Manufacturing User Guide

Sage (UK) Limited Copyright Statement

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Issue date: 31/01/2009
Pbn No: 13698

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Chapter 1

Welcome

Sage 200 Manufacturing is a .Net application which puts you in control of your manufacturing business.

The Manufacturing modules are:

- Manufacturing System Manager
- Bill of Materials
- Estimating
- Make to Stock
- Sales Forecasting
- MPS (Master Production Scheduling)
- MRP (Materials Requirements Planning)
- Works Orders

All of the above modules are described within this guide.

Note: All modules are covered by the Sage 200 Software Licence Agreement. For more information on the licence agreement see your *Sage 200 Accounting System Manager* documentation.

In this chapter:

Using this Guide 2
What Manufacturing Does 3
Getting Started 7
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Using this Guide

This User Guide provides information on how to use the Sage 200 Manufacturing modules. We hope you find it comprehensive and easy to use.

If you want to email your comments, please email the Sage Documentation team at: SageTechnicalAuthors@sage.com and mark the subject line as 'Sage 200 Manufacturing'.

Process-oriented approach

This User Guide describes processes that you will go through when using the Manufacturing modules. For example:

- Creating and editing a BOM (bill of materials).
- Converting an estimate into a works order.
- Producing a master production schedule.
- Completing a works order.

Conventions

To make it easy for you to follow the procedures in this guide, the instructions are written using the following conventions.

- A step by step procedure always starts in the same format and continues as a series of numbered steps.
- Italic text is used to refer to other sections of the guide or to other guides.

There is also consistent use of command words within the procedures, such as:

- Choose from a drop-down list.
- Select an option button, check box or an item from a list.
- Click a command button, an option from a toolbar or a tab.

What Manufacturing Does

Sage 200 Manufacturing consists of the following modules:

- *Manufacturing System Manager* on page 19
- *Bill of Materials* on page 99
- *Estimating* on page 167
- Four planning modules: *Make to Stock* on page 253, *Sales Forecasts* on page 261, *MPS (Master Production Schedule)* on page 269 and *MRP (Material Requirements Planning)* on page 287.

  Note: *Introducing Planning on page 241* provides an overview of the planning modules.
- *Works Orders* on page 335

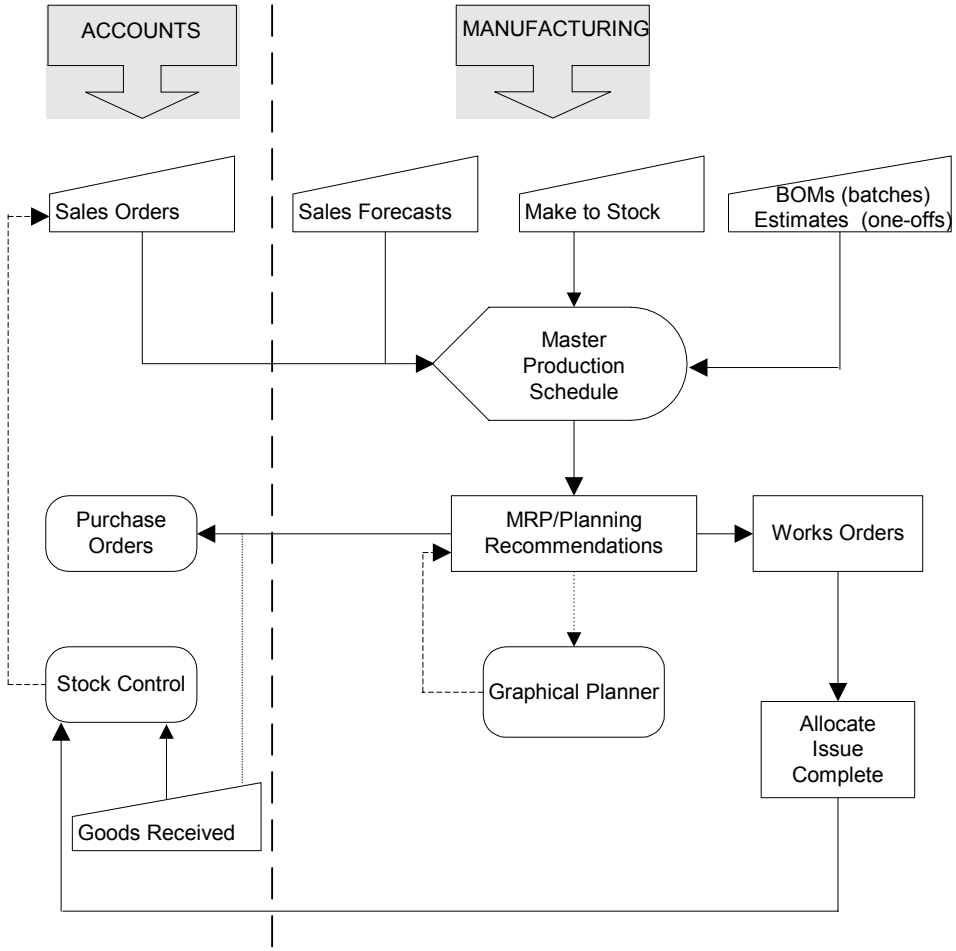
The Manufacturing System Manager module is where you set up commonly used settings, to run system wide utilities, such as importing and to enter information in registers for use across more than one Manufacturing module.

	Manufacturing System Manager	
	Settings	Registers
Bill of Materials	Highlight Colours, Overhead Recovery, Quantity Calculator, Analysis Codes, Customiser	Labour , Machine, Operations, Drawing
Estimating	Highlight Colours, Overhead Recovery, Quantity Calculator, Analysis Codes, Customiser	Labour, Machine, Operations, Drawing, Prospects, Employees, Stage Templates, Expense Types
Make to Stock	Quantity Calculator, Customiser	
Sales Forecasts	Quantity Calculator, Customiser	
MPS	Highlight Colours, Non-Working Periods, Quantity Calculator, Customiser, Maintain Roles	
MRP	Highlight Colours, Maintain Warehouse Hierarchy, Non-Working Periods, Customiser, Quantity Calculator, Maintain Roles	
Works Orders	Highlight Colours, Overhead Recovery, Maintain Warehouse Hierarchy, Quantity Calculator, Nominal Settings, Analysis Codes, Customiser	Labour Categories, Non-Chargeable Time, Certificates of Conformity, Employees, Expense Types

The following diagram will help you to understand the way that information flows through the Accounts and Manufacturing modules.

BOMs (bill of materials), estimates, sales forecasts and items to make for stock all feed into the production plan in the MPS module.

When you do not have sufficient stock in the Stock Control module to supply demand raised by sales orders, this is fed through into the MPS module also.



Within Manufacturing

Sage 200 Manufacturing caters for the following manufacturing environments.

- **Repetitive Batches**

  If you are working in a repetitive batch environment, you can use the Trial Kitting option (see *Using Trial Kitting* on page 146) within Bill of Materials. Trial Kitting checks whether you can build a specified quantity of any BOM. It identifies and displays shortages.

  Planning allows you to calculate and display the resources required to satisfy sales orders (Make to Order) and production for stock (Make to Stock). If the materials are not in stock, you can raise purchase orders for them within the Purchase Order Processing module.

  The BOM, created using Bill of Materials feeds into the plan.

  Once you have sufficient stock you can generate works orders to fulfil the BOM. You can generate works orders in the following ways.

  - From a plan (see *Actioning Recommendations* on page 250).
  - By direct entry (see *Creating Works Orders* on page 355 and *To create one-off works orders* on page 356).
  - From the Trial Kitting window (see *Using Trial Kitting* on page 146).

  From the works order, you can allocate and issue the stock. When the works order is complete, the stock is recognised within the Stock Control module. You can then proceed with your sales orders in the Sales Order Processing module.

  Note: Purchase orders can be raised within the MRP module.

- **One-off jobs**

  If you are in a one-off jobbing environment, the estimate feeds into the plan.

  Information for the estimate is drawn from the Stock Control module and from the Manufacturing Labour, Machine and Operations registers. You enter all expected costs for each stage of the job under each of the eight job cost types.

  When you turn the estimate into a works order (see *Converting an Estimate into a Works Order on page 226*) you can raise purchase orders for the works order in the Purchase Order Processing module.

  From the works order, you can allocate and issue the stock. When the works order is complete, the stock is recognised within the Stock Control module. You can then proceed with your sales orders in the Sales Order Processing module.

Using Graphical Planner

You can physically plan and shift around your time and resources, using Graphical Planner. This will help you to deliver the stock you need to meet the sales orders raised in Sales Order Processing.

For more information on graphical planner, see your *Sage Graphical Planner* documentation.

Graphical Planner does not need to be installed onto every machine which is running Manufacturing, but it must be installed on every machine which will require access to it.

Note: For every machine that requires access, it is necessary to register and activate Graphical Planner individually. Registration requires a connection to the Internet to enable the software.

For information on installing and registering Graphical Planner, refer to your *Sage Graphical Planner* documentation.

Getting Started

Note: Formal training in the use of your Manufacturing system is highly recommended. Sage run training courses which are of help to both new and more experienced users.

To start using Manufacturing, follow these key steps.

- Ensure that customer and supplier details are set up in your Sales Ledger and Purchase Ledger modules. For more information, see your *Sage 200 Sales Ledger* and *Purchase Ledger* documentation.
- Ensure that your Stock Control, Sales Order Processing and Purchase Order Processing modules are set up. For more information, see your *Sage Stock Control*, *Sales Order Processing* and *Purchase Order Processing* documentation.
- Enter your system wide settings and set up the system wide registers in the Manufacturing System Manager module. These are described in the *Manufacturing System Manager* on page 19.
- Enter your Bill of Materials, Estimating, MPS, MRP and Works Orders module settings.

  For more information, see the following sections:

  - *Entering Settings for BOMs* on page 106.
  - *Entering Settings for Estimates* on page 168.
  - *Entering Settings for MPS* on page 270.
  - *Entering Settings for MRP* on page 288.
  - *Entering Settings for Works Orders* on page 337.
- Create base data needed by Manufacturing. For example, set up your Manufacturing data.

  Note: Sage recommends that you use the demonstration data provided to work out how to create your own 'live' base data.

Using Demonstration Data

The best way to become familiar with Manufacturing is to practise. Sage 200 includes demonstration data. Sage recommends that you practise setting up the system and processing data, using the demonstration data provided.

Note: For the purpose of practising, it is recommended that you install Sage 200 on a standalone computer. Therefore, you can learn the system without affecting any of your real information.

To access the demonstration data in Sage 200

- Refer to the *Sage 200 System Administration help* for instructions on how to set up a company that accesses your demonstration data.

How to use the demonstration data

Start using Manufacturing by experimenting with the demonstration data. Try moving around the windows and familiarise yourself with the elements of the program. If you are not sure how to do this, the operation of the interface is described in the *Sage 200 help*.

As you work through this guide and the instructions, you can practise any function that you are unsure of. The demonstration data is fully interactive and you can enter information into the data set to try out the function and work within the system.

Remember, you are not on your own. Follow the guidance given in this chapter initially. Refer to the relevant parts of the guide for a fuller explanation of the procedures and processes. You also have the Manufacturing help system at your disposal, which you can search at any time. Press F1 to display help information about the window you are in.

Note: All details in the demonstration data are fictitious. Any similarities in the demonstration data with real names, addresses or other company details, past or present, is coincidental.

Documentation Summary

The following section provides a summary of the documentation.

Note: For information on operating the Sage 200 desktop, refer to *Sage 200* help.

Introducing Manufacturing

This section describes how the features of the Manufacturing program work together to provide you with what you need. Checklists are supplied for setting up your system and processing your data.

For more information, see *Introducing Manufacturing* on page 11.

Manufacturing System Manager

This section describes how to enter settings such as analysis codes, which are used in more than one module. It also describes how to use system wide utilities such as importing data. Commonly used registers, such as Prospects, Stage Templates and Expenses are also described.

For more information, see *Manufacturing System Manager* on page 19.

Bill of Materials

This section describes how to set up and use a BOM (bill of materials). This is essential if you are manufacturing in repetitive batches as production is based around the BOM.

For more information, see *Bill of Materials* on page 99.

Estimating

This section describes how to set up and use estimates. This is essential if you are manufacturing one-off jobs as production is based around the estimate.

For more information, see *Estimating* on page 167.

Planning

This section provides an introduction to the planning modules. You can plan with or without consideration for potential sales, or you can plan according to material requirements. In material requirements planning, you can look at stock projections in relation to demand, and generate appropriate recommendations.

For more information, see *Introducing Planning* on page 241.

Make to Stock

This section describes how to create demand by entering items to make to stock with no consideration for potential sales.

For more information, see *Make to Stock* on page 253.

Sales Forecasts

This section describes how to create demand with a consideration for potential sales.

For more information, see *Sales Forecasts* on page 261.

Master Production Schedule (MPS)

This section describes how to read all demands and provide a schedule for future production of finished items and sub-assemblies.

For more information, see *MPS (Master Production Schedule)* on page 269.

Material Requirements Planning (MRP)

This section describes how to view stock projections for demand listed within MPS. It describes how to generate recommendations to fulfil stock requirements. You also learn how to action recommendations to create purchase orders or works orders, as required. This ensures uninterrupted manufacturing of items listed within MPS.

For more information, see *MRP (Material Requirements Planning)* on page 287.

Works Orders

This section describes how to create, complete and cancel works orders. You can allocate and issue stock, scrap components and finished items and enter operation times and costs. You can also learn how to record certificates of conformance for products produced and despatched. User-definable certificates may be printed for entries in the register.

For more information, see *Works Orders* on page 335.

Glossary of Manufacturing Terms

This section lists frequently used Sage 200 Manufacturing terms and their meanings.

For more information, see *Glossary of Terms* on page 475.

Chapter 2

Introducing Manufacturing

This chapter provides an overview of how to set up and use your Manufacturing system.

Important! Sage recommends that you follow the checklists in this chapter for setting up your system and processing your data. This ensures you begin using your manufacturing system on a strong foundation and can use it to its maximum efficiency.

Once you have read this chapter, refer to the remaining chapters to begin working in detail with the modules. The checklists in this chapter point to other places in the documentation for further information.

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The Manufacturing Modules.....13
Setting Up Manufacturing 14
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What is in Manufacturing?

Sage 200 Manufacturing follows the manufacturing process from beginning to end. It provides vital information needed to help control costs and maintain efficiency.

The Bill of Materials module lets you list the products and components that make up a product. The Trial Kitting option lets you check whether you have sufficient stock to build a quantity of any BOM. It also lets you identify shortages. If there are shortages, you can raise purchase orders to cover these within Purchase Order Processing. From within Trial Kitting, you can create works orders, sales orders, or add the BOM to the list of make to stock items.

The Estimating module lets you provide accurate and timely quotations of work for one-off jobs. You can create works orders, BOMs or sales orders from your estimates.

Demands for stock are read within the MPS module to produce a master production schedule. There are four sources for demands: sales orders, estimates, make to stock items and sales forecasts.

The material requirements to fulfil orders and other demands are calculated within the MRP module. To fulfil the requirements, you can raise purchase orders within Purchase Order Processing, or further works orders in Works Orders.

You can create works orders manually, in addition to creating them automatically from Trial Kitting, Estimating and MRP. You can allocate and issue stock for orders within the Works Orders module. The stock levels are automatically updated within the Stock Control module as you do this.

Traceability of goods is determined by the 'Batch & serial numbered items' settings in the Stock Control module. Batch and serial numbers can be assigned when goods are received in Purchase Order Processing and Sales Order Processing modules. You are prompted to specify batch and serial numbers when you allocate or issue stock within the Works Orders module. Batch and serial numbers are also created when completing works orders.

Certificates of Conformity, confirming products are manufactured to ISO quality standards, can be produced from within Manufacturing System Manager.

In addition to smooth production planning, works order processing and resource management, Manufacturing works with Graphical Planner. Graphical Planner enables production to be planned effectively.

Manufacturing also has an Operation Times module. This runs alongside Works Orders and puts you in control of your manufacturing shop floor operation times.

The Manufacturing Modules

Module	Description
Manufacturing System Manager	Use this module to enter information or perform actions that apply across many Manufacturing modules.
Bill of Materials	Use this module to create, amend, delete, copy and cost BOMs.
Estimating	Use this module to create, amend, copy, print, recost, cancel and delete estimates.
Planning	Use the planning modules to collate production demand and generate a list of recommendations to satisfy that demand. ■ Make to Stock Use this module to create demand by entering items to make to stock with no consideration for potential sales. ■ Sales Forecasts Use this module to create demand with a consideration for potential sales. ■ MPS Use this module to consider all demands and provide a schedule for future production of finished items and sub-assemblies. ■ MRP Use this module to view stock projections in relation to demand and generate appropriate recommendations. You can raise purchase orders and works orders from the recommendations, if required.
Works Orders	Use this module to enter works orders manually, or to update automatically generated works orders with progress information. As works orders progress, you can allocate and issue stock to them, cost them, complete them and close them. You can print various works order documents and amend the picking list, if required. You can also cancel works orders if they are no longer required.
Operation Times	Use this module to control your manufacturing shop floor operation times. For more information, see your *Sage 200 Operation Times* documentation.

Setting Up Manufacturing

Before processing data, you must set up the system so it will work in the way that you want. The following table suggests a typical setup sequence. The setup sequence you use depends upon your business and how you intend to use your Manufacturing software. You can adapt the checklist as not all of the listed topics will be applicable.

Identify those parts of the checklist that apply to you. Refer to the 'For more information' sections to read in detail about setting up those parts of the system. Once you understand what you want to achieve, follow the suggested sequence and set up your system. Refer to the checklist on processing data for assistance in how to use the system on a regular basis (see *Processing Data in Manufacturing* on page 16).

Manufacturing operations contain details relating to labour and machine processes. You can set up operations and labour and machine process details for individual BOMs or estimates. However, you can set up your operation, machine and labour process details in the Operations Register, Machine Register and Labour Register first. Thereafter, you can easily include labour and machine costs and re-use operations in many BOMs or estimates in future. This can significantly reduce the time spent in setting up BOMs or estimates.

Note: You do not need to set up these details if you only want to include raw materials or component costs.

What you need to do	For more information	Applies to you
1. Set up supplier and customer details, stock control system, sales order processing and purchase order processing defaults.	See *Sage 200* documentation for the *Sales Ledger, Purchase Ledger, Stock Control, Sales Order Processing* and *Purchase Order Processing* modules.	❑
2. Set up Overhead Recovery Settings and Analysis Codes and ensure that Nominal Settings are correct.	See *Settings* on page 21.	❑
3. Enter details in the Labour Register.	See *Labour Register* on page 47.	❑
4. Enter details in the Machine Register.	See *Machine Register* on page 50.	❑
5. Set up the Operations Register.	See *Operations Register* on page 54.	❑
6. Enter details in the Drawing Register.	See *Drawing Register* on page 62.	❑
7. Set up expense categories.	See *Expense Types* on page 88.	❑

What you need to do	For more information	Applies to you
8. Set up labour categories.	See *Labour Categories* on page 82.	❑
9. Set up employee details.	See *Employees* on page 84.	❑
10. Set up non-chargeable time categories.	See *Non-chargeable Time* on page 90.	❑
11. Review and amend non-working periods.	See *Non-working Periods* on page 26.	❑
12. Set up Bill of Materials.	See *Planning a BOM* on page 100.	❑
13. Set up Estimating.	See *Entering Settings for Estimates* on page 168.	❑
14. Set up MPS (Master Production Schedule).	See *Entering Settings for MPS* on page 270 .	❑
15. Set up MRP (Materials Requirements Planning).	See *Entering Settings for MRP* on page 288.	❑
16. Set up Works Orders.	See *Entering Settings for Works Orders* on page 337.	❑
17. Add BOMs.	See *Creating a BOM* on page 117.	❑

Processing Data in Manufacturing

Important! Before processing data, you must set up the system so it will work in the way that you want. For more information, see *Setting Up Manufacturing* on page 14.

Processing information through Manufacturing follows a series of logical steps. These reflect the way events happen in business.

The following table suggests a typical processing sequence. The processing sequence you use depends upon your business and how you intend to use your Manufacturing software. You can adapt the checklist as not all of the listed topics will be applicable.

Identify those parts of the checklist that apply to you. Make any additions or substitutions that you need for your organisation. Refer to the 'For more information' sections to read in detail about how to perform the processing steps.

Processing Steps		Where	For more information	Applies to you
1.	Add BOM, if working in a repetitive batch environment.	Bill of Materials	*Creating a BOM* on page 117.	❑
2.	Add estimate, if working in a one-off jobbing environment.	Estimating	*Creating an Estimate* on page 178.	❑
3.	Receive the sales order.	Sales Order Processing	See your *Sage 200 Sales Order Processing* documentation.	❑
4.	Allocate existing stock to Sales Order.	Stock Control	See your *Sage 200 Stock Control* documentation.	❑
5.	Add Make to Stock items, if you are planning to build items to stock.	Make to Stock	*Creating a Make to Stock Item* on page 254.	❑
6.	Add sales forecasts, if you are planning to build stock based on sales forecasts.	Sales Forecasts	*Creating a Sales Forecast on page 262*.	❑
7.	Plan production, based on sales order shortfalls plus items to be made for stock.	MPS	See *Reading Demands* on page 276.	❑

Processing Steps		Where	For more information	Applies to you
8.	Ensure sufficient resources are available to meet the production plan.	MRP	See *Running MRP* on page 298.	❑
9.	Take necessary action where shortfalls occur.	MRP	See *Actioning Recommendations* on page 319.	❑
10.	Raise purchase orders.	MRP and Purchase Order Processing	See *Running MRP* on page 298 and your *Sage 200 Purchase Order Processing* documentation.	❑
11.	Raise works orders.	MRP and Works Orders	See *Running MRP* on page 298, *Creating Works Orders* on page 355 and *To create one-off works orders* on page 356.	❑
12.	Allocate raw materials against works orders.	Works Orders	See *Allocating Stock* on page 404.	❑
13.	Print picking lists, route cards, job cards and operation cards, as required.	Works Orders	See *Printing Works Order Documents* on page 396.	❑
14.	Receive goods.	Purchase Order Processing	See your *Sage 200 Purchase Order Processing* documentation.	❑
15.	Issue component/raw materials stock.	Works Orders	See *Issuing Stock and Reversing Stock Issues* on page 409.	❑
16.	When manufacturing is complete, put finished goods into stock.	Works Orders	See *Closing Works Orders* on page 470.	❑
17.	Despatch goods by raising a despatch note.	Sales Order Processing	See your *Sage 200 Sales Order Processing* documentation.	❑

Processing Steps		Where	For more information	Applies to you
18.	Raise invoice.	Sales Order Processing	See your *Sage 200 Sales Order Processing* documentation.	❑

Note: Before working with 'live' data, practise first with the demonstration data provided. For more information, see *Using Demonstration Data* on page 8.

Chapter 3

Manufacturing System Manager

This section describes how to enter settings such as analysis codes, which are used in more than one module. It also describes how to use system wide utilities such as importing data. Commonly used registers, such as Prospects, Stage Templates and Expenses are also described.

In this chapter:

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Changing Manufacturing System Manager Lists

You can display lists for the registers in the Manufacturing System Manager work area:

Each list is used for performing actions and working with the different types of record.

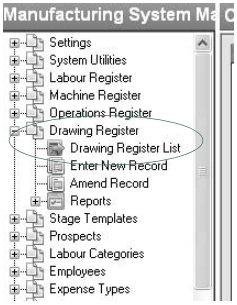
To select a list

- From the Navigation Bar, click Manufacturing System Manager, choose the record type and choose the record type list.

  The title of the work area changes to correspond to the list you choose and the selected list appears in the work area.

For example

To select the Drawing Register List, choose Drawing Register and then choose Drawing Register List.



The Manufacturing System Manager work area title changes to Drawing Register and the work area shows the list of drawings held.

For more information on the Sage 200 desktop, see *Sage 200 help*.

Settings

Settings defined in the Manufacturing System Manager are used in more than one manufacturing module.

For example, Analysis Codes and Overhead Recovery Settings are used in the Bill of Materials, Estimating and Works Orders modules.

Maintain Warehouse Hierarchy and Nominal Settings apply within the Works Orders module only.

Other settings are: Highlight Colours, Non-Working Periods, Quantity Calculator Defaults, Customiser Settings, Custom Layouts, Maintain Roles and Desktop Settings. These settings apply within a mix of the Manufacturing modules. In the case of Desktop Settings, this applies throughout the entire Sage 200 suite.

Analysis Codes

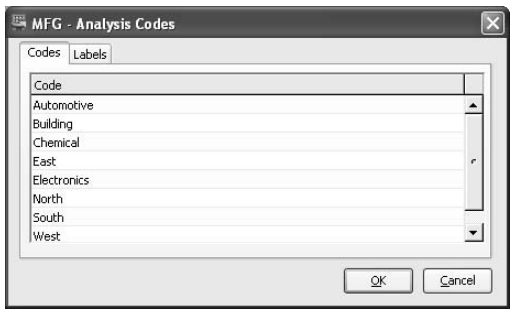
(Bill of Materials, Estimating, Works Orders)

You can attach up to five analysis codes to BOMs, estimates and works orders for analysis purposes during reporting. For more information, see *To enter Analysis Codes* on page 21.

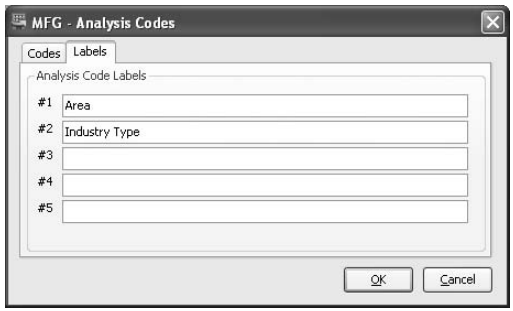
To enter Analysis Codes

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Analysis Codes.

   The Analysis Codes window appears.



2. To build a table of analysis codes to use, click the Codes tab.
3. Enter the analysis code headings here. Use the TAB key to create a new heading line.
4. Click the Labels tab and enter label descriptions to group the codes. The screen labels appear next to the analysis code boxes in the Bill of Materials, Estimating or Works Orders windows. In the following example, labels for 'Area' and 'Industry Type' are already set up.



5. To save your analysis codes, click OK.

   Note: Each time you want to apply analysis codes, you can now select from this list.

Highlight Colours

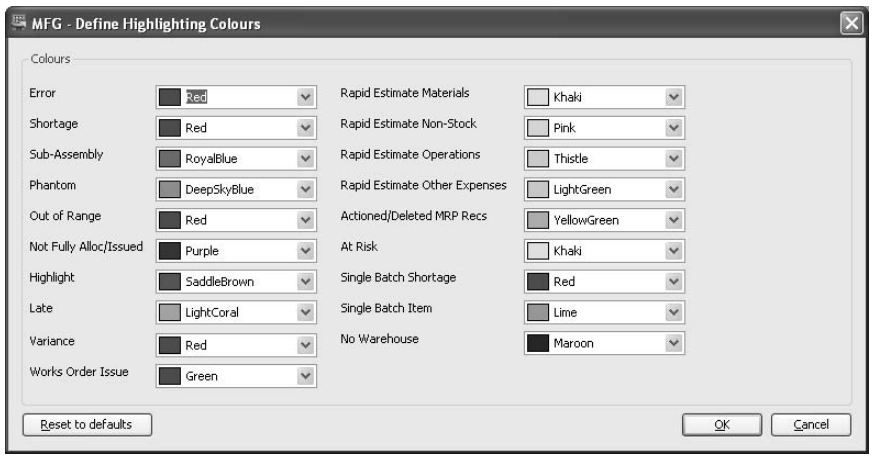
(Bill of Materials, Estimating, MPS, MRP, Works Orders)

You can assign colours to display certain items within Manufacturing windows. For example, using Highlight Colours, you can assign colours to errors, shortages, sub-assemblies, phantoms, and items at risk.

To highlight colours

1. From the Navigation Bar, click Manufacturing System Manager,and choose Settings > Highlight Colours.

   The Define Highlighting Colours window appears.



2. Select the colours that you want to use for the items.
3. To revert to the colours set up as defaults on installation, click Revert to defaults.
4. To save the colours, click OK.

Maintain Warehouse Hierarchy

(MRP, Works Orders)

Before running MRP or allocating or issuing stock in Works Orders you must define a hierarchy of supply warehouses. The hierarchy determines which warehouses are checked for stock during these processes.

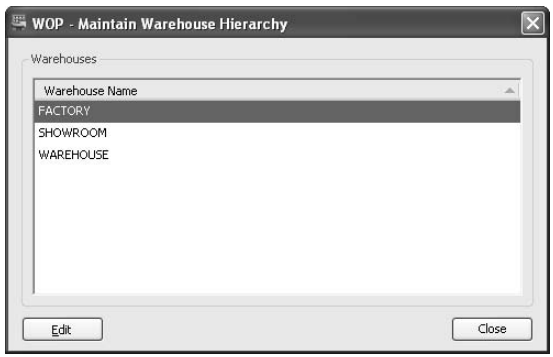
MRP checks all warehouses in the hierarchy. Recommendations to raise purchase orders or works orders are made if there is not enough stock in the warehouses to meet the demands.

Works Orders checks only those warehouses in the hierarchy which have been made 'Valid for component source' in Stock Control. Stock can only be allocated or issued from those warehouses in the hierarchy. For more information, see your *Sage 200 Stock Control* documentation.

To maintain warehouse hierarchy

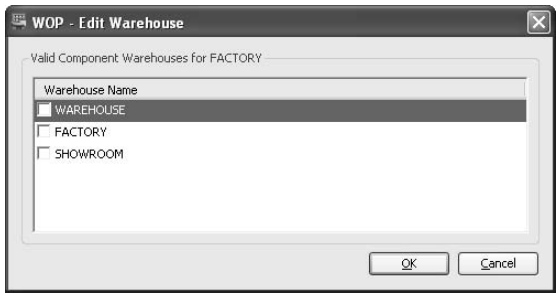
1. From the Navigation Bar, click Works Orders, and choose Setup > Maintain Warehouse Hierarchy.

   The Maintain Warehouse Hierarchy window appears.



2. Select the warehouse for which you want to maintain a hierarchy of supply warehouses.
3. Click Edit.

   The Edit Warehouse window appears.



4. Select the warehouses to include in the hierarchy of supply warehouses.

   Note: MRP checks all selected warehouses during planning. In order to allocate or issue stock from the warehouse in Works Orders, you must make the warehouse 'Available for component source' within 'Stock Control'. For more information, see your *Sage 200 Stock Control* documentation.

5. Click OK.

Non-working Periods

(MPS, MRP)

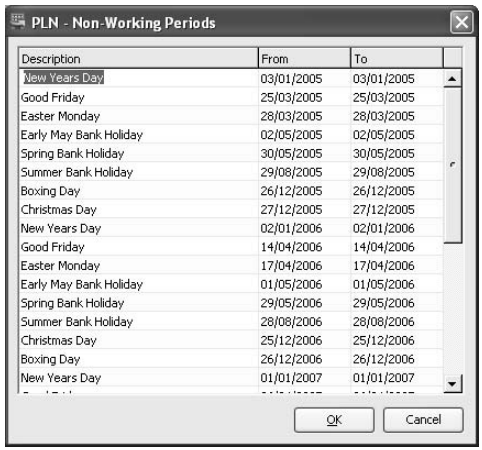
You can enter periods when the company shuts down. This information is used in the MPS and MRP modules when calculating capacities and start/end dates of jobs.

Note: United Kingdom public holidays for the next five years are loaded into the system prior to installation. You can amend, delete or add new dates to the list.

To maintain non-working periods

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Non-Working Periods.

   The Non-Working Periods window appears.



2. To add a date, scroll to the bottom of the window and click in a new line. Type in your Description and the From and To dates of the non-working period.
3. To amend a date, select the date and make the required amendment.
4. To delete a date, select the date and press F8.
5. To save your entries, click OK.

Overhead Recovery Settings

(Bill of Materials, Estimating, Works Orders)

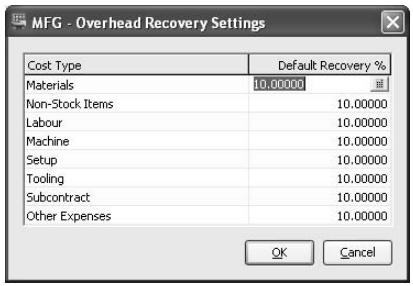
The calculation of overhead recovery applies in Bill of Materials, Estimating and Works Orders. For accurate breakdown of overhead costs, you must enter overhead recovery settings before costing BOMs, entering estimates or works orders.

To provide details of overhead recovery settings to the support team, use the 'view only' version of the settings. For more information, see *To view overhead recovery settings* on page 27.

To enter overhead recovery settings

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Overhead Recovery Settings.

   The Overhead Recovery Settings window appears.



2. Enter the percentage to be recovered for the different expense types.

   Manufacturing accumulates the totals for overhead recovery as costs are entered.

   Note: Set the percentage rate to '0' (zero) to suppress overhead calculations for a cost type.

   If nominal integration is switched on in Stock Control, nominal postings are made automatically when you complete works orders. Postings are made to the nominal codes set up within Manufacturing System Manager (see *Nominal Settings on page 37*). The WIP Account is set within the works order details (see *The Additional Details tab (Batch Works Order) on page 362*.

3. To save Overhead Recovery Settings, click OK.

To view overhead recovery settings

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > View Overhead Recovery Settings.
2. When you have finished viewing the settings, click Close.

Quantity Calculator

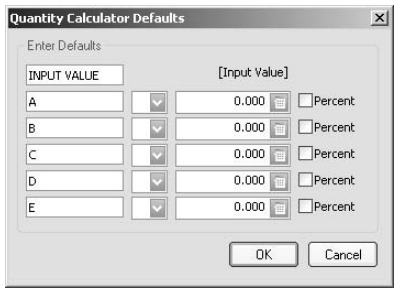
The Quantity Calculator applies across all Manufacturing modules. It helps you enter values into numeric boxes. If you use a calculation often, you can set this up as a default in the Quantity Calculator. You can also use the quantity calculator, to apply different calculations at different points in the program.

Note: You can change the default calculation in the calculator at any time. However, this does not change values generated using the old default calculation. You must revisit the numeric boxes and recalculate the values.

To set up a default formula

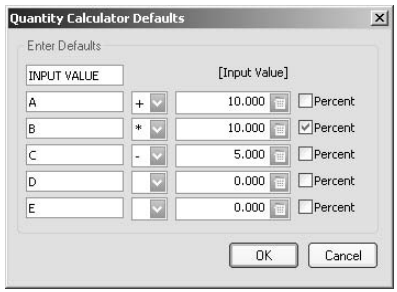
1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Quantity Calculator Defaults.

   The Quantity Calculator Defaults window appears.



2. Enter the operators (+, -, /, *), selecting from the down arrow alongside 'A', 'B', 'C', 'D' and 'E'.
3. Enter the values for the calculation. These can be actual values or percentage values.
   - To enter a percentage value, enter the value and select the Percent check box alongside the value.

   For example, you could set up the Quantity Calculator default calculation as follows:



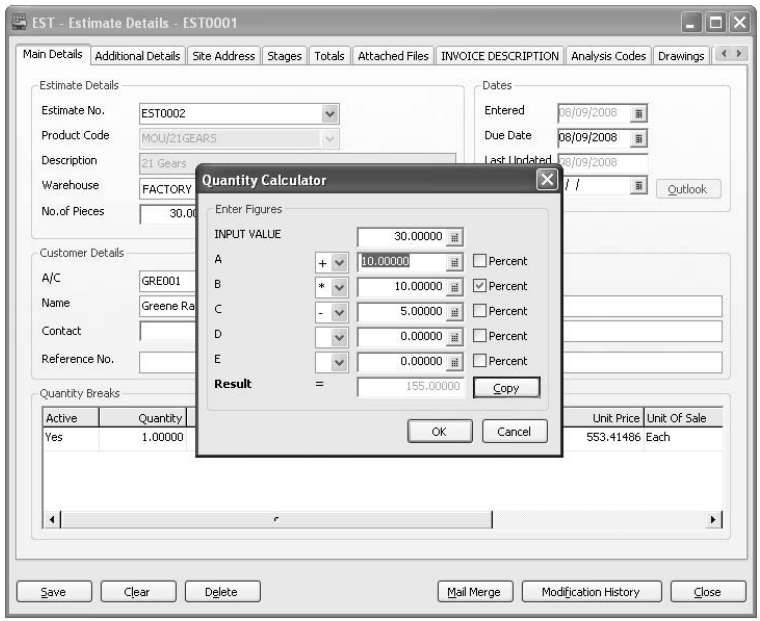
The calculation works sequentially through lines. It starts with Input Value A and adds 10, to give Input Value B. It then multiplies Input B by 10% to give Input Value C and then deducts 5 to provide the final result.

4. To save the default calculation, click OK.

To use the Quantity Calculator

1. Place the cursor in a numeric box and press 'CTRL + Q'.

   The Quantity Calculator appears and takes the value from the numeric box as your input value.



Note: Pressing 'Ctrl+Q' when you are not on a numeric field will display the Quantity Calculator without an input value.

2. If you have set up a default calculation, this is applied to the input value automatically. You can amend the default calculation and recalculate the result, if required.

   Note: This only affects this specific calculation. It does not change the default calculation for the next use. If you want to change it for every use, you need to set up the default calculation again. For more information, see *To set up a default formula on page 28*.

3. To paste the result into numeric boxes within the program, click Copy. The value is stored on the clipboard.

4. To close the window, click OK.

   If you opened the calculator whilst within a numeric box, the result is automatically inserted into the numeric box.

   You can paste the result from the clipboard into any numeric box required.

Customiser Settings

You can change any button, box, frame, tab or column label on any screen within the system. You can therefore customise Manufacturing to show any industry or business specific terms.

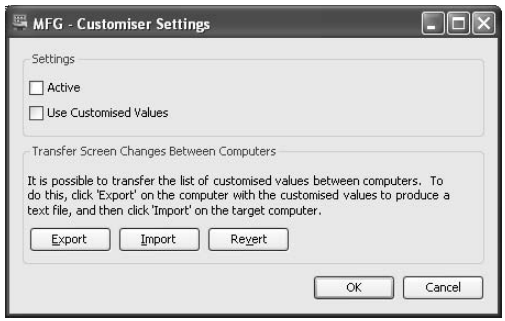
The option also enables you to use data boxes for something other than what was originally intended. For example, in the food processing industry, operation 'set-up time' may be more appropriately called 'clean time'.

Note: Renaming boxes can lead to difficulties when telephoning Sage for support. However, you can revert to standard names for the support call and then switch back to your customised settings. For more information, see *To revert to standard names for support calls* on page 34.

To use the customiser

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Customiser Settings.

   The Customiser Settings window appears.



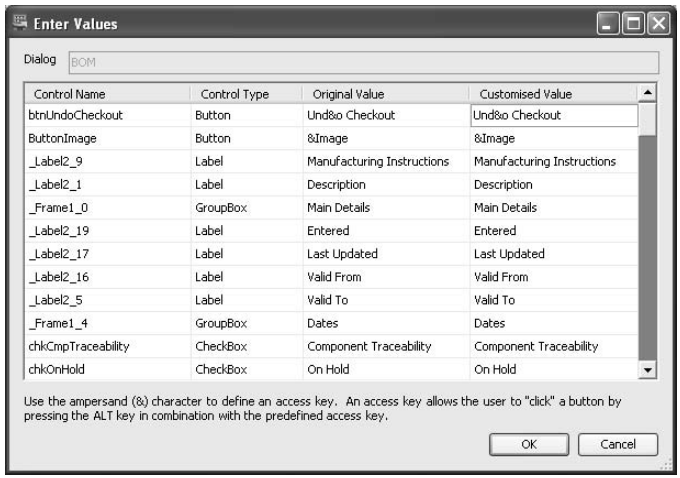
2. To make changes using the customiser, select the Active and Use Customised Values check boxes.
3. To save the settings, click OK.

   Note: You can now access the customiser by using 'Ctrl + S' from any form in the Manufacturing modules.

To make label changes using the customiser

1. Open the window containing the label that you want to change. Open a BOM record window as an example.
2. Press 'Ctrl + S'.

   The Enter Values window appears.



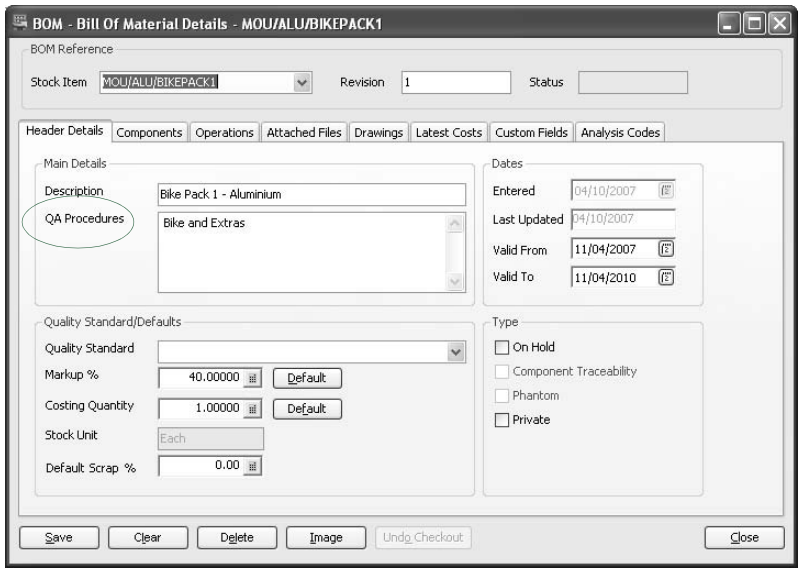
3. Select the Control Name you want to change, and enter the amendment you require in the Customised Value column.

   In the BOM record example, to change 'Manufacturing Instructions' to 'QA Procedures', you would do the following. Click in the Customised Value column in the '_Label2_9' row where the original value shows 'Manufacturing Instructions'. Type the new label in the Customised Value column.

   Note: You may see multiple entries of the same column name appearing in the list. The same name can be used on many column headings on different views within the module. Take care in this case to select the column label that you want to change.

4. To save your changes, click OK and close the BOM record.

   Note: The next time you select the BOM record, the label will have been replaced.



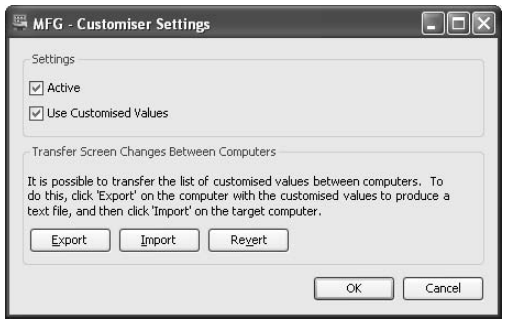
Note: If the label you changed appears elsewhere on the system you must repeat the above procedure for each window in which it appears.

To copy customised changes between computers

Note: Before following the steps below, ensure that you have made the label changes you want. For more information, see *To make label changes using the customiser on page 31*.

1. **On the PC you are copying from**, open the Customiser Settings window.
2. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Customiser Settings.

   The Customiser Settings window appears.



3. To transfer label changes to other network computers, on the PC you are copying from, click the Export button.

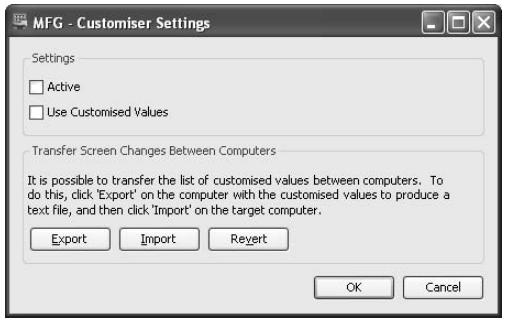
   The Enter Customer List Name window appears.

   - Select a location and enter a name for the exported file.
   - Click Save.

4. **On each PC you are copying to**, open the Customiser Settings window.

5. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Customiser Settings.

   The Customiser Settings window appears.



6. To transfer label changes to the computer, click the Import button.

   The Select File to Import window appears.

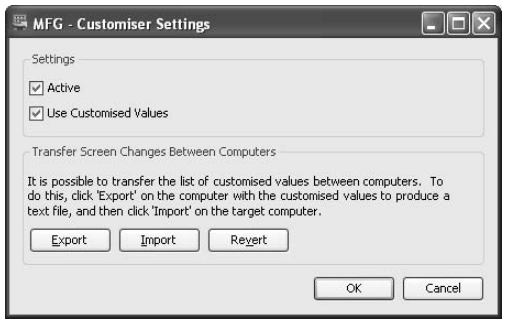
   - Select the location and the name of the file to import.
   - Click Open.

7. To view the label changes, select the Active and Use Customised Values boxes.

To revert to standard names for support calls

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Customiser Settings.

   The Customiser Settings window appears.



2. Clear the Use customised values box.

   The system displays the standard names throughout the system.

   Note: Do not use the Revert button! This clears all customised names from your system, permanently. Unless you have exported customised values and can import them again, you will need to re-enter them.

3. Call Support with your query.

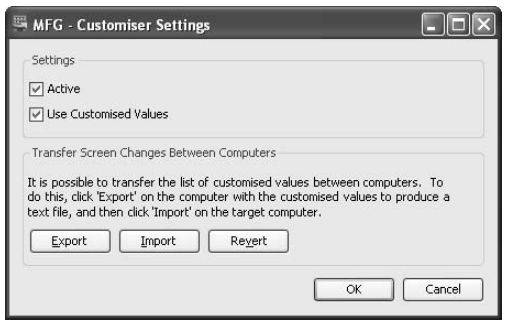
4. When you have resolved your query, select the Use Customised values box again. The system displays the customised names again throughout the system.

To revert to standard names permanently

1. Take a backup of your customised system.

2. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Customiser Settings.

   The Customiser Settings window appears.



   Important Note! Before the next step, export the customised values, if you have not already done so (see *To copy customised changes between computers on page 33*). The

Revert button should only be used if you want to remove all customised names from your system.

3. To clear customised names from the system, click Revert.
4. Confirm that you want to revert to the standard settings, when prompted.

   Note: The Active and Use Customised boxes remain selected. To ensure no more changes are made, you must clear the boxes after using Revert.

Nominal Settings

(Works Orders)

If Stock Control is set up to integrate with the Nominal Ledger, you can enter codes for nominal postings.

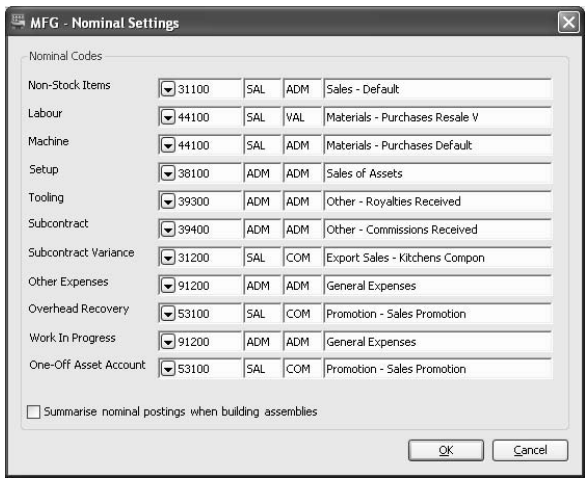
This lets you maintain accurate nominal records, such as labour, machinery and overhead recovery costs.

Note: To provide details of your settings to the support team, use the 'view only' version of the settings. For more information, see *To view nominal settings* on page 37.

To enter nominal settings

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Nominal Settings.

   The Nominal Settings appear.



2. Enter nominal codes for the required categories.
3. To make one posting for labour or machinery per sub-assembly, select the 'Summarise nominal postings when building assemblies' check box.
4. To save your Nominal Settings, click OK.

To view nominal settings

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > View Nominal Settings.

The View Nominal Settings window appears.

2. When you have finished viewing the settings, click Close.

Custom Layouts

Manufacturing modules offer a range of standard reports which are already defined in terms of content and layout. To start preparing reports, select the report from the Reports menu within the module menu structure.

For more information on preparing standard reports, see your *Sage 200 help*. For more information on the Manufacturing reports, see the relevant sections:

- *Preparing BOM Reports* on page 158.
- *Preparing Estimating Reports* on page 237.
- *Preparing Make to Stock Reports* on page 260.
- *Preparing Sales Forecasts Reports* on page 267.
- *Preparing MPS Reports* on page 286.
- *Preparing MRP Reports* on page 331.
- *Preparing Works Orders Reports* on page 455.

You can create custom layouts for the standard reports. Copy the standard layouts with alternative names. Then, amend the custom layouts as required.

Note: If you amend standard layouts, amendments by Sage to the standard reports will overwrite your changes.

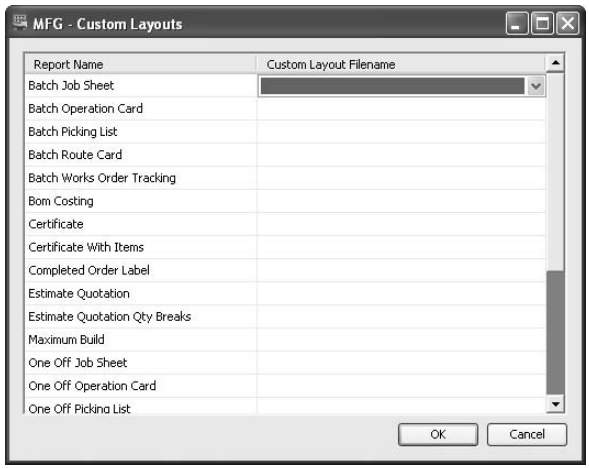
Sage Report Designer is used to create or amend report layouts. For more information, see your *Sage Report Designer* documentation.

You must save custom layouts in the same folder as the standard report layouts. To make the layout available for use, you need to associate the custom layout with a standard report.

To associate custom layouts with standard reports

1. From the Navigation Bar, click Manufacturing System Manager and choose Settings > Custom Layouts.

   The Custom Layouts window appears.



2. Select the Custom Layout Filename for the Report Name.
3. To save the Custom Layout Filename, click OK.

   The custom layout is used when you print the report.

To revert to standard reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Custom Layouts.

   The Custom Layouts window appears.
2. Select the Custom Layout Filename for the standard Report Name and clear the box.
3. To save the change, click OK.

Maintain Roles

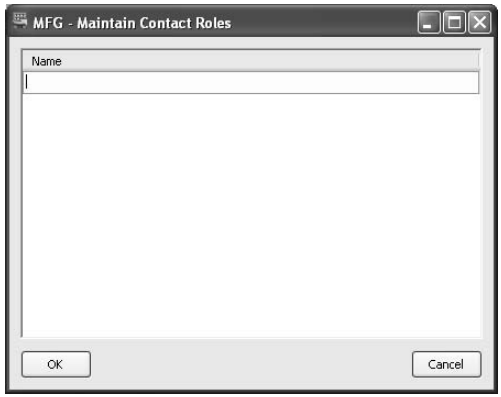
(MPS, MRP)

Roles are assigned against the stock item's contact details in Stock Control. You can create roles either here or within the stock item's contact details. For more information, see *Sage 200 Stock Control* documentation. Roles assist in the provision of items from specific warehouses. One role is allowed per contact. Within the planning settings General tab, you specify the contact role that represents the buyer (see *The General tab on page 271*). MRP uses this information to set the buyer code information against a recommendation.

To maintain roles

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Maintain Roles.

   The Maintain Contact Roles window appears.



2. Click in a line within the window to enter the role name, for example, 'Buyer'.
3. Repeat as many times as required.
4. To save the roles, click OK.

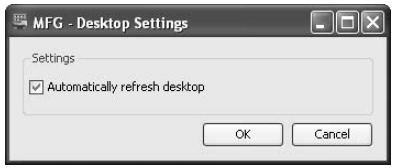
Desktop Settings

By default, lists in the Sage 200 suite refresh automatically. If this affects performance, you can switch off the automatic refresh.

To control automatic refresh

1. From the Navigation Bar, click Manufacturing System Manager, and choose Settings > Desktop Settings.

   The Desktop Settings window appears.



2. To switch automatic refresh off, clear the check box.
3. To switch automatic refresh on, select the check box.
4. To apply the setting, click OK.

System Utilities

System utilities allow you to import and export data.

Importing and Exporting Data

You can import data from another system or program into your system. You can also export data so that it can be read or imported by another system or program. This is useful if you need to copy a lot of information between one system and another.

Note: You cannot import data directly from Sage 50 Manufacturing projects or from Sage 200 Bill of Materials. This data must be migrated using the Sage 200 Data Migration Tool. For more information, see your *Sage 200 Data Migration* documentation.

You can import and export the following data.

- Bill of Material Components

  The product code needs to relate to an existing active item of the type 'stock' or 'miscellaneous'.

  When importing components that are serial number traceable, the quantity must be an integer.

  The component unit of measure must exist on the stock item. If the quantity being imported does not match the stock item unit of measure, the quantity will be rounded to make it valid.

  Note: The first time rounding occurs, you are prompted to accept or cancel the import operation. If you accept this prompt, any subsequent invalid quantities will be rounded automatically.
- Bill of Material Headers

  The BOM Reference needs to relate to a stock item that is marked as a built item. If version control is enabled, BOMs are given the status of 'new' and marked as 'checked in'.
- Bill of Material Operations

  The supplier account reference must exist in the Purchase Ledger.
- Drawings
- Employees
- Expense Types
- Labour Categories
- Labour Register
- Machines
- Non-Chargeable Time
- Operation Templates

You can import but not export the following data.

- Make to Stock

  The warehouse must be linked to the stock item.

- Sales Forecasts

  The warehouse must be linked to the stock item.

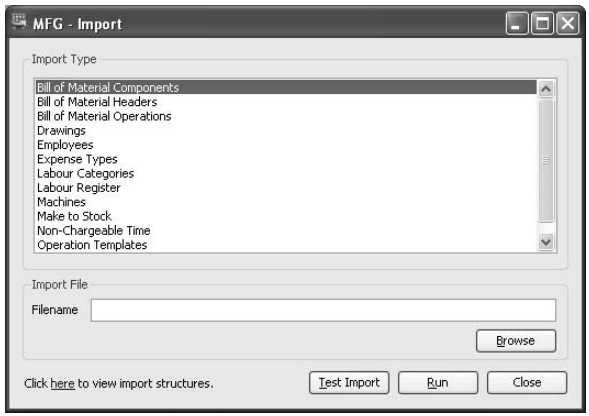
Imported data must be in the required format. This is a comma separated variable (CSV) file. The format of the files to import is provided within the software. For more information about the format, see *To display the required csv formats within the program on page 44*.

Note: When you export data it is exported in the same format.

To display the required csv formats within the program

1. From the Navigation Bar, click Manufacturing System Manager, and choose System Utilities > Import.

   The Import window displays.



2. Click 'here' to view the structures required for the import file.

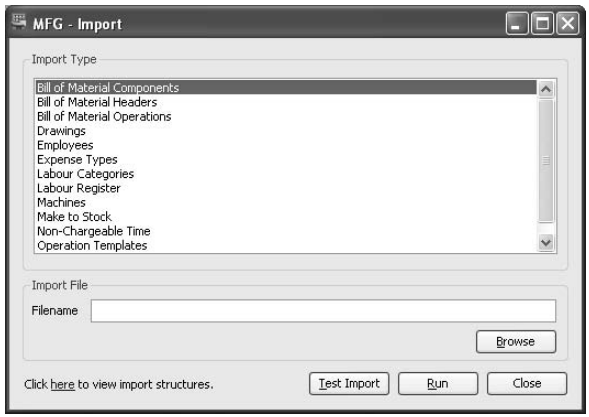
   The structures are displayed in an explorer help screen.

   You can print these for reference.

To import data

1. From the Navigation Bar, click Manufacturing System Manager and choose System Utilities > Import.

   The Import window appears.



2. Select the type of data you want to import.
3. Enter the path to the data file you want to import. Alternatively, use the Browse button to locate the file.
4. Click Test Import to test that the data is in the required format. If not, you cannot proceed with the import. You will need to check the format and try again.
5. If the data is in the required format, click Run to begin the import.

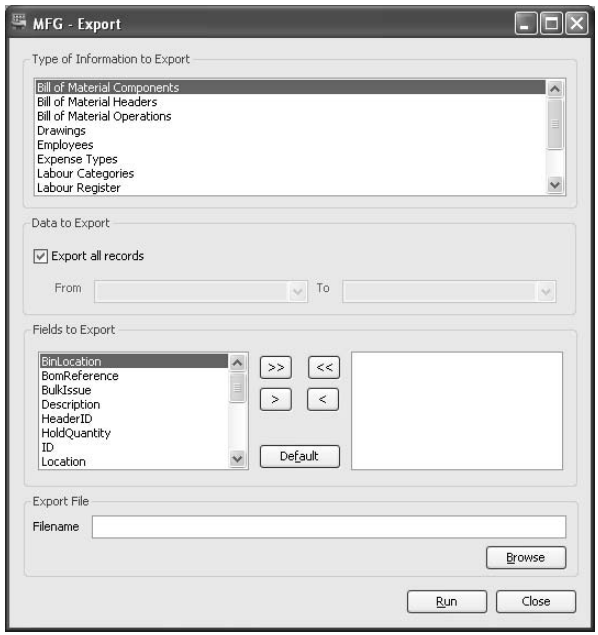
   A confirmation prompt appears.
6. To confirm that you want to import the data, click Yes. The data is imported.

To export data

Export works in a similar way to Import except that you are able to select ranges of records to export if you require.

1. From the Navigation Bar, click Manufacturing System Manager, and choose System Utilities > Export.

   The Export window appears.



2. Select the Type of Information to Export.
3. Select Data to Export.

   By default, 'Export all records' is selected. To export a selection of records, clear the check box and use the From and To boxes provided.
4. Select the Fields to Export in one of the following ways:
   - Use the double chevrons to select all the fields.
   - Use the single chevrons to move individually selected fields.
   - Click Default to select the default fields required for subsequent import.
5. Enter the Export File destination path and filename.

   Note: You can use the Browse button to locate the destination.
6. Click Run to begin the export.

   A confirmation prompt appears.
7. To confirm that you want to export the data specified, click Yes. The data is exported.

Registers

Registers defined in Manufacturing System Manager may be used in more than one manufacturing module.

For example, Operations Register is used in Bill of Materials and in Estimating. Non-Chargeable Time is used in Works Orders.

Other registers are Labour, Machine, Drawing, Prospects, Employees, Stage Templates, Expense Types, Labour Categories and Certificates of Conformity.

Labour Register

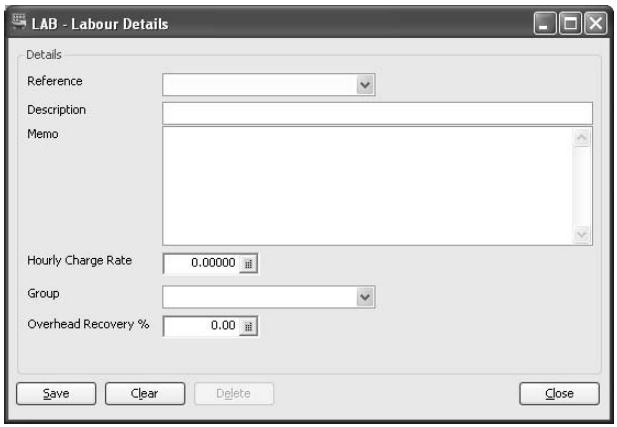
(Bill of Materials, Estimating)

You can enter details of labour manufacturing processes, including times and related costs, in the Labour Register. These can then be used in Bill of Materials and Estimating as required.

To add a labour process

1. From the Navigation Bar, click Manufacturing System Manager, and choose Labour Register > Enter New Record.

   An empty Labour Details window appears.



2. Enter a Reference for the labour process.
3. Enter a Description for the process (for example, cutting, drilling, assembly, inspection).
4. Enter any notes in the Memo box.
5. Enter an Hourly Charge Rate for the process. This is used as a default when adding the labour process to a BOM or estimate operation.

6. Enter or select a labour resource Group.

   Graphical Planner assigns works orders or works order recommendations to a specific labour resource or to a labour resource group. If you have several resources defined in the group, Graphical Planner uses the first available resource in the group.

7. Amend the Overhead Recovery %, if required. The default value shown was set in Overhead Recovery Settings. For more information, see *Overhead Recovery Settings* on page 27.

8. To save the process, click Save.

To amend a labour process

1. From the Navigation Bar, click Manufacturing System Manager, and choose Labour Register > Amend Record.

   An empty Labour Details window appears.

2. Select the labour Reference from the Reference drop-down list.

3. Make amendments to the labour record details where necessary.

4. To save the amended record, click Save.

To delete a labour process

1. From the Navigation Bar, click Manufacturing System Manager, and choose Labour Register > Amend Record.

   An empty Labour Details window appears.

2. Select the labour Reference from the Reference drop-down list.

3. Click Delete.

4. Confirm the deletion when prompted.

To print labour register reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Labour Register > Reports.

2. From the Reports menu, select the required report:
   - List - Detailed
   - List - Summary

To customise labour register reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Machine Register

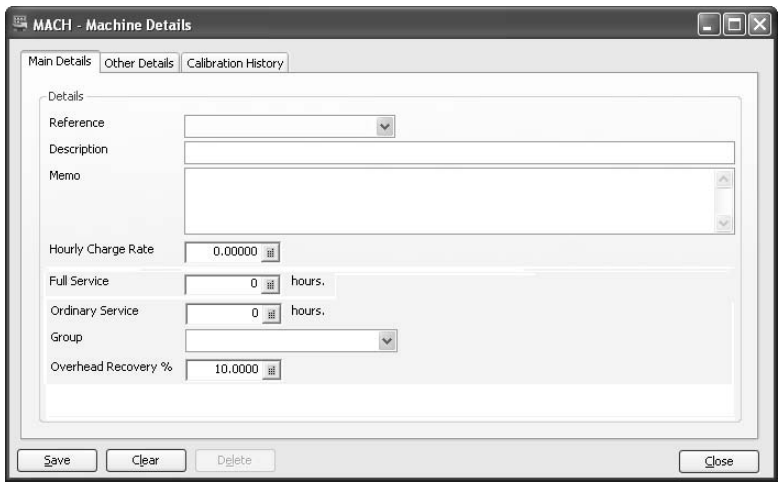
(Bill of Materials, Estimating)

The Machine Register holds details (including hourly rates) of machines used in manufacturing processes. You can store serial numbers, calibration intervals, repair history and so on with the details. These can then be used in Bill of Materials and Estimating as required.

To add a machine record

1. From the Navigation Bar, click Manufacturing System Manager, and choose Machine Register > Enter New Record.

   An empty Machine Details window appears.



