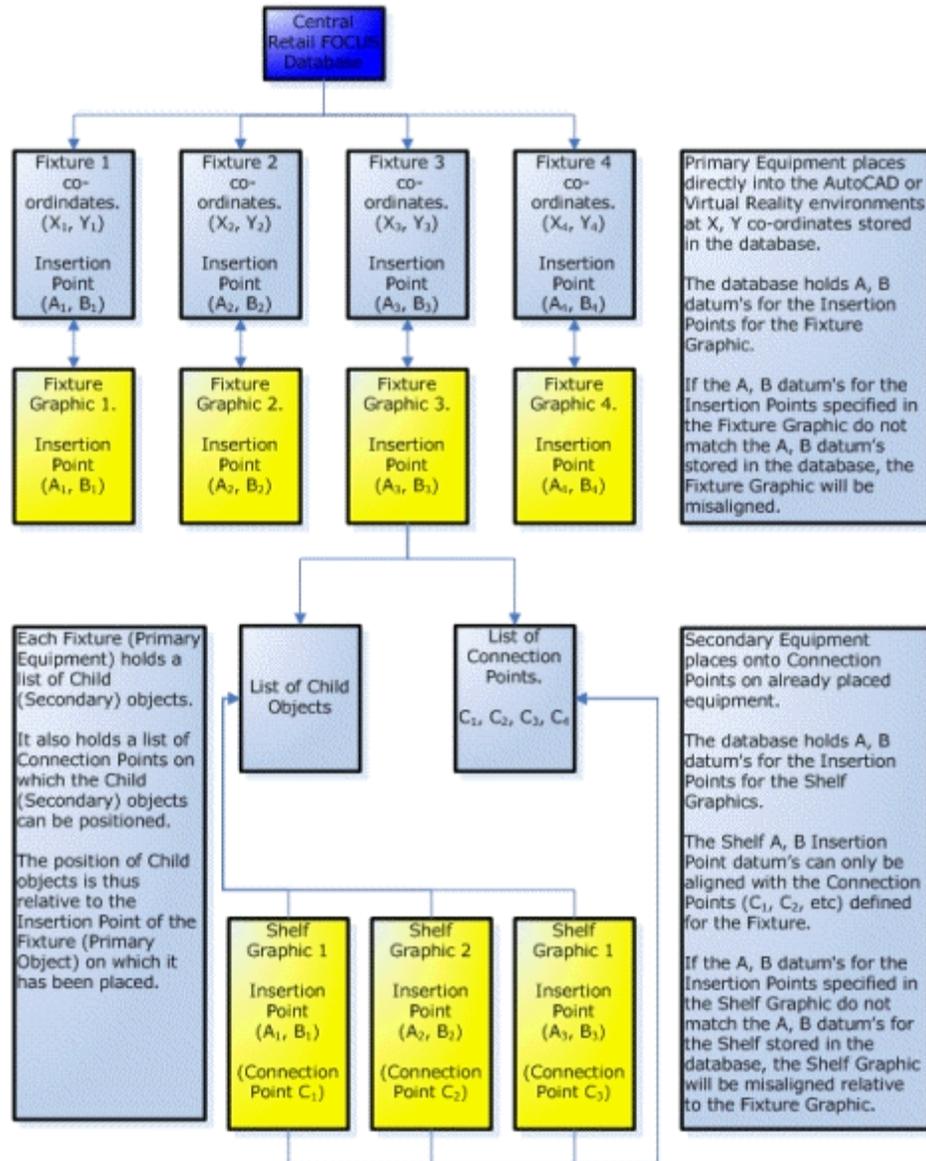
If the Macro Space Management Insertion Position is changed, the AutoCAD or 3D Studio insertion position must also be modified by changing the graphic or vice versa. Failure to do this results in differences between the AutoCAD/3D Studio insertion position and the Macro Space Management Insertion Position. This may result in misalignment when objects are placed in Macro Space Management. It results in errors when calculating adjacencies, etc.

Matching Macro Space Management to Graphical Insertion Points

Macro Space Management holds the insertion location of every object in a Virtual Reality Store in its central database. It also holds block details of every object to be inserted. These block details hold information including where Macro Space Management has assigned the position of the insertion point for the graphic for the object.

This graphic (produced by a program such as AutoCAD) contains its own insertion point produced when the graphic was first created. The Insertion Point specified within Macro Space Management must match the insertion point created when the graphic was drawn, or the graphic will be mis-aligned in the Virtual Reality environment.

This applies both to objects placed directly on the floor of a store layout (primary equipment) and to secondary and tertiary equipment attached to primary equipment.



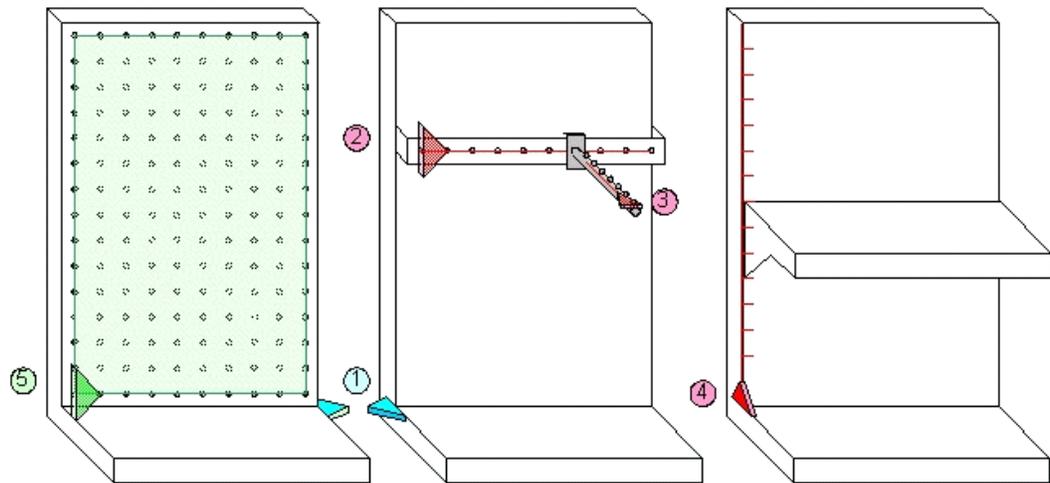
Connection Points

Connection Points are used to attach items of equipment or fixtures together in a precise alignment. They can either be used singly, or aligned in lines, planes or boxes. They also act as filters to ensure that incompatible equipment cannot be connected together.

Connection Lines are used where items like crossbars have set positions along their length that can accommodate Tertiary Equipment such as rods. The position of the arrow indicates the position of the connection point. The increments between set positions along a connection line are defined in Fixture Studio. The position of the connection arrow defines the leftmost position of the first point on the connection line.

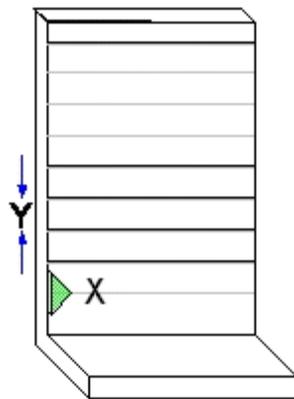
Connection Planes are used where Secondary Equipment such as peg boards or slotted back panels have a 2 dimensional array of possible connection points for Tertiary Equipment such as pegs. The increments between set positions in a connection plane are

defined in Fixture Studio. The position of the connection arrow defines the bottom left position of the first point on the connection plane.

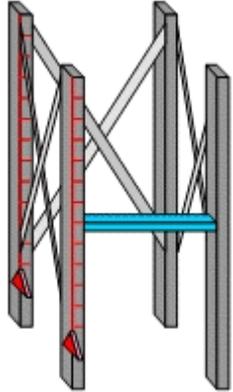


In the above diagram, blue arrows (1) represent Connection Points; red arrows (2, 3, 4) represent Connection Lines and the green arrow (5) represents a Connection Plane. The arrow direction indicates the X axis and the arrow lies in the X, Y plane.

Slatted back panels use a connection plane with the X spacing set to 0 so that rods can be slip to any position along the slot. The Y spacing is set to the distance between slots.



It is also possible to use more than one connection line, as for example with racking.



The fixture could be defined as two uprights (front and back), plus the cross-bracing. This would allow beams (blue) to be added to either the front or the back. Macro Space Management will use the nearest connection arrow to the drop/pick point when deciding which to use.

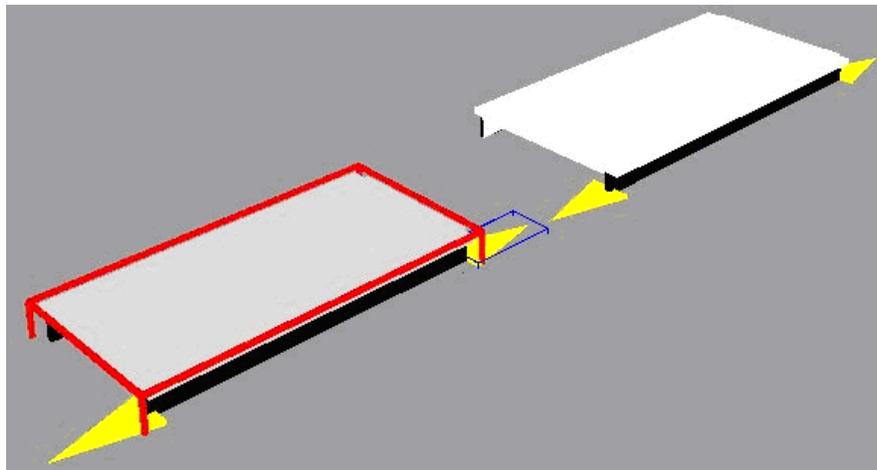
Connection points are used to define the exact point on the dropped object (shelf or peg or rod) that attaches to the notch position. The connection line/plane filters must match the connection point filters. If no connection point is defined for the dropped object, it will use the insertion point of the shelf/peg.

Using Connecting Points

To use connection points, both items of equipment should be visible and the connection point display should be on. It is suggested that Edit Mode is selected so that the viewpoint in the drawing is fixed while connection points are used.

To connect points:

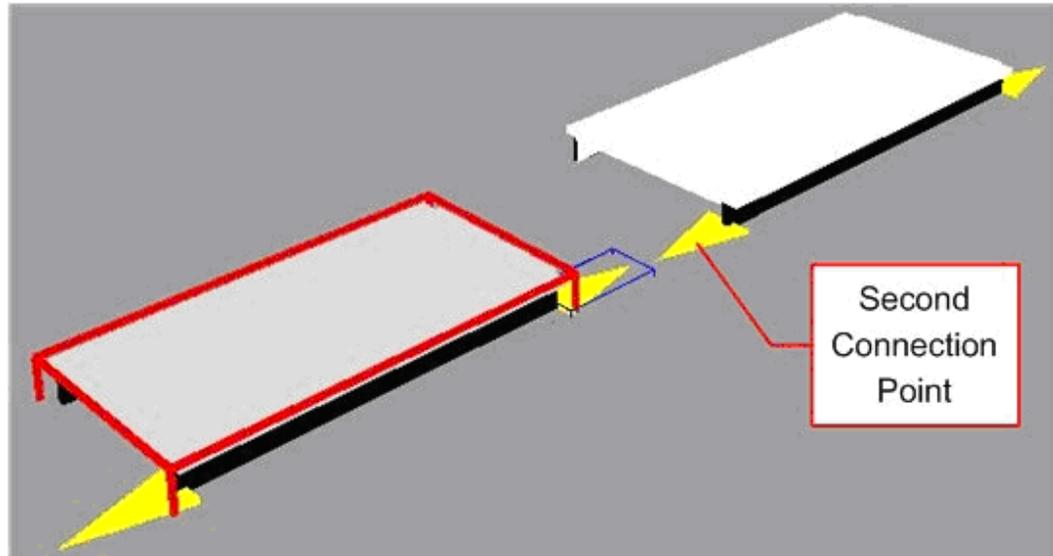
1. Click a Connection Point. The first connection point can be selected by simply clicking it. It is enclosed by a box suggesting it is selected.



2. Once the first connection point has been selected, a prompt appears in the status bar.



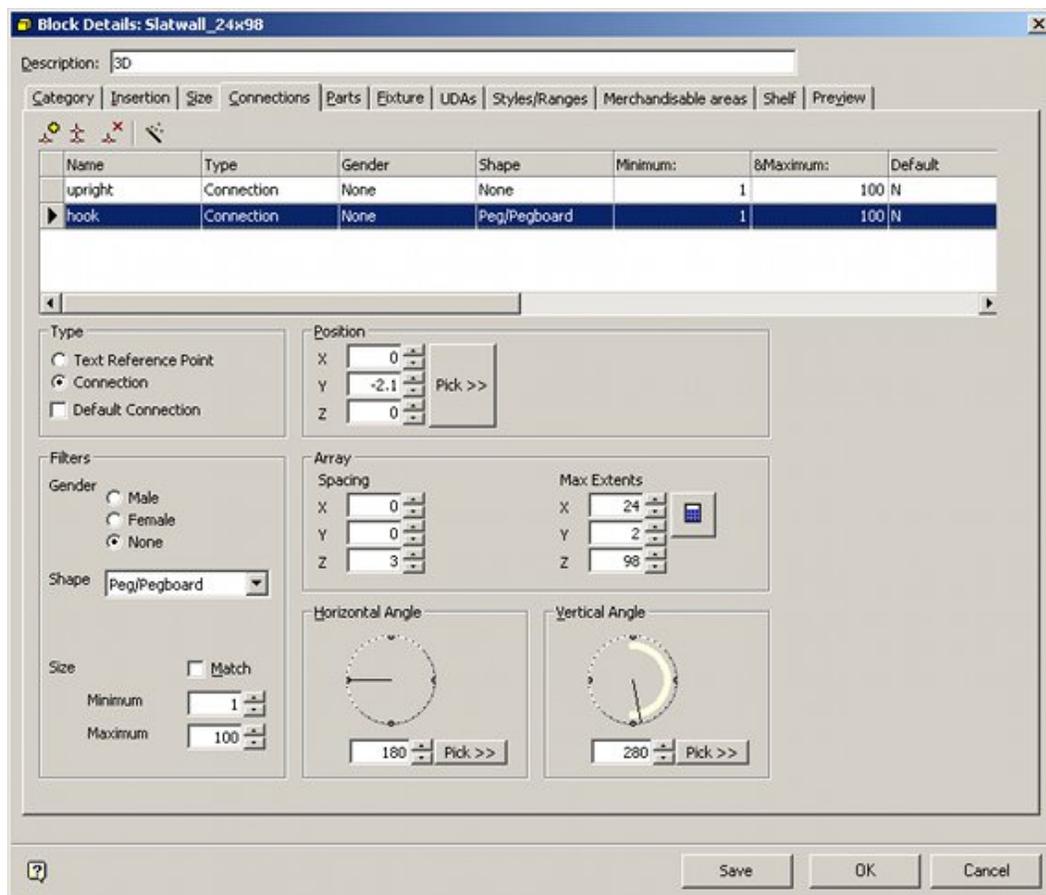
3. Now select a Second Connection Point. The second connection point can then be selected by clicking it.



If compatible, the two fixtures then snap together in a precise orientation. The Equipment will not connect with incompatible connection Points. If the equipment has incompatible connection points, a warning message appears in the status bar.

Connections Tab in Fixture Studio

The Connections tab in the Block Details dialog box in Fixture Studio allows you to specify the connection options for Macro Space Management blocks.



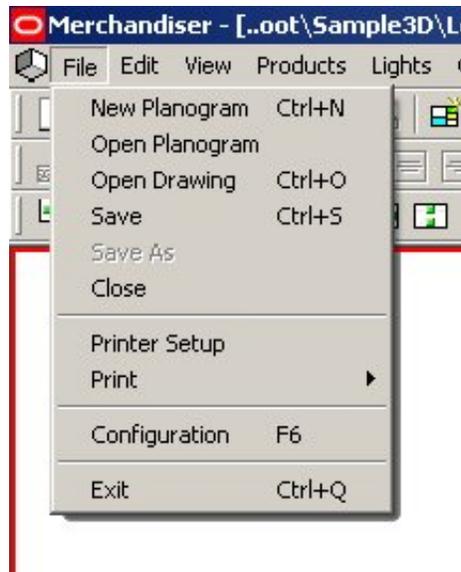
Block Details dialog box

A small Toolbar at the top lets you add, copy, and delete connections, while the Wizard on the toolbar allows you to add basic connections.

The Connections List below the toolbar lists all current connections for the Macro Space Management Block. The defined connection points are the defaults for that fixture type and are applied for every instance placed in the drawing.

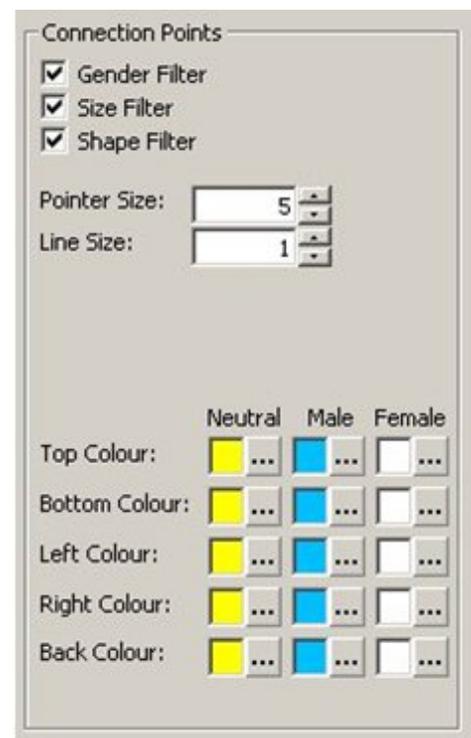
Connections Tab and the Configuration Module

Settings in the Configuration Module can affect how connection points appear and behave. Settings are local and can be customized for any user. Access the Configuration Module by selecting the Configure Option in the file pull down menu.



File Menu - Configure Option

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.
- **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 do not affect other users of Macro Space Management.

Connection Details

Each connection needs the following information to be specified for it in Fixture Studio.

- Name
- Type
- Layer
- Gender
- Shape
- Size
- Position, Array, and Angle settings

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

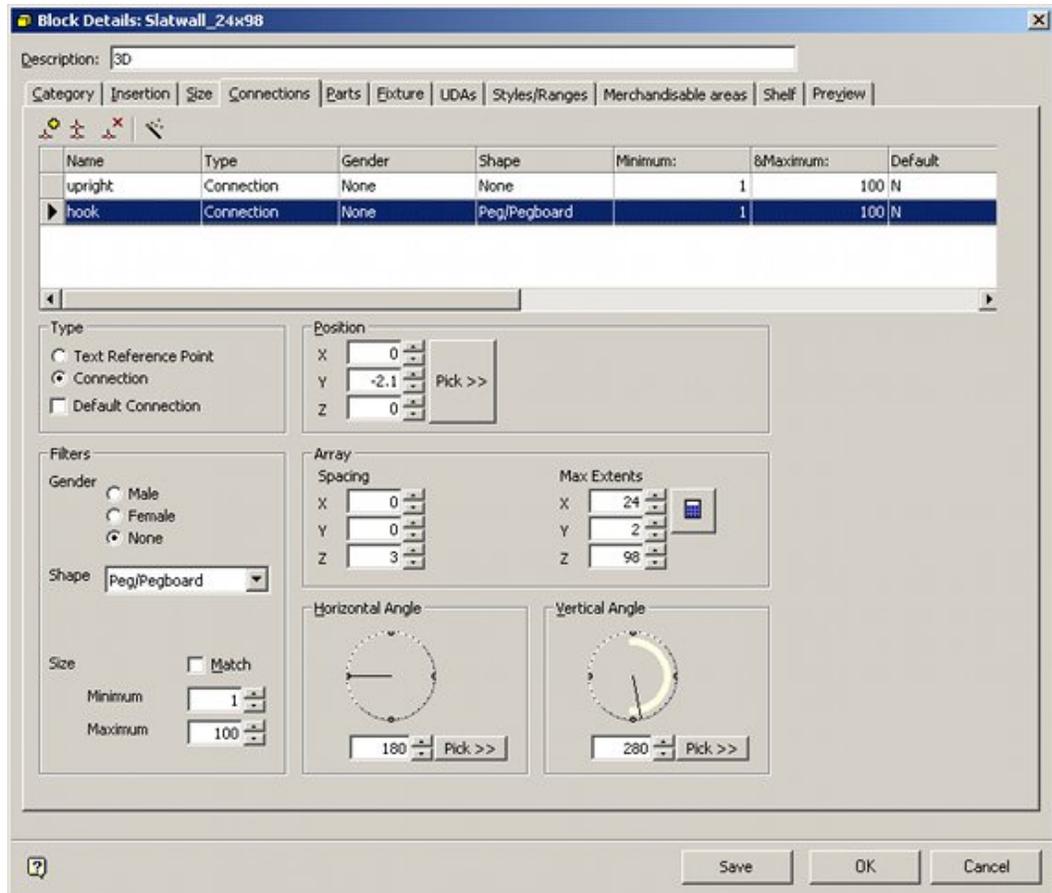
	Requirement	Optional or Mandatory
Gender	The connection points must have compatible genders	This requirement can be disabled in the Configuration Module
Shape	The connection points must have the same shape	This requirement can be disabled in the Configuration Module
Size	The connection points must have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

Connection Point Parameters

Setting Connection Point Parameters

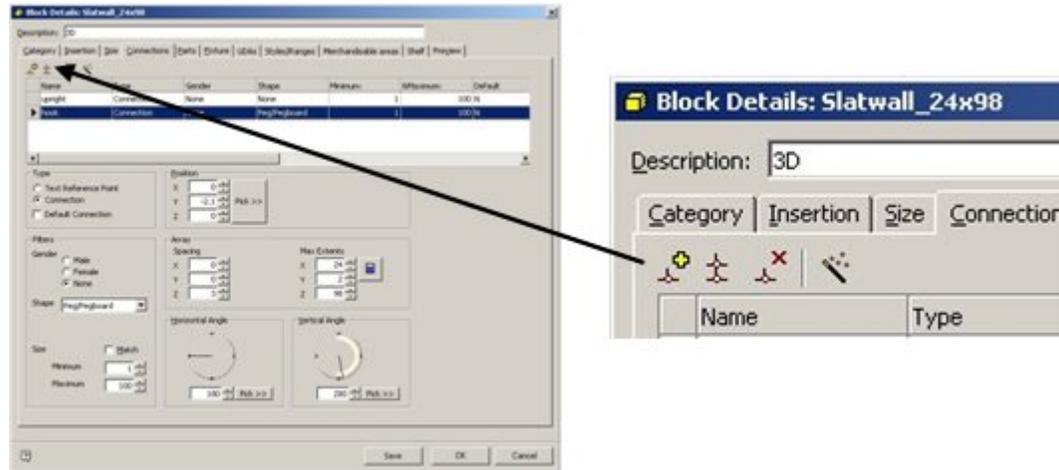
The Connection Point parameters are set using the Block Details dialog box in Fixture Studio.



Block Details dialog box

The Connections Toolbar

The Connections Toolbar is found to the upper left of the Connections tab in the Block Details dialog box in Fixture Studio. It allows you to add, copy and delete Connections. It also allows you to access the Connections Wizard.

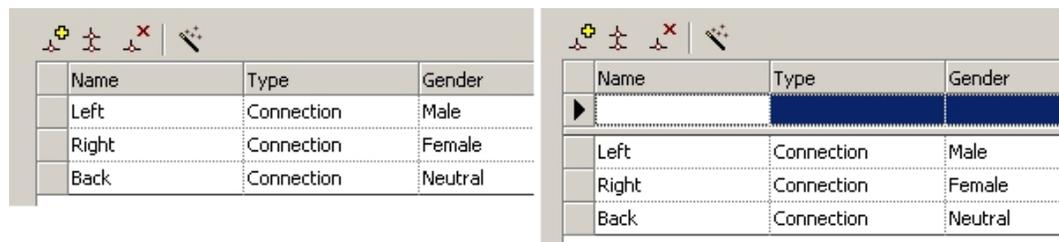


Connections Toolbar

Icon	Function
	Add a Connection
	Copy a Connection
	Delete a Connection
	Connection Point Wizard

Add a Connection

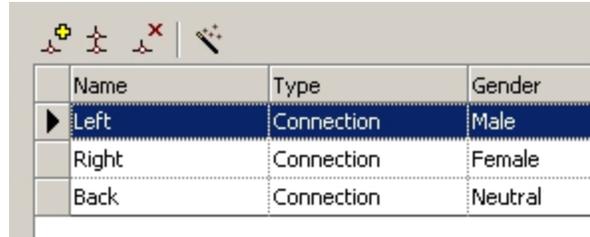
Clicking the **Add a Connection** icon causes a line to be added to the Connections List ready for further details of the connection to be added.



Add Connection

Copy a Connection

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



	Name	Type	Gender
▶	Left	Connection	Male
	Right	Connection	Female
	Back	Connection	Neutral

Copy Connection

Before clicking the Copy icon, select the connection to be copied. Clicking on the icon brings up the connection naming dialog box.

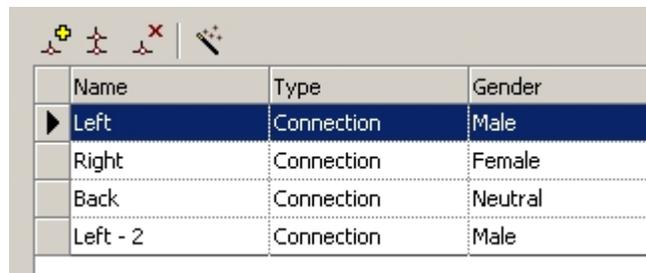


Copy connection point

Name:

? OK Cancel

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 is added, save for the changed name.



	Name	Type	Gender
▶	Left	Connection	Male
	Right	Connection	Female
	Back	Connection	Neutral
	Left - 2	Connection	Male

Delete a Connection

To delete a connection, highlight the connection to be deleted and click the Delete icon. You are asked to confirm deletion.



Fixture Studio

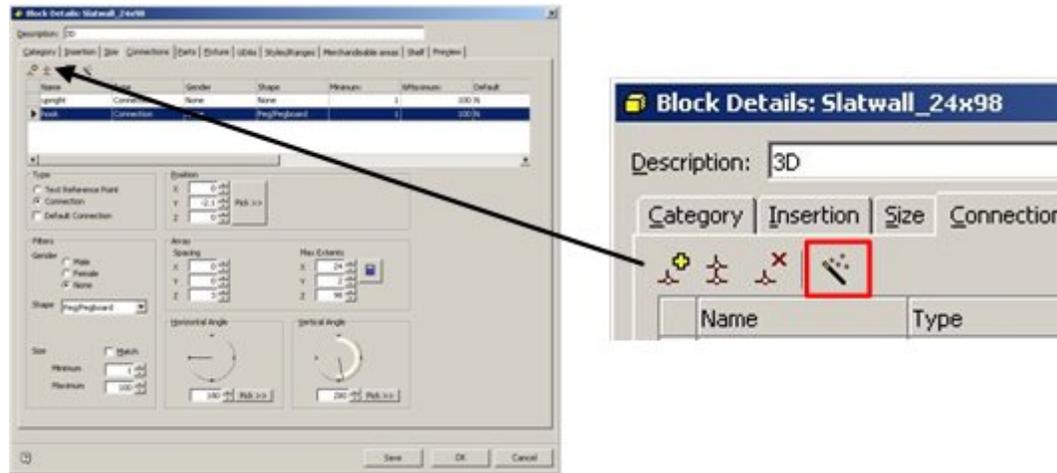
? Are you sure you wish to delete this?

Yes No

Connection Wizard

The Connections Wizard

The Connections Wizard can be accessed from the Wizard icon in the toolbar in the Connections Tab in the Block Details dialog box in Fixture Studio.



Connections Wizard

This brings up the Connections Wizard dialog box.



Connections Wizard dialog 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.

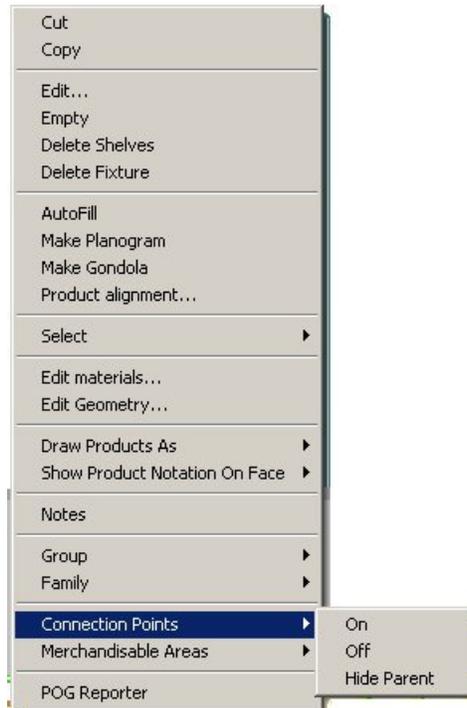
The left connection is male and the right female so that fixtures can only attach when they are facing the same way. The left connection is additionally set to be the default. The Back connection has no gender, so it attaches to any other connection.

Checking the Clear Existing Blocks checkbox removes any existing connections. On clicking OK on the Wizard, the selected default connections are added.

	Name	Type	Gender	Shape	Default	Justifica
▶	Left	Connection Point	Male	Triangular	True	Offset
	Right	Connection Point	Female	Triangular	False	Offset
	Back	Connection Point	None	Triangular	False	Offset

Turning Connection Display On and Off

The Connection Display can be turned on and off for individual fixtures or a selection set of fixtures within the Merchandiser Module. Select one or more fixtures, then move the mouse pointer inside a fixture and use <Ctrl> plus right click to bring up the pop-up menu.



Connection Points - On/Off

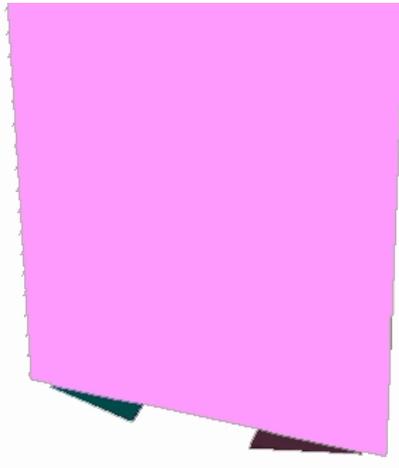
Clicking the Connection points option in the pop-up menu allows connection display to be turned on and off. Hide parent turns off the connection point displaying the parent fixture when (for example) a child object such as a shelf is selected.

Alternatively, connection point display can be toggled on or off on the status Bar.

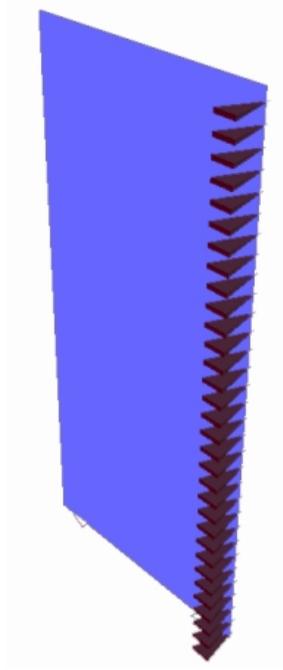


Connection Point Appearance

When visible, Connection Points are shown as triangles.

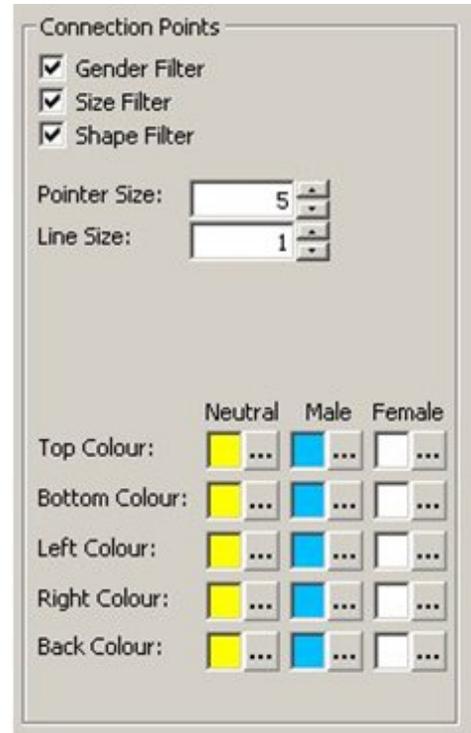
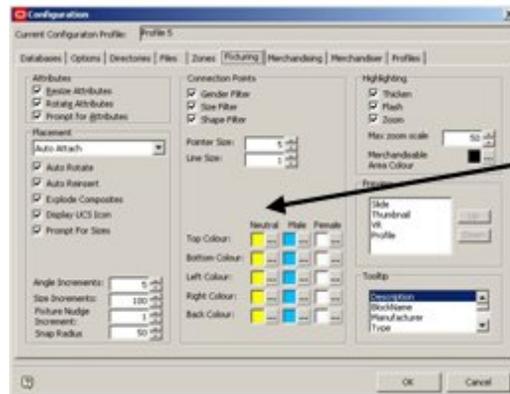


The color and size of the connection points can be specified in the Configuration Module. Their angle, gender, etc, for a specific fixture can be specified in Fixture Studio. Connection Points can appear in lines and arrays, as well as discrete points. The example below shows a Connection Line.



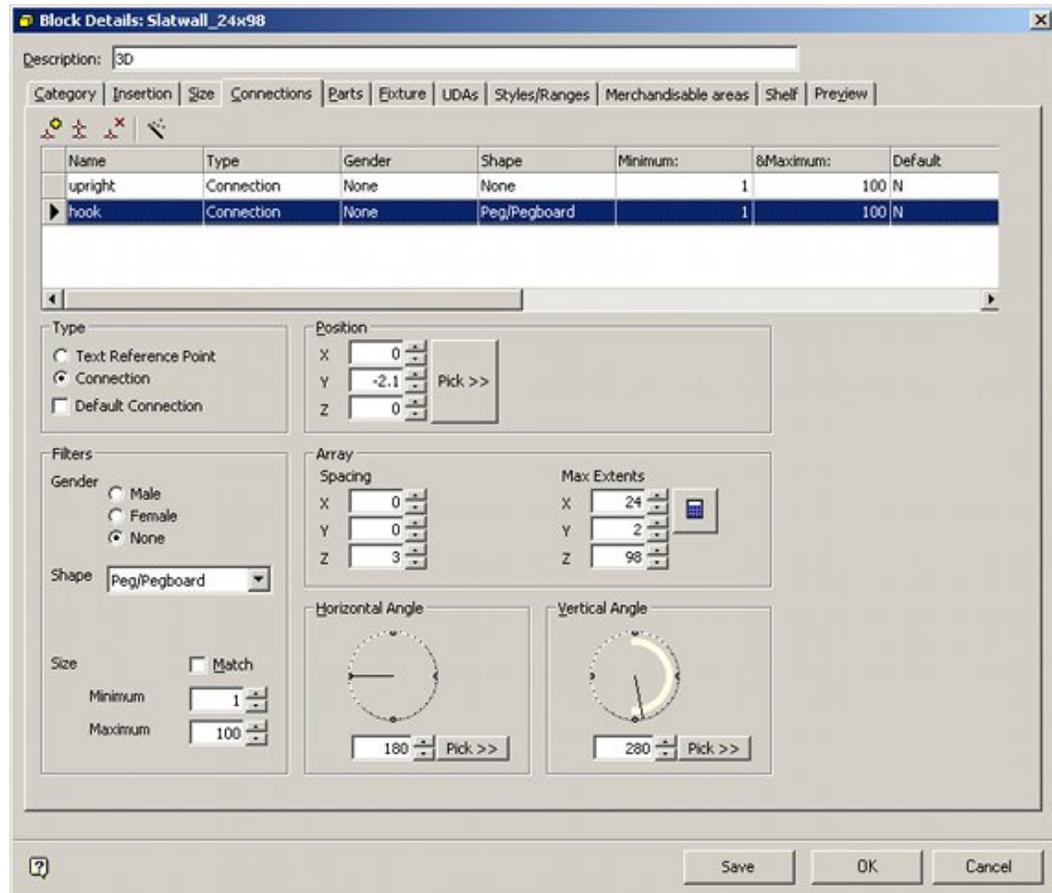
Using Connection Points

Connection points can be used to attach one piece of equipment to another. For the equipment to connect, the connection points must be compatible. Some factors affecting compatibility are set in the Configuration Module.