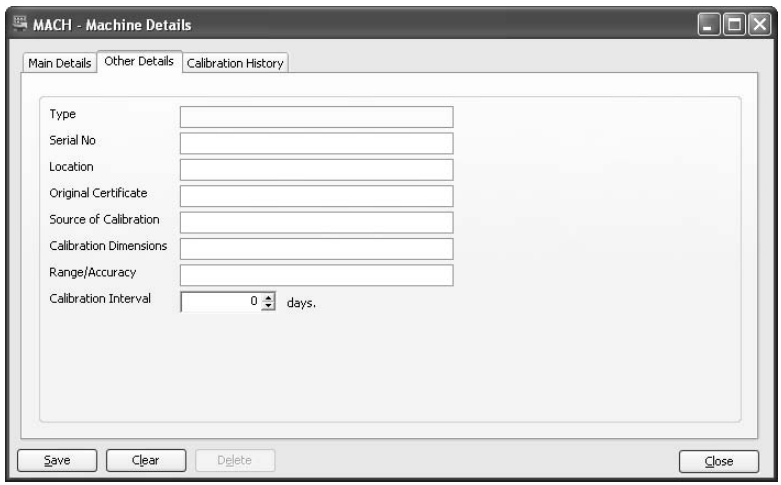
2. Enter the information required according to the following descriptions.

Reference	Enter a reference for the machine.
Description	Enter a description for the machine.
Memo	Enter any notes relating to the machine.
Hourly Charge Rate	Enter an hourly charge rate for the machine. This is used by default when the machine is used for a BOM or estimate operation.

Full Service	Enter the number of hours the machine can operate before it requires a full service. This is for reference only.
Ordinary Service	Enter the number of hours the machine can operate before it requires an ordinary service. This is for reference only.
Group	Enter or select a machine resource group.
Overhead Recovery %	Amend the Overhead Recovery %, if required. The default shown was set in Overhead Recovery Settings. For more information, see *Overhead Recovery Settings* on page 27.

3. To continue entering the Machine Details, click the Other Details tab.

   The Other Details information appears.

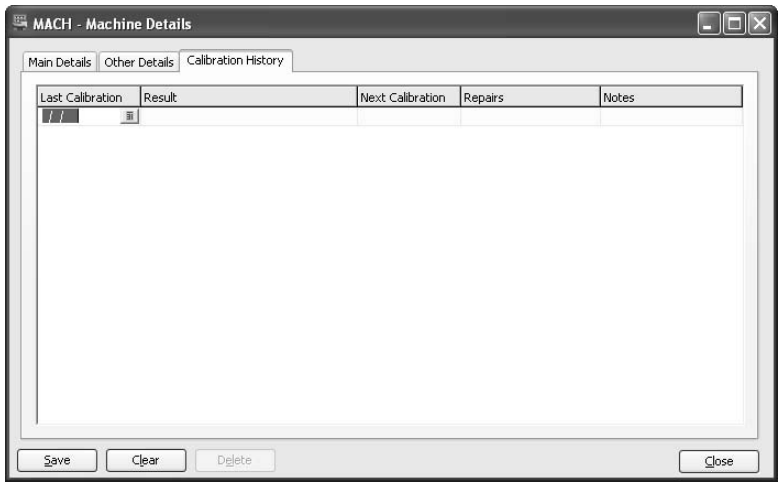


   - Enter any information which describes the machinery.
   - Enter a number of days for the Calibration Interval.

     Note: Manufacturing uses the interval to calculate the next calibration date.

4. To continue entering the Machine Details, click the Calibration History tab.

   The Calibration History information appears.



- Enter the Last Calibration date.

  Note: Manufacturing calculates the next calibration date using the Calibration Interval entered on the Other Details tab.

- Enter the Result of the last calibration, details of any Repairs and any further information in the Notes box.

5. To save the machine details, click Save.

To amend a machine record

1. From the Navigation Bar, click Manufacturing System Manager, and choose Machine Register > Amend Record.

   An empty Machine Details window appears.

2. Select the machine Reference from the drop-down list.

3. Make amendments to the machine record details, where necessary. For a description of the boxes, see *To add a machine record* on page 50.

4. To save the amended machine record, click Save.

To delete a machine record

1. From the Navigation Bar, click Manufacturing System Manager and choose Machine Register > Amend Record.

   An empty Machine Details window appears.

2. Select the machine Reference from the drop-down list.

3. Click Delete.
4. Confirm the deletion when prompted.

To print machine register reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Machine Register > Reports.
2. From the Machine Register Reports menu, select the required report:
   - List - Detailed
   - List - Detailed (By Machine Reference)
   - List - Summary
   - List - Summary (By Machine Reference)
   - Calibration Record
   - Due for Calibration

To customise machine register reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Operations Register

(Bill of Materials, Estimating)

The Operations Register includes labour and machine processes used in manufacturing processes.

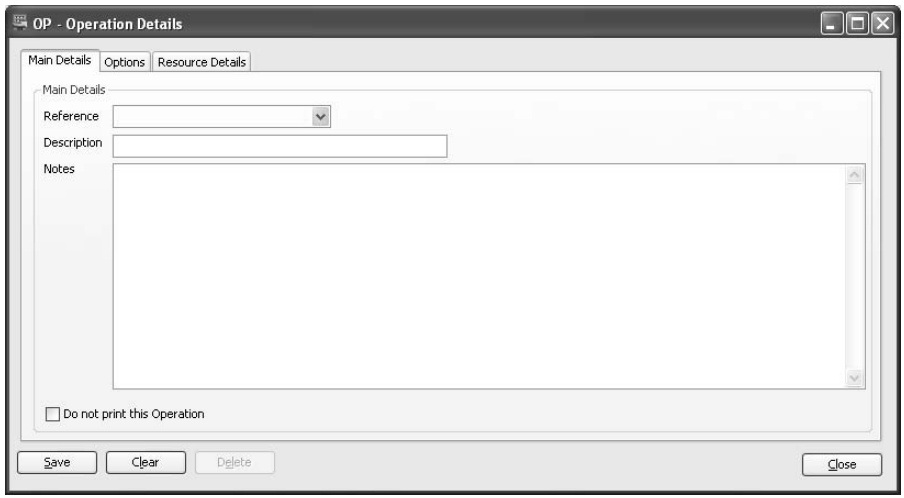
You can store setup times, time to completion, tooling costs and piece work or subcontract operation details.

Operations are used within Bill of Materials and Estimating modules. Details entered in the Operations Register act as defaults. You can change the details within individual BOMs or estimates.

To add an operation

1. From the Navigation Bar, click Manufacturing System Manager, and choose Operations Register > Enter New Record.

   An empty Operation Details window appears.

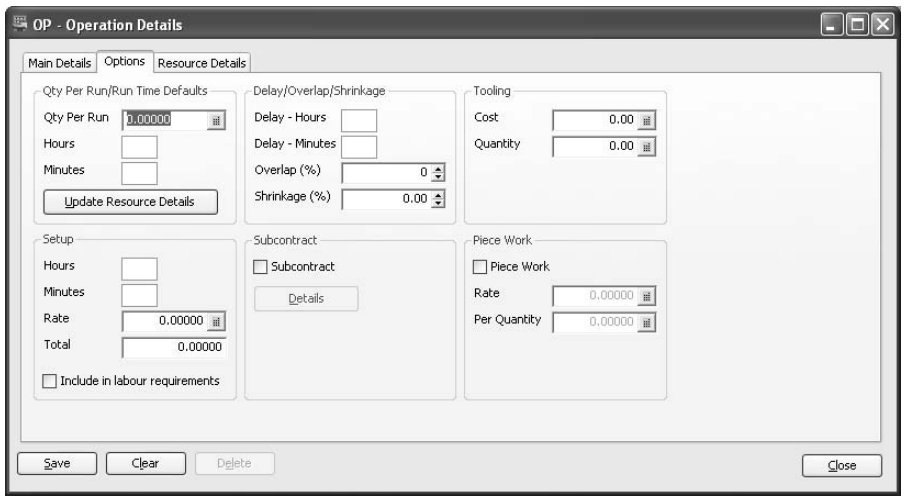


2. Enter the information required according to the following descriptions.

Reference	Enter a unique operation Reference.
Description	Enter an operation Description. This appears on works order documentation.

Notes	Enter additional information relating to the operation. You can add notes to works order documentation by amending the report layout. Customising works order documentation works in the same way as customising works order reports. For more information, see *To customise works orders reports on page 458*.
Do not print this Operation	Select this check box if you do not want to print the operation on documentation, for example, route cards.

3. To continue entering Operation Details, click the Options tab.
   The Options information appears.



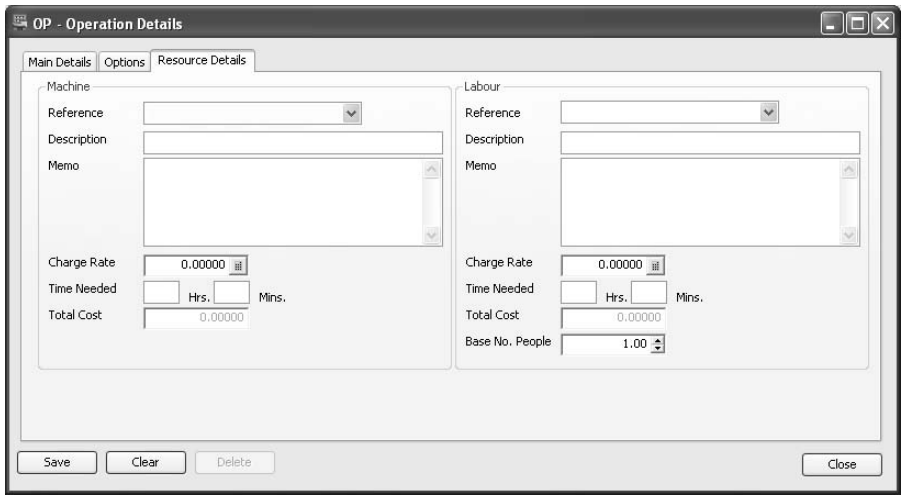
4. Enter the information required according to the following descriptions.

Qty Per Run	Enter a Qty Per Run/Run Time Defaults amount in the relevant boxes. For example, if the cycle time for 1000 finished items is five hours, enter: 'Qty Per Run' 1000 'Run Time' 5 Hrs 0 Mins. This would be exactly the same as entering: 'Qty Per Run' 2000 'Run Time' 10 Hrs 0 Mins. **Note:** Any related combinations may be used.
Update Resource Details	To enter Hours and Minutes values into the Time Needed boxes on the Resource Details tab, click Update Resource Details.
Setup	Enter machine setup time needed and the appropriate rate. Manufacturing multiplies these to arrive at a cost. To add setup time to the labour time required, select the 'Include in labour requirement' check box.
Delay/Overlap/Shrinkage	To control the gap between completing this operation and starting the next, choose one of the following options. ■ To lengthen lead time, enter the required delay time in the Delay - Hours and Delay - Minutes boxes. This is used by Graphical Planner to calculate time that must elapse before the next operation starts. ■ To start the next operation before the current one finishes, enter a percentage in the Overlap (%) box. This percentage of the current operation can be overlapped with the next operation. Graphical Planner uses this to calculate the operation duration that must elapse before the next operation starts. This enables subsequent operations to start earlier. Lead time is shortened for scheduled works orders or recommendations using the operation. ■ To shrink operation time shown on route cards or job sheets, enter a percentage in the Shrinkage (%) box.

Subcontract	If the operation is subcontracted to an external organisation or department, select the Subcontract check box and click Details. For more information, see *Subcontract Details* on page 58.
Tooling	Enter the tooling Cost, plus the related Quantity of finished items you can produce for the cost.
Piece Work	If cost is based on number of items completed, rather than an hourly rate, select the Piece Work check box. Enter a cost in the Rate box and number of items completed for that rate in the Per Quantity box. For example, 'Rate' = £20.00; 'Per Quantity' = 10.

5. To continue entering Operation Details, click the Resource Details tab.

   The machine and labour resource information appears.



6. Enter the information required according to the following descriptions.

Machine	Enter the reference for the machine required for the operation. **Note:** The machine must be defined in the Machine Register. For more information, see *Machine Register* on page 50. The time to make the (previously entered) quantity per run is displayed by default. You can amend this if required.
Labour	Enter the reference for the labour process. **Note:** The labour process must be defined in the Labour Register. For more information, see *Labour Register* on page 47. The time required to make the (previously entered) quantity per run is displayed by default. You can amend this if required. Enter the Base No. People required to complete the operation in the stipulated time. Depending on the Bill of Materials setting (see *The Costing/Trial Kitting tab on page 112*), you can calculate labour costs based upon the value entered here. If one hour is needed, at a rate of £7.50, but the job requires two people, the calculated cost is 1 x £7.50 x 2 = £15.00.

7. To save your Operation Details, click Save.

Subcontract Details

There are two tabs of information for subcontract details. You enter details of the charges for the subcontract operation, using the Details tab. Charges can be on a 'per-item' basis, or in bands. You enter details for the subcontract operation orders, using the Ordering tab.

To enter subcontract details

1. From the Navigation Bar, click Manufacturing System Manager, and choose Operations Register > Enter New Record or Amend Record.

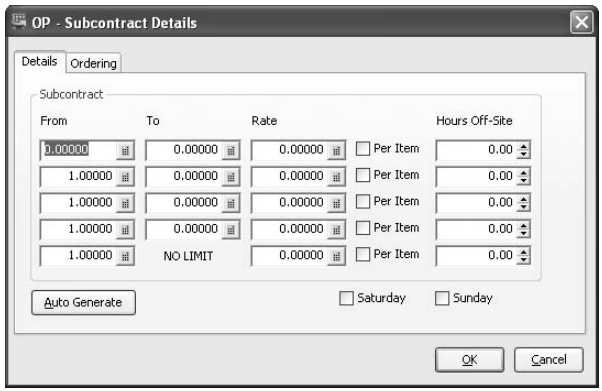
   The Operation Details window appears.

2. Enter the operation details (see *To add an operation* on page 54) or select the operation you want to amend.

3. Click the Options tab.

4. Select the Subcontract check box and then click Details.

   The Subcontract Details window opens.



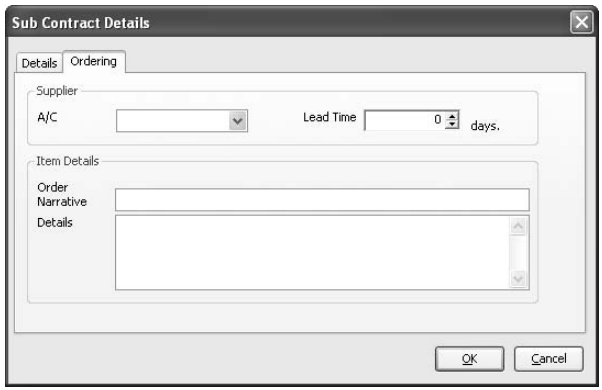
5. To generate price band quantities automatically, click Auto Generate and enter the band details.

6. Select the Per Item check boxes if charges shown are for each item within the band. Leave the check boxes clear if charges shown are for any quantity within the band.

7. Enter the number of hours items are likely to be off-site. This is for scheduling purposes.
   Select the Saturday check box if the Hours Off-Site figure includes Saturdays.
   Select the Sunday check box if the Hours Off-Site figure includes Sundays.

8. Click the Ordering tab.

   The Ordering information appears.



9. Enter the information required according to the following descriptions.

A/C	Enter the account number of the preferred subcontractor for the operation.
Lead Time	Enter a Lead Time. Suggested order dates are based on job start dates.
Order Narrative	Enter an Order Narrative and any additional information to use on subsequent purchase orders.
Details	Enter text to be placed as an S3 item on any Purchase Orders raised by Manufacturing. For more information, see *Allocating Stock* on page 404.

10. To save the subcontract details, click OK.

To amend an operation

1. From the Navigation Bar, click Manufacturing System Manager, and choose Operations Register > Amend Record.

   An empty Operation Details window appears.

2. Select the operation that you want to amend from the Reference drop-down list.
3. Make amendments to the operation record details where necessary. For more information, see *To add an operation* on page 54.
4. To save the amended operation record, click Save.

To delete an operation

1. From the Navigation Bar, click Manufacturing System Manager, and choose Operations Register > Amend Record.

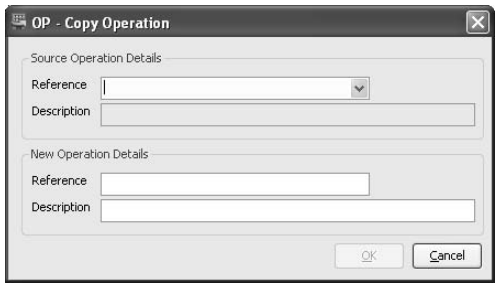
   An empty Operation Details window appears.

2. Select the operation that you want to delete from the Reference drop-down list.
3. Click Delete.
4. Confirm the deletion when prompted.

To copy an operation

1. From the Navigation Bar, click Manufacturing System Manager, and choose Operations Register > Copy Operation.

   The Copy Operation window appears.



2. Select the Reference for the source operation. The description is displayed automatically in the Description box.
3. Enter a Reference for the new operation.
4. Enter a Description for the new operation.
5. Click OK to display the confirmation screen.
6. To confirm the copy, click Yes.

To print operation reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Operations Register > Reports.
2. From the Reports menu, select the required report:
   - List - Detailed
   - List - Detailed (By Reference)
   - List - Summary
   - List - Summary (By Reference)

To customise operation reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Drawing Register

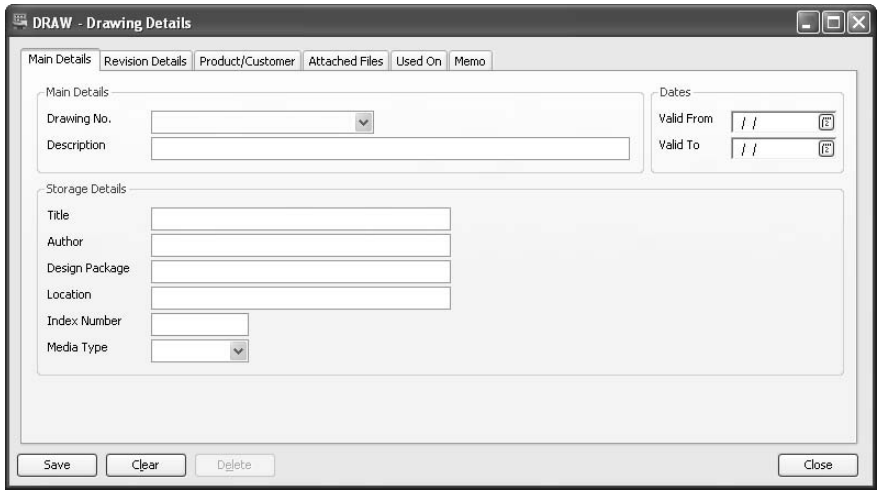
(Bill of Materials, Estimating)

The Drawing Register allows you to keep a record of all drawings relating to manufactured items. Details include the drawing reference number, revision details, and the physical location of the drawing. Drawings can be cross referenced to BOMs or estimates. This causes the drawing reference number and latest revision date to appear on works order documentation.

To add a drawing

1. From the Navigation Bar, click Manufacturing System Manager, and choose Drawing Register > Enter New Record.

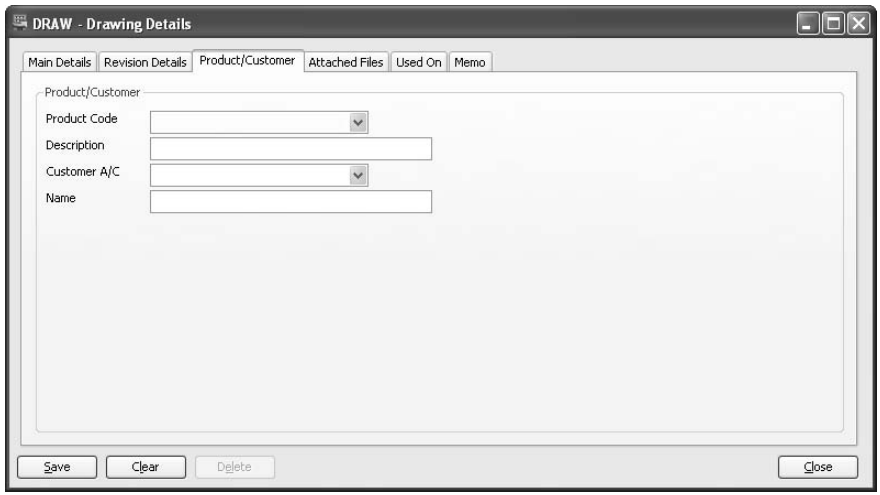
   An empty Drawing Details window appears.



2. Enter the information required according to the following descriptions.

Drawing No.	Enter a reference number for the drawing.
Description	Enter a drawing description.
Dates	Enter validity dates for the drawing, if required.
Storage Details	Enter details about where the drawing is stored. You can record a physical location of the drawing. For example, the drawing could be on paper stored in a particular cabinet, or saved on CD-ROM in a specific box.

3. To continue making changes to the drawing details, click the Product/Customer tab.
   The Product/Customer information appears.

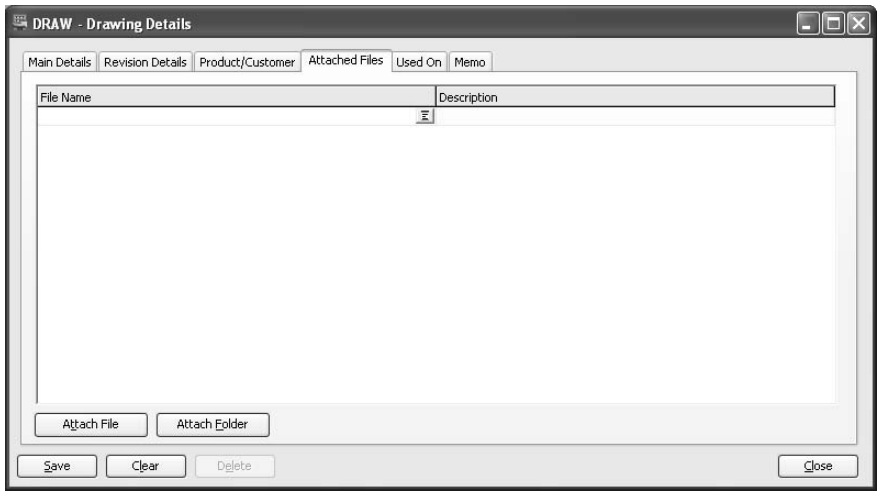


Note: All product/customer entries are optional.

4. Enter the information required according to the following descriptions.

Product Code	Enter the product code to which the drawing relates. The description appears automatically.
Customer A/C	Enter the Sales Ledger account reference to which the drawing relates. The Name appears automatically.

5. To continue making changes to the drawing details, click the Attached Files tab.
   The Attached Files information appears.



6. To attach a file or folder to a Drawing record, click Attach File or Attach Folder as appropriate.

   An Open or Choose File(s) window appears.

   - Select the file or folder you want to attach to the Drawing.
   - Click Open if a file, or OK if a folder.

     Note: You can only select one file or folder at a time.

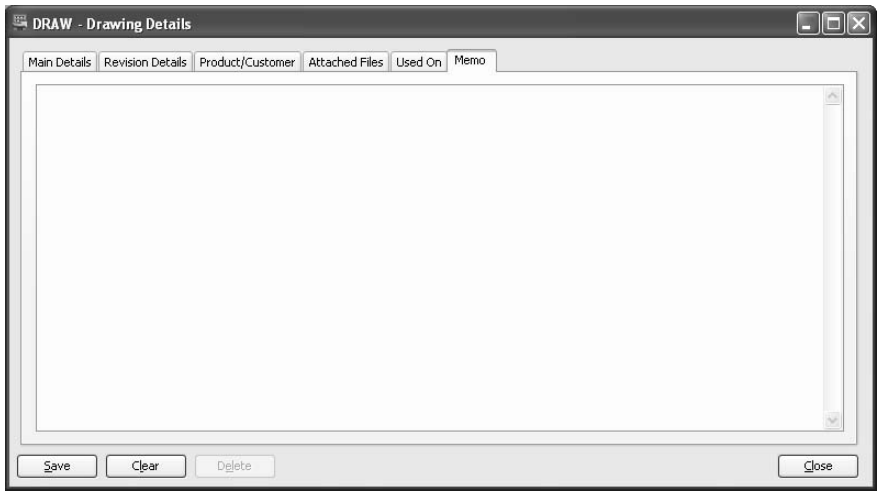
     The file or folder appears in the Attached Files list.
   - To open a file or folder, click it.
   - Enter a description for each attachment, if you require. This is for information only.

7. To delete an attached file, select it in the Attached Files list and press F8.

   The file is removed from the drawing; it is not removed from your computer.

8. To continue making changes to the drawing details, click the Memo tab.

   The Memo information appears.



9. Enter any notes you require.
10. To save your Drawing details, click Save.

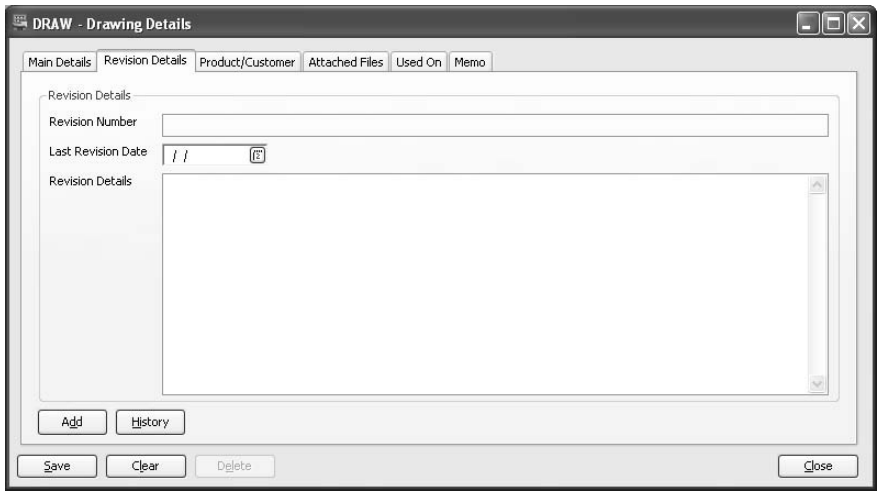
To amend a drawing

1. From the Navigation Bar, click Manufacturing System Manager, and choose Drawing Register > Amend Record.

   An empty Drawing Details window appears.

2. Select the drawing that you want to amend from the Reference drop-down list.
3. Amend the details on the Main Details, Product/Customer, Attached Files and Memo tabs as required. For more information, see *To add a drawing* on page 62.
4. Click the Revision Details tab.

   The Revision Details information appears.



5. Enter the information required according to the following descriptions.

Revision Number	Enter the drawing revision number.
Last Revision Date	Enter the Last Revision Date.
Revision Details	Enter any details of the latest revisions made.

6. To add a new revision to the revision history, click Add.

   This updates the history with the details shown on the Revision Details tab. It clears the boxes so they are ready for new information.

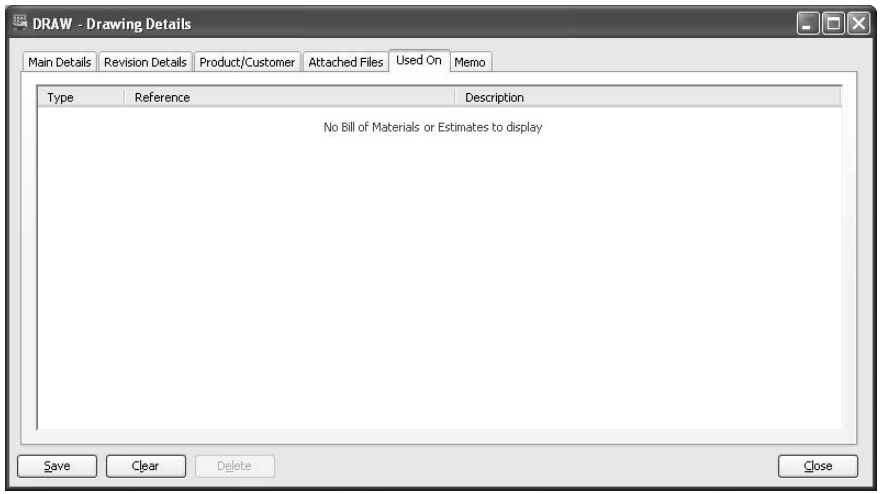
7. To view a list of previous revision, click History.

   The Revision History window appears.

   - Click Close to return to the Revision Details tab.

8. To continue making changes to the drawing details, click the Used On tab.

   The Used On information appears, showing if the drawing is linked to a BOM or an estimate.



Note: The Type column identifies the record as either BOM or Estimate.

9. To view the BOM or the estimate, double-click on an entry in the list.
10. When you have finished amending your drawing details, click Save.

    Note: If you are amending a drawing which is attached to BOMs or estimates, click Yes at the prompt. This updates the details stored in the Bill of Materials and Estimating modules.

To delete a drawing

1. From the Navigation Bar, click Manufacturing System Manager, and choose Drawing Register > Amend Record.

   An empty Drawing Details window appears.
2. Select the drawing that you want to delete from the Reference drop-down list.
3. Click Delete.
4. To confirm the deletion, click Yes when prompted.

To print drawing reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Drawing Register > Reports.
2. From the Reports menu, select the required report:
   - List - Detailed
   - List - Detailed (By Account Reference)

- List - Detailed (By Author)
- List - Detailed (By Drawing Reference)
- List - Detailed (By Product Code)
- List - Summary
- Valid To
- Valid To (By Date)

To customise drawing reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Stage Templates

(Estimating)

Stage templates are used within Estimating. Stages are the main elements into which an estimate can be broken down. For example, a design stage, a manufacture stage or an install stage.

All estimates must have at least one stage. If you are using full estimate or multi-item estimate entry, you must enter at least one stage for the estimate, when it is created. When you create a stage template, you can specify if you want it to be added automatically to estimates that are full estimate entry or multi item entry. If you are using rapid estimate entry, a default stage is used for the estimate. This default stage is specified within Estimating Settings.

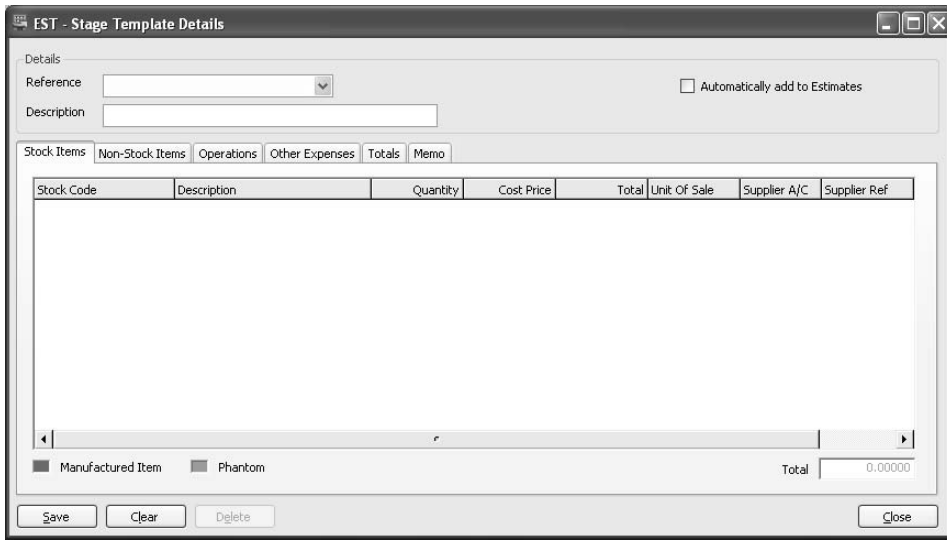
Setting up stage templates lets you enter estimates more quickly. You can modify the stage information for the individual estimates as you enter them.

When you set up stage templates, you have the option to update operations. This lets you update Operations Register automatically, with changes made to labour and machine hourly rates.

To create stage templates

1. From the Navigation Bar, click Manufacturing System Manager, and choose Stage Templates > Enter New Record.

   The Stage Template Details window appears.



2. Enter a Reference and Description for this template.
3. If you want the stage to be added automatically to new full estimates or multi-item estimates, select the Automatically add to Estimates check box.

   The stage will have a status of Entered and its Due Date will be that on the Estimate header.

   Note: The stage will not be added automatically to estimates if you create estimates using the following methods:

   - Convert a BOM to an estimate.

     Choose Estimating > Enter New Estimate - Full and select a product code which is an existing BOM.
   - Create a rapid entry estimate.

     Choose Estimating > Enter New Estimate - Rapid.
   - Create a one-off estimate.

     Choose Works Orders >Create Estimate from One-Off.
4. Enter stock item information according to the following descriptions.

   Note: Stock items are those which have a product record set up within the Stock Control module.

Stock Code	Enter or select the product code for the required component. The code must already exist in the Stock Control module. Stock items that have a BOM set up for them (manufactured items) are highlighted in blue by default. You can change this default colour, using the option *Highlight Colours* on page 23.
Description	The Stock Code description appears by default.
Quantity	Enter the number of items required. **Note:** If you enter a quantity which does not match the unit of sale, the quantity is automatically adjusted to the nearest appropriate value.
Cost Price	Manufacturing defaults to the last price paid for the stock item selected. This may not be the price you want to include in your estimate. You can overwrite it, if required. **Note:** If you overwrite the price and recost the estimate, the price reverts to what is stored in Stock Control.
Total	Manufacturing calculates and displays the total cost.

Unit of Sale	The unit of sale (used by Manufacturing as a unit of purchase) is displayed. If required, select an alternative unit of sale. **Note:** If you amend the cost price, you must make sure the amended price relates to the units displayed.
Supplier A/C	Enter a supplier's account reference, if required.
Supplier Ref	If you have a supplier reference, enter this.
Lead Time	This is the purchase lead time that should be used to offset the start date. It can also be applied to manufactured items. If you define a supplier and lead time against a manufactured item (an item with a BOM defined), it will be purchased, not manufactured.

- Continue to enter stock items until complete.

  To speed up the entry of lines within the Stock Items tab, try these shortcuts:

  F8 - delete an item from the estimate.

  F7 - insert a line into the estimate.

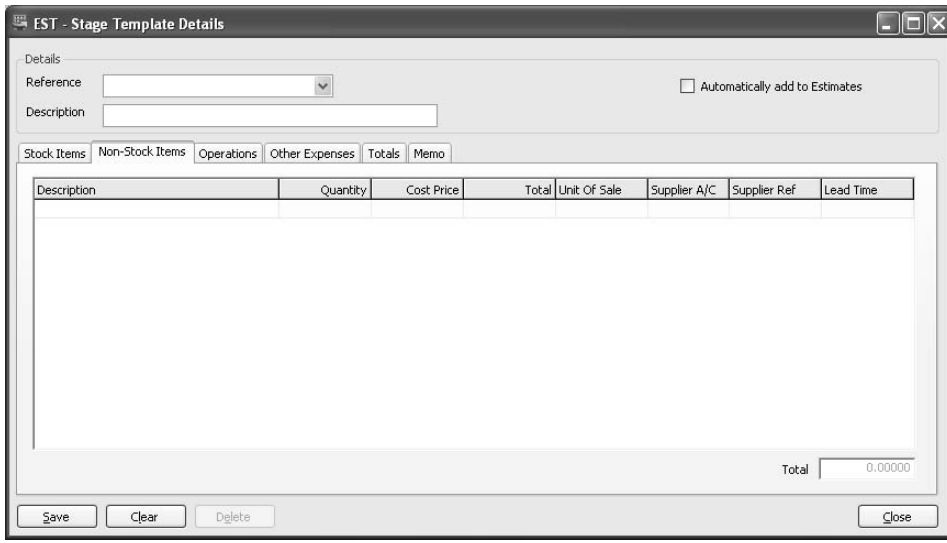
  F6 - copy the contents of the above cell.

  As you enter items, the total cost accumulates in the Total box.

Note: When you process estimates, using this template, sub-assembly requirements are automatically added by the MRP (Materials Requirements Planning) module.

5. To continue entering stage template information, click the Non-Stock Items tab.

   The non-stock items information appears.



6. Enter non-stock item information according to the following descriptions.

   Note: Non-stock items are bought in especially for manufacturing and do not have a product record set up in the Stock Control module.

Description	Enter a description of the non-stock item.
Quantity	Enter a quantity required for this template.
Cost Price	Enter the estimated cost price.
Total	Manufacturing calculates the total cost by multiplying the quantity entered, by the price. **Note:** You can use the TAB key to move out of the Total field to ensure that the total figure is calculated.
Unit of Sale	Enter the units that this price relates to for future reference, if required.
Supplier A/C	Enter a supplier's account reference, if required.
Supplier Ref	If you have a supplier reference, then enter this.

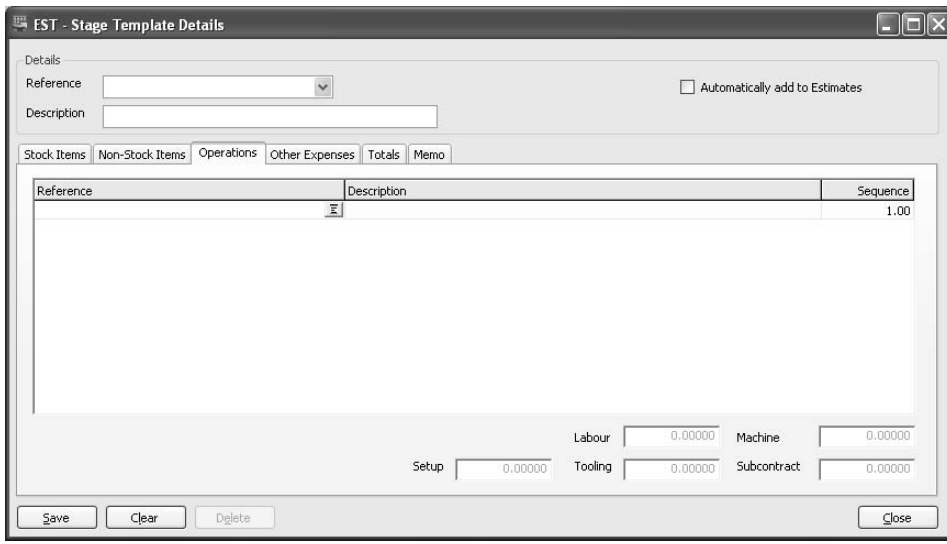
Lead Time	This is the purchase lead time that should be used to offset the start date.

- Continue to enter non-stock items.

  As you enter items, the total cost accumulates in the Total box.

7. To continue entering stage template information, click the Operations tab.

   The Operations information appears.



Note: Manufacturing operations can come from the Operations Register, the Labour Register or the Machine Register.

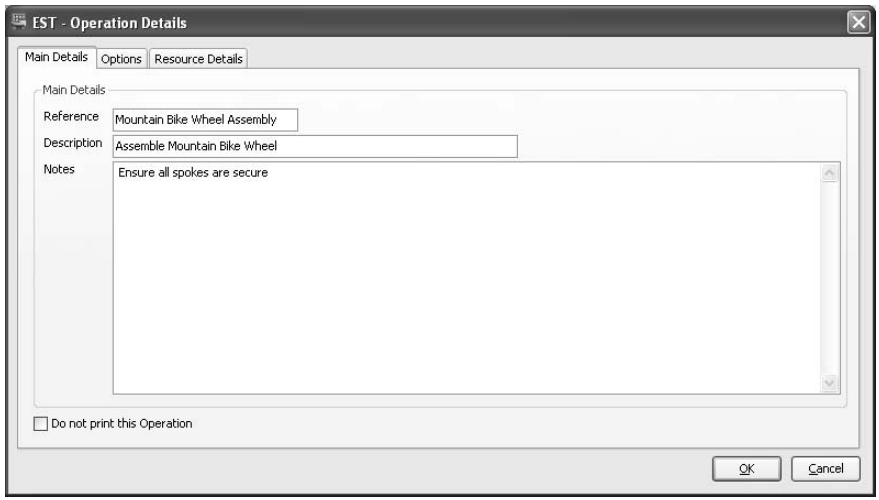
8. To use operations defined in the Operations Register, click in the Reference box to display the Select Operation list. Select the operation. The operation details are entered against the estimate. You can amend these as required. For more information on the Operations Register, see *Operations Register* on page 54.

9. If you are not using operations defined in the Operations Register, enter operations header information.

Reference	Enter the operation reference.
Description	Enter the operation description.

10. To amend operation details, click in the Description box.

    The Operation Details window appears.



    Entering operation details here is almost the same as entering operation details in the Operations Register. For more information on entering operation details into the Operations Register, see *To add an operation* on page 54.

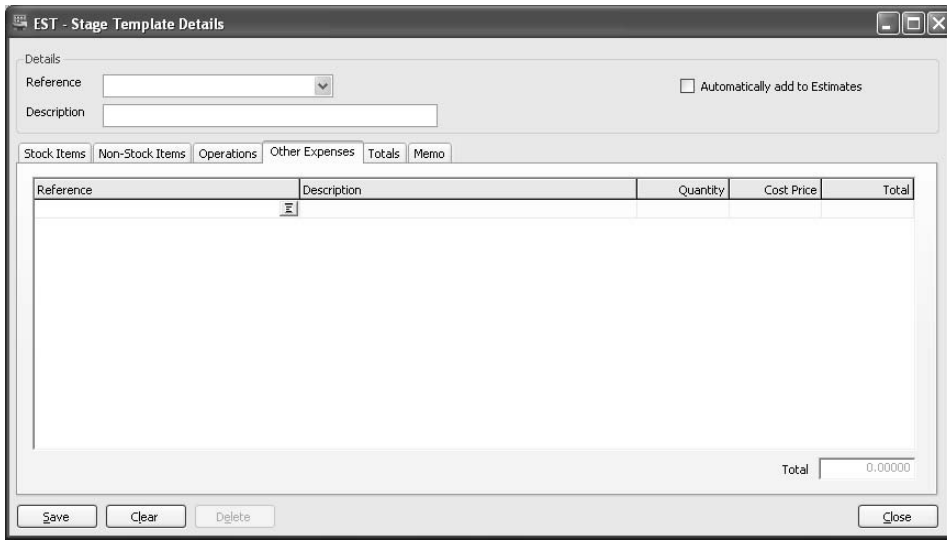
    On the Options tab, confirm the number of pieces required by default for the stage. This is the number of individual items required to make each finished item.

    Note: As you enter operation details, the total costs by category appear on the Resource Details.

    - When you complete all the operation details, click OK to save your entry. You are returned to the Stage Details window.
    - Continue to enter operations.

11. To continue entering your stage template information, click the Other Expenses tab.

    The Other Expenses information appears.



Note: You can use this window to enter details of expenses that are not covered by the other cost categories. Select from a list of Other Expenses already set up. For more information, see *Other Expenses* on page 439.

12. Enter the information required according to the following descriptions.

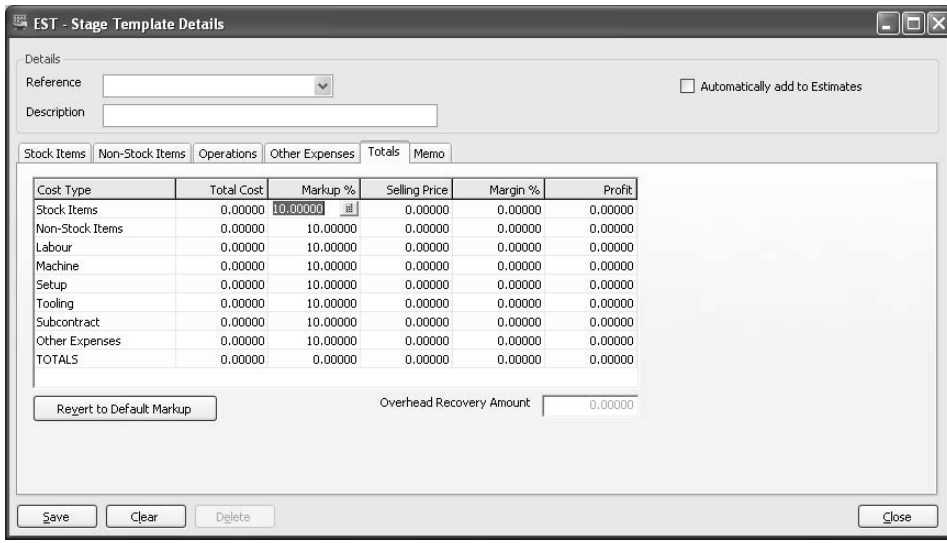
Reference	Click in the Reference box and the down arrow appears. Click this and select the required expense Reference. The Description appears automatically.
Quantity	Enter the quantity of this expense item.
Cost Price	The default expected price appears in the Cost Price box. You can change this, if required.
Total	When you enter a Quantity (and amend the Cost Price), the total updates.

- Continue to enter other expense items.

  As you enter each item, the total cost accumulates in the Total box.

13. To continue entering stage template information, click the Totals tab.

    The results of this stage are analysed under eight cost types.



Note: Default mark-up percentages entered under Estimate Settings are applied.

The Margin % is calculated by taking the profit as a percentage of the selling price.

14. Amend the Mark Up % and/or Selling Price of any cost type, if required. When you make an amendment, affected values are automatically recalculated.

    You can manipulate these values until they meet your own criteria, for example, minimum mark-up or margin percentages.

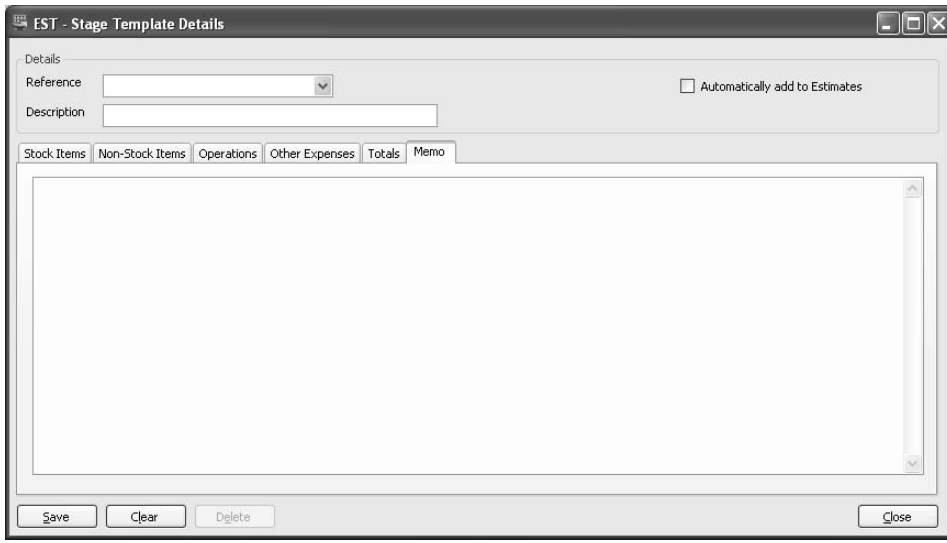
    Note: To revert to default mark-up, click 'Revert to Default Markup'. The values are recalculated to the figures shown before you amended them.

    You can return to previous entries you made under each cost type by clicking the appropriate tab. Amendments, deletions or additional entries are automatically reflected in the 'Totals' tab when you return to it.

15. The Overhead Recovery Amount box shows the total overheads recovered against the stage, based upon Overhead Recovery Settings. For more information, see *Overhead Recovery Settings* on page 27.

16. To continue entering stage template information, click the Memo tab.

    The Memo information appears.



- Enter an unlimited amount of text.

Note: When text is entered, the tab header displays in capital letters. This indicates that text has been entered.

17. To save the template details, click Save.

To amend stage templates

1. From the Navigation Bar, click Manufacturing System Manager, and choose Stage Templates > Amend Record.

   An empty Stage Template Details window appears.

2. Select the stage template that you want to amend from the Reference drop-down list.
3. Make any amendments to the stage template as required. For more information, see *To create stage templates* on page 69.
4. To save the amended template, click Save.

To delete stage templates

1. From the Navigation Bar, click Manufacturing System Manager, and choose Stage Templates > Amend Record.

   An empty Stage Template Details window appears.

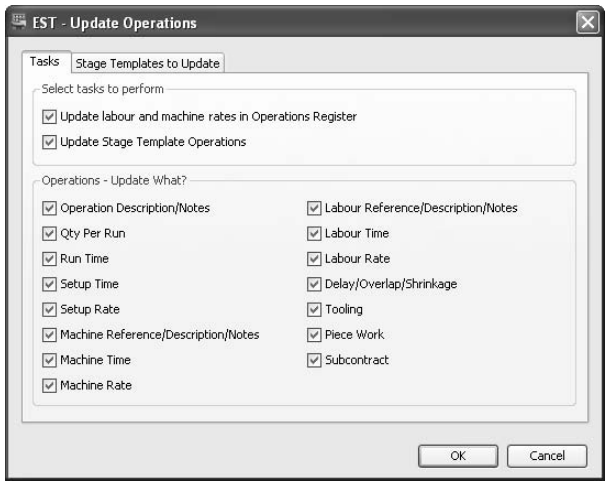
2. Select the stage template that you want to delete from the Reference drop-down list.

3. Click Delete.
4. Confirm the deletion when prompted.

To update operations

1. From the Navigation Bar, click Manufacturing System Manager, and choose Stage Templates > Update Operations.

   The Update Operations window appears.



2. Select or clear the following check boxes in the first section, 'Select tasks to perform':

Update labour and machine rates in Operations Register	Select this check box to update the Operations Register automatically with changes made in the Labour Register and Machine Register.
Update Stage Template Operations	Select this check box to update Stage Templates automatically with changes in the Operations Register.

3. Select the required check boxes in the second section, 'Select tasks to perform'.
4. If you have selected the 'Update Stage Template Operations' check box, click the 'Stage Templates to Update' tab to select the stage templates to update.
5. To perform the selected updates, click OK.
6. Confirm that you want to update the selected tasks when prompted.

Prospects

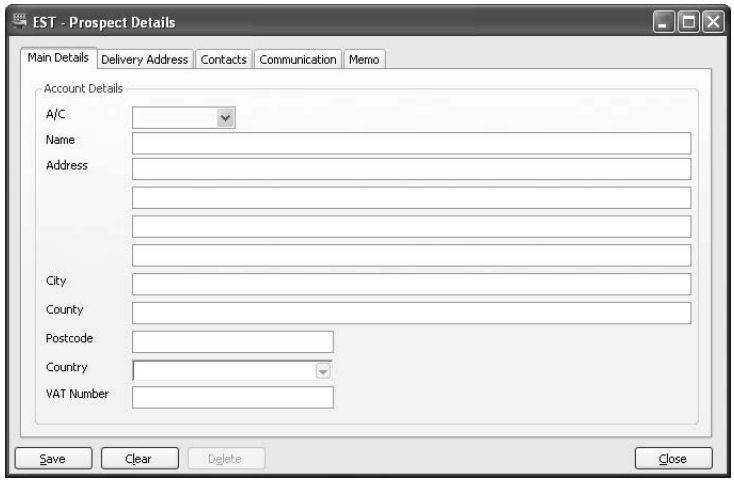
(Estimating)

Manufacturing lets you store information about prospective customers. This information is used in Estimating. For more information about this, see *The Main Details tab* on page 183. When prospective customers become customers you can move the information to the Sales Ledger.

To create prospect records

1. From the Navigation Bar, click Manufacturing System Manager, and choose Prospects > Enter New Record.

   The Prospect Details window appears.



2. Enter an A/C reference for the prospect.

   Note: We recommend that you choose a reference that does not exist in the Sales Ledger. Then, when you convert the prospect into a customer, you will not need to change the reference.

3. Enter the other information on the Main Details tab as required.

   Note: You can only enter City, County and Country information if the Use Segmented Addresses option is selected in Accounting System Manager.

4. Click the Delivery Address tab and enter the delivery address details if required.

   Note: You can only enter City, County and Country if the Use Segmented Addresses option is selected in Accounting System Manager.

5. Click the Contacts tab and enter contact details, if required.

6. Click the Communication tab and enter telephone and fax numbers and email and website addresses, if required.
7. Click the Memo tab and enter any notes required in the Memo box.
8. To save the record, click Save.

To amend prospect records

1. From the Navigation Bar, click Manufacturing System Manager, and choose Prospects > Amend Record.

   An empty Prospect Details window appears.
2. Select the prospect that you want to amend from the Reference drop-down list.
3. Make amendments to the prospect record as required.
4. To save the amended prospect, click Save.

To delete prospect records

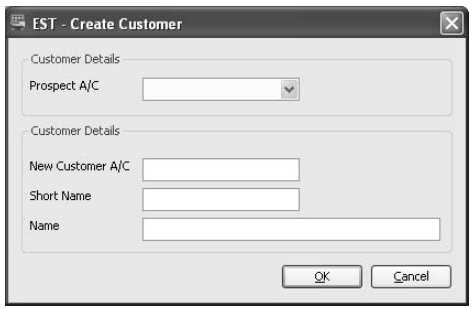
1. From the Navigation Bar, click Manufacturing System Manager, and choose Prospects > Amend Record.

   An empty Prospects window appears.
2. Select the prospect that you want to delete from the Reference drop-down list.
3. Click Delete.
4. Confirm the deletion when prompted.

To create a Sales Ledger customer from details in the prospects database

1. From the Navigation Bar, click Manufacturing System Manager, and choose Prospects > Create Customer.

   The Create Customer window appears.



2. Choose the Prospect A/C from the drop-down list.

   The New customer A/C defaults to the reference you entered for the prospect. The Short Name and Name shown are also those you entered for the prospect.

3. Amend the New Customer A/C, if required.

   Note: You cannot enter an account that is already used in the Sales Ledger.

4. Amend the Short Name and Name for the New Customer A/C, if required.

5. To remove the prospect details from the Prospects Database and create a new entry in the Sales Ledger, click OK.

To print prospect reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Prospects > Reports.

2. From the Reports menu, select the required report:
   - Estimates for Prospect
   - List - Detailed
   - List - Summary

To customise prospect reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Labour Categories

(Works Orders)

Labour Categories lets you group employees by function or skill. This is used in timesheet entry in Works Orders > Enter Costs. For more information, see *Entering Operation Times and Costs* on page 429.

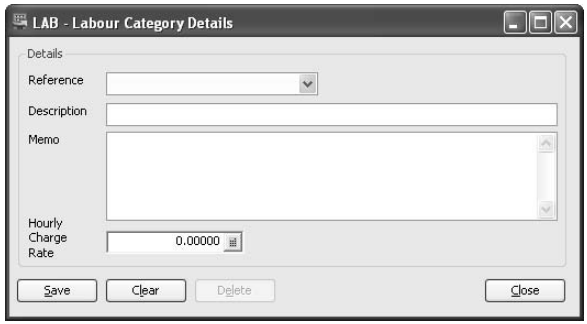
If you use Operation Times, labour categories can be used with this too. For more information, see the *Sage 200 Operation Times* documentation.

Typical employees may be operatives, supervisors, apprentices, fitters and installers, for example. Generally, employees in a category are charged at the same rate. However, you can apply different rates to individual employees, regardless of category.

To add a labour category

1. From the Navigation Bar, click Manufacturing System Manager, and choose Labour Categories > Enter New Record.

   The Labour Category Details window appears.



2. Enter a Reference for the labour category.

   Note: You may find it helpful to incorporate at least some characters from the description in the code. For example, operative may have a reference of 'OP'.

3. Enter any appropriate notes in the Memo box.

4. Enter a default Hourly Charge Rate for the category. You can amend this for individual employees if required.

5. When you have entered all the required information, click Save.

To amend a labour category

1. From the Navigation Bar, click Manufacturing System Manager, and choose Labour Categories > Amend Record.

   The Labour Category Details window appears.

2. Select the required category from the Reference drop-down list.

3. Amend the information as required.

   For more information, see *To add a labour category* on page 82.

4. Click Save.

To delete a labour category

1. From the Navigation Bar, click Manufacturing System Manager, and choose Labour Categories > Amend Record.

   The Labour Category Details window appears.

2. Select the required category from the Reference drop-down list.

3. Click Delete.

4. Confirm the deletion when prompted.

To print labour category reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Labour Categories > Reports.

2. From the Reports menu, select the required report.

   - List - Detailed
   - List - Summary

To customise labour category reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Employees

(Estimating, Works Orders)

You can enter employee details and attach a default labour category to each employee.

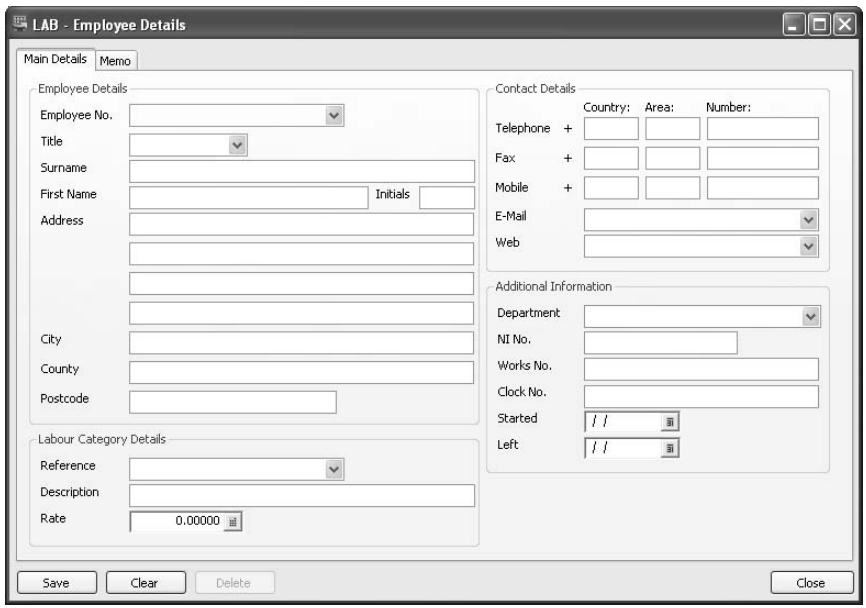
When entering labour costs in Works Orders > Enter Costs > Timesheets, you can amend the category and hourly rate, if necessary. For more information, see *Entering Operation Times and Costs* on page 429.

Employees are also used in Operation Times. For more information, see the *Sage 200 Operation Times* documentation.

To add an employee record

1. From the Navigation Bar, click Manufacturing System Manager, and choose Employees > Enter New Record.

   The Employee Details window appears.

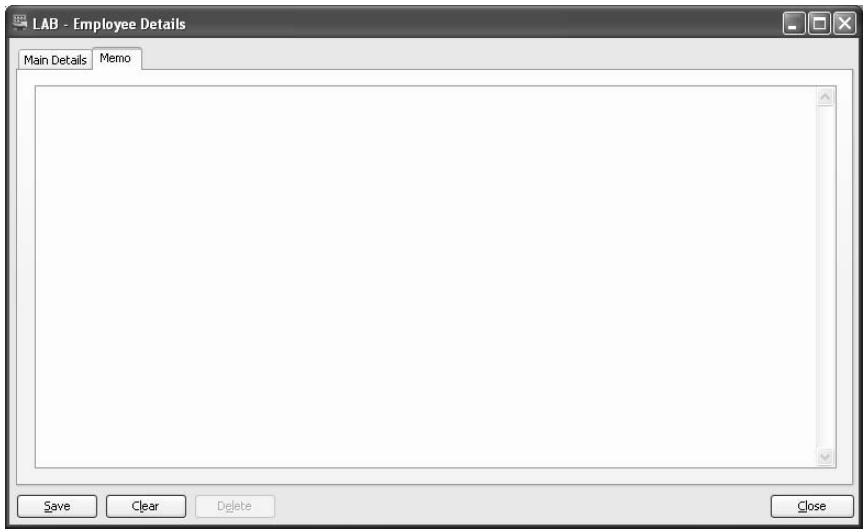


2. Enter the information required according to the following descriptions.

Employee Details	Enter an employee number of up to 10 letters and/or numbers. **Note:** You may find it helpful to incorporate at least some characters from the employee's name. For example, John Smith may have a number of SMI001. Complete the other boxes for the employee: **Note:** You can only enter City and County information if the Use Segmented Addresses option is selected in Accounting System Manager.
Contact Details	Enter the contact details, if required.
Labour Category Details	Enter the employee category Reference. Employees can be grouped according to function or skill, for example, operators and supervisors. These groups are set up under labour categories. For more information see *Labour Categories* on page 82. The Description and default Rate are displayed. If the default rate is not appropriate for this employee you can change it. **Note:** This only changes the rate for this employee, and not for the labour category.
Additional Information	Enter a Department that applies to this employee, if required. **Note:** If you are using Operation Times, you can print barcode reports by department. Enter the NI No. and Works No. if required. Enter the Clock No. if required. Enter the Started and Left dates.

3. To continue adding employee details, click the Memo tab.

   The Memo information appears.



4. Enter any appropriate notes in the Memo box. You can enter an unlimited amount of text.
5. To save your employee details, click Save.

To amend an employee record

1. From the Navigation Bar, click Manufacturing System Manager, and choose Employees > Amend Record.

   The Employee Details window opens.
2. Select the employee record that you want to amend.
3. Amend the employee Main Details and Memo text as required. For more information, see *To add an employee record* on page 84.
4. To save your Employee details, click Save.

To delete employee records

1. From the Navigation Bar, click Manufacturing System Manager, and choose Employees > Amend Record.

   The Employee Details window opens.
2. Select the employee record that you want to delete.
3. Click Delete to delete the employee record.
4. Confirm the deletion when prompted.

To print employee reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Employees > Reports.
2. From the Reports menu, select the required report.
   - Barcode Labels
   - Barcode Labels (By Department)
   - Barcode Labels (Sorted By Name)
   - Barcode Labels (By Department, Sorted By Name)
   - List - Detailed (By Department)
   - List - Detailed (By Employee Number)
   - List - Summary (By Department)
   - List - Summary (By Employee Number)

To customise employee reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Expense Types

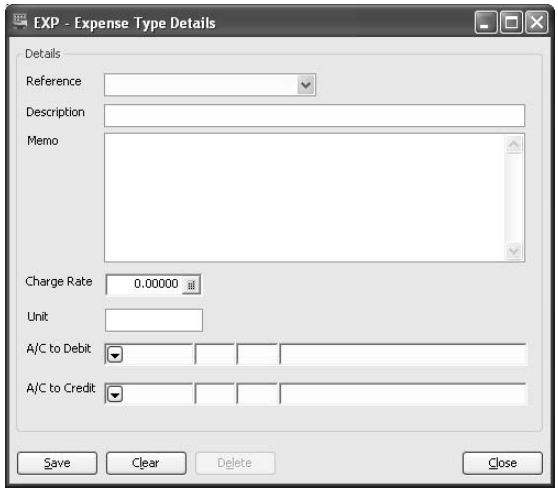
(Estimates, Works Orders)

Manufacturing analyses costs under eight main headings. Setting up expense types lets you analyse other costs. Expense types can be used in estimates and transactions.

To add expense types

1. From the Navigation Bar, click Manufacturing System Manager, and choose Expense Types > Enter New Record.

   The Expense Type Details window appears.



2. Enter a Reference for the expense type.

   Note: It can be helpful to incorporate at least some characters from the expense description in the code. For example, the description 'Travelling Time' may have a reference of 'TRAV'.

3. Enter a description for the expense type.

4. Enter any appropriate notes in the Memo box.

   You can enter an unlimited amount of text.

5. Enter a Charge Rate for this item, followed by the appropriate Unit of Sale.

   For example, a mileage allowance may be charged at 35 pence per mile.

6. Enter the default nominal codes to produce automatic journals when making entries for these expenses. Enter these using the A/C to Debit and A/C to Credit drop-down lists.

7. When you have entered all the necessary information, click Save.

To amend an expense type

1. From the Navigation Bar, click Manufacturing System Manager, and choose Expense Types > Amend Record.

   The Expense Type Details window appears.

2. Select the expense type from the Reference drop-down list.
3. Make changes to the information displayed, as required. For more information, see *To add expense types* on page 88.
4. When you have entered all the necessary information, click Save.

To delete expense types

1. From the Navigation Bar, click Manufacturing System Manager, and choose Expense Types > Amend Record.

   The Expense Type Details window appears.

2. Select the expense type from the Reference drop-down list.
3. Click Delete.
4. Confirm the deletion when prompted.

To print expense type reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Expense Types > Reports.
2. From the Reports menu, select the required report.
   - List - Detailed
   - List - Detailed (By Reference)
   - List - Summary
   - List - Summary (By Reference)

To customise expense type reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Non-chargeable Time

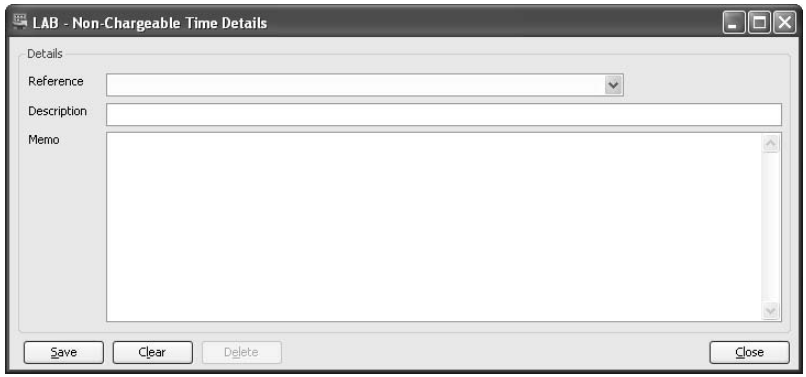
(Works Orders)

You can set up categories for time that is not chargeable within manufacturing jobs, for example, training or downtime. These categories are used with the Timesheets option (see *Posting Actual Times and Costs to Works Orders* on page 433). When you enter timesheet information, you can record time against these categories, if required. You can also produce reports to analyse non-chargeable time bookings, by date or non-chargeable reference code.

To add non-chargeable time categories

1. From the Navigation Bar, click Manufacturing System Manager, and choose Non-Chargeable Time > Enter New Record.

   The Non-Chargeable Time Details window appears.



2. Enter a Reference for the new non-chargeable time type.
3. Enter a Description.
4. Enter any applicable notes in the Memo box. You can enter an unlimited amount of text.
5. To save your entry, click Save.

To amend non-chargeable time categories

1. From the Navigation Bar, click Manufacturing System Manager, and choose Non-Chargeable Time > Amend Record.

   An empty Non-Chargeable Time Details window appears.

2. Select the record you want to amend from the Reference drop-down list.

3. Make the required amendments. For more information, see *To add non-chargeable time categories* on page 90.
4. To save the amended record, click Save.

To delete non-chargeable time categories

1. From the Navigation Bar, click Manufacturing System Manager, and choose Non-Chargeable Time > Amend Record.

   An empty Non-Chargeable Time Details window appears.
2. Select the record you want to delete from the Reference drop-down list.
3. Click Delete.
4. Confirm the deletion when prompted.

To print non-chargeable time reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Non-Chargeable Time > Reports.
2. From the Reports menu, select the required report.
   - List
   - List (By Reference)
   - Non-Chargeable Time
   - Non-Chargeable Time (By Reference and Transaction Date)
   - Non-Chargeable Time (By Reference)
   - Non-Chargeable Time (By Transaction Date)

To customise non-chargeable time reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Certificates of Conformity

(Works Orders)

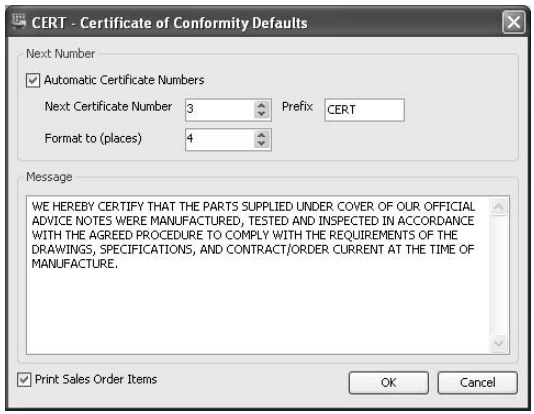
Certificates of conformity are produced to show that products comply with a required standard of quality. You record certificates of conformance for your products within the Certificates of Conformity register. You can print certificates individually or in batches.

Note: Default settings are required for certificates of conformity. To provide details of your settings to the support team, use the 'view only' version of the settings. For more information, see *To view certificate of conformity default settings* on page 93.

To enter certificate of conformity default settings

1. From the Navigation Bar, click Manufacturing System Manager, and choose Certificates of Conformity > Setup > Certificates of Conformity Settings.

   The Certificate of Conformity Defaults appear.



2. To use the automatic certificate numbering option:
   - Select the Automatic Certificate Numbers check box.
   - Enter the number from which you want the automatic numbering to start in the Next Certificate Number box.
   - Enter what you want to use as a prefix (up to 10 characters). This will appear immediately before the certificate number. For example, 'CERT'.
   - Enter the number of digits, including leading zeroes, to use for the certificate number in the 'Format to (places)' box.

   Note: If you do not select Automatic Certificate Numbers, you must enter and keep track of certificate numbers manually.

3. Enter or amend the message to be printed on the certificate of conformity.

   Note: To print all item lines on selected sales orders, select the Print Sales Order Items check box. You can override this when you print certificates. For more information, see *To print certificates of conformity* on page 97.

4. To save the changes, click OK.

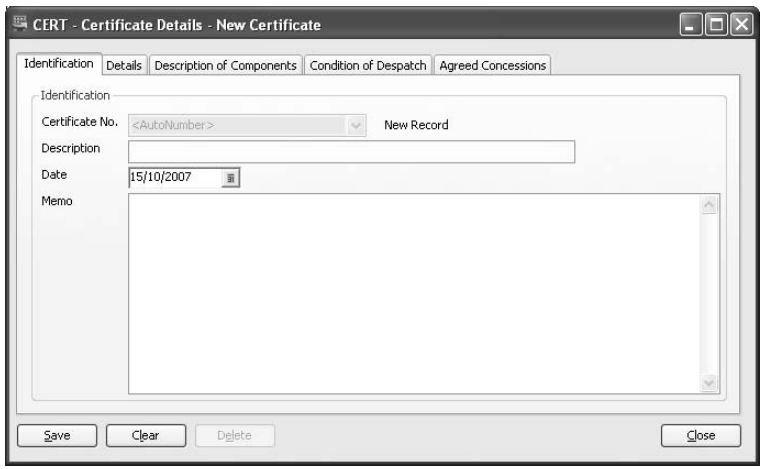
To view certificate of conformity default settings

1. From the Navigation Bar, click Manufacturing System Manager, and choose Certificates of Conformity > Setup > View Certificate of Conformity Settings.
2. When you have finished viewing the settings, click Close.

To enter a certificate of conformity

1. From the Navigation Bar, click Manufacturing System Manager, and choose Certificates of Conformity > Enter New Certificate.

   The Certificate Details - New Certificate window appears.

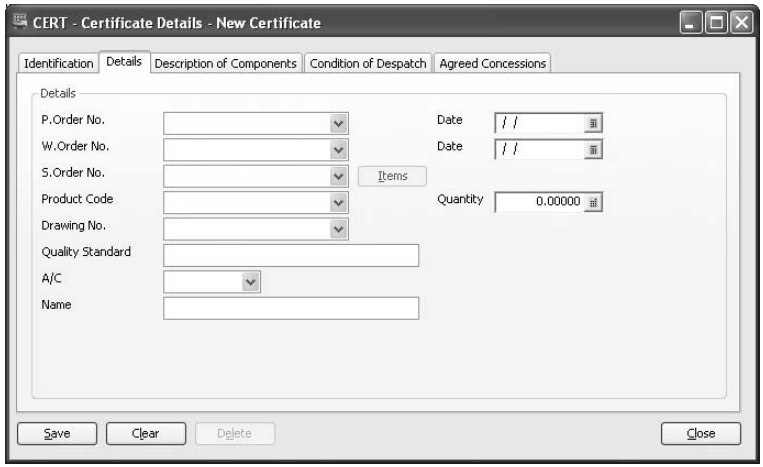


2. Enter the required information according to the following descriptions.

Certificate No.	If you have chosen not to use automatic certificate numbering, enter the Reference. For more information on automatic numbering, see *To view certificate of conformity default settings* on page 93.
Description	Enter a description for the certificate.

Date	Enter the date of the certificate.
Memo	Enter any relevant notes or comments.

3. To continue entering or amending Certificate of Conformity details, click the Details tab. The Details information appears.



4. Enter or amend the information required according to the following descriptions.

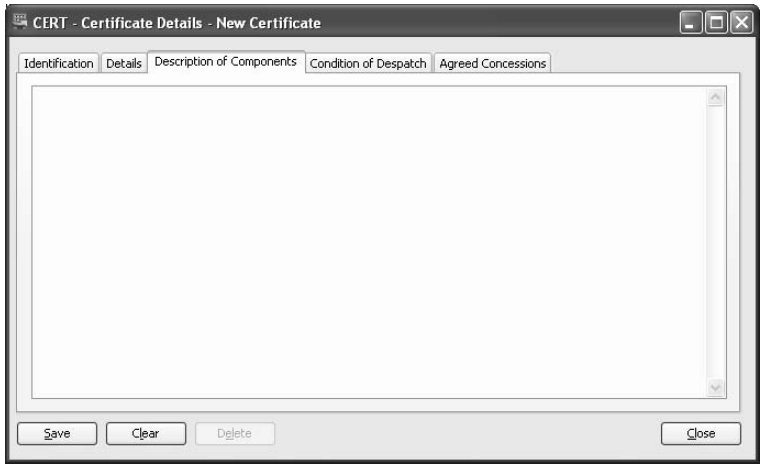
Note: All boxes are optional.

P. Order No. W.Order No. S. Order No.	Enter or amend the purchase order number, works order number or sales order number that relates to this certificate. The date displays automatically alongside the purchase and works order numbers but you can amend this if required. The Quantity is automatically entered fro the works order. This too can be amended if required. Click Items alongside S. Order No. to display or amend the quantity of items on the sales order.
Product Code	Enter or amend the product code that relates to this certificate. Enter the quantity of product produced.
Drawing Number	Enter or amend the drawing number that relates to this certificate.

Quality Standard	Enter or amend a description of the standard specified for the product produced.
Account Ref and Name.	Enter or amend the account reference that relates to this certificate.

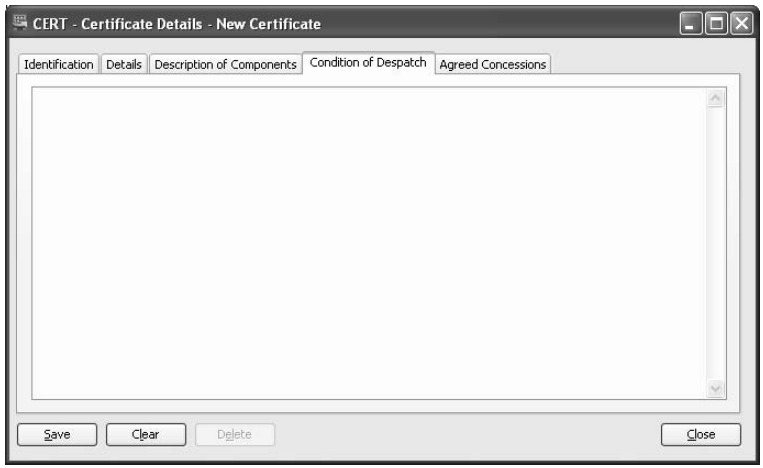
5. To continue entering or amending the Certificate of Conformity details, click the Description of Components tab.

   The Description of Components information appears.



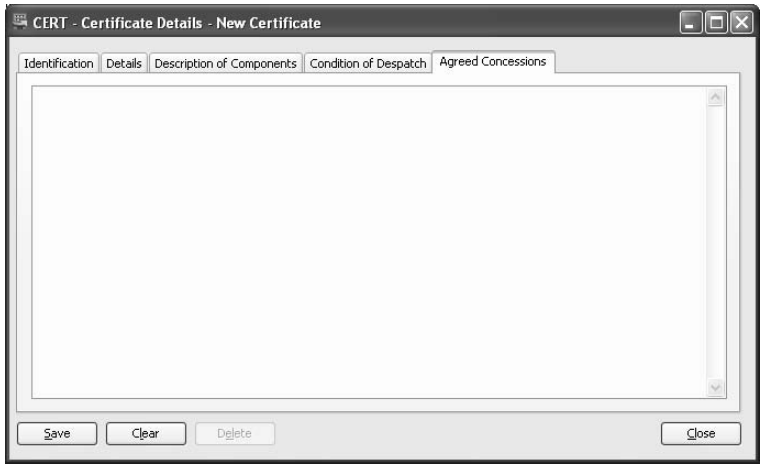
6. Enter a description of the components used within the product.
7. To continue entering or amending the Certificate of Conformity details, click the Condition of Despatch tab.

   The Condition of Despatch information appears.



8. Enter a description for the condition of the goods on despatch.
9. To continue entering or amending the Certificate of Conformity details, click the Agreed Concessions tab

   The Agreed Concessions information appears.



10. Enter a description for any agreed concessions to the goods despatched.
11. To save your Certificate of Conformity details, click Save.

To amend a certificate of conformity

1. From the Navigation Bar, click Manufacturing System Manager, and choose Certificates of Conformity > Amend Certificate.

   The Certificate of Conformity Details window appears.

2. Select the certificate that you want to amend from the Certificate No. drop-down list.

3. Make amendments to the certificate record details as necessary. For more information, see *To enter a certificate of conformity* on page 93.

4. To save the amended certificate record, click Save.

To delete a certificate of conformity

1. From the Navigation Bar, click Manufacturing System Manager, and choose Certificates of Conformity > Amend Certificate.

   The Certificate of Conformity Details window appears.

2. Select the certificate that you want to delete from the Certificate No. drop-down list.

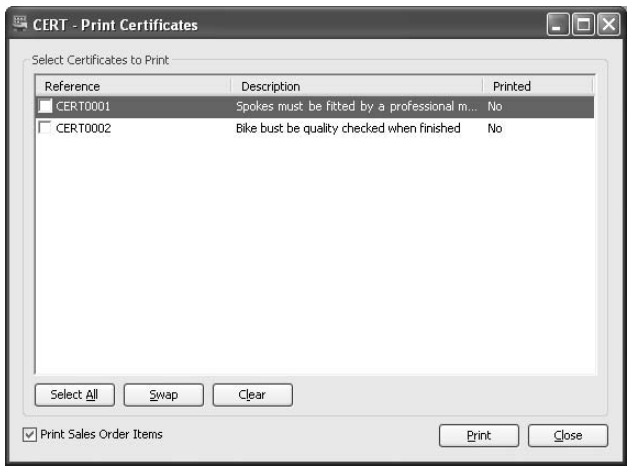
3. Click Delete.

4. Confirm the deletion when prompted.

To print certificates of conformity

1. From the Navigation Bar, click Manufacturing System Manager, and choose Certificates of Conformity > Print Certificate.

   The Print Certificates window appears.



2. Select the certificates to print.
3. To print sales order items on certificates, select the Print Sales Order Items check box.

   Note: This is selected by default, if you selected the Print Sales Order Items check box within Certificate of Conformity Defaults. For more information on the default settings, see *To enter certificate of conformity default settings* on page 92.
4. To print the certificates, click Print.

To print certificates of conformity reports

1. From the Navigation Bar, click Manufacturing System Manager, and choose Certificates of Conformity > Reports.
2. From the Reports menu, select the required report.
   - List - Summary

To customise certificates of conformity reports

You can edit or copy reports, or create a new report, using Sage Report Designer. Report Designer is available as part of your Sage application. For more information, see your *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Chapter 4

Bill of Materials

The Bill of Materials module provides a combined stock assembly and process-costing function. Directly integrated with the Stock Control module, it allows you to specify finished items in terms of sub-assemblies and components. If process costs are involved in sub-assemblies, these can be entered against a BOM (bill of materials).

If you are manufacturing in repetitive batches, production is based around the BOM. If you are working in a one-off jobbing environment use the Estimating module. For more information, see *Estimating* on page 167.

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Amending a BOM 135
Deleting a BOM 138
Copying a BOM 139
Controlling a BOM 141
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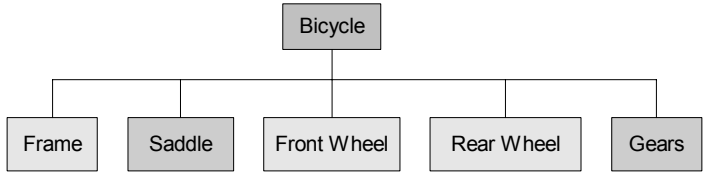
Planning a BOM

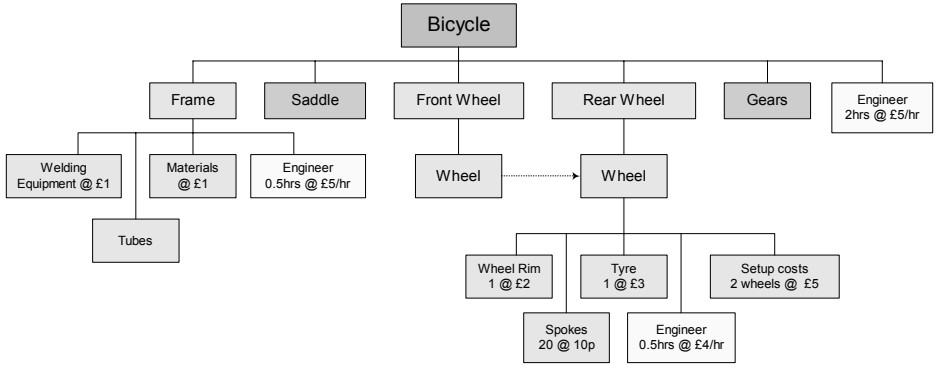
A BOM is a list of items needed to build a product.

An example of a basic BOM is shown below. A bicycle is made up of a frame, saddle, two wheels and a set of gears. This type of BOM is known as a 'single-level BOM'. This displays a list of items used to make up the finished product; in this case, the bicycle.



A BOM can also be made up of a number of sub-assemblies. The diagram below shows a 'multi-level BOM'. It displays all components and sub-assemblies that are directly or indirectly used in the finished product.

Using the example of a bicycle, the wheel and frame can be classed as sub-assemblies. Whilst the company may not sell the frame or wheels separately, they are used to make the final product. The BOM, including sub-assemblies, looks like this:



If a sub-assembly is made for specific use in a BOM, it can be a phantom BOM. The product code for the the phantom BOM does not appear at a higher level. For example, the wheel sub-assembly consists of a tyre, rim and spokes. The frame requires alloy tubing and welding equipment. Both require manufacturing, setup and additional labour costs.

Introducing Costs

When you create a BOM, you will consider the obvious costs. These are the stock item or raw material costs that you need to build the finished item. However, there will also be additional costs. Additional costs include labour costs, machine setup costs, run costs and close-down costs.

In the bicycle example shown earlier in this chapter, three occurrences of additional costs were included for labour. Separate setup costs were included to build each wheel.

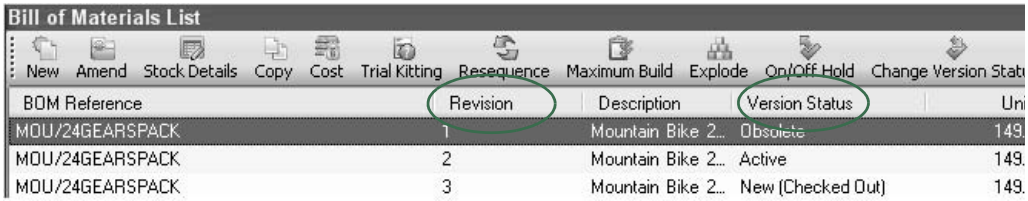
In chemical and food processing industries, you might consider additional costs for cleaning machinery.

Introducing Version Control

The Bill of Materials module has a version control option. This means you can have multiple revisions of a BOM. BOM details cannot be changed by more than one person at a time and only one revision can be in active use at any one time. You can enable this option within the BOM settings. For more information, see *The General tab* on page 107.

To use version control, you must understand the concepts used within version control: revision numbers, version statuses and the 'checking out' and 'checking in' of new BOM revisions.

Within the Bill of Materials List, the Revision number and Version Status of each BOM revision is shown.



Revision

Each time a BOM is created, it is given revision number '1'. When a revision is amended, the revision number is incremented. For example, when changes are made to revision '1', revision '2' is created. The highest revision number for a BOM Reference is the most recent revision.

Note: You will only see the incremented revision number when you have saved the revision. So, if you make changes to revision '2' and click Save, it will be listed in the Bill of Materials List as revision '3'.

Version Status

This describes how the revision is being used by the Bill of Materials module. Statuses can be New, New (Checked Out), Active, Obsolete and Retired.

- New

  A revision that has a new status is a new revision. You create a new revision when you create a BOM for the first time, or if you make changes to the BOM details for an existing BOM revision.

  New status can be assigned by:

  - Choosing to 'check in' the revision. For more information, see *To check in a BOM revision on page 143*.
  - Using the Change Version Status option. For more information, see *To change a BOM status on page 141*.

Anyone can amend and delete BOM revisions with new status. For more information, see *Amending a BOM on page 135* and *Deleting a BOM on page 138*.

Note: You cannot make stock allocations to a BOM revision with new status. You must make the revision active in order to do this. You can make a new revision active at any time. For more information, see *To make a BOM active on page 144*.

- New (Checked Out)

  The status is equivalent to New, but only the user who created the revision can amend the details.

  New (Checked Out) status is assigned automatically to any new revision but can only continue to be assigned by:

  - Choosing to 'leave the revision checked out'. For more information, see *To check out a BOM revision on page 142*.

- Active

  A revision that has an active status is the BOM revision that is used by the system.

  Active status can be assigned by:

  - Saving the revision and choosing to 'make active' the revision. For more information, see *To make a BOM active on page 144*.
  - Using the Change Version Status option. For more information, see *To change a BOM status on page 141*.

  You can amend, copy and delete BOM revisions of active status. For more information, see *Amending a BOM on page 135*, *Copying a BOM on page 139* and *Deleting a BOM on page 138*.

  You can also allocate stock items to active BOM revisions. For more information, see *Allocating Stock on page 404*.

  Note: Only one revision of a BOM can be active at one time. You should ensure that other users are not using another active revision of the BOM when you want to make a revision active.

- Obsolete

  A revision that has an obsolete status is one that is not required at this time.

  Obsolete status can be assigned by:

  - Using the Change Version Status option to manually assign the status. For more information, see *To change a BOM status on page 141*.
  - By making another revision active to automatically assign the status. For more information, see *To make a BOM active on page 144*

  Obsolete revisions are retained on the system and you can make these active again at any time. For more information, see *To make a BOM active on page 144*.

- Retired

  A revision that has a retired status is one that is not required again. You cannot make a retired BOM revision active.

  Retired status can be assigned by:

  - Using the Change Version Status option. For more information, see *To change a BOM status on page 141*.

  Retired revisions are retained on the system for reporting purposes. You can remove it from the system, if required. For more information, see *To purge retired BOMs on page 138*

Placing BOMs on hold

In addition to version control, you can also put the BOM on hold. This prevents any changes to the BOM. For more information see *To turn BOM hold status on and off on page 144*.

Amending Stock Details

You may need to amend stock item details when you are working with BOMs. There is a shortcut to the Amend Stock Item Details window within the Bill of Materials List.

To use the shortcut to amend stock item details

1. From the Navigation Bar, click Bill of Materials.
2. Within the Bill of Materials List, click Stock Details.

   The Amend Stock Item Details window appears. For more information on amending stock item details, see your *Stock Control* documentation.

Entering Settings for BOMs

You can tailor the system to your company's needs through the setup process. This saves time when using the system. For more information, see *To enter the BOM default settings* on page 106.

Calculation of overhead recovery applies in Bill of Materials. Once you enter BOM details, an amount is calculated to show the breakdown of overhead costs.

Note: Enter the overhead recovery settings before costing your BOM. For more information, see *Overhead Recovery Settings* on page 27.

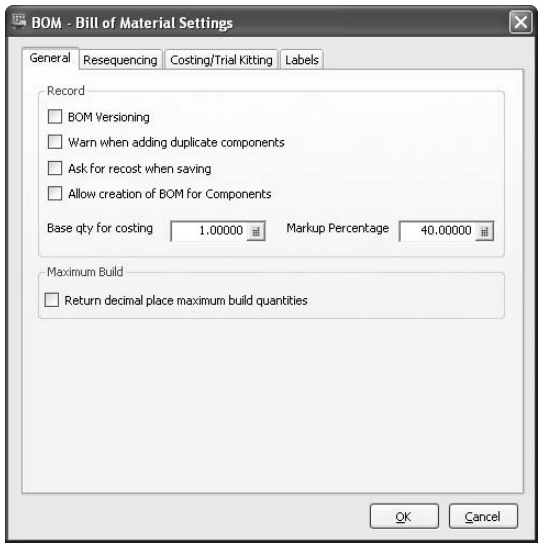
BOMs can have up to five analysis codes attached to them for analysis purposes. For more information, see *Analysis Codes* on page 21.

If you use labour, machine and operation details in more than one BOM, set these up first. For more information, see *Labour Register* on page 47, *Machine Register* on page 50, *Operations Register* on page 54 and *Drawing Register* on page 62.

To enter the BOM default settings

- From the Navigation Bar, click Bill of Materials and choose Setup > BOM Settings.

  The Bill Of Material Settings window appears.



For more information on each Bill of Materials Settings tab, please read the following sections.

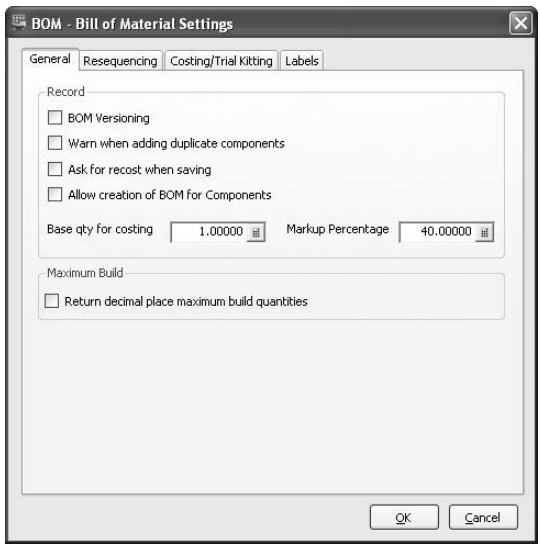
- *The General tab* on page 107
- *The Resequencing tab* on page 110
- *The Costing/Trial Kitting tab* on page 112
- *The Labels tab* on page 115

The General tab

To enter general settings

1. In the Bill of Material Settings window, click the General tab.

   The General settings appear.



2. Enter the settings required, according to the following descriptions.

BOM Versioning	Select this if you want to use version control within the BOM module. This means you can have multiple revisions of a BOM but only one revision can be in active use at any one time. BOM details cannot be changed by more than one person at one time and, if a BOM is active (in use in the system), it cannot be changed. For more information on BOM Versioning, see *Introducing Version Control on page 102* and *Controlling a BOM on page 141*. **Note:** You can clear the BOM Versioning check box when it has been in use. However, this affects processes that reference other BOMs, so you must confirm that you want to do this. You can also control the use of a BOM by putting the BOM on hold. This prevents any changes being made. For more information about the on hold setting on the BOM record, see *The Header Details tab* on page 118. You can also use On/Off Hold in the BOM Records menu or on the Bill of Materials List toolbar.
Warn when adding duplicate components	By default, you can add the same component to a BOM several times. Select this check box to display a warning when you do this.
Ask for recost when saving	Select this check box to prompt for a recost when you enter or amend a BOM.

Allow creation of BOM for Components	Select this check box to show component stock items in the product code drop-down list when you create a BOM as well as stock items that are marked as built or built/bought. For more information, see your *Stock Control* documentation. You must do this if: ■ You want to create a BOM for a component stock item. ■ You want to create a BOM for an item which you have previously bought and sold and now want to manufacture. **Note:** Selecting the check box will mean you have a large list of stock items to select from when creating a BOM. The default setting is clear, so only stock items which are marked as built or bought are available when you create BOMs.
Base qty for costing	Enter a typical batch quantity. When you enter a new BOM, the base quantity defaults to this quantity. You can change the figure for individual BOMs and also change this default.
Markup Percentage	Set the system to suggest a selling price during costing, by entering a default markup percentage. For example, a total product cost of £1.50 with a 50% mark-up results in a suggested selling price of £2.25. **Note:** The suggested selling price has no direct effect on any other figures.
Return decimal place maximum build quantities	Select this option for the Maximum Build Quantity routine to return values with decimal places. If you do not select the check box, the quantity is rounded down to the nearest whole number.

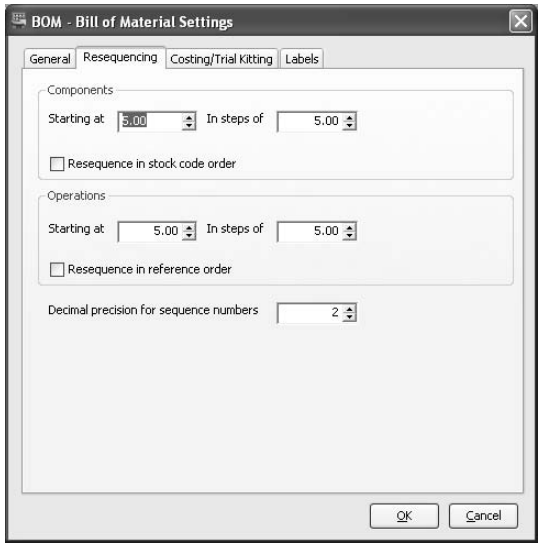
3. To continue entering Bill of Material Settings, click the Resequencing tab.
   To save your Bill of Material Settings, click OK.

The Resequencing tab

To enter resequencing settings

1. In the Bill of Material Settings window, click the Resequencing tab.

   The Resequencing settings appear.



2. Enter the settings required according to the following descriptions.

Resequence in stock code order	If you want to resequence the components of a BOM in stock code order, select this check box. This is useful if you make amendments to your list of components. You can resequence starting at any number and in steps of any number. **Note:** If you are unsure, set to resequence starting from '1' in steps of '1'. You can change this at any time.
Resequence in reference order	If you want to resequence the manufacturing operations, select this check box. This is useful if you make changes in the list of operations. You can resequence starting at any number and in steps of any number. **Note:** If you are unsure, set to resequence starting from '1' in steps of '1'. You can change this at any time.

Decimal precision for sequence numbers	Enter the number of decimal places for sequence numbers. You can enter a figure between zero and six.

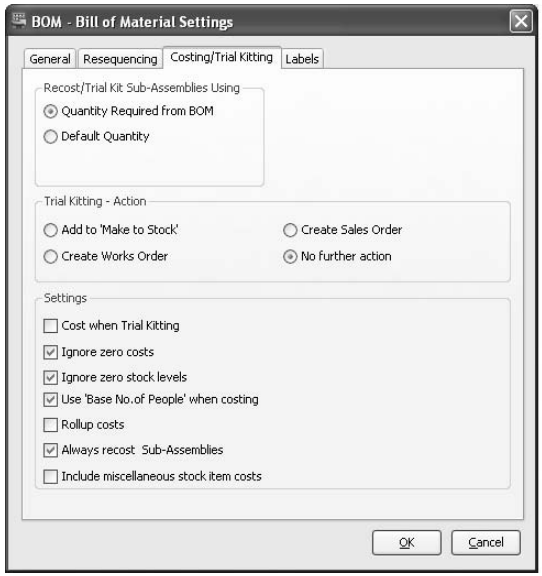
3. To continue entering Bill of Material Settings, click the Costing/Trial Kitting tab.
   To save your Bill of Material Settings defaults, click OK.

The Costing/Trial Kitting tab

To enter costing/trial kitting settings

1. In the Bill of Material Settings window, click the Costing/Trial Kitting tab.

   The Costing/Trial Kitting information appears.



2. Enter the settings required, according to the following descriptions.

Recost/Trial Kit Sub-Assemblies Using	Select Quantity Required from BOM to calculate costs using the quantities on the BOM sub-assemblies. Select Default Quantity to calculate costs using the quantity on the BOM header.
Trial Kitting - Action	Select a default action for Trial Kitting. You can change this each time you use the Trial Kitting option. For more information see *Using Trial Kitting* on page 146. ■ Select Add to 'Make to Stock' to add the BOM to the production plan as an entry in Make to Stock.

- Select 'Create sales order' to create a sales order in Sales Order Processing.
- Select 'Create works order' to bypass planning and generate a works order directly.
- Select 'No further action' to close the Trial Kitting window without affecting planning.

Cost when Trial Kitting	Select this check box in order to perform and display a BOM costing when you use Trial Kitting.
Ignore zero costs	By default, a visual warning appears where the system encounters an item with a zero cost during the costing process. You can enter a cost later if necessary. Select the check box if you do not want to see the warning.
Ignore zero levels	By default, a visual warning appears where the system encounters an item with a zero stock quantity during costing. You can amend the stored cost in these circumstances, as the cost may be out of date. Select the check box if you do not want to see the warning.
Use 'Base No. of People' when costing	By default, Bill of Materials assumes that one person performs manufacturing operations. If you want costings to reflect that more than one person performs manufacturing operations, select this check box. For example, Bill of Materials costs an operation taking two people ten hours at the equivalent of 20 hours. If you select the check box, you can enter the base number of people for any operation within the BOM record. (For more information on operations, see the *Operations Register* on page 54.)
Rollup costs	Select this check box to provide a breakdown of non-material costs in the BOM.
Always recost Sub-Assemblies	Select this check box to calculate sub-assembly costs when you perform a costing. Leave blank to use the existing stored sub-assembly costs during costing. **Note:** If your BOM structure contains many sub-assemblies, calculating sub-assembly costs during costing will extend the time taken for costing.

Include miscellaneous stock item costs	Miscellaneous items are not included in the standard stock valuation reports. Select this check box to: ■ Include miscellaneous stock item costs when costing a BOM (see *Costing a BOM on page 149*). ■ Post miscellaneous item costs to the Stock asset account when closing works orders (see *Closing Works Orders on page 470*). You can also select the check box within the Works Orders Allocate/Issue/Complete settings (see *The Allocate/Issue/Complete tab on page 346*). **Note:** Selecting it in one place automatically selects it in the other.

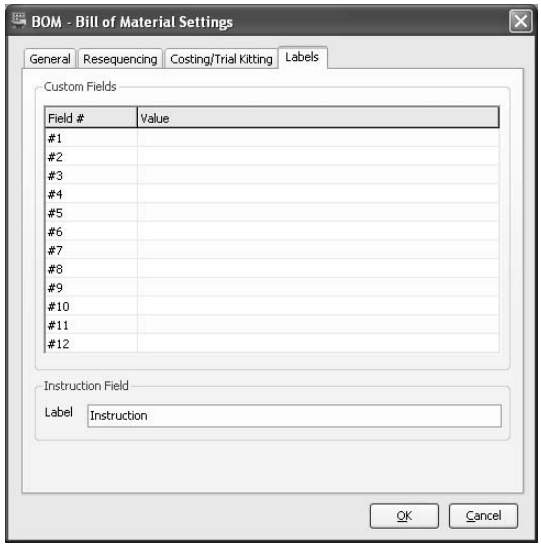
3. To continue entering Bill of Material Settings, click the Labels tab.
   To save your Bill of Material Settings, click OK.

The Labels tab

To enter labels settings

1. In the Bill of Material Settings window, click the Labels tab.

   The Labels information appears.



2. Enter the settings required, according to the descriptions below.

Custom Fields 1 to 12	You can name 12 data boxes contained within each BOM record. The boxes appear under the Custom Fields tab.
Instruction Field Label	Enter the label that appears on each BOM record.

3. To save your Bill of Material Settings, click OK.

Viewing Settings for BOMs

If you need to provide details of your settings to the support team, use the 'view only' versions of the settings.

To view BOM Settings

1. From the Navigation Bar, click Bill of Materials and choose Setup > View BOM Settings.
2. When you have finished viewing the settings, click Close.

Creating a BOM

There are three ways of creating a BOM in Sage 200 Manufacturing.

- New

  You can set up the bill of materials within Sage 200 Manufacturing. For more information, see *To set up a new BOM* on page 117.

- Copy

  You can copy an existing bill of materials and amend the details where required. For more information, see *Copying a BOM* on page 139 and *Amending a BOM* on page 135.

- Import

  You can import a bill of materials record from a CSV file. For more information on importing, see *Importing and Exporting Data* on page 43.

To set up a new BOM

1. From the Navigation Bar, click Bill of Materials and choose Records > Enter New BOM. The Bill of Material Details window appears.
2. Enter the BOM header details. These consist of the stock item product code, quality information and manufacturing instructions relating to the build. For more information, see *The Header Details tab* on page 118.
3. Enter the product codes for the component parts or raw materials. For more information, see *The Components tab* on page 120.
4. Enter details of the manufacturing operations needed. These may include machine processes, labour processes or both. For more information, see *The Operations tab* on page 124.
5. Enter the attached files to open with a BOM. For more information, see *The Attached Files tab* on page 127.
6. Enter drawing references for the BOM. For more information, see *The Drawings tab* on page 129.
7. Enter the custom fields if required. For more information, see *The Custom Fields tab* on page 131.
8. Add analysis codes for the BOM. For more information, see *The Analysis Codes tab* on page 132.
9. Save the BOM. For more information, see *Saving a BOM* on page 133.

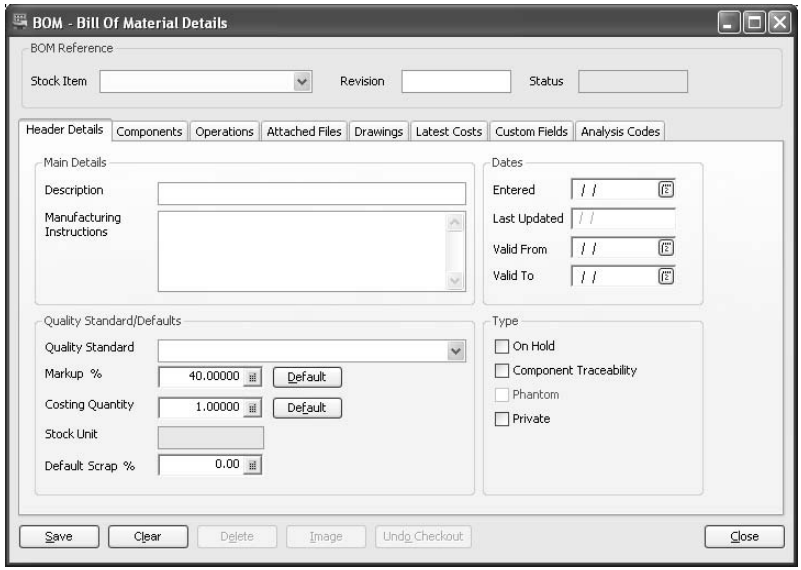
For more information on each Bill of Material Details tab and on saving the BOM, please read the following sections.

The Header Details tab

To enter Bill of Materials header details

1. From the Navigation Bar, click Bill of Materials and choose Records > Enter New BOM.

   An empty Bill of Material Details window appears.



2. Select a stock code for the BOM from the Stock Item drop-down list. This code already exists in the Stock Control module. When you select the code, the description appears automatically in the Main Details section.

   Note: If you have selected the Allow creation of BOM for Components check box in Bill of Material Settings, then the Stock Item drop-down list will show all stock items, including components.

3. If you are using version control, the Revision Number is assigned automatically when you save the BOM details. Status is assigned automatically as 'New (Checked Out)'. For information on using version control, see *The General tab* on page 107. For information on the Revision number and Status, see *Introducing Version Control on page 102*.

4. Enter any Manufacturing Instructions. These can be reproduced on works order documentation, if required.

5. The date entered defaults to the current system date. Enter a different date if required.

6. The date last updated is shown automatically.
7. Enter a 'valid from' and 'valid to' date for your BOM, if applicable. Bill of Materials displays a warning if you try to use the BOM outside this date range.
8. Enter the quality standard to which the product must be manufactured.
9. Enter a default markup percentage to use when calculating a suggested selling price during future costing operations.
10. Enter a default costing quantity for use during costing or trial kitting.

    Note: The costing and kitting options always offer the option to use the default quantity.
11. The stock unit name automatically appears in the Stock Units box.
12. Enter the default scrap percentage figure for the BOM components, if required.

    Note: If you amend this you are prompted to amend it for all components on the BOM.
13. If you do not want to use the BOM immediately, select the On Hold check box.

    Note: You can change this by selecting the BOM and clicking On/Off Hold in the toolbar or using the On/Off Hold option on the BOM Records menu.
14. If full component traceability is required, select the Component Traceability check box. This setting is passed to any works order created using the BOM.
15. If the BOM is a phantom, the Phantom check box is automatically selected for you.

    A phantom works in the same way as a standard sub-assembly, with one exception. The product code for the finished item does not appear on a higher level works order. Manufacturing blows through the phantom and adds its components and operations (including any nested phantoms) to the top-level works order. The phantom components and operations are given a sequence number of zero.
16. If you are not using version control, you can select the Private check box. Select this if the BOM is undergoing design changes. It will not be included in calculations outside Bill of Materials.

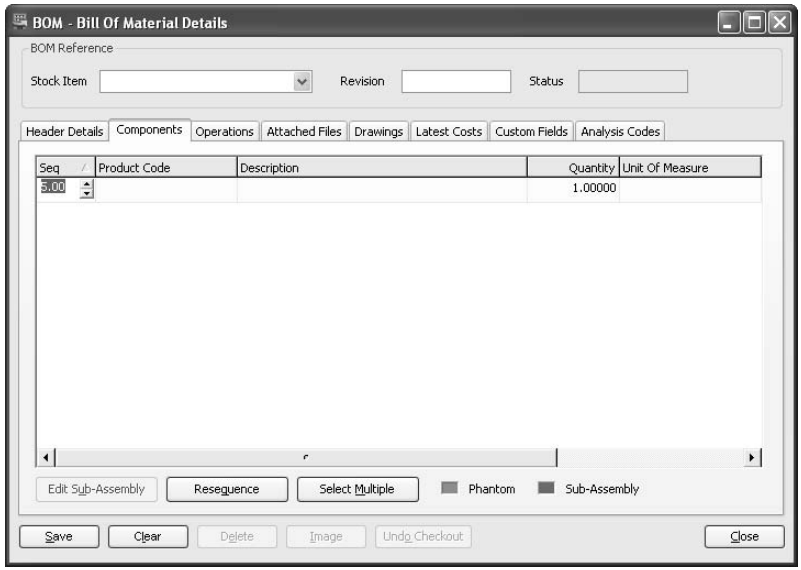
    Note: If a private BOM is used as a component on another BOM or works order, component priority comes into effect. The setting on the lower level item is ignored when processing the higher level item. You must set the 'private' flag on the component entry on the higher level BOM. For more information, see *To set up components* on page 120.
17. Click the Image button if you want to store a picture of this product.
18. To continue entering BOM information, click the Components tab. Then, confirm that you want to save the BOM Header details when prompted.
    To save your BOM details, click Save.

The Components tab

To set up components

1. In the Bill of Material Details window, click the Components tab.

   The Components information appears.

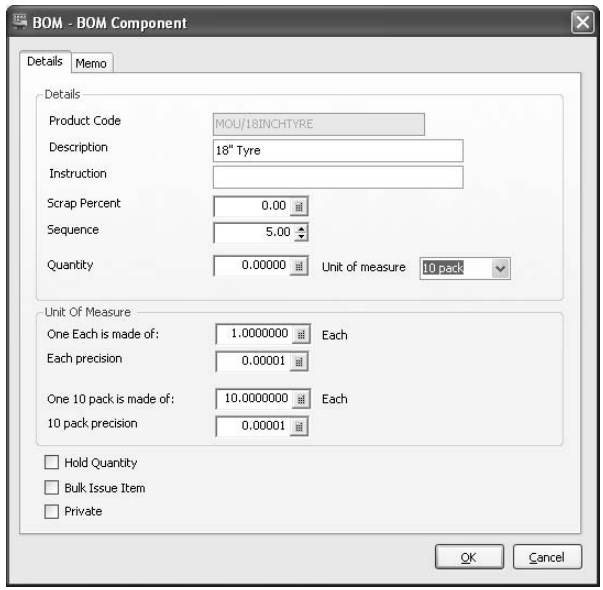


2. Click in the Product Code column and enter the code for the component that you want to use.

   Note: Components are of type Stock or Miscellaneous. You cannot leave the code blank.

3. Enter additional component information by clicking in the Description box.
   - Click the box that appears at the right hand side of the Description box.

     The BOM Component window appears.



- You can enter the following details in the BOM Component window:

Description	Enter the component description.
Instruction	Enter any instructions relating to this particular component. The instructions you enter here display on the Indented Parts list. You can change the label of the Instruction box. For more information, see *To make label changes using the customiser* on page 31.
Scrap Percent	The allowance for scrap when issuing this BOM, defaults to the Scrap Percent on the BOM Header Details tab. You can amend this value for the component if required.
Sequence	BOM components are taken in a sequence determined by the sequence number. For more information on setting up sequence numbers, see *The Resequencing tab* on page 110. If you want to change the sequence number, enter a new sequence number here.

Quantity	Enter the quantity of this component or raw material required to manufacture the finished item. **Note:** If you enter a quantity which does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.
Unit of Measure	The Unit of Measure displayed is from the stock record, but you can change it here.
Unit of Measure	Unit of measure ratio and precision default values are defined in the Stock Control module. For more information, see the *Stock Control* help system. You do not need to use these boxes when adding components to the BOM. If you change the ratio and precision values within Stock Control, use these boxes to enter the changed default values for the component unit of measure. This is because changes to unit of measure values within Stock Control have no effect on values within components already added to the BOM. ■ Enter the value and precision for the default stocked in unit of measure in the first pair of boxes. ■ If you selected an alternative unit of measure in the Unit of Measure box, use the second pair of boxes to enter the changes.
Hold Quantity	Select this check box if you do not want to multiply the quantity by the batch quantity when ordering. For example, if the component quantity is two, and the batch quantity is 1000, Manufacturing issues 2000 components. If you select the Hold Quantity check box, it issues two components.
Bulk Issue Item	Select the Bulk Issue Item box if you want to handle stock movements manually for this component. **Note:** Manufacturing clears the Update Stock flag on subsequent works orders by default.

Private	If you are not using version control, you can select the Private check box. This is useful if the BOM is undergoing design changes. It will not be included in calculations outside Bill of Materials.

- Enter any further relevant information by clicking the Memo tab.
- When you have entered all additional details, click OK to return to the BOM components list.

4. Enter the component quantity required to manufacture the finished item.

   Note: If you enter a quantity which does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

5. Bill of Materials transfers units of measure from each Stock Control record into the BOM. If the item has multiple units of measure, select the required unit of measure from the drop-down list available.
6. Enter any Instruction relating to this specific component.
7. To delete a component, select it and press F8.
8. If a component is a sub-assembly, click Edit Sub-Assembly to edit it.
9. Click Re-Sequence to re-sequence the components.
10. To add several components to the BOM at the same time, click Select Multiple.
11. To continue entering BOM information, click the Operations tab.
    To save your BOM details, click Save.

The Operations tab

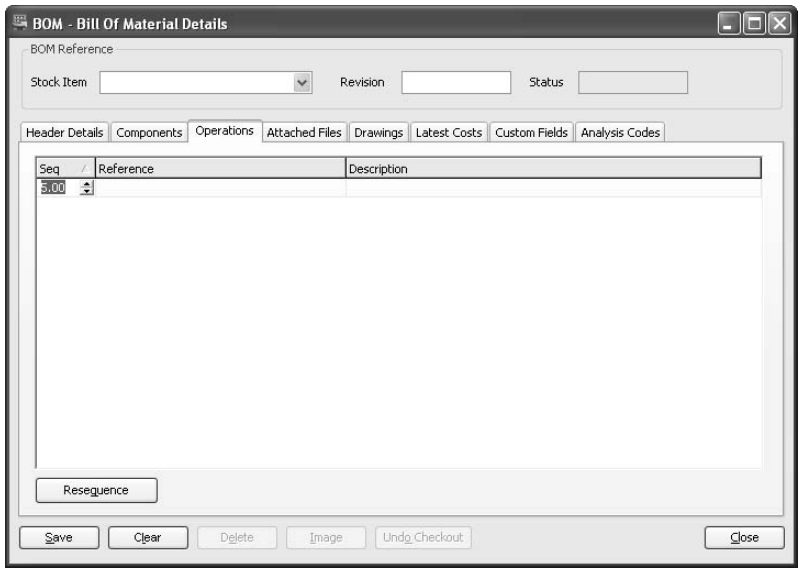
For each operation, you add the labour and machine processes required to manufacture items. You also specify the time, including machine setup time, required to complete the operation.

Note: You can enter operation details each time you create a BOM. However, we recommend you store operations in the Operations Register. You can use these operations within many BOMs. For more information, see the *Operations Register* on page 54.

To add operations

1. In the Bill of Materials Details window, click the Operations tab.

   The Operations information appears.



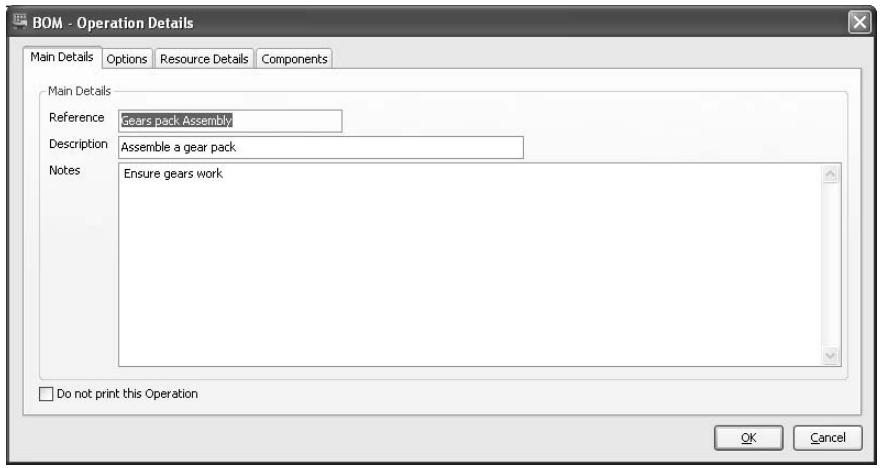
2. If you are using the Operations Register, select the operation from the Reference drop-down list. All the operation details are entered against your BOM and you can amend these as required. For more information on the Operations Register, see *Operations Register* on page 54.
3. If you are not using Operations Register, enter the operation header information.

Reference	Enter the operation reference.
Description	Enter the operation description.

Sequence	Enter the sequence number for the operation.

4. Enter additional component information by clicking in the Description box.
   - Click the box that appears at the right hand side of the Description box.
5. Enter additional operation details by clcking in the Description box.
   - Click the box that appears at the right hand side of the Description box.

     The Operation Details window appears.



     This procedure is the same as entering Operation details into the Operations Register. For more information, see *Operations Register* on page 54.

     Note: As you enter Operation Details, the total costs by category appear on the Resource Details tab.
   - To print components on subcontract advice notes, associate components from the BOM with the operation on the Components tab. When you create a works order from Trial Kitting, the components are copied to the works order. They can then be printed on a subcontract advice note.

     Note: If the component quantity does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.
   - When you have finished entering details, click OK.
6. Continue to enter operations.
7. Click Resequence to change the sequence of the operations. For more information, see *Resequencing BOMs* on page 152.

8. To continue entering BOM information, click the Attached Files tab.
   To save your BOM details, click Save.

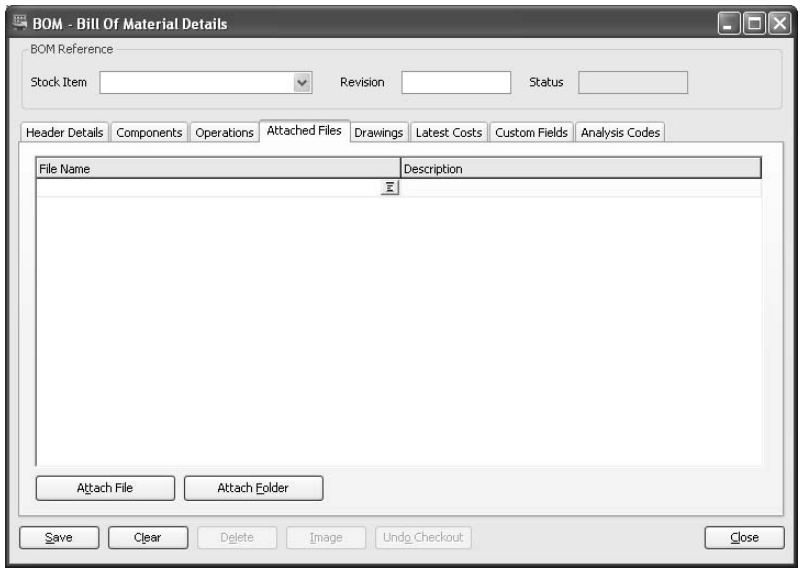
The Attached Files tab

You can associate files, such as Microsoft® Excel or Microsoft® Word documents, to save and open with a BOM. You can also attach the complete contents of a folder. This is useful for storing supporting documentation for the BOM.

To attach a file or folder to the BOM record

1. In the Bill of Material Details window, click the Attached Files tab.

   The Attached Files information appears.



2. To attach a file or folder to a BOM record, click Attach File or Attach Folder as appropriate.

   An Open or Choose File(s) window appears.

   - Select the file or folder you want to attach to the BOM record. Click Open to attach a file, or OK to attach a folder.

     Note: You can only select one file or folder at a time.

     The file or folder appears in the Attached Files list.
   - To open the file or folder, click it.
   - Enter a description for each attachment, if you require. This is used for information purposes only.

3. To delete an attached file, select it in the Attached Files list and press F8

   The file is removed from the BOM; it is not removed from your computer.

4. To continue entering BOM information, click the Drawings tab.
   To save your BOM details, click Save.

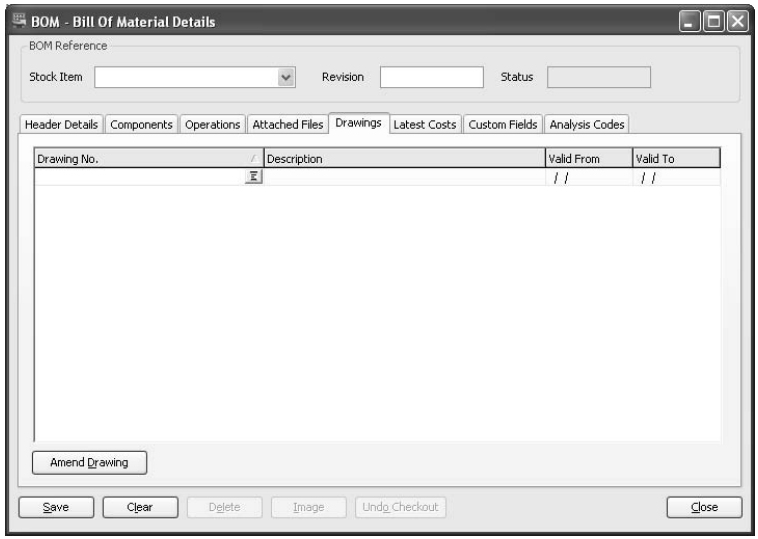
The Drawings tab

You can cross-reference a BOM with any number of different drawings.

To work with drawings

1. In the Bill of Materials Details window, click the Drawings tab.

   The Drawings information appears.



2. Enter the following information, if required, for each drawing line.

Drawing No.	Enter a unique reference number for the drawing. If you are using the Drawing Register, select the drawing from the Drawing No. column drop-down list. Description, Valid From and Valid To are displayed automatically.
Description	Enter the drawing description.
Valid From Valid To	Enter a 'valid from' and 'valid to' date for your drawing, if applicable.

3. To edit the drawing details in the Drawing Register, select the drawing and click Amend Drawing. For more information, see *To amend a drawing* on page 65.

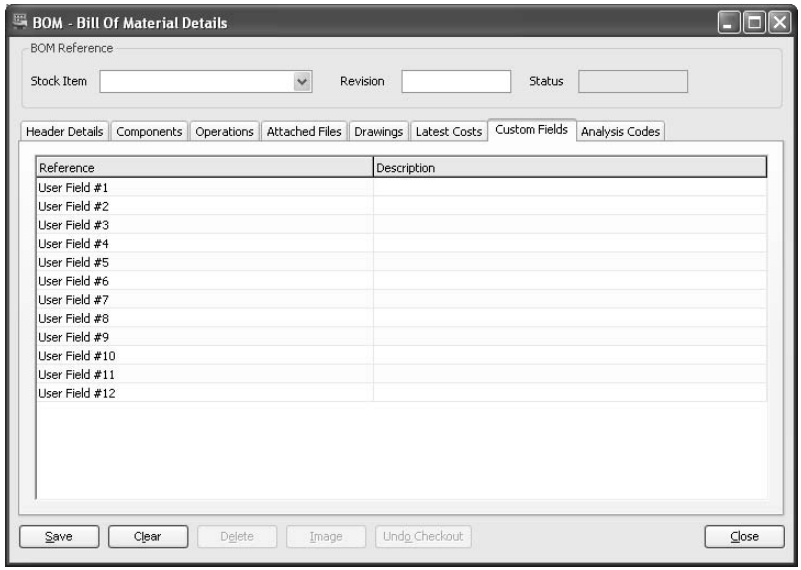
4. To continue entering BOM information, click the Custom Fields tab.
   To save your BOM details, click Save.

The Custom Fields tab

To enter custom fields to a bill of materials

1. In the Bill of Materials Details window, click the Custom Fields tab.

   The Custom Fields information appears.



2. Enter details for up to twelve custom boxes for each BOM. You can customise the box names. For more information, see *The Labels tab* on page 115.

3. To continue entering BOM information, click the Analysis Codes tab.
   To save your BOM details, click Save.

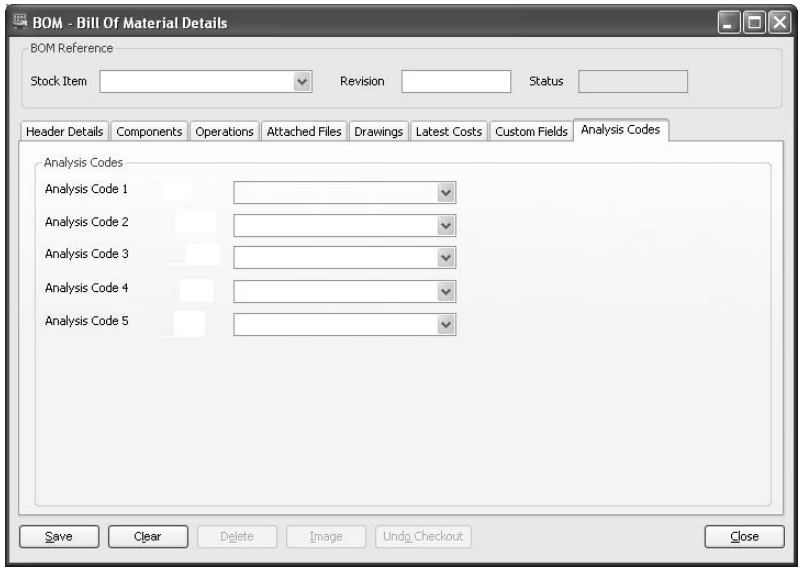
The Analysis Codes tab

Analysis codes are used in reporting.

To enter BOM analysis codes

1. In the Bill of Material Details window, click the Analysis Codes tab.

   The Analysis Codes information appears.

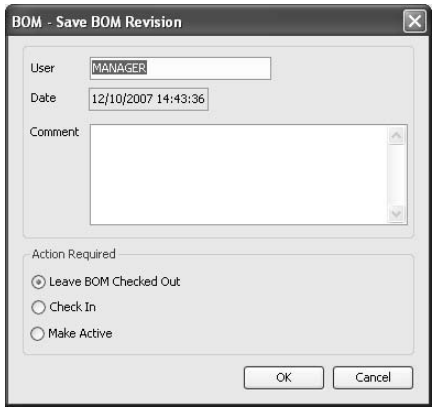


2. Enter up to five unique analysis codes for each BOM. You can use these for custom reporting.
3. To save your BOM details, click Save.

Saving a BOM

To save a BOM

1. In the Bill of Material Details window, click Save to save the BOM details you have entered.
2. If you are using version control, the Save BOM Revision window appears. For more information, see *Introducing Version Control* on page 102.



3. Enter a comment outlining the changes.
4. Select the Action Required.

Leave BOM Checked Out	Select this to ensure other users cannot make changes to the BOM revision. The revision is saved with a status of New (Checked Out). To allocate items using the BOM revision, you must make the revision active.
Check In	Select this to make the BOM revision available to any user. It is saved with a status of New. To allocate items using the BOM revision, you must make the revision active.