Connection points

Other fixture specific factors are set in the Configuration Tab of the Block Details dialog box in Fixture Studio.



The combination of both sets of parameters determines whether two connection points are compatible with each other.

Checklist for Compatibility

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

Gender

The gender of a connection determines whether that connection is compatible with another. There are three genders; male, female and neutral. They connect as follows:

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 list provided by Oracle. 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

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 Merchandiser, all connection points will appear visually as triangles).

Size

A maximum and minimum size for the connection can be set in Fixture studio. A pair of connection points must have compatible sizes to connect together. If the Match check box is ticked, then the connections must have identical maximum and minimum sizes. If they are not identical, the connections will not mate.

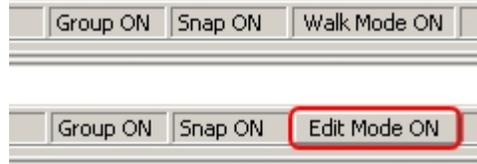
If the Match check box is not ticked, then the connections must have overlapping size ranges. If they are not overlapping, the connections will not mate.

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

Connecting two objects in Edit Mode

Swap to Edit Mode

To connect two objects in edit mode, first ensure that edit mode has been selected by toggling from Walk Mode to edit mode on the status bar.



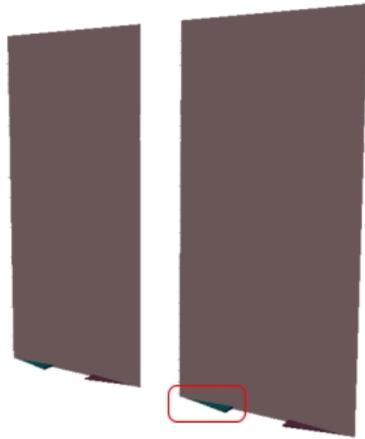
Turn Connection Points On

Next, ensure that the connection points have been toggled on by selecting a least two fixtures and use <Ctrl> plus right click to bring up the pop-up menu.

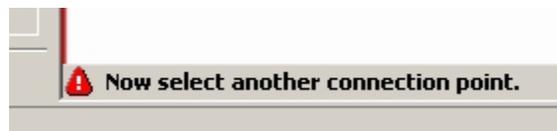


Connection Points - On/Off

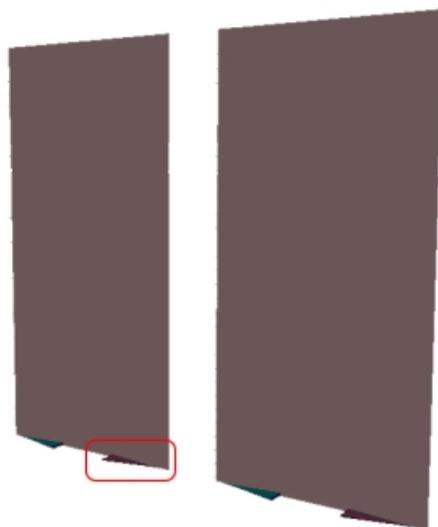
Turn connection points on and they appear as triangles in the drawing. Click First Connection Point and Follow Prompts. Click on the first connection point. (Circled in red in the image below).



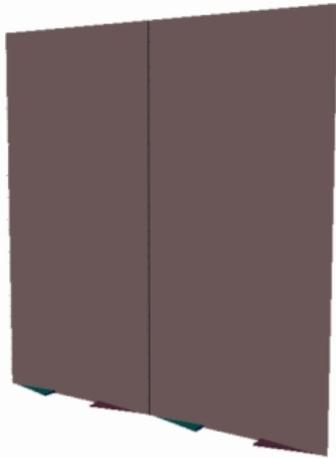
A prompt appears in the status bar asking to select another connection point.



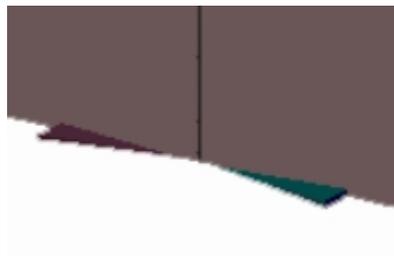
Select a connection point on the other fixture. (Circled in red in the image below).



As soon as the second connection point is clicked, the first object is connected to the second one.



Note how the two connection points now meet:



Rotation

Rotations can be used to change the orientation of fixtures and fittings, shelf objects, and products.

Fixtures and fittings can be rotated about all three axes, but it would be more normal to just rotate about the Z axis. Fixtures and fittings can be rotated using the Edit option from the pop-up menu accessed by <Ctrl> and right clicking.

Position:	Angle:	Size:
X: 47030.69	X: 0.0	X: 900.00
Y: 24149.40	Y: 0.0	Y: 3.00
Z: 0.00	Z: 0.0	Z: 2900.00

Material: Backpanel

Buttons: ? (help), OK, Cancel

Edit Fixture Dialog Box

Changing the setting in the Angle section will result in the selected object(s) rotating.

Shelf objects can be rotated about all three axes, but it would be more normal to just rotate about the X axis. Shelf Objects can be rotated using the Edit option from the pop-up menu accessed by <Ctrl> and right clicking.

Position:	Slot:	Angle:	Size:
X: 0	0	X: 0.0	X: 900.00
Y: 0.00		Y: 0.0	Y: 400.00
Z: 1293	26	Z: 0.0	Z: 30.00

Fixture - Height: 2500 Slots: 52 First Slot: 123 Spacing: 45
Width 900 Slots: 900 First Slot: 0 Spacing: 0

Material: (none)

Preferred Style: (None)

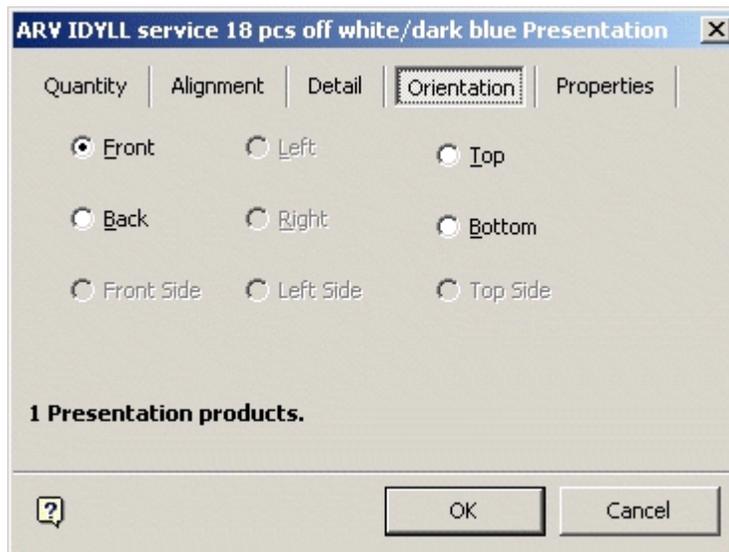
Buttons: ? (help), OK, Cancel

Edit Shelf Dialog Box

Changing the setting in the Angle section will result in the selected shelf object(s) rotating.

Products can generally be rotated in any axis. (This is known as product orientation). However, the possible rotations may be restricted by the working and stacking axes selected for the products' parent shelf object.

Products and Product Groups are best rotated using the Edit Group option from the pop-up menu accessed by <Ctrl> and right clicking.



Edit Group option

The orientation can be changed to any of the nine options. (If size constraints prevent any rotations, the options will not be available).

Working and Stacking Axes

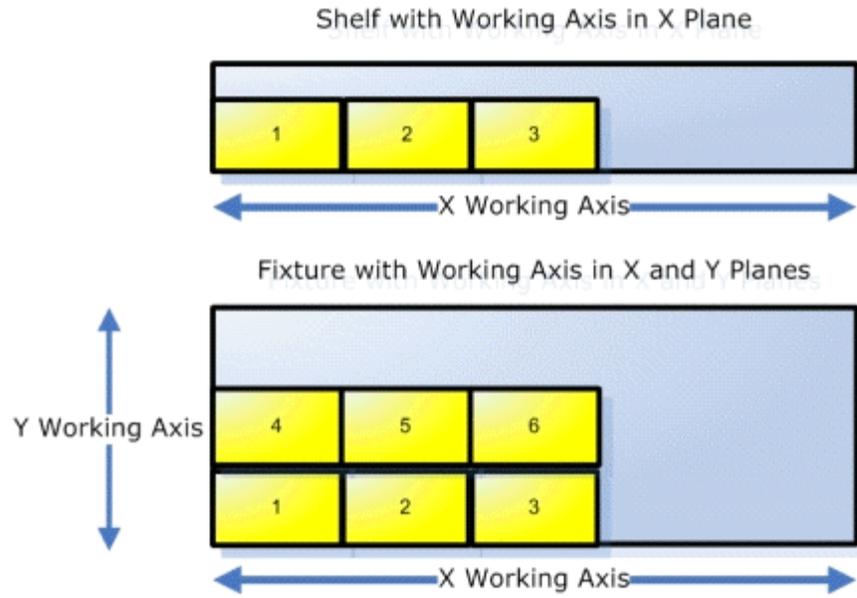
Working and Stacking axis define how product is placed onto fixtures and shelf objects. Fixtures and shelf objects that do not have at least one working and one stacking axis defined cannot accept product.

Working Axis

When products are placed onto a shelf object they have to be aligned with each other during placement. The working axis's of an item of shelf equipment are the axis's which product that is being sequentially placed is aligned along.

- The X working axis is from left to right.
- The Y working axis is from front to back.
- The Z working axis is used for vertical placement.

The working axis set should be appropriate for the type of fixture or shelf object. For example a shelf normally has only an X working axis as product is normally placed along the length of a shelf. A freezer cabinet might have an X and a Y working axis as product is placed both along the length of the cabinet and from back to front

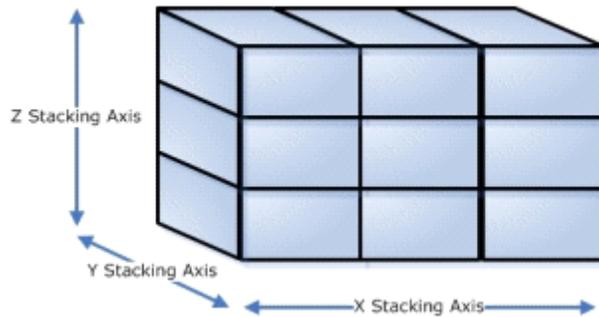


The working axis set should be appropriate for the type of fixture or shelf object.

Stacking Axis

The stacking axis (or axis's) is the direction(s) that products may be stacked on a fixture or shelf object.

- The X stacking axis is from left to right.
- The Y stacking axis is from front to back.
- The Z stacking axis is used for vertical stacking.



The stacking axis set should be appropriate for the type of fixture or shelf object. An open shelf has objects placed along the length of the shelf (X working axis). It can have objects stacked next to each other (X axis) behind each other (Y axis) and on top of each other (Z axis). Accordingly an open shelf should have all three stacking axes checked.

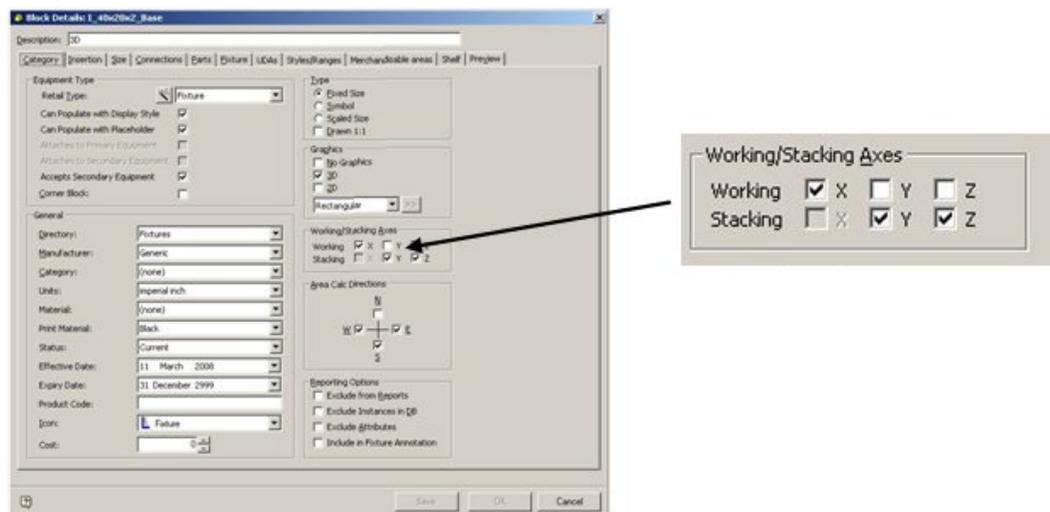
SHELF	X	Y	Z
Working	<input checked="" type="checkbox"/>		
Stacking	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

A peg on the other hand can only have products placed along its length (Y working axis). A peg can only have products slid along its length – they are constrained so they can only move in that direction. Accordingly, a peg should only have its Y stacking axis enabled.

PEG	X	Y	Z
Working		<input checked="" type="checkbox"/>	
Stacking		<input checked="" type="checkbox"/>	

Setting Working and Stacking Axes

Working and Stacking Axes are set in Fixture Studio.

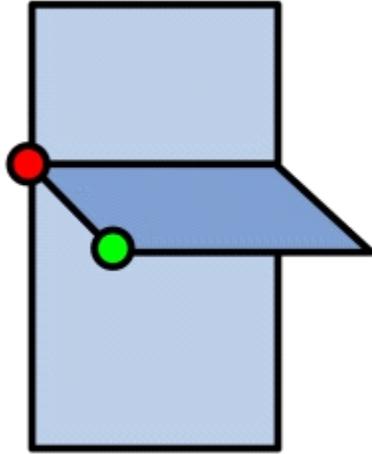


Working and Stacking Axes

The rotation of products is theoretically allowed in any axis. In practice this is constrained by the Working/Stacking axes of the shelf objects.

Child Insertion Points

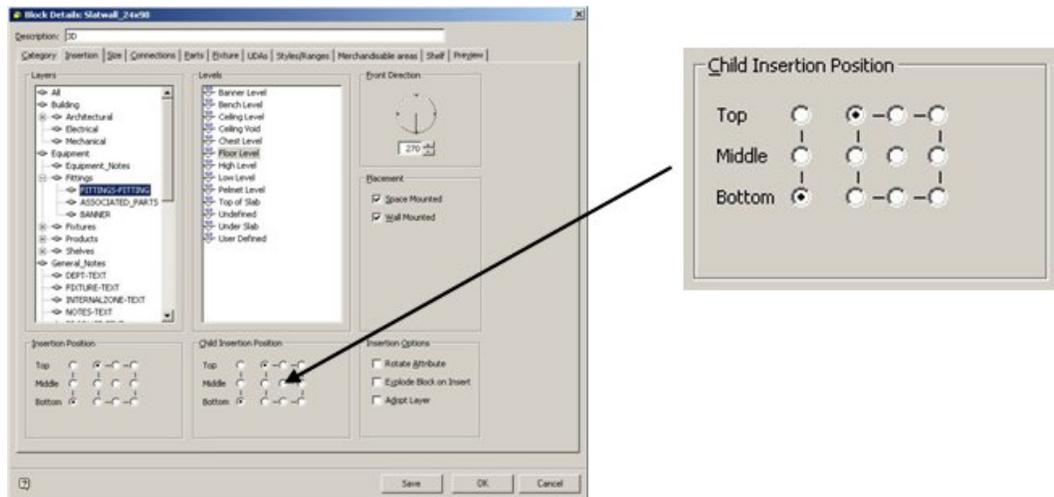
Child Insertion Points are used to provide a datum for product being inserted onto a fixture or shelf object. They are different from Insertion Points. Insertion points are used by Macro Space Management to specify the location of an object (fixture, shelf object, etc) within a Virtual Reality store. Child Insertion Points are used by Macro Space Management to align product being placed on that fixture, shelf object, etc.



In the above diagram the shelf has an insertion point (red). This has been used to align the shelf relative to the back panel it has been placed on. Any moving or editing operations for the shelf will be carried out relative to this insertion point. The shelf also has a child insertion point (green). This will be used to align any product placed on the shelf. Any moving or editing operations for products placed will be carried out relative to this insertion point.

Setting Child Insertion Points

Child Insertion Points are set in Fixture Studio.



Child Insertion Points

The Child Insertion Position can be set to any one of nine positions in a specific X – Y plane, and to any of three positions in the Z axis. This gives 27 options for the child insertion position.

Important: Wherever possible, child insertion positions should be standardized for particular classes of object. This will prevent misalignment problems.

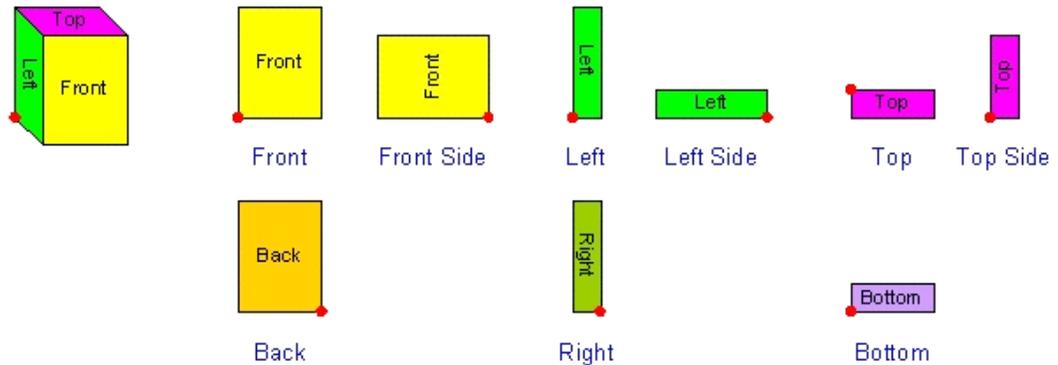
Product Orientations

Product is normally placed on the shelves with the front of the packaging facing the customer. However, this orientation can be changed; either during placement or when a product is edited.



Product Orientation

The nine possible orientations are as follows:



(The red dot indicates the insertion point).

Front is the default orientation. The other orientations are achieved by the following rotations from the default.

Orientation	Rotation in X Axis	Rotation in Y Axis	Rotation in Z Axis
-------------	--------------------	--------------------	--------------------

Orientation	Rotation in X Axis	Rotation in Y Axis	Rotation in Z Axis
Front	None	None	None
Front Side	None	270°	None
Back	None	None	180°
Left	None	None	90°
Right	None	None	270°
Left side	None	270°	90°
Top	90°	None	None
Top side	90°	270°	None
Bottom	270°	None	None

Effect of Rotations

Then the object is rotated to change its orientation, it occupies the same relative position on its parent object. This is done by means of child insertion points. In the example of the box on a shelf, the child insertion point (the datum for the boxes' position) is shown in blue. It is set at the front left of the shelf.



When the box is rotated, it is still aligned relative to the child insertion point, although the boxes' insertion point (shown in red) has moved. A similar effect can be seen in the example of a box being rotated relative to its parent peg.



The child insertion point (shown in blue) is at the front of the peg. When the box is rotated it remains in the same relative position to the child insertion point although its own insertion point has changed position.

Products and Planograms

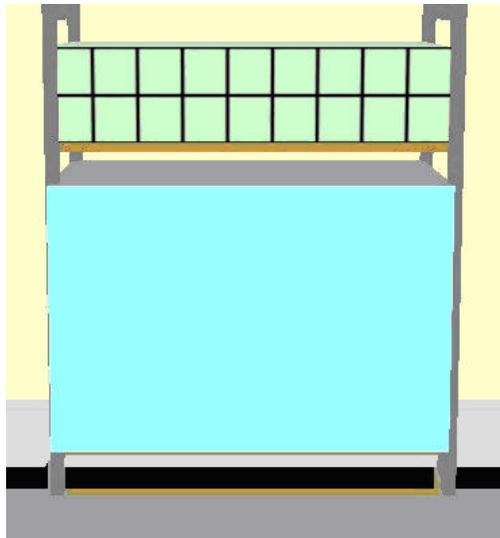
Merchandising is the addition of items for sale to a store plan. There are two ways of adding merchandise to a store plan:

- As individual products
- As preconfigured arrangements of shelves and products called Planograms

The properties of products can be defined or edited in Product Studio. The properties of planograms can be imported, or defined in Merchandiser.

Products

Products can be added at all levels in the product hierarchy. If added at any level down to SKU (Stock Keeping Unit), merchandise is added as a placeholder. In Merchandiser, you can add products with an additional level of detail called Display Styles.



In the above example, the lower shelf has been merchandised with a placeholder, and the upper shelf with a display style.

Placeholders

Placeholders are used to indicate that a particular class of merchandise is present on the shelf (for example paint) while display styles are used to indicate a very specific form of merchandise (for example 1 liter tins of paint).



In the above example, placeholders could be placed at a number of levels. There are also two display styles, 'Hanging Display' for going onto pegs or rails, and 'Shelf Display' for placing onto shelves. The Display Styles has different dimensions reflecting the different forms they are displayed in.

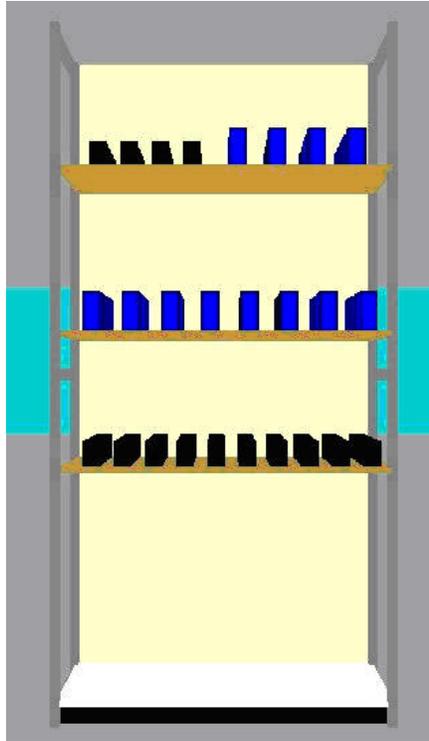
Placing Products and Planograms

Products are placed by dragging and dropping from the Object Browser or Object Grid onto fixtures or shelves and their placement is controlled by a number of factors including:

- What styles are associated with the equipment and with the merchandise
- Whether the selected objects are in a group or not
- Whether the size rule is on
- Other options selected during the actual placement

Products can only be added to fixtures or shelf objects. Products cannot be added to fittings as fittings are not designed to accept products. Equipment only accepts merchandise at Display Style level if the style associated with the display style is compatible with the style associated with the merchandise.

A planogram, a pre-planned arrangement of shelves and fixtures, is designed to occupy multiple fixtures. Planograms provide a quick and effective way to rapidly place a standard arrangement of shelves and products. The example below displays a single bay planogram that occupies a single fixture with three shelves. Planograms can be either imported from third party software or they can be designed within Merchandiser.



Planograms

Both Products and planograms can be placed either from the Object Browser or the Object Grid.

Product Appearance and Annotation

There are number of settings and options affecting how products and planograms appear when placed in the drawing.

Settings

Option	Effect
Walk and Edit mode	In walk mode, you can move your viewpoint around the store. If edit mode, your viewpoint is fixed.
Size Rule	This determines whether products will be confined to the extents of the fixture or shelf they are being placed on, or whether they can overhang
Clash Detection	If clash detection is on (recommended), products are not allowed to occupy the same space on a fixture or shelf.

Note: The Size Rule defaults to off each time Merchandise is started. It is strongly recommended that it be reset to on before doing any merchandising.

Options

Option	Effect
Shelf and Fixture Groups	These determine whether product will place on a single shelf or fixture.
Styles	The styles for the fixture (or shelf) must be compatible with the style assigned to the Display Style.

Configuring Products and Planograms

A number of settings in the Merchandising tab of the Configuration Module affect how products and planograms are placed.

Option	Effect
Sort Leftmost	Determines whether fixtures are populated in the sequence they were selected, or from the leftmost first
% over and under tolerances	Determines the amount of variation allowed if the length of a planogram does not match the selected fixtures
Check rules	The options in this frame determine what warnings are given when a planogram is placed.
Extend if fixture is longer	This (and it's child options) determine what to do if a planogram is placed on a longer fixture than it was designed for
Truncate	If selected, this will result in shelves being shortened if the selected fixture is shorter than the planogram was designed for.

Walk and Edit Mode

Toggle between walk and edit mode using the options on either the Edit menu or the button on the status bar. Use walk mode to move the fixed viewpoint around the store. Use edit mode, to view the store with a fixed viewpoint.

It is recommended that you navigate in front of the fixtures or shelves you want to merchandise while in Walk Mode, then toggle to edit more. This fixes the viewpoint in the store and makes it easier to select fixtures or shelves to place products on.

Size Rule

The Size Rule determines whether products are restricted to the confines of the fixture or shelf, or whether they can overlap their extents. It is recommended the Size Rule is turned on. If it is not, it is possible that products overlap fixtures or shelves to the left, right or above.

Note: The Size Rule defaults to off each time Merchandiser is started. It is strongly recommended that it be reset to on before doing any merchandising.

Clash Detection

Clash Detection should be turned on when aligning or when products can overwrite each other.

- If Clash Detection is turned on, products move until they are in contact.
- If Clash Detection is turned off, products can be moved so they occupy the same physical space.

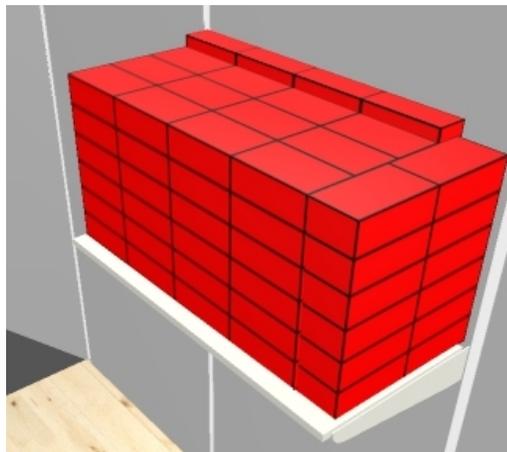
Clash detection is toggled On or Off by clicking on the clash Detection icon in the View toolbar.

Adding Product Items

When Products are added, they are added as a Product Group. Product Group is a set of linked individual products that can be manipulated as a single entity. Products are added by dragging them from the window in the Merchandising tab on the Object Browser onto the fixture or shelf that they are intended to populate.

They can only be placed if the dimensions of the receiving fixture and fitting are of sufficient size and if the styles of the fixture or shelf are compatible with the product being placed on it. If the product can be placed then the Add Products Dialogue box appears.

This enables the Quantity, Alignment, Detail, Orientation and Properties to be specified. Product quantities and alignments can either be placed manually or calculated automatically. The latter option is particularly useful when using caps.



The above example has back and end caps. These could be placed manually, but this would be time consuming. They can be placed in a single operation when the quantity is calculated automatically.

Adding Products

How products place depends on whether a product placeholder (SKU level of above) or a Display Style is chosen to place. A placeholder is placed as soon as it has been 'dragged and dropped'. If a Display Style is 'dragged and dropped', the Add Products dialog box appears.

To add a product:

1. Use Walk Mode to move in front of the fixtures or shelves it is desired to merchandise.
If multiple fixtures or shelves are to be merchandised check they have been formed into a Fixture Group and that Grouping is On.
2. Select the product to be added by highlighting the product in the Merchandising tab of the Object Browser. Alternatively, go to the Object Grid and select the required product.
3. 'Drag and drop' the product onto the required fixture or shelf.
4. If a Display Style is being placed, set the required options in the Add Products dialog box.

Note: It is recommended that the Size Rule (Edit Menu) be set to On. This will be defaulted to Off when Merchandiser is first started.

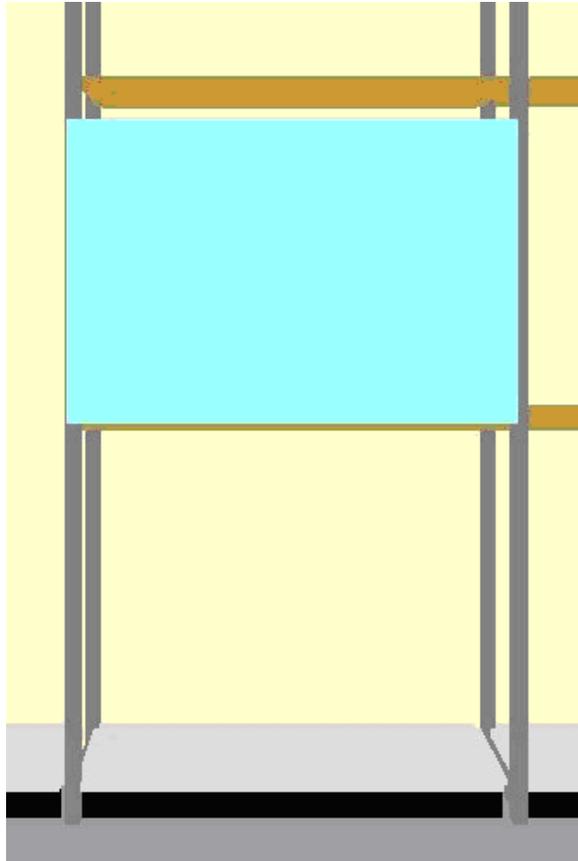
Adding a Product at SKU level from the Object Browser

To add Products from the Object Browser,

1. From the Merchandise tab, select the Products sub-tab.
2. Locate the required item in the hierarchy and highlight it.
3. Now, hold down the left mouse key and 'drag and drop' the selected item from the hierarchy onto the required fixture or shelf.



A + sign by the cursor indicates that the shelf has been selected. As soon as the mouse key is released, the placeholder is added.



The placeholder takes up the entire merchandisable volume of the item of equipment it has been placed on.

Adding a Product at Display Style level from the Object Browser

To add Products from the Object Browser,

1. On the Merchandise tab, select the Products sub-tab.
2. Locate the required item in the hierarchy and highlight it.



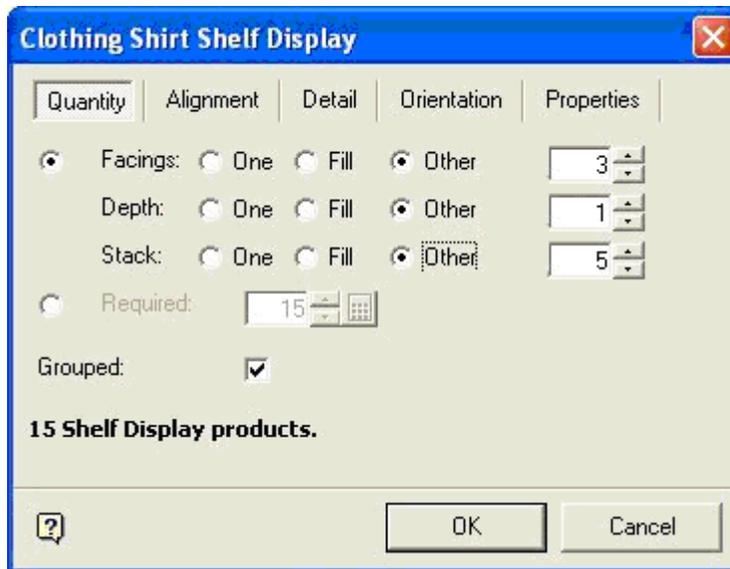
Add Products

In the above example, the Shelf Display style has been selected.

3. Next, hold down the left mouse key and 'drag and drop' the selected item from the hierarchy onto the required fixture or shelf.

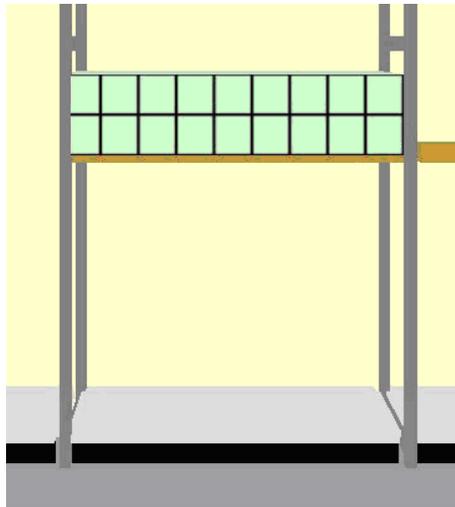


A + sign by the cursor indicates that the shelf has been selected. As soon as the mouse key is released, the Add Products dialog box appears.



Shelf Display

4. Select the appropriate settings, and click the OK button to place the merchandise.



Placeholders take up the entire merchandisable volume of the equipment they are placed on. Display Styles take up the space specified by the facing, depth and stacking parameters set on addition.

Adding a Product at Display Style level from the Object Grid

Products can only be added at Display Style level from the Object Grid.

To add Products from the Object Grid,

1. Locate the required item in the list of data and highlight it.

Name	Description	Class
Shelf Display	Brand AA 2 litre Green - Shelf Display	Decorating
Shelf Display	Brand AA 1 litre Green - Shelf Display	Decorating
Shelf Display	Brand AA 5 litre Green - Shelf Display	Decorating
Shelf Display	Brand V 2 litre Green - Shelf Display	Decorating
Shelf Display	Brand V 1 litre Green - Shelf Display	Decorating

5 record(s).

Object Grid

In the above example, the 1 liter green display style has been selected.

- Next, hold down the left mouse key and 'drag and drop' the selected item from the hierarchy onto the required fixture or shelf.



A + sign by the cursor indicates that the shelf has been selected. As soon as the mouse key is released, the Add Products dialog box appears.

Brand AA 1 litre Green - Shelf Display

Quantity | Alignment | Detail | Orientation | Properties

Facings: One Fill Other

Depth: One Fill Other

Stack: One Fill Other

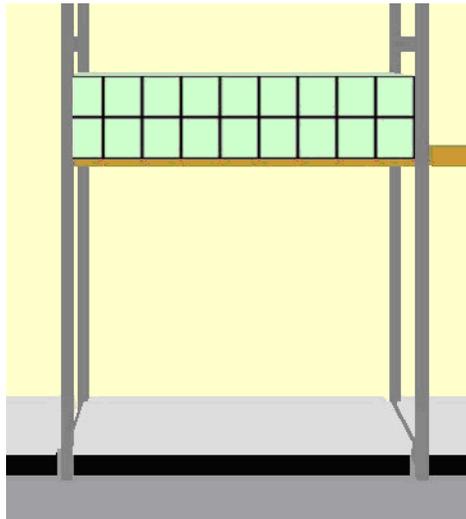
Required:

Grouped:

72 Shelf Display products.

OK Cancel

3. Select the appropriate settings and click the OK button to place the merchandise.



Note: Placeholders take up the entire merchandisable volume of the equipment they are placed on. Display Styles take up the space specified by the facing, depth and stacking parameters set on addition.

The Quantity Tab

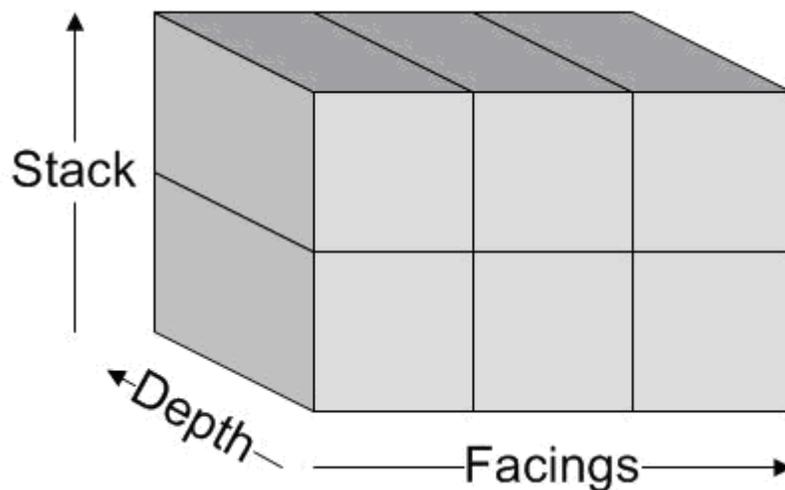
The **Quantity tab** allows you to specify the number of instances a product can be placed.