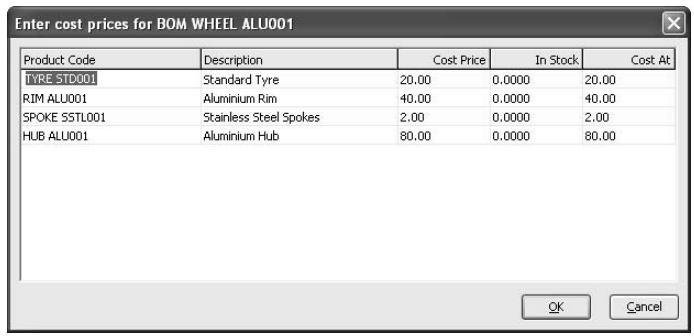
Make Active	Select this to make the BOM revision active. It is saved with a status of Active. You can allocate items to the BOM revision. For more information, see *Allocating Stock on page 404*. **Note:** You must make one of the BOM revisions active if you are creating the BOM for a stock item component in order to build the item. You must select Built/Bought for the BOM details on the stock item record Details tab within the Stock Control module and you can only do this if one of the BOM revisions is active. For more information, see your *Stock Control* documentation.

5. To save the revision, click OK.
6. If you selected the 'Ask for recost when saving' setting, confirm if you want to cost the BOM. For more information, see *The General tab* on page 107.
   - Click Yes if you want to calculate costs and store them against the BOM.

     Manufacturing costs the BOM, and writes the results to the Latest Costs tab of the BOM record for future reference.

     Note: If the 'Ignore zero cost' and 'Ignore zero levels' settings are not selected, you are prompted for a cost for the sub-assembly in the 'Enter cost prices for BOM' window. For more information, see *The Costing/Trial Kitting tab* on page 112.

     This window indicates that there is no cost or a zero stock level stored in the stock record for a component on the BOM.



   - Enter the cost prices that you want to use and click OK.

     The window clears to allow you to enter details of another BOM.
7. To close the Bill of Material Details window, click Close.

Amending a BOM

It is important to maintain accurate BOM records. Details such as 'markup' and 'valid from' or 'to' dates can change over time.

To amend a Bill of Materials

1. From the Navigation Bar, click Bill of Materials, and choose Records > Amend BOM Details.
2. Select the BOM required.

   If you are using version control:

   - The BOM status is checked. A message informs you if it is already checked out to another user. If not, it is checked out to you.

   The Bill of Material Details window appears.
3. Make the changes you require to the BOM.

   Note: The Bill of Material Details tabs function in the same way as when creating the BOM. For more information, see *Creating a BOM* on page 117.

   If the selected BOM is on hold:

   - Confirm that you want to continue to amend it. If you are using version control, a New (Checked Out) version will be created. If you are not using version control, you can continue to amend the BOM.

     Note: You can change the BOM on hold status by selecting the BOM and selecting On/Off Hold in the toolbar or using the On/Off Hold option in the BOM Records menu.
4. To edit sub-assemblies, click Edit Sub-Assembly on the Components tab.
5. To save your revision changes, click Save.
6. If you are using version control, the Save BOM Revision window appears.
   - Enter a comment outlining the changes.
   - Select the Action Required, according to the following descriptions.

Leave BOM Checked Out	Select this if you want to ensure that the BOM revision cannot be updated accidentally by another user. The BOM revision is saved with a status of New (Checked Out). To allocate items to the BOM revision, you must make the BOM revision active.

Check In	Select this to save the BOM revision with a status of New and make it available to be edited by anyone on the system. However, before any stock can be allocated to the revision, it must be made active. **Note:** If a component is a Built-Stock Item and has no active revision, confirm that you want to check it in.
Make Active	Select this to save the BOM revision with a status of active. **Note:** You can only have one active revision of the BOM. If another active revision of the BOM is found you can make this one active. The other will be made obsolete automatically.

The BOM revision number is incremented.

Note: Date of change, operator ID, revision number and revision text are stored in the Revision Details tab of the BOM Details window.

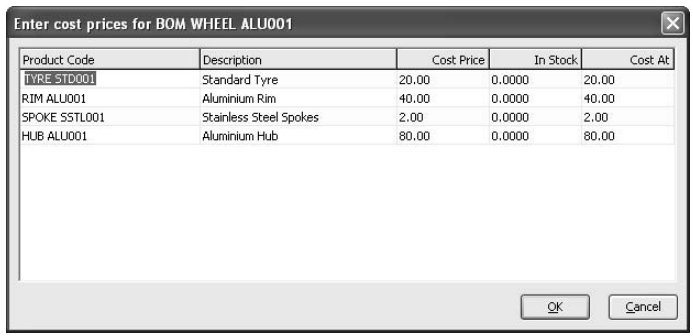
7. If you selected the 'Ask for recost when saving' setting, confirm if you want to cost the BOM. For more information, see *The General tab* on page 107.

   - Click Yes if you want to calculate costs and store them against the BOM.

     Manufacturing costs the BOM, and writes the results to the Latest Costs tab of the BOM record for future reference.

     Note: If the 'Ignore zero cost' and 'Ignore zero levels' settings are not selected, you are prompted for a cost for the sub-assembly in the 'Enter cost prices for BOM' window. For more information, see *The Costing/Trial Kitting tab* on page 112.

     This window indicates that there is no cost or a zero stock level stored in the stock record for a component on the BOM.



- Enter the cost prices that you want to use and click OK.

  The window clears to allow you to enter details of another BOM.

8. To close the Bill of Material Details window, click Close.

Deleting a BOM

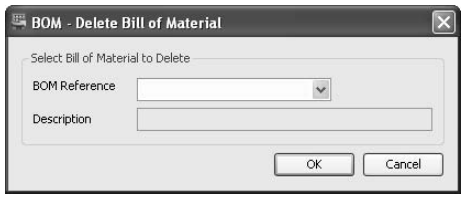
You can remove redundant BOM records, if they conform to certain criteria.

If you are using version control you can remove Retired BOMs. For information on assigning the Retired status to BOMs, see *To change a BOM status* on page 141.

To delete BOM records

1. From the Navigation Bar, click Bill of Materials, and choose Records > Delete BOM.

   The Delete Bill of Material window appears.



2. Select the BOM record that you want to delete and click Delete.

   The BOM record is deleted.

To purge retired BOMs

1. From the Navigation Bar, click Bill of Materials and choose Maintenance > Purge Retired BOMs.

   A confirmation prompt appears.

2. To remove the retired BOMs, click Yes.

   The retired BOMs are removed.

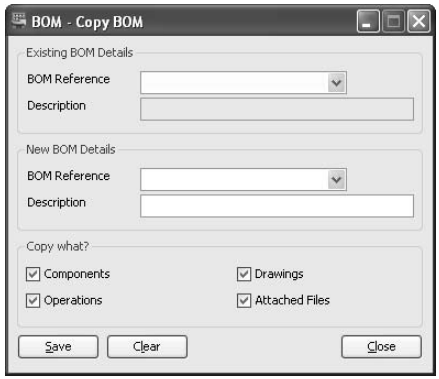
Copying a BOM

You can copy a BOM. This lets you create another BOM quickly.

To copy the BOM

1. From the Navigation Bar, click Bill of Materials, and choose Records > Copy BOM.

   The Copy BOM window appears.



2. Enter the information required according to the following descriptions.

Existing BOM Details	Select the reference of the BOM you want to copy from the drop-down list. **Note:** If you are using version control, you must select an active BOM.
New BOM Details	Select the reference for the new BOM from the drop-down list. **Note:** This must be a different reference from the BOM you are copying. The description appears automatically although you can amend this.

Copy What?	Select the check boxes to copy the following: ■ Components ■ Drawings ■ Operations ■ Attached Files

3. To copy the BOM, click Save.

   Note: If you are using version control, the BOM is saved with new status.

   The BOM appears in the Bill of Materials List. You can make amendments as required. For more information, see *Amending a BOM* on page 135.

Controlling a BOM

If you use version control, you have more control over the changes made to a BOM and to which revision of the BOM is used. For more information on choosing to use BOM Versioning, see *The General tab* on page 107. For more information on understanding version control, see *Introducing Version Control on page 102*.

Using version control means you can have several different revisions of a BOM in the system at once. For example, you can create a new revision, without having to delete the current active revision.

Changes are prevented from being made to BOMs by more than one person at once. When you create a BOM, the system automatically checks out the BOM to you. Noone else can make changes to it until you check it in again.

Note: You can also place BOMs on hold whether or not version control is activated.

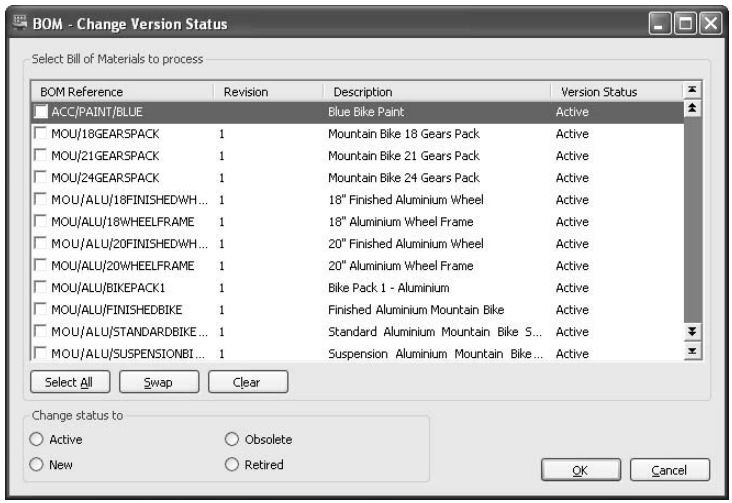
To change a BOM status

1. From the Navigation Bar, click Bill of Materials and choose Bill of Materials List.

   The Bill of Materials List is displayed in the work area.

2. Choose Change Version Status.

   The Change BOM Status window appears.



3. In the list of BOMs, select the BOM or BOMs to process.
4. Select the status you want to change to.

Active	Select this if you want to use the New or New (Checked Out) or Obsolete BOM revision as the active BOM within the system and allocate stock to it. **Note:** You can also make a BOM active when you create or amend it. For more information, see *Saving a BOM* on page 133 and *Amending a BOM* on page 135.
Obsolete	Select this if you do not want the currently active BOM revision to be used in the short term. The details of the BOM remain on the system. **Note:** You cannot select this if there are any outstanding BOM allocations.
New	Select this if the BOM is New (Checked Out) and you want to check it in and make it available for other users to amend or use. **Note:** You can also check in a BOM revision as New when you create or amend an existing revision. For more information, see *Saving a BOM* on page 133 and *Amending a BOM* on page 135.
Retired	Select this if you are sure that the obsolete BOM revision should not be used again.

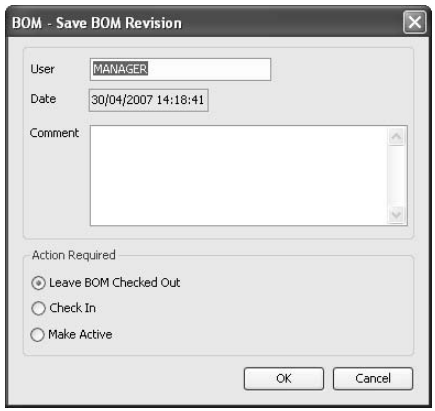
5. To apply the changes, click OK.

To check out a BOM revision

Note: When you create a BOM revision it is automatically checked out to you whilst you are making changes.

1. After making changes to a BOM revision, click Save.

   The Save BOM Revision window appears.



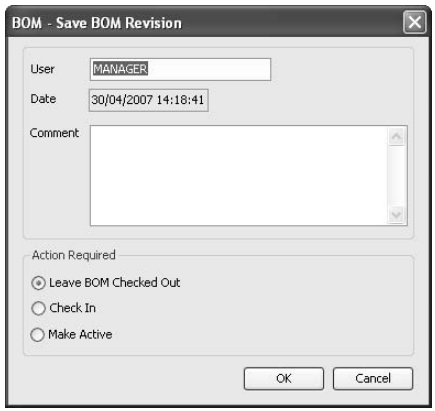
2. Enter a comment, and select Leave BOM Checked Out.
3. Click OK.

   The BOM Revision is listed in the Bill of Materials List with the Version Status of New (Checked Out). Only you can make changes to it.

To check in a BOM revision

1. After making changes to a BOM revision, click Save.

   The Save BOM Revision window appears.



2. Enter a comment, and select Check In.
3. Click OK.

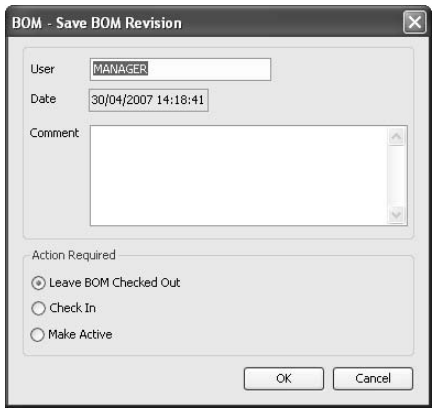
The BOM Revision is listed in the Bill of Materials List with the Version Status of New. Any user can make changes to it.

To make a BOM active

Note: You can make new or obsolete BOMs active.

1. After making changes to a BOM revision, click Save.

   The Save BOM Revision window appears.



2. Enter a comment, and select Make Active.
3. Click OK.

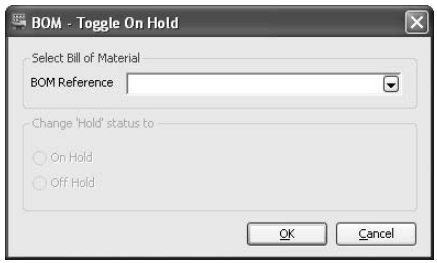
   The BOM Revision is listed in the Bill of Materials List with the Version Status of Active. This revision of the BOM is now used and allocations can be made to it.

   Any previous active revision for the BOM is automatically give the status, Obsolete.

To turn BOM hold status on and off

1. From the Navigation Bar, click Bill of Materials and choose Records > On/Off Hold.

   The Toggle On Hold window appears.



2. Select the BOM Reference.
3. Select On Hold if you want to place the BOM on hold.
4. Select Off Hold if you want the selected BOM to be available for processing.
5. To apply the changes, click OK.

Using Trial Kitting

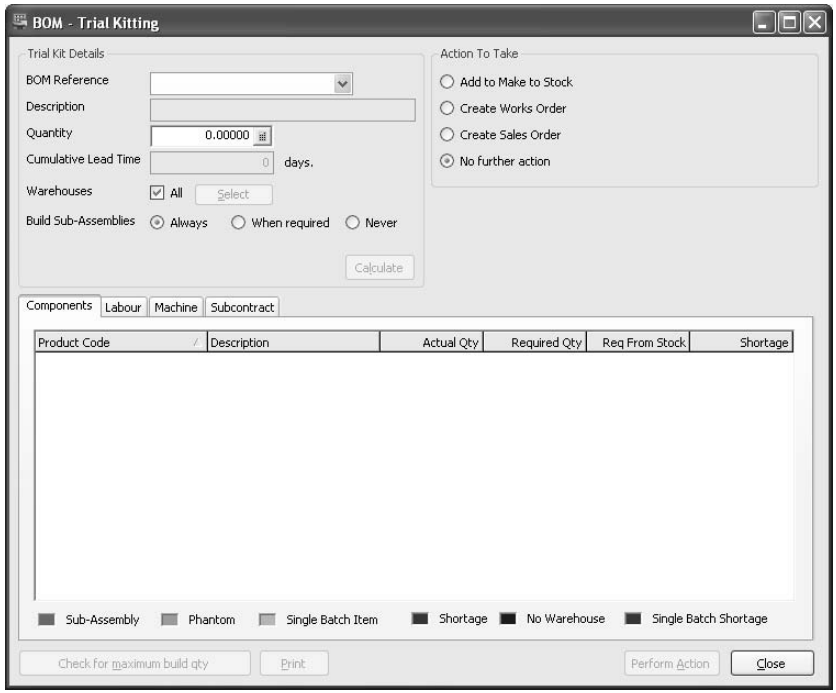
Trial Kitting lets you check whether you can build a specified quantity of any BOM. It identifies and displays any potential shortages.

Note: You cannot perform trial kitting on phantom BOMs. If you are using version control, you can only perform trial kitting on active BOMs.

To run trial kitting

1. From the Navigation Bar, click Bill of Materials and choose Processing > Trial Kitting.

   The Trial Kitting window appears.



2. Select the BOM Reference from the drop-down list.
3. Enter the Quantity to manufacture. This defaults to the 'Base qty for costing' value set in Bill of Material Settings. For more information, see *The General tab* on page 107. You can amend this to any quantity you require.

   Note: If you enter a quantity which does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

4. Cumulative Lead Time shows the total time required to build the product. This is calculated by adding the time it takes to manufacture to the longest material lead time.
5. Specify the warehouses that you want to check for stock during the trial kitting process.
   - Select All warehouses to select all warehouses.
   - Clear the All warehouses check box and click Select to choose a warehouse or warehouses.
6. Specify when you want to build sub-assemblies.
   - Select Always if you always want to build sub-assemblies. This refreshes the component list with all of the components from the sub-assemblies included in the selected BOM.

     Note: Phantom sub-assemblies operate on an Always setting.
   - Select 'When required' if you want to build sub-assemblies only when required. This extends the component list to show sub-assembly components where there is a shortage of made up sub-assemblies.
   - Select Never if you never want to build sub-assemblies.
7. Click Calculate.
   - Enter cost prices if prompted.

     This happens if zero stock levels or cost prices are enountered and 'Ignore zero costs' or 'Ignore zero levels' settings are selected. For more information on these settings, see *The Costing/Trial Kitting tab* on page 112.

   The results are calculated and displayed in the following tabs.

Components	Lists the material requirements and any shortages. If the required quantity (Required Qty) does not match the unit of measure, the automatically adjusted rounded up quantity (Actual Qty) is used. This is used to determine the quantity which is required from stock (Req From Stock), if there is a shortage. The rounding is done per BOM item line. The quantity required from stock is the sum of rounding on individual BOM item lines for the same item. For example, if there is BOM line for 1.2 of an item and a BOM line for 1.5 of the same item, Trial Kitting rounds each of these individual BOM lines up to 2. It then sums the rounded results to show a requirement of 4 for the component.
Labour	Shows the total labour hours required, analysed by process.

Machine	Shows the machine hours required on each machine.
Subcontract	Shows the total hours required for each subcontract operation.
Costs	**Note:** The Costs tab is shown if you selected the 'Cost when Trial Kitting' setting. For more information see *The Costing/ Trial Kitting tab* on page 112. Shows the cost of producing the required quantity of finished product, including overhead. Uses the required mark-up figure from the BOM record to calculate a suggested selling price. You can also see the latest actual selling price taken from the stock record.

8. Click 'Check for maximum build qty' to calculate the total quantity of finished product that you can produce. The calculation is based on the current free stock of components and sub-assemblies in your Stock Control records.

   Note: If the quantity does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value. This is shown in the Actual Qty column.

9. Click Print to produce a printed copy of your Trial Kitting results. You can print requirements and shortages, shortages only or a costing report.

10. Select any further Action To Take.
    - Select Add to Make to Stock to add the BOM to the Make to Stock module. You will also need to enter a Due Date.
    - Select Create Works Order to create a Works Order based on the details entered. You will also need to enter a Due Date.
    - Select Create Sales Order to create a sales order in Sales Order Processing. The sales order will be for the quantity specified.
    - Select 'No further action' if you do not want to take any further action.

11. To perform an action, click Perform Action.
    To close the Trial Kitting window, click Close.

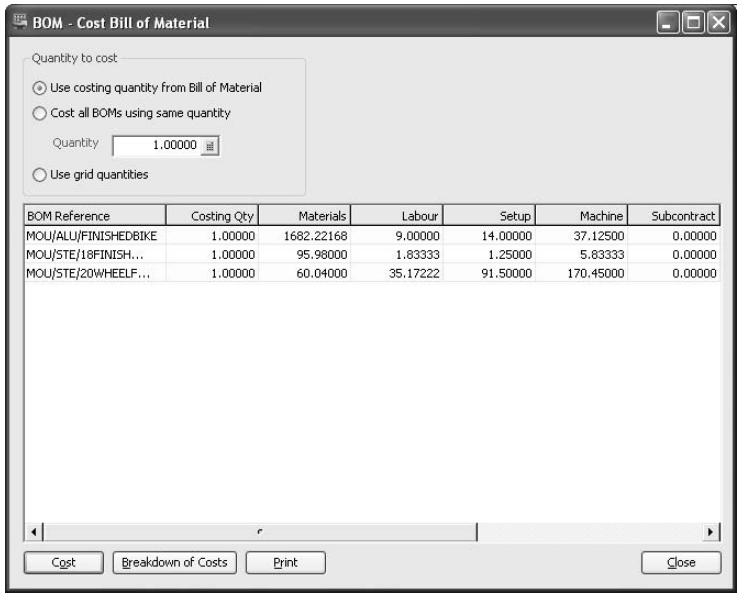
Costing a BOM

BOMs need to be costed when prices, components or operations change.

To cost a BOM

1. From the Navigation Bar, click Bill of Materials and choose Processing > Cost.

   The Cost Bill of Material window appears.



2. Select a BOM to cost by clicking in a blank BOM Reference box.
3. To cost using the costing quantity on the BOM record, select 'Use costing quantity from Bill of Material'.
4. To cost all BOMs using one quantity, select 'Cost all BOMs using same quantity' and enter the Quantity.
5. To cost each BOM using a different quantity, select 'Use grid quantities' and then change the 'Costing Qty' for each line.
6. Click Cost to update the grid with the costs.
7. Click Print to produce a report detailing the current BOM costs.
8. Click 'Breakdown of costs' to display a graphical breakdown of the costs.

Note: The unit cost of a manufactured item depends on the batch size. This is because setup and subcontract costs are shared by all units in the batch.

Displaying Current Latest Costs

You can view current latest costs at any time from the Bill of Material Details window.

To display current latest costs

1. From the Navigation Bar, click Bill of Materials and choose Records > Amend BOM Details.

   The Bill of Material Details window appears.
2. Select the BOM that you want to view latest costs for.
3. Click the Latest Costs tab.
4. Click Cost Now to calculate BOM costs.
5. Click 'Breakdown of costs' to display a graphical breakdown of the costs.
6. Click 'Breakdown of overheads' to display a graphical view of the overhead costs.

Resequencing BOMs

Each BOM holds details of components and operations. Sequence numbers determine the sequence in which BOMs are processed and displayed on reports. Sequence numbers are applied automatically to components or operations as you add them to a BOM. The pattern for the numbers applied is set within the resequencing settings. For more information, see *The Resequencing tab* on page 110.

By default, sequence numbers are set in ascending numerical order, starting from '1.00', in steps of '1' (for example '1.00', '2.00', '3.00', '4.00', and so on). You can apply new sequence numbers to components or operations when required. Use the resequencing settings to specify new sequence numbers and defined steps for the sequence numbers. Incrementing by a number other than '1.00', for example '5.00' or '10.00', leaves a gap between sequence numbers. New components or operations fit into the sequence easily, since there are already gaps available in the numbering.

You can resequence BOMs individually or as a batch. If you resequence individually from the Bill of Materials Details window, you have the choice of resequencing either the components, or operations, or both.

To resequence a BOM

1. From the Navigation Bar, click Bill of Materials and choose Processing > Resequence.

   The Resequence window appears, listing all BOMs which are not on hold.

2. Select the 'Show Bill of Materials On Hold' check box to include in the list BOMs which are on hold.

3. Select the BOMs you want to resequence and click OK.

   Note: If you are using version control, you can only resequence active BOMs. A new version of the active BOM is created. If a new version already exists, resequencing does not take place.

Finding Maximum Build Quantity

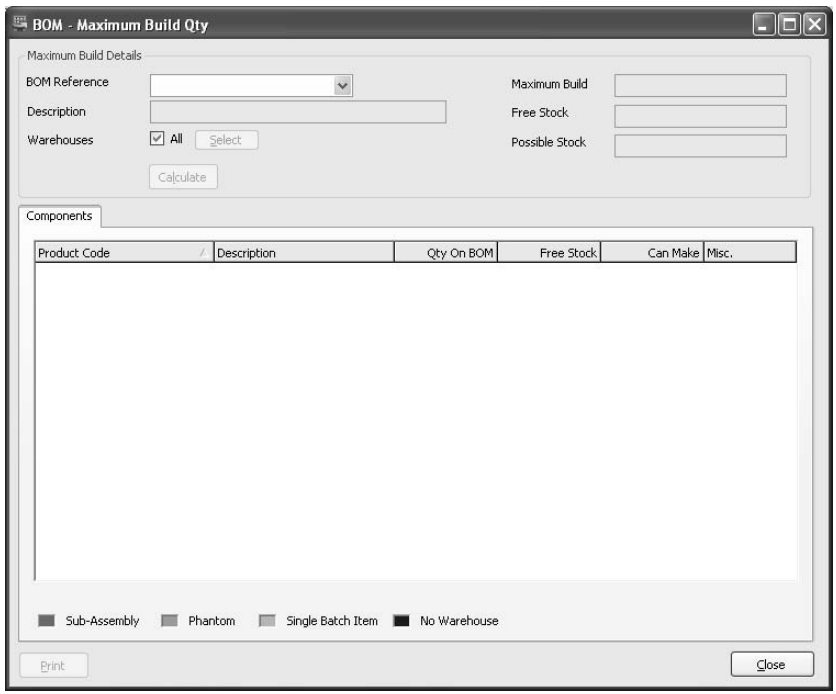
You can determine the current maximum build quantity for a BOM using this option. Bill of Materials bases the maximum build quantity upon the availability of current free stock. For each component, the quantity required, quantity available, and quantity that you can build, are shown. You can also print the information for reference.

Note: Maximum Build Quantity is also available within Trial Kitting. You must use the option in Trial Kitting to check for maximum build quantity on sub-assemblies. For more information, see *Using Trial Kitting* on page 146.

To run the maximum build routine

1. From the Navigation Bar, click Bill of Materials and choose Processing > Maximum Build Quantity.

   The Maximum Build Qty window appears.



2. Select the BOM Reference from the drop-down list. The Description appears automatically.
3. If stock is available in many warehouses, specify the locations to be used for estimating the maximum build quantity.

- To look at stock in all warehouses, select the All warehouses check box.
- To look at stock in specific warehouses, clear the All warehouses check box, and click Select. Select the required warehouses from the drop-down list.

4. Click Calculate.
   - If you are using version control and the BOM is checked out, you cannot continue.
   - If the BOM is on hold, confirm that you want to continue.

   If you selected a warehouse where a component is not stored, this is highlighted in red.

   Note: If the quantity does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value. The quantity that can be made is shown in the Can Make column.
5. Click Close to close the Maximum Build Quantity window.

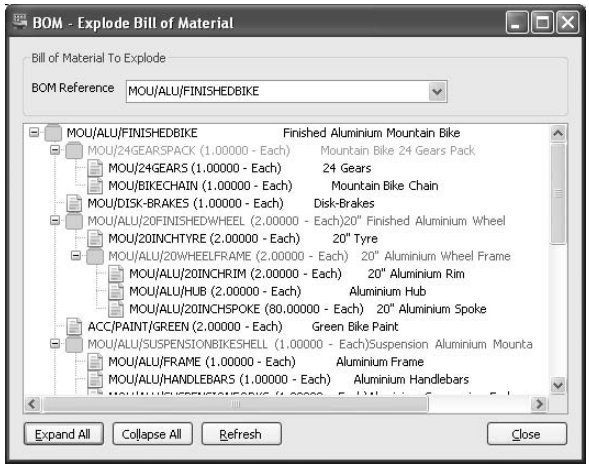
Viewing BOM Component Details

You can see different views of BOM component details. You can explode BOMs and view the component details within the BOMs. You can also implode the components to see which BOMs the components lie within.

To explode a single BOM

1. From the Navigation Bar, click Bill of Materials and choose Processing > Explosion > Single Bill of Materials.

   The Explode Bill of Material window appears.

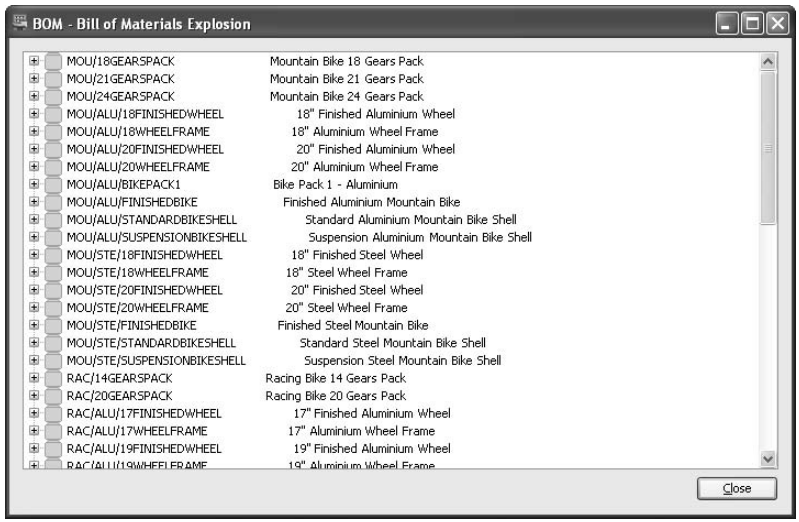


2. Select the BOM Reference from the drop-down list.
3. To view the component details, click Expand All.
4. To close the window, click Close.

To explode all BOMs

1. From the Navigation Bar, click Bill of Materials and choose Processing > Explosion > All Bill of Materials.

   The Bill of Materials Explosion window appears.

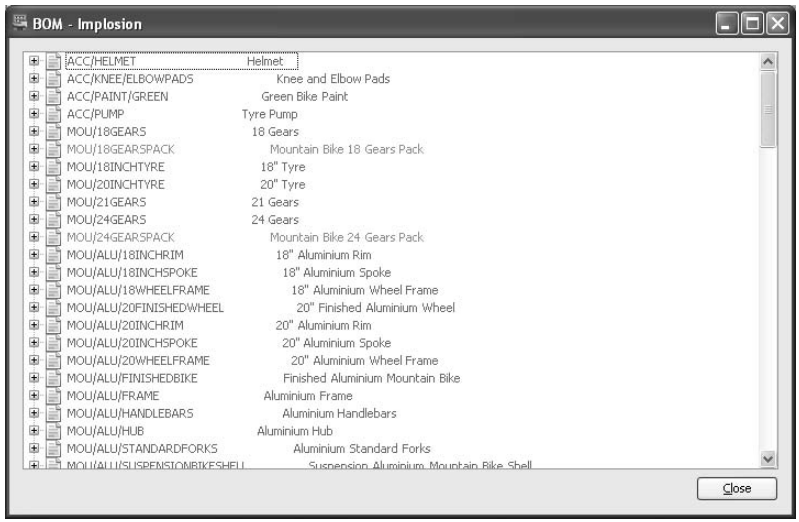


2. To view the component details, click the '+' (plus) sign next to the BOM.
3. To close the window, click Close.

To implode BOM components

1. From the Navigation Bar, click Bill of Materials and choose Processing > Implosion.

   The Implosion window appears.



2. To view the BOM details for a component, click the '+' (plus) sign next to the component.
3. To close the window, click Close.

Preparing BOM Reports

The following reports are available from the Bill of Materials menu.

- Bom Implosion

  This provides a report on the BOMs from the component viewpoint. It lists the BOMs that each component is a part of.

- Construction Report

  This provides a report on the BOMs in construction. The report can be listed by BOM reference.

- Indented Parts List

  The report can be listed by level, with costs, with suppliers, with suppliers by level, or with suppliers and costs.

- List

  The BOM list may be organised by BOM reference, by date entered, by last costed, by last updated, by valid from or valid to, or in summary by BOM reference, by date entered, last costed or last updated.

- Where Used

  This report provides information on which BOMs use various elements. The report may be listed by components (by product code), drawings (by drawing reference), labour (by labour reference), machinery (by machine reference) or operation (by operation reference).

To prepare BOM reports

1. From the Navigation Bar select Bill of Materials, and choose Reports.
2. Select the report required from the list of available reports in the menu.

   For more information on preparing reports, see the *Sage 200 help*.

To customise BOM reports

You can edit or copy report layouts, or create a new report layout, using Sage Report Designer. For more information, see *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Maintaining BOMs

You can add, replace or delete components in many BOMs at the same time. You can also update your Operations Register and/or BOMs with changes made to labour and machine hourly rates automatically.

Purging retired BOMs is described under *Deleting a BOM on page 138*.

Add Component

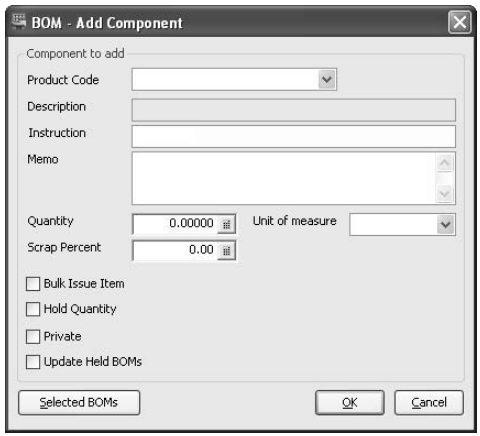
This lets you add a component to many BOMs at the same time.

Note: You cannot add components if you are using version control.

To add a component

1. From the Navigation Bar, click Bill of Materials and choose Maintenance > Add Component.

   The Add Component window appears.



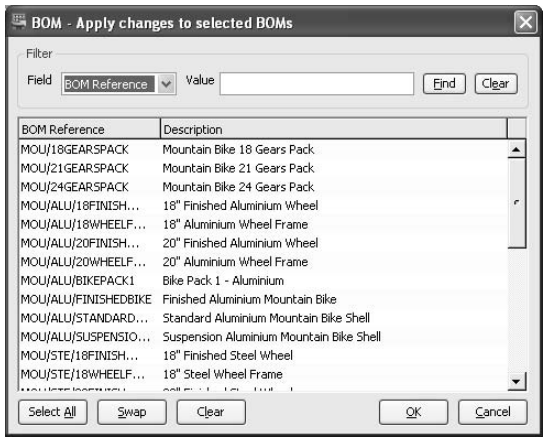
2. Select the Product Code. The Description appears automatically.
3. Enter the required information, according to the following descriptions.

Instruction	Enter any instructions relating to this particular component. The instructions you enter here display on the Indented Parts list. You can change the label of the Instruction box. For more information, see *Registers* on page 47.

Memo	Enter any other information about the product that you want to record.
Quantity	Enter the quantity of the component or raw material required to manufacture the finished item. **Note:** If the quantity does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.
Unit of Measure	The Unit of Measure displayed is from the stock record, but you can change it here.
Scrap Percent	If you want to build in an allowance for scrap when issuing this bill of materials, enter the percentage in the Scrap Percent box.
Bulk Issue Item	Select the Bulk Issue Item check box if you want to handle stock movements manually for this component. **Note:** Manufacturing clears the Update Stock flag on subsequent works orders by default.
Hold Quantity	Select Hold Quantity if you do not want to multiply the quantity by the batch quantity when ordering. For example, if you have a component quantity of two, and you are building 1000 of the finished product, Manufacturing would issue 2000 of the components. If you select the Hold Quantity check box, the system will issue only two components.
Private	Select the Private box if you do not want to include the component in any calculations outside Bill of Materials.
Update Held BOMs	Select the Update Held BOMs check box if you want to add components to BOMs that are currently on hold.

4. To apply the component to selected BOMs, click Selected BOMs.

   The 'Apply changes to selected BOMs' window appears.



- Select the BOMs that you want to add the component to, and click OK to return to the Add Component window.

5. To add the component to the BOMs, click OK.
6. Confirm that you want to add the component, when prompted.

Replace Component

This lets you replace a component in a BOM or works order. You can amend all records or select which records you want to amend.

Note: You cannot replace components if you are using version control.

To replace components

1. From the Navigation Bar, click Bill of Materials and choose Maintenance > Replace Component.

   The Replace Component window appears.

2. In the Replace area, select the Product Code for the item you want to be replaced from the drop-down list.

   The Description appears automatically.

3. In the With area, select the Product Code for the item to use as a replacement from the drop-down list .

   The 'Description' appears automatically.

   Note: The replacement item must support the same unit of measure as the original item. Even if it does, it may not be a suitable alternative item. In this case, you must confirm the replacement when you click OK.

4. In the Update Modules area, select the modules you want to update (Bill of Materials and Works Orders).

5. Select Update Held BOMs if you want to replace components in BOMs that are currently on hold.

6. To specify the BOMs to replace the component in, click Selected BOMs.

   The 'Apply changes to selected BOMs' window appears.

   - Select the BOMs required and click OK.

7. To replace the component in the selected BOMs, click OK.

   Note: The new component must support the same unit of measure as the original item. If not, the replacement cannot be performed and you must enter another new component.

8. Confirm the replacement when prompted.

   Manufacturing finds all BOMs and/or works orders which contain the part to be replaced and substitutes the new item.

Note: You now need to recost your affected BOMs. For more information, see *Costing a BOM* on page 149. You can run the Where Used report in Bill of Materials to find out which BOMs have been altered.

Delete Component

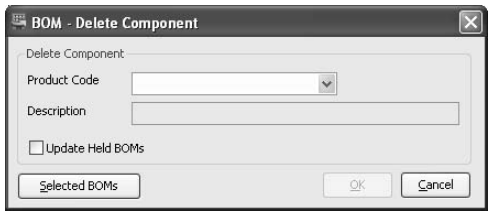
This lets you delete a component from all BOMs.

Note: You cannot delete components if you are using version control.

To delete a component

1. From the Navigation Bar, click Bill of Materials and choose Maintenance > Delete Component.

   The Delete Component window appears.



2. Select the Product Code of the component you want to delete from the drop-down list.

   The description is appears automatically.

3. Select Update Held BOMs if you want to delete components from BOMs that are on hold.
4. To specify which BOMs to delete the component from, click Selected BOMs.

   The 'Apply changes to selected BOMs' window appears.

   - Select the BOMs required and click OK.

5. To delete the component from the selected BOMs, click OK.
6. Confirm the deletion when prompted.

Update Operations

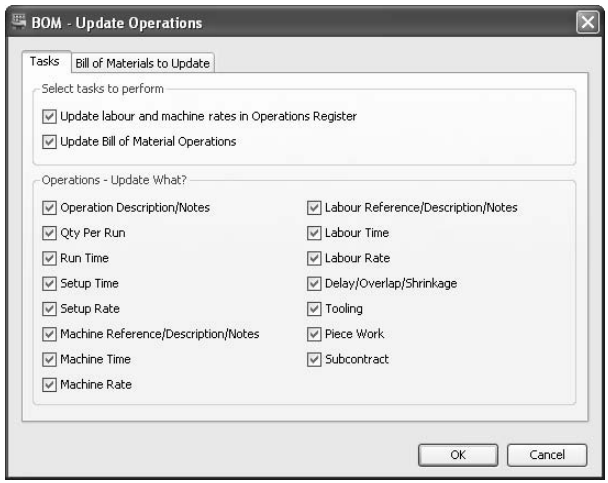
This lets you automatically update your Operations Register and/or BOMs with changes to labour and machine hourly rates.

Note: You cannot update operations if you are using version control.

To update operations

1. From the Navigation Bar, click Bill of Materials and choose Maintenance > Update Operations.

   The Update Operations window appears.



2. Select or clear the following check boxes.

Update labour and machine rates in Operations Register	Select this check box to update the Operations Register automatically with changes made in the Labour Register and Machine Register.
Update Bill of Material Operations	Select this check box to update all or a selection of BOMs automatically with changes made in the Operations Register.

3. Select the check boxes for the features you want to update.
4. If you selected Update Bill of Material Operations, click the Bill of Materials to Update tab.
   - Select the BOMs to update.
5. To perform the selected updates, click OK.

6. Confirm that you want to update the selected tasks, when prompted.

   You are prompted to recost your BOMs.

7. Click OK to complete the process.

   Note: Remember that you may need to recost your BOMs.

   For more information, see *Costing a BOM* on page 149.

Chapter 5

Estimating

The Estimating module assists in the production of estimates for one-off items or non-repetitive batches. If you are working in a one-off jobbing environment, read this chapter.

Information for the estimate is drawn from Stock Control, the Labour Register, Machine Register and Operations Register. You can enter expected costs for each stage of the job under each of the job cost types.

You can copy, print, recost, cancel and delete estimates. These facilities are described in this chapter.

In this chapter:

Entering Settings for Estimates 168
Viewing Settings for Estimates 177
Creating an Estimate.....178
Creating Multiple Estimates.....209
Amending an Estimate.....214
Amending Multiple Estimates.....216
Deleting an Estimate 219
Copying an Estimate.....220
Printing an Estimate.....222
Costing an Estimate.....223
Creating a Sales Order.....224
Converting an Estimate into a Works Order 226
Converting an Estimate into a BOM .228
Releasing All Stages 229
Managing Multiple Estimates 231
Preparing Estimating Reports 237
Cancelling an Estimate.....238
Maintaining Estimates 239

Entering Settings for Estimates

You can tailor the system to your company's needs through the setup process. This saves time when using the system. For more information, see *To enter the estimate default settings* on page 168.

Calculation of overhead recovery applies in Estimating. Once you enter estimate details, an amount is added to increase the estimate and ensure overheads are met.

Note: Enter overhead recovery settings before estimating. For more information, see *Overhead Recovery Settings* on page 27.

Estimates can have up to five analysis codes attached to them for analysis purposes. For more information, see *Analysis Codes* on page 21.

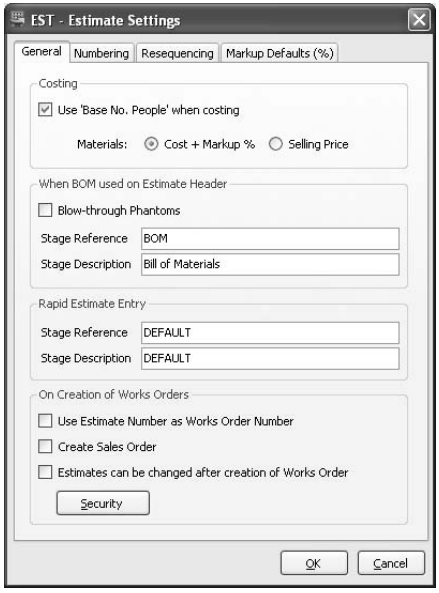
You can set up labour, machine and operation details prior to creating estimates. For more information, see *Labour Register* on page 47, *Machine Register* on page 50, *Operations Register* on page 54 and *Drawing Register* on page 62.

In addition, stage templates, prospects and expense types can apply within estimates. For more information, see *Stage Templates* on page 69, *Prospects* on page 79 and *Expense Types* on page 88.

To enter the estimate default settings

- From the Navigation Bar, click Estimating and choose Setup > Estimate Settings.

  The Estimate Settings window appears.



For more information on each Estimate Settings tab, please read the following sections.

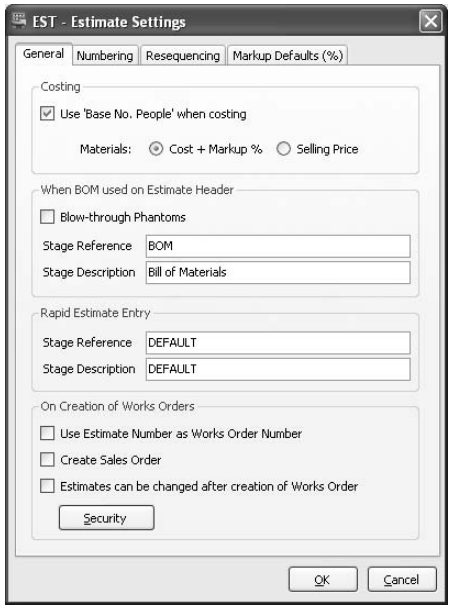
- *The General tab* on page 170
- *The Numbering tab* on page 173
- *The Resequencing tab* on page 175
- *The Mark-Up Defaults (%) tab* on page 176

The General tab

To enter general settings

1. In the Estimate Settings window, click the General tab.

   The General settings appear.



2. Enter the settings required, according to the following descriptions.

Use 'Base No. People' when costing	By default, it is assumed that manufacturing operations are to be performed by one person. Select this setting if more than one person is required to perform for an operation. This ensures accuracy in costing. For example, an operation taking two people 10 hours is costed at 20 hours. **Note:** If in doubt, select the option.

Materials	When building estimates, you can: ■ Enter selling prices and mark-up% for quantity breaks. ■ Use the existing customer selling prices set up within the Price Book for each stock item. To enter both selling prices and mark-up% for quantity breaks when you create estimates, select Cost + Markup%. **Note:** This is the default. To use the customer selling prices for each stock item, select Selling Prices.
Blow-through Phantoms	To accommodate one-off modifications to standard products, you can add a BOM as a product code on an estimate header. Select this option to add the BOM components and operations to a special stage on the estimate.
Stage Reference	If you select Blow-through Phantoms, enter the reference for the special stage.
Stage Description	If you select Blow-through Phantoms, enter the description for the special stage.
Rapid Estimate Entry	Estimates must have at least one stage. You can create estimates with a full range of stages or use the rapid option. If you use the rapid option, enter a default Stage Reference and Stage Description here. This stage is used automatically during rapid entry.
Use Estimate Number as Works Order Number	Select this to use the estimate number for the works order if you convert the estimate to a works order.
Create Sales Order	You can choose to create a sales order in Sales Order Processing when you put an estimate into production. To make this choice available, select Create Sales Order.

Estimates can be changed after creation of Works Order	You may want to change estimates after they have gone into production or been converted to works orders. To allow changes, select 'Estimates can be changed after creation of Works Order'. To restrict the ability to make changes, click Security and set a password. **Note:** By default, the password is blank.

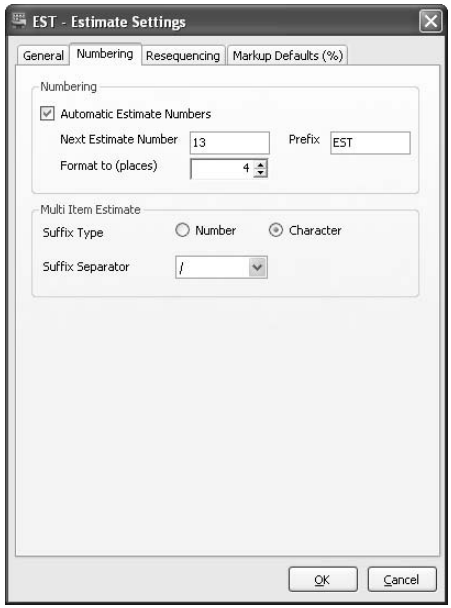
3. To continue entering Estimate Settings, click the Numbering tab.
   To save Estimate Settings, click OK.

The Numbering tab

To enter numbering settings

1. In the Estimate Settings window, click the Numbering tab.

   The Numbering settings appear.



2. Enter the settings required, according to the following descriptions.

Automatic Estimate Numbers	Manufacturing automatically generates estimate numbers. To enter your own estimate numbers using any 30 digit alphanumeric sequence, clear the check box.
Next Estimate No.	If you selected the Automatic Estimate Numbers check box, enter the number you would like to start with. The number is incremented by one each time you enter and save or abandon an estimate.
Prefix	If you selected Automatic Estimate Numbers, you can enter up to ten letters and/or numbers here. These will appear as a prefix before your estimate number.

Format to (places)	If you selected Automatic Estimate Numbers, enter the number of digits, including leading zeroes, for the estimate number. This ensures estimates are displayed in the expected order. For example, entering '4' results in the sequence 0001, 0002, 0003, and so on.
Suffix Type	You can create several estimates for one customer at one time. When you do this, a suffix is added to the estaimte number. Select the type of suffix you want for multi item estimates: ■ Choose Number if you want the suffix to be numeric. For example, 01, 02, 03, and so on. ■ Choose Character if you want the suffix to be letters. For example, AA, AB, AC, and so on.
Suffix Separator	Select from the drop-down list the separator character to use before the suffix in the Estimate Reference. For example, if you select the forward slash character (/), the suffix is shown as /01 or /AA.

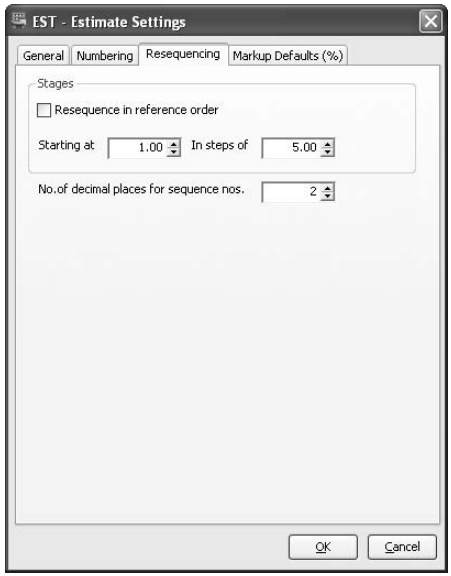
3. To continue entering Estimate Settings, click the Resequencing tab.
   To save Estimate Settings, click OK.

The Resequencing tab

To enter resequencing settings

1. In the Estimate Settings window, click the Resequencing tab.

   The Resequencing settings appear.



2. Enter the settings required, according to the following descriptions.

Resequence in reference order	If you want the system to resequence the manufacturing stages by reference, select this check box. This is useful if you make changes in the list of stages. You can resequence stages starting at any number and in steps of any number. **Note:** If you are unsure, set to resequence starting from '1' in steps of '1'. You can change this at any time.
No. of decimal places for sequence nos.	Enter the number of decimal places for sequence numbers. You can enter a figure between zero and six.

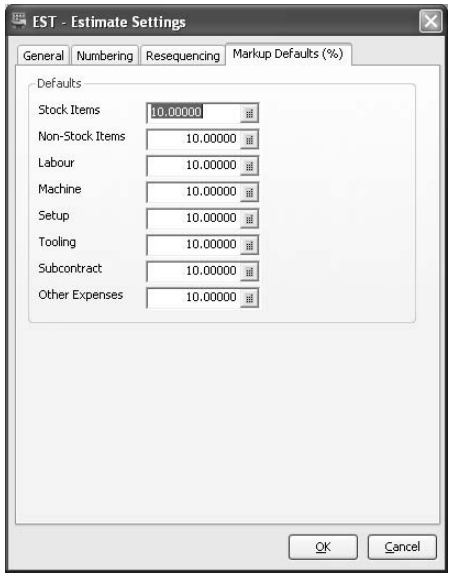
3. To continue entering Estimate Settings, click the Mark-Up Defaults (%) tab.
   To save Estimate Settings, click OK.

The Mark-Up Defaults (%) tab

To enter mark-up defaults (%) settings

1. In the Estimate Settings window, click the Mark-Up Defaults (%) tab.

   The Mark-Up Defaults (%) settings appear.



2. Enter the settings required, according to the following descriptions.

Defaults	Manufacturing analyses costs under eight headings. For each heading, you can enter a default mark-up. This is applied to the total cost price to calculate a selling price. For example, if you enter a mark-up of 50% on stock items, items bought for £1000 would be charged at £1500. Mark-up can be adjusted for individual estimates, if required.

3. To save Estimate Settings, click OK.

Viewing Settings for Estimates

If you need to provide details of your settings to the support team, use the 'view only' versions of the settings.

To view estimate settings

1. From the Navigation Bar, click Estimating and choose Setup > View Estimate Settings.
2. When you have finished viewing the settings, click Close.

Creating an Estimate

Note: You cannot create an estimate for a foreign currency customer.

There are various ways of creating an estimate in Sage 200 Manufacturing.

- Full

  You can set up the estimate with detailed information about the stages involved in the estimate. For more information, see *To set up a full estimate* on page 178.

- Rapid

  You can set up an estimate quickly, using the Enter New Estimate - Rapid option. This is useful if you are not interested in setting up stages manually for the estimate. The default stage for the estimate (see *The General tab* on page 170) is created automatically. For more information, see *To set up an estimate quickly* on page 179.

- Copy

  You can copy an existing estimate and amend the details where required. For more information, see *Copying an Estimate* on page 220 and *Amending an Estimate* on page 214.

- Multi Item

  You can create several estimates for a customer at one time. For more information, see *Creating Multiple Estimates on page 209*.

To set up a full estimate

1. From the Navigation Bar, click Estimating and choose Records > Enter New Estimate - Full.

   The Estimate Details window appears.

2. Enter the estimate Main Details. These consist of an estimate description and customer details such as the account code (if any) contacts and reference numbers. This is also where quantity breaks are specified. For more information, see *The Main Details tab* on page 183.

3. Enter the Additional Details. These include information such as who was involved with the estimate, overall discounts applied to the estimate and overhead recovery. For more information, see *The Additional Details tab* on page 187.

4. Enter the Site Address details. This is the customer site address. For more information, see *The Site Address tab on page 189*.

5. Enter details about your manufacturing stages. Stages are the main elements into which the estimate may be broken down. For example, you may enter stages for Design, Manufacture, Install and so on.

Note: You must have at least one stage for each estimate you are entering in the Enter New Estimate - Full process.

Check that all prices are correct before moving on to the next stage. For more information, see *The Stages tab* on page 190.

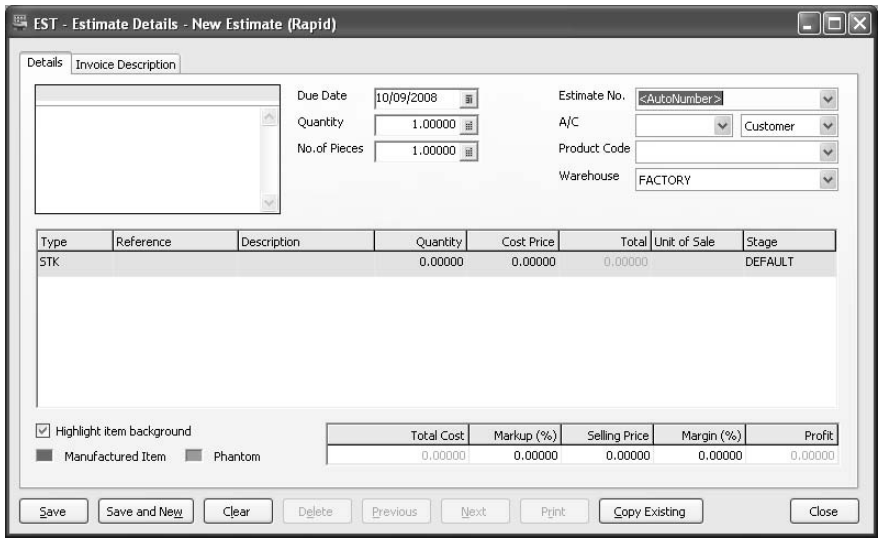
6. Check the Totals to ensure that selling prices, mark-ups and margins are all correct. For more information, see *The Totals tab* on page 200.
7. Enter the path to additional files on your PC or network which you want to link with this estimate. For more information, see *The Attached Files tab* on page 202.
8. If required, enter additional text for the Invoice Description. For more information, see *The Invoice Description tab* on page 204.
9. Enter appropriate Analysis Codes for reporting purposes. For more information, see *The Analysis Codes tab* on page 205.
10. Add Drawings to the estimate. For more information, see *The Drawings tab* on page 206.
11. Add notes about the estimate for your reference, using the Memo tab. For more information, see *The Memo tab* on page 208.
12. When you have finished entering your estimate details, click Save.

    The Estimate Details window closes and you are returned to the Estimate List. The list now includes your new, saved estimate.

To set up an estimate quickly

1. From the Navigation Bar, click Estimating and choose Records > Enter New Estimate - Rapid.

   The Estimate Details - New Estimate (Rapid) window appears.



2. Click Copy Existing to copy the details from an existing estimate, or enter the following estimate details.

Due Date	Enter the date the estimate should be completed. This is the default date for the stages. It is also used in MPS and MRP, and is carried over into the works order upon conversion.
Quantity	Enter the number of finished items you want to manufacture. If you change the quantity at any stage, the quantities for each item are recalculated.
No. of Pieces	Enter the number of individual items required for each finished item. If you change the number at any stage, the quantities for each item are recalculated.
Estimate No.	Manufacturing automatically generates estimate numbers. To enter your own estimate numbers, clear the Automatic Estimate Numbers check box in Estimate Settings. For more information, see *The Numbering tab* on page 173. You can enter estimate numbers up to 30 digits using any alphnumeric sequence.

A/C	If the estimate is for an existing customer/prospect, select the customer/prospect from the drop-down list. The address appears automatically. If the estimate is for a new customer/prospect, enter the customer/prospect reference. **Note:** You can only create estimates for base currency customers.
Product Code	Select a product from the Product Code drop-down list. **Note:** If you select a product that has a BOM defined, the BOM components and operations appear in the items list.
Warehouse	Select a warehouse, set up for component supply in Stock Control, from the Warehouse drop-down list.

3. Enter the required information, according to the following descriptions.

Type	Click within the Type box and select the type of transaction. The type can be 'ST' (stock), 'NS' (non-stock), 'OP' (operations) and 'EXP' (expenses).
Reference	Click within the Reference box to select a description from the drop-down list.
Description	Enter the description for the item.
Quantity	Enter the quantity required for this estimate. **Note:** If you enter a quantity which does not match the unit of sale, the quantity is automatically adjusted to the nearest appropriate value.
Cost Price	Enter the estimated cost price.
Total	Total cost is calculated as the quantity multiplied by the price. The calculation is done when you move out of the box. **Note:** You can use the TAB key to move out of the Total box to ensure that the total figure is calculated.

Unit of Sale	If the item uses multiple units, click within the Unit of Sale box. Select from the drop-down list, the units this price relates to, for future reference. Otherwise, the product unit is displayed.
Stage	Each job for which you are preparing an estimate, can be broken down into stages. Click within the Stage box, and select the stage, if it already exists, from the drop-down list. If it does not already exist, select 'NEW' to create a new stage. **Note:** If you specified a Stage Reference and Stage Description in Estimate Settings, this stage is shown here by default.

As you add information to the estimate, the Total Cost, Markup (%), Total Selling Price, Margin (%) and Profit are updated. Depending on your Costing Materials setting within Estimate Settings, you either manually update the markup %, selling price and margin (%) or update the values automatically. For more information, see *The General tab* on page 170.

- If you selected the Cost + Markup % Materials setting, then Markup (%) is calculated from the default specified in Estimate Settings. For more information, see *The Mark-Up Defaults (%) tab* on page 176. You can change this and you can enter a Total Selling Price, or you can enter a Margin (%) value.

  If you enter a Markup (%) and a Total Selling Price, then the Margin (%) value is calculated automatically.

  If you enter a Margin (%) value, the Markup (%) and Total Selling Price are calculated automatically.
- If you selected the Selling Price Materials setting, then Markup (%) and Selling Price are taken from the stock item record. If the customer has special discounts these are also taken into account and the Markup (%) and Selling Price amended.

  Note: You cannot amend the Markup (%) and Selling Price values and you cannot enter a Margin (%) value.

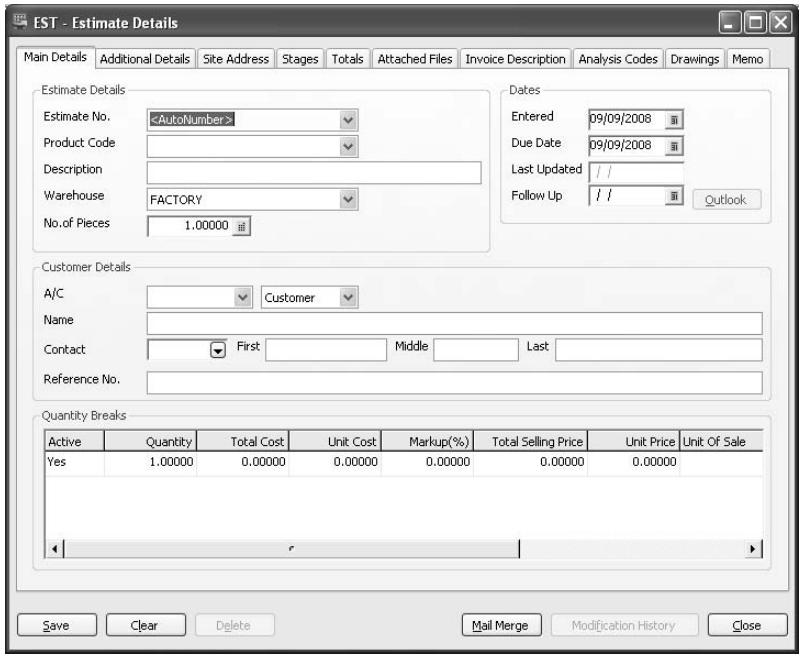
4. To save your Estimate Details, click Save.
   To continue entering another fast entry estimate, click Save and New.

The Main Details tab

To enter estimate details

1. From the Navigation Bar, click Estimating and choose Records > Enter New Estimate - Full.

   An empty Estimate Details window appears.



2. If you are using automatic numbering (see *The Numbering tab* on page 173), Manufacturing automatically generates the estimate number when you save the estimate. If you are entering estimate numbers, enter a number up to 30 digits, using any alphanumeric sequence.

3. Enter the number of individual items required for each finished item in the No. of Pieces box. If you change the number at any stage, the quantities for each item are recalculated.

   Note: You must enter this before selecting or entering a product.

4. Select the product code from the Product Code drop-down list. The Warehouse and Description appear automatically.

   The Description is entered automatically on the Invoice Description tab. The Invoice Description tab changes to capital letters.

Note: If you select a BOM product code for this estimate, stages that were set up to be added automatically to estimates must be manually added instead. For more information, see *Stage Templates* on page 69 and *The Stages tab* on page 190.

5. The Date Entered box defaults to 'today's date' but you can overwrite this.
6. If you know the date by which the estimate should be completed, enter it in the Due Date box. This is the default date for the stages (not to be confused with the due date on the stages). It is carried over into a resulting works order upon conversion.
7. The Follow Up box lets you enter a date on which to take further action, if required. Type a date in the field or use the calendar button.

   Note: Microsoft® Outlook users may now click the Outlook button. An entry is made in your Microsoft Outlook diary. A reminder is set, ensuring that any follow up action is not forgotten. You can amend and save this entry in the usual way.
8. If you are preparing this estimate for an existing customer or prospect, select Customer or Prospect. Then select the A/C from the drop-down list.

   Note: You can only prepare estimates for base currency customers.
9. If you are preparing the estimate for a new customer or prospect, ignore the A/C box. Enter the name of the person or company for whom the estimate is being prepared into the Name box.
10. The Contact boxes automatically display any data from the selected A/C. You can amend this information.
11. Enter an appropriate Reference No.
12. You can enter multiple quantity breaks for the finished items you want to manufacture. This gives you the ability to quote prices for different quantities when preparing estimates for customers. For more information about the Quantity Breaks Table, see *Using the Quantity Breaks Table* on page 185.
13. To continue entering estimate information, click the Additional Details tab
    To save your Estimate Details, click Save.

Using the Quantity Breaks Table

From within the full estimate Main Details tab, you can set up quantity breaks. You can use the same estimate to calculate different costs depending on different quantities. You can cost the estimate and print the estimate details for any or all of the quantity breaks that you set up.

Only one quantity break can be active at any one time. When the estimate goes into production or is converted to a works order, only one quantity can be used. The quantity that is used is the active quantity.

When you create an estimate, a default quantity break line is created with a status of 'Active' and a quantity of '1'. Any subsequent quantity breaks created by you are given an inactive status and are calculated on the basis of the active details.

To use quantity breaks

1. Enter the new quantity break in the next available row.
2. Enter the Quantity you require.

   If you are using the quantity breaks correctly, you will not need to enter a duplicate quantity value.

   If the quantity you enter already exists within the table, the system prompts you to enter another value.

   If you enter a quantity which does not match the unit of sale, the quantity is automatically adjusted to the nearest appropriate value.

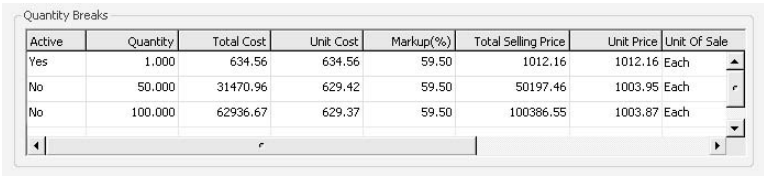
   Note: You can change the Unit of Sale, if required. Click in the Unit of Sale box and select another unit of sale from the drop-down list.
3. Depending on your Costing Materials setting within Estimate Settings, you either manually update the Markup (%) and Total Selling Price or Margin (%) values, or update the values automatically. For more information, see *The General tab* on page 170.
   - If you selected the Cost + Markup % Materials setting, then Markup (%) is calculated from the default specified in Estimate Settings. For more information, see *The Mark-Up Defaults (%) tab* on page 176. You can change this and you can enter a Total Selling Price, or you can enter a Margin (%) value.

     If you enter a Markup (%) and a Total Selling Price, then the Margin (%) value is calculated automatically.

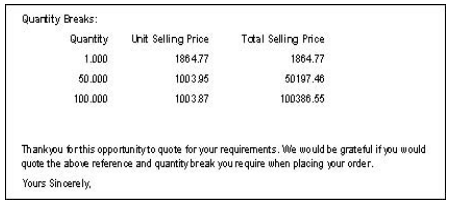
     If you enter a Margin (%) value, the Markup (%) and Total Selling Price are calculated automatically.
   - If you selected the Selling Price Materials setting, then Markup (%) and Selling Price are taken from the stock item record. If the customer has special discounts these are also taken into account and the Markup (%) and Selling Price are amended.

     Note: You cannot amend the Markup (%) and Selling Price values and you cannot enter a Margin (%) value.

4. If required, select an alternative Unit of Sale.
5. Set up as many breaks as you require.



When you print the estimate, all quantity breaks set up are displayed.



For more information on printing an estimate, see *Printing an Estimate* on page 222.

6. To make a quantity break active, select Yes in the Active column.

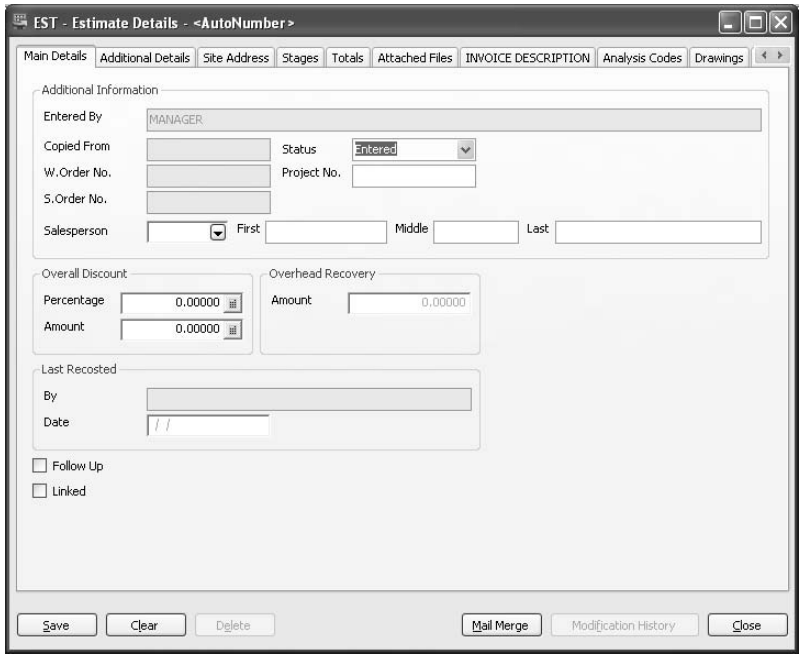
   The new estimate uses the various cost items taken from the active entries on the Quantity Breaks Table, to provide costs estimates.
7. To make a quantity break inactive, select No in the Active column.

The Additional Details tab

To set up additional details

1. In the Estimate Details window, click the Additional Details tab.

   The additional information appears.



   Note: The description of the stock item selected on the Main Details tab is entered automatically on the Invoice Description tab. The Invoice Description tab is shown in capital letters to indicate this.

2. The Entered By box defaults to the current user name.
3. If appropriate, enter the name of the Salesperson. Otherwise, leave these boxes blank.
4. When entering a new estimate the status is Entered. When you begin processing the estimate, change the Status if you have Manager access rights.
5. The Copied From, W. Order No. and S.Order No. boxes are updated automatically.
6. Apply an Overall Discount to a sales order when it is created from the estimate. Enter the discount as a percentage or amount. This discount is applied in addition to any manual adjustments made in the system-generated sales price, shown in the Quantity Breaks table.

7. Overhead Recovery is calculated automatically as a percentage cost of the estimate. The calculation uses the default percentages (for total cost or individual cost types) you have defined in the Overhead Recovery Settings. For more information, see *Overhead Recovery Settings* on page 27.

8. The Last Recosted boxes are completed automatically by the system as it uses the information from your login and computer system date.

9. To set a flag against the estimate, which can be seen in the Estimate List, select the Follow Up check box.

10. To link purchase orders (raised to meet this estimate's demands) to one-off works orders, select the Linked check box. The box is clear, by default, but will be either selected or clear, depending on your last selection.

    If you select this check box, then any associated orders raised will only be used to meet this estimate's demands.

    Note: Another setting must be selected for MRP to raise linked works and purchase orders to the works order created for the estimate header. This is the 'Allow linked under MRP' check box on the Stock Item Manufacturing tab.

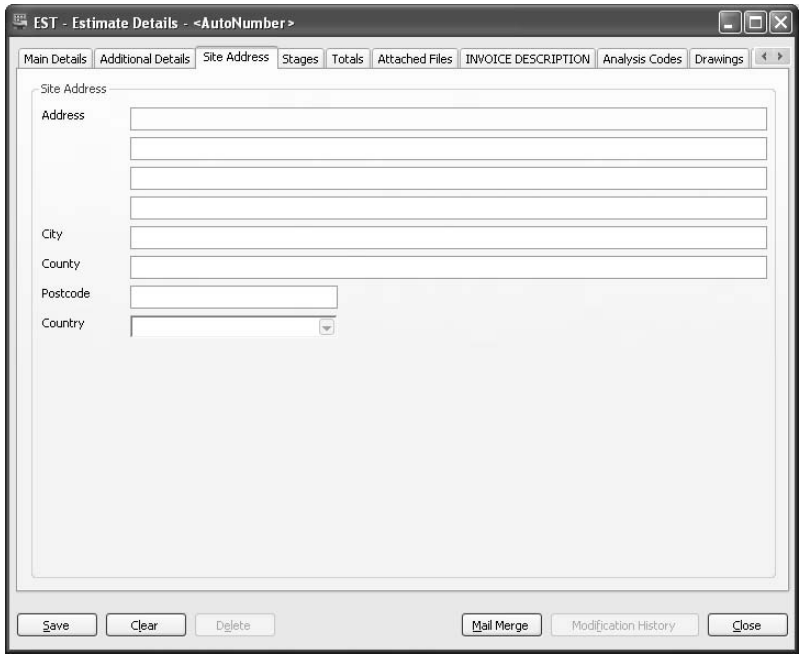
11. To continue entering estimate information, click the Site Address tab.
    To save your Estimate Details, click Save.

The Site Address tab

To set up the site address details

1. In the Estimate Details window, click the Site Address tab.

   The site address information appears.



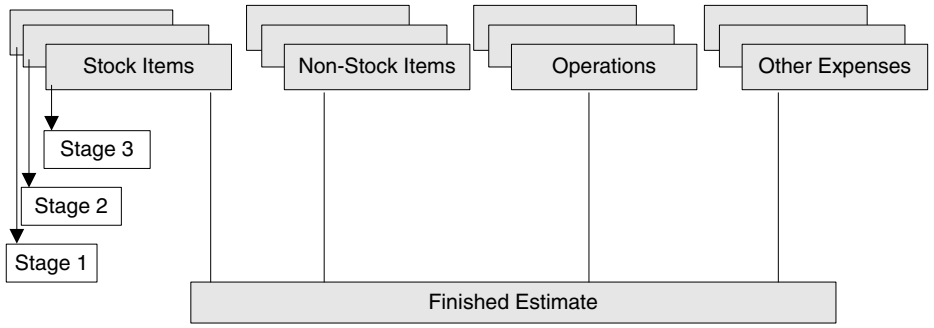
2. Enter the customer site address details.

   Note: You can only enter City, County or Country information if the Use Segmented Addresses option in Accounting System Manager is selected.

3. To continue entering estimate information, click the Stages tab.
   To save your Estimate Details, click Save.

The Stages tab

Each manufacturing job for which you are preparing an estimate can be broken down into stages. You can accumulate costs (stock, non-stock, operations and expenses) stage by stage, and compare actual costs against estimated costs.



Note: Estimates must have at least one stage.

Stages contain two levels of information: header information and detailed information. At the detailed level you enter the type of cost information: stock, non-stock, operations or expenses.

Stages can be entered directly or from stage templates. Stage templates hold common information that can apply to many different stages. Creating stages for an estimate using stage templates saves time and allows you to create the stages that you require quickly and easily.

When you create a stage template, you can specify if you want the stage to be added automatically to a new estimate. This can save you time. Stages can be added automatically when you enter enter full estimate details, if the product code you select does not already exist for a BOM. Stages which are added automatically will have a status of Entered and the stage Due Date will be that on the Estimate header.

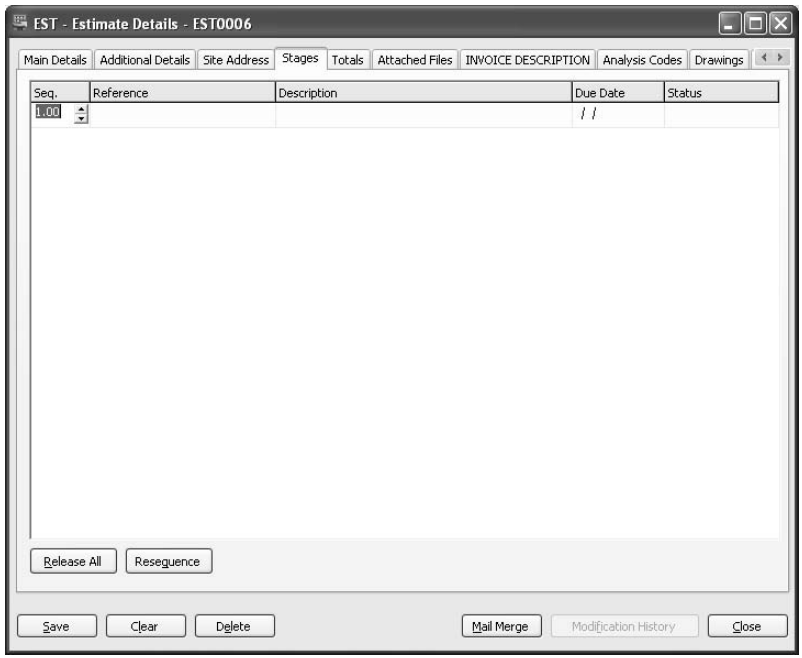
For more information see *Stage Templates* on page 69.

To enter stage header information

1. In the Estimate Details window, click the Stages tab.

   Note: You must save your estimate header information before you can enter the estimate stages information. Click Yes to continue.

   The Stages window appears.



2. If you are using stage templates, click within the Reference box and select the template you require from the drop-down list. For more information on stage templates, see *Stage Templates* on page 69. The template details are entered against your estimate and you can amend these as necessary.

3. If you are not using stage templates, enter the stage header information.

Stage Reference	Enter a reference for the stage. This may be up to 30 alphanumeric characters in length.
Stage Description	Enter a description for the stage. This may be up to 60 alphanumeric characters in length.
Due Date	This defaults to the date entered on the Main Details tab but you can change it if necessary. This is the due date used by MPS and MRP.

Status	To include an estimate in demands read by MPS, the estimate must be Released. You can release each stage of an estimate by selecting Released from the Status drop-down list. Or you can release all stages of the estimate by clicking Release All. **Note:** An estimate that has been converted to a works order has a status of Production.

4. Enter all stage header information required.

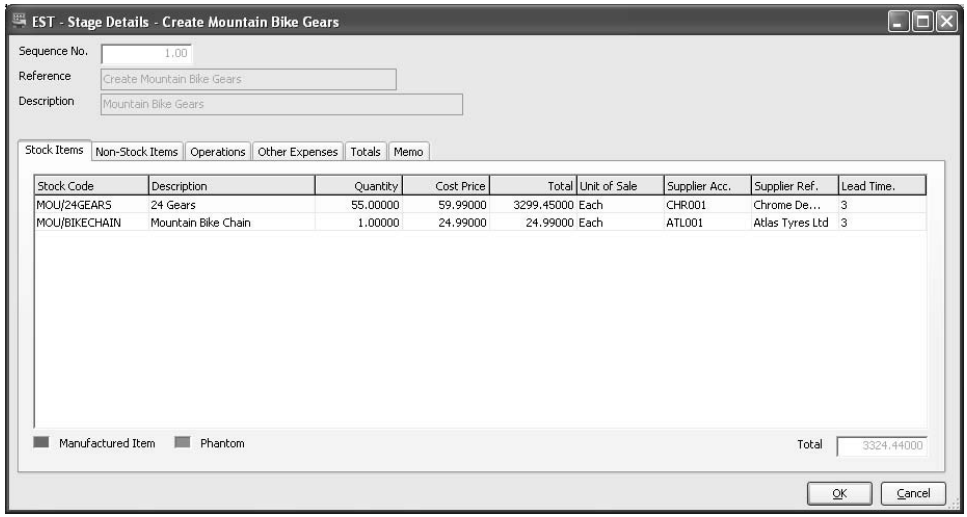
   Then enter the stage details for each stage. For more information, see *To enter stage detail information*.

To enter stage detail information

1. Click within the stage Description box to open the Stage Details window.

   Note: You must save your stage information before you can add items to it. Click Yes to continue.

   The Stage Details window appears.



   Note: Stock items have a record set up within the Stock Control module.

2. Enter the stock item information according to the following information.

Stock Code	Select a code from the drop-down list.
Description	The description of the product code in the Stock Control module appears by default.
Quantity	Enter the required quantity of this item. **Note:** If you enter a quantity which does not match the unit of sale, the quantity is automatically adjusted to the nearest appropriate value.
Cost Price	This automatically defaults to the last price paid for the product. Change this, if required, to the price you want to include in the estimate. **Note:** If you change the price and then cost the estimate, the price reverts to the price stored within Stock Control.
Total	The total cost is shown.
Unit of Sale	The unit of sale (used by Manufacturing as a unit of purchase) is displayed. If required, select an alternative unit of sale. **Note:** If you amend the Cost Price, make sure the amended price relates to the units displayed.
Supplier Acc.	Enter a supplier's account reference, if required.
Supplier Ref.	If you have a supplier reference, enter this.
Lead Time	This is the purchase lead time that should be used to offset the start date. It can also be applied to manufactured items. **Note:** If you define a supplier and lead time against a manufactured item (that is, a product with a BOM defined), the item will be purchased rather than manufactured.

Note: Stock items that have a BOM set up for them (that is 'manufactured' items) are highlighted in blue, by default. This can be customised in Manufacturing System Manager > Settings > Highlight Colours). When the estimate is processed, sub-assembly requirements are automatically added by MRP.

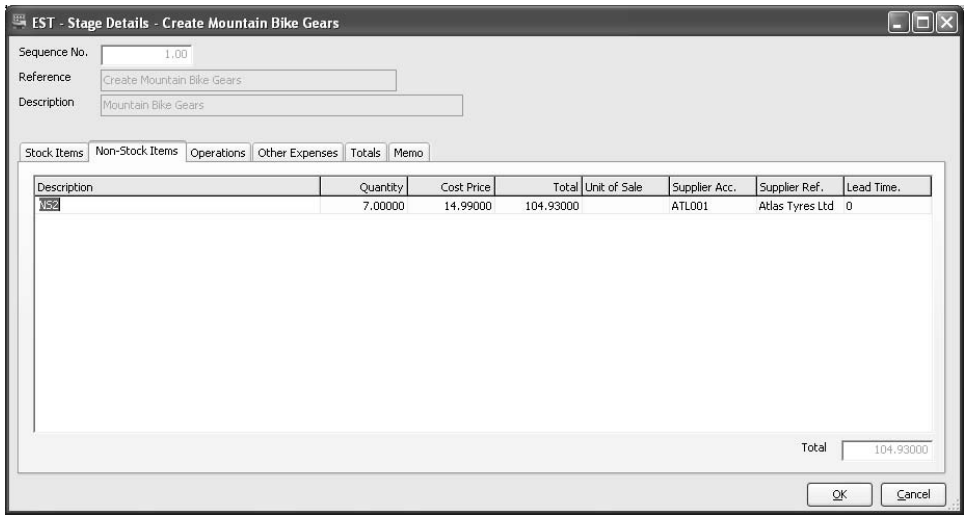
3. Continue to enter stock items until complete.

   To speed up the entry of lines within the Stages tab, try these shortcuts:

F8 - deletes an item from the estimate.
F7 - inserts a line into the estimate.
F6 - copies the contents of the above cell.

As you enter items, the total cost accumulates in the Total box at the bottom right of the window.

4. Click on the Non-Stock Items tab.



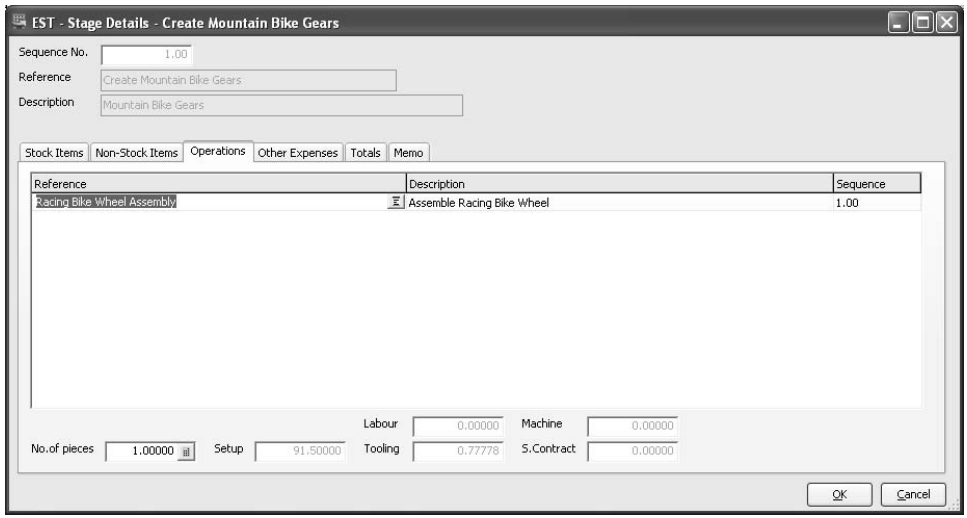
Note: Non-stock items are bought in for manufacturing and do not have a product record in Stock Control.

5. Enter your non-stock item information now:

Description	Enter the description for the item needed.
Quantity	Enter the quantity required for this estimate.
Cost Price	Enter the estimated cost price.
Total	Total cost is calculated as the quantity entered multiplied by the price. The calculation is done when you move out of the box. **Note:** You can use the TAB key to move out of the Total box to ensure that the total figure is calculated.

Unit of Sale	Enter the units that this price relates to for future reference, if required.
Supplier Acc.	Enter a supplier's account reference, if required.
Supplier Ref.	If you have a supplier reference, enter this.
Lead Time	This is the purchase lead time that should be used to offset the start date. It can also be applied to manufactured items. **Note:** If you define a supplier and lead time against a manufactured item (that is a product with a BOM defined), the item will be purchased rather than manufactured.

6. Continue to enter non-stock items. As you enter items, the cost accumulates in the Total box.
7. Click the Operations tab.



Note: Operations may come from the Operations Register, Labour Register and Machine Register.

8. Before entering details of your operation, confirm the number of pieces that you require as a default for this stage. This is the number of individual items required for each finished item. This is a default for the same box stored on each operation and is itself taken by default from the entry on the estimate header. For more information, see *To enter estimate details* on page 183.

9. If you are using the Operations Register, click the button within the Reference box to display the Select Operation list. Select the operation you require. The operation details are entered against your estimate and you can amend these as required.
10. If you are not using the Operations Register, enter the operations header information.

Reference	Enter the operation reference.
Description	Enter the operation description.
Sequence	Enter the sequence number for the operation.

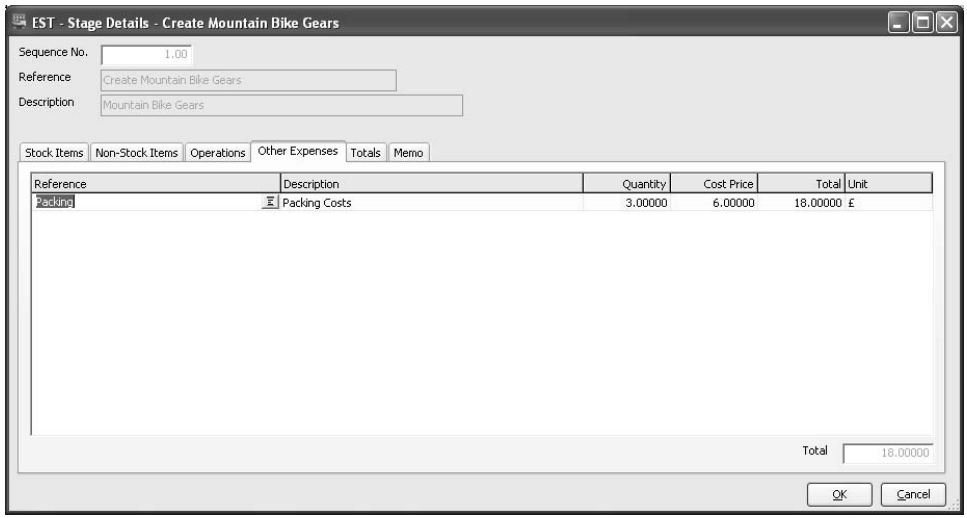
11. To amend the operation details, click the button within the Description box to display the Operation Details window.

    The procedure is almost the same as that for entering Operation details into the Operations Register. For more information, see *To add an operation* on page 54.

    Note: As you enter operation details, the total costs by category appear.

    - On the Options tab, confirm the number of pieces that you require as a default for the stage. This is the number of individual items required to make each finished item.
    - On the Components tab, associate components from the estimate with the operation. When you create a works order from the estimate, the components are copied to the works order. You can print these on a subcontract advice note.

      Note: If the component quantity does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.
    - When you have completed the details, click OK to save your entry. You are returned to the Stage Details window.
12. Continue to enter operations.
13. Click the Other Expenses tab.



Note: You can enter details of expenses that are not covered by the other cost categories. These expenses are already set up. For more information, see *Expense Types* on page 88.

14. Click in the box within the Reference box and select the required Reference.

    The Description appears automatically.

15. Enter the quantity requirement of this item. The quantity should relate to the units displayed in the end column.

16. The default expected price appears in the Cost Price box. You can change this, if required.

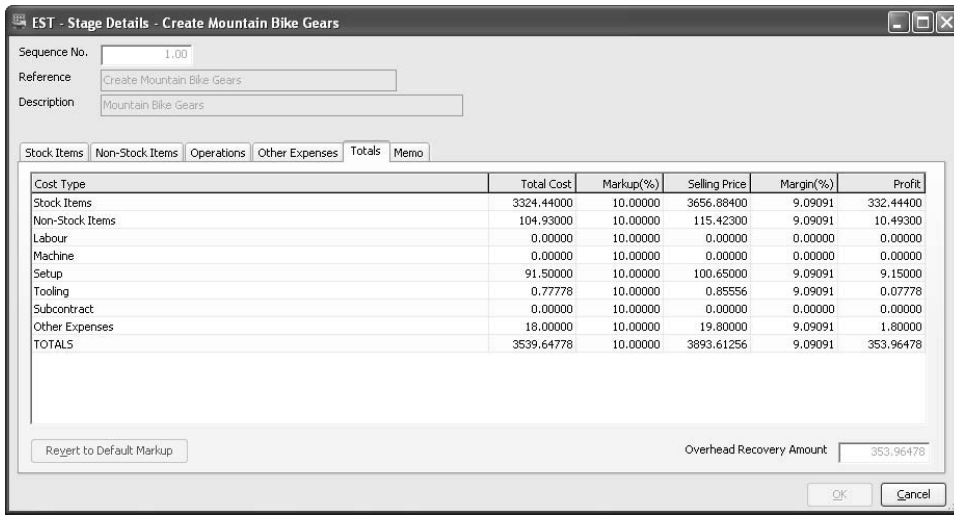
17. Use the TAB key to move to the Total box. The total cost of the item is calculated and displayed.

18. The Unit which is defined for the Expense Type is shown automatically.

19. Repeat the above procedure until all expense items have been included on your estimate.

20. Click the Totals tab.

    The Totals information shows the results of this stage of your estimate, analysed under each of the eight cost types.



Note: The default mark-up percentages entered under Estimate Settings have been automatically applied.

The Margin % has been automatically calculated by taking the profit as a percentage of the selling price.

21. Amend the Mark Up (%), Selling Price and/or Margin (%) of any of the eight cost types.

    Note: If you selected the Selling Prices for your Costing Materials setting within Estimate Settings (see *The General tab* on page 170), you cannot amend Markup (%) and Selling Price values or Margin (%) values for Stock Items.

    As with a spreadsheet, each time you make an amendment, any cell that is affected by your change will automatically recalculate. Use the mouse to move the cursor to the cell you want to amend and insert your new figure.

    You can manipulate the results of your costings until the stage estimate meets your own criteria (for example, minimum mark-up or margin percentages).

    - To revert to the default mark-ups, click Revert to Default Markup. The figures shown before your amendments are displayed.

    You can return to any previous entry made under a cost type by clicking the appropriate tab. Amendments, deletions or additional entries are reflected in the Totals tab when you return to it.

    The Overhead Recovery Amount box shows the total overheads which are recovered against this stage, based upon your settings in Overhead Recovery Settings. For more information see *Overhead Recovery Settings* on page 27.

22. Click the Memo tab to enter any notes relevant to the stage details. You can enter an unlimited amount of text here.

    Note: Immediately upon making an entry, the tab header changes to upper case. This indicates text has been entered.

23. To close the Stage Details window, click OK.

    The Stage Details window closes and you are returned to the Estimate Details window displaying the Stages tab.

24. Repeat the above steps to add more stage details. When you have entered all estimated costs for all stages, continue to the next step.

25. To continue entering estimate information, click the Totals tab.
    To save your Estimate Details, click Save.

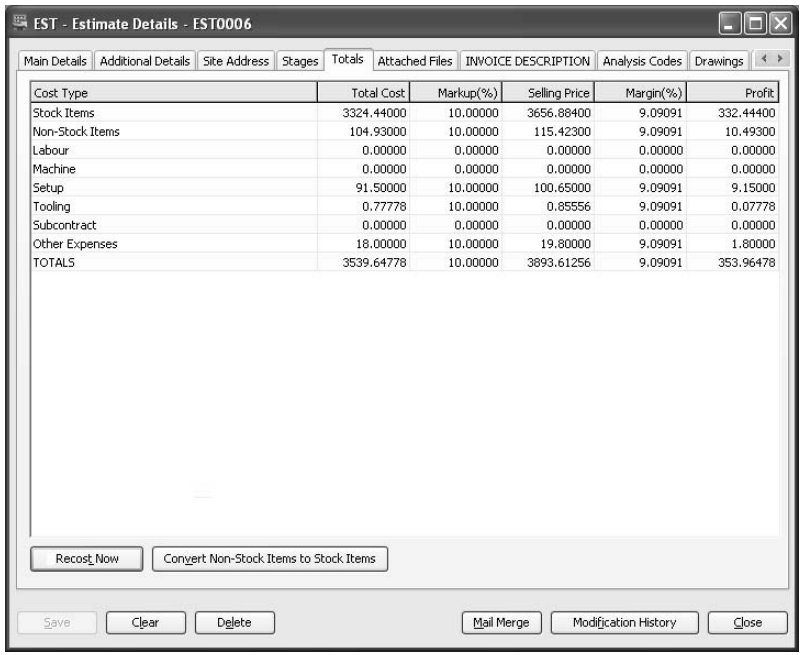
The Totals tab

To amend costs, mark-ups or selling prices, you must return to your stage details by clicking on the Stages tab. You can use the Totals tab to recalculate the cost of an estimate.

To use the Totals tab

1. In the Estimate Details window, click the Totals tab.

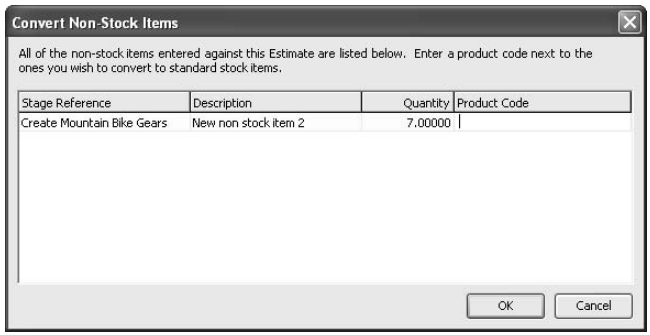
   The Totals information appears.



   The Totals tab shows the total of all stages added together.

2. To recalculate the cost of the estimate, click the Recost Now button.
3. To convert non-stock items into stock items, click the 'Convert Non-Stock Items to Stock Items' button.

   The Convert Non-Stock Items window appears listing all of the non-stock items, across all stages on this estimate.



4. Enter the Product Code for each item you want to convert. If you do not want to convert a specific entry, leave the Product Code column blank.

5. Click OK.

   The Enter New Stock Item window appears for each item that you want to convert. For more information, on creating stock items, see your *Sage 200 Stock Control* documentation.

6. To continue entering estimate information, click the Attached Files tab.
   To save your Estimate Details, click Save.

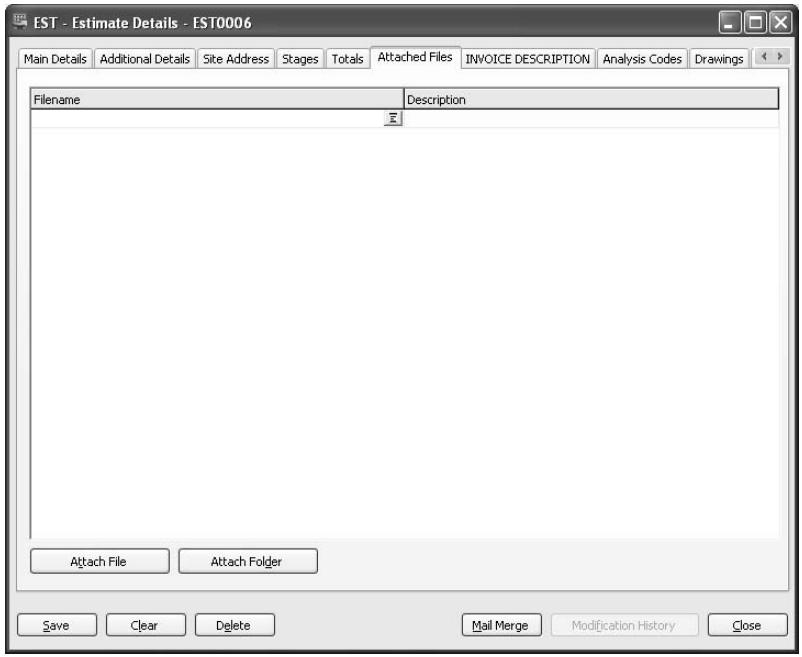
The Attached Files tab

Using the Attached Files tab, you can associate files, such as a Microsoft® Word document, with an estimate. You can also attach the complete contents of a folder. This is useful for linking supporting documentation with each estimate.

To attach a file or folder to the estimate record

1. In the Estimate Details window, click the Attached Files tab.

   The Attached Files information appears.



2. To attach a file or folder to an Estimate record, click Attach File or Attach Folder as appropriate.

   An Open or Choose File(s) window appears.

3. Select the file or folder you want to attach. Click Open to attach a file, or OK to attach a folder.

   Note: You can only select one file or folder at a time.

   The file or folder appears in the list on the Attached Files tab.

4. To open the file or folder, click it.

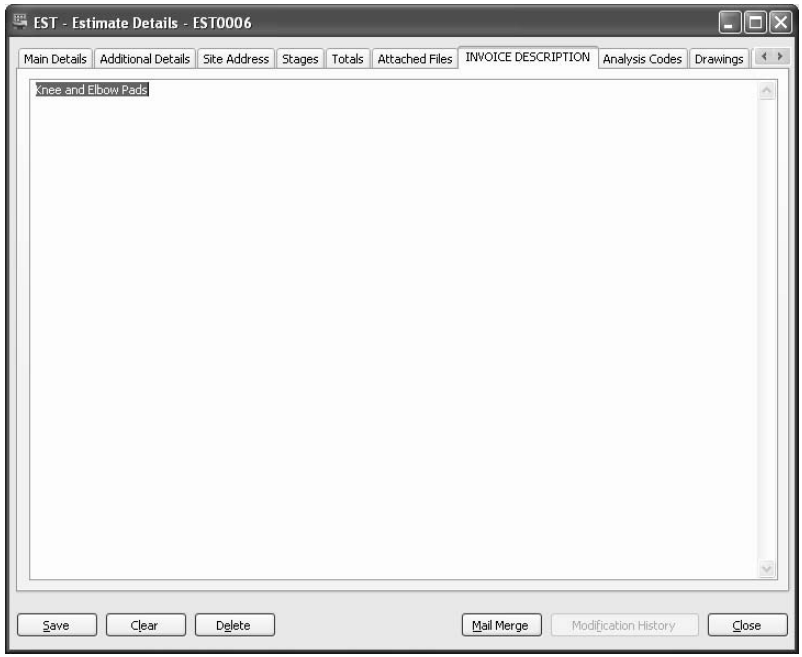
5. Enter a description for each attachment, if required. This is for information only.
6. To continue entering estimate information, click the Invoice Description tab.
   To save your Estimate Details, click Save.

The Invoice Description tab

To enter an invoice description

1. In the Estimate Details window, click the Invoice Description tab.

   The Invoice Description area appears.



   The Invoice Description shown is the stock Item Description entered on the stock code. This is entered here automatically when you select the stock code on the Main Details tab. For more information, see your *Stock Control* documentation and *The Main Details tab on page 183*. The Invoice Description header changes to upper case to indicate there is text on the tab.

   If you selected a stock code which has no Item Description, no text is entered automatically on this tab. The Invoice Description header remains in mixed case until you enter a description of the job being estimated.

2. Enter a full description of the job being estimated. The text you enter can be printed on sales orders and subsequent sales invoices.

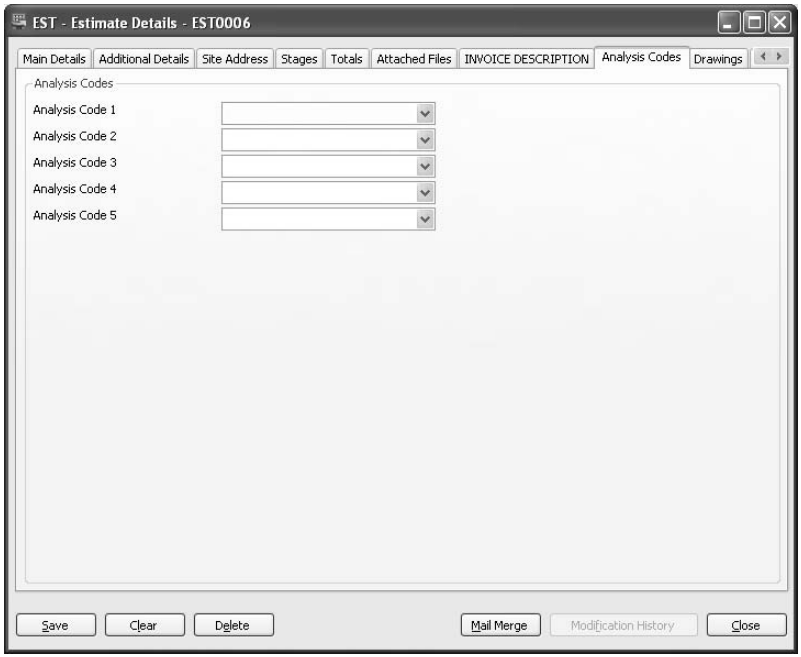
3. To continue entering estimate information, click the Analysis Codes tab.
   To save your Estimate Details, click Save.

The Analysis Codes tab

To enter estimate analysis codes

1. In the Estimate Details window, click the Analysis Codes tab.

   The Analysis Codes information appears.



2. Enter up to five analysis codes for the estimate.

   You can use these for custom reporting.

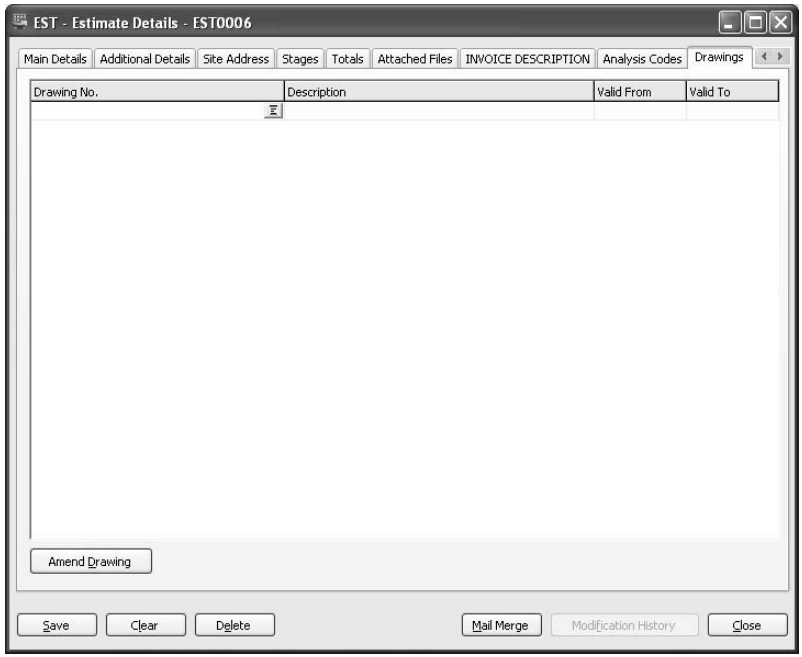
3. To continue entering estimate information, click the Drawings tab.
   To save your Estimate Details, click Save.

The Drawings tab

To work with drawings

1. In the Estimate Details window, click the Drawings tab.

   The Drawings information appears.



2. Enter the required information for each drawing, according to the following descriptions.

Drawing No.	Enter a unique identifier for the drawing.
Description	Enter a description for the drawing.
Valid From Valid To	Enter valid dates for your drawing, if applicable.

   Note: You can cross-reference an estimate with any number of different drawings.

3. To edit the drawing details, select the drawing and click Amend Drawing.

4. To continue entering estimate information, use the right scroll icon ( ) in the tab bar to reveal the Memo tab and click the Memo tab.
   To save your Estimate Details, click Save.

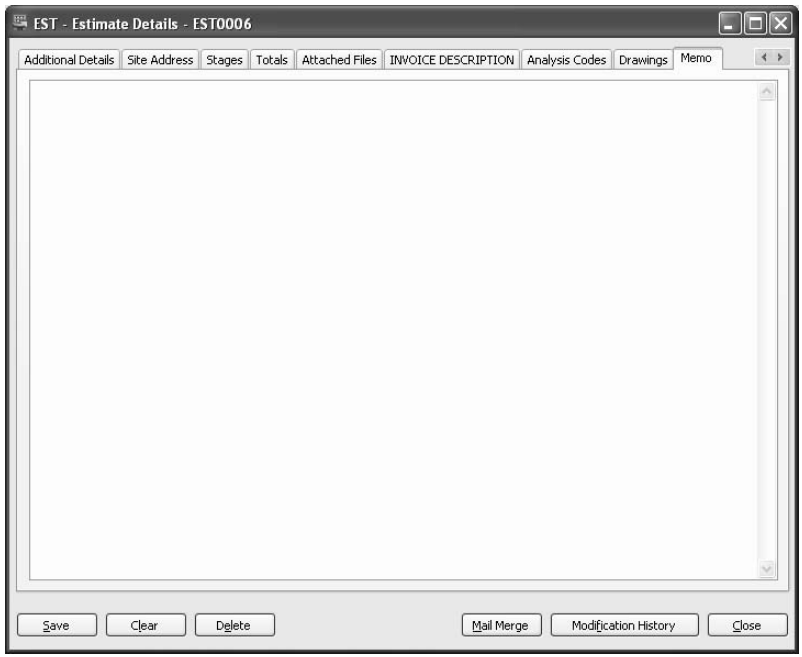
The Memo tab

To enter a memo

1. In the Estimate Details window, click on the Memo tab.

   Note: You may need to use the right scroll icon ( ) in the tab bar to reveal the Memo tab.

   The memo area appears.



2. Enter additional notes about the estimate.

   Note: Immediately upon making an entry, the tab header changes to upper case. This indicates the presence of an entry.

3. To save your Estimate Details, click Save.

Creating Multiple Estimates

You can create groups of estimates. However, the estimates must be for products that already exist within Stock Control.

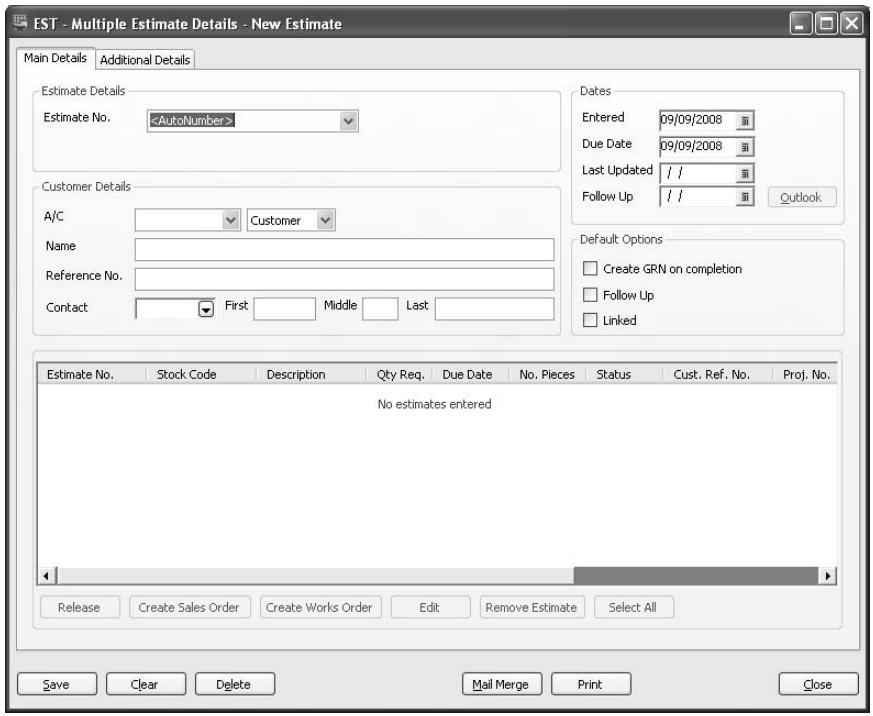
Note: You cannot create multiple item estimates for new products.

Multiple item estimates share common information which is held on the multiple estimate header. The estimates are created through a grid on the Multiple Estimate Details form. This information is used by default for each new estimate on the grid. However, if you change the default header information for an estimate, this change applies to each new estimate added subsequently in the grid.

To create multiple item estimates

1. From the Navigation Bar, click Estimating and choose Records > New Multi Item Estimate.

   The Multiple Estimate Details - New Estimate window appears.



2. On the Main Details tab, enter the following estimate header information.

Estimate Details	If you are using automatic numbering (see *The Numbering tab on page 173*), Manufacturing automatically generates the estimate number when you save the estimate. If you are not using automatic numbering, you can enter estimate numbers up to 27 digits in an alphanumeric sequence. **Note:** Fewer digits are allowed for multi item estimate references because suffixes are added to this reference to differentiate between the multiple items.
Dates	The Date Entered box defaults to 'today's date'. You can overwrite this. If you know the date by which the estimate should be completed, enter it in the Due Date box. This is the default date for the stages (not to be confused with the due date on the stages). It is carried over to the works order upon conversion. Enter a date in the Follow Up box on which to take follow up action, if required. **Note:** To use Microsoft® Outlook, click the Outlook button. An entry is made in your Microsoft Outlook diary. A reminder is set. This ensures that any follow up action is not forgotten. You can amend and save this entry in the usual way.
Customer Details	If you are preparing the estimates for an existing customer or prospect, select Customer or Prospect. Then select the A/C from the drop-down list. **Note:** You can only prepare estimates for base currency customers. If you are preparing the estimates for a new customer or prospect, ignore the A/C box. Enter the name of the person or company for whom the estimates are being prepared in the Name box. Enter an appropriate Reference No.

The Contact boxes automatically display information from the selected A/C. You can amend this information.

Default Options

You can set these options on the estimate header.

These settings apply to multi item estimates created in the grid. Any change you make to the defaults apply to new estimates added in the grid subsequently.

To print a Goods Received Note upon completion of the works order raised from the estimate, select the Create GRN on completion check box.

Note: A GRN can only be produced if product codes have been defined for the estimates.

To set a flag against the estimates which require follow up action, select the Follow Up check box.

To link purchase orders (raised to meet the demands of these estimates) to one-off works orders, select the Linked check box. By default, the box is clear, but will display your last selection.

If you select the Linked check box, then any associated orders raised will only be used to meet the demands of these estimates.

Note: Another setting must be selected for MRP to raise linked works and purchase orders to the works order created for the estimate header. This is the 'Allow linked under MRP' check box on the Stock Item Manufacturing tab.

3. On the Additional Details tab, enter the following estimate header information:

Overall Discount	Apply a discount to a sales order when it is created from the estimate. Enter the discount as a percentage or amount. This discount is applied in addition to any manual adjustments made in the system-generated sales price. The price is shown in the Quantity Breaks table for each individual estimate item. For more information, see *Using the Quantity Breaks Table on page 185*.
Last Recosted	These boxes are completed automatically by the system as it uses the information from your login and computer system date.
Overhead Recovery	Overhead recovery is calculated automatically as a percentage cost of the estimate. The calculation uses the default percentages (for total cost or individual cost types) you have defined in the Overhead Recovery Settings. For more information, see *Overhead Recovery Settings on page 27*.
Additional Information	The Entered By box defaults to the current user name. Enter the name of the Salesperson, if required. Enter a Project Number, if required. The project number is useful if you have multiple estimates for a project.
Customer Site Address	Enter the customer site address, if required. **Note:** You can only enter City, County or Country information if the Use Segmented Addresses option in Accounting System Manager is selected.

4. Enter each estimate detail line on the Main Details tab, as follows.
   - Click in the first empty line within the Estimates grid.

     Note: The Estimate No. will not be shown until you click the Save button. The number will be the estimate header number plus a suffix, specified in Estimating settings (see *The Numbering tab on page 173*).
   - Select the product code from the Stock Code drop-down list, if required.

     The Description appears automatically.

- Enter or change the description required.
- Enter the quantity required in the Qty Req. box.

  Note: If the quantity you enter does not match the default stocked unit of measure, the quantity is automatically adjusted to the nearest appropriate value.
- The Due Date defaults to the date entered on the estimate header but you can change this, if required.
- The number of individual items required for each finished item defaults to '1' in the No. Pieces box. Change the number, if required. The quantities for each item are recalculated.
- When entering a new estimate the status is Entered. If you have Manager access rights, you can change the Status.
- Enter a customer reference in the Cust. Ref. No. box.
- Enter a project number in the Proj. No. box. This defaults to the Project Number entered on the estimate header. You can change this, if required.
- The Create GRN, Follow Up and MRP Linked settings default to the settings entered on the estimate header. You can change these, if required.

5. To save your estimates, click Save.

   Note: You can add or amend details for individual multi item estimates through the Amend Multi Item Estimate option (see *Amending Multiple Estimates on page 216*) or through the Amend Estimate option (see *Amending an Estimate on page 214*).

Amending an Estimate

You can change estimates, depending on the estimate status.

Entered	You can change anything.
Production	You can change some things.
Cancelled	You cannot make changes. **Note:** You can copy a 'cancelled' estimate.

You can change estimates after converting them to works orders if you selected the required setting whilst entering estimate settings. You can put password protection on this, if required. For more information, see *The General tab on page 170*.

Note: You cannot change the customer or product after a sales order has been created from the estimate.

To amend an estimate

1. From the Navigation Bar, click Estimating and choose Records > Amend Estimate or Amend Estimate - Rapid.

   The Estimate Details or Estimate Details (Rapid) window appears.

2. Select the Estimate No. required.

3. Make changes to the estimate.

   Note: The tabs of the Estimate Details windows function in the same way as when adding the estimate. For more information, see *To set up a full estimate* on page 178 and *To set up an estimate quickly* on page 179.

4. To record details of changes, click Modification History.

   The Enter Modification History window appears.

- Enter the change details.
- Click OK.

5. To save your changes, click Save.

Amending Multiple Estimates

You can amend groups of estimates if they were created as multiple item estimates. For more information, see *Creating Multiple Estimates on page 209*.

To amend multiple item estimates

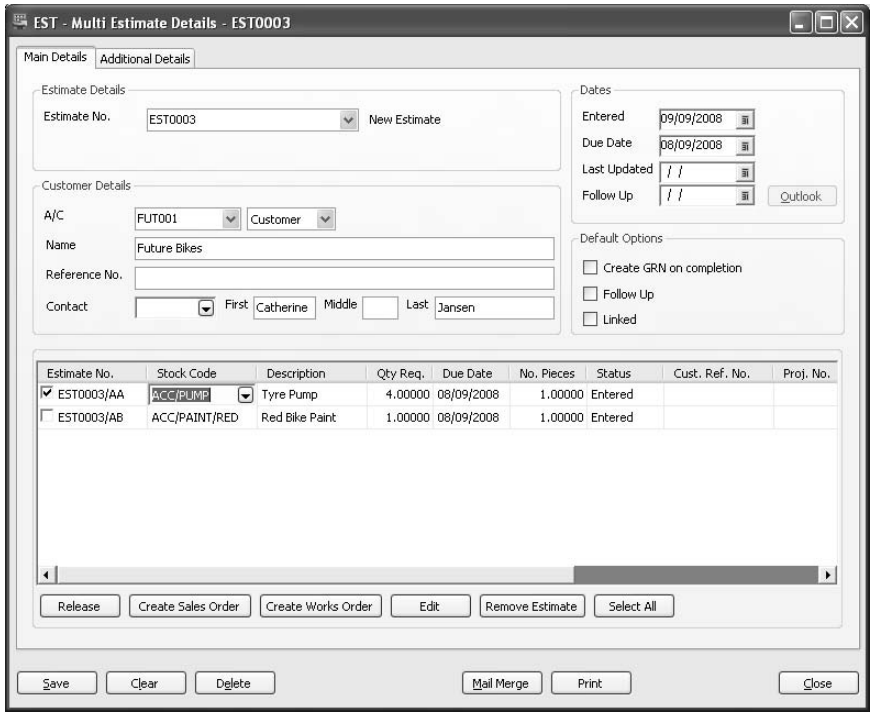
1. From the Navigation Bar, click Estimating and choose Records > Amend Multi Item Estimate.

   The Multiple Estimate Details - New Estimate window appears.

2. Select the estimate number required from the Estimate No. drop-down list.

   The estimates for the multiple item group are listed in the estimate grid.

   Note: You can only select estimates which are part of a multiple item group.



3. Make any changes required to the estimate header details. For more information, see *Creating Multiple Estimates on page 209*.

4. Within the estimate grid, perform the following actions for each estimate that you want to amend.

5. Select the check box of the Estimate No. you want to amend.

   You can change:

   - Estimates with a status of Entered.
   - Estimates with a status of Production.
   - Estimates which have been converted to works orders if the 'Estimates can be changed after creation of Works Order' setting is selected. For more information, see *The General tab on page 170*.

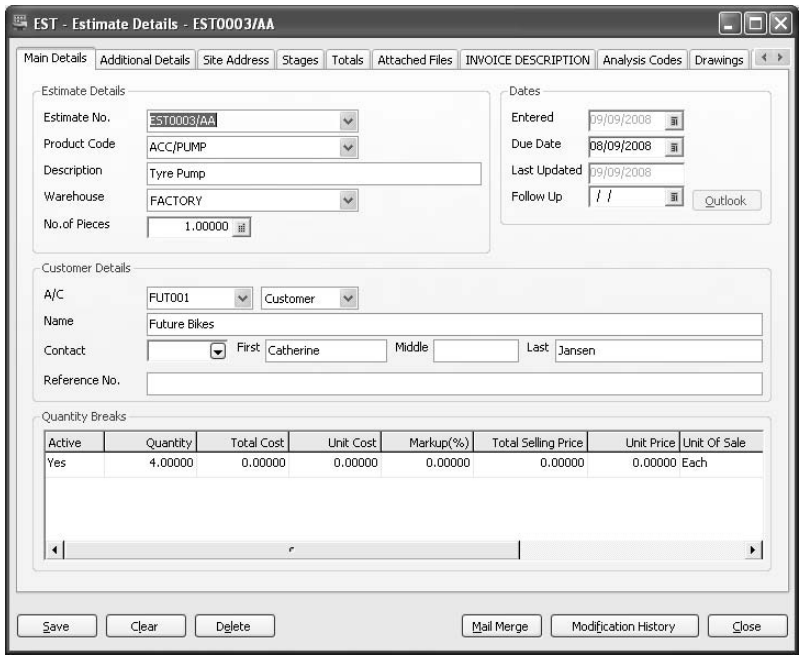
   You cannot change:

   - Cancelled estimates.
   - The estimate customer or product once a sales order has been created from the estimate.

6. Click Edit.

   Note: You can only click Edit when one estimate is selected.

   The Estimate Details window appears.



7. Make changes to the estimate.

   Note: The tabs of the Estimate Details windows are the same as a full individual estimate. For more information, see *To set up a full estimate* on page 178.

8. To record details of the changes, click Modification History.

   The Enter Modification History window appears.

   - Enter the change details.
   - Click OK.

9. To save your changes, click Save.

Deleting an Estimate

You can remove estimates if they become redundant.

Note: You can use the Multi Item Estimate option to remove multiple item estimates. For more information, see *Managing Multiple Estimates on page 231*.

To delete estimates

1. From the Navigation Bar, click Estimating and choose Records > Delete Estimate.

   The Delete Estimate window appears.

2. Select the Estimate No. of the estimate to remove, and click Delete.

   The estimate is deleted.

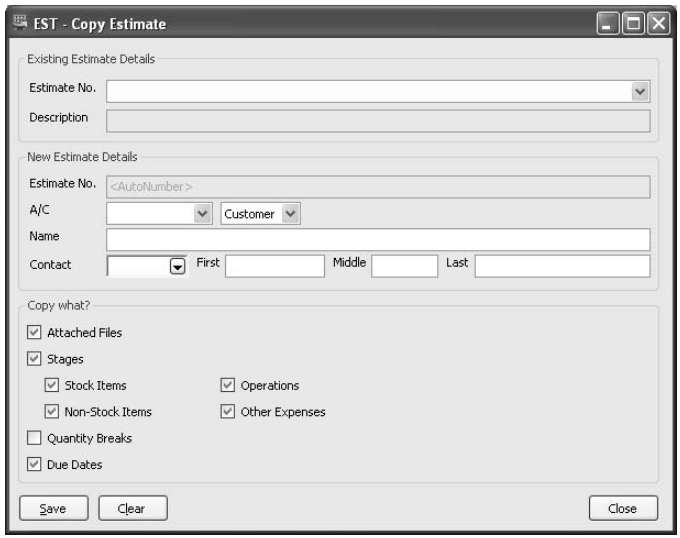
Copying an Estimate

You can use Copy Estimate to quickly create another estimate. Once you have copied it you can amend the details as required. You can choose to copy attached files, stages and each of the cost types.

To copy an estimate

1. From the Navigation Bar, click Estimating and choose Records > Copy Estimate.

   The Copy Estimate window appears.



2. Select the existing estimate to copy from the Estimate No. drop-down list in Existing Estimate Details.
3. Enter the required information, according to the following descriptions.

Estimate No.	Assign the estimate a new Estimate No. This appears in the Estimating window when you have copied the estimate. **Note:** This number is automatically generated if you are using automatic numbering. For more information see *The Numbering tab* on page 173.

A/C	Select the customer or prospect account for whom the new estimate is being prepared. If no account exists, leave A/C blank and enter an account Name instead. **Note:** You cannot select a customer who is on hold or does not use base currency.
Name	Enter the account name if no account exists already.
Contact	Enter the contact details.

Copy What?	Select the relevant check boxes to copy the following:
	■ Attached Files
	■ Stages
	  ■ Stock Items
	  ■ Non-Stock Items
	  ■ Operations
	  ■ Other Expenses
	■ Quantity Breaks
	■ Due Dates

4. To copy the estimate, click Save.

   The new estimate appears in the Estimate List. Make amendments as you require. For more information, see *Amending an Estimate* on page 214.

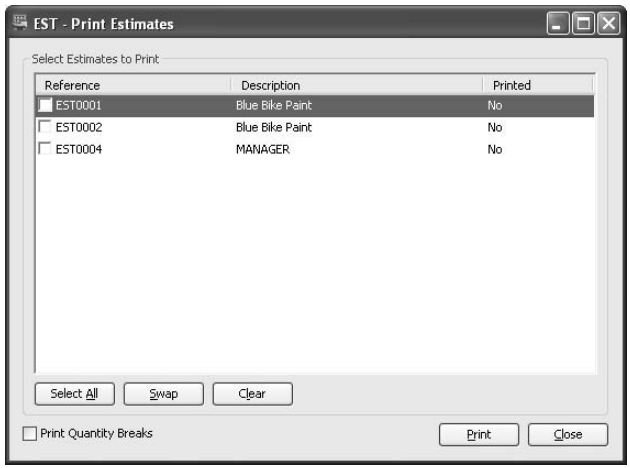
Printing an Estimate

Note: You can use the Multi Item Estimate option to print multiple item estimates. For more information, see *Managing Multiple Estimates on page 231*.

To print an estimate

1. From the Navigation Bar, click Estimating and choose Print > Estimate.

   The Print Estimates window appears.



2. Select the estimates that you want to print.
3. To print quantity breaks, select the Print Quantity Breaks check box.
4. Click Print.

   The estimates are printed.

   Reports are printed to the output mode of your choice, set using File > Choose Output Mode on the Menu Bar. For more information, see *Sage 200 help*.

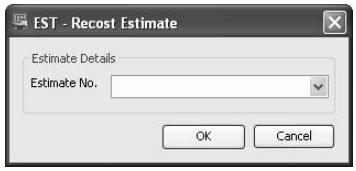
Costing an Estimate

You can recost estimates if stock prices change.

To cost an estimate

1. From the Navigation Bar, click Estimating and choose Processing > Recost Estimate.

   The Recost Estimate window appears.



2. Select the Estimate No. to recost from the drop-down list and click OK.

   A confirmation message appears advising that existing costs will be overwritten.

3. To recalculate the estimate cost, click Yes.

   The estimate is recosted.

Creating a Sales Order

You can choose to create a sales order when you convert the estimate to a works order. For more information, see *The General tab* on page 170.

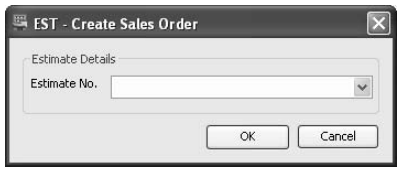
To create a sales order before you convert the estimate to a works order, use the Create Sales Order option.

Note: You can use the Multi Item Estimate option to create sales orders for groups of multiple item estimates. For more information, see *Managing Multiple Estimates on page 231*.

To create a sales order

1. From the Navigation Bar, click Estimating and choose Processing > Create Sales Order.

   The Create Sales Order window appears.



2. Select the Estimate No. that you want to create a sales order for and click OK.

   The estimate is converted and the Sales Order Confirmation window appears.

3. Check the details displayed and, if correct, enter the 'Customer Order no' and click OK. Otherwise, click Cancel.

4. When the sales order has been created, the Document Number Confirmation window appears. This shows the system generated number for the sales order.
5. Click OK and confirm whether you want to view the order or not. For more information on working with sales orders, see your *Sage 200 Sales Order Processing* documentation.

   Note: If the quantity on order does not match the unit of measure, it is automatically adjusted to the nearest appropriate value.

Converting an Estimate into a Works Order

You can convert estimates into works orders without the need to enter more information. If there is a difference between an order and the estimate, change the estimate before converting it to a works order.

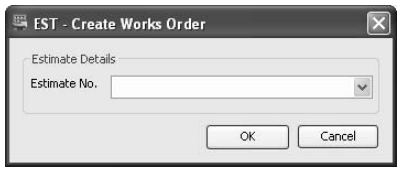
We recommend you use planning to create works orders for estimates. This ensures you have sufficient resources to complete the job within the allotted time. For more information on using planning to plan estimate production, see *MRP (Material Requirements Planning)* on page 287.

Note: You can use the Multi Item Estimate option to create works orders for groups of multiple item estimates. For more information, see *Managing Multiple Estimates on page 231*.

To convert an estimate into a works order

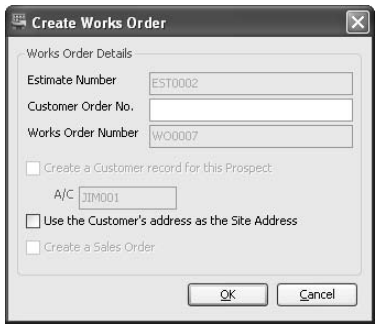
1. From the Navigation Bar, click Estimating and choose Processing > Create Works Order.

   The Create Works Order window appears.



2. Select the Estimate No. that you want to create a works order for, and click OK.

   The Create Works Order window expands for you to enter more information.