Quantity tab

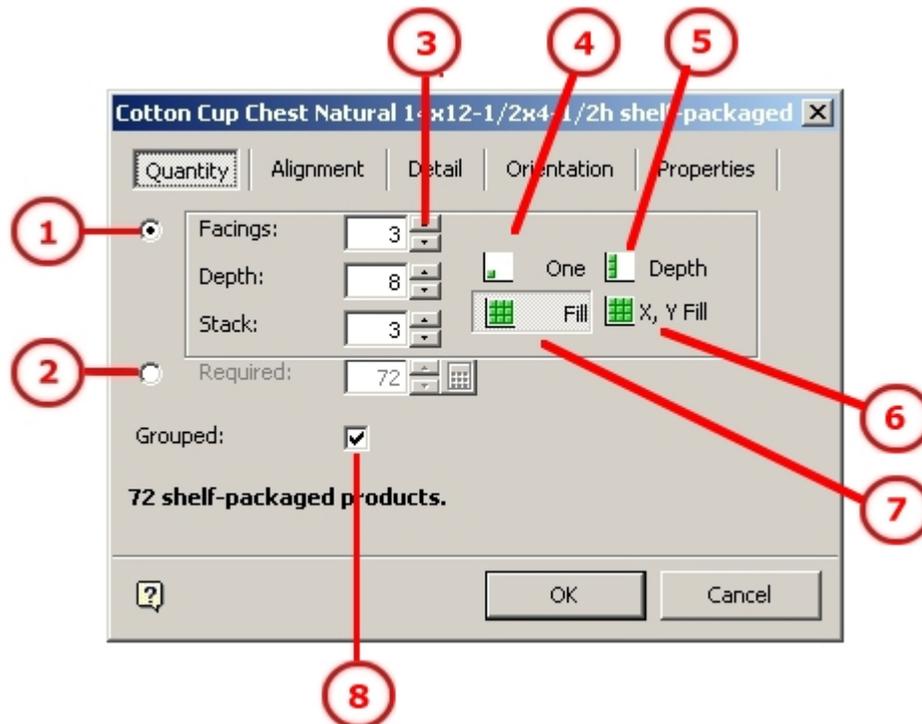
Two radio buttons allow you to specify whether quantities are set by the user (1) or calculated by the program (2).

- Facings are the number of times the product can be placed along the shelf (X direction).
- Depth is the number of times the product can be placed relative to the depth of the shelf (Y direction).
- Stack is the number of times the product can be placed on top of itself (Z direction).



The Quantity Tab - Setting by User

The **Quantity tab** allows you to specify the number of instances a product can be placed. Any quantity can be specified up to the maximum capacity of the fixture or shelf.



Quantity tab - Setting by User

Two radio buttons allows you to specify whether quantities are set manually by the user (1) or set automatically by the program (2).

Set Manually by the User

For Facing, Stack and Depth, use the radio button to select whether to place a single product in that orientation, whether to fill in that orientation or whether to manually set the number for that orientation.

Note: The Grouped checkbox should be checked.

Spin controls (3) allow you to set the required quantities for facings, depths and stack height.

Facings	The number of times the product can be placed along the shelf (the X direction).
Depth	The number of times the product can be placed relative to the depth of the shelf (the Y direction).
Stack	The number off times product can be stacked on top of each other (the Z direction).

These quantities are constrained by the dimensions of the shelf or fixture. The minimum possible value in each direction is one, while the maximum number is determined by the dimensions of the product.

Set Automatically by the Program

Four buttons automatically set the facings, stack and depth values to the maximums possible for that option relative to the dimensions of the shelf.

- The One button (4) sets facings, depth and stack values for a single instance of the product.
- The Depth button (5) sets facings, depth and stack values for a single row of product to the full depth and height available.
- The X,Y fill button (6) sets facings, depth and stack values for a single layer of product to the full length and depth of the shelf.
- The Fill button (7) sets facings, depth and stack values to get the maximum number of products on the shelf without using caps.

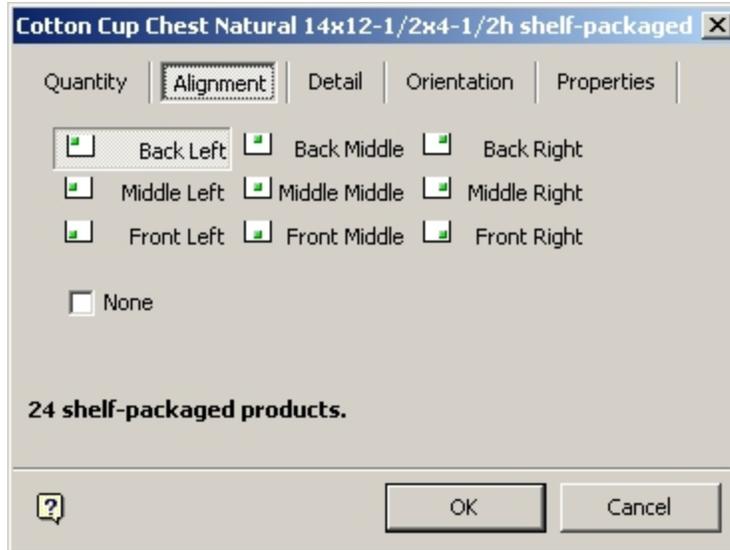
Note: Automatic setting by the program does not place caps, but only places the product in the primary orientation. If you want to place products with side, rear or top caps, it is recommended they select the Calculate option by clicking on the appropriate radio button - (2) in the annotated diagram above.

Grouped (8) determines whether products are placed as product groups, or as a stack of ungrouped items.

Note: It is recommended that products are placed as grouped items as they can then be manipulated as a single object. If they are placed as a stack of ungrouped items, then each item in the stack has to be manipulated individually.

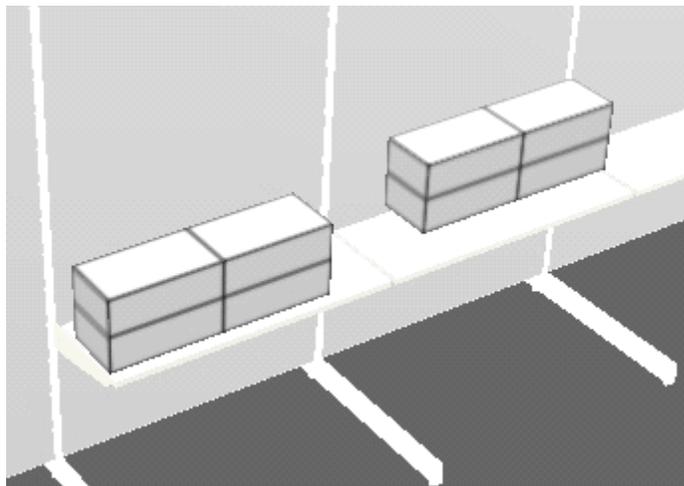
The Alignment Tab

The **Alignment tab** allows alignment to be adjusted horizontally in the X, Y plane.



Alignment tab

In the example below, the products on the left hand shelf have been placed with a Left Front justification, and the products on the right hand shelf have been placed with a Back Right justification.

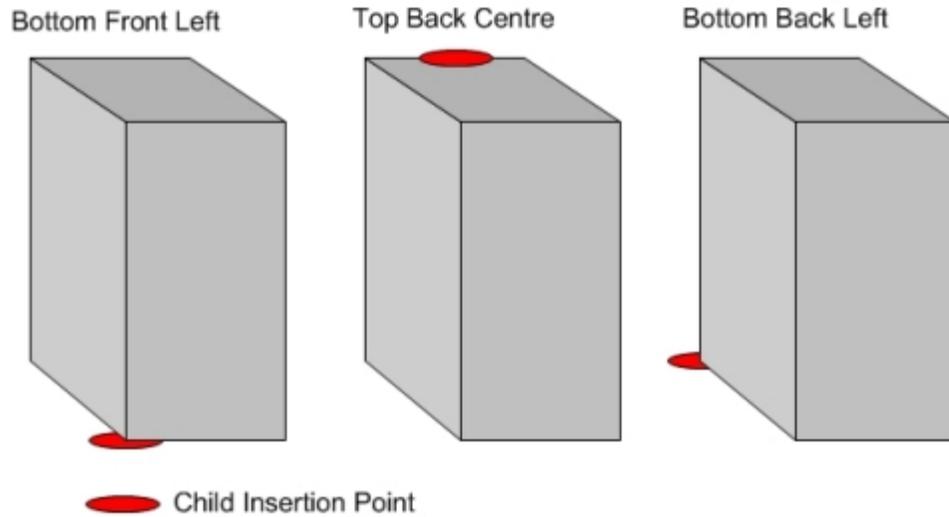


The Alignment Tab and Child Insertion Positions

It is important to be aware of the different effects that the Child Insertion Position and the selection made in the Alignment tab have.

Child Insertion Position

The child insertion position for a fixture determines the insertion point of the products that is placed on the fixture. This is because products are not directly assigned an insertion point, but adopt those specified for the fixture they are being placed on.



If the fixture has an insertion point of Bottom Front Left any products are placed with this point on the product used as a datum. Similarly, products with insertion points of Top Back Centre or Bottom back left are placed using different datum points for those products.

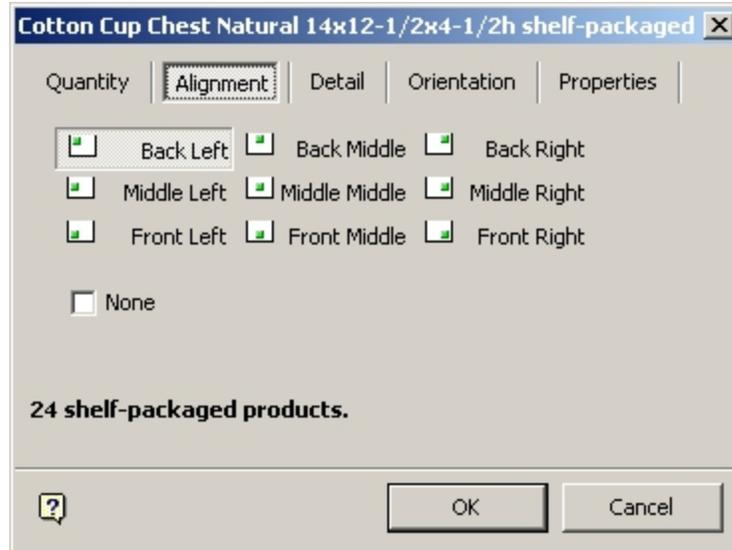
If a shelf object (for example a open shelf) was intended to take boxed products, it might have its Child Insertion Position set to Bottom Back Left as the boxed products sit on top of the shelf.

If a shelf object (for example a hanging rod) was intended to take products hanging from it, it might have its Child Insertion Position set to Top Back Centre so the products appear to hang from the rod when placed on it.

Note: Child Insertion Positions are set in Fixture Studio.

Alignment Tab

The setting made in the alignment tab determines the position of the product when placed on the object.



For example if Back Left is selected, product will be placed at the back left of the shelf. Similarly, if front middle is selected for a rod, product will be placed starting at the front of the rod.

Summary

The Child Insertion Position determines how the product is placed relative to the object it is being placed on; above it, below it, centered on it, etc.

The Alignment Option determines which part of the object (for example a shelf) a product is placed starting from. For example if Front Right is selected, the first box of a product is placed at the front right of the shelf.

The Detail Tab

The **Detail tab** gives information on dimensions and quantities.

	X	Y	Z
Size:	14	1	12
Gap:	0	0	0
Min Stack:	0	0	0
Max Stack:	3	8	3
Shelf capacity:	45.5	8.25	42.25

24 shelf-packaged products.

? OK Cancel

Detail tab

- **Size** is the size of one instance of the Product.
- **Gap** is the gap between instances of the product. The gap is preset when the product is designed in Product Studio and may be necessary where merchandise like glass or crockery is concerned.
- **Min stack** is the minimum quantity that can be placed.
- **Max stack** is the calculated maximum quantity that can be placed.
- **Shelf Capacity** is the dimension of the shelf on which the products are being placed.

The Orientation Tab

The **Orientation tab** allows the orientation of the product to be changed when it is placed on the shelf.

Cotton Cup Chest Natural 14x12-1/2x4-1/2h shelf-packaged [X]

Quantity | Alignment | Detail | **Orientation** | Properties

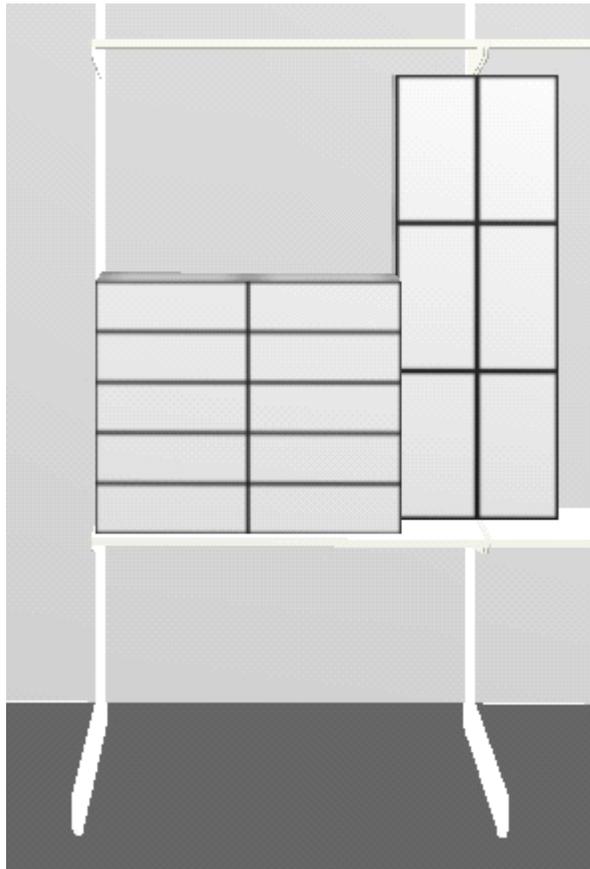
<input type="radio"/> Front Max: 48	<input type="radio"/> Left Max: 0	<input type="radio"/> Top Max: 0
<input type="radio"/> Back Max: 48	<input type="radio"/> Right Max: 0	<input type="radio"/> Bottom Max: 0
<input checked="" type="radio"/> Front Side Max: 72	<input type="radio"/> Left Side Max: 0	<input type="radio"/> Top Side Max: 0

24 shelf-packaged products.

[?] [OK] [Cancel]

Orientation tab

The maximum amount placeable for each orientation is shown, while non available orientations are inactivated. By default, the product is placed with the front of the packaging showing. It can be placed in a whole series of other orientations with the top, bottom, left or right sides of the packaging showing.



In the above example the product group on the left has been placed with the Front orientation. A second example of the same product group has then been placed to its right in the Top Side orientation.

Note: Changing orientation will also change the quantity on the Quantities Tab to the maximum possible in that orientation. This is to allow you to see if changing the orientation increases the quantities that can be placed on the shelf.

The Properties Tab

The **Properties tab** displays a customizable list of properties associated with the products being placed. The values for this customizable list can be input into Macro Space Management directly or imported from an external program.

The screenshot shows a dialog box titled "Cotton Cup Chest Natural 14x12-1/2x4-1/2h shelf-packaged". It has several tabs: "Quantity", "Alignment", "Detail", "Orientation", and "Properties". The "Properties" tab is active, displaying a table with two columns: "Property" and "Value". The table is currently empty. Below the table, the text "24 shelf-packaged products." is visible. At the bottom of the dialog, there are "OK" and "Cancel" buttons, along with a help icon (a question mark in a square).

Properties tab

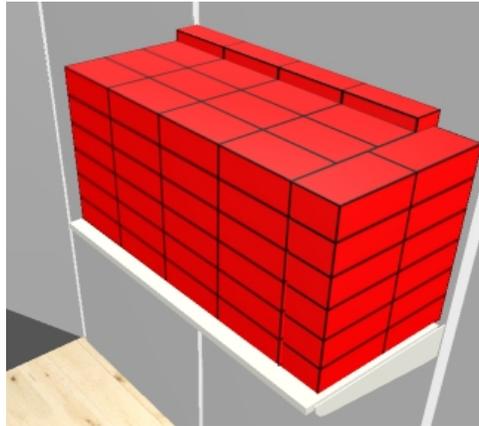
The information is advisory only and will not cause a warning to be issued if the product being placed falls outside of the set criteria.

Automatic Calculation of Product Quantities

Calculation Option Method

This section details how the calculate option can be used to simplify maximizing the number of products placed on a shelf. There are two options for adding products in Merchandiser; by manually adding and by automatically adding them by using the calculate option.

To maximize the number of products on a shelf it is sometimes necessary to use end caps, as in the example below.



It is possible to achieve this manually by placing the main body of product, then placing the rear end cap and then the size end cap. This may require some time to achieve. It is also possible to achieve this in a single operation using the Calculate option. This can result in considerable savings in time when populating shelves.

Summary of Method

Within Merchandiser:

- Check the Size Rule is ON.
- If necessary make shelves a Group.
- Select the product to be placed from the product hierarchy.
- Drag the product onto the required shelf.
- Select the calculate option and use the spin controls to set the number of products required.
- Set the tolerance and orientation in the Calculation screen.
- Set priority for the working axes, specify if dimension is to be filled/ maximum number of products and specify if caps are allowed.
- If solution is satisfactory, click on OK to confirm.

Automatic Calculation Method

1. Check the Size Rule is On. When placing product it is recommended the **Size Rule** is turned on, either from the edit menu or the icon on the toolbar. This restricts the number of products added to those permitted by the confines of the shelf. If this option is not enabled, it is possible that product overlaps shelves to the left, right or above.
2. If necessary make shelves a Group. With the Size rule on, product is confined to a single shelf, unless two or more shelves have been made into a Group. Shelf Groups are groups of shelves that are at the same height, at the same angle and form a continuous run. Grouped shelves allow you to treat adjacent shelves as one long shelf. This enables you to place products that span more than one shelf.

To make a Shelf Group:

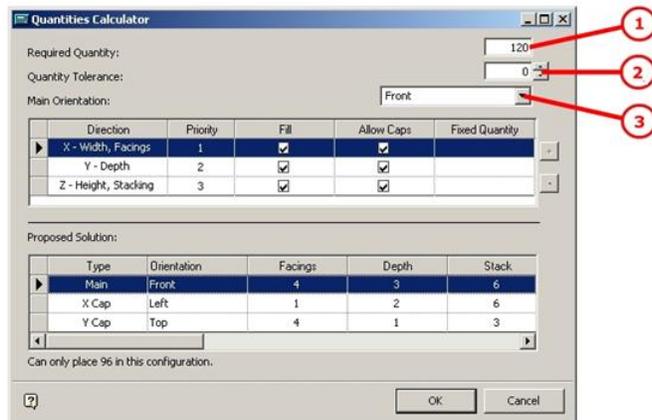
- a. Select the shelves.
- b. Right click to bring up the pop-up menu and select Group > Join.
Ungrouped shelves can be distinguished by their red and blue outlines. Grouped shelves have yellow and green outlines.
3. Select the product to be placed from the product hierarchy by clicking it to highlight it.
4. Drag the product onto the required shelf. Hold down the left mouse key and drag the selected product onto the desired shelf. A + sign by the cursor indicates that the shelf has been selected. As the mouse key is released, the Add Products dialog box appears.

Note: If styles are in use the Shelf Style and the Display (Product) style must be compatible or the product cannot be placed.

5. Select the calculate option and use the spin controls to set the number of products required. The Add Products dialog box allows the user to control the quantity and orientation of the product being placed. The calculate option is selected by clicking on the appropriate radio button. The spin control can be used to set the required quantity of product to be placed. The Calculate button can then be used to open the calculation screen.

Note: If it is desired to get the absolute maximum of products onto the shelf, the required quantity should be set significantly above what is required. This will ensure Macro Space Management calculates the maximum number of products that will fit on the shelf.

6. Set the tolerance and orientation in the Calculation screen. After the calculate button is clicked, the Quantities Calculator screen appears.



Quantities Calculator screen

- The **Required Quantity (1)** is set in the preceding Add Products dialog box. If necessary this can be edited to a different value while in the screen.
- The **Quantity Tolerance (2)** allows you to set the permissible variation in quantity. If set to 0, Macro Space Management tries and calculates an exact solution. If set to >0 Macro Space Management accepts the first calculated solution that comes inside the permissible range. For example, if set to 60 ± 5, the first calculated solution that falls in the range 55 – 65 will be accepted.

- The **Main Orientation (3)** of the product can be set from the drop down list. This determines which part of the products' packaging faces the front of the shelf.
7. Set priority for the working axes, specify if dimension is to be filled / maximum number of products and specify if caps are allowed.

The screenshot shows the 'Quantities Calculator' dialog box. At the top, there are input fields for 'Required Quantity' (120), 'Quantity Tolerance' (0), and 'Main Orientation' (Front). Below these is a table with columns: Direction, Priority, Fill, Allow Caps, and Fixed Quantity. The 'X - Width, Facings' row is highlighted, and its 'Fixed Quantity' field is set to 120. Below the table is a 'Proposed Solution' table with columns: Type, Orientation, Facings, Depth, Stack, and Total. The 'Main' row is highlighted, showing 4 Facings, 3 Depth, 6 Stack, and a Total of 72. At the bottom, there is a message 'Can only place 96 in this configuration.' and 'OK' and 'Cancel' buttons.

Direction	Priority	Fill	Allow Caps	Fixed Quantity
X - Width, Facings	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	120
Y - Depth	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Z - Height, Stacking	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Type	Orientation	Facings	Depth	Stack	Total
Main	Front	4	3	6	72
X Cap	Left	1	2	6	12
Y Cap	Top	4	1	3	12

Quantities Calculator screen

The **Priority (1)** for the working axes can be set by clicking on the appropriate axis to highlight it (2) then using the + and – buttons (3) to change the order of priority. Macro Space Management calculates the quantities in the order the axes have been selected. For example, if the X axis has been chosen, the software will stack the maximum number of products along that axis then take the dimensions of those placed products in account when calculating how many products can be placed along the second priority axis.

If the **Fill check box (4)** is selected, then Macro Space Management places the maximum number of products in that direction. If the Fill checkbox is not selected, then a **Fixed Quantity (5)** can be entered in the appropriate box. If a Fixed Quantity is entered, this will also disable the Allow Caps (6) option as the fixed quantity only applies to products placed in the Main Orientation. If a quantity greater than the maximum number that will fit is entered then the number will default to the largest value possible.

Allow Caps (6) can be allowed or prevented by selecting or un-selecting the check box as appropriate.

8. When done, click OK to confirm. The calculate screen will continually update to show the effect of any changes.

The screenshot shows the 'Quantities Calculator' dialog box. It has several input fields and two tables. Red callouts are placed as follows: 3 points to the 'Required Quantity' field (value 120), 2 points to the warning message 'Can only place 96 in this configuration.', 1 points to the 'Proposed Solution' table, and 4 points to the 'OK' button.

Required Quantity: 120
Quantity Tolerance: 0
Main Orientation: Front

Direction	Priority	Fill	Allow Caps	Fixed Quantity
X - Width, Facings	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Y - Depth	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Z - Height, Stacking	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Proposed Solution:

Type	Orientation	Facings	Depth	Stack	Total
Main	Front	4	3	6	72
X Cap	Left	1	2	6	12
Y Cap	Top	4	1	3	12

Can only place 96 in this configuration.

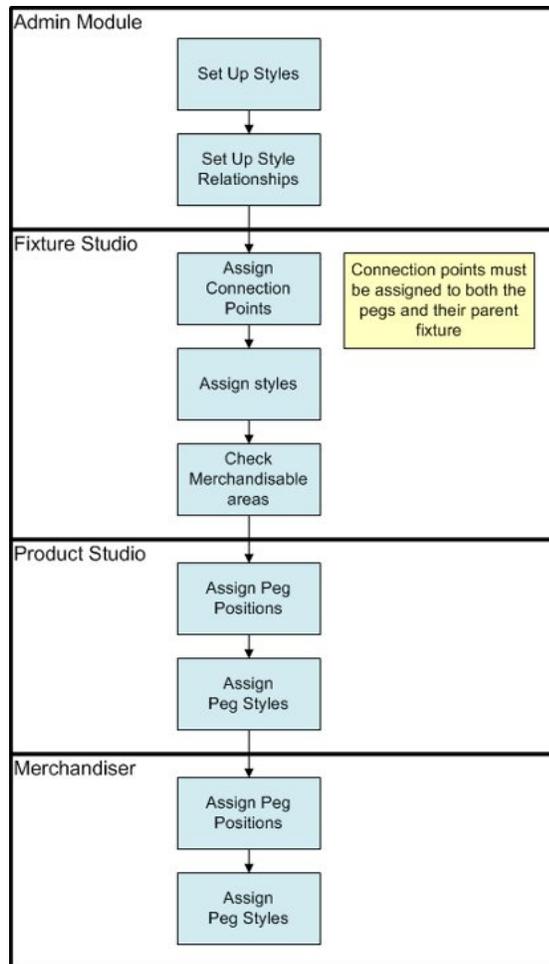
Buttons: ? OK Cancel

The results will show in the Proposed Solution frame (1). A warning (2) will appear if the number of products that can be placed is below that in the Required Number (3) setting. If the details are correct, click on the **OK** button (4) to place the products.

Adding Products using Pegs

To add products using pegs in Merchandiser, a series of preparatory parameters must be set in the Admin Module, Fixture Studio, and Product Studio. This then enables products to be added to pegs in Merchandiser. A pegboard might contain an array of 10 x 20 pegs, 200 pegs in all. Merchandising these pegs is a potentially time consuming operation as this might involve 5 sizes of battery (N, AAA, AA, C & D) from three or four manufacturers (Duracell, Exide, Eveready, Energiser).

It is therefore normal to produce a planogram involving a specific combination of battery sizes and manufacturers. Once available, this planogram can then be placed multiple times in multiple stores. An example would be a battery planogram designed for an end cap on a gondola run.



Workflow of Adding Products using Pegs

Setting up Styles in the Admin Module

Styles serve as filters to determine what can be attached to what.

- The parent fixture has a fixture and a shelf style.
- The peg has a shelf style.
- The product has a product style.

For the peg to go onto the parent fixture, there must be a style relationship between the Fixture and Shelf Styles. For the product to go onto the peg there must be a style relationship between the Shelf and the Product Styles.

Settings Required in Fixture Studio

For products to be placed on pegs, some fundamental settings need to be correct on the equipment onto which the products will be placed.

Connection Points

The pegs and their parent fixtures must have compatible connection points. This enables them to fit together.

Styles

The pegs and their parent fixtures must have appropriate styles assigned, and a style relationship must exist between them.

Merchandisable Areas

The merchandisable area for the peg must be compatible with the product being placed.

Connection Points for Pegs and Parent Fixtures

Connection points are used to fit together one item of equipment to another in accurate alignment. 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.

Gender

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

Male can connect with female, and it would be conventional to give the connections on the parent fixture female gender, with the peg having male gender.

Shape

Permissible Values	Comment
---------------------------	----------------

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

Both peg and parent fixture should be assigned the same shape, or 'None'. This will allow them to connect.

Size

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

It is recommended that both the parent fixture and peg are given identical connection sizes.

Note: The above comments only deal with the connection between parent fixture and peg. Other connections may exist (for example between pegboard and supporting legs). These would have different genders, shapes and sizes to the connections specified above.

Assigning Styles for Pegs and Parent Fixtures

Styles serve as filters to determine what can be attached to what.

- The parent fixture has a fixture and a shelf style.
- The peg has a shelf style.
- The product has a product style.

For the peg to go onto the parent fixture, there must be a style relationship between the Fixture and Shelf Styles.

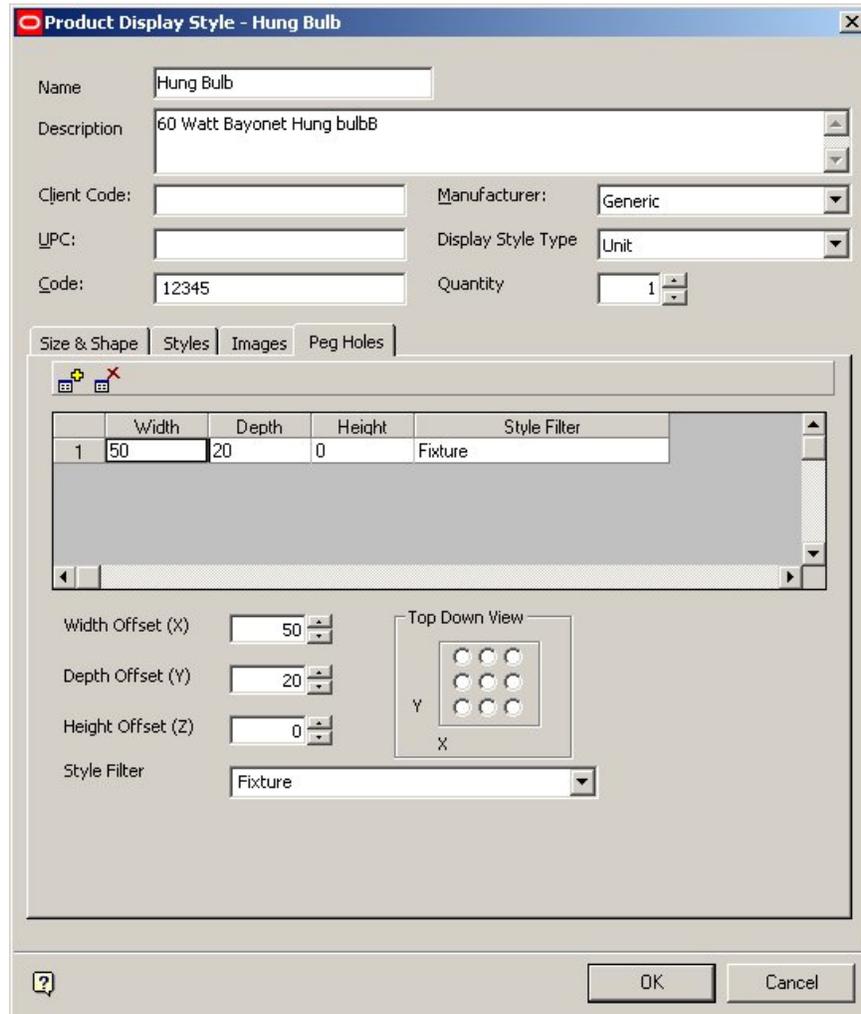
For the product to go onto the peg there must be a style relationship between the Shelf and the Product Styles.

Configuring Merchandisable Area for Pegs

The merchandisable area for the peg is the area that merchandise can take up on the peg. It is configured in the Merchandisable Areas tab of the Block Definitions dialog box for the peg. It is generally set to be unbounded in the X direction using the appropriate check boxes.

Setting up the Peg Position in Product Studio

Peg Positions are set up using the Peg Holes Tab in Product Studio.



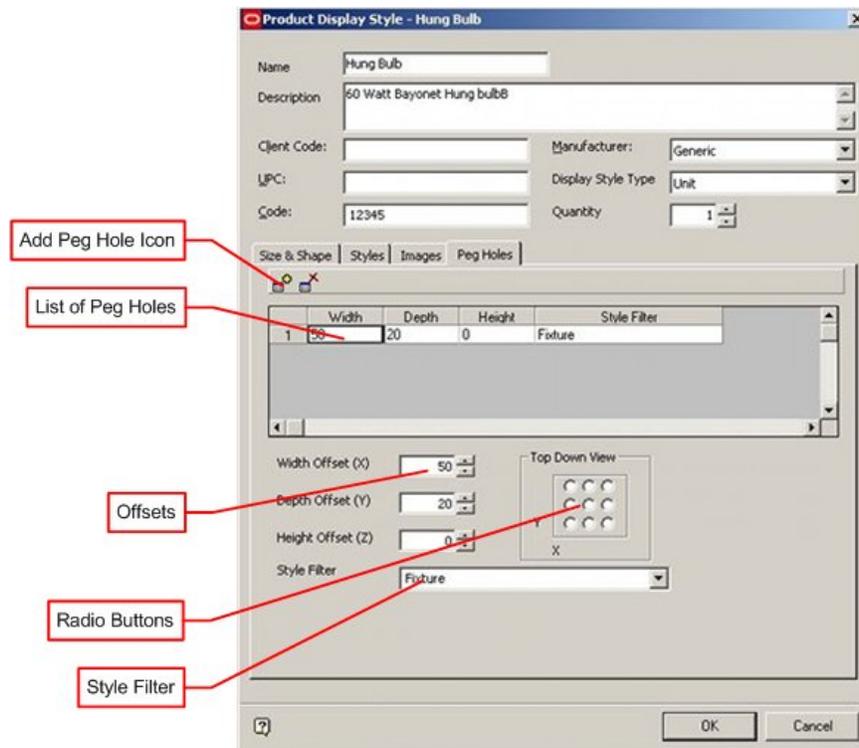
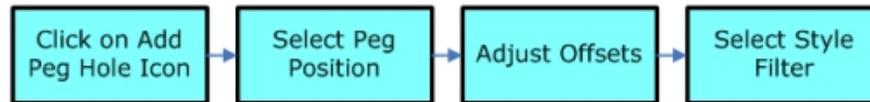
Peg Holes Tab

Peg Hole positions can be added or deleted using the Add or Delete Peg Hole icons on the Toolbar:

	Add Peg Hole Position
	Delete Peg Hole Position

Setting Up Peg Hole Positions

To set up a Peg Hole Position requires the following stages.



Peg Holes Tab - Setting

Click on the Add Peg Hole icon to add a Peg Hole to the List .

The X, Y coordinates of the peg hole can then be set by clicking on the radio buttons.
More Info

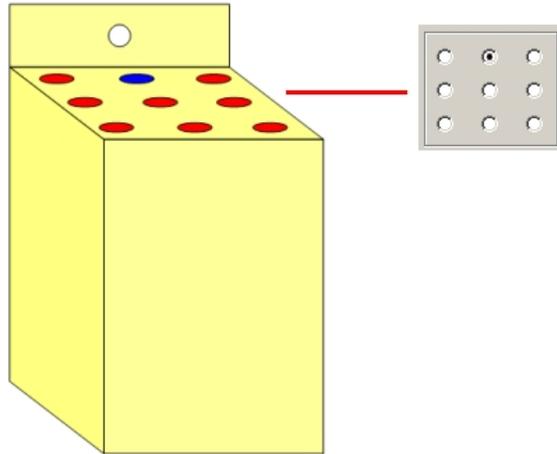
The selected X, Y coordinates can be seen in the list. These determine where on the top of the product the peg hole will be located.

The Style Filter allows you to select a Peg Style that the product can be placed on. If the product is to go onto two or more styles of peg, then multiple peg holes must be defined.

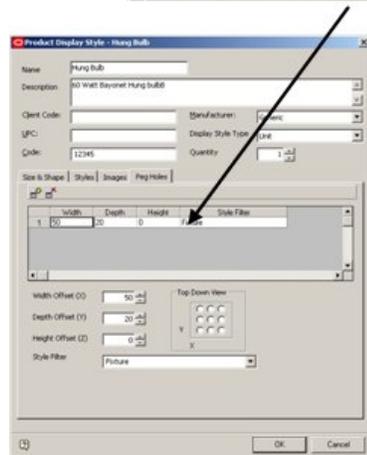
The Offsets can then be adjusted to allow for hole positions, etc. More Info

Selecting the Basic Offset using Radio Buttons

The nine radio buttons allow you to set an offset in the X, Y plane relative to the top back left position of the product.



In this case the selected radio button corresponds to the blue circle on the product. Offsets are calculated relative to the size of the object.

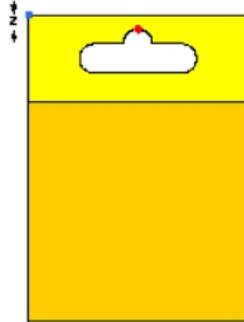


Peg Holes Dialog Box

In the above example the Width (X) and Depth (Y) offsets are calculated based on the area of the object, which is 100 x 100 mm. All offsets are calculated from the top, back, left corner of the package.

Changing Offsets to allow for Hole Positions

Sometimes a small offset is required in the Z axis to allow for the position of the hole relative to the top of the product. The actual position should be the top of the hole, as indicated by the red dot in the diagram. This will then correspond with a connection line on the peg, which is defined on the top of the peg.



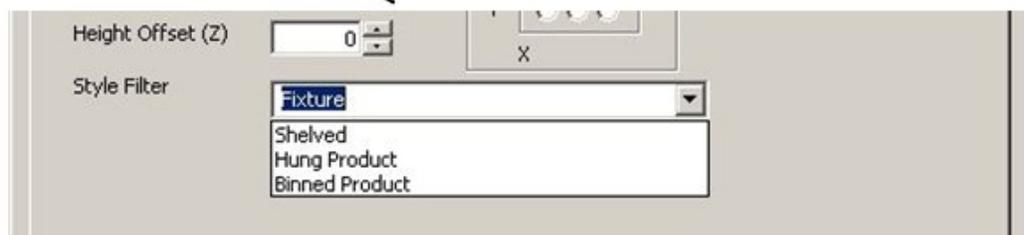
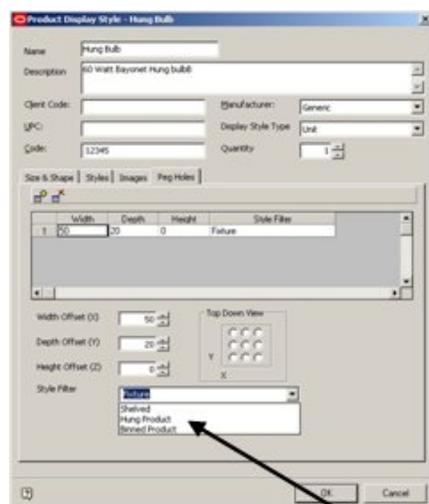
Multiple Peg Holes

Multiple peg hole positions can be defined for a product. The first position is defined as the primary, which is the one used when positioning the product on a pegboard. The other hole positions determines where the extra pegs are placed.

To define a product with multiple peg holes, simply define two or peg holes that have the same style.

Multiple Peg Types

It is possible to define different types of peg for different parent fixtures. This is done by specifying at least two peg holes for the product, and specifying different Styles for each from the Style Filter list.



Pegs Tab - Style Filter

The actual peg that is used is determined by the pegboard onto which the item is placed, as dictated by the style relationship rule. This ensures that the product is only placed onto certain types of peg.

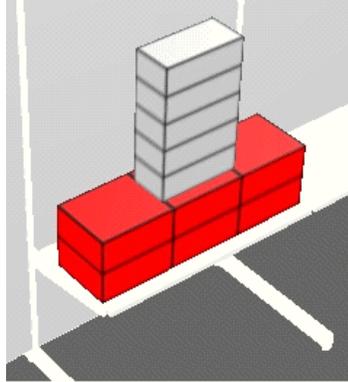
Placing Product on top of Product

Macro Space Management allows products to be placed on top of other products. This is done by determining the height of the top face of the existing product and adjusting the elevation of the new product accordingly.

This is only enabled if the parent shelf/fixture of the product, on which it is being placed, allows stacking in the Z axis (working or stacking Z axis is enabled).

To place on product on top of another drag the required product from the options in the merchandising tab over to the product on top of which you wish to place it. Ensure the mouse cursor is just inside the object to be placed on top of, and release the mouse key. The desired products are placed on top.

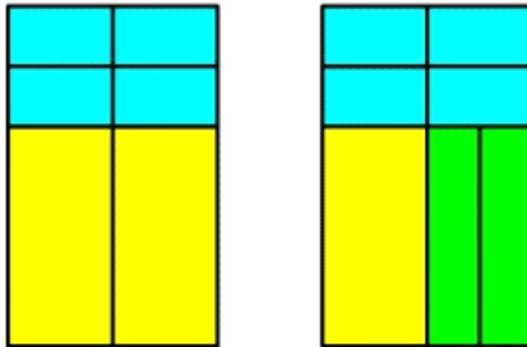
Note: If the mouse cursor is just above the object to be placed on top of when the key is released, then the object being placed is inserted to one side, rather than on top.



The depth and number of facings of the object being placed on top cannot exceed those determined by the length and depth of the object of which it has been placed on top.

Caps

Caps are when the same product is placed over another product, using a different orientation, in order to fill space.



These can be achieved by placing a separate instance of the product on top of another product and changing its orientation/rotation. In the first example above, two arrayed products would be placed, the first with 2 front facings, the second (on top) with 2 facings with top orientation.

The second example above could be achieved with three sets of arrayed products: the first would be 1 facing with front orientation, then 2 facings with a left orientation and finally a 2 facings with top orientation.

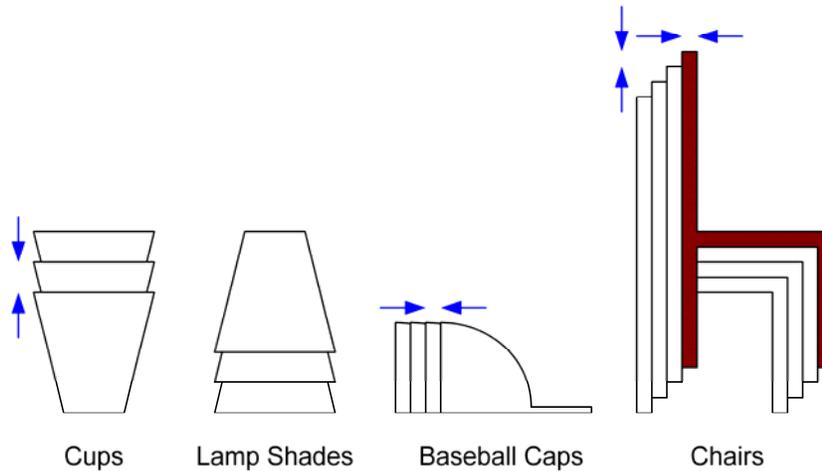
Note: Orientations can be changed during insertion by choosing the orientation from the Orientations tab of the



Add Products dialog box.

Nesting

Nesting is where the same products are arrayed, but the each additional instance partially fits within another, as in the example below.



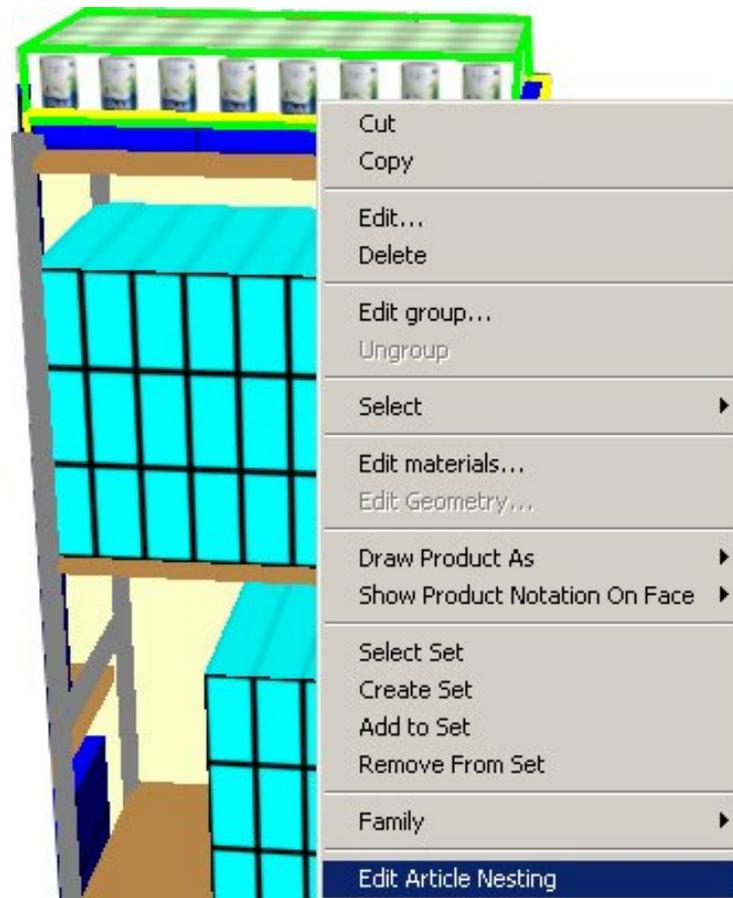
Currently only bottom nesting (as in the example of the cups) is available.

Nesting Different Products

On some occasions, you may want to place different products on top of other products, where nesting would apply, but the nesting value could not be determined in advance by a value in the database.



First the products have to be placed on top of each other. The nesting distance can then be manually adjusted by selecting the objects to be nested and right clicking to bring up the pop-up menu.



Edit Article Nesting

Click the Edit Article Nesting option to bring up the Edit Product Nesting dialog box.



The distance can be adjusted by means of the spin control. The units are automatically default to imperial or metric units depending on what was defined for the store in Store Manager.

Alignment

Alignment defines the relative positions of product (and sometimes equipment) to each other. You can customize position using the various options available. Products can be aligned with each other, or with their parent fixture or shelf, depending on what is selected. The alignment works with equipment, as well as products.

There are 9 options for alignment.

Aligning along length of shelf

	Align to Left
	Align to Centre
	Align to Right

Aligning across depth of shelf

	Align to Front
	Align to Middle
	Align to Back

Distributing across volume of shelf

	Distribute Left/Right
	Distribute Front/Back
	Distribute Top/Bottom

Buttons for aligning along or across the shelf are enabled only if at least one object is selected and the drawing is not read-only.

Buttons for distributing across the shelf are enabled if at least 3 objects are selected and the drawing is not read-only.

Clash Detection

Clash Detection should be turned on when aligning or products can overwrite each other.

- If Clash Detection is turned on, products move until they are in contact.
- If Clash Detection is turned off, products can be moved so they occupy the same physical space.

Clash detection is toggled On or Off by clicking on the clash Detection icon in the Views toolbar



Sequential Operations

Each alignment operation only works on one plane at a time; that is, it only works in the X, Y or Z plane for that particular operation. It is thus possible to use sequential alignment operations to achieve the desired effect. For example it is possible to use the Align to Left operation (X axis) followed by the Align to Back operation (Y axis). This will result in all selected products being aligned to the left and rear of the selected shelf.

Alignment Operations

Align to Left

If one or more shelves/fixtures are selected before clicking the Align to Left button, then all child products will be aligned to the left. Alignment towards the front or back of the shelf will not be affected.

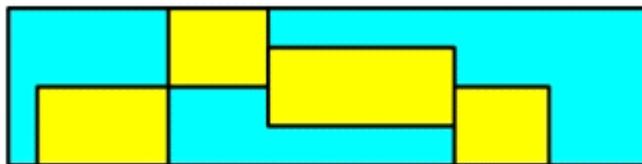
Products will first be sorted in order of position along the length of the shelf. The first product will then be placed at the left hand end of the shelf. The next product will be placed adjoining the first such that it is adjacent, but does not overlap. Successive products will be placed in a similar manner until all have been placed in a left justified alignment.

The manner of the alignment will depend on whether only products are selected, whether the shelf and some of its products are selected, or whether the shelf/fixture alone is selected.

Products Selected

If only products are selected, then they will be aligned so that left-hand side of each product matches the right-hand side of the preceding product in the selection set.

Justify Left – Product: View from Top



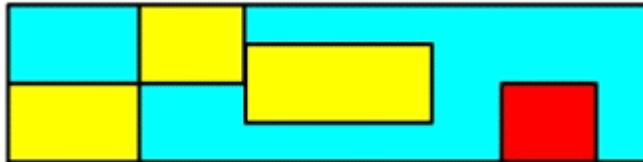
Justify Left – Product: View from Front



Shelf/Fixture and Products Selected

If the shelf/fixture, plus some of its child products are selected, then only those products will be aligned with the shelf, rather than all the products on the shelf.

Justify Left – Product and Shelf: View from Top



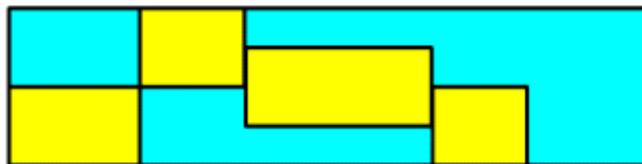
Justify Left – Product and Shelf: View from Front



Shelf/Fixture Selected

If the shelf is selected (and no products) and the alignment button is pressed, then it will assume all child objects are selected and align them to the shelf.

Justify Left – Shelf: View from Top



Justify Left – Shelf: View from Front



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

Align to Centre

If one or more shelves/fixtures are selected before clicking the Align to Centre button, then all child products will be aligned to the centre. Alignment towards the front or back of the shelf will not be affected.

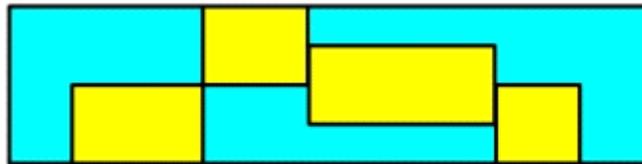
When all products have been aligned to centre, there will be an equal unoccupied space to either side.

The manner of the alignment will depend on whether only products are selected, whether the shelf and some of its products are selected, or whether the shelf/fixture alone is selected.

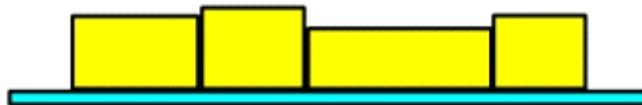
Products Selected

If only products are selected, then they will be aligned so that centre-hand side of each product matches the centre-hand side of the first product in the selection set.

Justify Centre – Product: View from Top



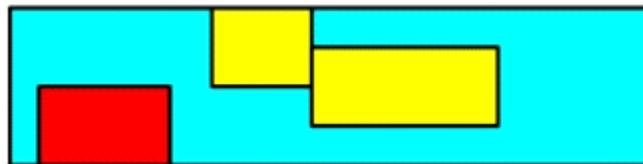
Justify Centre – Product: View from Front



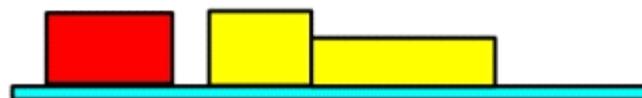
Shelf/Fixture and Products Selected

If the shelf/fixture, plus some of its child products are selected, then only those products will be aligned with the shelf, rather than all the products on the shelf.

Justify Centre – Product and Shelf: View from Top

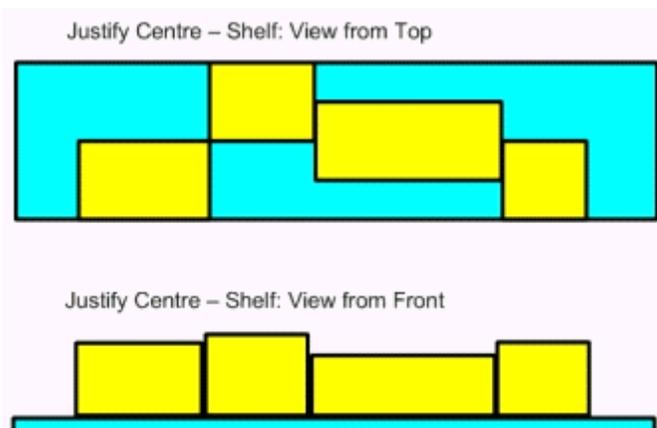


Justify Centre – Product and Shelf: View from Front



Shelf/Fixture Selected

If the shelf is selected (and no products) and the alignment button is pressed, then it will assume all child objects are selected and align them to the shelf.



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

Align to Right

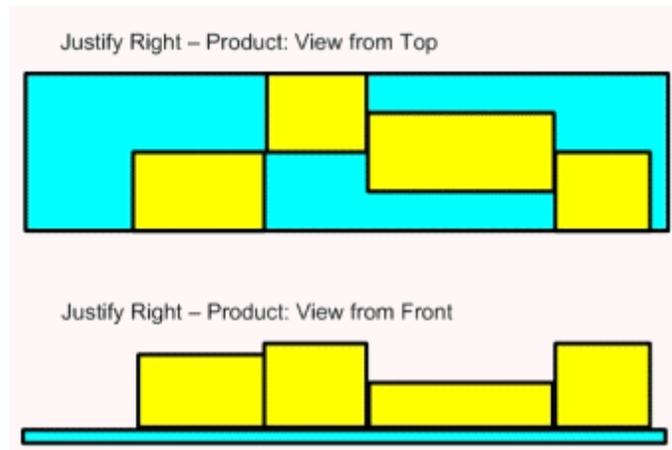
If one or more shelves/fixtures are selected before clicking the Align to Right button, then all child products will be aligned to the right. Alignment towards the front or back of the shelf will not be affected.

Products will first be sorted in order of position along the length of the shelf. The first product will then be placed at the right hand end of the shelf. The next product will be placed adjoining the first such that it is adjacent, but does not overlap. Successive products will be placed in a similar manner until all have been placed in a right justified alignment.

The manner of the alignment will depend on whether only products are selected, whether the shelf and some of its products are selected, or whether the shelf/fixture alone is selected.

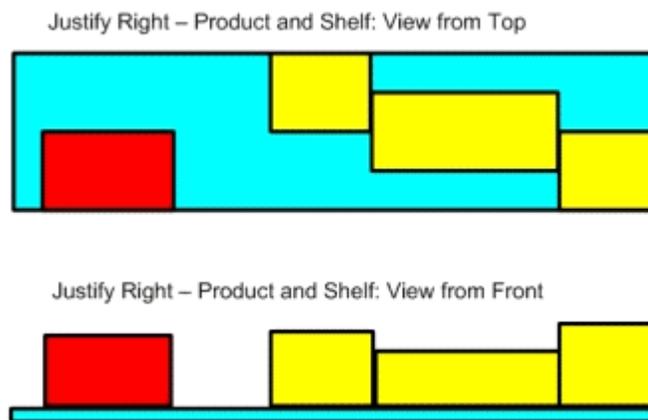
Products Selected

If only products are selected, then they will be aligned so that right-hand side of each product matches the right-hand side of the first product in the selection set.



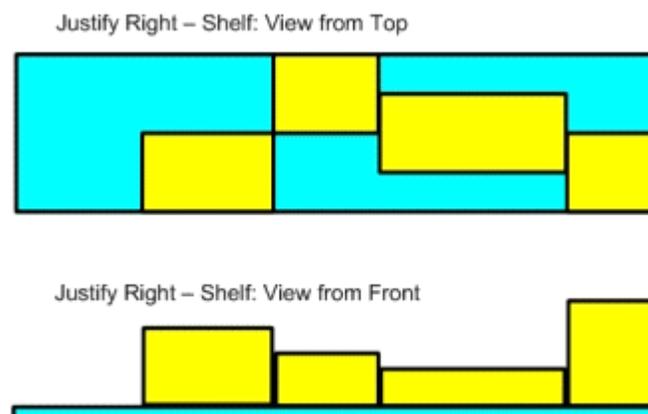
Shelf/Fixture and Products Selected

If the shelf/fixture, plus some of its child products are selected, then only those products will be aligned with the shelf, rather than all the products on the shelf.



Shelf/Fixture Selected

If the shelf is selected (and no products) and the alignment button is pressed, then it will assume all child objects are selected and align them to the shelf.



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

 Align to Front

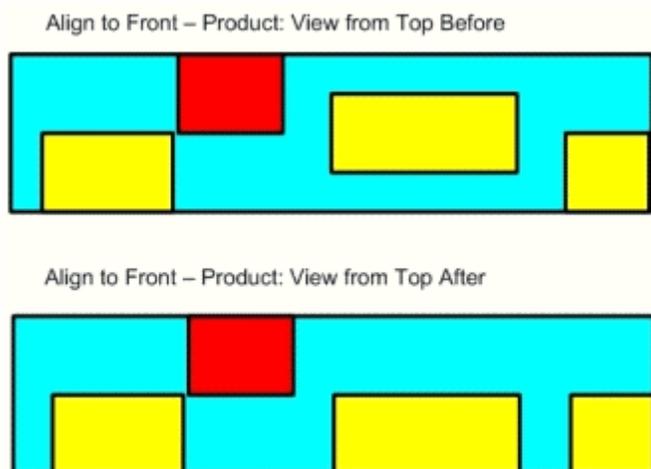
If one or more shelves/fixtures are selected before clicking the Align to Front button, then all child products will be aligned to the front. Alignment towards the left or right of the shelf will not be affected.

Products will first be sorted in order of position along the depth of the shelf. The first product will then be placed at the front edge of the shelf. The next product will be placed adjoining the first such that it is adjacent, but does not overlap. Successive products will be placed in a similar manner until all have been placed in a front justified alignment.

The manner of the alignment will depend on whether only products are selected, whether the shelf and some of its products are selected, or whether the shelf/fixture alone is selected.

Products Selected

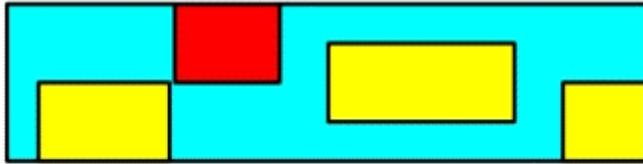
If only products are selected, then each selected product will be aligned so that front edge of each matches the front edge of the shelf.



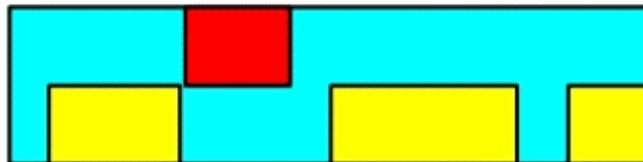
Shelf/Fixture and Products Selected

If the shelf/fixture, plus some of its child products are selected, then only those selected products will be aligned with the front of the shelf, rather than all the products on the shelf.

Align to Front – Shelf and Product: View from Top Before



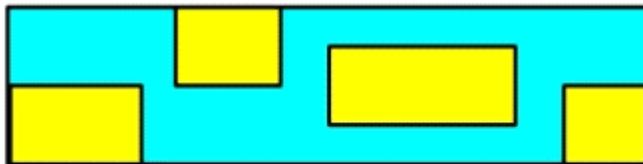
Align to Front – Shelf and Product: View from Top After



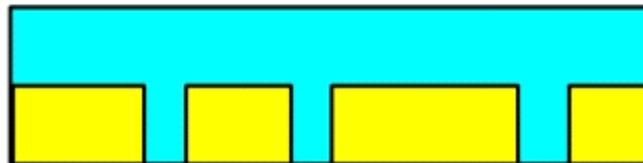
Shelf/Fixture Selected

If the shelf is selected (and no products) and the alignment button is pressed, then it will assume all child objects are selected and align them to the front of the shelf.

Justify Front – Shelf: View from Top Before



Justify Front – Shelf: View from Top After



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

Align to Middle

If one or more shelves/fixtures are selected before clicking the Align to Middle button, then all child products will be aligned to the middle. Alignment towards the left or right of the shelf will not be affected.

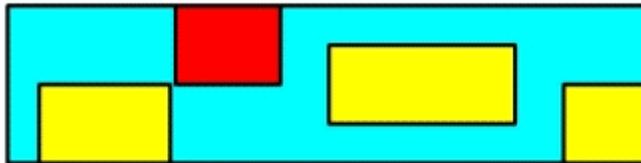
When all products have been aligned to the middle, there will be an equal unoccupied space to the front and rear.

The manner of the alignment will depend on whether only products are selected, whether the shelf and some of its products are selected, or whether the shelf/fixture alone is selected.

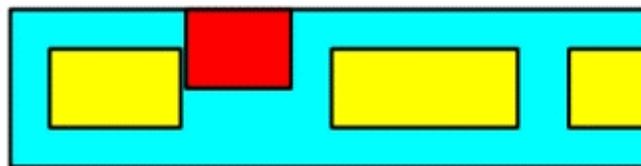
Products Selected

If only products are selected, then each selected product will be aligned so that middle of each matches the middle of the shelf.

Align to Middle – Product: View from Top Before



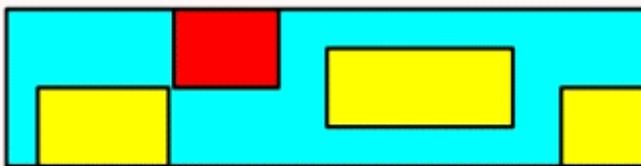
Align to Middle – Product: View from Top After



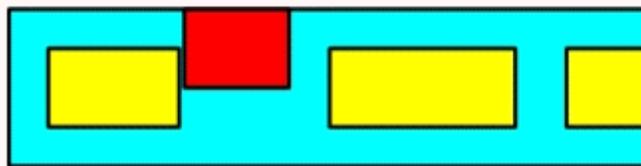
Shelf/Fixture and Products selected

If the shelf/fixture, plus some of its child products are selected, then only those selected products will be aligned with the middle of the shelf, rather than all the products on the shelf.

Align to Middle – Product and Shelf: View from Top Before

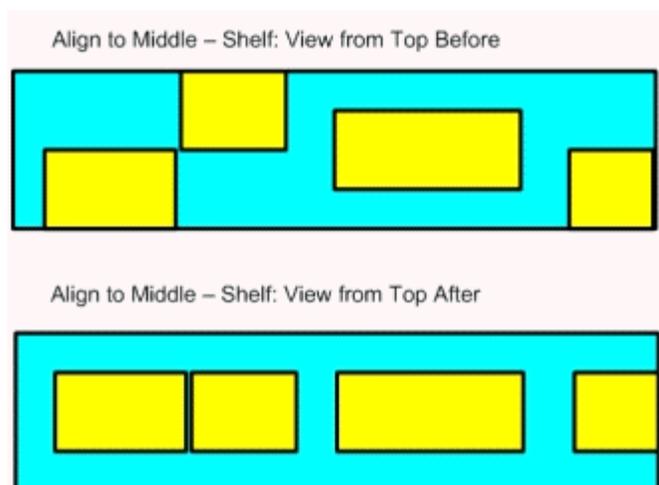


Align to Middle – Product and Shelf: View from Top After



Shelf/Fixture selected

If the shelf is selected (and no products) and the alignment button is pressed, then it will assume all child objects are selected and align them to the middle of the shelf.



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

Align to Back

If one or more shelves/fixtures are selected before clicking the Align to Back button, then all child products will be aligned to the back. Alignment towards the left or right of the shelf will not be affected.

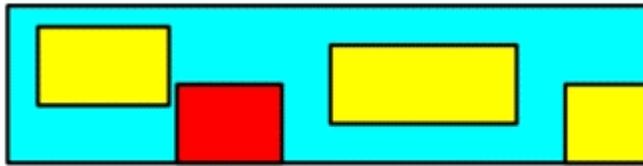
Products will first be sorted in order of position along the depth of the shelf. The first product will then be placed at the back edge of the shelf. The next product will be placed adjoining the first such that it is adjacent, but does not overlap. Successive products will be placed in a similar manner until all have been placed in a back justified alignment.

The manner of the alignment will depend on whether only products are selected, whether the shelf and some of its products are selected, or whether the shelf/fixture alone is selected.

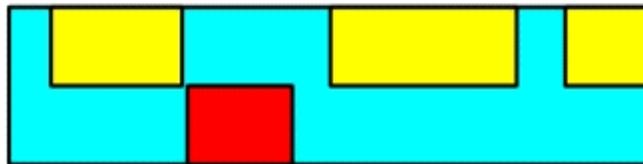
Products Selected

If only products are selected, then each selected product will be aligned so that back of each matches the back of the shelf.

Align to Back – Product: View from Top Before



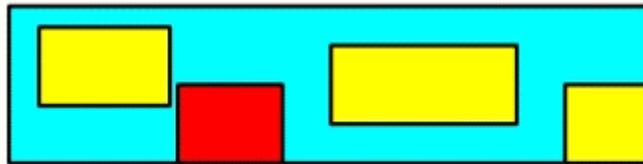
Align to Back – Product: View from Top After



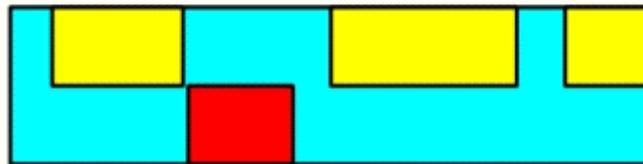
Shelf/Fixture and Products Selected

If the shelf/fixture, plus some of its child products are selected, then only those selected products will be aligned with the back of the shelf, rather than all the products on the shelf.

Align to Back – Product and Shelf: View from Top Before



Align to Back – Product and Shelf: View from Top After



Shelf/Fixture Selected

If the shelf is selected (and no products) and the alignment button is pressed, then it will assume all child objects are selected and align them to the back of the shelf.



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

Distribute Left/Right

Distribution ensures that the spaces (or overlaps) between objects are equal.

Products

If only products are selected, then Distribute Left/Right will establish the total distance between the left edge of the leftmost product and the right edge of the rightmost product. It will then establish the combined length of all the products within that distance.

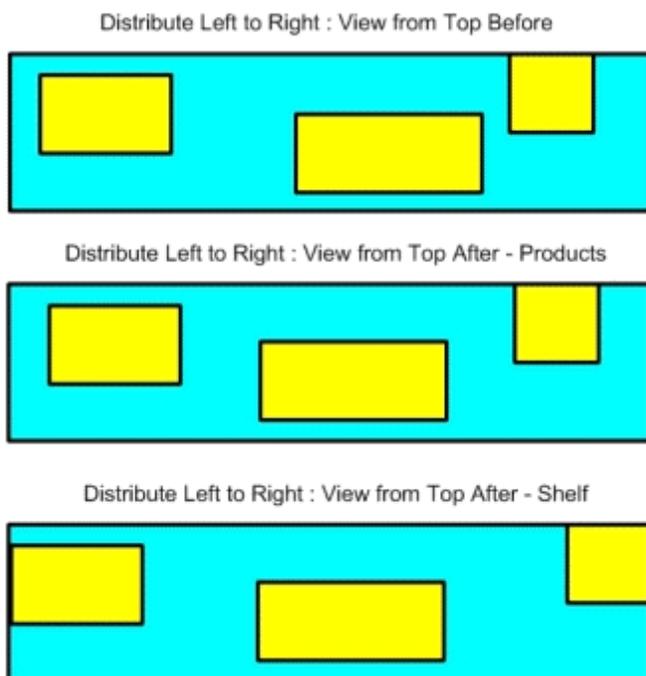
After comparing the total distance and the combined length, Distribute Left/Right will then move all selected products so that the gaps (or overlaps) between the selected products are equal.

If products are selected, the left hand and right hand products in the selection will not move, but all intermediate products may have their positions adjusted.

Parent Fixture/Shelf

If the parent fixture/shelf is also selected, then it will assume that all child products are selected; this will distribute products between the left hand edge and right hand edge of the merchandisable areas.

This means that unlike a Products selection, the left hand and right hand products in the selection will move to the respective left hand and right hand extents of the shelf respectively.



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

 Distribute Front/Back

Distribution ensures that the spaces (or overlaps) between objects are equal.

Products

If only products are selected, then Distribute Front/Back will establish the total distance between the front edge of the foremost product and the back edge of the rearmost product. It will then establish the combined depth of all the products within that distance.

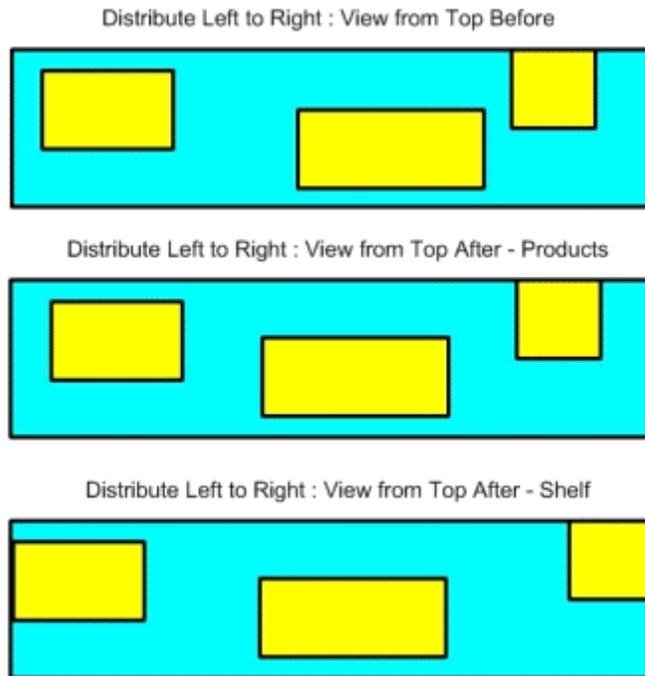
After comparing the total distance and the combined depth, Distribute Front/Back will then move all selected products so that the gaps (or overlaps) between the selected products are equal.

If products are selected, the front and back products in the selection will not move, but all intermediate products may have their positions adjusted.

Parent Fixture/Shelf

If the parent fixture/shelf is also selected, then it will assume that all child products are selected; this will distribute products between the front edge and rear edge of the merchandisable areas.

This means that unlike a Products selection, the front and rear products in the selection will move to the respective front and rear extents of the shelf respectively.



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

Distribute Front/Back

Distribution ensures that the spaces (or overlaps) between objects are equal.

Products

If only products are selected, then Distribute Top/Bottom will establish the total distance between the top edge of the lowermost product and the maximum height available. It will then establish the combined heights of all the products within that distance.

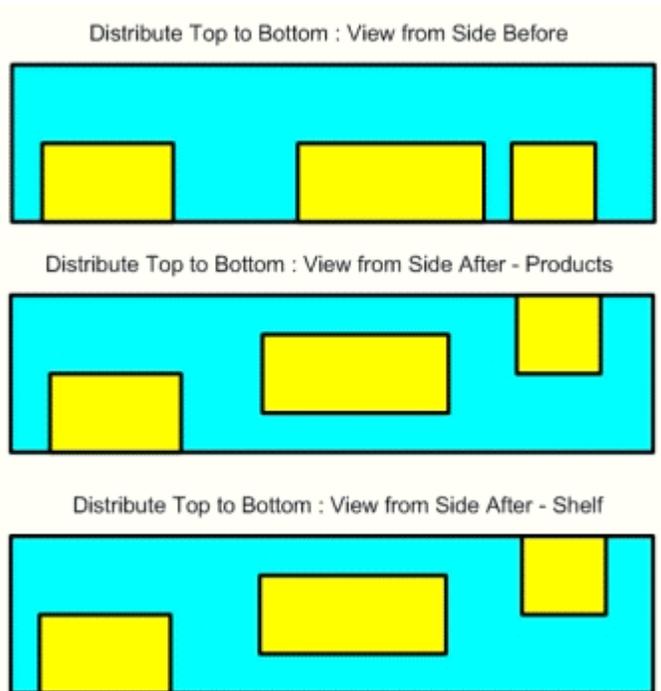
After comparing the total distance and the combined heights, Distribute Top/Bottom will then move all selected products so that the gaps (or overlaps) between the selected products are equal.

If products are selected, the top and bottom products in the selection will not move, but all intermediate products may have their positions adjusted.

Parent Fixture/Shelf

If the parent fixture/shelf is also selected, then it will assume that all child products are selected; this will distribute products between the front edge and rear edge of the merchandisable areas.

This means that unlike a Products selection, the top and bottom products in the selection will move to the respective top and bottom extents of the shelf respectively.



Note: It is recommended that Clash Detection be turned on. This will avoid one product being placed on top of another if only some of the products on a shelf are selected for alignment.

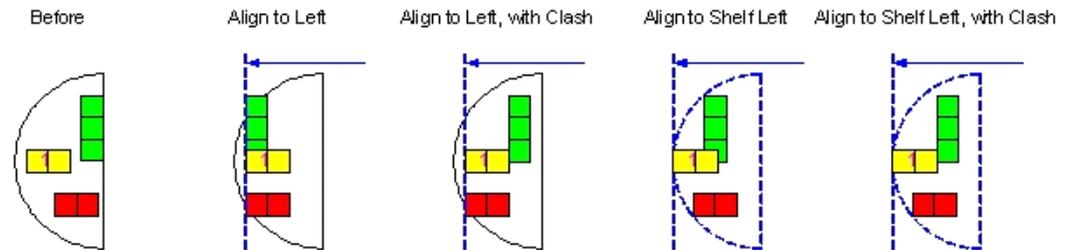
Other Aspects of Alignment Operations

Aligning to Non-Rectangular Objects

Macro Space Management allows alignment to non rectangular objects such as semi-circular fixtures or corner shelves. The shape of the non-rectangular shelf is defined in Fixture Studio, all products placed on the shelf are confined to the bounds of the non-rectangular area.