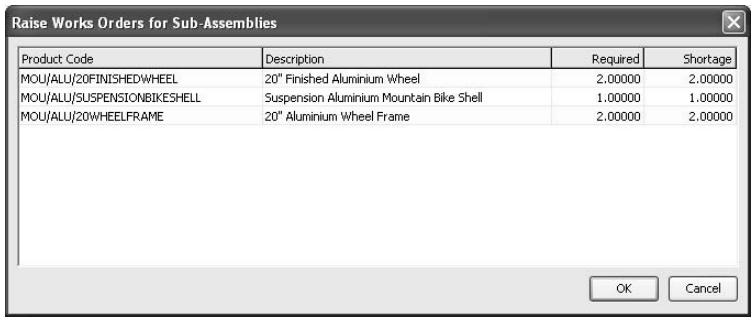
3. Enter a Customer Order No. for your converted estimate.
4. Enter the works number you want to use.

Note: If you chose Automatic Works Order Numbers in Works Order Settings, or 'Use Estimate Number as Works Order Number' in Estimate Settings, the works order number is shown. For more information on works order settings, see *The Numbering tab* on page 339, and on estimate settings, see *The General tab* on page 170.

5. To create a customer record for this prospect, select the appropriate check box and enter an A/C reference. The customer record is created in the Sales Ledger.
6. To use the customer's address as the site address for the works order, select the appropriate check box. If you leave the check box blank, the customer site address on the estimate is used.
7. To create a sales order for this estimate, select the Create a Sales Order check box.
8. To save the works order information, click OK.
9. To raise works orders for sub-assemblies, click Yes when prompted.

   Note: We recommend using MRP to create works orders for sub assemblies as MRP takes into account other demand for common products.

   The Raise Works Orders for Sub-Assemblies window apears.



- To raise the works orders for the sub-assemblies, click OK.
- Confirm that you want to create works orders for the sub-assemblies shown, when prompted.

The estimate status changes to Production. Within Works Orders the status of the newly formed works order(s) is 'Entered'.

Converting an Estimate into a BOM

You can convert an estimate into a BOM.

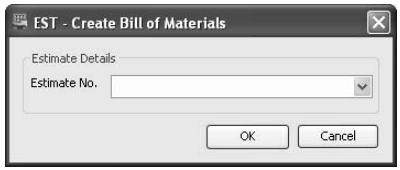
During the process you may be directed to create stock items in the Stock Control module. For more information on creating stock items, see your *Sage 200 Stock Control* documentation.

Note: Any other expenses that have been set up for the estimate are not created on the BOM.

To convert an estimate into a BOM

1. From the Navigation Bar, click Estimating and choose Processing > Convert to BOM.

   The Create Bill of Materials window appears.



2. Select the Estimate No. that you want to convert to a BOM, and click OK.

   If you have non-stock items on this estimate, the Enter New Stock Item window appears for each item. You must enter a stock code for every non-stock item on the estimate. For more information, see your *Sage 200 Stock Control documentation*.

   When you have entered your product codes, the new BOM appears in the Bill of Materials List and the estimate is cancelled.

Releasing All Stages

Estimate stages must be released in order for estimates to be passed into planning. You can release individual or multiple stages within an estimate from within the estimate Stages tab. For more information, see *The Stages tab* on page 190.

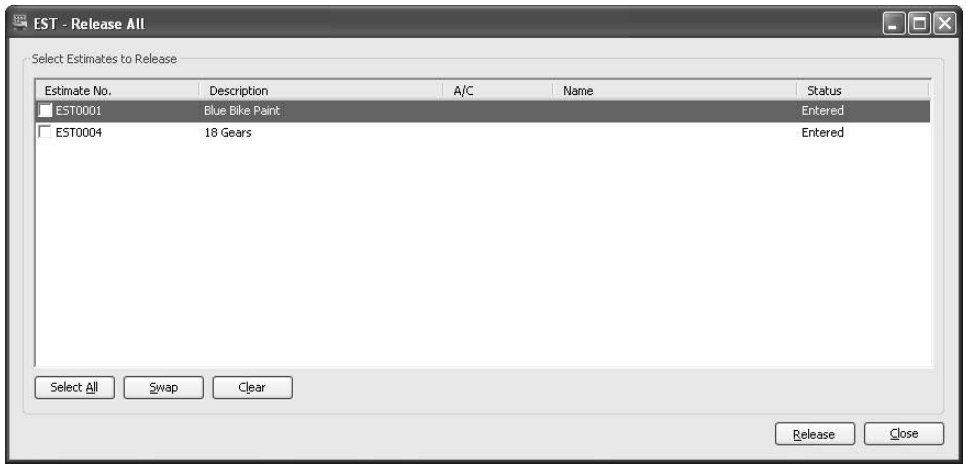
If you want to release all stages on many estimates at one time, use this option.

Note: You can use the Multi Item option to release stages for groups of multiple item estimates. For more information, see *Managing Multiple Estimates on page 231*.

To release all stages

1. From the Navigation Bar, click Estimating and choose Processing > Release All.

   The Release All window appears. Estimates are listed, with the status of 'Entered' or 'Part Released'.



   Note: By default, all estimates are selected.

2. Clear the check box for each estimate you do not want to release.
3. To release all stages for the selected estimates, click Release.

   The status of the estimates' stages changes to released.

   The estimates can now be used within MPS.

Run Mail Merge

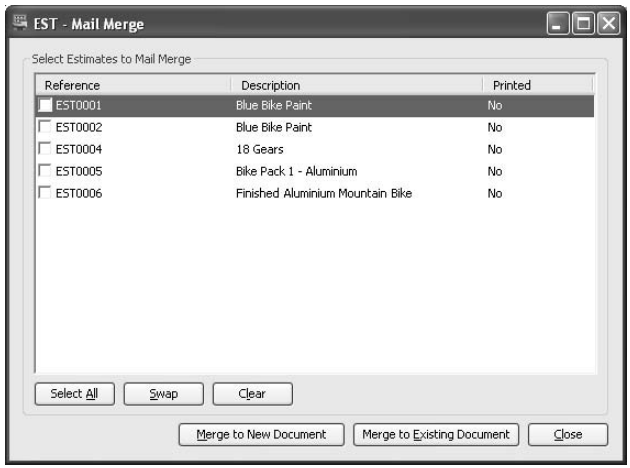
You can choose to open a new document or to merge an estimate with an existing document.

Note: You can use mail merge for multiple item estimates from within the Multi Item Estimate option. For more information, see *Managing Multiple Estimates on page 231*.

To run mail merge

1. From the Navigation Bar, click Estimating and choose Processing > Mail Merge.

   The Mail Merge window appears.



2. Select the estimates that you want to merge.
3. To open a new document, click Merge to New Document.
   To add the estimate to an existing document, click Merge to Existing Document.

   The estimates are merged accordingly and the document is opened.

   You can now work with the document in the usual way.

Managing Multiple Estimates

You can create multiple estimates using the Enter New Multi Item Estimate option. For more information, see *Creating Multiple Estimates on page 209*.

Each multi item estimate has a common estimate number with a unique suffix. For example, EST0001/01, EST0001/02, EST0001/03, and so on.

These estimates share common information from the estimate header. However, you can change the details of any individual multi item estimate.

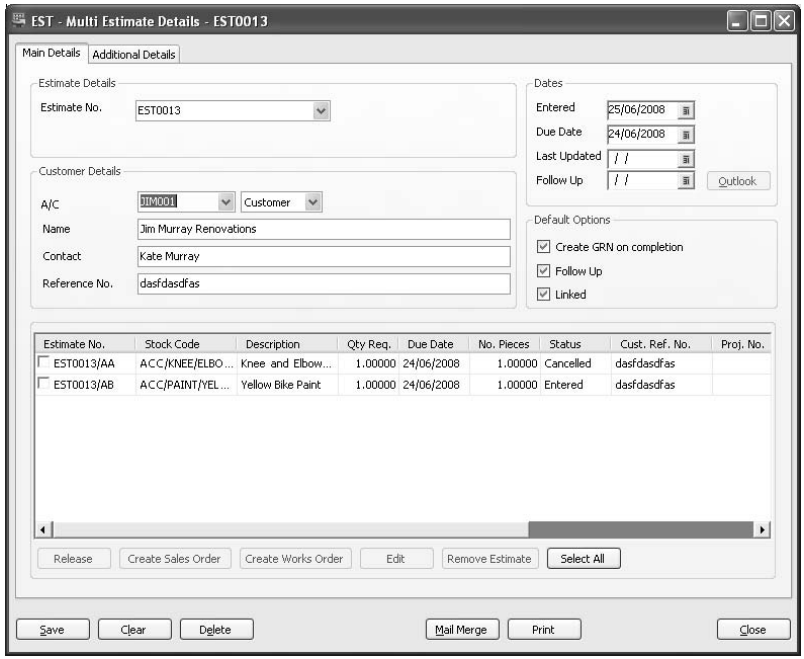
You can work with the estimates as individual estimates. For example, you can amend, copy, print, cost, delete, cancel, release or create a sales order or a works order from EST0001/02.

You can also manage a number of these activities for the multi item estimates from within the Amend Multi Item Estimate option. This lets you perform actions on groups of multiple items.

To manage multiple estimates

1. From the Navigation Bar, click Estimating and choose Records > Amend Multi-Item Estimate.
2. On the Main Details tab, select the estimate number from the Estimate No. drop-down list.

   The existing multi item estimates are displayed in the grid.



Note: You can select individual items within the grid, or click Select All to select all the items. Select All switches the selection on and off. For example, if everything is selected and you click Select All, all the check boxes are cleared.

To amend default header information	When you add new items, you can change the default header information on the Main Details or Additional Details tabs. For more information, see *Creating Multiple Estimates on page 209*. **Note:** When you change this information, the changed information applies by default to the next item you create in the grid.
To amend header information for a grid item	1. Select a multi item estimate. 2. Select the information in the header that you want to amend. 3. Overtype it.
To amend detailed information for a grid item	You can amend details for multi item estimates if the estimate status is Entered or Production. 1. Select the multi item estimate. 2. Click Edit. **Note:** You can only click Edit when one item is selected. The tabs of the Estimate Details windows are the same as for a full individual estimate. For more information, see *To set up a full estimate* on page 178. For more information on amending multiple items, see *Amending Multiple Estimates on page 216*. For more information on amending individual items, see *Amending an Estimate on page 214*.
To delete items	1. To delete one or more items, select the items and click Remove Estimate. 2. To delete all items, click Delete. **Note:** You can also delete multi item estimates using the Delete Estimate option. For more information on deleting individual estimates, see *Deleting an Estimate on page 219*.

To release multi item estimates

1. Select the multi item estimates.
2. Click Release.
   - The status of the selected estimates' stages changes to Released.
   - The estimates can now be used within MPS.

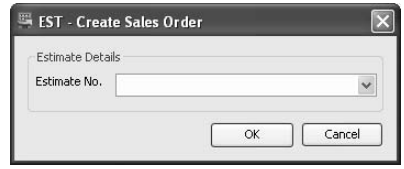
Note: You can also release multi item estimates using the Release All Stages option. For more information on releasing estimates, see *Releasing All Stages on page 229*.

To create sales orders for multi item estimates

If you select the Create Sales Order check box 'on creation of works orders' within estimating settings (see *The General tab* on page 170) you can choose to create a sales order when you convert an estimate to a works order. But you can also create sales orders for estimates before you create works orders for them using the following steps.

1. Select the multi item estimates.
2. Click Create Sales Order.

   The Create Sales Order window appears.



3. Select the Estimate No. that you want to create a sales order for and click OK.

   The estimate is converted and the Sales Order Confirmation window appears.

4. Check the details displayed and, if correct, enter the 'Customer Order no' and click OK. Otherwise, click Cancel.
5. When the sales order has been created, the Document Number Confirmation window appears. This shows the system generated number for the sales order.
6. Click OK and confirm whether you want to view the order or not. For more information on working with sales orders, see your *Sage 200 Sales Order Processing* documentation.

Note: Sales orders can also be created for multi item estimates using the Create Sales Order option. For more information, see *Creating a Sales Order on page 224*.

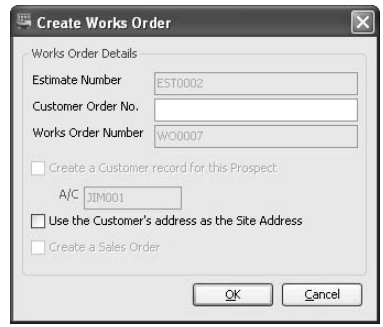
To create works orders for multi item estimates

You can convert estimates into works orders without the need to enter more information. However, we recommend you use the Planning module to create works orders for estimates. This ensures you have sufficient resources to complete the job within the allotted time. For more information on planning estimate production, see *MRP (Material Requirements Planning)* on page 287.

1. Select the multi item estimates.

2. Click Create Works Order.

   The Create Works Order window appears for each estimate in turn.



3. Enter a Customer Order No. for your converted estimate.

4. Enter the works number you want to use.

   Note: If you chose Automatic Works Order Numbers in Works Order Settings, or 'Use Estimate Number as Works Order Number' in Estimate Settings, the works order number is shown. For more information on works order settings, see *The Numbering tab* on page 339, and on estimate settings, see *The General tab* on page 170.

5. To create a customer record for this prospect, select the appropriate check box and enter an A/C reference. The customer record is created in the Sales Ledger.

6. To use the customer's address as the site address for the works order, select the appropriate check box. If you leave the check box blank, the customer site address on the estimate is used.

7. To create a sales order for this estimate, select the Create a Sales Order check box.

8. To save the works order information, click OK.

9. To raise works orders for sub-assemblies, click Yes when prompted.

   The Raise Works Orders for Sub-Assemblies window apears.

10. To raise the works orders for the sub-assemblies, click OK.

11. Confirm that you want to create works orders for the sub-assemblies shown, when prompted.
    - The estimate status changes to Production.
    - Within Works Orders the status of the newly formed works order(s) is 'Entered'.

For more information, see *Converting an Estimate into a Works Order on page 226*. For more information on works orders, see *Works Orders on page 335*.

To run mail merge for a multi item estimate

1. Select the multi item estimate.
2. Click Mail Merge.

Note: You can also run Mail Merge using the Mail Merge option. For more information, see *Run Mail Merge on page 230*.

To print multi item estimates

1. Select the multi item estimates.
2. Click Print.

Note: Estimates can also be printed using the Print option. For more information, see *Printing an Estimate on page 222*.

3. To save changes to the multiple item estimate, click Save.

Preparing Estimating Reports

The following reports are available from the Estimating menu.

- List

  This provides a list of estimates. You can produce a list of estimate details, including stages, or just a summary list of estimates.
- Modification History

  This report provides a history of the changes that have been made to the estimate.
- Quantity Breaks List

  This provides a list of the quantity breaks used in the estimate.
- Schedule

  This report may be detailed or summary.
- Statistics

  This report provides statistical information (percentage conversion) on the ratio of successful estimates to cancelled estimates. The report may be listed by customer, by date entered, by estimate number, by last updated, by status, or by works order number.
- Totals Report

  This provides a report on totals. It may be for all quantity breaks.
- Transaction Report

  This provides a report on estimate transactions. It may be by stage or for all stages.

To prepare estimating reports

1. From the Navigation Bar select Estimating, and choose Reports.
2. Select the report required from the list of available reports in the menu.

   For more information on preparing reports, see *Sage 200 help*.

To customise estimating reports

You can edit or copy report layouts, or create a new report layout, using Sage Report Designer. For more information, see *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Cancelling an Estimate

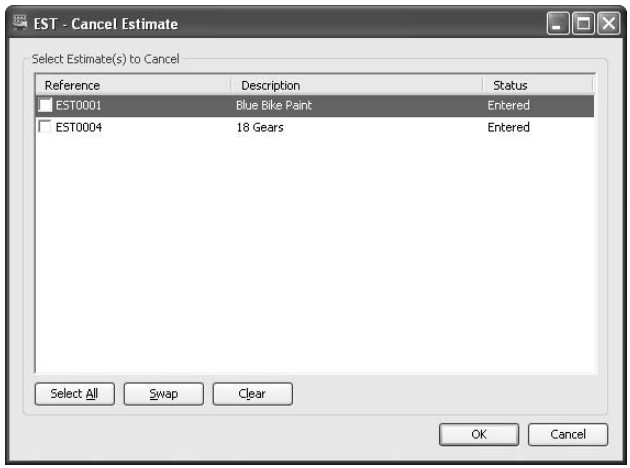
You can cancel estimates when the customer is not going to place an order.

Note: You can analyse the ratio of completed estimates to cancelled estimates using the Statistics report. For more information, see *Preparing Estimating Reports on page 237*.

To cancel an Estimate

1. From the Navigation Bar, click Estimating and choose Records > Cancel Estimate.

   The Cancel Estimates window appears.



2. Select the Reference for the estimates that you want to cancel.
3. Click OK.
4. If sales orders are linked to the estimate, confirm that you want to cancel the estimate.

   Note: Cancelling an estimate with linked sales orders does not affect the sales orders.

   The estimate status changes to cancelled.

   You can still view the estimate details and copy it (see *Copying an Estimate* on page 220) but you cannot process it any further.

   To view cancelled estimates, use the filters. For more information see *Sage 200 help*.

Maintaining Estimates

You can update hourly rates for all labour categories and for all or a selection of employee categories.

Update Labour Categories

You can change hourly rates in all labour categories at once, using this option.

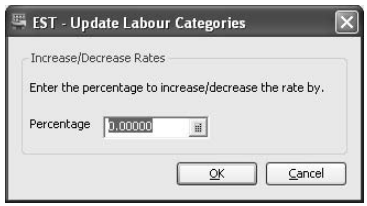
Note: The changes do not apply to existing estimates.

If you only want to change rates for certain employee categories, use the Update Employees option. For more information, see *Update Employees* on page 239.

To change all labour categories hourly rates

1. From the Navigation Bar, click Estimating and choose Maintenance > Update Labour Categories.

   The Update Labour Categories window appears.



2. Enter the Percentage you require to increase or decrease the rate.
3. To complete the changes, click OK.
4. Confirm the change when prompted.

Update Employees

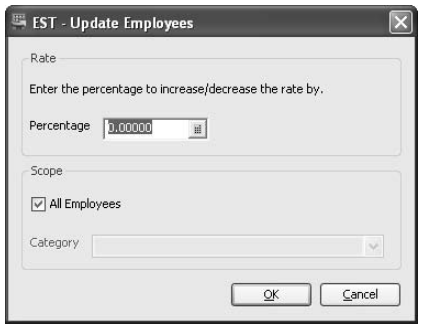
You can change the hourly rates attached to all of your employee categories or to a specific employee category.

Note: The changes do not apply to existing estimates.

To make a global change to employees hourly rates

1. From the Navigation Bar, click Estimating and choose Maintenance > Update Employees.

   The Update Employees window appears.



2. Enter the Percentage you require to increase or decrease the rate.
3. Select the employees to apply the rate change to.

   To apply the rate change to all employees, select the All Employees check box.

   To apply the rate change to a specific category, clear the All Employees check box and select the Category.
4. To complete the changes, click OK.
5. Confirm the change when prompted.

Chapter 6

Introducing Planning

You do not have to plan, but it helps in the manufacturing process if you do.

Planning is based around demands. The Sales Order Processing, Estimating, Make to Stock and Sales Forecasts modules allow you to create demands.

Two modules allow detailed planning:

- MPS (Master Production Schedule)

  This considers demands, and constructs an inventory of work that needs to be done to meet them.

- MRP (Material Requirements Planning)

  This considers the inventory of work created by MPS. It generates recommendations for buying or making stock in order to meet demands.

Graphical Planner works alongside MRP. It shows, graphically, the schedule of work required to meet the demands. For more information, see *Sage Graphical Planner* documentation.

In this chapter:

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Creating Demands for Planning 244

Creating the Master Production Schedule (in MPS) 245

Considering the Material Requirements (in MRP).....248

Modifying Recommendations.....249

Actioning Recommendations 250

Changing Planning Lists 251

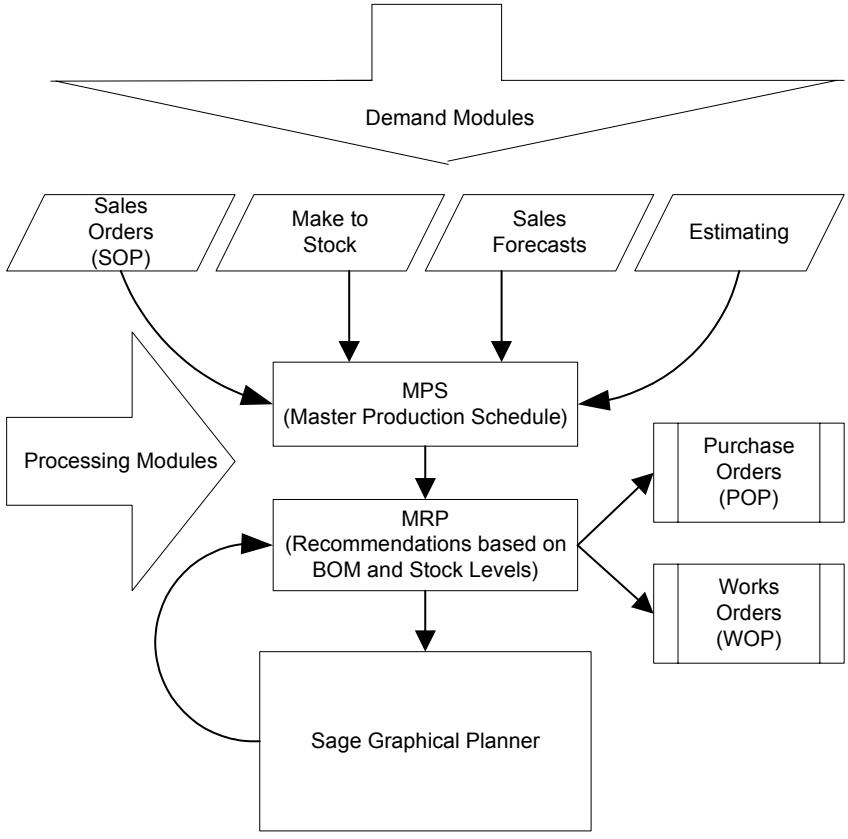
Finding Out More about Planning.....252

How Planning Works

The following description illustrates how planning works within Manufacturing.

The planning process

The following diagram illustrates the planning process.



There are four source modules used to create demands for planning:

- Sales orders are added in the Sales Order Processing module.
- Manual entries are added to plans, ad-hoc, using the Make to Stock module.
- Sales forecasts are added in the Sales Forecasts module.
- Estimates are added in the Estimating module.

Demands from these modules feed into the MPS module. The list of demands is then broken down through material requirements planning in the MRP module. Recommendations are made to raise purchase orders or works orders, depending on stock levels.

You can use Graphical Planner to modify your plans and optimise resource planning. For more information on how to use the graphical planner, see *Sage Graphical Planner* documentation.

Creating Demands for Planning

The first step in planning is to create the demands.

Demands can be created in the following ways.

- Entering sales orders in the Sales Order Processing module. For more information on entering this information, see *Sage 200 Sales Order Processing* documentation.

  Note: You can specify within Sales Order Processing settings if you want sales orders to be linked with works orders that are created to satisfy the demand for sales orders. In this case a batch works order is raised automatically for the sales order when the sales order is saved.You can remove the link within Works Order Processing. For more information, see *Unlinking Works Orders on page 395*. If you don't use the Sales Order Processing method, you can still link sales orders to works orders within the MPS module. For more information, see *Linking Sales Orders on page 279*.

- Entering estimates, planned by stage, in the Estimating module.

  Note: You must release estimates within Estimating so that MPS can pick them up.

  For more information on estimating, see *Estimating* on page 167.

- Entering sales forecasts within the Sales Forecasts module.

  Note: You must release forecasts within Sales Forecasts so that MPS can pick them up.

  For more information on sales forecasts, see *Sales Forecasts* on page 261.

- Entering items, for which there are no specific demands, in the Make to Stock module.

  Note: You must release the items within Make to Stock so that MPS can pick them up.

  For more information on make to stock items, see *Make to Stock* on page 253.

Creating the Master Production Schedule (in MPS)

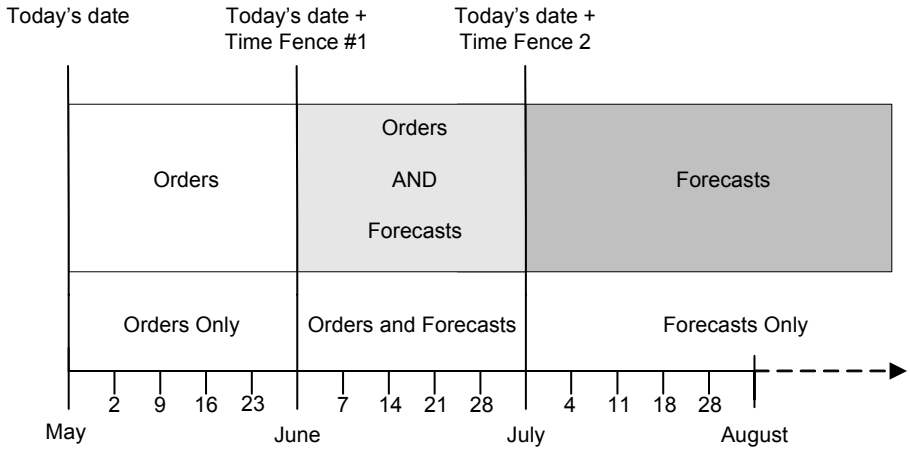
MPS reads demands and creates a Master Production Schedule.

Estimates, make to stock items and sales forecasts must be released to be included in the Master Production Schedule. For information on releasing estimate stages, see *Estimating* on page 167. For information on releasing Make to Stock items, see *Make to Stock* on page 253. For information on releasing sales forecasts, see *Sales Forecasts* on page 261.

Below is an introduction to MPS. For more information on MPS, see *MPS (Master Production Schedule)* on page 269.

Time fences

There are two controls in MPS which you can use to determine which sales orders and forecasts are read by MPS.These are the Time Fences, set within the Planning Settings MPS tab. Time fences are numbers of days added onto today's date to give a date in the future. So you can calculate two future dates from today's date, adding the number of days stored for Time Fence 1 and the number of days stored for Time Fence 2. For more information on time fences, see *The MPS tab on page 273*.



Between today's date and the date calculated by adding the number of days stored in Time Fence 1 to today's date are all sales orders. Any forecasts within this time period cannot be fulfilled if they become orders at this time, therefore they are not read by MPS.

Time Fence 2 is used for long term planning. From the date calculated by adding the number of days stored in Time Fence 2 to today's date, any sales orders are ignored by MPS because they are too far in the future. However, sales forecasts are read.

Between Time Fences 1 and 2, the quantities of sales orders and sales forecasts are netted off and are read by MPS.

Exclusions

Once demands are read, they are included in the Master Production Schedule or in a list of excluded demands. Demands may be excluded for the following reasons.

- The sales order is on hold.
- The demand is beyond the horizon date. This defaults to today's date but you can change it when you read demand or set a default for it within the MPS tab of Planning Settings. For more information, see *Entering Settings for MPS on page 270*.
- The item does not have a due date.
- The sales order is a proforma or quotation.
- The sales order has been cancelled.
- The BOM is private. For more information, see *The Header Details tab on page 118*.
- The sales order was created by Estimating.
- The item has not been released to production.
- The sales forecast falls within the Time Fence #1 number of days.
- The sales order due date falls outside the Time Fence #2 number of days.
- The sales order line is flagged for exclusion from MPS.
- Sales Order fulfilment method is set to 'From supplier direct to customer'. For more information, see the *Sage 200 Stock Control* documentation.
- The customer is on hold.
- A warehouse has not been specified.
- The sales order has been completed.

Back-to-back ordering

MPS facilitates back-to-back ordering (the generation of purchase orders to satisfy sales orders) for non-manufactured items.

Linking sales orders

Sales orders can be linked with batch works orders that are created specifically to meet the demands in the sales orders. The link can be set up within the Sales Order Processing module when the sales order is created and saved (see *Creating Demands for Planning on page 244* and your *Sales Order Processing* documentation). If links are not made within Sales Order Processing, you can link sales orders with works orders within the MPS - List.

This is done in the following way:

1. Within MPS, select the sales orders that you want to link (see *Linking Sales Orders on page 279*).

Note: The Linked column within the MPS - List is set to Yes.

2. Within MRP, run MRP to make a recommendation to raise a works order to fulfil the sales order. The Linked To column within the MPS - List displays the MRP Recommendation reference number.

If you set up links within MPS you can remove them (see *Unlinking Sales Orders on page 281*).

Note: You cannot remove links within MPS that have been set within Sales Order Processing. To remove those links you must do so through the works orders. For more information, see *Unlinking Works Orders on page 395*.

Considering the Material Requirements (in MRP)

When you have a Master Production Schedule, you can Run MRP in the MRP module. For most items, this considers stock levels and looks at items where stock is below the reorder point. The list of demands is exploded through BOM structures, taking into account the current and projected stock levels. From this, a series of recommendations is generated. Recommendations may be to make other items (raise a works order) or buy them (raise a purchase order).

Note: 'Buy' recommendations are not made if the Order Generation setting within Purchase Order Processing is set to Use Generate Orders. In this case MRP will also not suggest any existing purchase orders are cancelled. We recommend you select another Order Generation setting if you are using MRP. For more information, see your *Sage Purchase Order Processing* documentation.

Items may be linked so that a purchase order meets the demands for a specific works order. If so, the demands for the specific works order are not included with the demands for other items.

Items may also be linked so that a raised batch works order fulfils the demands from a specific sales order. This can be set up within the Sales Order Processing module. For more information, see *Creating Demands for Planning on page 244*.

It can also be set up within MPS. For more information, see *Creating the Master Production Schedule (in MPS) on page 245* and *Linking Sales Orders on page 279*. If it is set up within MPS then when MRP is run, the sales order is linked to the MRP Recommendation number for raising the works order.

For information on considering material requirements and producing recommendations using Material Requirements Planning, see *Running MRP* on page 298.

For information on raising or cancelling works orders and purchase orders, see *Estimating* on page 167 and *Works Orders* on page 335.

Modifying Recommendations

You can modify recommendations within MRP, or you can export data to Graphical Planner and use it. You must import data into MRP after you have modified it in Graphical Planner. This updates the works orders and recommendations as if they had been modified within MRP.

For more information on modifying the recommendations manually within 'MRP', see *Amending Recommendations* on page 311.

For more information on using Graphical Planner, see *Sage Graphical Planner* documentation.

Actioning Recommendations

Actioning recommendations raised within MRP creates a number of purchase and works orders.

You can action individual recommendations, a range of recommendations (by product, supplier, date, product family), or all recommendations.

Purchase recommendations are consolidated by supplier automatically. If you select multiple recommendations with the same supplier, and click Action, they are combined in one purchase order. If the due dates are the same, the recommendations are combined in one line on the order. If the due dates are different, multiple order lines are created.

For more information on creating purchase orders and works orders, see *Actioning Recommendations* on page 319.

Changing Planning Lists

You can display different lists for the four planning modules. The lists are useful when you are working in the respective planning modules. If you are working in Sales Forecasting, you can display the Sales Forecast List list in the work area.

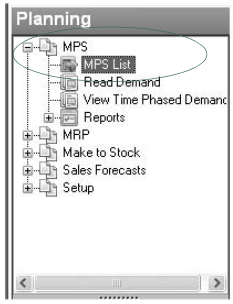
To select a list

- From the Navigation Bar, click Planning, choose the required planning module and then choose the module list.

  The title of the work area changes to correspond to the module you choose and the selected list appears in the work area.

For example

To select the MPS List, choose Planning > MPS and then choose MPS List.



The Planning work area title changes to MPS and the work area shows the available MPS lists.

You can maximise a list to display it more clearly in the work area. The other lists are available by selecting the list title at the foot of the work area.

For more information on the Sage 200 desktop, see *Sage 200 help*.

Finding Out More about Planning

The planning modules are described in further detail in separate chapters.

For information on Make to Stock, see *Make to Stock* on page 253.

For information on Sales Forecasts, see *Sales Forecasts* on page 261.

For information on MPS, see *MPS (Master Production Schedule)* on page 269.

For information on MRP, see *MRP (Material Requirements Planning)* on page 287.

Chapter 7

Make to Stock

You can use the Make to Stock module to create demands for items that are not required for sales.

In this chapter:

Creating a Make to Stock Item.....254
Amending a Make to Stock Item.....256
Deleting a Make to Stock Item.....257
Entering Repeating Items.....258
Preparing Make to Stock Reports....260

Creating a Make to Stock Item

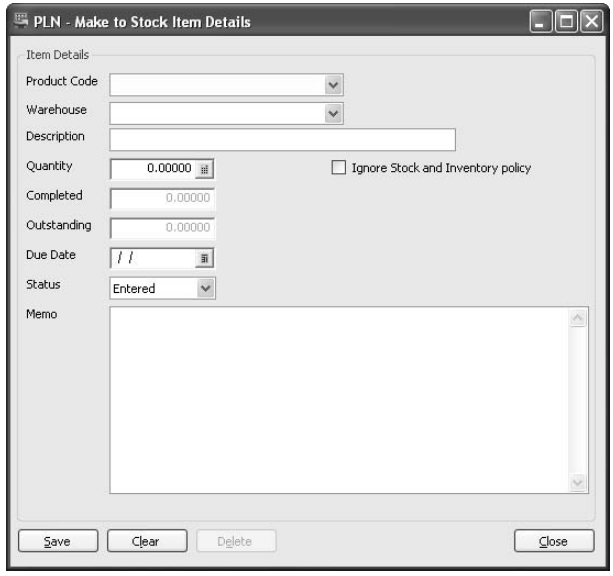
This section explains how to set up a new Make to Stock item.

Note: You can import Make to Stock items. For more information on importing data, see *Importing and Exporting Data* on page 43.

To set up a new stock item

1. From the Navigation Bar, click Planning > Make to Stock and choose Records > Enter New Record.

   The Make to Stock Item Details window appears.



2. Select a Product Code for the Make to Stock item from the drop-down list.

   Note: This code must exist in the Stock Control module.

   When you enter the code, the description appears automatically and the stock unit is shown alongside the Quantity box.

   If you are using multiple locations, the warehouse name appears automatically.

   Note: You can select another warehouse from the Warehouse drop-down list.

3. Enter the quantity of items to make.

   Note: If you enter a quantity that does not match with the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

   This quantity is compared with existing stock and any replenishments. If any exist, the resulting works or purchase order will be for the 'difference' quantity.

Note: If you are using traceability and the item is serial number traceable, you cannot enter decimal places.

4. Select the Ignore Stock and Inventory policy check box to ignore any physical stock or inventory policy associated with the stock item. This means that the full quantity you enter here will be processed by MRP.

   Clear the check box to take into consideration the physical stock and inventory policy associated with the stock item. This means the quantity you enter here is offset against physical stock and may be increased. The increase depends on the configured inventory policy.

   Note: The value defaults from the MPS Settings. For more information, see *Entering Settings for MPS on page 270*.

5. Enter the Due Date for the items.

6. The status defaults to 'Entered'. This means that it has not been processed through MPS and MRP.

   When you want the item to be processed in MPS, change the status to released. For more information, see *MPS (Master Production Schedule)* on page 269.

   Once the item is processed through MRP, the status may change to part complete, complete or cancelled.

7. Enter any notes relating to the item in the Memo box.

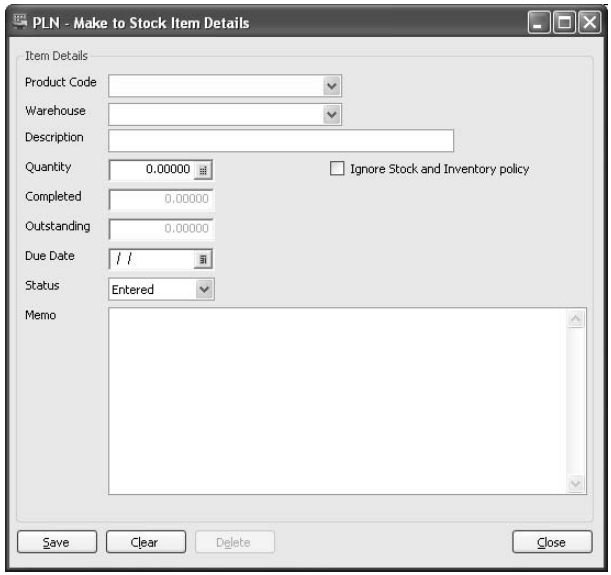
8. To save your item details, click Save.

Amending a Make to Stock Item

To amend a stock item

1. From the Navigation Bar, click Planning > Make to Stock and choose Records > Amend Record.

   The Make to Stock Item Details window appears.



2. Select the item from the Product Code drop-down list.
3. Amend the information required.

   For more information, see *Creating a Make to Stock Item* on page 254.
4. When you have entered all the required information, click Save.

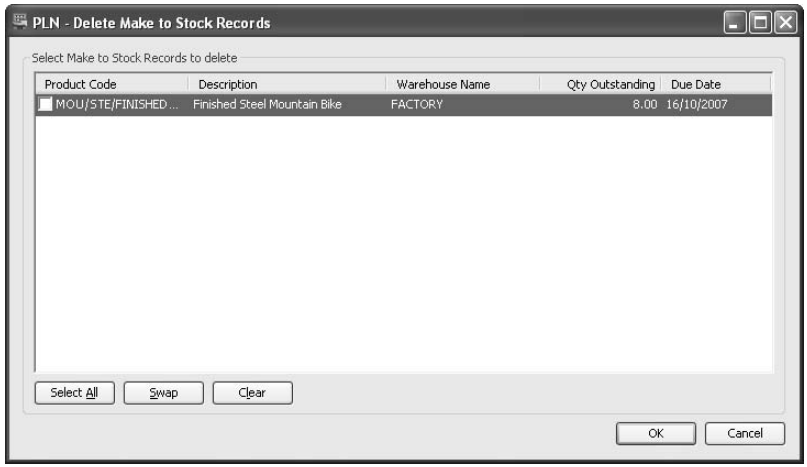
Deleting a Make to Stock Item

Note: You cannot delete items that are released or part complete.

To delete a stock item

1. From the Navigation Bar, click Planning > Make to Stock and choose Records > Delete Record.

   The Delete Make to Stock Records window appears.



2. Select the products that you want to delete, and click OK.

   The items are deleted.

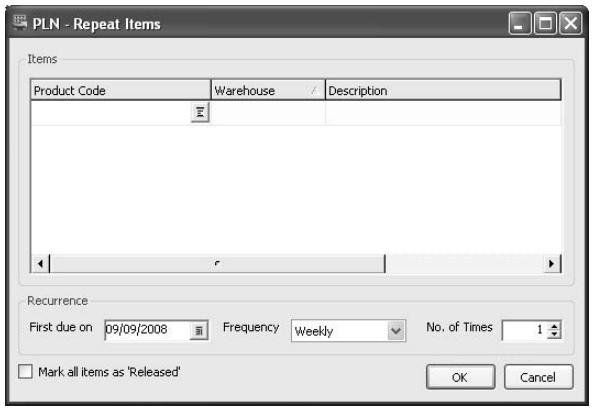
Entering Repeating Items

You can schedule the same item to be made regularly, for example,100 oak desks every week.

To enter repeating items

1. From the Navigation Bar, click Planning > Make to Stock and choose Records > Repeat Items.

   The Repeat Items window appears.



2. Click in the Product Code box and select the code from the drop-down list.

   Note: The Product Code must exist in the Stock Control module.

   When you enter the code, the description appears automatically and the stock unit is shown alongside the Quantity box.

   If you are using multiple locations, the warehouse name appears automatically.

   Note: You can select another warehouse from the Warehouse drop-down list.

3. Enter the quantity of items to make.

   Note: If you enter a quantity that does not match with the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

   This quantity is compared with existing stock and any replenishments. If any exist, the resulting works or purchase order will be for the 'difference' quantity.

   Note: If you are using traceability and the item is serial number traceable, you cannot enter decimal places.

4. Scroll right to enter any notes required in the Memo box.

5. In the 'First due on' box, enter the manufacture start date.

6. Select how frequently you want to repeat the job in the Frequency box. If you select Weekly, the item is scheduled to be made each week.
7. Specify how many times you want to repeat the job in the No. of Times box.

   If you enter '5', the item is scheduled to be made five times.
8. To release items automatically, select the Mark all items as Released check box.
9. To save the repeating item, click OK.

   The item is added to the list of stock items in the Make to Stock window.

Preparing Make to Stock Reports

The following reports are available from the Make to Stock menu.

- Make to Stock

  This provides a report on the make to stock items, grouped by due date or by product.
- Make to Stock - List

  This report may be detailed or summarised.

To prepare make to stock reports

1. From the Navigation Bar, select Planning > Make to Stock and choose Reports.
2. Select the report required from the list of available reports.

   For more information on preparing reports, see the *Sage 200 help*.

To customise make to stock reports

You can edit or copy report layouts, or create a new report layout, using Sage Report Designer. For more information, see *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Chapter 8

Sales Forecasts

The Sales Forecasts module allows you to create demands with a consideration for potential sales.

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Deleting a Sales Forecast.....265
Copying a Sales Forecast 266
Preparing Sales Forecasts Reports ..267

Creating a Sales Forecast

You can create a sales forecast, in one of the following ways.

- Create

  Set up a new sales forecast. For more information, see *To set up a new sales forecast* on page 262.

- Copy

  Copy an existing sales forecast. For more information, see *Copying a Sales Forecast* on page 266.

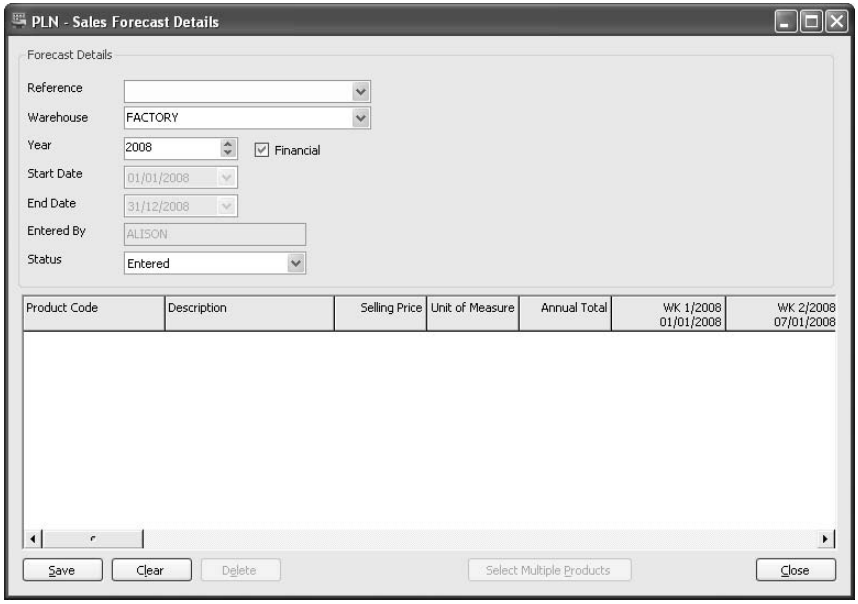
- Import

  Import a sales forecast. For more information, see *Importing and Exporting Data* on page 43.

To set up a new sales forecast

1. From the Navigation Bar, click Planning > Sales Forecasts and choose Records > New Sales Forecast.

   The Sales Forecast Details window appears.



2. Enter a unique reference.
3. Enter a warehouse.

   Note: You cannot change the warehouse when products have been added.

4. Select the forecast year.

   Note: You can enter a number of forecasts for the same period.

5. To use your company's financial year, select the Financial check box. To use the calendar year, leave the check box clear.

   The Start Date and End Date of the chosen year display automatically.

6. The status defaults to 'Entered'. This means that it has not been processed through MPS and MRP.

   When you want the item to be processed in MPS, change the status to released. For more information, see *MPS (Master Production Schedule)* on page 269.

   Once the item is processed through MRP, the status may change to part complete, complete or cancelled.

7. Select the product or products that you want to add to the forecast.
   - To select individual products, click in the Product Code box and select the product from the drop-down list.
   - To select multiple products, click Select Multiple Products and select the products from the Select Product window.

8. Enter the total quantity of forecasted sales for the year in the Annual Total box.

   Note: If you enter a quantity that does not match with the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

   The WK boxes display the annual total quantity divided by 53.

   Note: If you are using traceability and the item is serial number traceable, you cannot enter decimal places.

9. Change any of the weekly totals required.

   Note: If you enter a quantity that does not match with the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

   The Annual Total is automatically updated.

10. To save your forecast, click Save.

    This calculates the last date in each week as the forecast date.

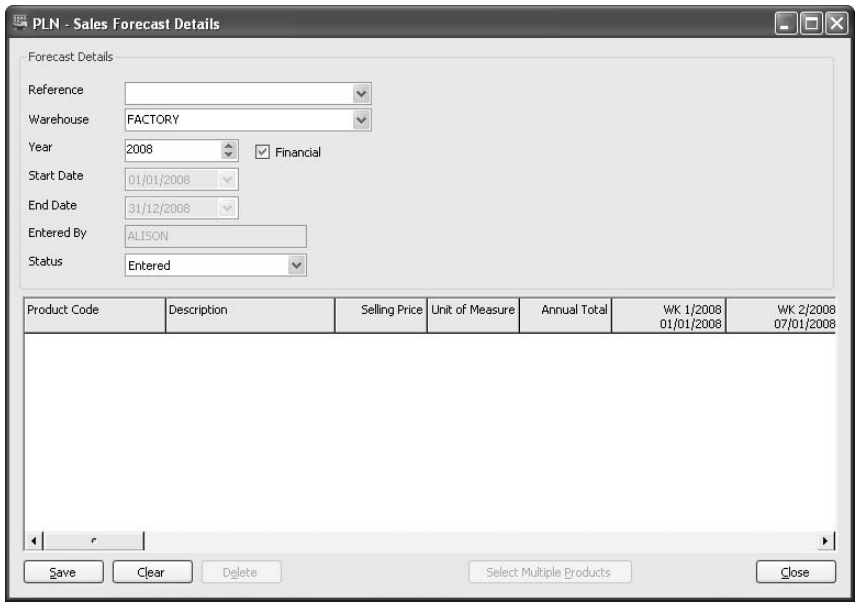
Amending a Sales Forecast

Note: You cannot amend a sales forecast that is part complete or completed.

To amend a sales forecast

1. From the Navigation Bar, click Planning > Sales Forecasts and choose Records > Amend Sales Forecast.

   The Sales Forecast Details window appears.



2. Select the required forecast from the Reference drop-down list.
3. Amend the information required.

   For more information, see *Creating a Sales Forecast* on page 262.
4. When you have entered all the required information, click Save.

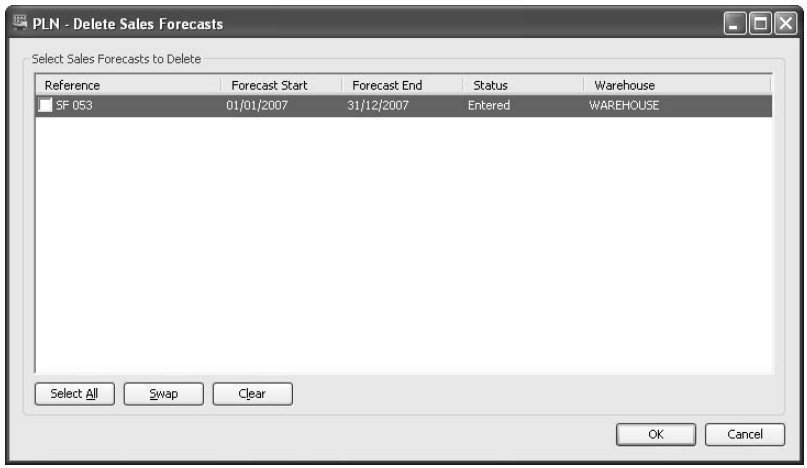
Deleting a Sales Forecast

Note: You cannot delete a sales forecast that is released or part complete.

To delete a sales forecast

1. From the Navigation Bar, click Planning > Sales Forecasts and choose Records > Delete Sales Forecast.

   The Delete Sales Forecasts window appears.



2. Select the forecasts to delete and click OK.

   The forecasts are deleted.

Copying a Sales Forecast

This option provides a quick way of creating a sales forecast.

To copy the sales forecast

1. From the Navigation Bar, click Planning > Sales Forecasts and choose Records > Copy Sales Forecast.

   The Copy Sales Forecast window appears.

2. Select the existing forecast to copy.
3. Enter a unique reference for the new forecast.
4. To use your company's financial year, select the Financial check box. To use the calendar year, leave the check box clear.

   The Start Date and End Date of the chosen year display automatically.
5. To save the forecast, click OK.

   The forecast is saved with the new reference.

   You can make further changes as required. For more information, see *Amending a Sales Forecast* on page 264.

Preparing Sales Forecasts Reports

The following reports are available from the Sales Forecasts menu.

- List

  The sales forecast list may be detailed or summarised.

To prepare sales forecasts reports

1. From the Navigation Bar, select Planning > Sales Forecasts and choose Reports.
2. Select the report required from the list of available reports.

   For more information on preparing reports, see the *Sage 200 els* documentation.

To customise sales forecasts reports

You can edit or copy report layouts, or create a new report layout, using Sage Report Designer. For more information, see *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Chapter 9

MPS (Master Production Schedule)

The MPS module considers all demands and provides a master schedule for production of finished items and sub-assemblies sold separately.

Whilst reading demands, MPS looks at items that are:

- Outstanding from a sales order in Sales Order Processing.
- Marked for release in Make to Stock.
- Unfulfilled in Sales Forecasts.
- Required to fulfil estimates in the Estimating module.

Note: MPS also processes bought items so the MRP module can facilitate back-to-back ordering. For more information, see *Processing Items That Are Not Manufactured* on page 284.

You can also include and exclude demands manually.

In this chapter:

Entering Settings for MPS.....270
Viewing Settings for MPS.....275
Reading Demands.....276
Removing Items from MPS.....278
Linking Sales Orders.....279
Unlinking Sales Orders.....281
Excluding Items.....282
Including Items.....283
Processing Items That Are Not Manufactured.....284
Viewing Time Phased Demand.....285
Preparing MPS Reports.....286

Entering Settings for MPS

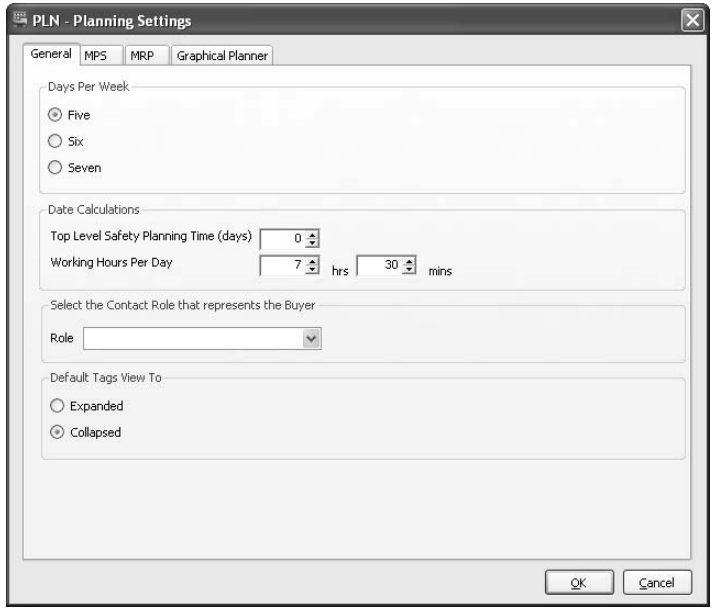
To save time when using the system, you can tailor the system to your company's needs through the setup process.

Planning considers the company working times. These are set up here. It also considers company shutdown times as these affect capacities and job start and end dates. For more information, see *Non-working Periods* on page 26.

To enter the MPS default settings

- From the Navigation Bar, click Planning and choose Setup > Planning Settings.

  The Planning Settings window appears.



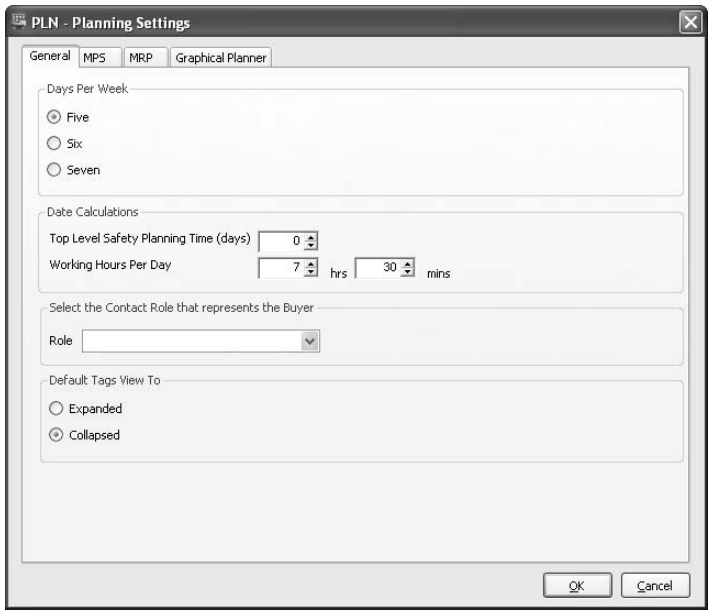
  For more information on each Planning Settings tab relevant to MPS, please read the following sections.

  - *The General tab* on page 271
  - *The MPS tab* on page 273

The General tab

To enter general settings

1. In the Planning Settings window, click the General tab.



2. Enter the settings required according to the following descriptions.

Days Per Week	Select the number of working days in a week. Planning calculates backwards from the due date to determine the order start date.
Date Calculations	Enter a number of days to act as a buffer to lead times in the Top Level Safety Planning Time (days) box. Enter the number of Working Hours Per Day in the 'hrs' and 'mins' boxes.
Role	Select the contact role from the drop-down list. This list contains roles defined in the Maintain Contact Roles window. For more information, see *Maintain Roles* on page 41.

Default Tags View To	Select the default setting for viewing tags within MRP Recommendation Details and Tags and Exceptions windows. Select Expanded to view tags set by default as expanded. You can collapse the tags manually. Select Collapsed to view tags set by default as collapsed. You can expand the tags manually.

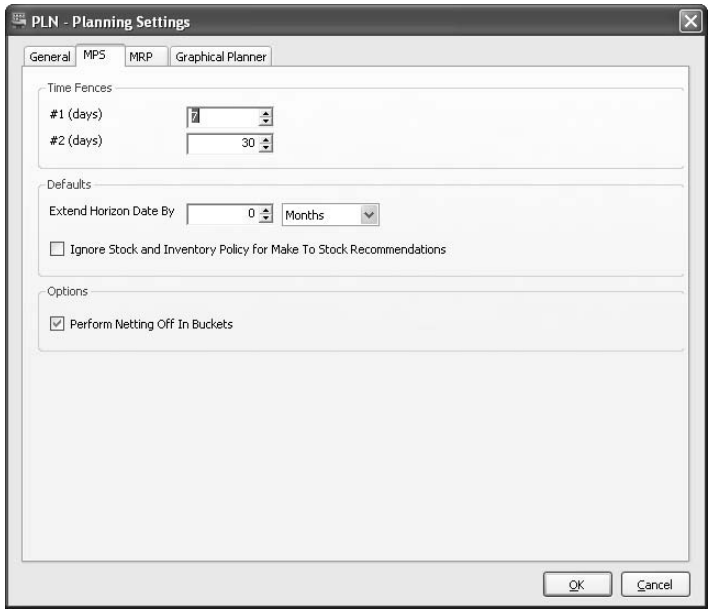
3. To continue entering Planning Settings, click the MPS tab.
   To save your Planning Settings, click OK.

The MPS tab

To enter MPS settings

1. In the Planning Settings window, click the MPS tab.

   The MPS settings appear.



2. Enter the settings required according to the following descriptions.

Time Fence #1 (days)	Enter the number of days from the System Date that sales forecasts are ignored by MPS. This defaults to seven days.
Time Fence #2 (days)	Enter the number of days from the System Date that sales order Due Date is compared to the sales forecast for an item. This defaults to 30 days.

Extend Horizon Date By	The horizon date is the date up to which demands are read within MPS. For more information, see *Reading Demands on page 276*. By default, the horizon date is the current system date, or today's date. To set a horizon date in the future, you must define an extension to this date. Enter a number and select units to specify an extension. For example, entering '2 months', sets the Read Demand default horizon date two months ahead in time. **Note:** The Horizon Date is also used when you run MRP. For more information, see *Running MRP on page 298*.
Ignore Stock and Inventory Policy for Make To Stock Recommendations	This acts as a default for the setting that is displayed in the Make to Stock Item Details window. Select the check box to ignore any physical stock or inventory policy associated with the stock item. This means that the full quantity entered on the Make to Stock item will be processed by MRP. Clear the check box to take into consideration the physical stock and inventory policy associated with the stock item. This means that the quantity entered on the Make to Stock item will be offset against physical stock.
Perform Netting Off In Buckets	Select this check box to perform the netting off on a weekly basis. This takes into account the amount of sales orders and forecasts within a weekly bucket, where the week number is calculated from the Sales Forecast and Sales Order due date. **Note:** This is the recommended option. Clear the check box to perform the netting off for the length of time the time fences are set. This means that sales orders may be netted off against forecasts in earlier weeks.

3. To save your Planning Settings, click OK.

Viewing Settings for MPS

You can only view settings using the View Planning Settings window. To edit the settings, see *Entering Settings for MPS on page 270*.

To view MPS Settings

- From the Navigation Bar, click Planning' and choose Setup > View Planning Settings.
- When you have finished viewing the settings, click Close.

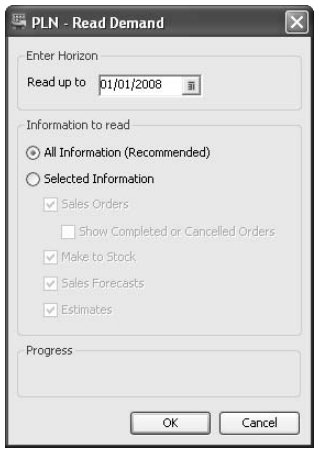
Reading Demands

This section explains how to read demands from Sales Order Processing, Estimating, Make to Stock and Sales Forecasts.

To read demands

1. From the Navigation Bar, click Planning > MPS and choose Read Demand.

   The Read Demand window appears.



2. Enter the date up to which you want to read demands. By default, this is the current system date, or today's date. If you have set a date in the future within the MPS Settings then this date is shown here automatically. For more information, see *Entering Settings for MPS on page 270*.
3. To read all information, select All Information.

   Note: This is recommended.
4. To read selected information, select Selected Information, and make further choices from the following check boxes.

Sales Orders	Select this check box to read demands from sales orders.
Show Completed/ Cancelled Orders	Select this check box if you want to show completed and cancelled orders in the excluded view.

Make to Stock	Select this check box to read demands from Make to Stock items.
Sales Forecasts	Select this check box to read demands from Sales Forecasts.
Estimates	Select this check box to read demand from estimates.

5. Click OK.

   Demands are read up to the horizon date.

   The Master Production Schedule - List shows included sales forecasts, make to stock items, estimates and sales orders.

   If you are using multiple locations, the warehouses are listed, showing the quantity at each warehouse.

   The Master Production Schedule - Excluded list shows excluded items. Items are excluded in the following circumstances.

   - The sales order is on hold.
   - The demand is beyond the horizon date.
   - The item does not have a due date.
   - The sales order is a proforma or quotation.
   - The sales order has been cancelled.
   - The BOM is private. For more information, see *The Header Details tab on page 118*.
   - The sales order was created by Estimating.
   - The item has not been released to production.
   - The sales forecast falls within the Time Fence #1 number of days. For more information, see *Entering Settings for MPS on page 270*.
   - The sales order Due Date falls outside the Time Fence #2 number of days. For more information, see *Entering Settings for MPS on page 270*.
   - The sales order line is flagged for exclusion from MPS.
   - Sales Order fulfilment method is set to 'From supplier direct to customer'. For more information, see the *Sage 200 Stock Control* documentation.
   - The customer is on hold.
   - A warehouse has not been specified.
   - The sales order has been completed.

Removing Items from MPS

You cannot remove items directly from the Master Production Schedule. You must take the following actions to remove items.

- Cancel a sales order.
- Clear the released status on a make to stock item.
- Clear the released status on a sales forecast.
- Clear the released stages of an estimate.

When you Read Demand again, MPS will not read the items and they will not be included in the Master Production Schedule.

Linking Sales Orders

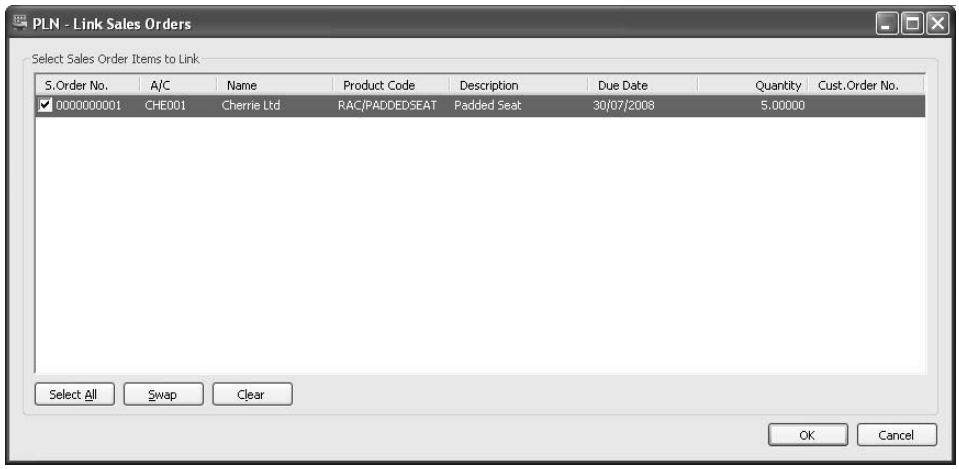
You can link sales orders with batch works orders in the Sales Order Processing module so that the specific works orders fulfill specific sales orders. This can occur even if the sales order due dates change. For more information, see your *Sales Order Processing* documentation.

If you have not linked sales orders within Sales Order Processing, you can use this option within MPS to link sales orders with works orders.

To link sales orders

1. From the Navigation Bar, click Planning > MPS and choose Link Sales Orders.

   The Link Sales Orders window appears. This shows sales orders which are not currently linked and do not have allocations.



2. Select the sales orders you want to link.
3. Click OK.

   The status of the sales orders is updated to Yes in the Linked Column within the Master Production Schedule - List.

   Note: To see this column, right click within the Master Production Schedule - List, select Columns and then select Linked.