Shelves

Alignment on non-rectangular objects should be carried out using the Shelf alignment options and with clash detection on.

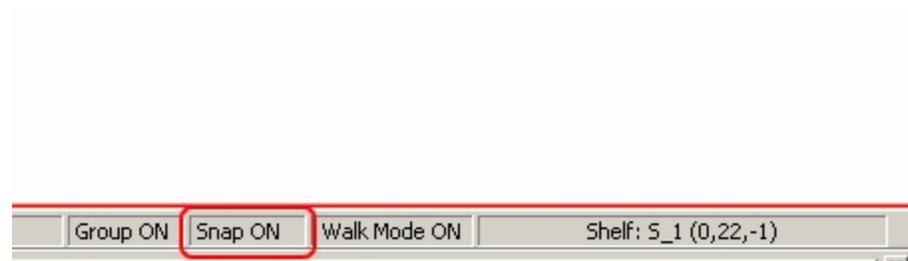


Products

Non-rectangular products are treated as boxes for alignment purposes.

Aligning to Snap Grid

It is possible to align objects to a regular grid. This can be toggled On or Off by clicking on the Snap option on the Status bar.

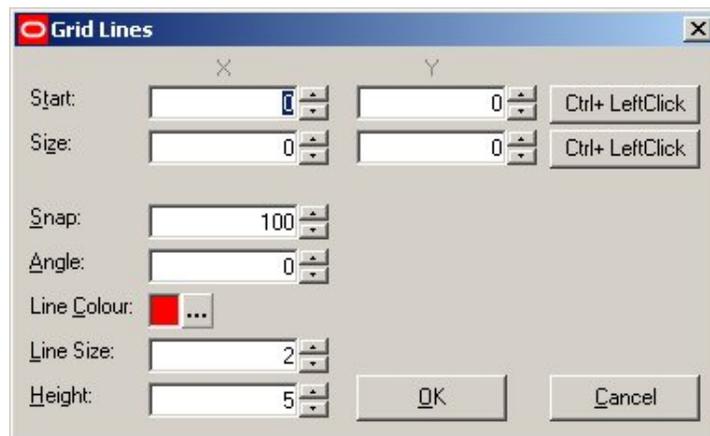


It is also possible to toggle it On or Off using the Edit menu.

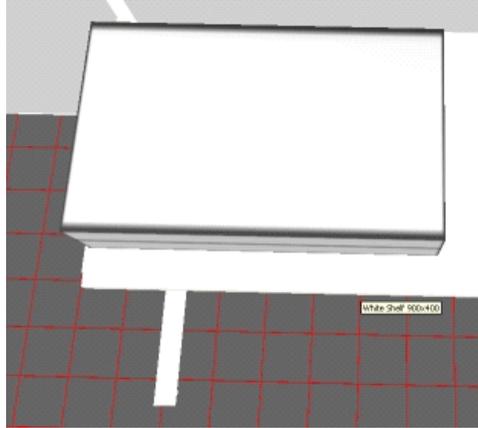
The grid itself can be set to be displayed using the Grid Lines Option in the View pull down menu.



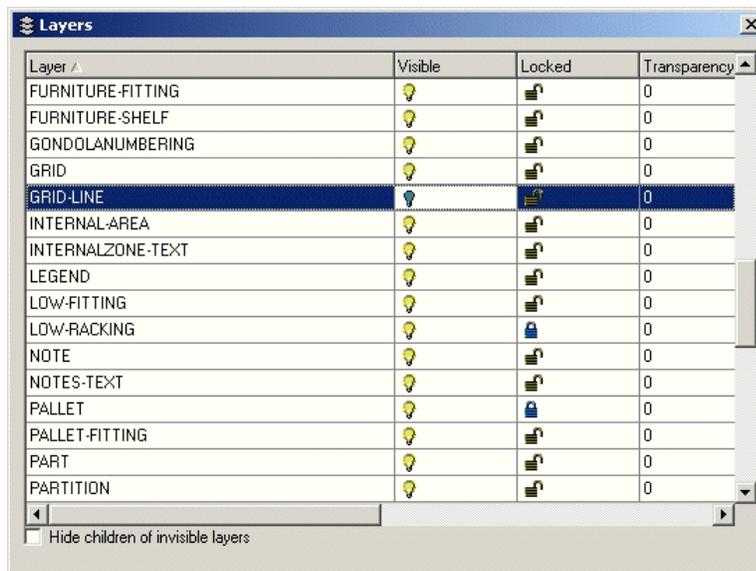
This brings up the Grid Lines dialog box which can be used to set the parameters of the grid.



The grid appears in the Virtual Reality Environment.



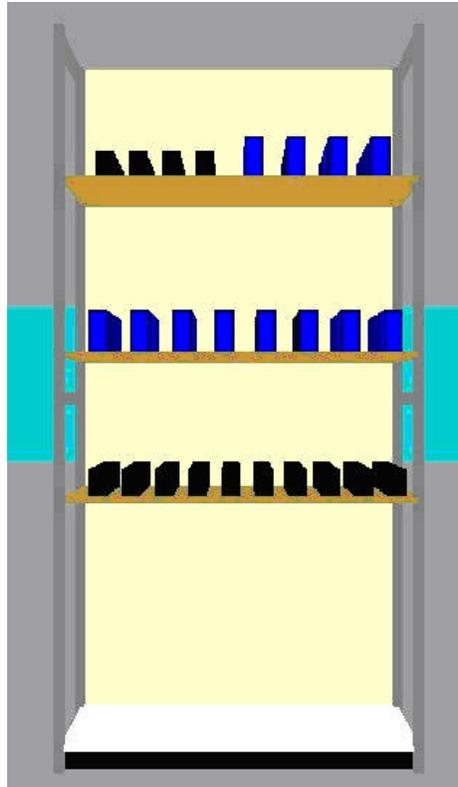
To turn a grid off, go to the layers dialog box and turn off the grid lines layer.



Adding Planograms

A planogram, a pre-planned arrangement of shelves and fixtures, is designed to occupy multiple fixtures. Planograms provide a quick and effective way to rapidly place a standard arrangement of shelves and products. The example below displays a single bay planogram that occupies a single fixture with three shelves. Planograms can be either imported from third party software or they can be designed within Merchandiser.

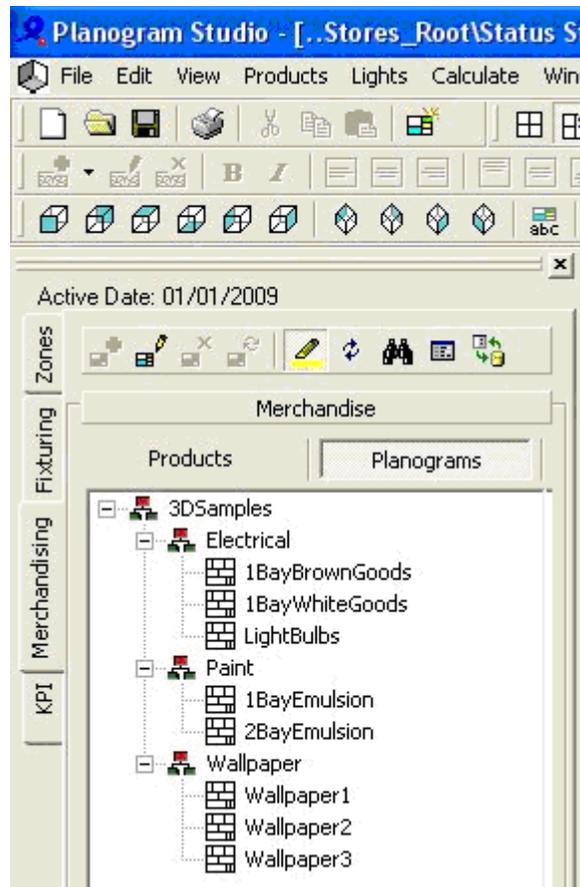
Planograms are designed to go on fixtures of specific dimensions. These are selected in the store plan. The actual planogram that is then placed consists of shelves and merchandise placed on those fixtures.



Both Products and planograms can be placed either from the Object Browser or the Object Grid.

Planogram Hierarchy

Planograms are organized in a Planogram Hierarchy. This can be found in the Object Browser.



Planogram Hierarchy

Planograms can be added to the hierarchy in Macro Space Management in one of three ways:

- Imported from third party software
- Designed from new in Macro Space Manager
- Created from existing equipment and merchandise in Macro Space Manager

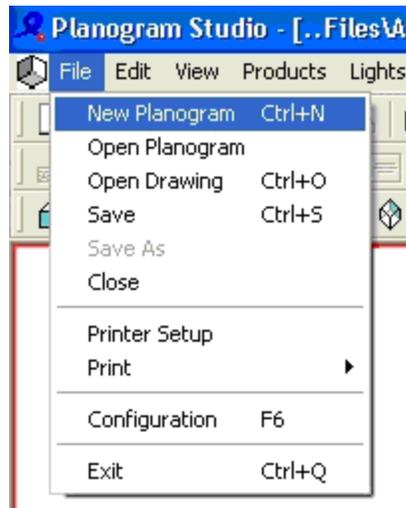
The hierarchy can be modified in one of two ways: groups and planograms.

- **Groups:** Groups are similar to directories in Windows Explorer - they provide folders in which planograms can be stored in a logical arrangement. Groups can be set up in a hierarchical structure - for example Summer Promotion is a child of Promotional Items.
- **Planograms:** Planograms can only be assigned to groups.

Designing a Planogram

Planograms are designed from new by selecting a parent group and highlighting it. There are then two options: using the menu options or using the right click pop up menu. To add anew planogram:

1. Select the **New Planogram** option from the File Menu. Alternatively, planograms can also be added by using Ctrl + Right Click to bring up the pop-up menu and selecting Add Planogram.



Add Planogram

Planogram dialogue box appears. The Planogram dialogue box allows you to specify complete details for the planogram.

 A screenshot of the "ExamplePlanogram" dialog box. The title bar reads "ExamplePlanogram". The dialog has several tabs: "Details", "Stores", "Seasons", "Fixture Styles", "Design", and "UDAs". The "Details" tab is active. It contains the following fields:

- Name: Example Planogram
- Revision: 1
- Description: Example Planogram
- Status: Proposed (dropdown)
- Source: Planogram Studio
- Effective Date: (dropdown)
- Imported Name: (empty)
- Type: (dropdown)
- Last Imported: 11/12/2008 at 11:22
- Stock Type: (dropdown)
- Summary Product: (empty)
- Autofill Rule: < > (dropdown)
- Temp Range: < >
- Units: imperial inch (dropdown)
- Created: 11 Dec 2008
- Can be Split:
- Created By: pw
- Number of Bays: 3
- Last Modified: 11 Dec 2008
- Size: 108, 24, 36 (checkboxes)
- Last Modified By: pw
- Last Published: 11 Dec 2008

 At the bottom, there are three buttons: "OK", "Save As", and "Cancel".

Add Planogram - Details

2. Enter all the details on the dialog box.
 - The Details Tab allows the planogram name, effective date, etc, to be specified.

- The Stores Tab allows you to select which stores the planogram is intended for.
 - The Seasons Tab allows you to select which time periods the planogram is intended for.
 - The Fixture Styles Tab allows you to specify which types of fixtures the planogram can be placed on.
 - The Design Tab allows the planogram design to be modified relative to the fixtures and merchandise selected in the store.
 - The UDA Tab allows User Designed Attributes to be set for the Planogram.
3. Click Save as option to save the planogram. On saving of the Planogram dialogue, the new planogram appears in the hierarchy.

Adding Planograms

To add a planogram:

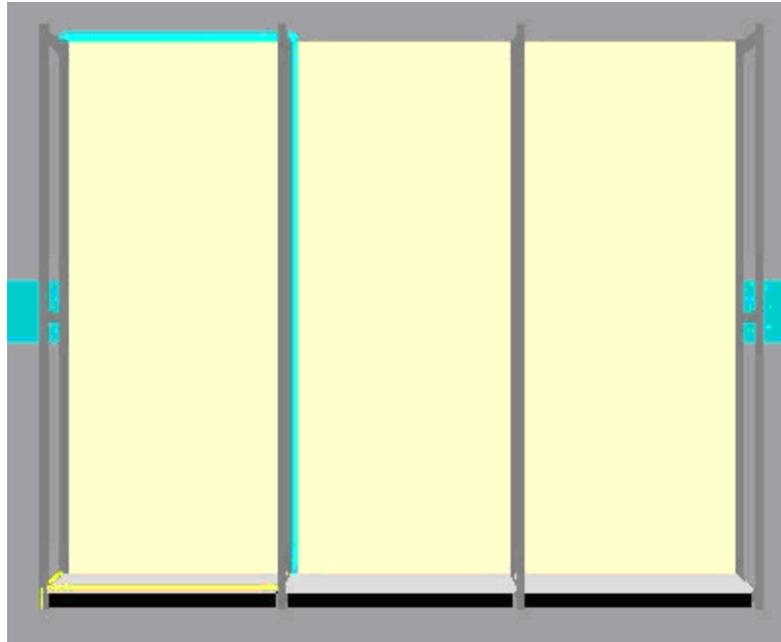
1. Use Walk Mode to move in front of the fixtures or shelves it is desired to merchandise
2. Select the fixtures the planogram is to be added to
3. Select the planogram to be added
 - Highlight the required planogram from the Merchandising tab of the Object Browser.
 - Alternatively, go to the Object Grid and select the required planogram.
4. 'Drag and drop' the planogram onto the required fixture or shelf.

Note: It is recommended that the Size Rule (Edit Menu) be set to On. This will be defaulted to Off when Merchandiser is first started.

Adding a Planogram from Object Browser

To add Planograms from the Object Browser,

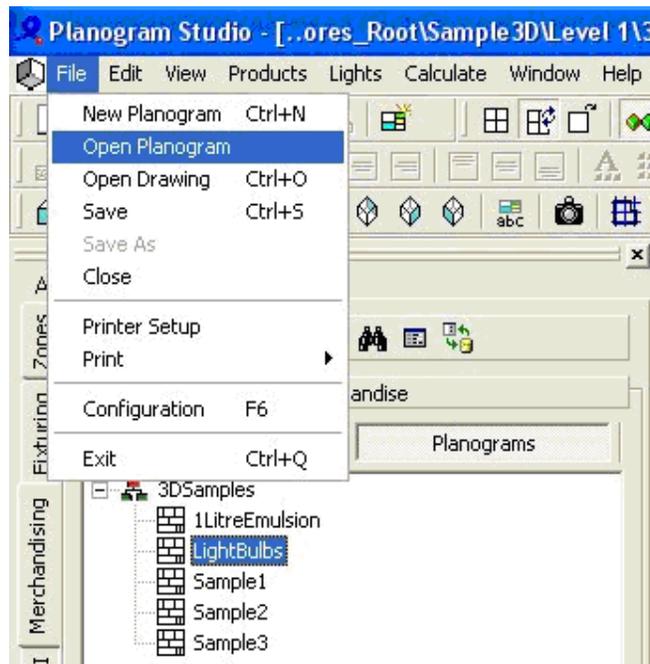
1. Select the required fixtures in the drawing.



Placement of Planogram

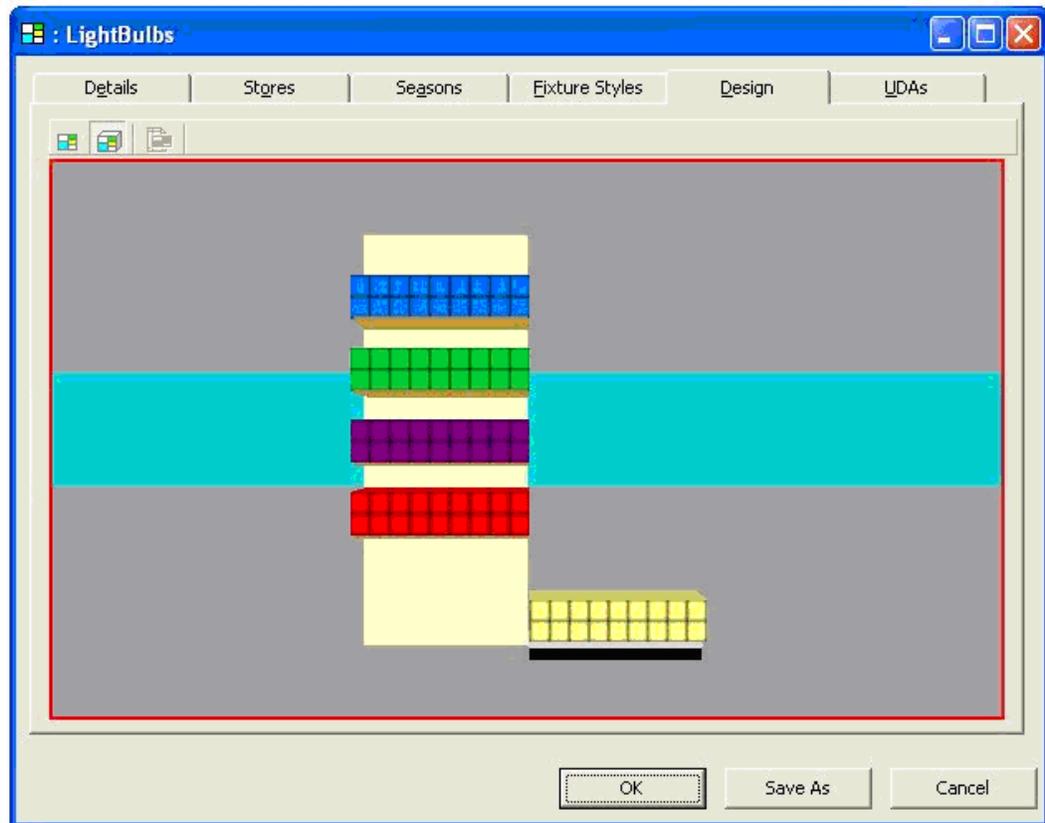
Note: Turn Grouping off in the status bar. This will make it easier to select the required fixtures.

2. Identifying which fixtures are required for the planogram can be done by highlighting a planogram in the hierarchy and selecting **Open Planogram** from the file menu.



Planogram Studio - Open

This opens the Planogram Design Window.

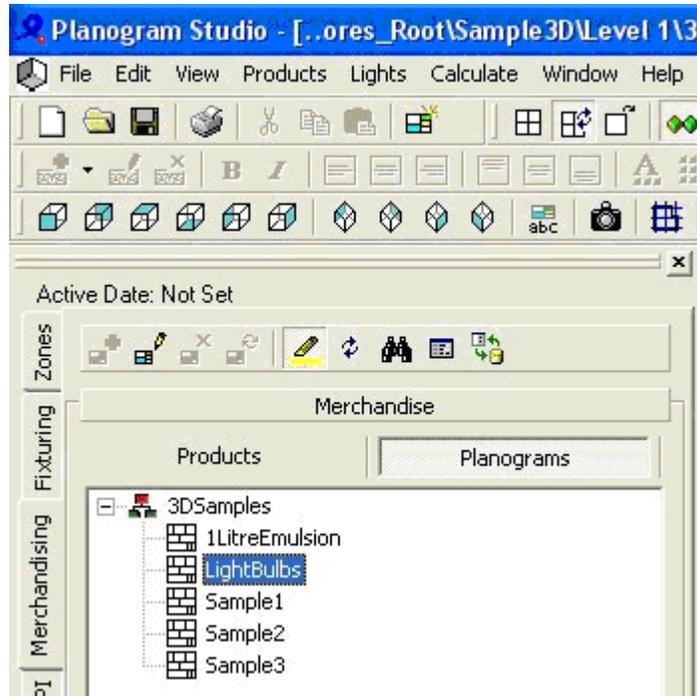


Planogram Studio - Lightbulbs

3. Identifying the required fixtures can be done by holding the mouse pointer over them until the tooltip appears. Dimensions can be found by right clicking and choosing the edit option from the resulting pop-up menu.

Note: fixtures required for the planogram appear in sequence from left to right and not in the positions they are in the drawing.

4. Once the fixture details are known, go to the Merchandise tab in the Object Browser and select the Planograms sub-tab. Locate the required item in the hierarchy and highlight it.



Planogram Studio

In the above example, the planogram 'Light bulbs' has been selected.

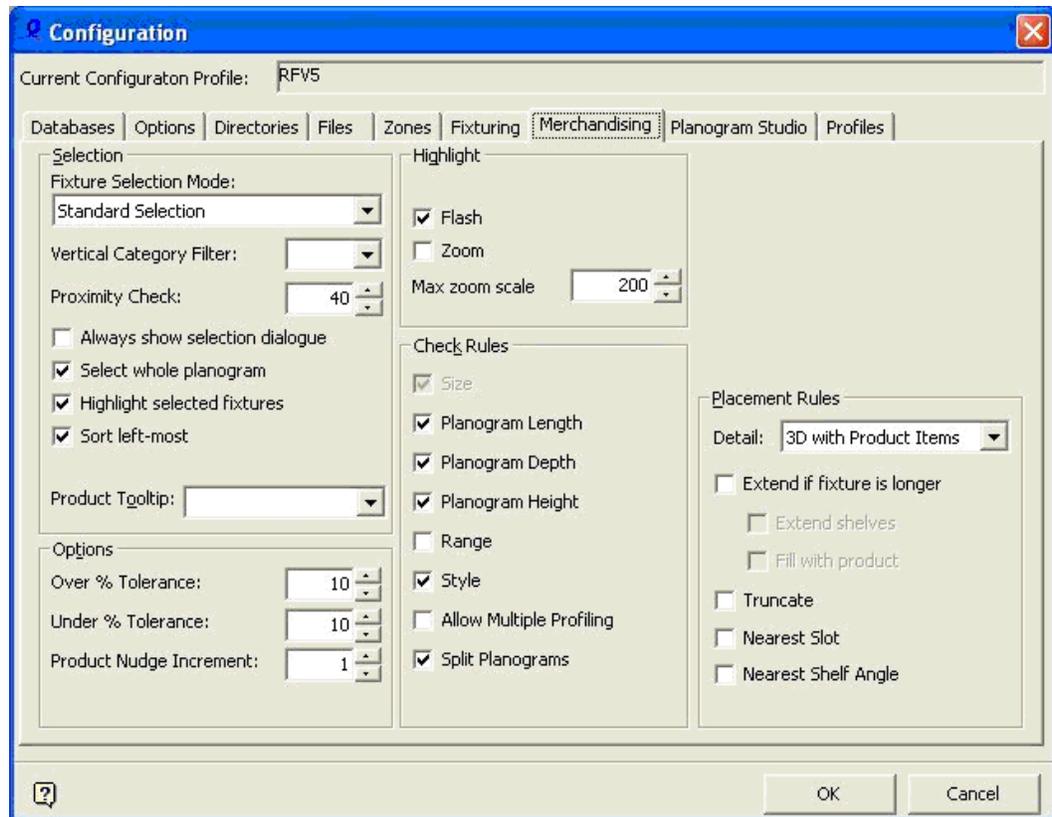
5. Next, hold down the left mouse key and 'drag and drop' the selected item from the hierarchy onto the selected fixtures.



Drop Item on Fixtures

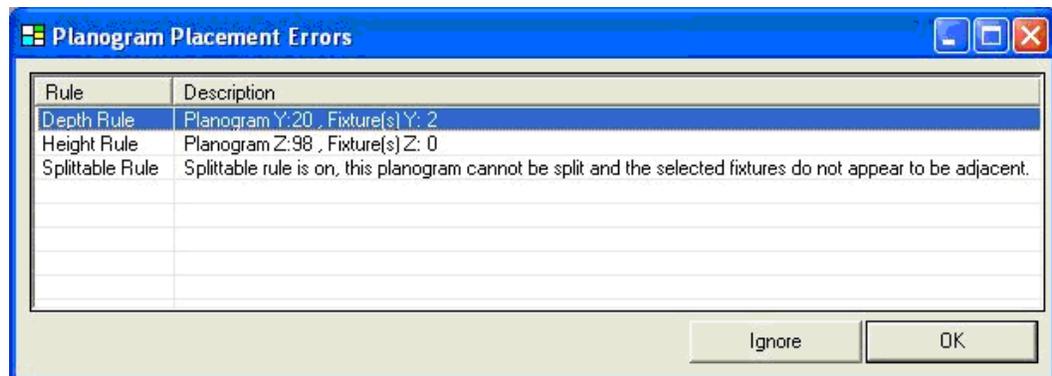
A + sign by the cursor indicates that the shelf has been selected.

6. Release the mouse key to add the planogram. How the planogram places depends on the settings in the Check Rules frame of the Configuration Module.



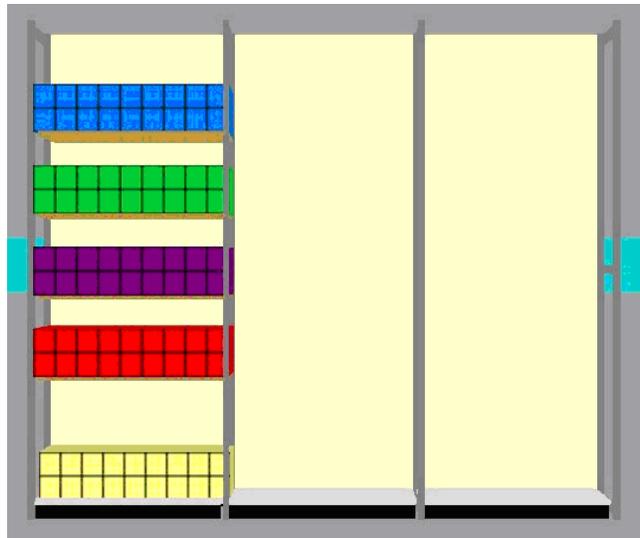
Configuration Module - Merchandising

In the above example, the planogram length, depth, height, style and whether the planogram has been split have been set to give warnings. If some or all the check rules have been set to on, the warning dialog may appear.



Planogram Placement Errors

7. To stop placing the planogram click **OK**. To place the planogram click **Ignore**

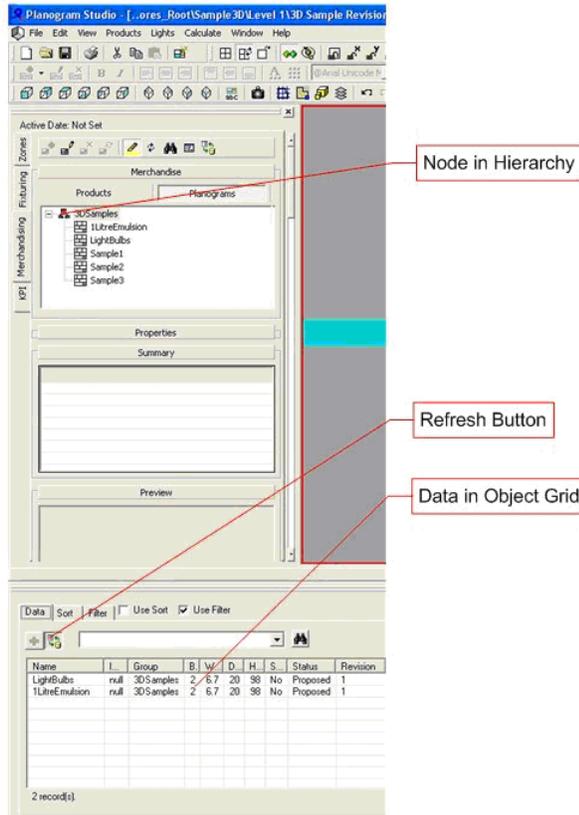


Placement of Planogram

Adding Planogram in a Object Grid

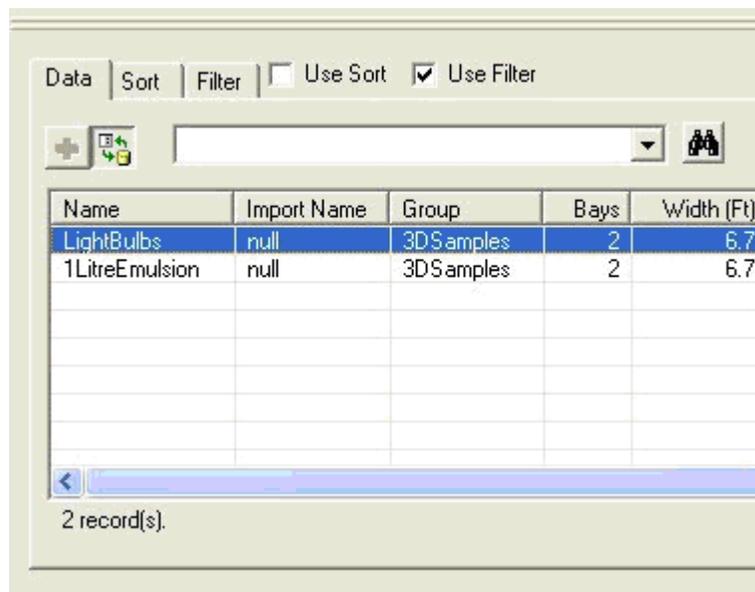
To populate (or repopulate) the Object Grid with data:

1. Select a node in the Object Browser. Ensure the Refresh button is on in the Object Grid.
The Object Grid will be populated with all child data below that node.



Add Planogram

2. To add planograms from the Object Grid, highlight the required planogram. (If necessary, use the Find, Sort and Filter options to simplify the list).



Object Grid

3. Drag and drop into the drawing. On 'dropping' the planogram it is placed in the drawing.

Exploding and Imploding Planograms

It is possible to place planograms in both the Planner and Merchandiser modules. There is a difference in how they appear.

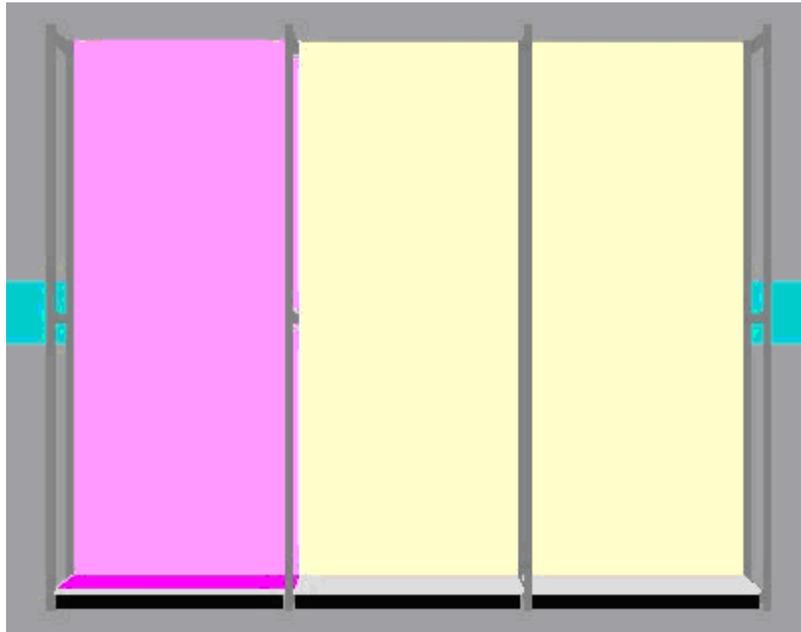
- In the Planner module they appear as placeholders – a single block without any detail.
- In the Merchandiser module they appear with considerable detail including Display Style information for products appearing on specific shelves.

When a planogram placed in the Planner module is first viewed in the Merchandiser module, it appears as a single product block with little detail. The Explode option shows it in full detail, while the Implore option allows the level of detail to be reduced.

Exploding or Imploding Planograms in Merchandiser does not affect the level of detail shown in the Planner module.

Exploding a Planogram

When a planogram is placed in the Planner Module and subsequently viewed in the Merchandiser module it initially appears as a placeholder.

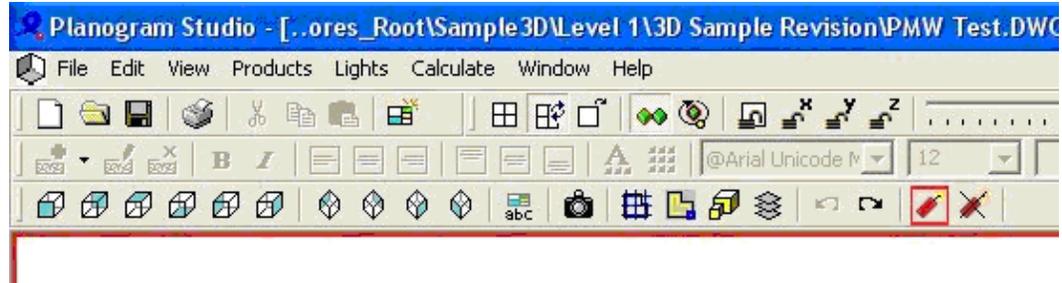


In the above example, the planogram appears as simple product blocks on the left hand base and back panel. There are two modes of exploding planograms:

- If no fixtures are selected, all 2D planograms in the drawing are exploded.
- If fixtures containing planograms are selected, only the planograms on those fixtures are exploded.

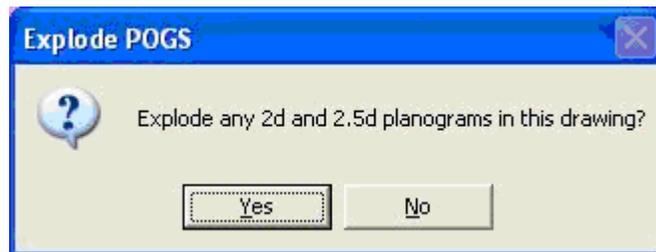
To explode planograms:

1. Select the option from the Directions and Product Text toolbar.



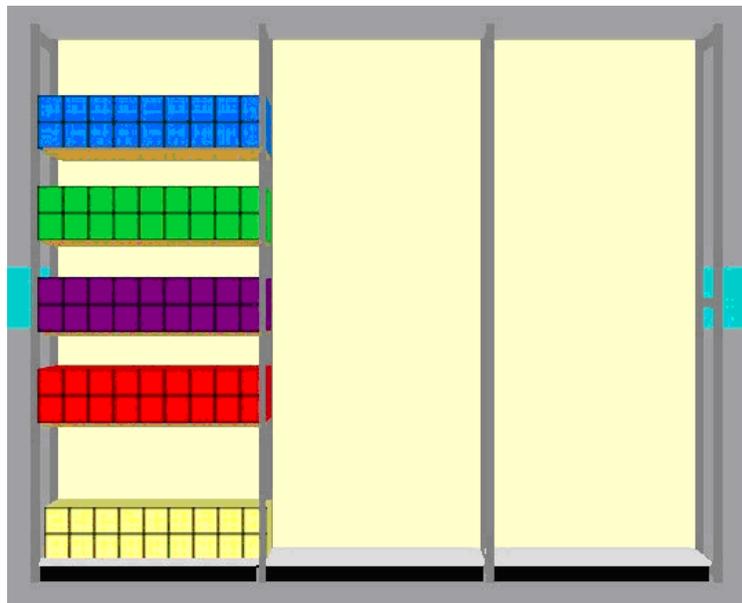
Planogram Studio - Explode

If no fixtures containing planograms are selected, a warning dialog box appears.



2. Click on OK to explode all planograms in the drawing. If fixtures containing planograms are selected, those planograms are exploded (without the warning dialog box).

Exploded planograms can then be seen at their maximum level of detail.

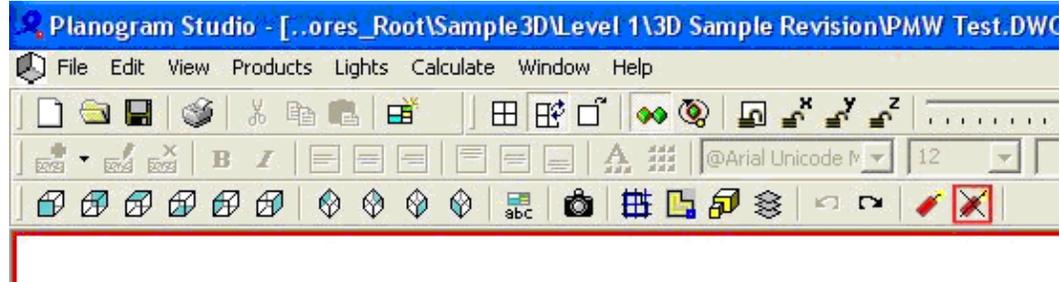


Imploding a planogram

Imploding planograms reverses the exploded planogram. The planogram is displayed at a lower level of detail.