   When you run MRP next, a recommendation is made to raise a batch works order to fulfil this sales order. The MRP Recommendation reference number is displayed in the Linked To column within the Master Production Schedule - List.

   Note: To see the Linked To column, right click within the Master Production Schedule - List, select Columns and then select Linked To.

When you action the recommendation and raise the batch works order to fulfil the sales order, the exact quantity defined in the sales order is used.

To unlink a sales order which you have linked within MPS, use the Unlink Sales Orders option. For more information, see *Unlinking Sales Orders on page 281*.

Note: You cannot unlink a sales order within MPS if it has been linked within Sales Order Processing. In that case you must use the option with the Works Orders module. For more information, see *Unlinking Works Orders on page 395*.

Unlinking Sales Orders

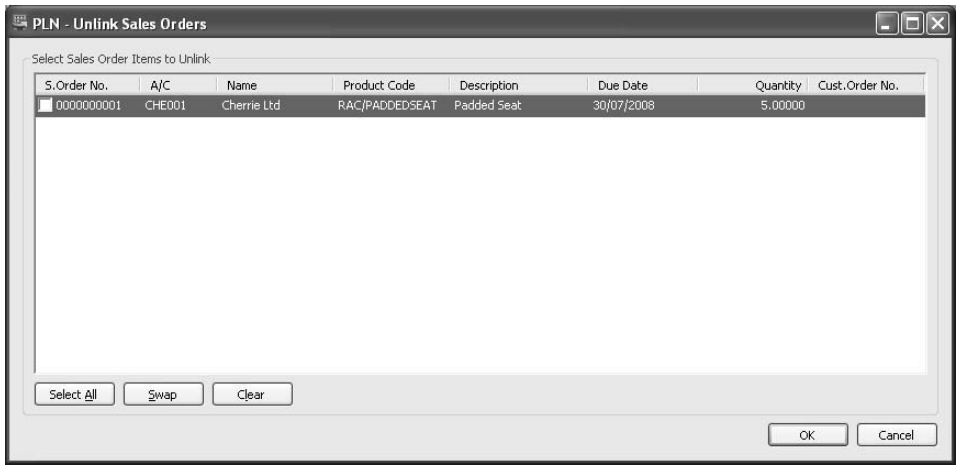
Use this option to unlink sales orders that you have linked within MPS (see *Linking Sales Orders on page 279*).

Note: You cannot use this option to unlink sales orders you have linked within Sales Order Processing. To unlink those orders, you must use the option within the Works Orders module. For more information, see *Unlinking Works Orders on page 395*.

To unlink sales orders

1. From the Navigation Bar, click Planning > MPS and choose Unlink Sales Orders.

   The Unlink Sales Orders window appears. This contains the sales orders which are currently linked.



2. Select the sales orders you want to unlink.
3. Click OK.

   The status of the sales orders is updated to No in the Linked column.

   When you re-run MPS, the reference in the Linked To column is removed.

   Note: To see these columns within the Master Production Schedule - List, right click within the list, select Columns and then select Linked.

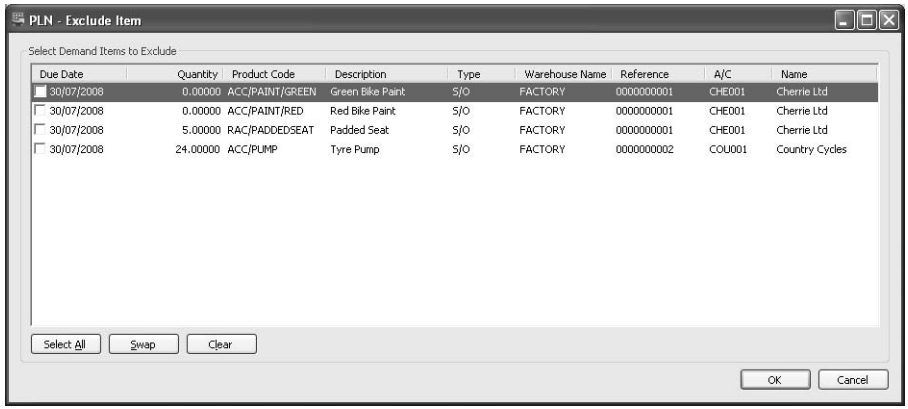
Excluding Items

MPS follows rules for excluding items when reading demands. For more information, see *Reading Demands on page 276*. You can manually exclude items if you use this option.

To exclude items

1. From the Navigation Bar, click Planning > MPS and choose Exclude.

   The Exclude Item window appears.



   All items which have not been excluded automatically are shown.

2. Select the items you want to exclude.

3. Click OK.

   The items will be excluded and listed in the Master Production Schedule - Excluded list until you manually include them again. For more information, see *Including Items on page 283*.

Including Items

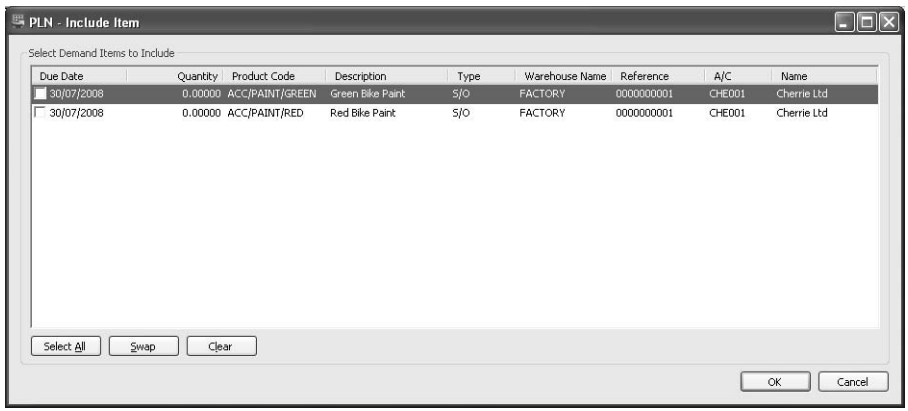
You can include items if you have excluded them manually. For more information, see *Processing Items That Are Not Manufactured on page 284*.

Note: You cannot include items that are automatically excluded following the Read Demand process. For more information on the reasons for automatic exclusion, see *Reading Demands on page 276*.

To include items

1. From the Navigation Bar, click Planning > MPS and choose Include.

   The Include Item window appears.



   All items which have been manually excluded are shown.

2. Select the items you want to include.
3. Click OK.

   The items are included in the Master Production Schedule - List and will be read the next time you read demand. For more information, see *Reading Demands on page 276*.

Processing Items That Are Not Manufactured

MPS picks up demand for items from sales orders. When MRP processes items, it raises recommendations to buy (purchase order) or make (works order) the items. Works orders are recommended if BOMs exist for the items. Otherwise purchase orders are recommended.

For more information on material requirements planning, see *MRP (Material Requirements Planning)* on page 287.

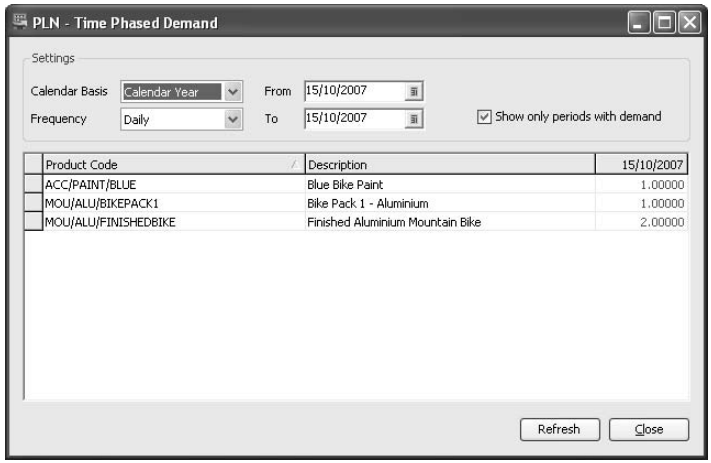
Viewing Time Phased Demand

You can view a summary of items spread across time periods.

To view time phased demand

1. From the Navigation Bar, select MPS and choose View Time Phased Demand.

   The Time Phased Demand window appears.



2. Select Calendar Year or Financial Year from the Calendar Basis drop-down list. This shows time periods that reflect the calendar year or the financial year.
3. Select Daily, Weekly, Four Weekly or Monthly from the Frequency drop-down list. Time periods reflect the selection.
4. Enter the date range From and To.
5. To show only periods with demands, select the 'Show only periods with demand' check box.
6. To view the demands, click Refresh.
7. To view the demands for a particular time period, click in the time period box.

   The 'Demand for ...' window appears showing details of the demands for that date.

Preparing MPS Reports

The following reports are available from the MPS menu.

- Items

  The items in this report may be grouped by period, product or type.
- Items List

  The items list may show all items or only those that have been excluded.

To prepare MPS reports

1. From the Navigation Bar, select Planning > MPS and choose Reports.
2. Select the report required from the list of available reports.

   For more information on preparing reports, see *Sage 200 help*.

To customise MPS reports

You can edit or copy report layouts, or create a new report layout, using Sage Report Designer. For more information, see *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Chapter 10

MRP (Material Requirements Planning)

MRP looks at stock projections in relation to demands and generates appropriate recommendations.

After reading demands in MPS, use MRP to explode demands through the BOM levels and produce make or buy recommendations. MRP produces recommendations after considering the following:

- Product Manufactured setting.
- Supplier lead time.
- BOM lead time.
- Stock levels.
- Work in progress.
- On order quantities.
- Minimum levels.
- Batch sizing rules.
- Locations of stock components.
- Whether version control is being used.

You can refine recommendations manually.

You can raise purchase orders and works orders from within MRP. This ensures uninterrupted manufacture of the items listed on MPS.

Graphical Planner works alongside MRP. For more information, see *Sage Graphical Planner* documentation.

In this chapter:

Entering Settings for MRP.....288
Viewing Settings for MRP 297
Running MRP 298
Looking at the Content of the MRP Output Log 303
Amending Recommendations.....311
Splitting Recommendations 314
Combining Recommendations.....316
Deleting Recommendations 318
Actioning Recommendations 319
Viewing Stock Projection 326
Viewing Tags and Exceptions.....328
Preparing MRP Reports.....331

Entering Settings for MRP

You can tailor the system to your company's needs through the setup process. This saves time when using the system. For more information, see *To enter the MRP default settings* on page 288.

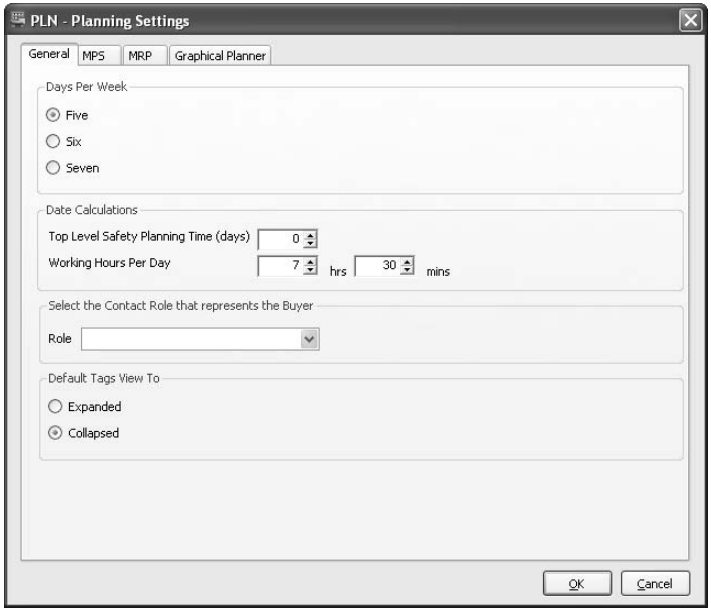
Planning takes account of when the company shuts down as this affects capacities and the start and end dates of jobs. Five years of United Kingdom public holidays are entered in the system by default. You can amend, delete or add new dates. For more information, see *Non-working Periods* on page 26.

When MRP runs, it searches for available stock to make recommendations. The 'Valid for component source' check box within Stock Control indicates components are available from the warehouse. Within Manufacturing System Manager, you must maintain your warehouse hierarchy, indicating which warehouses supply components to other warehouses. This means that MRP can make recommendations at specific locations. For more information, see your *Stock Control* documentation and *Maintain Warehouse Hierarchy* on page 24.

To enter the MRP default settings

- From the Navigation Bar, click Planning and choose Setup > Planning Settings.

  The Planning Settings window appears.

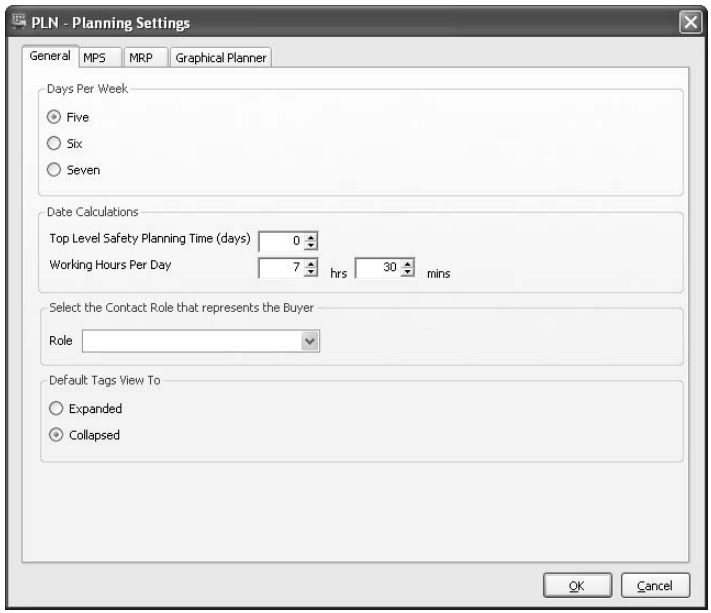


  For more information on each Planning Settings tab relevant to MRP, please read the following sections.

The General tab

To enter general settings

1. In the Planning Settings window, click the General tab.



2. Enter the settings required according to the following descriptions.

Days Per Week	Select the number of working days in a week. Planning uses this to calculate backwards from the due date to determine the start date for orders.
Date Calculations	Enter a number of days to act as a buffer to lead times in the Top Level Safety Planning Time (days) box. Enter the number of Working Hours Per Day to be included in planning calculations.
Role	Select the contact role from the drop-down list. This list contains roles defined in the Maintain Contact Roles window. For more information, see *Maintain Roles* on page 41.

Default Tags View To	Select the default setting for viewing tags within MRP Recommendation Details and Tags and Exceptions windows. Select Expanded to view tags set by default as expanded. You can collapse the tags manually. Select Collapsed to view tags set by default as collapsed. You can expand the tags manually.

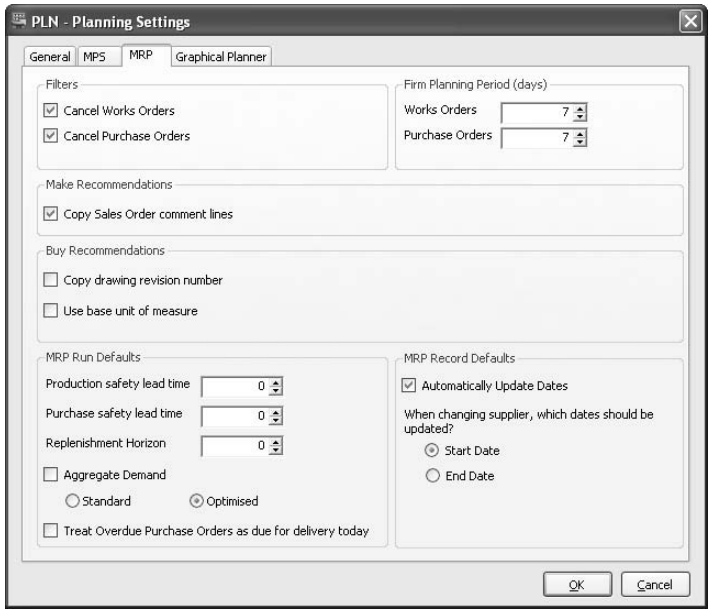
3. To continue entering Planning Settings, click the MRP tab.
   To save your Planning Settings, click OK.

The MRP tab

To enter MRP settings

1. In the Planning Settings window, click the MRP tab.

   The MRP settings appear.



2. Enter the settings required, according to the following descriptions.

Filters	Select the Cancel Works Orders check box if you have permission to cancel works orders for the product. Select the Cancel Purchase Orders check box if you have permission to cancel purchase orders for the product.
Firm Planning Period (days)	Set a number of days before the System Date when purchase orders or works orders cannot be cancelled within MRP.

Make Recommendations	Select the 'Copy Sales Order comment lines' check box to copy sales order comments to the works order. Sales order comments copied are sales order comment lines '1' and '2' in Sales Order Processing. The comments can be printed on documentation, for example, route cards.
Buy Recommendations	Select 'Copy drawing revision number' to copy the drawing revision number to purchase orders generated in Purchase Order Processing. Select 'Use base unit of measure' to ensure MRP raises purchase orders using quantities expressed in the base unit of measure instead of the stock unit. The default is to use the stock unit.
Production safety lead time	Set a number of working days to add to the lead time of every works order recommendation. **Note:** This does not change the due date on the works order. The start and end dates are recalculated to include the safety lead time.
Purchase safety lead time	Set a number of working days to add to the lead time of every purchase order recommendation. **Note:** This does not change the due date on the purchase order. The start and end dates are recalculated to include the safety lead time.
Replenishment Horizon	Set a number of days to add to due dates to find the Replenishment Horizon. Demands can be tagged to future replenishments rather than MRP suggest additional replenishments. This value defaults when MRP is run although you can overwrite the value at that time. **Note:** To store specific replenishment horizon values for stock items, enter the Replenishment Horizon (days) value on the Manufacturing tab of the Stock Item Details form. The stock item replenishment horizon value overrides replenishment values entered in Manufacturing. For more information, see your *Sage 200 Stock Control* documentation.

Aggregate Demand

Select the Aggregate Demand check box to group together demand for like products within a product time bucket. The product time bucket is determined from the Aggregate Demand (days) value set on the stock item. For more information, see your *Sage 200 Stock Control* documentation.

There are two ways of aggregating demand: standard and optimised. The default is optimised.

Optimised aggregation will create all buckets due to demand. It will not start a new bucket if there is no demand on that day.

Standard aggregation will create the first bucket due to demand but will then create the subsequent buckets automatically. Therefore, standard aggregation will lead to empty buckets.

For example, a stock item has an Aggregate Demand (days) value of 2. The pattern of demand is as follows:

	Aggregation								
Days	1	2	3	4	5	6	7	8	9
Demand	0	10	5	0	0	20	0	10	5
Standard		1		2		3		4	
Optimised		1				2		3	

Standard and optimised buckets both start the first bucket on the first demand day, day 2. However, the next optimised bucket will start on day 6. Standard aggregation will create an empty bucket for days 4 and 5.

Treat Overdue Purchase Orders as due for delivery today	Select this check box to ensure: ■ Unfulfilled purchase orders with a due date earlier than the MRP run date (i.e. purchase orders where delivery is late) are not cancelled automatically. ■ New orders are issued when MRP is run. **Note:** If the Replenishment Horizon is greater than the overdue period then new orders are not issued. Warnings about overdue purchase orders are listed in the MRP output log. For more information, see *Exceptions List on page 307*. You can leave the check box clear to ensure the original order is cancelled and a new order issued. **Note:** If you leave the check box clear, too much stock could be ordered.
Automatically Update Dates	Select the Automatically Update Dates check box to update dates for recommendations automatically when you change suppliers.
When changing supplier, which dates should be updated?	Select whether you want to update the Start Date or End Date, when changing supplier.

3. To continue entering Planning Settings, click the Graphical Planner tab.
   To save your Planning Settings, click OK.

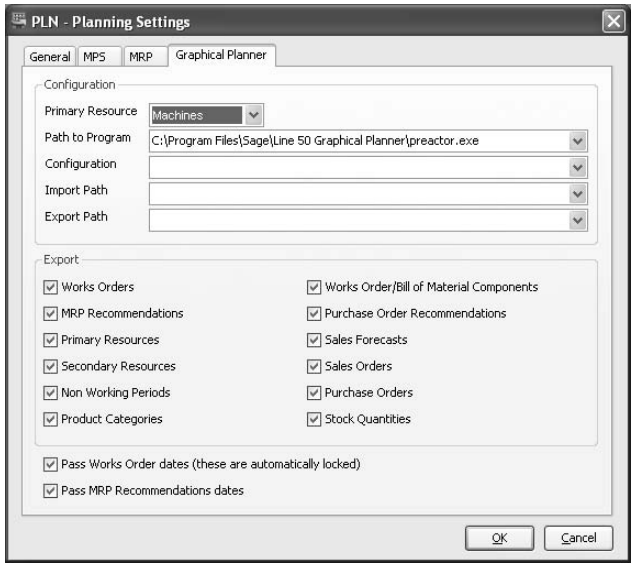
The Graphical Planner tab

Use this tab to record the settings that identify how Manufacturing integrates with Graphical Planner. For more information about Graphical Planner, see *Sage Graphical Planner* documentation.

To enter graphical planner settings

1. In the Planning Settings window, click the Graphical Planner tab.

   The Graphical Planner settings appear.



2. Enter the settings required according to the following descriptions.

Configuration	In the Primary Resource box, select whether labour or machines are to be the primary resource in Graphical Planner. In the Path to Program box, enter the path to the Graphical Planning Executable file (.exe). This should include the path and file name. **Note:** By default the Graphical Planner program folder is in your program files folder, for example, c:\program files. If you installed Graphical Planner in a different directory you will need to change the path displayed.

	Note: By default, the Configuration, Import Path and Export Path folders are installed at My Documents\Sage\Graphical Planner. In the Configuration box, enter the path to the Graphical Planning Configuration file (*.prcdf). This should include the path and file name. In the Import Path box, enter the path where Graphical Planner imports data from. This is where MRP exports data to. In the Export Path box, enter the path where Graphical Planner exports data to. This is where MRP imports data from.
Export	Select the check boxes for items to export to Graphical Planner.
Pass Works Order dates (these are automatically locked)	Select this check box to pass dates to and from Works Orders and Graphical Planner.
Pass MRP Recommendations dates	Select this check box to pass dates to and from MRP and Graphical Planner.

3. To save your Planning Settings, click OK.

Viewing Settings for MRP

If you need to provide details of your settings to the support team, use the 'view only' versions of the settings.

To view MRP Settings

1. From the Navigation Bar, click Planning and choose Setup > View Planning Settings.
2. When you have finished viewing the settings, click Close.

Running MRP

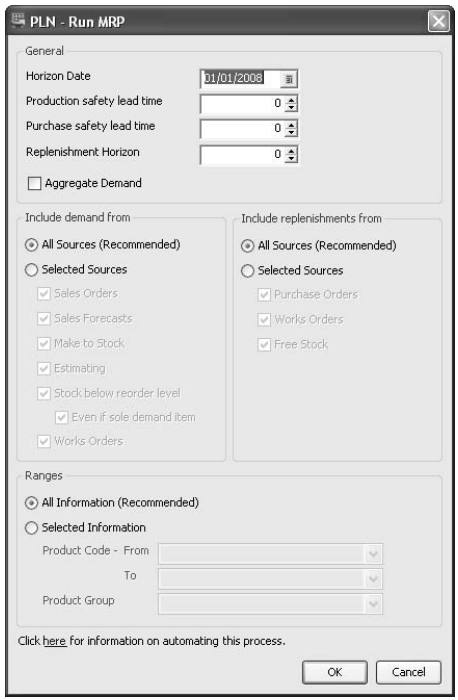
You need to run MRP to calculate demands and see make or buy recommendations.

The results are listed in a log file. You can view the log file and check the details. You can also send it via email to other users.

To run MRP

1. From the Navigation Bar, click Planning > MRP and choose Processing > Run MRP.

   The Run MRP window appears.



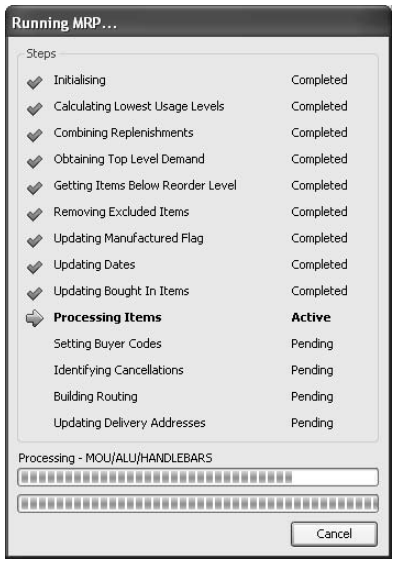
2. Specify how you want to run MRP, by entering the following information.

Horizon Date	The cut-off date for processing demands defaults to the date entered when demands are read in MPS. You can change the default, if required. **Note:** Items with a due date after this date are ignored.

Production safety lead time	This defaults to the number of days defined within the Planning Settings. It adds a number of working days to the lead time of every works order recommendation. You can change the default, if required.
Purchase safety lead time	This defaults to the number of days defined within the Planning Settings. It adds a number of working days to the lead time of every purchase order recommendation. You can change the default, if required.
Replenishment Horizon	This defaults to the number of days defined within the Planning Settings. It adds a number of calendar days to due dates to find the horizon for replenishments. You can change the default, if required. **Note:** Use the Replenishment Horizon (days) box on the Manufacturing tab of the Stock Item Details form to store the horizon values for individual stock items. The stock item replenishment horizon value overrides replenishment values entered in Manufacturing. For more information, see your *Sage 200 Stock Control* documentation.
Aggregate Demand	Select the Aggregate Demand check box to group together demand for like products within a product time bucket. The product time bucket is determined from the Aggregate Demand (days) value set on the stock item. For more information, see your *Sage 200 Stock Control* documentation. If you select Aggregate Demand, the method of aggregating demand defaults to the method specified in Planning Settings. For more information, see *The MRP tab on page 291*. **Note:** Sales orders which are linked with batch works orders are not included in aggregated demand.
Include demand from	Choose which items are included. **Note:** We recommend you include demands from all sources.
Include replenishments from	Choose which replenishments are included. **Note:** We recommend you include replenishments from all sources.

Ranges	Choose the product ranges over which MRP is run. **Note:** We recommend you choose ranges which cover all information.

3. To run MRP, click OK.



MRP processes demands for each product that qualifies in the Master Production Schedule. In addition, demands are considered for all products that are below reorder level. The demands are grouped by product and sorted by order date. Sales orders which are linked, are processed as precise quantity and are excluded from MRP ordering and batch rules.

Replenishment is listed on a new line for each stock item that has a replenishment value.

If the 'Treat Overdue Purchase Orders as due for delivery today' setting is selected in MRP Settings, purchase orders that are overdue on the MRP Horizon Date are listed as Exceptions in the MRP output log. For more information, see *Exceptions List on page 307*.

Once all demands have been processed, MRP explodes estimates and BOMs to the next level. Phantom BOMs are blown through a level. Exploded demands are added to the MRP considerations.

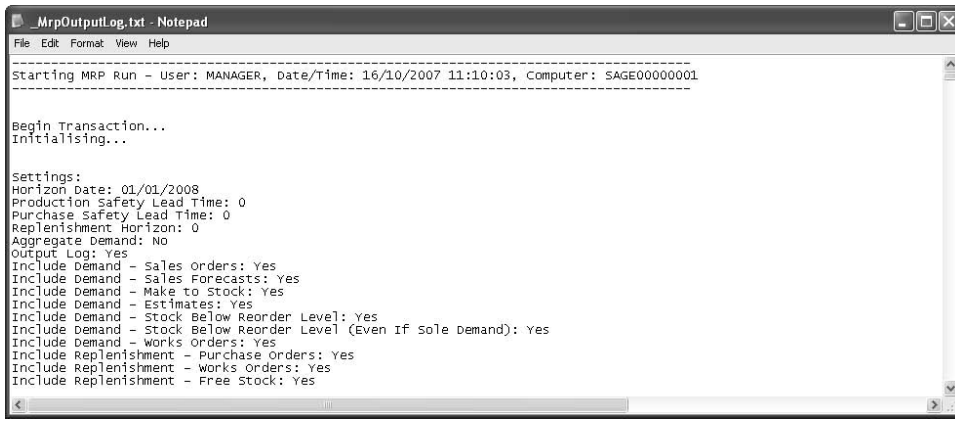
The results of the MRP calculations are displayed in the MRP window. Current and projected stock levels can be viewed. Action can be taken on recommendations made by the routine.

The results of the MRP calculations are saved in a text file in a folder of the company's Attachments path. For more information on the path, refer to your System Administrator. The file name is <company name>_MrpOutputLog.txt.

To view the MRP output log

1. From the Navigation Bar, click MRP and choose MRP Output Log > View Log.

   The View MRP Output Log window appears.



2. To close the log, click the Close button in the top right-hand corner of the window.

   For more information about the log, see *Looking at the Content of the MRP Output Log* on page 303.

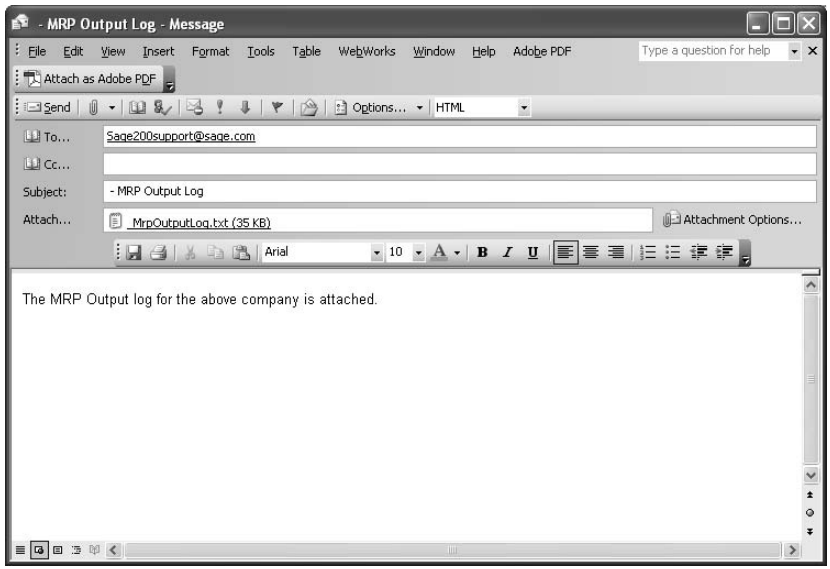
To send the MRP output log

1. From the Navigation Bar, click MRP and choose MRP Output Log > Send To.

   The Send MRP Output Log window appears.

2. Enter the user's email address.
3. To open the email window, click OK.

   The default email window opens, displaying a new message with the log file as an attachment.



4. Complete the message as required and send the message in the usual way.

   For more information about the log, see *Looking at the Content of the MRP Output Log* on page 303.

Looking at the Content of the MRP Output Log

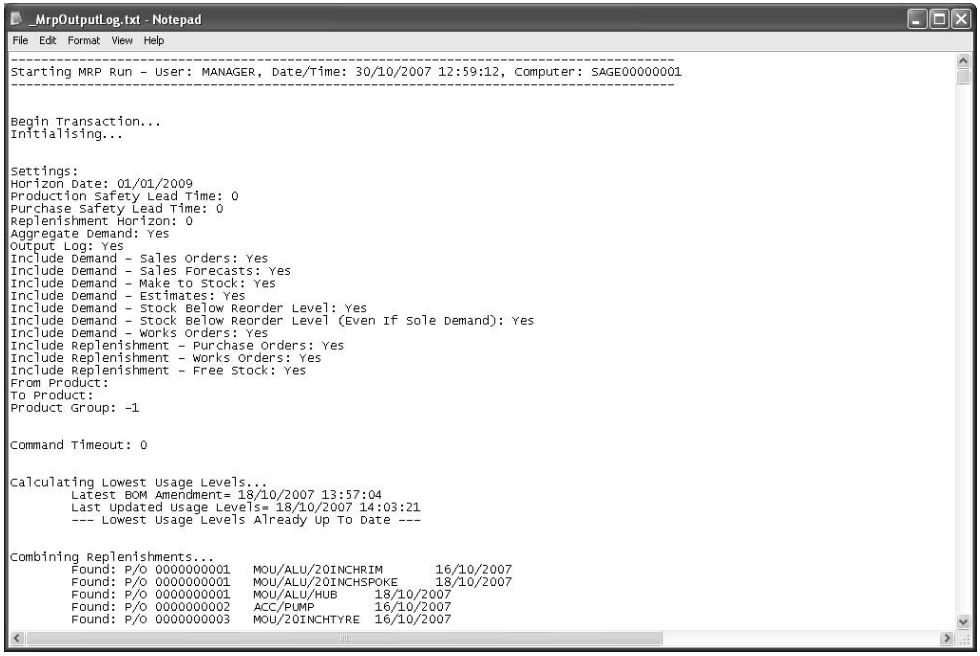
The MRP Output Log is produced during the Run MRP process within MRP.

It allows you to see what has happened during the Run MRP process, and also lists exclusions. This lets you have a better understanding of the MRP status.

The output log layout

The initial display provides a list of the selected Planning settings available for alteration prior to the run.

The product range is blank in the following example, as the All Information option (recommended)', was taken.



The example log has the setting Aggregate Demand selected – are we going to group the demands for like products based on a setting in the Stock Control module. Whether we are or not depends on the setting configured within Planning Settings but can be overridden when you Run MRP.

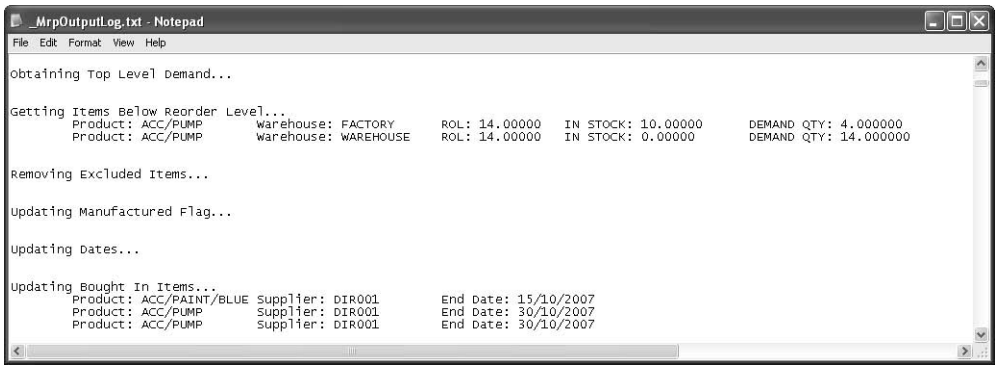
Product time buckets are set in the Stock Control module. Each product can be set to Aggregate Demand within a certain number of days. Prior to the assembly structure explosion,

MRP checks for any product time buckets. The number of days is entered against the product record.

Within Planning settings (see *The MRP tab on page 291*) a default setting (Aggregate Demand) controls whether the number of days is used. You can change this default when you run MRP.

If you are using optimised aggregation, the number of days still applies. But, each bucket only starts on days when there is demand. This eliminates the empty time buckets which can arise if you use standard aggregation.

All Replenishment sources selected when you run MRP have their quantities combined by Product Code filter within specific order dates. If Make to Stock items are excluded from aggregation and replenishment checks then this is noted in the log.

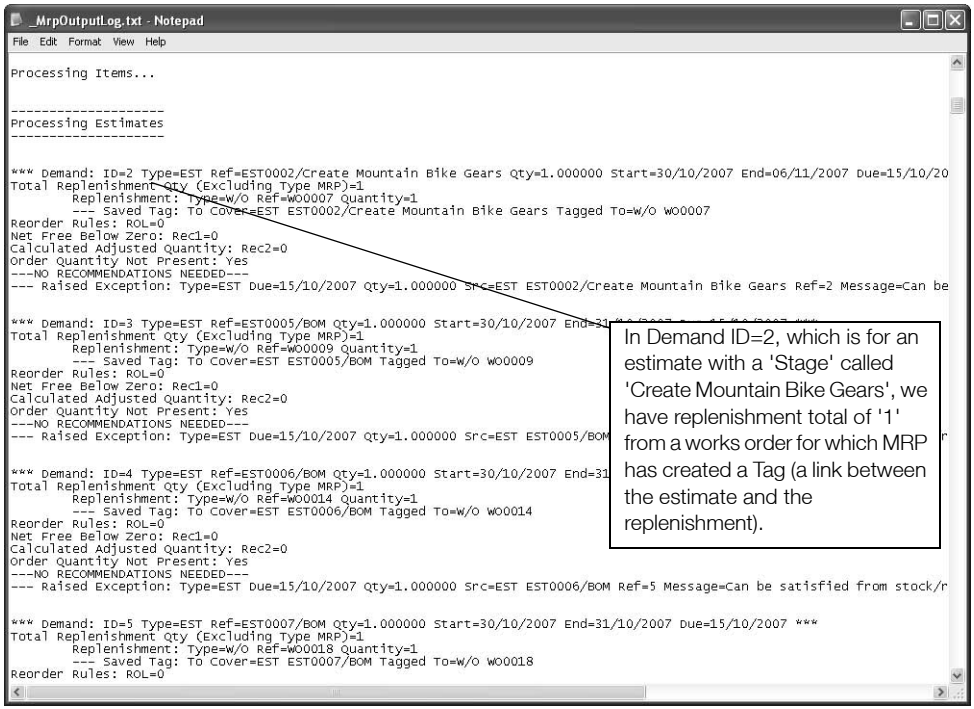


Top Level Demand is obtained from Read Demand in MPS.

Processing Items

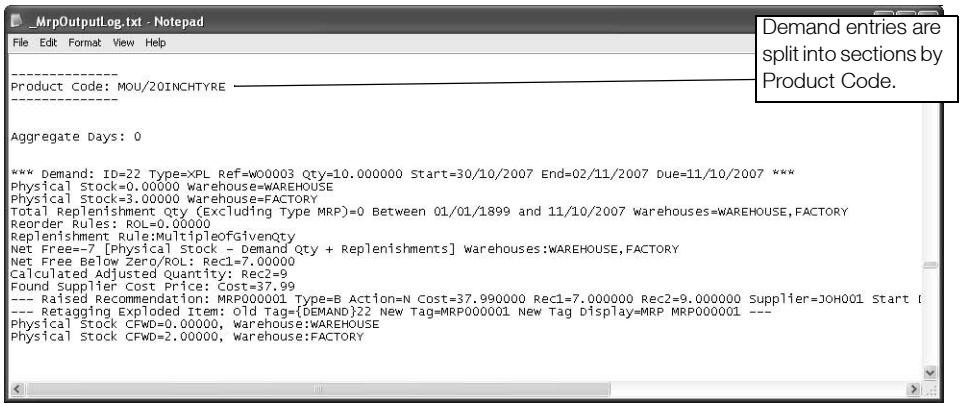
Estimates are processed initially, followed by products in order of usage level.

Provided within each breakdown are the mathematical calculations as performed by Run MRP. The replenishment quantities are defined within Run MRP from one or all of the following: Purchase Orders, Works Orders, Free Stock and any excess from MRP recommendations.

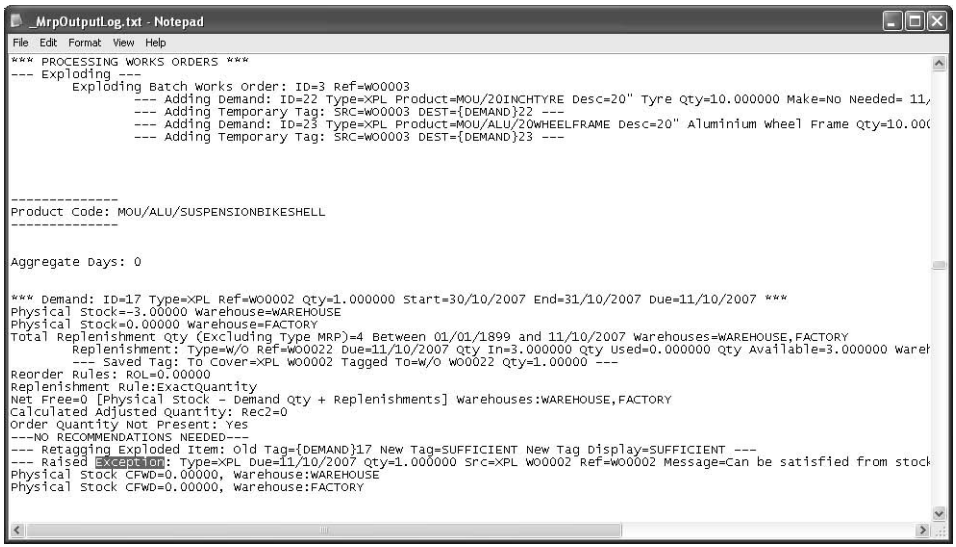


The following excerpt shows demand for Product=MOU/ALU/20FINISHEDWHEEL, created as the result of a BOM structure explosion:

The following excerpt shows demand for Product=MOU/20INCHTYRE, also created as the result of a BOM structure explosion which results in an MRP recommendation:



Exceptions List



Exceptions are listed within each Product Code grouping and can be any of the following:

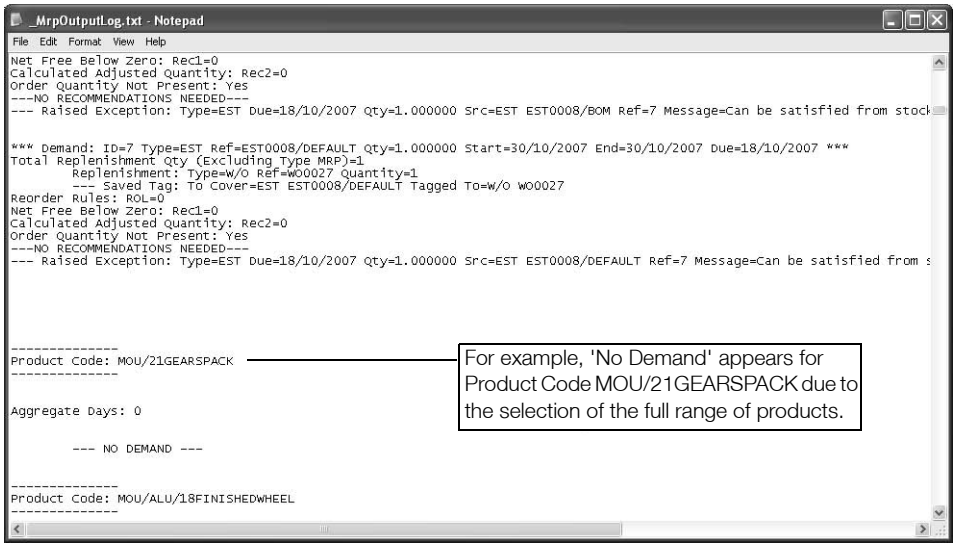
- Version control is enabled but the top level BOM for the item is not active, or it is active but the sub-assembly BOMs are not active.
- Non-stock Item.
- Free stock will drop below reorder level.

  This can occur when suggesting to cancel works orders or purchase orders.
- Can be satisfied from stock/replenishments.
- Cancel Prevented - PO Invoiced.
- Bulk issue item.
- Within Firm planning period.

  This can occur when suggesting to cancel works orders or purchase orders within the setup firm planning period.
- Filter prevented Cancellation.

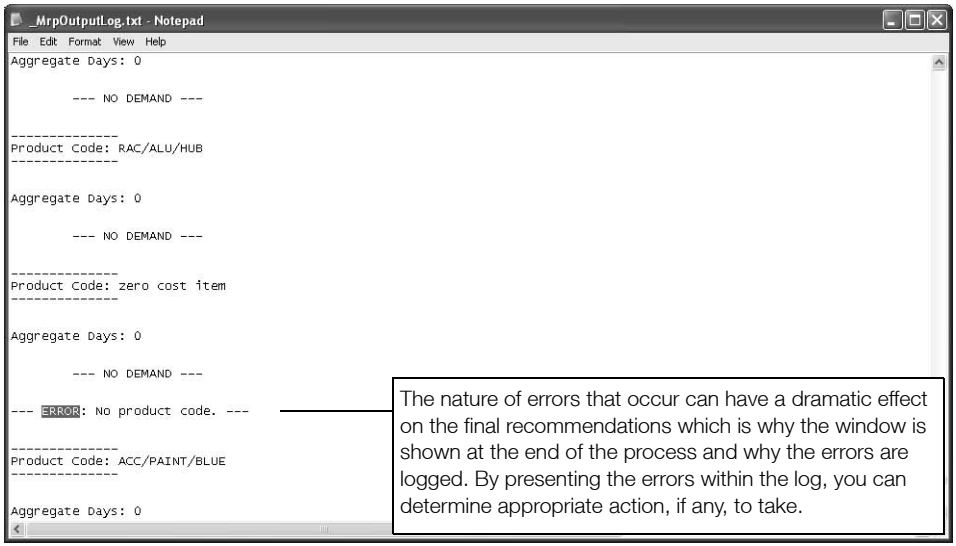
  Within the Planning Settings, on the MRP tab, there are two check boxes - Cancel Works Orders/Cancel Purchase Orders. These must be selected to give permission to cancel.
- Invalid Start, End or Due Date.
- Overdue Purchase Order.

Other information and alerts can be generated, providing extra help with understanding the MRP results. These can appear as the result of the choices made during Run MRP.

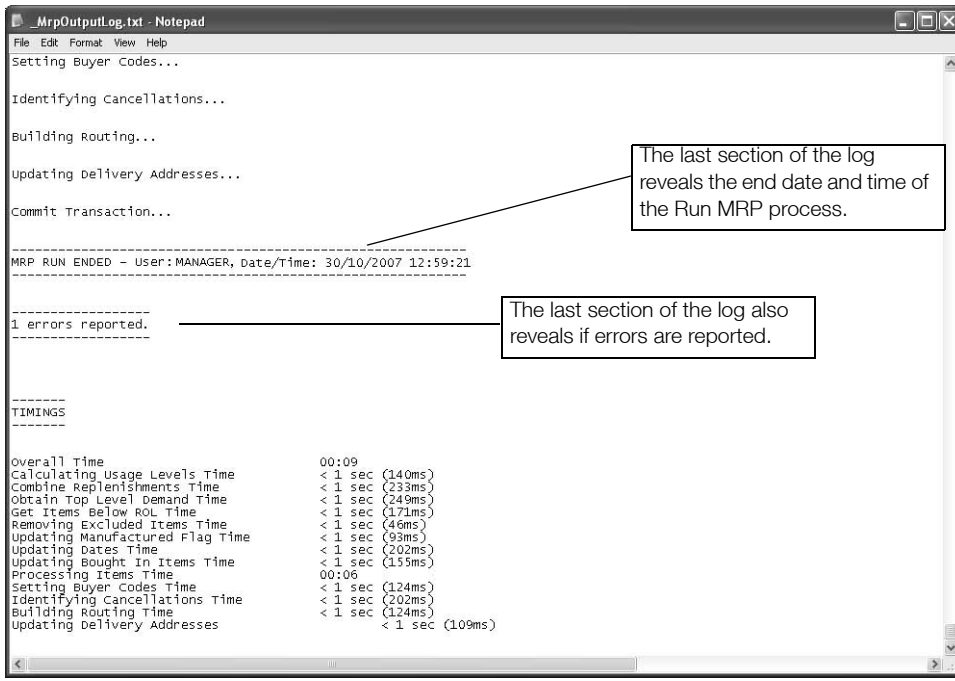


Error Logging

The Run MRP window can show errors occurring within the separate steps which are output to the log. When MRP related errors occur, the software will proceed, although you can cancel the process, if required.



Note: When viewing the output log, you can use any search facilities available within your default text editor to find occurrences of the word 'ERROR'.


_MrpOutputLog.txt - Notepad
File Edit Format View Help
Setting Buyer Codes...
Identifying Cancellations...
Building Routing...
Updating Delivery Addresses...
Commit Transaction...
MRP RUN ENDED - User:MANAGER, Date/Time: 30/10/2007 12:59:21
1 errors reported.
TIMINGS
Overall Time 00:09
Calculating Usage Levels Time < 1 sec (140ms)
Combine Replenishments Time < 1 sec (233ms)
Obtain Top Level Demand Time < 1 sec (249ms)
Get Items Below ROL Time < 1 sec (171ms)
Removing Excluded Items Time < 1 sec (46ms)
Updating Manufactured Flag Time < 1 sec (93ms)
Updating Dates Time < 1 sec (202ms)
Updating Bought In Items Time < 1 sec (155ms)
Processing Items Time 00:06
Setting Buyer Codes Time < 1 sec (124ms)
Identifying Cancellations Time < 1 sec (202ms)
Building Routing Time < 1 sec (124ms)
Updating Delivery Addresses < 1 sec (109ms)
The last section of the log reveals the end date and time of the Run MRP process.
The last section of the log also reveals if errors are reported.

Amending Recommendations

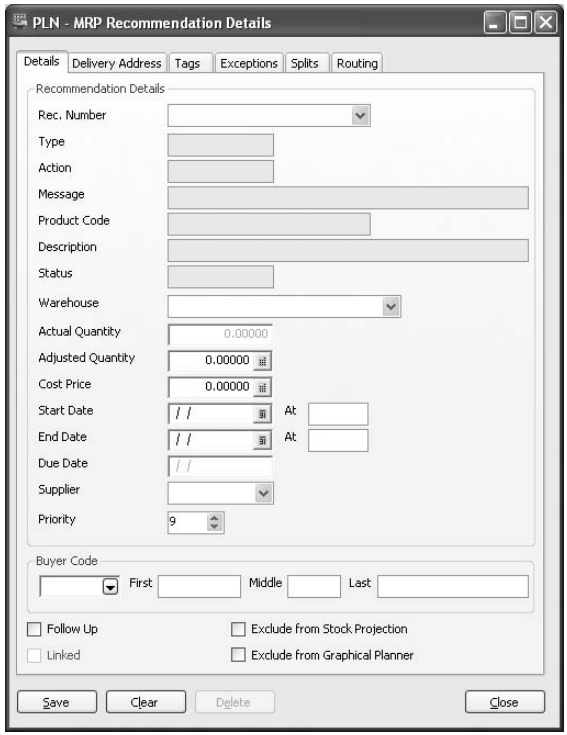
You can review and amend recommendations made by the Run MRP process. Recommendation Details can be selected from the MRP - Recommendations list. Recommendation details are also available by drilling down from the Stock Projection List window. For more information, see *Viewing Stock Projection* on page 326.

Note: You can amend the recommendations graphically using Graphical Planner. For more information, see *Sage Graphical Planner* documentation.

To amend recommendations

1. From the Navigation Bar, click Planning > MRP and choose Recommendation Records > Amend Recommendation.

   The MRP Recommendation Details window appears.



2. You can amend the following Recommendation Details, if required:

   - Warehouse.

     The warehouse delivery address (set up within Stock Control Locations) is displayed on the Delivery Address tab.

     Note: A supplier must be selected.

   - Adjusted Quantity

     Note: If you enter a quantity that does not match with the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

     If the recommendation is a sales order and the sales order is linked, you cannot adjust the quantity to less than the quantity on the linked sales order line.

   - Cost Price (using the supplier's currency)
   - Start Date and time (At)
   - End Date and time (At)
   - Supplier

     Click the down arrow in the Supplier box.

     The Select Supplier window appears.

     Select the supplier you want from the list. For example, you might need a supplier with a lower minimum order quantity. Click View All Suppliers to select a supplier from the complete list of suppliers.

     Note: If you are changing from a make to a buy item by adding a supplier, and the recommendation is linked, you are prompted to confirm you want to replace the permanent link with a temporary tag when you save the changes.

   - Buyer Code
   - Priority

     The Priority of the works order is shown. The priority range is from -32000 to 32000. The lower the number, the higher the priority, so -32000 is the highest priority and 32000 is the lowest priority. This information passes into Graphical Planner and is used during planning. For more information see *Sage Graphical Planner* documentation.

     Note: When a Make MRP Recommendation is actioned, the priority is copied to the works order. For more information about actioning recommendations, see *Actioning Recommendations* on page 319.

   Note: If you change Supplier, Adjusted Quantity, Start Date or End Date, you must action the recommendation before running MRP. If you do not, your changes will be lost. Actioning the recommendation and running MRP will show the effect of your changes.

3. Select the Follow Up check box if you want to perform any follow up action on the recommendation.

4. Select the Exclude from Stock Projection check box if you want to exclude the item from the stock projection list.
5. Select the Exclude from Graphical Planner check box if you want to exclude the recommendation from export to Graphical Planner.
6. Click the Delivery Address tab to review the delivery address.

   Note: The delivery address is the address of the warehouse selected on the Details tab. You cannot amend it here. If you need to amend it, this can be done within Stock Control Locations.
7. Click the Tags tab to review the links between other items.

   Linked sales orders are indicated by the suffix (LINKED).

   Note: You can action recommendations from this tab. For more information, see *Actioning Recommendations* on page 319.
8. Click the Exceptions tab to show items that may not be needed.
9. Click the Splits tab to view all associated MRP records if the item has been split.
10. Click the Routing tab to view the operations routing of the items against make recommendations only.
11. To save your changes to the recommendations, click Save.

Splitting Recommendations

You can raise multiple orders for a specified product, supplier and date combination by splitting the recommendation. You might need to do this if the customer wants a phased delivery of the order.

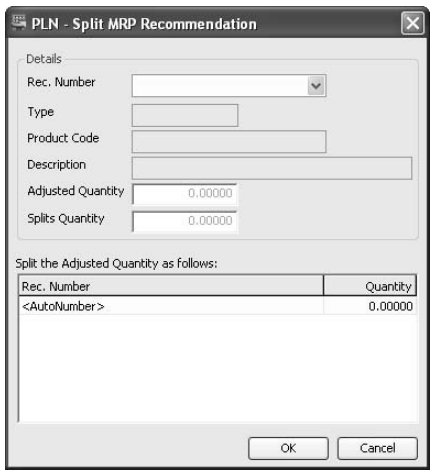
You cannot split the following:

- Service type items, typically non-stock items from an estimate or a subcontract operation.
- Linked recommendations.

To split a recommendation

1. From the Navigation Bar, click Planning > MRP and choose Processing > Split Recommendation.

   The Split MRP Recommendation window appears.



2. Select the record number of the recommendation that you want to split.
3. Split the adjusted quantity as follows:
   - Click in the Quantity column on the first line, and enter the quantity for the first part of the split.
   - Click in the Quantity column on the next line, and enter the quantity for the second part of the split.
   - Repeat until you have entered the quantities for all the required splits.

   Note: The total quantity for the splits must equal the adjusted quantity. If any of the quantities you enter does not match with the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

4. To save the splits, click OK.

   A new recommendation is created for each split you have made. The new lines are displayed in the MRP - Recommendations window.

Combining Recommendations

To simplify ordering, you can combine recommendations for the same Make to Stock item into one works order. You can also combine items with the same supplier into one purchase order.

However, you cannot combine buy recommendations linked to demands for sales order items with the fulfilment type 'from supplier direct'. This is because the purchase order items need to hold the delivery address from the sales order.

If multiple locations are used for component store and supply, the items being combined must come from the same warehouse.

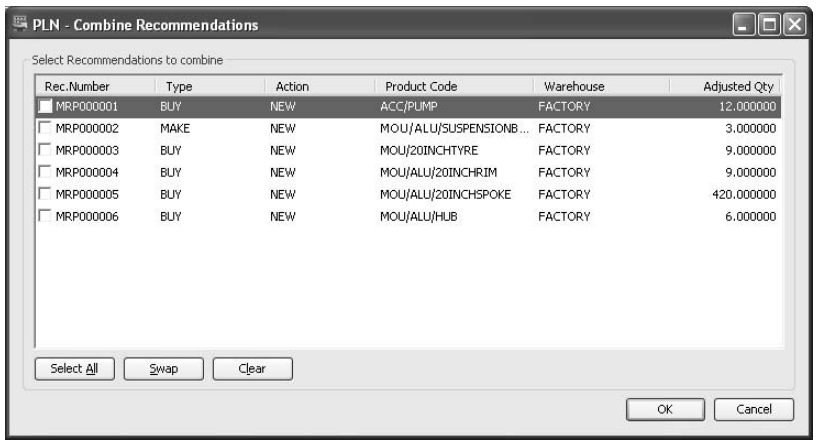
You cannot combine the following:

- Service type items, typically non-stock items from an estimate or a subcontract operation.
- Linked recommendations.

To combine recommendations

1. From the Navigation Bar, click Planning > MRP and choose Processing > Combine Recommendations.

   The Combine Recommendations window appears.



2. Select the recommendations that you want to combine.
3. To save the selection, click OK.

   The combined adjusted quantity must be valid for the unit that the item is stocked in. If not, you cannot proceed with combining the recommendations.

   If the adjusted quantity is valid for the unit that the item is stocked in, the recommendations are combined into the first recommendation that you selected. You can see this in the MRP - Recommendations list. The status of the other recommendations changes to 'Deleted'.

All recommendations have a Created Reference which is the first combined recommendation Rec. Number.

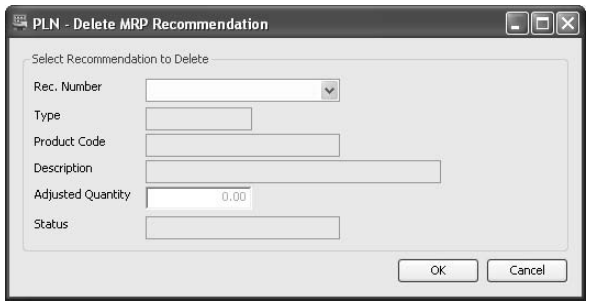
Deleting Recommendations

You can delete a recommendation.

To delete a recommendation

1. From the Navigation Bar, click MRP and choose Recommendation Records > Delete Record.

   The Delete MRP Recommendation window appears.



2. Select the recommendation required.
3. To delete the recommendation, click OK.
4. Confirm the deletion when prompted.

   The Recommendation status changes to deleted.

Actioning Recommendations

Recommendations to make and buy products are generated by the Run MRP process.

MRP can raise recommendations to buy items which do not have an associated supplier. You cannot action these recommendations. They are listed with a zero cost price unless a cost price has been entered on the estimate. You must associate the items with a supplier and then run MRP again to regenerate the recommendations. You can then action them.

Note: You cannot action a buy recommendation for a quantity greater than 9999999.99999.

Two types of action may be taken on recommendations.

New	This action allows you to raise a new works or purchase order. **Note:** Purchase Order Processing must be set to automatically generate purchase order numbers in order to raise purchase orders from recommendations.
Cancel	This action allows you to cancel a recommendation.

You can action a recommendation when its status is 'Entered'

Note: If it is a linked recommendation, you can action it if all its parent recommendations have already been actioned.

Actioning a recommendation changes the recommendation status to 'Actioned'.

There are different ways you can action recommendations.

- To action all recommendations:
  - From the Navigation Bar, click Planning and choose MRP > Processing > Action Recommendations.
  - Whilst none of the recommendations is selected, click Action in the MRP - Recommendations list in the MRP list window.
- To action selected recommendations:
  - Use the Tags tab on the MRP Recommendation Details window.
  - Use the MRP - Recommendations list in the MRP list window.

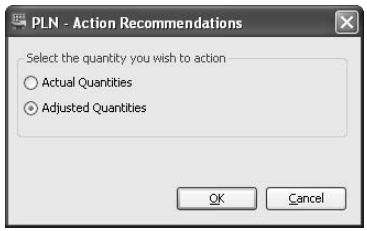
    Note: Using the Filters before clicking Action will offer greater flexibility. You can action all buy recommendations, those with a specific buyer code or for a particular supplier.
  - Use the Tags/Exceptions window. (From the Navigation Bar, click Planning and choose MRP > Tags/Exceptions).

To action recommendations from the Navigation Bar

1. From the Navigation Bar, click Planning > MRP and choose Processing > Action Recommendations.

2. Confirm at the prompt that you want to process all recommendations.

   The Action Recommendations window appears.



3. In the Action Recommendations window, choose whether to action actual or adjusted quantities. Adjusted quantities are actual quantities adjusted to take account of any reorder quantities.
4. To apply the quantities, click OK.

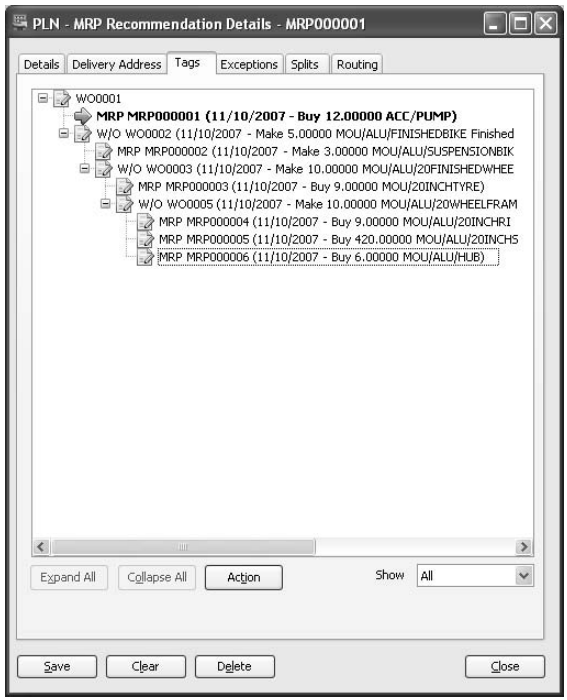
   The status of the recommendation changes to 'Actioned'.

   Note: When you action a make recommendation, the priority is copied to the works order.

To action recommendations from the Tags tab

1. From the Navigation Bar, click Planning > MRP and choose Recommendation Records > Amend Recommendation.

   The MRP Recommendation Details window appears.
2. Select the record number of the recommendation that you want to action.
3. Click the Tags tab.



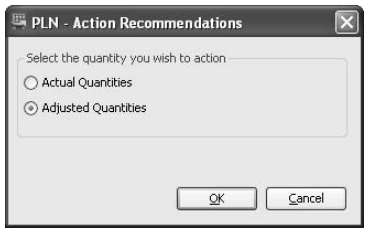
Note: Depending on the Default Tags View To setting on the Planning Settings General tab, the recommendations are displayed as expanded or collapsed. If you selected Expanded as the default view, the recommendation you selected is displayed in bold. All other linked recommendations are shown in a tree view structure. If you selected Collapsed as the default view, you must click Expand All to display the tree view structure.

4. Select the recommendation within the tree view that you want to action.
5. Click Action and select one of the following actions.

Action this recommendation	Select this to action only the selected recommendation without affecting any recommendations it is linked to.
Action selected recommendations	Select this to action all selected recommendations without affecting any descendents.
Action selected and descendents	Select this to action only the selected recommendation and its descendents.

Action all related recommendations	Select this to action all related recommendations.