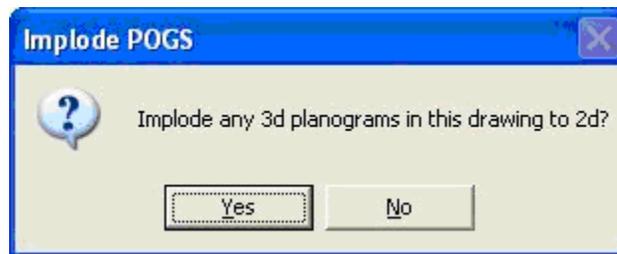
To implode specific planograms:

1. Select the parent fixtures. To implode all planograms, ensure no fixtures are selected.
2. Click the Implore icon in the Directions and Product Text toolbar.

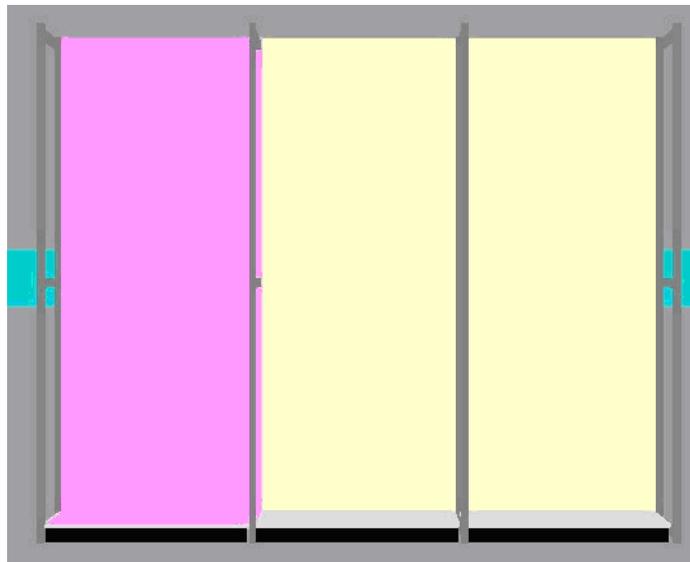


Planogram Studio - Implore

A warning dialog box appears if no fixtures are selected.



The planograms is imploded.

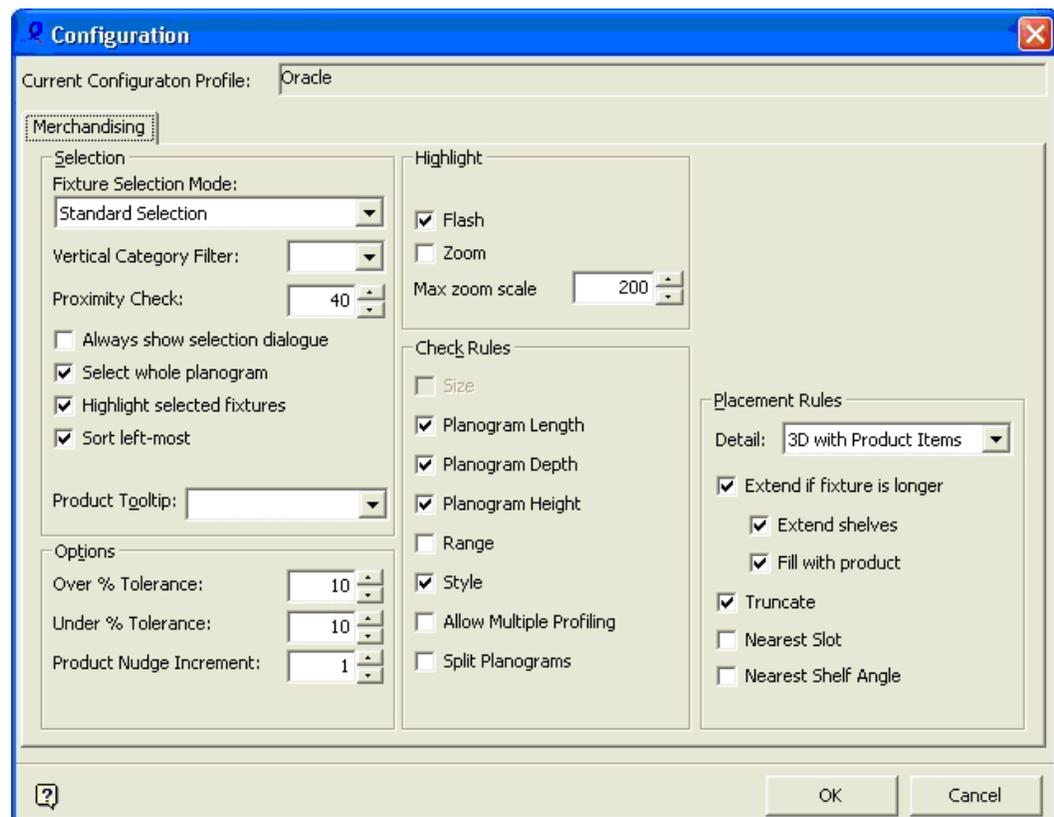


Updating Planogram Versions

Imploding and exploding planograms has another use. Sometimes planogram designs are updated and a new version of the planogram is generated. This information is held in the Macro Space Management database. Imploding then Exploding all planograms in the drawing has the effect of replacing any outdated versions of planograms with the latest versions.

Configuring Planograms

How planograms place is determined by settings in the Merchandising tab of the Configuration Module. This can be called from the File menu of Merchandiser or from the Properties icon on the Object Browser toolbar.



Configuration Module - Merchandising

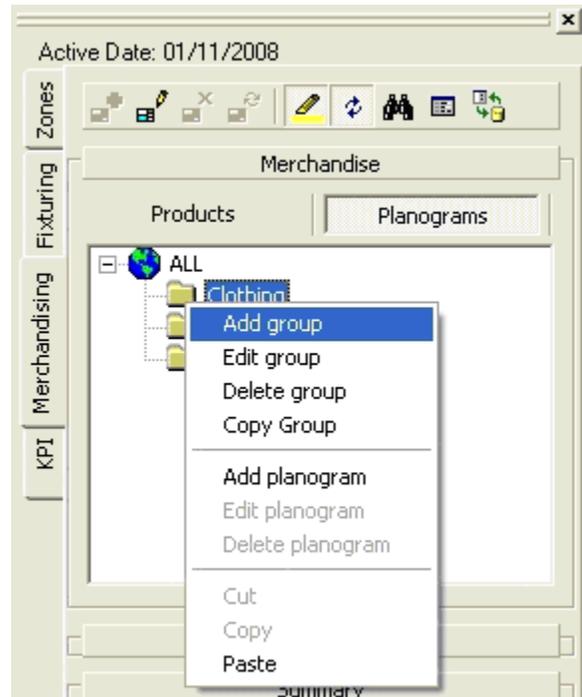
Planograms are designed for fixtures of specific dimension and type. If placed on other fixtures the behavior of the planogram (and any subsequent warnings) depends on what settings are selected in the Configuration Module.

- **Options Frame:** Settings in the Options Frame determine the degree of variation allowed if the length of the selected fixtures differs from those in the planogram design.
- **Check Rules Frame:** Settings in the Check Rules frame determine what warnings are given if the planogram design does not match the selected fixtures.
- **Placement Rules Frame:** Settings in the Placement Rules frame determine what to do with products if the planogram dimensions do not match the fixture dimensions.

Planogram Group Operations

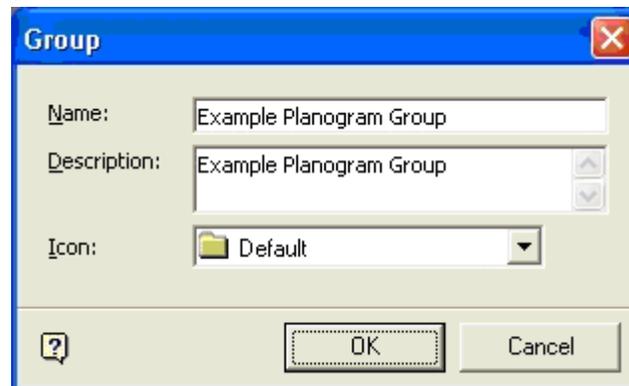
Adding a Group

To add a group, highlight the node in the hierarchy the group is to be a child of. Use Ctrl + Right Click to bring up the pop-up menu.



Add Group

Next, select Add Group to bring up the Group dialogue box.



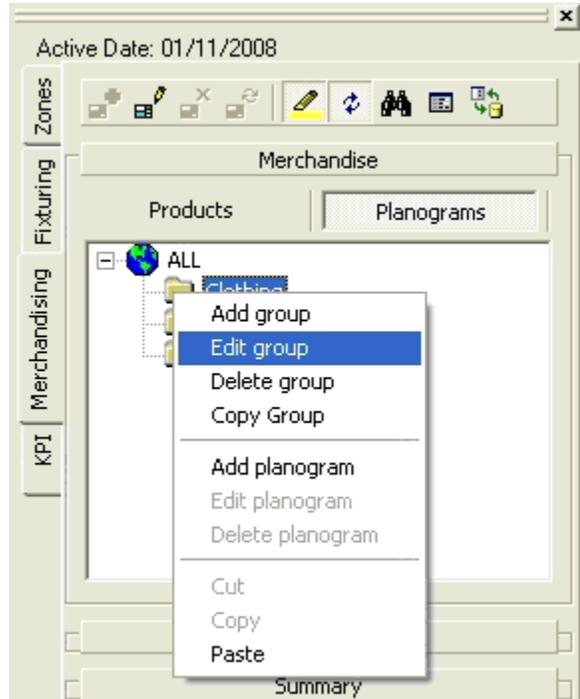
Group dialogue box

The Name and description can be typed in, and the pertinent icon selected from a drop down list. On clicking OK, the group is added to the hierarchy.

Editing a Group

Groups can be edited in one of two ways; their details can be modified, or their position in the hierarchy can be changed.

To edit details highlight the required group in the hierarchy and use Ctrl + Right Click to bring up the pop-up menu.



Edit Group

Select the Edit Group option. This brings up the Edit Group dialogue box. Modify it as required.

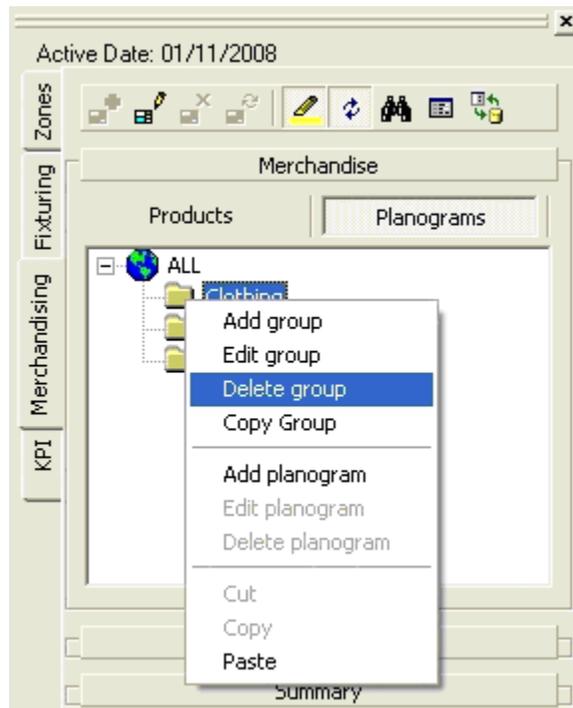


Edit Group dialogue box

Modify the information as required, click on OK and the edited details are modified in the hierarchy.

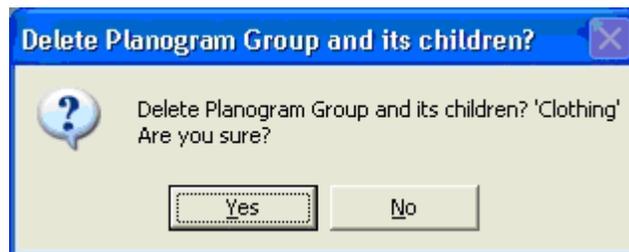
Deleting a Group

To delete a group from the hierarchy, first highlight it and use Ctrl + Right Click to bring up the pop-up menu.



Delete Group

Click Delete Group, a confirmation to delete planogram appears.



Click Yes and the Group and any child objects are deleted.

Editing Objects

Editing Fixtures

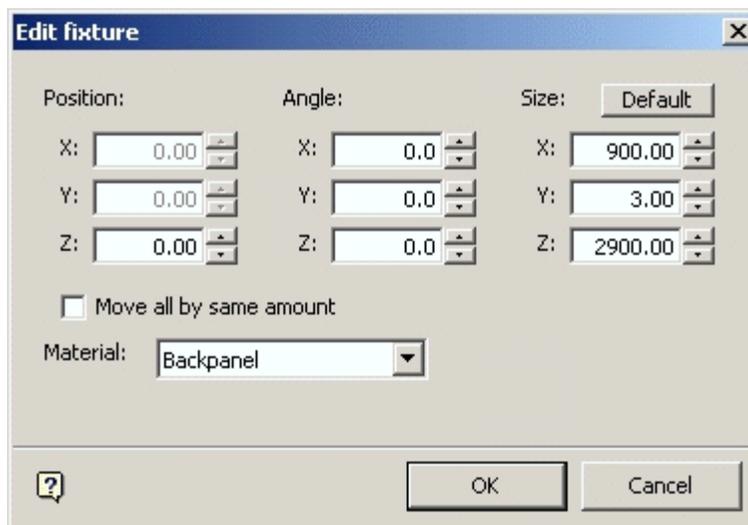
Fixtures can be edited on the Fixtures tab of the Object Browser.



Edit Fixtures

To edit a fixture:

1. Select a fixture from the Fixturing tab of the Object Browser.
2. From the toolbar, select Edit fixture icon. The Edit Fixture dialog Box opens in the Fixture Studio.



Edit Fixture Dialog Box

This allows the Position, Angle and Size of the fixtures to be edited.

Note: If dissimilar fixtures have been selected as part of the Group, only options that are common to those fixtures will be available for editing.

Editing Shelves

Shelves can be edited from either the Fixtures or Merchandising tabs in the Object Browser.

1. Hold down <Ctrl> and right click to bring up the pop-up menu.



Edit Shelves

2. Click on the edit option to bring up the Edit Shelves dialog Box.

Edit Shelves dialog Box

This allows the Position, Slot Number, Angle and Size of the shelves to be edited.

Note: If dissimilar shelves have been selected as part of the Group, only options that are common to those shelves will be available for editing.

Editing Products

You can edit single or grouped products by using Edit or Edit Group option.

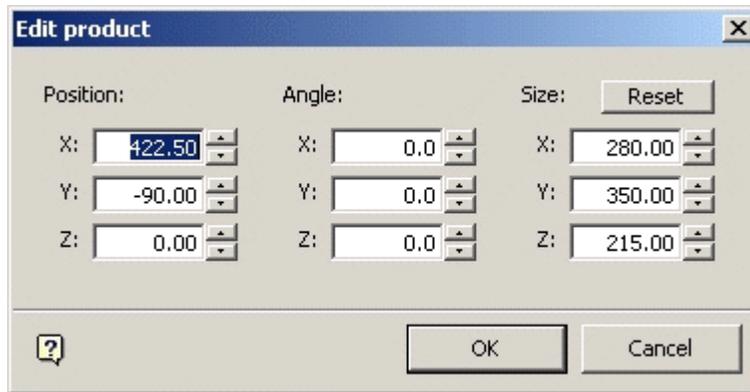
To edit products:

1. Select the product by highlighting it.
2. With the cursor on the product, hold down the <Ctrl> and right click to bring up the pop-up menu.



Edit Products

3. Select **Edit**. The Edit Product dialog box appears.



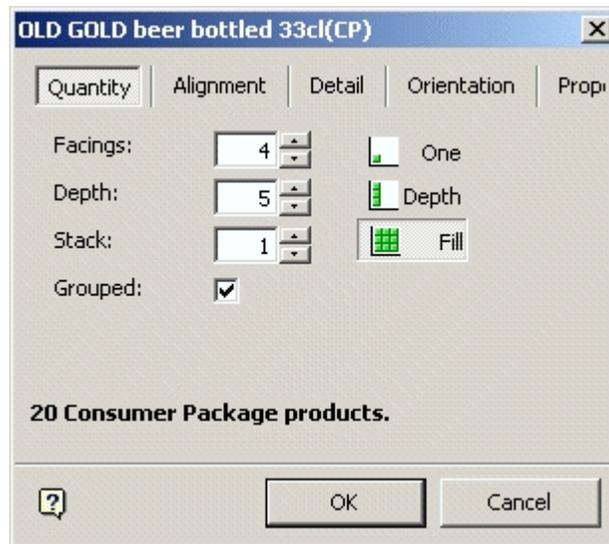
Edit Product dialog box

4. Modify the position and orientation of the product. Changes made will affect the single instance of the product.
5. Click **OK** when done.

Edit Group

The Edit Group option enables you to edit the products in the group.

Select **Edit Group** from the pop up menu to bring up the Edit Group dialog box.



Edit Group dialog box

The changes made affect the grouped products.

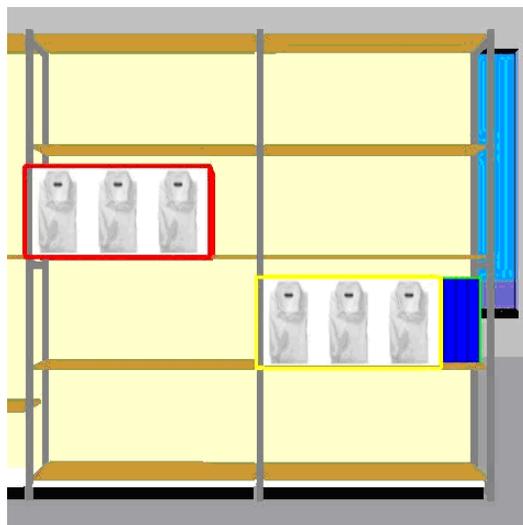
Removing Products

There are two ways of removing products from fixtures or shelves.

- Selecting the item of merchandise and using the <Delete> key.
- Selecting the item of equipment and using the Empty command.

Using the Delete Key

To use the delete key, select the required items of merchandise. These are highlighted.

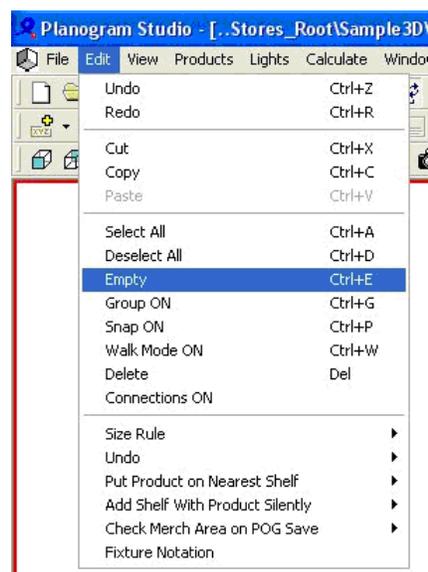


Use the Delete Key

Once the required merchandise has been selected, click the <Delete> key to remove it.

Using the Empty command

The Empty command is found on the Edit menu.

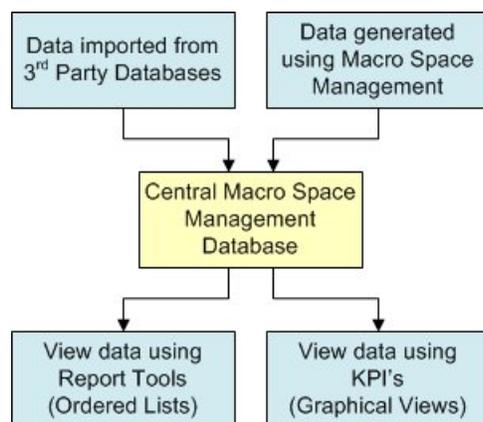


Empty Command

To use it, select the required shelves or fixtures (which are highlighted). Once the fixtures are selected, use the Empty command (or Ctrl+E) and the fixtures or shelves are emptied of merchandise.

Time Dependent Data

Macro Space Management data can come from two main sources: the program itself and data imported from external software. This data is stored in the central Macro Space Management database. The data can be analyzed in two ways: using Reporting Tools and Key Performance Indicators (KPI).



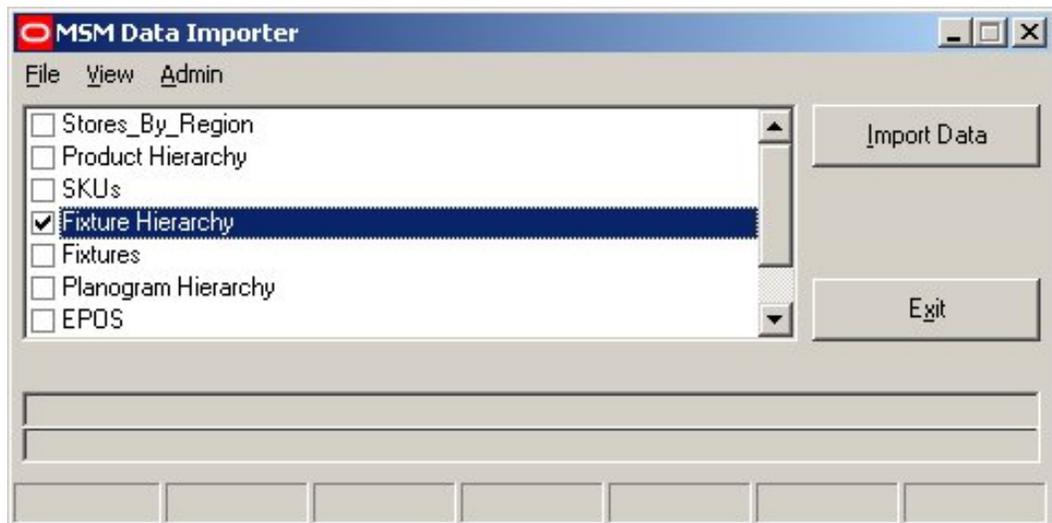
KPIs present data visually in the form of color coded objects within the Virtual Reality store. This enables an overview of performance to be seen at a glance. Reporting Tools present data in the form of ordered lists. This enables data to be analyzed in detail. The two methods are complementary, enabling you to see information in two different ways.

Note: Macro Space Management has an internal reporting tool called Report Studio. Alternatively, reporting tools from Oracle can be used - an example is BI Publisher.

As data changes with time, Macro Space Management allows data to be analyzed for specific periods of time. Such information is known as Time Dependent Data. It is possible to review Time Dependent Data for a specific day, week, month, quarter or year. It is also possible to review the data for seasons or any other specified criteria.

Data Import

Data can be imported from external programs using Macro Space Management's Data Import module.



MSM Data Importer

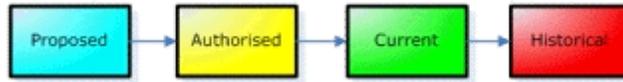
This data is then stored in tables within Macro Space Management's central database. Such data might include sales values, product volumes, etc. Imported data can then be analyzed using Report Studio or KPIs, (Key Performance Indicators).

Store Manager

Status and Effective Dates

Status

Each store within a retail organization is subdivided into floors. Each floor in turn can have a number of revisions, and each revision can contain a number of drawings. Only one drawing at a time can be current (active) for a store. The current position of a drawing is indicated by its status. Although there will be some variation from customer to customer, statuses tend to follow the same general sequence.



Proposed drawings are tentative layouts for stores.

Authorized drawings are layouts that have been accepted for future implementation.

Current drawings are the layouts that are presently in use.

Historical drawings are drawings of layouts that have been superseded.

A specific store may only have one current drawing (the layout presently in use) and one authorized drawing (the layout due to come into use) at any one time. Drawings can be viewed with any status, but the amount of information available for KPIs and reports may vary depending on the status of the drawing. For example, drawings with Proposed status may not have sales data associated with them, while drawings with Current status will have sales data associated with them.

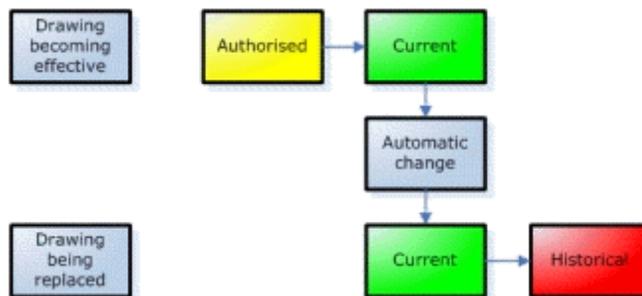
Publish and Effective Dates

When a drawing reaches Authorized status it may have Publish and Effective dates assigned to it. The Publish Date is the date at which an authorized drawing is sent to the affected stores so that they may begin preparations for implementing it. The Effective Date is the date at which the drawing becomes the active version of the layout within the affected stores.

Note: Publish and Effective dates can only be set when a drawing has Authorized status.

Effect of Effective Date on Status

When an Authorized drawing is given an Effective date, this indicates the date at which it is to come into use. At the date when the drawing becomes Effective, its status is changed from Authorized to Current. Simultaneously, the drawing it replaces has its status changed from Current to Historical.

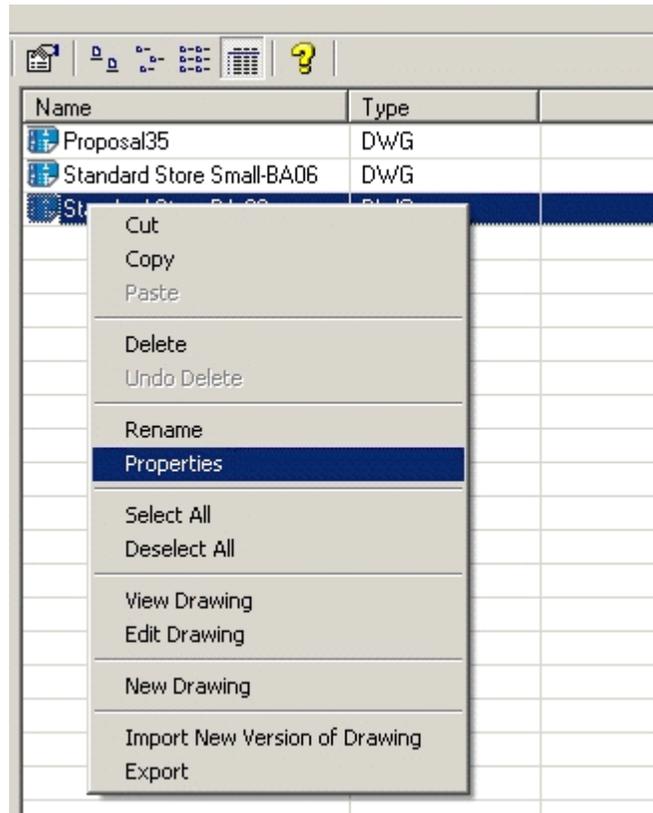


Setting Effective Dates in Store Manager

You can set the Effective Date for a drawing within Store Manager by accessing the Properties file of the drawing.

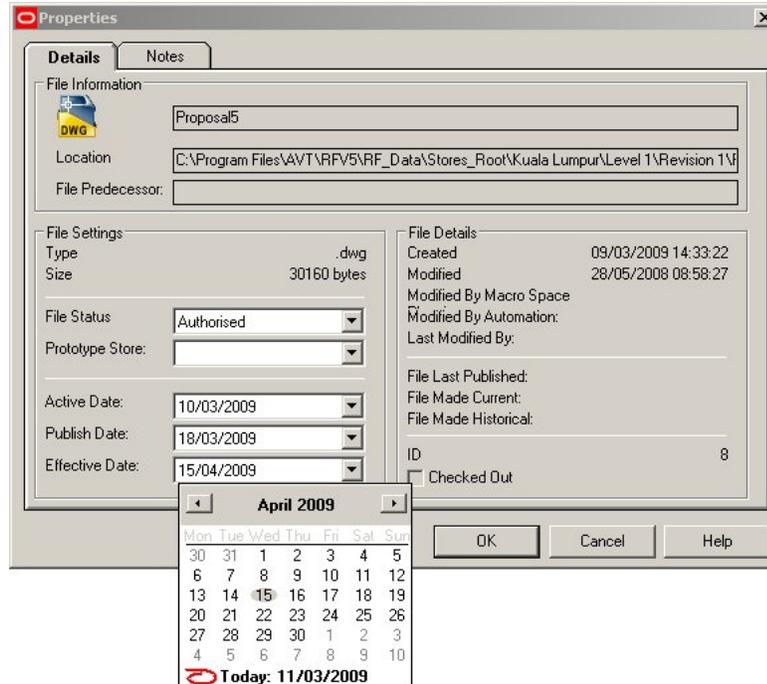
To set the effective date:

1. Selecting the required drawing by highlighting it.
2. Right click on the drawing to bring up drop down menu options.



Set Effective Dates

3. Select **Properties** to bring up the Properties dialog box.



Properties Window

4. Set the **Publish Date** and **Effective Date** by selecting the dates from the calendar.
5. Click **OK**.

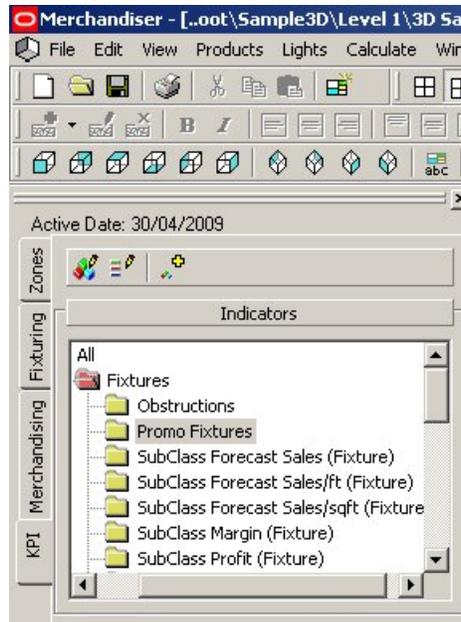
Note: Publish and Effective dates can only be set when a drawing has Authorized status.

KPIs

Key Performance Indicators (KPIs) allow fixtures to be color coded to show performance. They can be customized according to requirements and can use either Macro Space Management data or information from other databases.

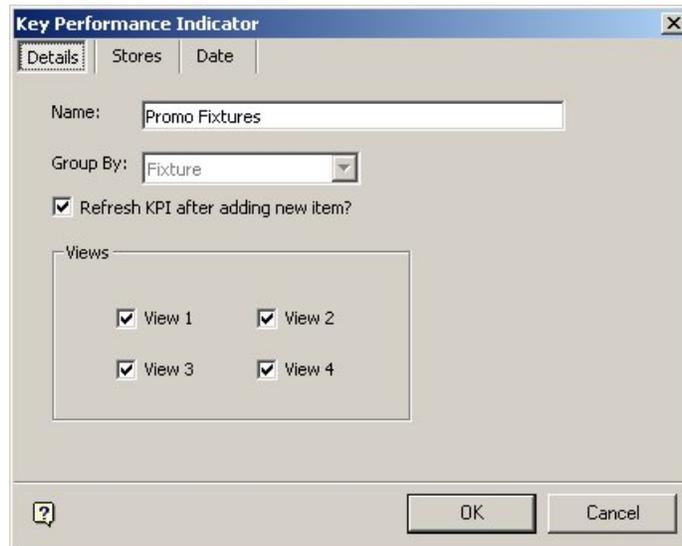
Key Performance Indicators (KPIs) can be produced using data from the store associated with the current drawing, or from a user specified store. Macro Space Management enables you to select both the date and time period for the data to be displayed. This enables you to monitor performance with specified time periods.

KPIs can be selected from the Object Browser by clicking the KPI tab.



Merchandiser - KPI

Click on a particular KPI to bring up the Key Performance Indicator Dialogue Box.



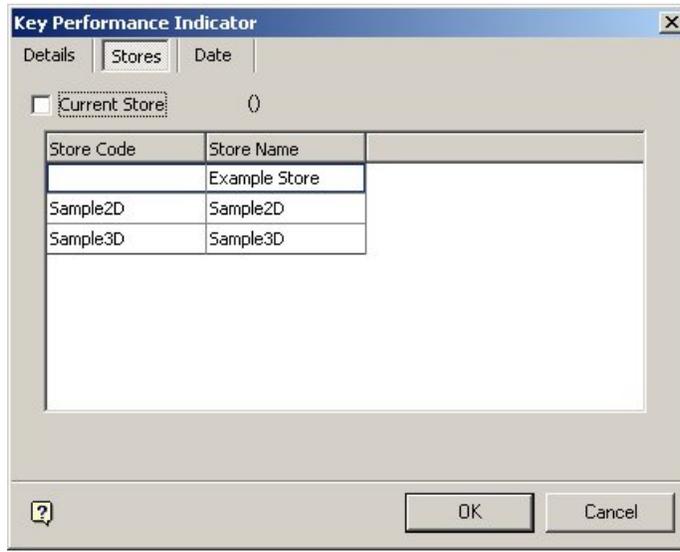
Key Performance Indicator Dialogue Box

On this dialog box, you can specify the Details, Stores involved and Date Ranges required. You can specify which ViewPort(s) to use. When done click OK.

Selecting Stores

To select stores:

1. On the KPI tab, select the required KPI by highlighting it. Ensure the store layout drawing is open.
2. Double click the KPI to display the Key Performance Indicator dialog box.
3. Select the Stores tab.



KPI - Stores

4. If the Current Store check box is selected, clear the Current Store checkbox to select any other store. When you clear the Current Store checkbox, available store names and codes are displayed in the box. You may sort the data by Store Code or Store Name by clicking the column header.
5. Select the store and click **OK**. The KPIs are displayed for the store associated with the active drawing.

Selecting Dates Ranges

You can select the date range for the KPIs to be displayed by using the Date tab in the Key Performance Indicator dialog box.

KPI - Date

To select the dates:

1. On the KPI tab, select the required KPI by highlighting it. Ensure the store layout drawing is open.
2. Double click the KPI to display the Key Performance Indicator dialog box.
3. Select the Date tab.
4. You can select from the available options:
 - Effective Date - date on which the drawing becomes current
 - Current Date - system's current date
 - Other Date - user specified date
 - Active Date
5. Select appropriate data in the Data Type field from the drop down options. This specifies the time period relative to the selected date. All date ranges are after the selected date. For example, if the current date is 11/10/06 and a date range of a Month, then the application selects all data for October 2006

KPIs and ViewPorts

Each KPI can be associated with one or more viewports. This is specified in the Details tab of the Key Performance Indicator dialog box when the KPI is first opened.

Key Performance Indicator

Details Stores Date

Name: Promo Fixtures

Group By: Fixture

Refresh KPI after adding new item?

Views

View 1 View 2

View 3 View 4

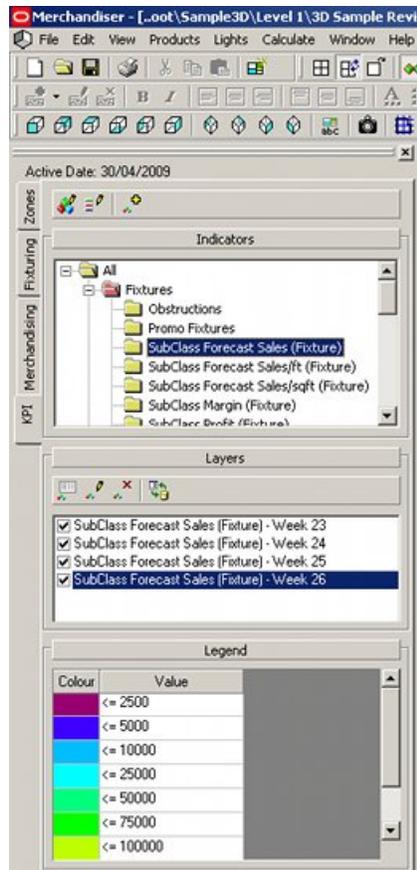
? OK Cancel

KPI - Details

In the above example, the KPI has been selected to show in ViewPort 1.

KPIs and using Multiple Viewports

You can use ViewPorts to display a single KPI reporting on data over different date ranges. You can also use ViewPorts to display performance data from different stores sharing the same layout. Each instance of the KPI can be set to show in a different ViewPort window, allowing the Macro Space Management user to compare how performance changes over time or how performance varies from store to store.

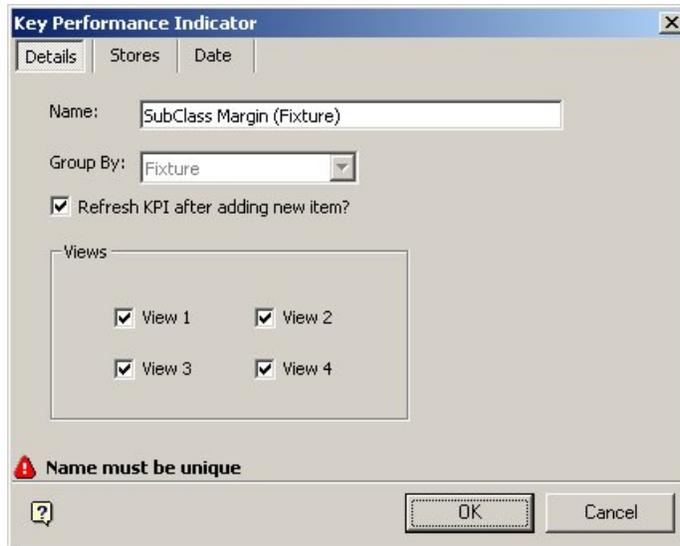


Key Performance Indicator dialog box

In the above example the Weekly Sales KPI has been set to show in four different ViewPorts, each showing different week's data.

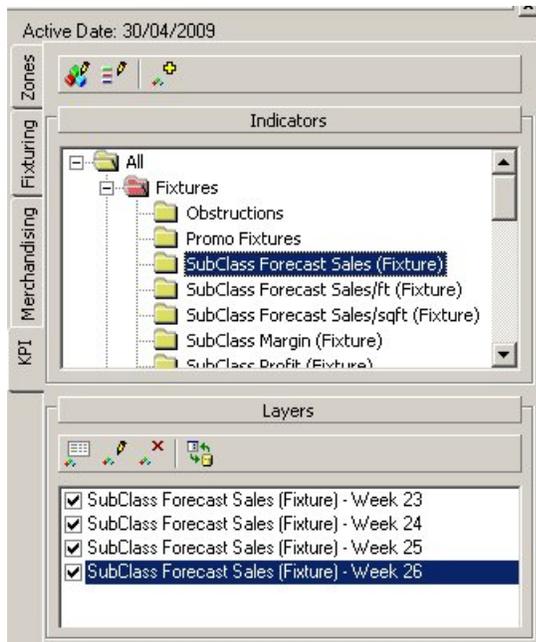
Renaming KPIs

Each instance of similar KPIs open in multiple ViewPorts has to be renamed because each KPI must have a unique name. If duplicate names occur, Macro Space Management places a warning at the bottom of the Key Performance Indicator dialog box.



Key Performance Indicator dialog box - Naming

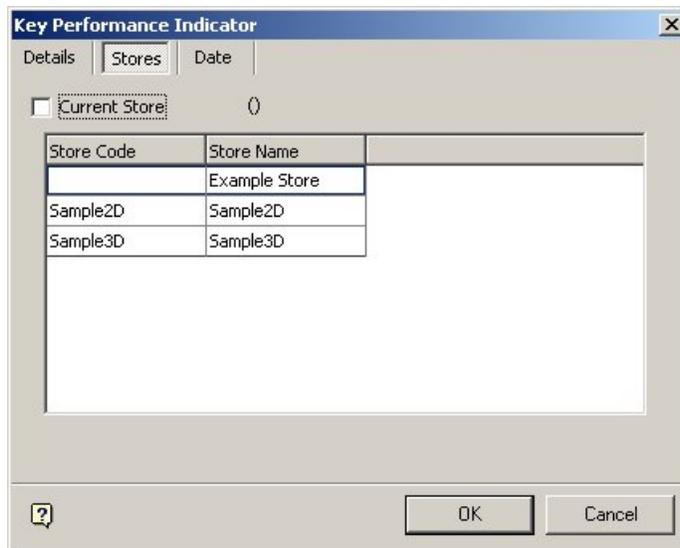
In the example below the SubClass Forecast Sales (Fixture) KPI has been renamed to each instance has a unique name.



Key Performance Indicator dialog box - Rename

Selecting stores

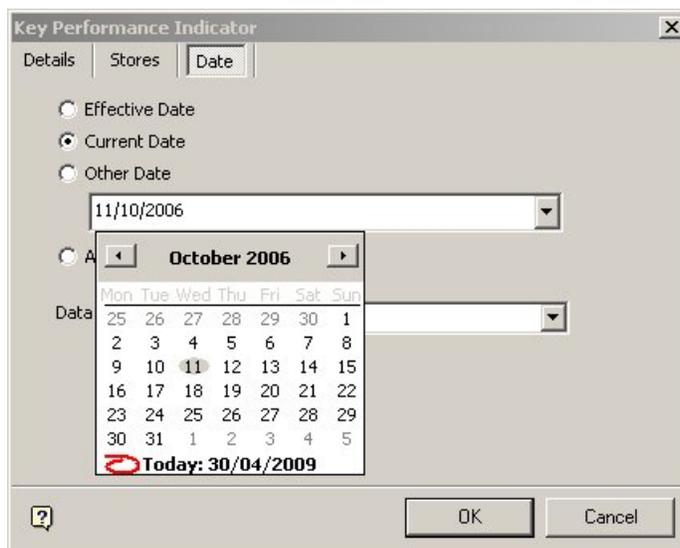
Stores can be selected from the list on the Stores Tab of the Key Performance Indicator dialog box.



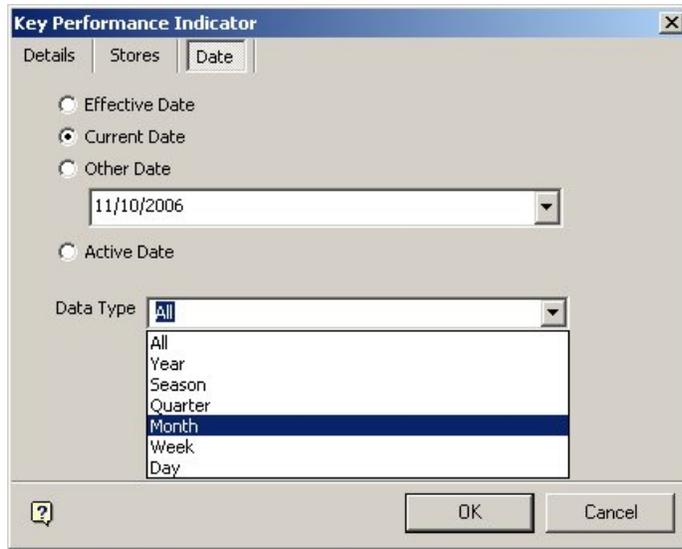
Key Performance Indicator dialog box - Store Tab

Date Ranges

Start dates and Date Ranges can be set from the Date Tab of the Key Performance Indicator dialog box.



Key Performance Indicator dialog box -Dates Tab



Key Performance Indicator dialog box - Data Type

Synchronization

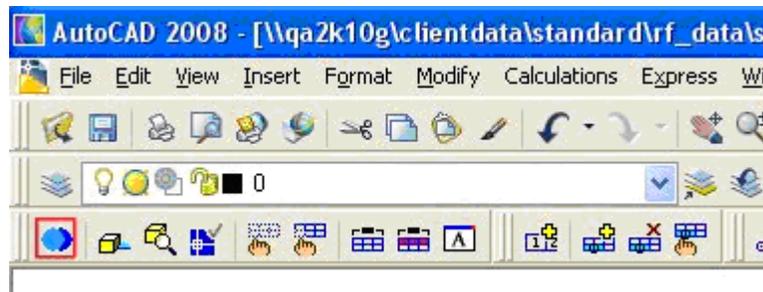
The working environment in the Merchandiser is a virtual reality environment. All changes made to the store plan are written directly to the database.

When a drawing is subsequently opened in the Planner (CAD) environment, these changes are not incorporated in the drawing. Before the drawing can be worked on in the Planner (CAD) environment, it must first be updated with the latest information in the database. This is done through Synchronization.

Using Synchronize button

To synchronize data:

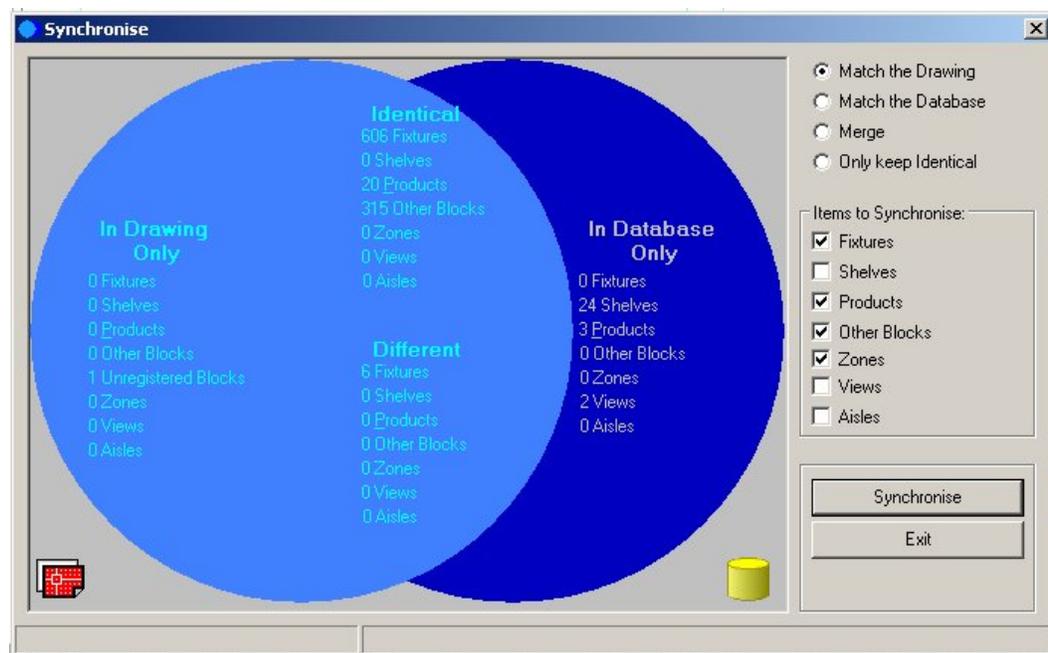
1. Select the **Synchronize** button from the Planner toolbar. Alternatively, select the synchronization option from the File menu.



Planner Toolbar

The Synchronization dialog box appears.

IMPORTANT: When opening a Planner (CAD) drawing after modifying it in the merchandiser diagram it is very important to select the Match the Database option. If the Match the Drawing option is selected, all changes made in the Merchandiser environment will be lost.



Synchronization dialog box

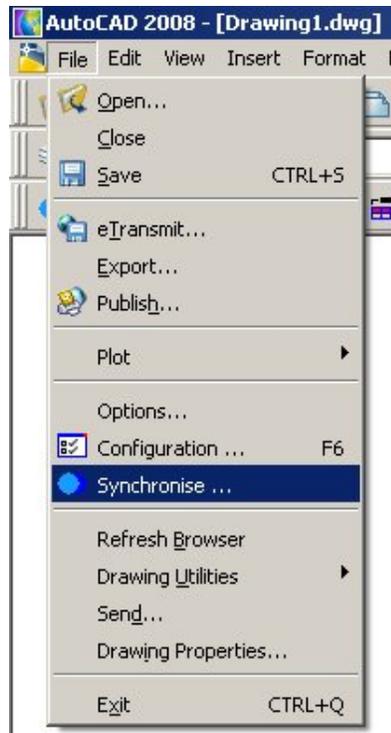
2. To synchronize the changes from the Merchandiser environment into the Planner (CAD) environment, select the following settings:
 - a. Set to Match the Database.
 - b. Check the following items to synchronize:
 - Fixtures
 - Shelves
 - Products
 - Other Blocks
3. Click the **Synchronize** button.
4. Click the **Exit** button.

The Planner (CAD) drawing now contains all the changes made in the Merchandiser environment.

Note: The Planner (CAD) environment only displays products down to SKU level. Accordingly, shelves that were merchandised at display style level in Merchandiser shows as empty in the Planner (CAD) environment.

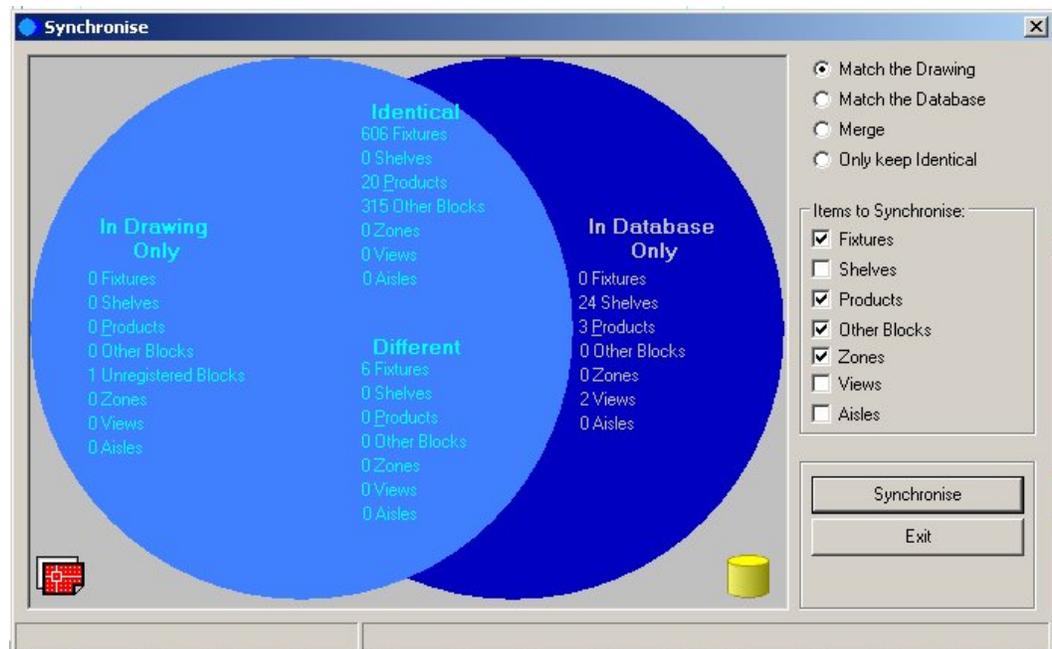
Accessing the Synchronization Module

You can access the Synchronization option from the File menu in Planner.



Synchronization Option

This will bring up the Synchronization dialog box.



Synchronization dialog box

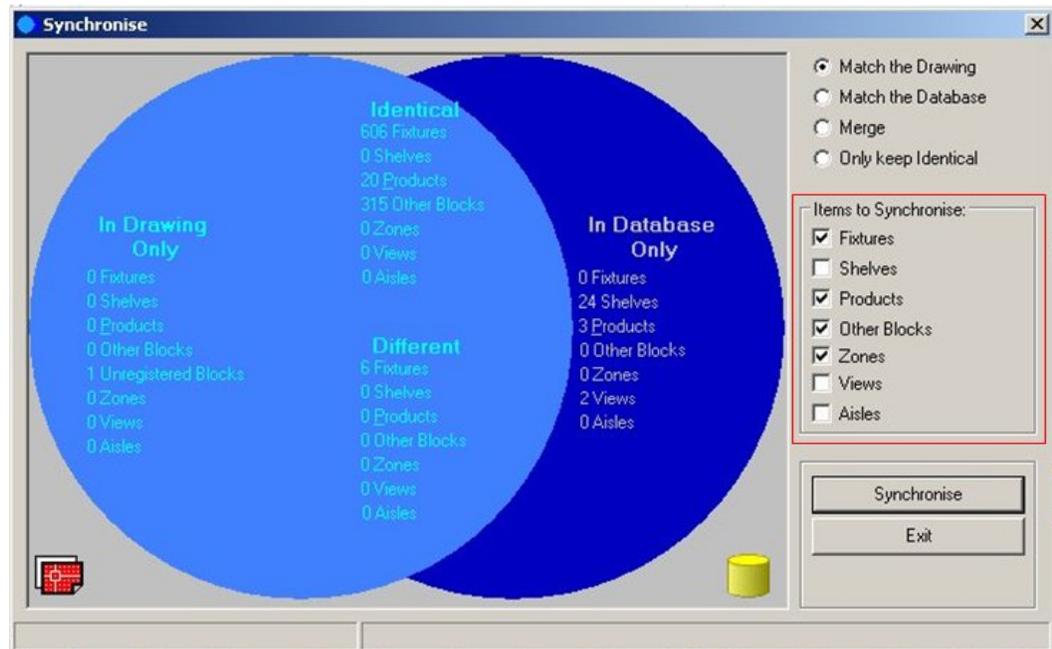
This dialog box allows the type of synchronization to be selected by means of the Action frame in the upper right corner of the dialog box. The types of items to synchronize can be selected by means of the Items to Synchronize frame in the centre right of the dialog box. The current status of the synchronization can be seen in the main frame of the dialog

box. This details the information held in the drawing only and in the database only. It also displays totals of identical and different items.

Synchronization Options

Selecting Items to be Synchronized

The items that can be synchronized are detailed in a small check box frame in the Items to Synchronize dialog box.



Synchronization dialog box

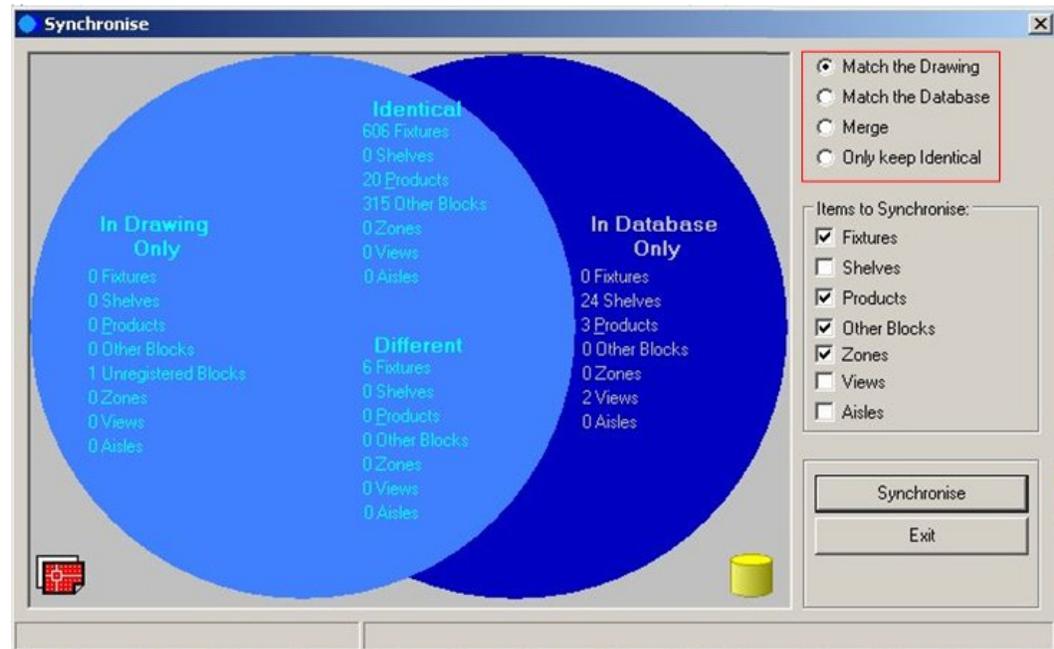
One or more options can be selected by ticking the appropriate check box:

Fixtures ensures all fixtures, fittings and gondolas are synchronized.

- **Shelves** ensure all shelves are synchronized. This may be necessary when planograms have been used to populate features with product and the planogram contains information on what is on the varying shelves within the fixture. It may also be necessary if shelves have been added to fixtures in the Merchandiser environment.
- **Products** ensure all products placed as products or using planograms are synchronized.
- **Other Blocks** enables additional drawing features such as blocks representing lights or power-points to be synchronized.
- **Zones** enable Zone locations to be synchronized.
- **Views** enables views (temporary tables in the database) to be synchronized.
- **Aisles** enable the physical position of Aisles to be synchronized.

Setting Synchronization Options

The varying options for synchronization are selected using radio buttons.



Synchronization dialog box

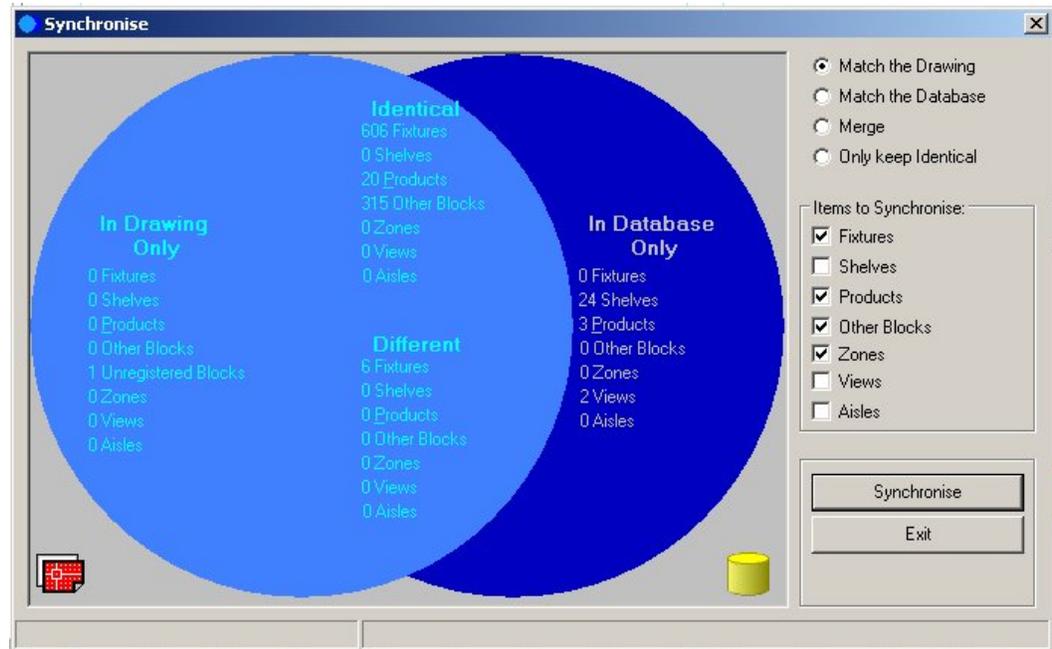
Only one action may be selected.

Note: All changes made to drawings using Macro Space Management tools are stored in the central database at the same time as the action is carried out. All changes made to the drawing using AutoCAD tools are only stored in the drawing. Synchronization means drawing and database contain identical information.

- **Match the Drawing** updates the central database with all AutoCAD changes to the drawing made since the last synchronization. No changes will be made to the drawing, and all new information in the drawing will be stored in the database.
- **Match the Database** restores the drawing to the last version held in the central database. All AutoCAD changes made to the drawing since the last time the drawing was synchronized with the database will be removed.
- **Merge** updates the database based on data held in both the drawing and the database. If objects exist in both the drawing and database, but there are slight differences between them (for example in position) which data will be used depends on whether merge priority is given to the drawing or to the database.
- **Only Keep Identical** updates the drawing with only those objects common to both the drawing and the database. All objects in the drawing that are not identical with objects held in the central database will be removed from the drawing. Similarly, all objects in the central database that are not identical with objects on the drawing will be removed from the database.

Identifying Items in Specified Categories

The Synchronization Module dialog box contains tabulated lists of objects in specified categories. For example there are 606 Fixtures that are Identical in both Drawing and Database and there are 24 shelves in the Database only.

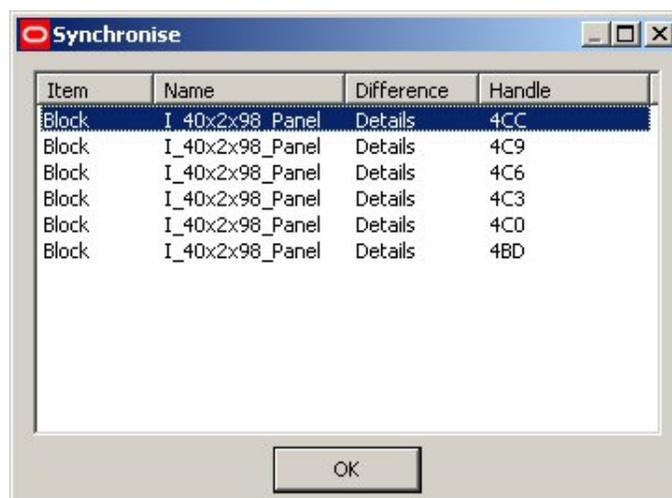


Synchronization dialog box

If the mouse pointer is poised over a category of information with items in it, a question mark appears.



This indicates that left clicking on the category will bring up a dialog box.



Synchronize Dialog Box

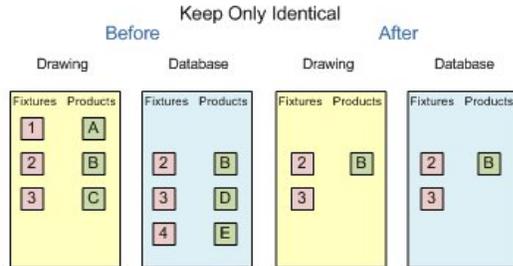
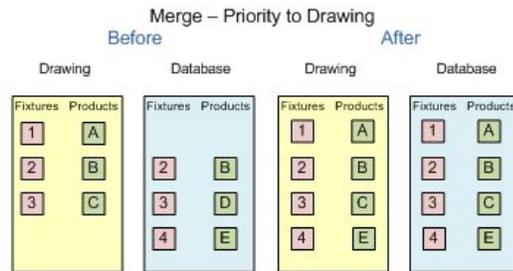
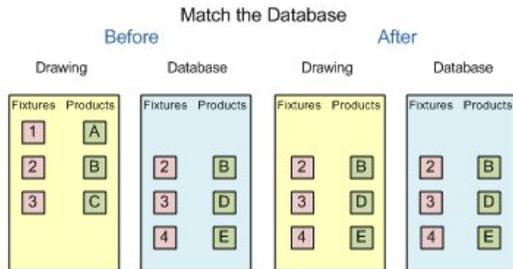
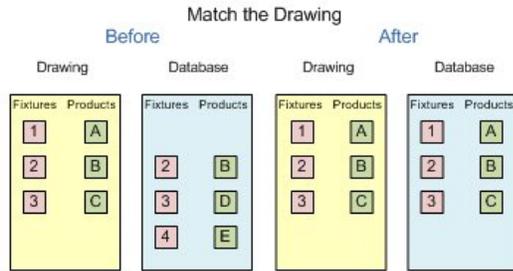
The dialog box contains a list of all objects:

- **Item** specifies the type of object. These are normally blocks, but can also be Views or other types of Macro Space Management options.
- **Name** is the user input file name of the block.
- **Difference** specifies whether the objects are in the drawing only, database only or are identical.
- **Handle** is the AutoCAD handle. This handle is the unique alphanumeric tag for an object in that specific drawing.

Clicking **OK** returns the user to the main Synchronization dialog box.

Effect of Synchronization Options

The effect of using the various synchronization options is demonstrated in the diagram below.

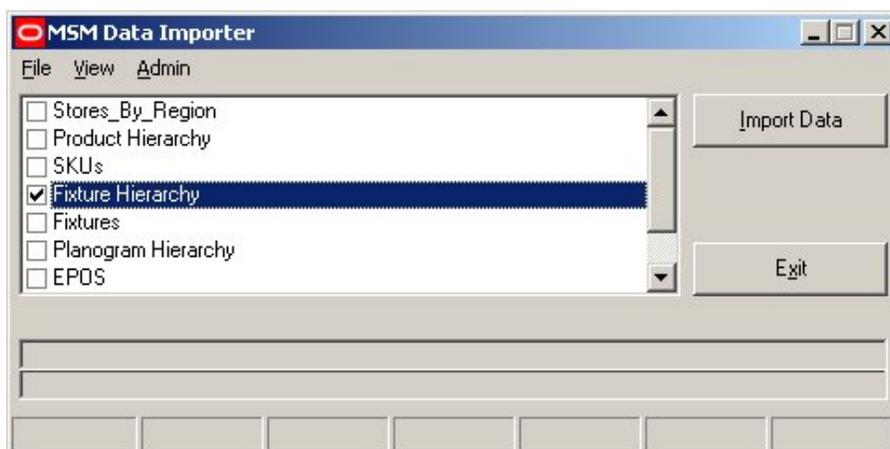


- In the Merge example, note that merging is with priority to the drawing. Product block C is selected in preference to product block D.
- In Keep Only Identical, only Fixtures 2 and 3, together with Product B are identical, so only these blocks are retained.

Data Importer

Data Importer enables you to import data into Macro Space Management. It takes data in one of the three following formats and inserts it into the central Macro Space Management database:

- CSV (Comma Separated Value)
- Spreadsheet
- XML File (Extensible Mark-up Language)



Data Importer

The data to be imported must be in a pre-defined format:

Fixture Name	Fixture Length	Fixture Depth	Fixture Height	File Name
Back Panel-1	600	10	1250	Back_panel_1.dwg
Back Panel-2	600	10	1500	Back_panel_1.dwg
Back Panel-3	800	10	1800	Back_panel_1.dwg

Data Importer puts this data into very specific places within the central Macro Space Management database. For example, Fixture Name and File Name go into the FIXTURE_INFO table and the fixture length, depth, and height go into the FIXTURE_DIMENSIONS table. This imported data then becomes usable in Macro Space Management.

Important: Data Importer can be used at several levels. It is possible for a normal Macro Space Management user to run a pre-configured import by selecting a few options in the Data Importer GUI. It is also possible for a user with Administrator's rights to configure the basic parameters determining how a specific import of data works. Users configuring the way data imports need understanding of the Macro Space Management database schema and a good knowledge of how to write SQL statements. If you do not have these two skills, Oracle **STRONGLY** recommends that you do not attempt to configure the Data Import module.

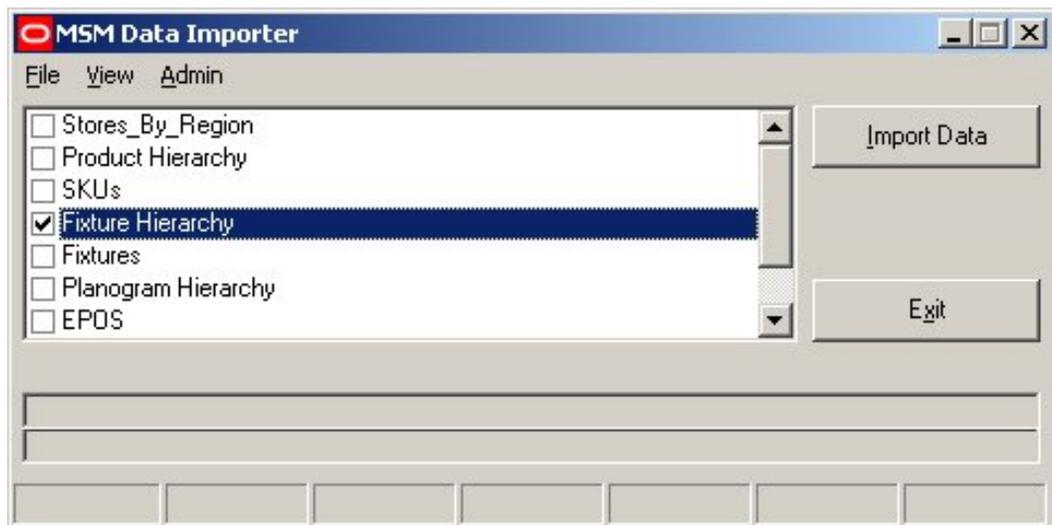
Using Data Importer

There are 3 basic levels of using Data Importer:

- Via the GUI
- Via the Command Line
- Configuring Data Importer

Via the GUI

Standard users operating the Data Importer via the Graphical User Interface (GUI) can select the data to import by means of the check boxes in the MSM Data Importer module. Select the required data check box and click the **Import Data** button. You can then check the error logs to confirm correct import of data.



Data Importer Dialog box

Via the Command Line

When operating via the command line, you can use switches to determine which data to import. This form of operation is usually used in conjunction with automatic scheduling so that data import can be carried out automatically overnight.

Configuring Data Importer

You can configure the Data Importer to import the data as per your requirement. To do this you must have Administrators rights. Using <Ctrl + A> will toggle an additional menu into view.

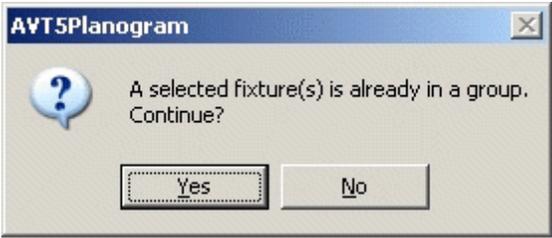
For detailed information on configuring the Data Importer, refer the *Oracle Retail Macro Space Management Administration Guide*.

Troubleshooting

This section contains information on commonly experienced problems and its solutions.

Issue	Solution
Planner	
I am having trouble changing the status of a Revision	If changing from Authorized to Current status, ensure that one drawing in the revision has Authorized status.
I cannot edit a drawing	If you only have read only privileges, you cannot edit drawings. Ask an Administrator for your privileges to be changed.
I can't find a drawing	If the drawing is no longer present within the Macro Space Management file structure, this will be indicated by the <i>Lost</i> icon. 
I cannot manually set a drawing to current status	This option is not available. Drawings are automatically set to <i>Current</i> status when the status of a Revision is set to <i>Current</i> .
I cannot manually set a drawing to historical status	This option is not available. Drawings are automatically set to <i>Historical</i> status when the status of a Revision is changed to <i>Historical</i> .
I cannot manually set a Revision to Historical	Revisions cannot directly be changed to <i>Historical</i> status. They change when another revision becomes <i>Current</i> .
I'm having trouble comparing my Store to the Prototype	When comparing Stores to a Prototype, it is important to remember that the number of floors may be different.
I'm having trouble changing the status of a drawing	<ol style="list-style-type: none"> 1. The status of a drawing cannot be changed if it has been associated with a floor. Check that the drawing is correctly associated with a Revision, (not a Floor). 2. The status of a drawing within a Revision can only be set to proposal or approved. Its status will change to current when the status of the Revision is set to <i>Current</i>.
My Revision has a status of Historical and I want to use it	It is not normally possible to reverse <i>Historical</i> status. Create a new revision and copy the required files from the <i>Historical</i> revision.

Issue	Solution
My Store Root is different from the Configuration File	<p>The Store Root can be changed from either the Configuration Module, or from within Store Manager.</p> <p>If it is changed from the Configuration Module by another user while another person is working in Store Manager, then Store Manager will not immediately update.</p> <p>Many of the file icons will change to the Lost icon:</p>  <p>To remove the problem, close the Store Manager Module, then reopen it. Store Manager will then see the same Store Root that was specified in the Configuration Module.</p>
When I open a drawing it will only open in Read Only mode	<p>Once drawings have been set to Current or Historical status they can only be viewed in Read Only mode. This is because they are either in use within the stores, or have been taken out of service.</p> <p>Windows Explorer should also be used to check the status of the file. When Macro Space Management sets a file to Read Only status, it is just a flag in the database. If a File has been set to Read Only by the Windows operating system, then Macro Space Management will not be able to change the status.</p>
I Cannot Access the Administration Module	<p>The Administration Module is only available to users with administrative privileges. If you do not have these privileges, you will not be able to access the Administration Module.</p>
I can't make a Group or Family	<p>There are two possibilities if a user cannot make a family or group.</p> <p>Firstly, the objects could be incompatible. Groups cannot for example include both shelves and products.</p> <p>Secondly, groups and families can only be created when in the appropriate tab. For example fixture groups can only be created while in the fixturing tab in the Object Browser</p>
I can't remove objects from a Group or Family	<p>Objects can only be removed from groups and families when in the appropriate tab. For example fixture groups can only be modified while in the fixturing tab in the Object Browser</p>

Issue	Solution
I'm creating a Group and I'm being told there is a fixture already in it	If a user has selected several objects with the intent of forming a Group, they could receive the following warning.
	
	<p>One reason for this is that there could be selected fixtures in the drawing other than the current view.</p> <p>If necessary use <Ctrl> + D to de-select all objects in the drawing, then re-select the objects required.</p>
Fixturing	
A recently created fixture in Fixture Studio doesn't show on the Object Browser	<p>Fixtures created in Fixture Studio have to be saved there before they become available to the Planner module of Macro Space Management.</p> <p>Newly added and saved fixtures from Fixture Studio will not show in the hierarchical tree on the Object Browser until the Refresh option has been run.</p>
A recently created gondola in Fixture Studio doesn't show on the Object Browser	<p>Gondolas created in Fixture Studio have to be saved there before they become available to the Planner Module of Macro Space Management.</p> <p>Newly added and saved gondolas from Fixture Studio will not show in the hierarchical tree on the Object Browser until the Refresh option has been run.</p>
I've placed a fixture and its very large	Macro Space Management is working in imperial dimensions, and the fixture was designed using metric dimensions.
I've placed a fixture and its very small	Macro Space Management is working in metric dimensions and the fixture drawing was dimensioned in inches.
I can't bay number a recently placed a fixture or gondola	Fixtures or gondolas cannot be bay numbered until the Synchronize and Adjacency options have been run.
I select a fixture and it zooms to the extents of the drawing	Whether or not a fixture zooms to the extents of the drawing is determined by the Highlighting frame in the Fixturing Tab of the Configuration module. If the user does not want the selected fixture(s) to zoom to the extents of the drawing, uncheck the zoom box in the Highlighting frame.

Issue	Solution
Message in Fixtures windows says object has no graphics	<p>If an object in the Fixtures window, for example a fixture, fitting or gondola, has a message in bold saying it has no graphics file, this means the object was created outside AutoCAD and has no AutoCAD .DWG file associated with it.</p> <p>An example would be fixtures in Fixture Studio. These are often created using an external graphics program such as 3D Studio. The results are saved as .3DS files and will accordingly display in Fixture Studio. Other external graphics programs supported by Fixture Studio are LightWave 3D (file extension .LWO) and Harvard Graphics applications (file extension .TPL). The object without an AutoCAD dwg file will appear in the hierarchical tree in the Fixturing tab of the Object Browser with an error message like in the above example.</p> <p>To correct the problem, Macro Space Management needs an MSM AutoCAD drawing. This can be done by typing 3DSIN in the MSM AutoCAD command line, then following the prompts to load the 3D Studio drawing into the current MSM AutoCAD drawing.</p> <p>The Wblock command can then be used to write the required objects to the Macro Space Management.</p>
The Fixture is very narrow	<p>The fixtures menu actually contains a mixture of fixtures and fittings. Fittings are typically used to close off the end of a row of fixtures, hold up display cabinets, etc.</p> <p>Fittings can be quite narrow. Fittings cannot be populated with merchandise</p>
Synchronization and Bay Numbering	<p>Before Bay Numbering can be carried out, the Synchronization Module must be run to ensure the information from the drawing has been fully transferred to Macro Space Management's Central database. Next, the Adjacency option must be run so the central database has up to date information on which fixture is next to which fixture. Bay Numbering can then be carried out.</p>
Fixture Studio	

Issue	Solution
Combinations using Naming Conventions	<p>Naming conventions rely on a consistent approach being applied to block names. In the above example podiums have been named using a consistent convention.</p> <p>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 $2 \times 5 \times 3 = 30$ combinations, yet there are only 13 actual blocks.</p> <p>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.</p> <p>If a block name is generated while drawing a gondola that does not match the list of available ones, an error will result.</p>
Problems with Naming Conventions	<p>The Gondola Definitions dialog 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.</p> <p>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.</p>
Zones	
I Cannot Delete a Zone Type	<p>Zone Types cannot be deleted if there is a Zone Definition associated with it. The associated Zone Definitions must be deleted or assigned to another category first.</p>
I'm Trying to Add a Zone and an Error Message Comes Up	<p>In order to add a Zone to a drawing, a drawing must first be opened via Store Manager. If a user tries to add a Zone to the default drawing, an error message is displayed.</p>
I'm Trying to Draw a Zone and the Lines Will Only Draw to Specified Points on the Drawing	<p>If the lines being used to draw a zone will only finish at corners, midpoints, etc, of existing zones, then the OSNAP command is on. Turn OSNAP off if trying to draw Zones of customized shape.</p>
I've Created a Zone Type, but it Doesn't Appear in the Zone Descriptions List	<p>It will only appear in the Zone Definitions list after it has been defined.</p>
I've Tried to Cut a Hole and a Hole Problem Error Message Displays	<p>When cutting a hole, the Zone into which the hole is to be cut must first be selected in the hierarchical tree in the Zone Definition window. Failure to do this will result in an error.</p>

Issue	Solution
The Changes Made to Zone Definitions Have Had No Effect	Changes made in the to Zone Definitions in the Configuration Module only take effect the next time Macro Space Management is restarted.
The Changes Made to Zone Types Have Had No Effect	Changes made in the to Zone Types in the Configuration Module only take effect the next time Macro Space Management is restarted.
The Outline of a Previously Erased Hole has Reappeared	If a Hole has been erased using AutoCAD tools, then the drawing must be synchronized before another hole is drawn. If it is not, then a 'ghost' image of the AutoCAD erased Hole will reappear.
The View Zone Type and View Hatch Types Buttons Don't Appear to Be Working	If the Zone Description window is maximized, the View Zone Type and View Hatch Types windows will tend to appear behind the Zone Description window. It will have to be minimized before the new windows can be seen.
Data Importer	
Data Importer is reading the wrong data.	<p>If the Start Line is incorrect, Data Importer will read the wrong data. The start line will typically be set to 1 during configuring the data Import.</p> <p>It should be set to where the first line of actual data is (typically 2 or 3) before data is imported into the database using data importer. If it is left at 1, errors will result as Data Importer reads in data incompatible with the database.</p>
CSV file	<p>It is important to save the CSV file in the format that is appropriate for the system it will be used on. If you do not save the CSV file in the format appropriate for the system you are working on, errors may result. For example, if you are working on a computer with the Windows operating System, and you want to use the file on that computer, it is important to save the file in the CSV (Windows) format. If however, you are using Windows and want to use the text file on a Macintosh computer, save the file in the CSV (Macintosh) format. If you are using a Macintosh computer and want to use the text file on a system running Windows or Windows NT, save the file in the CSV (Windows) format</p>

Appendix

Glossary

Access Rights

Access Rights are the privileges that users have to access the various parts of Macro Space Management. Some users, for example Administrators, will have new universal access rights. Other users will have more restricted access rights and will only be able to use a limited number of the parts of Macro Space Management. Access rights are sometimes called Privileges.

Aisle

An **Aisle** is designated by a line and represents a theoretical path through a store. It is generally bordered on one or both sides by fixtures. The line representing the aisle is an AutoCAD Polyline and can take the form of any number of interconnected straight lines and arcs. Aisles are used to further define the relationship between fixtures and products.

Aisle adjacency

Aisle adjacency establishes which planograms share a common aisle. It is similar in concept to product adjacency, but enables the correlations between planograms to be analyzed over a larger area than the more specific correlation done for product adjacency. Planograms can have aisle adjacency if they are in bays or bay groups that share a common aisle. The exact method used to calculate the adjacency depends of settings within Macro Space Management. Aisle adjacency is calculated by establishing the distance to the nearest aisle in four 90 degree opposed directions. The aisle selected is the closest aisle to the fixture that falls within a predetermined tolerance.

Annotation

Annotation is the information printed on the drawings containing information on the fixtures and products placed on that drawing. Annotation is customizable within the Configuration Module.

Architectural Drawing

An **Architectural Drawing** is a detailed dimensional drawing of the floor of a store. It may also include other information such the position of gas, electrical and water services, etc. It is often used, (by means of xrefs), as the basis for store plans.

Adjacency

Adjacency is the relationship of certain classes of object within Macro Space Management to one another. There are three different types of adjacency; fixture, product and aisle. They are used for differing purposes.

Fixture adjacency is used to establish which fixtures are treated as having a relationship with each other. This could be for bay numbering, gondola numbering and other purposes. Planograms can have two forms of adjacency to one another. The first depends on the relationship of their parent fixtures to each other and is known as product adjacency.

Planograms can also have a relationship with each other depending on the relationship of the parent fixtures to any aisles that may have been placed. This is known as Aisle Adjacency. It is important to note that slightly different rules apply for aisle, fixture and product adjacency. For example a specific bay might be adjacent to another bay by the rules of fixture adjacency, but the product in those bays might not be adjacent by the rules of product adjacency.

Area calculations

Area calculations are performed to establish what area a fixture is visible from for sales purposes. It is calculated by measuring out in the specified directions from the fixture until another object is reached, or the measuring reaches the limit of the tolerances set in the Configuration Module.

The area is then adjusted to allow for any overlaps it might share with nearby features. It is also adjusted to allow for any zone or departmental boundaries. The resulting calculated area is a good indication of the space from within which the customer can view the fixture.

Authorized Status

Authorized status is given to objects or plans that have been approved for use, but have not yet reached their Effective Date and gained Current status.

Base Height

Base height is the minimum height at which any product can be placed.

Bays

Fixtures and gondolas are sub-divided into **bays**. These bays are allocated numbers to simplify identifying locations. A fixture will be assigned a single bay number. Gondolas, which comprise a number of fixtures, may have two or more bay numbers associated with them.

Bay Groups

Bay Groups are two or more fixtures that have been linked together so they are treated as a single bay during bay numbering operations. Bay groups may also be treated as a single bay during adjacency calculations.

Birth Date

The **Birth Date** is the date at which an object becomes active. Birth Dates are associated with the Status of Stores, Floors and Revisions. The Birth Date is the date at which the Store, Floor or Revision becomes active.

Block

A **Block** is a collection of data describing (for example) a fixture or fitting. It can be regarded as a drawing in its own right which, when inserted into a floor plan, also inserts all the information associated with that drawing. Macro Space Management contains a library of blocks.

Blocks are normally drawn within AutoCAD and imported into Macro Space Management.

Note: There is a difference between AutoCAD blocks and Macro Space Management blocks. AutoCAD blocks are normally called blocks. Macro Space Management blocks are called MSM blocks.

Block types

There are a variety of **block types**. These include:

- Composite Blocks.
- Fitting Blocks.
- Fixture Blocks.
- Other Blocks.
- Part Blocks.
- Product Blocks.
- Reference Blocks.
- Shelf Blocks.
- Title Blocks.
- Unknown blocks.

There are also:

- Database Blocks.
- Drawing Blocks.

Brown goods

A term often used to describe goods that will be used in the living room and bedrooms of a house. Such goods include televisions, sound systems, computers, etc.

Cartesian co-ordinates

Cartesian co-ordinates are a way of describing the position of an object relative to a reference point. The reference point is normally called the origin, and has co-ordinates (0, 0). All other locations can be described relative to the origin. The "X" ordinates are to the left or right of the origin. X ordinates with a positive value are to the right, negative ones to the left. The "Y" ordinates are above or below the origin. Y ordinates with a positive value are above the origin, negative ones below. Thus a reference of (10, 10) describes a point above and to the right of the origin. Similarly a reference of (-5, -15) describes a point below and to the left of the origin. The system can be extended to three dimensions by the use of a "Z" axis.

Any form of units can be used for Cartesian co-ordinates, although these must be the same when co-ordinates are being compared. Millimeters, inches, meters, yards, kilometers and miles are examples of valid units.

Child Insertion Position

The **child insertion position** for a fixture determines the insertion point of the products that will be placed on the fixture. This is because products are not directly assigned an insertion point, but adopt those specified for the fixture they are being placed on.

If the fixture has an insertion point of Bottom Front Left any products will be placed with this point on the product used as a datum. Similarly, products with insertion points of

Top Back Centre or Bottom back left will be placed using different datum points for those products.

If a shelf object (for example a open shelf) was intended to take boxed products, it might have its Child Insertion Position set to Bottom Back Left as the boxed products will sit on top of the shelf. If a shelf object (for example a hanging rod) was intended to take products hanging from it, it might have its Child Insertion Position set to Top Back Centre so the products appear to hang from the rod when placed on it.

Clusters

A **Cluster** is a logical grouping of stores that meet specified criteria. Examples of possible groupings for Clusters include stores that are:

- In the same country.
- In the same region.
- Of the same size.
- Of the same turnover.
- Of the same internal layout.

Clusters of a specific type can be further divided into sub-clusters.

Composite Block

A **composite block** is a block made up of more than one type of object. For example it could contain individual blocks containing information on fixtures, fitting and shelves.

Connection points

The **connection point** for a fixture or fitting is a representation of the physical connections that can be used to join one unit to another. They are typically on the left and right sides of a fixture, and also on the back. Clicking on the insertion point during addition of fixtures or fittings automatically aligns the fixture or fitting to be placed with the connection point.

It is possible to cycle through the available connection points by pressing "B" on the keyboard.

Current Status

Anything that is in use at the present time has Current status.

Cut Holes

Cut Holes is an option available for Zones. It allows the effect of pillars and other obstructions to be taken into account in, for example, area calculations.

Database Block

A **Database Block** is a block that has been read from the Macro Space Management Central Database. Conversely, a Drawing Block is a block that has been read from an AutoCAD drawing.

Death date

The **Death Date** is the date at which a current object is no longer active.

Drawing Block

A **Drawing Block** is a block that has been read from an AutoCAD drawing. Conversely, a Database Block is a block that has been read from the Macro Space Management Central Database.

Dumb Block

A **Dumb Block** is one that has not yet had any block properties associated.

Effective Date

The **Effective Date** is the date at which an object becomes active.

Exclusion

Exclusion is an option within Block Properties. Any object set for exclusion will not appear in calculations or reports.

Explode on Insert

Explode on Insert is an option in the Block Details Module. Selecting it means a composite block is split back into its constituent parts on insertion into a drawing. The individual components can then be manipulated separately.

Fence

A **Fence** is an AutoCAD method of selecting objects on a drawing. It is invoked by typing Select into the AutoCAD command line, followed by Fence to specify the method. The user can then use the mouse to specify a multi-segmented line on the drawing. Any object by the line will be selected.

Filtering of planograms

A retail operation may create many thousands of planograms. When populating a store, the required planograms must be quickly and efficiently filtered from those available. This operation is often called profiling. Some profiling/filtering is done by the use of layers. When populating a fruit and vegetable fixture, Macro Space Management automatically selects fruit and vegetable planograms.

Other profiling is user controlled. For example, it is possible to select all planograms over a certain height, or those designed for a specific season. Within Macro Space Management, planogram selection is done via the Profiling sub-module.

First Slot

First slot is the height of the first slot, (for example on a peg board), above the height of the base of the fixture.

Note: Base Height can be set using the Base Height in the Fixture Dimensions Frame of the Size Tab in the Block Definitions dialog box.

Fitting blocks

Fitting Blocks are blocks containing details of specific fittings.

Fixture adjacency

Adjacent fixtures are fixtures that are touching, or within a specified proximity to each other. All fixtures that Macro Space Management identifies as having adjacency in a drawing are treated as a gondola for planning purposes.

Fixture blocks

Fixture Blocks are blocks containing details of specific fixtures.

Fixture Dimensions

Actual Height is the specified height of the block.

Actual Depth is the specified depth of the block.

Base Height is the minimum height at which product could be placed.

Inside Height is the height to the inside of the upper part of the fixture.

Lip Height is the height to the top of the lip of the fixture.

Product Offset is the dimension that has to be subtracted from the Actual Depth to give the available depth that can be populated by product.

Product Depth is the depth to which it is desired to populate the fixture with product.

Fixtures, fittings and shelves

Fittings are items within a store that aid the retail effort, but do not themselves hold merchandise. Examples are display material and checkout counters. Some fittings are used to support or augment fixtures. For example a shelving unit could be made up of support legs, (a fitting), and shelves, (a fixture). Fittings always remain separate items on the drawing, (and can be hidden from view using the Hide Fittings command).

A Fixture is a structure designed to hold products for sale. It can take many forms including runs of shelving, display cabinets and kiosks. A fixture can hold product directly, or via shelves. A shelf always has a parent fixture. It can be used as a generic description as equipment within a fixture which can hold product. For example a backboard might hold several support bars. The support bars could in turn have rods attached. Product could then be hung from those rods. The arrangement of rods emanating from a single support bar is generically called a shelf for planning purposes. Each shelf or fixture always has a product base associated with it. This serves as a placeholder for any merchandise placed on it. Fixtures and fittings are often color coded as to purpose. As an example, fixtures holding groceries might be drawn in green, fixtures holding chilled goods in blue.

Floors

A *Floor* is a distinct physical level within a store. It can only be associated with a specific store and will not be found elsewhere in the hierarchy. A Floor can have architectural drawings associated with it. These can only be associated at this level. A floor can also contain single or multiple revisions, (specific arrangements of fixtures and fittings). The drawings associated with these revisions have to be contained at the revision level.

Any connection between drawings in revisions and architectural drawings has to be made using xrefs.

Footprint

The **Footprint** is calculated from the X and Y dimensions of an object; in effect by multiplying the length and the width.

This calculation works best for square and rectangular objects. It is less effective for circular and polygonal objects. In these cases it may be preferable to input a nominal area in the Sizes tab of the Block Details module.

Front

All fixtures have a designated **Front direction**. This is the section of the fixture where the customer typically stands to select their products. Front directions are set in the Block Details Module.

Global Change

A **Global Change** is a change made to Macro Space Management that affects all users simultaneously. If, for example, the Update Database option is used in the Configuration Module to change the name of a specified database, then all Macro Space Management users will read and write information to that new database. A record of all current settings is stored in a Profile.

Gondolas

A **Gondola** is an arrangement made up from two or more fixtures linked together by means of connection points or in sufficiently close proximity to meet the definition of adjacency. An example might be a run of 10 fixtures placed back to back, with end caps on each end to maximize the area devoted to sales.

Gondolas are internally sub-divided into sections, each new section beginning where fixtures go through more than a 30° change of angle when connected. Gondolas are often color coded as to purpose. For example gondolas holding groceries might be drawn in green, fixtures holding chilled goods in blue. Note that single fixtures are numbered as gondolas if the Gondola Numbering option is used.

Gross Area - Zones

The **Gross Area** of a Zone is the total area of a Zone before any Holes or other non-usable areas have been taken into account.

Groups

Groups are collections of fixtures and gondolas that have been linked within Macro Space Management so they can be subjected to collective operations such as moving or rotating.

Hierarchical structures

A **Hierarchical structure** is one where objects are organized in the form of a tree. The more fundamental data is close to the trunk, while the more dependent data is further out on the branches. The most fundamental part of the hierarchical structure is the root.

Hierarchical structures are used to allow objects to be set out in a logical relationship to each other. The Stores cluster contains the Prototypical sub-cluster. This sub-cluster contains the Large Prototype store. The Large Prototype store has a 'Level 1' floor, and that floor contains the Prototype revision.

The Store cluster is closest to the trunk, while the New Dover Layout revision is the most dependent data.

Historical Status

Anything that was once current and has now been taken out of service has **Historical** status. Generally drawings with Historical status can only be viewed in read only mode, and cannot be directly re-used within Macro Space Management.

Hole - Zones

A **Hole** is an area cut into a Zone to represent a pillar or similar obstruction. Its area is subtracted from the Gross Area of the Zone to give the Net Area.

Insertion points

The **Insertion Point** is the point at where a fixture, fitting or gondola is located on the drawing. It can be designated anywhere within the fixture during the drawing stage and appears as a small blue square.

Insertion points can be revealed by left clicking on any line within the drawing of the fixture, fitting or gondola. The position of the Insertion Point is defined in the Block Details module.

Inside Height

The **Inside Height** of a fixture is the height after the thickness of any top section not suitable for merchandising has been subtracted. For example, if a fixture is 2000 mm high, but it has a 100 mm pelmet, then the Inside Height is 1900 mm.

Internal Area

The basis for any store plan is normally an Architectural Drawing. This is normally xrefed to another AutoCAD drawing to act as a blueprint for the arrangement of zones, fixtures, fittings and merchandise. The first zone to be drawn is often the Internal Area Zone. This defines the maximum area available for sales activities.

The Internal Area can include both Sales and Non-Sales areas. It is also possible to draw both sales and non-sales Zones outside of the internal area. Any Zones outside the Internal Area will not be included in any Area Calculations.

Key Performance Indicator

Key Performance Indicators, (KPIs), are used to give an overview of the efficiency of the merchandised layout. They are presented in the form of color coding to show performance against specific criteria. KPIs present a general view of how sales income is performing.

Layers

AutoCAD drawings are often divided into **Layers**. Each layer contains a specific type of information. For example one layer might contain information on fixtures, another data

on electrical wiring. Layers can be further sub-divided into aliases. Each aliased layer will contain very specific information. For example, one aliased layer might contain details of all the fixtures capable of holding chilled goods; another all fixtures holding fruit and vegetables.

Layers are one method used by Macro Space Management to filter fixtures, planograms, etc.

Local Change

A **Local Change** is a change made to Macro Space Management that affects only the user's computer – typically the Registry settings will be changed on that computer.

Local changes are often made to customize the operation of the software so that it meets the user's individual preferences. An example of this would be enabling or disabling Sounds in the Configuration Module.

A record of all current settings is stored in a Profile.

Log File

Log files are files recording problems during operation of Macro Space Management. This enables problems to be investigated at a later date. Their location is specified in the Directories tab of the Configuration Module

Net Area - Zones

Net Area is the area remaining in a Zone after Holes have been taken into account.

Nominal Area

Nominal Area is a value that can be set in the Size tab of the Block Definitions module by the Macro Space Management user. It overrides the Footprint that would otherwise be calculated from the X and Y dimensions of the object. Nominal Areas are often used when the object is not a square or rectangular shape.

For example a circle would have a footprint calculated from the product of two 90 degree opposed diameters. This Footprint would be 27% greater than the area of the equivalent square.

Nominal Base Linear

Nominal Base Linear is a measurement used when the length of a fixture that can be populated is different from the actual length. An example would be a chest freezer, where the actual length of the unit would be greater than the length available to place product.

Another use would be a non-rectangular fixture, such as a curved one. In this case a Nominal Base Linear dimension would be entered to facilitate Area Calculations.

Objects

There are varying classes of data used within Store Manager. Each distinct class of data is described as an Object. Objects include:

- Store root.
- Clusters.
- Sub-clusters.

- Stores.
- Floors.
- Revisions.
- Files.

For administrative purposes, these objects are organized within a hierarchy. They often have a status, and their use is governed by rules.

Other block

An **Other Block** is a block that contains architectural information.

Parent-Child Relationships

Some objects within Store Manager are linked together in such a manner that changes to one object may result in changes to other objects linked to it. Such objects are described as being in a Parent-Child relationship. The object that has dependent objects associated with it is known as the parent, while the objects that are associated with the parent object are known as the children.

In a hierarchical structure, children of one parent can be parents of their own children in turn. When the status of a parent object is changed; it can result in changes to the status of child objects. Similarly, the status of parent objects can sometimes only be changed when the status of the appropriate child object is correct. When a parent object is deleted, it affects all the associated child objects. Conversely, a child object can often be deleted without affecting the parent.

Part Blocks

A **Part Block** is a block that contains information on a specific type of part.

P_Base

Also called a Product Base, a P_Base is a class of object within Macro Space Management that is capable of showing the presence of a planogram. Planograms cannot be placed unless the fixture has had a generic P_Base designated. Every fixture must therefore contain at least one P_Base. When the planogram is placed, a simple rectangular slab will be drawn on each shelf on the fixture to show that product has been placed. P_Bases are a type of Product Base.

PDA File

A **PDA file** is a form of AutoCAD file that is produced when a Revision is made Current. A PDA file can be used in hand held devices or for In-Store Space Collaboration.

Perimeter Gondola

A gondola that follows a wall or other structural feature.

Planogram substitution

Planogram Substitution allows the replacement of a currently planogram type with that of a selected replacement. Depending on the options available and specified, replacement can be universal for the selected floor, store or group of stores – all required

planograms are replaced in a single operation. More complex substitutions require Macro Space Management Enterprise – a version with automatic updating facilities.

Planograms

Planograms are objects within Macro Space Management that hold details of merchandise to be placed into the fixtures within a store. Planograms define the type, quantity and arrangement of the sales goods to be placed in the bay(s). They are designed to maximize sales revenue by placing the optimum combination of products into the available sales space.

Planograms are infinitely flexible and can be configured to hold any combination of products.

Planograms are placed in fixtures and gondolas, but must be of suitable configuration for that specific fixture or gondola.

Privileges

Privileges are the rights that users have to access the various parts of Macro Space Management. Some users, for example Administrators, will have near universal access rights. Other users will have more restricted access rights and will only be able to use a limited number of the parts of Macro Space Management. Privileges are sometimes called Access Rights.

Product adjacency

Product Adjacency is used to establish which planograms are in proximity to each other. A product can be adjacent to the products on the fixtures to its left and right, and to other planograms that might share the same fixture.

The products in the yellow fixtures are adjacent to the product(s) in the blue fixture. Product in the red fixtures is not adjacent to the product(s) in the blue fixture.

Product adjacency can then be used establish if two of the planograms fall within previously determined rules. These rules might determine if planograms should be associated to improve product sales; for example pasta being adjacent to pasta sauces.

Product Base

A **Product Base** is also called a P_Base.

Product block

A **Product Block** is the generic description of block that will be used to locate planograms. Planograms cannot be placed without a product block being present on the fixture. Product Bases, (P_Bases), are a specific type of Product Block.

Product colors

An alternative form of presentation for the efficiency of the merchandised layout is in the form of Product Colors. Each bay is allocated a color relative to the class of layout group it belongs to. This enables the general form of the layout to be seen at a glance. Product coloring allows the Macro Space Management user to concentrate on specific details of the merchandising arrangement within the store.

Product Depth

Product Depth is the maximum depth a product can occupy on a shelf. For example a fixture might be 1000 mm deep. The back wall might be 100 mm thick and the front lip 100 mm thick. This leaves a Product Depth of 800 mm.

Product Offset

Product Offset is the distance that has to be allowed from the back of a fixture for anything that might reduce the depth. For example a fixture might be 1000 mm deep with a back wall be 100 mm thick. This leaves a maximum available depth for product of 900 mm.

Products

A **Product** is a single type of merchandisable item.

- Jasmine rice is one type of product.
- Basmati rice is another type of product.
- Japonica rice is a third type of product.
- Short grained rice is yet another type of product.

Products can be combined in a Planogram to give a planned combination of products filling part of all of a fixture. For example, a Rice planogram might contain specified amounts of Jasmine, Basmati, Japonica, short-grained, and other types of rice.

Promotional Fixtures

Promotional Fixtures can be assigned within a gondola by selecting a fixture or fixtures and clicking on the Fixture Attribute icon in the toolbar. Promotional Fixtures are normally used for reporting purposes. They are assigned by selecting a fixture then selecting the appropriate option from the pull down menu.

Fixtures designated as Promotional can be identified by using the highlight option. Alternatively, they can be identified by running a report on the drawing or by using a KPI.

Prototype store

A Prototype Store is a store that is used as a basis for comparison for other stores within the Store Manager hierarchy. Prototype Stores can be theoretical; designed by marketing staff as an exemplar of what a store should be. They can also be practical examples selected from operational stores.

There can be many Prototype Stores, but each operating store can only have a single Prototype Store assigned to it at one time. Prototype status can be assigned to a store by editing its properties.

Publish date

The **Publish Date** is the date at which a previously authorized file is issued to the stores. The file will not become current until the Effective date is reached.

Reference Block

A **Reference Block** is a block containing information on how to present Bay numbering.

Depending on the type of Reference Block chosen, bay numbering can be written onto, (for example), oval, round, elliptical or rectangular backgrounds.

Report Studio

Report Studio is a module within Macro Space Management that contains a number of standard reports. This module is now being superseded by BI Publisher. Additional customized reports can be produced by Oracle at the customer's request.

Revision

A Revision is used as a folder to hold a set of files that refer to one specific arrangement of the fixtures, fittings and merchandise on a floor. Floors can have many revisions. For example a floor could have Spring, Summer, Autumn and Winter revisions, each representing a planning arrangement to be used at the appropriate time.

Floors can also have different revisions showing different marketing mixes, fixture arrangements, etc. Any connection between drawings in revisions and architectural drawings has to be made using xrefs. Only one Revision can be Current at any one time.

RFBin

The **RFBin** is Macro Space Management's equivalent of the Recycle Bin. Files marked for deletion are sent to the RFBin, but will not be permanently deleted until the Purge option is used in the Admin menu.

Scaled size block

A **Scaled Size Block** is attached to an object of some sort to append visual information. The scale of the scaled size block is determined by the block onto which it is attached.

Security Server

This part of Macro Space Management - Security Server - retains a record of the user's access rights. Each time a user attempts to open another module, Security Server will either allow or prevent it, depending on the user's rights. This means that a user only has to log into once per session.

Shelf Block

A **Shelf Block** is a block containing details on a specific type of shelf.

Shelf Types

Shelves can be of any number of user defined types. Examples include:

- Open shelves.
- Heavy shelves.
- Obstruction shelves.
- Peg Boards.
- Lateral Rods.
- Rods.

Shelf type is assigned in the Fixtures Tab of the Block Details dialog box.

Shelf Category

Shelf Category is found in the Shelving Frame of the Block Details dialog box. Shelf Category allows the aliased layer to be occupied by the shelf to be further sub-divided. The default is 0, but shelves can be assigned to further vertical categories within the aliased layer. For example generic goods could be assigned to Shelf Category 1, branded goods to Shelf Category 2...

Slot Spacing

Slot Spacing is the distance between slots in certain types of shelving, (for example peg boards). It is set using the spin controls within the Shelving Frame in the Fixtures Tab in the Block Details dialog box.

Snake Gondola

A single sided gondola that may go through a number of changes of angle – hence ‘snake gondola’.

Status

Status defines the current standing of an object within the system. For example an arrangement of fittings and fixtures for a floor layout can be defined as either a Proposal, (at the design stage), Authorized, (approved for use in the future), Current, (in use), or Historical, (taken out of service).

The status of an object will change as Macro Space Management users move through the business cycle.

Status of clusters and sub-clusters

Clusters and sub-clusters are not objects. As such, they do not require a status.

Status of files

The **status** of a file can have one of several potential statuses, typically including:

Proposal – a trial layout currently being considered for adoption.

Authorized – a layout that has been set to become current at a specific date. Such layouts have birth dates.

Published – a layout that has been sent to the stores for future implementation at an agreed date.

Current – the layout currently in use. Such layouts can have *death* dates where they revert to an inactive status.

Historical – layouts that have once been current and have reverted to inactive status. Such layouts can be reactivated by a change of status.

Status of floors

Floors can typically have one of three statuses:

Proposed – where the floor is at the design stage.

Existing – where the floor is in use.

Demolished – where the floor is no longer available.

Status of revisions

The **status of a revision**, (or layout of a floor), can be set to the following typical options:

Proposal – a trial layout currently being considered for adoption.

Authorized – a layout that has been set to become current at a specific date. Such layouts have *birth* dates.

Current – the layout currently in use. Such layouts can have *death* dates where they revert to an inactive status.

Historical – layouts that have once been current and have reverted to inactive status. Such layouts can be reactivated by a change of status.

Status of stores

Stores can typically have one of three statuses:

Proposed – the store is in the design or purchase stage.

Open – the store is in use.

Closed – The store has been taken out of service.

Store Root

The **Store Root** is the origin of the hierarchical tree. All other data emanates from the Store Root. Normally, stores are grouped in clusters and sub-clusters for ease of organization.

However, it is possible to add stores directly at the root level without them being associated with a cluster or sub-cluster.

Stores

A **Store** is the unique description of a specific retail outlet. Stores are made up of one or more floors. Stores are normally associated with one or more clusters; although they can, (less usually), be directly associated with the Store Root.

Stores can be associated with more than one cluster. However, this multiple association is merely a series of links to the same store within the central database. Stores act as containers for floors and their associated files.

Sub-clusters

A **Sub-cluster** is a sub-division of a Cluster. Sub-clusters are used to allow a finer level of detail when analyzing the performance of groups of stores.

For example the cluster of stores labeled England might be further sub-divided into sub-clusters called north, central and south. If necessary, this process could be continued further, with the north sub-cluster being further divided into, for example, city and suburban sub-sub-clusters.

Synchronization

Macro Space Management and In-Store Space Collaboration can modify drawings in a number of ways. This may result in different information being held in a drawing in the Planner module and in the central MSM database.

At intervals Macro Space Management needs to ensure that both drawing and database contain the same information. This process is called synchronization and is controlled by the Synchronization module.

System Variable

A **System Variable** is a parameter within the Macro Space Management database that makes a permanent and fundamental change in the way Macro Space Management operates.

System variables are often used as switches to toggle features on and off. System variables are not accessible through the standard Macro Space Management interface and should only be changed by system administrators. It is strongly recommended that system variables are only changed after consultation with the Oracle Technical Support Team.

Tierage

Tierage is activated when the Has Shelves tick box is unchecked in the Fixtures Tab of the Block Details dialog box.

The fixture then has tiers, (often used for displaying sample products), rather than shelves. If Tierage is selected then the number of tiers can be selected using the spin control for Tierage.

Title block

A **Title Block** is a block associated with a floor plan. It contains information such as drawing title, drawing number, drawing issue, drawing date, revision history, designer, etc. It may contain information on floor area, merchandisable area, non-sales area, etc.

In short, a Title Block specifies all the information contained within a drawing.

Trusted connection

A **Trusted Connection** for users is one where access rights are assigned when the computer starts up there is no need to sign on with passwords, etc. User ID Passwords will always be required for Oracle databases.

If a connection is not trusted, then the Macro Space Management User Name and password will be required to connect to the central database.

Turn Grouping Off

When **Grouping** is turned off interconnected objects within, for example, gondolas are treated as individual objects. Individual fixtures within a gondola can then be manipulated as separate entities.

Turn Grouping On

When **Grouping** is turned on all interconnected objects within, for example, a gondola can be manipulated as a single entity. For example a gondola can be moved to a new position by "dragging and dropping".

Unregistered Block

An **Unregistered Block** is a block that exists in an AutoCAD drawing but has not yet been registered in the Macro Space Management Central Database.

Vertical Category

Vertical Category is a way of sub-dividing an aliased layer. Found in the Fixtures Tab of the Block Details dialog box, Vertical Category allows the aliased layer to be further sub-divided.

The default is 0, but (for example) 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.

White Goods

White Goods is a term often used to describe electrical goods for kitchen or bathroom applications.

Xref

XREF is a method AutoCAD uses to link drawings. When you attach a drawing as an xref, you link that referenced drawing to the current drawing. Any changes to the referenced drawing are then displayed in the current drawing when it is opened.

This is used within Macro Space Management where an architectural drawing can be attached as an xref to multiple drawings at the same time. This allows a single architectural drawing to be used as a framework on which multiple arrangements of zones, fixtures, aisles and merchandise may be planned.

Note: Using xrefs reduces the quantity of data stored, as each architectural plan is only used once for each floor, not copied under multiple file names.

Zone

The purpose of a **Zone** is to allow Macro Space Management users to represent space within a floor plan. It is a sub-division of the total available floor area that can be used to designate that area as a sales or non-sales area. The description of the purpose can then be further defined. A Zone can be allocated to a specific type of sales; for example fruit and vegetables or electrical goods. Alternatively it could be allocated to a more specific non-sales function, for example offices or storage purposes.

The Zone can also contain information on pillars or other obstructions that might affect the area of merchandisable space. The Zone can be used to filter the total list of fixtures, fittings and Planograms in the store, enabling the Macro Space Management user to establish which have been placed in that particular part of the store.

The Zone can also be used for specific reports, again giving more information on what is in a specified part of a store.

Zone Definitions

After Zone Types (broad classes of Zones) have been defined, individual types of Zones can be defined.

Examples of Departments (Sales Zones) Definitions might include:

- Chilled Goods
- Furniture
- Ladies clothing

Examples of Non-Sales Zone Definitions might include:

- Corridors
- Offices
- Toilets

As well as name and zone type, Zone Definitions can include the type of hatching used in the drawing, the color of the hatching and a user defined code.

Zone Types

A **Zone Type** is the broad class a zone falls into. Zone Types are user defined and can include:

- Internal Areas
- Departments
- Non-Sales areas

Each Zone Type is drawn onto its own AutoCAD layer – only Zones on the same layer will be detected as clashing, (overlapping).

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