6. If you choose 'Action this recommendation', the Action Recommendations window appears.



Selecting any of the other three actions produces the Select Types to Action window first.

- Choose whether to action make or buy recommendations, or both.
- To apply the types, click OK.

  The Action Recommendations window appears.

7. In the Action Recommendations window, choose whether to action actual or adjusted quantities. Adjusted quantities are actual quantities adjusted to take account of any reorder quantities.
8. To apply the quantities, click OK.

   The status of the recommendation changes to 'Actioned'.

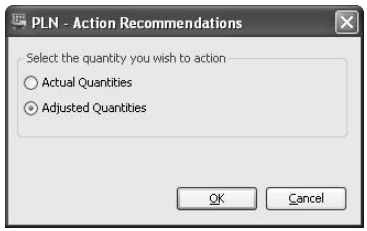
   Note: When you action a make recommendation, the priority is copied to the works order.

To action recommendations from the MRP list

1. From the Navigation Bar, click Planning and choose MRP > MRP List.
2. In the MRP - Recommendations list, select the recommendations that you want to action, and click Action.

Note: To action all recommendations, do not select any recommendations before clicking Action. Then, confirm that you want to action all recommendations.

The Action Recommendations window appears.



3. Choose whether to action actual or adjusted quantities. Adjusted quantities are actual quantities adjusted to take account of any reorder quantities.
4. To apply the quantities, click OK.

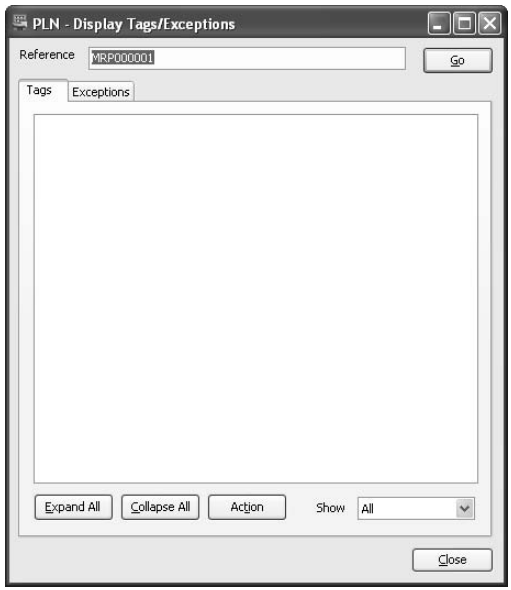
   The status of the recommendation changes to 'Actioned'.

   Note: When you action a make recommendation, the priority is copied to the works order.

To action recommendations from the Tags/Exceptions window

1. From the Navigation Bar, click Planning > MRP and choose Tags/Exceptions.

   The Display Tags/Exceptions window appears.



2. Select the Reference of the recommendation that you want to action.

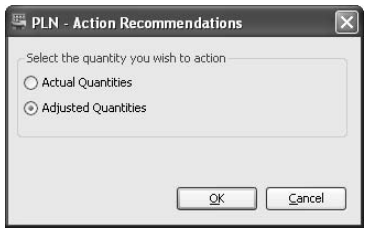
   Depending on the Default Tags View To setting on the Planning Settings General tab, the recommendations are displayed as expanded or collapsed. If you selected Expanded as the default view, the recommendation you selected is displayed in bold. All other linked recommendations are shown in a tree view structure. If you selected Collapsed as the default view, you must click Expand All to display the tree view structure.

3. Select the recommendation within the tree view that you want to action.

4. Click Action and then select from the following actions available.

Action selected recommendations	Select this to action all selected recommendations without affecting any descendents.
Action selected and descendents	Select this to action only the selected recommendation and its descendents.
Action all related recommendations	Select this to action all related recommendations.

   The Action Recommendations window appears.



5. Choose whether to action actual or adjusted quantities. Adjusted quantities are actual quantities adjusted to take account of any reorder quantities.
6. To apply the quantities, click OK. The status of the recommendation changes to 'Actioned'.

   Note: When you action a make recommendation, the priority is copied to the works order.

Viewing Stock Projection

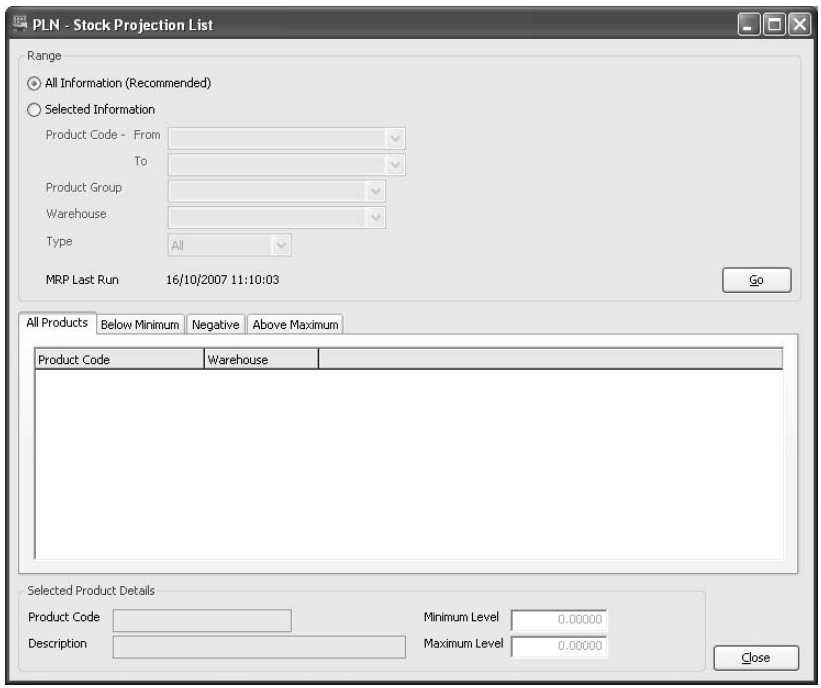
You can look at a list of predicted stock for all or a range of products in each time period. If you are using multiple locations, you can also look at a range of products from an individual warehouse. You can see stock predictions for products below minimum level, those with negative stock, or those above maximum level.

You can drill down and look at the details for a particular stock item.

To view the stock projection list

1. From the Navigation Bar, click Planning > MRP and choose Stock Projection > List.

   The Stock Projection List window appears.



   Note: The date and time MRP was last run indicates how current the information is.

2. Choose the range of products you want to view information for. To display the products within the range, click Go.

3. Choose to view stock projections for All Products, or for those products Below Minimum, Negative or Above Maximum levels.

Note: Selecting a Product Code in the list displays the product details in the Selected Product Details portion of the window.

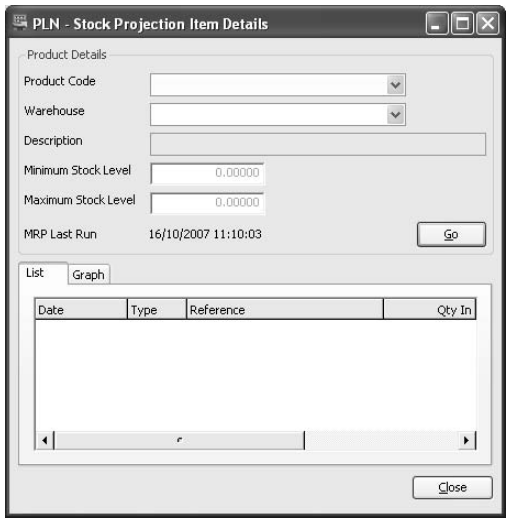
4. To view the details for an item, select and double-click the item in the list. This displays the Stock Projection Item Details window. For more information, see *To view stock projection details* on page 327.

5. To close the Stock Projection List window, click Close.

To view stock projection details

1. From the Navigation Bar, click Planning > MRP and choose Stock Projection > Item Details.

   The Stock Projection Item Details window appears.



   Note: The date and time MRP was last run indicates how current the information is.

2. Select the Product Code.

3. If you are using multiple locations, select the Warehouse of the item.

4. Click Go.

   The details are displayed in a list and as a graph. Access these views by clicking the List or Graph tabs.

   Note: To view the MRP Recommendation Details for an item, select and double-click an item in the list.

5. To close the Stock Projection Item Details window, click Close.

Viewing Tags and Exceptions

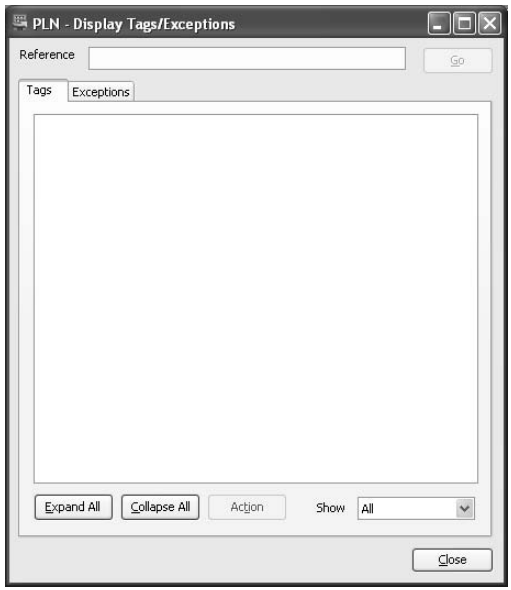
You can view tags and exceptions with a recommendation reference, purchase order number, works order number or sales order number.

Note: You can also action recommendations from the display.

To view tags and exceptions

1. From the Navigation Bar, click Planning > MRP and choose Tags/Exceptions.

   The Display Tags/Exceptions window appears.



2. Enter the Reference required.
3. To view the details, click Go.

   The tags and exceptions are displayed on the Tags and Exceptions tabs. By default, the tags are fully expanded.
4. To collapse tags or exceptions, click the minus sign ('-') next to the higher level tag or exception, or click Collapse All.
5. To expand tags or exceptions, click the plus sign ('+') next to the higher level tag or exception, or click Expand All.

6. To action recommendations, select the recommendation and click Action. For more information, see *To action recommendations from the Tags/Exceptions window* on page 323.
7. To close the window, click Close.

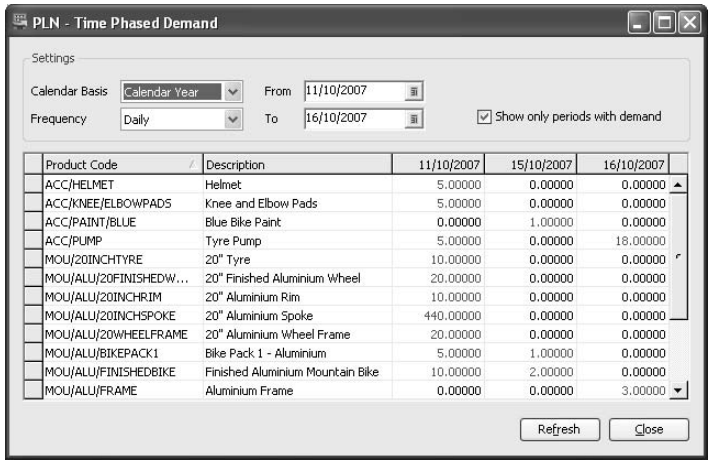
Viewing Demand Forecast

You can view a summary of items by product, spread across a series of time periods.

To view demand forecast

1. From the Navigation Bar, select MRP and choose Processing > Demand Forecast.

   The Time Phased Demand window appears.



2. Select the Calendar Basis. You can view time periods by calendar or financial year.
3. Select the Frequency of the time periods to view.
4. Enter the date range From and To.
5. To view only those periods with demands, select the check box 'Show only periods with demand'.
6. To view the demand forecast, click Refresh.

Preparing MRP Reports

The following reports are available from the MRP menu.

- Demand

  This report lists the demands considered in the Run MRP process.

- Exceptions

  This provides a list of exceptions generated during the Run MRP process. This lists items which have been excluded.

- Late Recommendations

  This report lists late recommendations.

- Recommendations

  Recommendations can be listed in detail, with or without routing. They can be listed in summary. You can also produce a report of routing for make items only.

To prepare MRP reports

1. From the Navigation Bar, select Planning > MRP and choose Reports.
2. Select the report required from the list of available reports.

   For more information on preparing reports, see *Sage 200 help*.

To customise MRP reports

You can edit or copy report layouts, or create a new report layout, using Sage Report Designer. For more information, see *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

Chapter 11

Graphical Planner

Graphical Planner is a powerful graphical scheduling tool, which works alongside MRP.

Different plans can be produced and saved for the same set of demands, so that you can assess the impact of your resources on your day-to-day scheduling needs. For example, you can add overtime or extra shifts to be able to meet a particular deadline. Once you have defined your production plan in Graphical Planner, you can action the MRP recommendations.

The following sections highlight the steps to follow when using Graphical Planner. Before proceeding, we recommend that you read *Sage Graphical Planner* documentation in full.

In this chapter:

How Graphical Planner integrates with MRP 334

How Graphical Planner integrates with MRP 334

Setting Up Graphical Planner within Planning 334

Using Graphical Planner.....334

How Graphical Planner integrates with MRP

You can export information from MRP to Graphical Planner in order to modify it. After modifying it in Graphical Planner you must import the information back into MRP. You can then action the recommendations within MRP.

For more information, see *Sage Graphical Planner* documentation.

Setting Up Graphical Planner within Planning

Before you use Graphical Planner you must set up the appropriate planning settings. These are described in the MRP and Graphical Planner tabs. For more information, see *The General tab on page 289* and *The Graphical Planner tab on page 295*. A full description of how these settings affect the behaviour of Graphical Planner is provided in *Sage Graphical Planner* documentation.

Using Graphical Planner

To use Graphical Planner

- From the Navigation Bar, click Planning and choose MRP > Graphical Planner.

  Graphical Planner is a complex and powerful tool. For more information on using graphical planner, see *Sage Graphical Planner* documentation.

Chapter 12

Works Orders

Use Works orders to produce parts, using components specified on the BOM or in the estimate, and following the process specified on the works order operations.

Manufacturing provides a variety of order documentation (picking lists, job sheets, operation and route cards and labels).

You can raise orders in the following ways:

- By saving sales orders if works order linking is set up. Batch works orders are raised. For more information, see *Sales Order Processing* help.
- By actioning recommendations within the MRP module. For more information, see *MRP (Material Requirements Planning)* on page 287.
- From the Trial Kitting window in Bill of Materials. For more information see *Using Trial Kitting* on page 146.
- By turning an estimate into a works order. For more information, see *Converting an Estimate into a Works Order* on page 226.
- By direct entry - manually creating a works order. For more information, see *Creating Works Orders* on page 355.

Use this chapter to learn more about creating and working with orders.

In this chapter:

Changing Works Orders Lists 336
Entering Settings for Works Orders ..337
Creating Works Orders 355
Amending a Batch Works Order 358
Amending a One-Off Works Order ...376
Linking Works Orders 392
Unlinking Works Orders 395
Printing Works Order Documents.....396
Amending Picking Lists.....399
Checking a Works Order is Ready to be Made 402
Allocating Stock.....404
Issuing Stock and Reversing Stock Issues 409
Scrapping Finished Items.....417
Scrapping Components.....419
Substituting Traceable Components 422
Entering Operation Times and Costs429
Costing a Works Order (Batch Works Orders Only) 442
Enquiring on Orders.....446
Viewing Subcontracting Operations (Batch Works Orders Only).....449
Cancelling Works Orders 459
Completing Works Orders.....460
Closing Works Orders.....470

Changing Works Orders Lists

There are two lists that you can display in the Works Orders work area: Works Orders List and Subcontracting List.

The Works Orders List is used for working with works order records, whilst the Subcontracting List is used for working with subcontracting records.

To select the works orders list

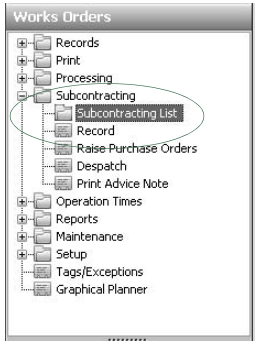
- From the Navigation Bar, choose Works Orders > Records and then choose Works Order List.

To select the subcontracting list

- From the Navigation Bar, choose Works Orders > Subcontracting and then choose Subcontracting List.

For example

To select the Subcontracting List, choose Works Orders > Subcontracting and then choose Subcontracting List.



The Works Orders work area title changes to Subcontracting and the work area shows the Subcontracting List.

For more information on the desktop, see *Sage 200 help*.

Entering Settings for Works Orders

You can tailor the system to your company's needs through the setup process. This will save you and other users time when using the system.

You can produce certificates of conformity for products produced and despatched within Works Orders. For this reason you must enter certificates of conformity settings. For more information, see *Certificates of Conformity* on page 92.

When you cost or complete works order details, the system calculates an additional amount to ensure overheads are met. For this reason you must enter overhead recovery settings before costing or completing Works Orders. For more information, see *Overhead Recovery Settings* on page 27.

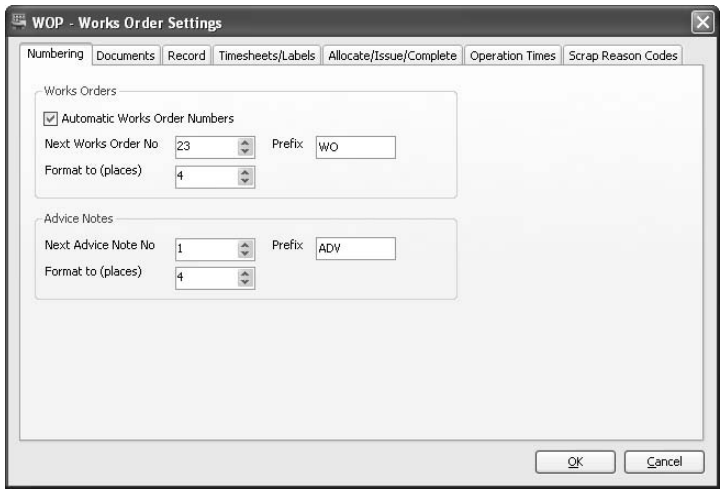
Works orders may be raised for specific locations so you must maintain a warehouse hierarchy. Locations are set up in the Stock Control module and the 'Valid for component source' check box can be selected when you set up the warehouse. For more information, see the *Sage 200 Stock Control* documentation. You can maintain the warehouse hierarchy within Manufacturing System Manager. For more information, see *Maintain Warehouse Hierarchy* on page 24.

You can also set up and use Labour Categories, Employees and Non-Chargeable Time prior to working with works orders. You can use the same details in more than one works order. For more information, see *Labour Categories* on page 82, *Employees* on page 84 and *Non-chargeable Time* on page 90.

To enter the works orders default settings

- From the Navigation Bar, click Works Orders and choose Setup > Works Order Settings.

  The Works Order Settings window appears.



For more information on each Works Order Settings tab, please read the following sections:

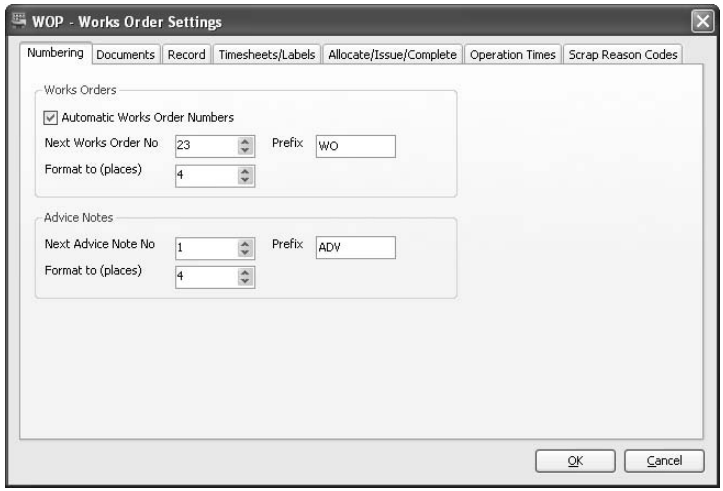
- *The Numbering tab* on page 339
- *The Documents tab* on page 341
- *The Record tab* on page 343
- *The Timesheets/Labels tab* on page 344
- *The Allocate/Issue/Complete tab* on page 346
- *The Operation Times tab* on page 350
- *The Scrap Reason Codes tab* on page 352

The Numbering tab

To enter numbering settings

1. In the Works Order Settings window, click the Numbering tab.

   The Numbering settings appear.



2. Enter the settings required, according to the following descriptions.

Automatic Works Order Numbers	Select this check box if you want the system to generate works order numbers automatically for you. Leave the check box clear to enter your own works order numbers.
Next Works Order No	If you left the Automatic Works Order Numbers check box clear, enter the next works order number. You can use up to 30 alphanumeric characters.
Prefix	If you left the Automatic Works Order Numbers check box clear, enter a prefix for your works order numbers. For example, WO.

Format to (places)	If you left the Automatic Works Order Numbers check box clear, enter the number of digits, including leading zeroes, for the works order number. This ensures that works orders are always displayed in the expected order. For example, entering '4' would result in a sequence of '0001',' 0002', '0003', and so on.
Next Advice Note No	Enter the next advice note number.
Prefix	Enter a prefix for your advice note numbers, if required. For example, AN.
Format to (places)	Enter the number of digits, including leading zeroes, for the advice note number. This ensures that advice notes are always displayed in the expected order. For example, entering '4' would result in a sequence of '0001', '0002', '0003', and so on.

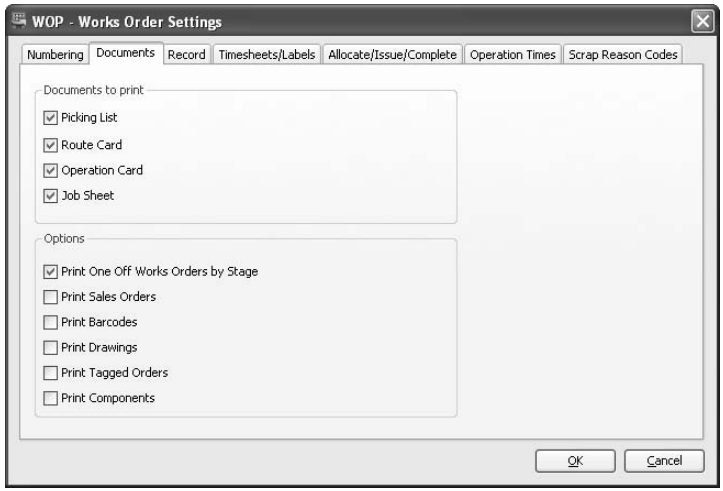
3. To continue entering Works Order Settings, click the Documents tab.
   To save your Works Order Settings, click OK.

The Documents tab

To enter documents settings

1. In the Works Order Settings window, click the Documents tab.

   The Documents settings appear.



2. Enter the settings required, according to the following descriptions.

Picking List	Select this check box to print a picking list.
Route Card	Select this check box to print a route card.
Operation Card	Select this check box to print an operation card.
Job Sheet	Select this check box to print a job sheet.
Print One Off Works Orders by Stage	Within the Works Orders module, you can print various documents. For example, the picking list, route card, operation card and job sheet. By default, these are set to print for one-off works orders. Select this check box to separate one-off works orders into stages for the reports you choose.
Print Sales Orders	Select this check box to print sales orders on your works orders documents.

Print Barcodes	Select this check box to use barcode facilities in the Operation Times module.
Print Drawings	Select this check box to print drawings associated with the works order.
Print Tagged Orders	Select this check box to print tagged works orders (those which are linked to purchase orders).
Print Components	Select this check box to print a list of components at the end of your works order documents.

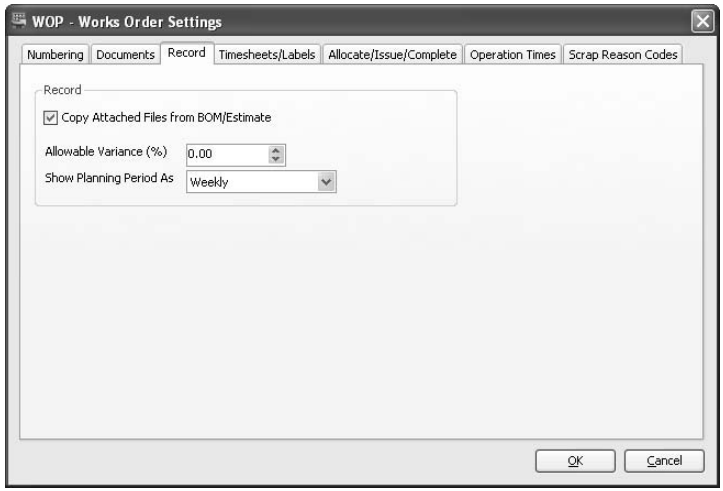
3. To continue entering Works Order Settings, click the Record tab.
   To save your Works Order Settings, click OK.

The Record tab

To enter record settings

1. In the Works Order Settings window, click the Record tab.

   The Record settings appear.



2. Enter the settings required, according to the descriptions below.

Copy Attached Files from BOM/Estimate	Select this check box to attach to the works order, any documents that are attached to a BOM or estimate.
Allowable Variance (%)	Enter an Allowable Variance (%) value, for the difference between estimated and actual costs. The Works Orders module offers reports, which highlight any variances between estimated and actual costs. **Note:** If the variance between estimated and actual costs is greater than this value, the items are highlighted on the reports.
Show Planning Period As	Select how you want to show the planning period on reports. The planning period is calculated according to your selection.

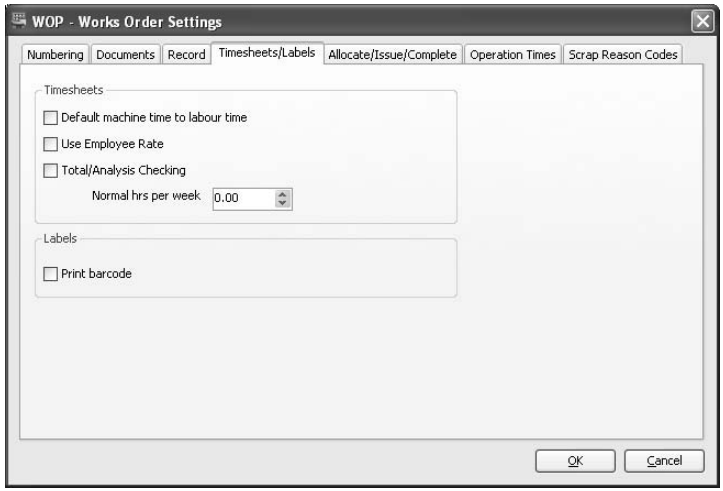
3. To continue entering Works Order Settings, click the Timesheets/Labels tab.
   To save your Works Order Settings, click OK.

The Timesheets/Labels tab

To enter timesheets/labels settings

1. In the Works Order Settings window, click the Timesheets/Labels tab.

   The Timesheets/Labels settings appear.



2. Enter the settings required according to the following descriptions.

Default machine time to labour time	Select this check box if you want the machine time to default to that entered for labour when entering timesheets.
Use Employee Rate	Select this check box to override the labour rate against operations. This option also modifies the way Operation Times calculates costs.
Total/Analysis Checking	Select this check box to double-check the amount of time entered on timesheets. This option provides a way of checking for input errors when entering data. With this option selected, you cannot exit from the timesheet entry screen until the hours analysis is equal to the total hours worked.
Normal hrs. per week	Enter the normal hours worked per week. This is the default used on the Timesheet Entry window. **Note:** The total hours worked can be changed when entering timesheets.

Print barcode	Select this check box if you want to include a barcode on finished goods labels.

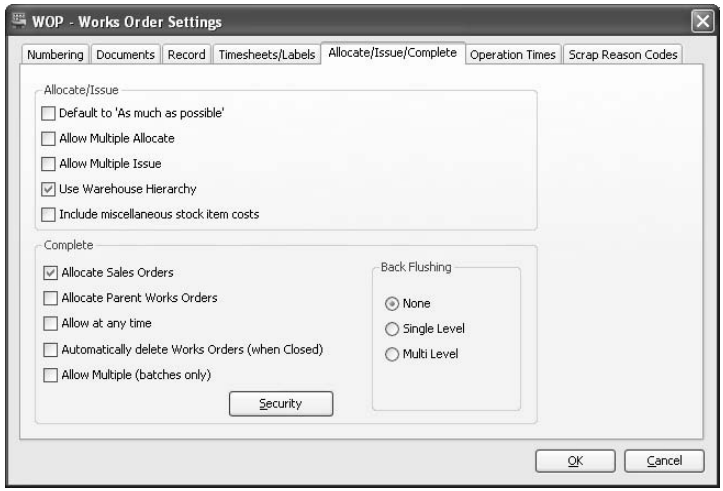
3. To continue entering Works Order Settings, click the Allocate/Issue/Complete tab.
   To save your Works Order Settings, click OK.

The Allocate/Issue/Complete tab

To enter allocate/issue/complete settings

1. In the Works Order Settings window, click the Allocate/Issue/Complete tab.

   The Allocate/Issue/Complete settings appear.



2. Enter the settings for allocating, issuing and completing works orders, according to the following descriptions.

Default to 'As much as possible'	Select this check box to default to as much as possible during allocation and issue.
Allow Multiple Allocate	Select this check box to allocate to many works orders at the same time.
Allow Multiple Issue	Select this check box to issue to many works orders at the same time.

Use Warehouse Hierarchy	This checkbox is the default setting for the Allocate/Issue from Completion Warehouse option on the works order record. Select the check box to specify which components can be drawn from the full warehouse hierarchy. Clear the check box to specify which components can only be drawn from the warehouse specified on the works order header. You can change the default setting on individual works orders.
Include miscellaneous stock item costs	Miscellaneous items are not included in the standard stock valuation reports. Select this check box to: ■ Include miscellaneous stock item costs when costing a BOM (see *Costing a BOM on page 149*). ■ Post miscellaneous item costs to the Stock asset account when closing works orders (see *Closing Works Orders on page 470*). You can also select the check box within the BOM Costing/ Trial Kitting settings (see *The Costing/Trial Kitting tab on page 112*). **Note:** Selecting it in one place automatically selects it in the other.

3. Enter the settings for completing works orders, according to the following descriptions.

Allocate Sales Orders	Select this check box to allocate stock to sales orders on works order completion.
Allocate Parent Works Orders	Select this check box to allocate stock to parent works orders on works order completion.
Allow at any time	Select the check box if you want to mark a works order as completed even if all the components have not been issued to it. **Note:** If you do not select this check box, then all the components must be fully issued before you can mark the order as completed.

Automatically delete Works Orders (when Closed)

Select this check box to delete works orders automatically on completion of production.

Note: If you do not select the check box, you can delete works orders manually from the Works Orders window.

Sage recommends that you do not select this check box. Until you are familiar with Manufacturing, delete works orders manually from the Works Orders window.

Allow Multiple (batches only)

Select this check box to complete multiple batch works orders at the same time.

Click Security to set a password for this option.

To prevent unauthorised personnel making entries which affect finished stock quantities, on either full or part completion of works orders, click Security.

The Security window appears.

- If you have an existing password, enter this in the Old Password box.
- Enter a new password in the New Password box.
- Enter the new password again in the Confirm New Password box.
- To save the changes, click OK.

Note: You must enter this password before making entries for finished production.

Backflushing	Select whether to enable backflushing for a single works order, works orders with multiple levels, or not at all. **Note:** Multi Level backflushing is only available if you are using MRP to raise works orders. Select Multi Level if you want to backflush a completed top level works order. The components are issued through each level and finished items are put into stock. You can override this for individual works orders.

4. To continue entering Works Order Settings, click the Operation Times tab.
   To save your Works Order Settings, click OK.

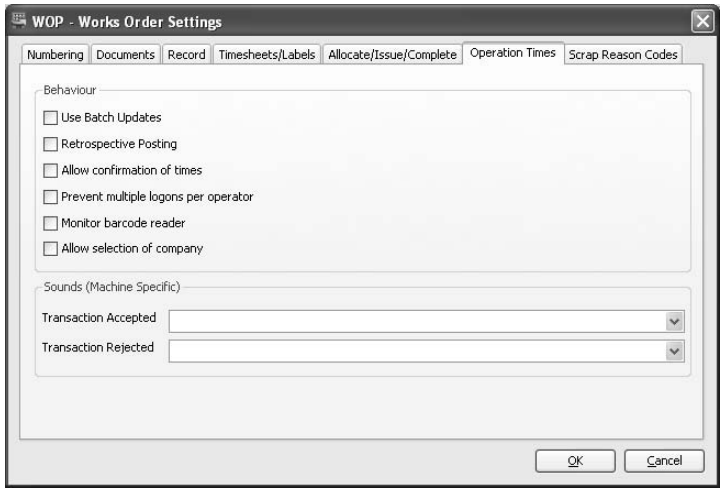
The Operation Times tab

If you use the Operation Times module, you can configure the way it works here.

To enter operation times settings

1. In the Works Order Settings window, click the Operation Times tab.

   The Operation Times settings appear.



2. Enter the settings required according to the descriptions below.

Use Batch Updates	Select this check box to send your information to a holding area (the waiting postings file). You can review the postings there before posting them to the works order and the Nominal Ledger. For more information, see *Waiting to be posted on page 450*. Clear the check box if you want Operation Times to update your works orders directly as the operation times are posted from the shop floor. **Note:** Sage recommends that you select the check box and use batch updates.

Retrospective Posting	Select Retrospective Posting to record job details after the job is completed. Clear the check box to record information in real time. In this case, you log on and tell the computer you are starting the job. When you finish the job, you log on and tell the computer you have have finished working on the job. **Note:** Sage recommends that you clear the check box and use online processing.
Allow confirmation of times	This check box is only available if you have cleared the Retrospective Posting check box. Select the check box to prompt workers to confirm the time calculated by the computer when they log off an operation. Clear the check box to ensure that employees cannot change the times calculated by the system.
Prevent multiple logons per operator	Select this check box to prevent employees from working on many jobs at once. This can affect the accuracy of job times and costs. Clear the check box to let employees log onto and work on multiple jobs at the same time.
Monitor barcode reader	Select this check box if you want to enter data in Operation Times using bar codes produced on documentation within Manufacturing. For more information, see your *Sage 200 Operation Times* documentation.. Clear the check box if you want to enter data using the keyboard and the mouse.
Allow selection of company	Select this check box to be able to choose different companies when you run Operation Times.
Sounds (Machine Specific)	Select the sound files that you want to use for accepted and rejected transactions. **Note:** Sage recommend that you only assign a sound file for a rejected transaction. This ensures that you are prompted to problems as soon as they arise.

3. To continue entering Works Order Settings, click the Scrap Reason Codes tab.
   To save your Works Order Settings, click OK.

The Scrap Reason Codes tab

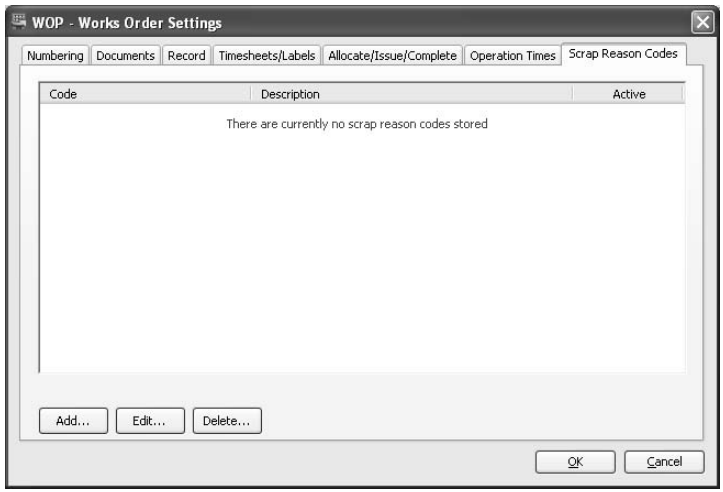
Components and finished items can be scrapped. You can add scrap reason codes using this tab to help analyse the reasons behind the scrap.

To enter scrap reason codes settings

1. In the Works Order Settings window, click the Scrap Reason Codes tab.

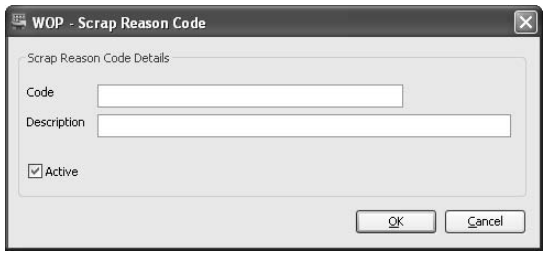
   The Scrap Reason Codes tab displays a list of codes and their descriptions and indicating which codes are active.

   Note: A code must be active in order to be used.



2. To add a scrap reason code, click Add.

   The Scrap Reason Code window appears.



   - Enter the Code and Description for the scrap reason.
   - Select Active if you want to make the code available for use.

- To apply the details, click OK.

3. To amend a scrap reason code, select the code and click Edit.
   - Amend the Code, if required.
   - Amend the Description, if required.
   - Change the Active setting, if required.
   - To apply the changes, click OK.
4. To make a code inactive, select the code and click Edit.
   - Clear the Active check box.
   - To apply the changes, click OK.
5. To delete a code, select the code and click Delete.
6. To save your Works Order Settings, click OK.

Viewing Default Settings for Works Orders

If you need to provide details of your settings to the support team, use the 'view only' version of the system settings.

To view Works Orders Settings

- From the Navigation Bar, click Works Orders and choose Setup > View Works Order Settings.
- When you have finished viewing the settings, click Close.

Creating Works Orders

Works orders may be raised for repetitive jobs (batches) or for one-off jobs.

Works orders can be generated automatically in the following ways.

- Batch works orders can be generated from the Sales Order Processing module. Sales Order Processing must be set up for this to be done. This allows sales orders to link with works orders. For more information, see your *Sales Order Processing* help.
- Batch and one-off works orders can be generated from the MRP module. For more information, see *Actioning Recommendations* on page 319.

  Note: If you want to link sales orders with batch works orders and it is not set up in Sales Order Processing, use MPS. For more information, see *Linking Sales Orders on page 279*. When MRP is run and the recommendation to raise a batch works order is actioned, the batch works order is linked with the specified sales order.
- Batch works orders can be generated automatically from the Trial Kitting window in the Bill of Materials module. For more information, see *Using Trial Kitting* on page 146.
- One-off works orders can be generated automatically from the Estimating module. For more information, see *Converting an Estimate into a Works Order* on page 226.

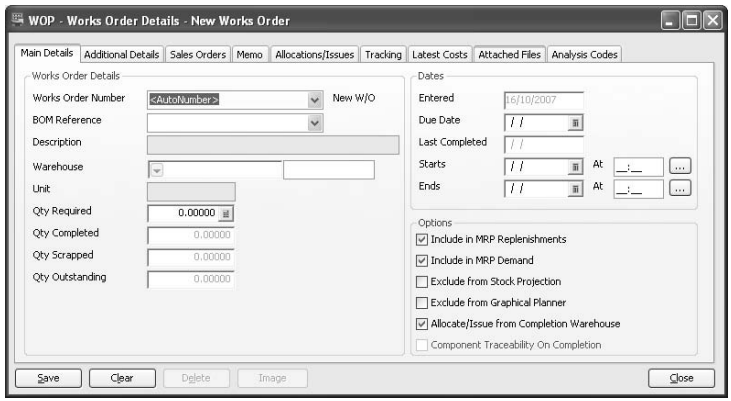
Automatic generation checks the availability of materials and requirements for labour and machine hours, including sub-assemblies, before generating the Works Order record.

You can create batch and one-off works orders manually through the Works Orders module. This is described in the following sections. After raising the works orders this way, you must check the requirements manually. For more information, see *Amending a Batch Works Order on page 358* and *Amending a One-Off Works Order on page 376*.

To create batch works orders

1. From the Navigation Bar, select Works Orders and choose Records > Batch > Enter New Works Order.

   The batch Works Order Details window appears.



2. Enter the works order information.

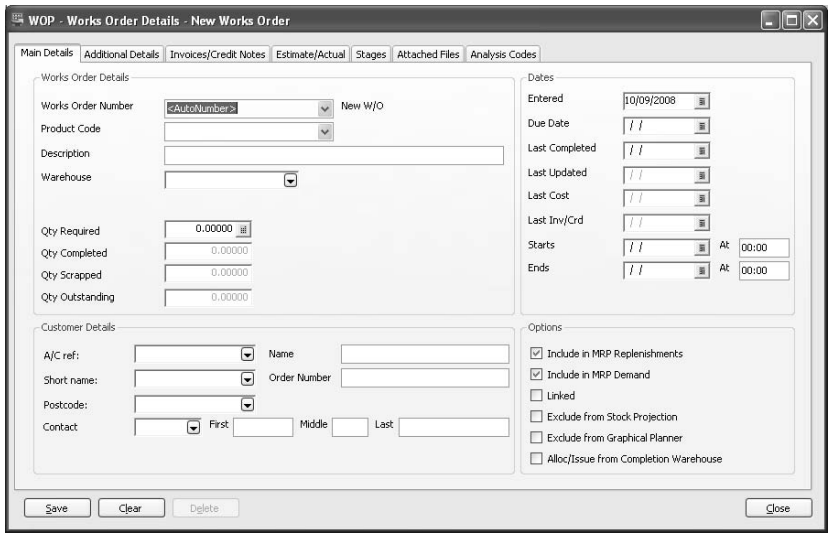
   Note: The information required is the same as for amending works orders. For more information, see *Amending a Batch Works Order* on page 358.

3. When all required information has been entered, click Save.

To create one-off works orders

1. From the Navigation Bar select Works Orders and choose Records > One-Off > Enter New Works Order.

   The one-off Works Order Details window appears.



2. Enter the works order information.

   Note: The information required is the same as for amending one-off works orders. For more information, see *Amending a One-Off Works Order* on page 376.

3. When all required information has been entered, click Save.

Amending a Batch Works Order

You can amend the detail of a works order at any time. During this process you can also view important information such as the sales order breakdown, costs and progress of the works order.

To amend or view a batch works order

1. From the Navigation Bar, click Works Orders and choose Records > Batch > Amend Works Order.

   The Works Order Details window appears.

2. Make amendments to the batch works order Main Details. For more information, see *The Main Details tab (Batch Works Order)* on page 359.

3. Make amendments to the additional details. For more information, see *The Additional Details tab (Batch Works Order)* on page 362.

4. Make amendments to the batch works order Sales Orders details. For more information, see *The Sales Orders tab (Batch Works Order)* on page 364.

5. Make amendments to the batch works order Memo details. For more information, see *The Memo tab (Batch Works Order)* on page 365.

6. Make amendments to the batch works order Allocations/Issues. For more information, see *The Allocations/Issues tab (Batch Works Order)* on page 366.

7. Make amendments to the batch works order Tracking. For more information, see *The Tracking tab (Batch Works Order)* on page 369.

8. Make amendments to the batch works order Latest Costs. For more information, see *The Latest Costs tab (Batch Works Order)* on page 372.

9. Make amendments to the batch works order Attached Files. For more information, see *The Attached Files tab (Batch Works Order)* on page 373.

10. Make amendments to the batch works order Analysis Codes. For more information, see *The Analysis Codes tab (Batch Works Order)* on page 375.

11. When you are satisfied with your entries, click Save.

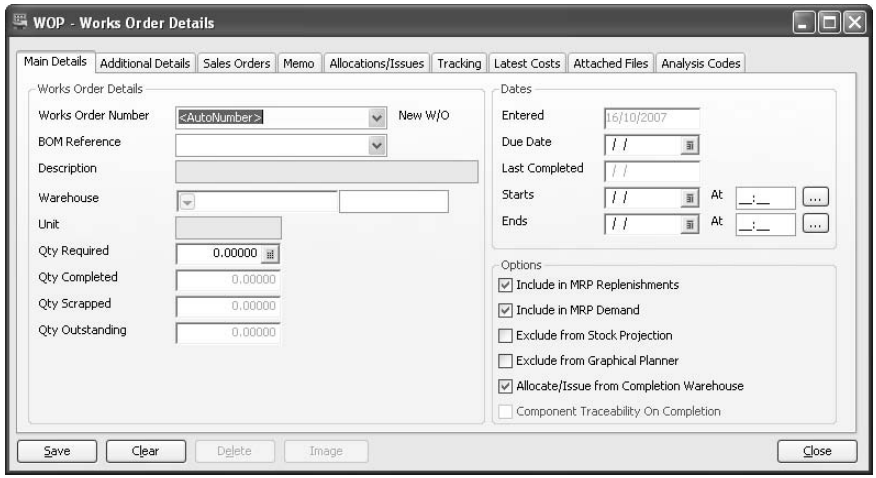
    The works order window closes.

The Main Details tab (Batch Works Order)

To amend batch works order main details

1. From the Navigation Bar, click Works Orders and choose Records > Batch > Amend Works Order.

   The Works Order Details window appears, open at the Main Details tab.



2. Select the Works Order Number.
3. Enter the changes required, according to the following descriptions.

BOM Reference	Select a BOM Reference if you are creating a batch works order. Do not change the BOM Reference, if you are amending a batch works order. **Note:** If you change the reference, the tags assigned by planning are not updated. This could distort any linked requirements calculated within Graphical Planner.

Warehouse/Bin	If the stock item is linked to more than one bin, select the bin required from the drop-down list. If the stock item is only linked to one bin, the bin is displayed automatically alongside the completion warehouse. **Note:** If you change the warehouse and the BOM contains operations, the works order will be excluded from Graphical Planner.
Unit	The Stock Control record unit of sale is displayed.
Qty Required	Enter or amend the quantity required. **Note:** The quantity you enter must be valid for the stocked unit of the BOM finished product. If you enter a quantity that is not valid, it is automatically adjusted to the nearest appropriate value. If the works order is linked with a sales order, you cannot enter a quantity which is less than the sales order quantity. If you change the quantity, you are prompted to update component requirements, and to specify what you want to do with manually added or phantom components. Choose the Quantity Calculation and click OK.
Due Date	Enter or amend the date the works order is due. **Note:** If you change the due date on a works order which is linked with a sales order, the sales order may not be fulfilled on time.
Starts	Enter or amend the date the works order starts. **Note:** If you enter the Starts date and time, click on the '...' (calculate) button alongside to calculate the Ends date and time.
Ends	Enter or amend the date the works order ends. **Note:** If you enter the Ends date and time, click on the '...' (calculate) button alongside to calculate the Starts date and time.

Include in MRP Replenishments	Select this check box if you want finished items on this works order to be included as available to use when MRP demands are calculated. **Note:** We recommend you do not change this setting if the works order is tagged to a sales order.
Include in MRP Demand	Select this check box if you want the components required to fulfil this order to be included when MRP demands are calculated. **Note:** We recommend you do not change this setting if the works order is tagged to a sales order.
Exclude from Stock Projection	Select this check box if you want to exclude this works order from the stock projection calculations.
Exclude from Graphical Planner	Select this check box if you want to exclude this works order from being exported to Graphical Planner. **Note:** This check box is automatically selected. You cannot change it if you have changed the warehouse from that stored on the stock item.
Allocate/Issue from Completion Warehouse	Select this check box if components can only be allocated or issued from the completion warehouse.
Component Traceability On Completion	Select the check box to choose traceable components when completing the works order. **Note:** The check box is automatically selected if the BOM item on the works order uses component traceability. Clear the check box if you do not need to specify traceable components during completion.

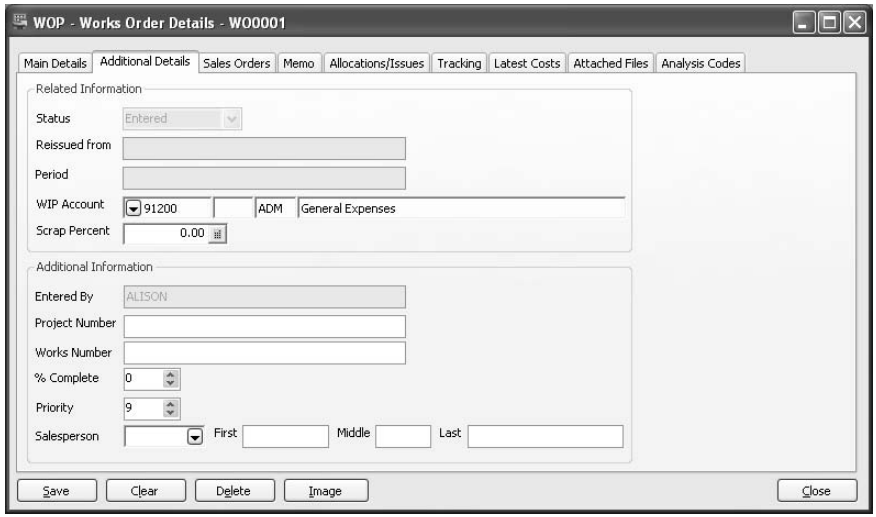
4. To continue making changes to the batch Works Order Details, click the Additional Details tab.
   To save your batch Works Order Details, click Save.

The Additional Details tab (Batch Works Order)

To amend batch works order additional details

1. In the Works Order Details window, click the Additional Details tab.

   The Additional Details information appears.



2. Enter the changes required, according to the following descriptions.

Status	Change the current 'Status'. **Note:** Changing the status here does not apply in the planning modules.
Reissued from	The works order that this works order was issued from is displayed (if applicable). **Note:** If a works order has been raised to replace 'Scrapped Finished Product', this box highlights the related works order from which the product was scrapped.
Period	The period in which the works order starts, is displayed

WIP Account	Enter a nominal account code to hold nominal postings associated with this works order. The default is to leave this box clear. All transactions will then default to the code specified in Works Order Settings.
Scrap Percent	Amend the default value (displayed from BOM default scrap factor), if you need to make changes to component quantities on the works order.
Project Number	Enter a Project Number for information purposes. This is useful if you have multiple works orders against a project.
Works Number	Enter any alpha/numeric reference. This is for information purposes only.
% Complete	Enter a percentage to indicate how complete the works order is. This is not updated automatically and is for information purposes only.
Priority	The Priority of the works order is shown. Priority range is from -32000 to 32000. The lower the number, the higher the priority, therefore -32000 is the highest priority and 32000 is the lowest priority. This information passes into Graphical Planner and is used during planning. For more information see *Sage Graphical Planner* documentation.
Salesperson	Enter a reference, if required. This is for information purposes only.

3. To continue making changes to the batch Works Order Details information, click the Sales Orders tab.
   To save your batch Works Order Details, click Save.

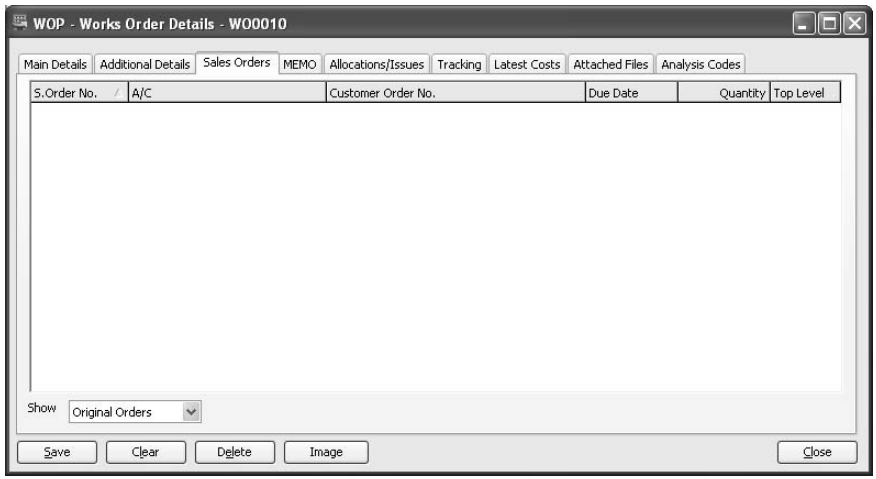
The Sales Orders tab (Batch Works Order)

If the works order has been generated within the MRP module, the Sales Orders tab shows any relevant sales orders.

To display batch works order sales orders

1. In the Works Order Details window, click the Sales Orders tab.

   The Sales Orders information appears.



2. To display sales orders, select one of the following options from the Show drop-down list.

Current Orders	Shows sales orders currently tagged to this works order, as calculated by MRP.
Original Orders	Shows sales orders that gave rise to the works order being created.

3. To continue making changes to the batch Works Order Details, click the Memo tab.
   To save your batch Works Order Details, click Save.

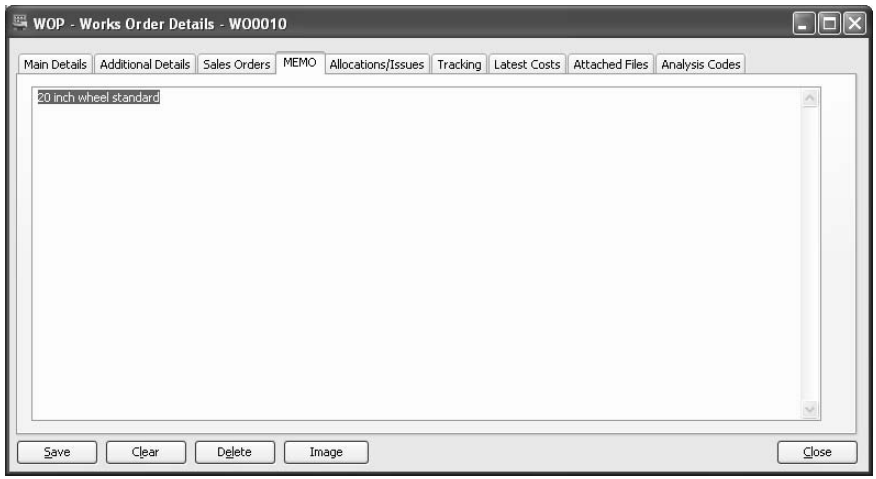
The Memo tab (Batch Works Order)

To enter notes or comments relating to batch works orders

1. In the Works Order Details window, click the Memo tab.

   Note: If any text has been added to this tab already, the word Memo will appear in upper case.

   The memo area appears.



2. Enter or amend your notes or comments.
3. To continue making changes to the batch Works Order Details, click the Allocations/Issues tab.
   To save your batch Works Order Details, click Save.

The Allocations/Issues tab (Batch Works Order)

Use the Allocations/Issues tab to view details of components and raw materials allocated and issued to date.

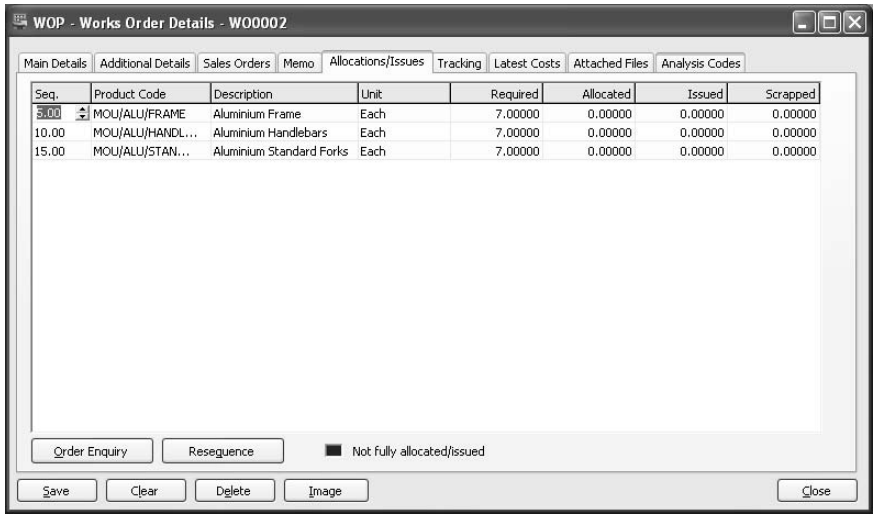
When the works order is created, the BOM components are copied to the Allocation/Issues section of the works order. Manufacturing functions involving stock are based on the information held on this tab, not on the original BOM. The design of the product might need to be modified for this specific works order. There might be a specific customer request for a modification, or a component might be unavailable. You can add, amend or remove components from the works order. This does not affect other works orders created from the original BOM.

Note: You can update the BOM with amendments, if required. For more information, see *Creating/Updating BOM (Batch Works Orders Only)* on page 444.

To maintain components in the batch works order

1. In the Works Order Details window, click the Allocations/Issues tab.

   The Allocations/Issues information appears.



2. To add a component, click within the Product Code box in a new line, and enter the item details.

   Note: A new 'Seq' number is automatically calculated for this new component although you can change this if required.

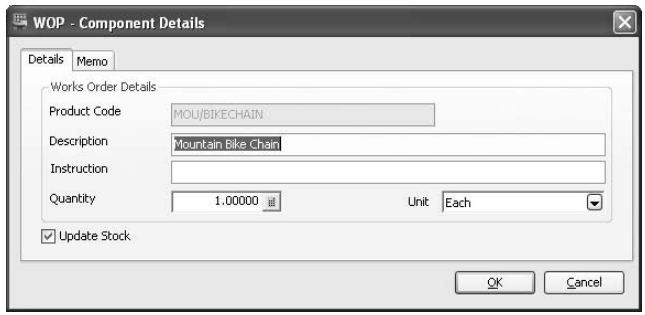
3. To amend a component, select the required component and change the details where necessary.

Note: You can change any details of a component as long as it has not been allocated or issued.

The description is updated automatically but you can also change this if required.

4. Enter additional information about the component, if required.
   - Click the Description box.

     The Component Details window appears.



   - Enter the component details.
   - Enter the quantity required to manufacture the finished item.

     This should be the total quantity required of this component. If you enter a quantity which does not match the unit, the quantity is automatically adjusted to the nearest appropriate value.

     Note: If a unit of measure was stored against an item in the stock record Unit of Sale box, this unit is displayed. The unit here, is not a unit of sale as it is a component and not a sales item. Sage 200 Manufacturing uses the stock record unit of sale value as a default, in the absence of a stock record unit of cost.
   - Select the Update Stock check box if the component is to be allocated and issued in Stock Control.

     Note: This setting depends on the Bulk Issue Item setting on the BOM component. If the Bulk Issue Item is set on the BOM component Additional Details (see *The Components tab* on page 120), the Update Stock flag is cleared, and vice versa. The Bulk Issue Item setting is used as the default.
   - To add notes about the component, click the Memo tab and add these.
   - To return to the Allocations/Issues tab, click OK.
5. Enter the quantity required in the Required column.

   Note: This should be the total quantity required of this component. If you enter a quantity which does not match the unit of the item, the quantity is automatically adjusted to the nearest appropriate value.

6. To view a list of purchase orders and works orders tagged to the works order, click Order Enquiry.
7. To re-sequence the components, click Re-sequence.
8. To delete a component that has not been allocated or issued, select it and press F8.
9. To continue making changes to batch Works Order Details, click the Tracking tab.
   To save your batch Works Order Details, click Save.

The Tracking tab (Batch Works Order)

Use the Tracking tab to outline the operations required to complete the works order, and the progress of each of those operations.

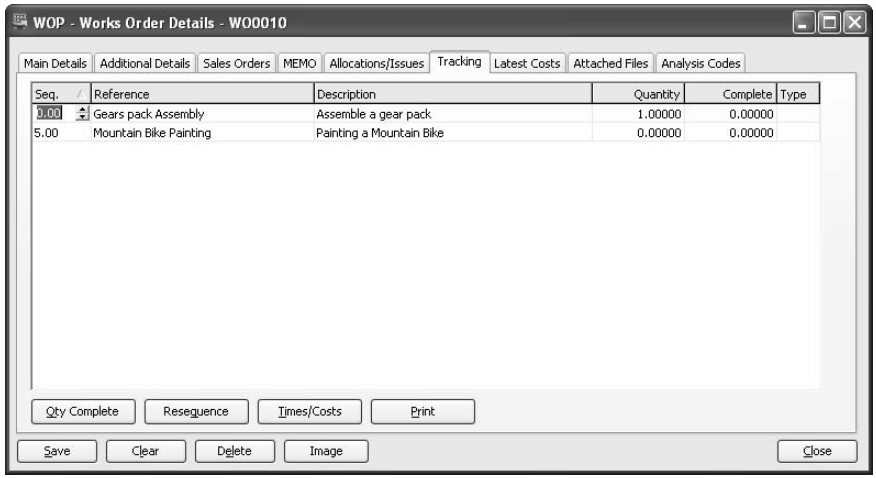
When the works order is created, the BOM operations are copied to the Tracking section of the works order. Manufacturing functions involving operations are based on the information held on this tab, not on the original BOM. The design of the product might need to be modified for this specific works order. There might be a specific customer request for a modification, or a component might be unavailable. You can add, amend or remove operations from the works order. This does not affect other works orders created from the original BOM.

Note: You can update the BOM with amendments, if required. For more information, see *Creating/Updating BOM (Batch Works Orders Only)* on page 444.

To maintain operations in the batch works order

1. In the Works Order Details window, click the Tracking tab.

   The Works Order Tracking information appears.



2. To add an operation, click within the Reference box in a new line, and enter the details.

   Note: A new 'Seq' number is automatically calculated for this operation although you can change this if required.

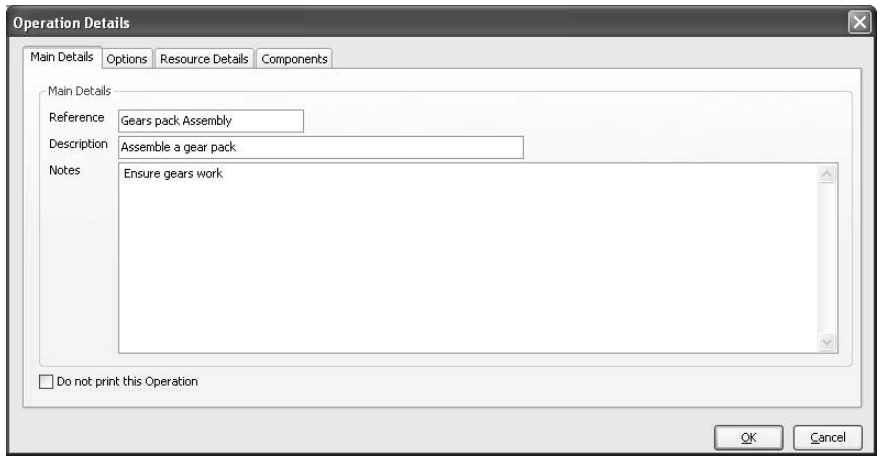
3. To amend an operation, select the required operation and change the details where necessary.

   Note: You can change any details of an operation as long as it has not been progressed.

The description is brought in automatically from the Operations Register if the item was selected there. You can change this, if required.

4. Enter additional information about the operation, if required.
   - Click within the Description box.
   - Click the button that appears in the Description box.

     The Operation Details window appears.



     This procedure is the same as entering Operation details into the Operations Register. For more information, see *Operations Register* on page 54.

     Note: As you enter Operation Details, the total costs by category appear on the Resource Details tab.

   - To print components on subcontract advice notes, associate components from the BOM with the operation on the Components tab. When you create a works order from the BOM through Trial Kitting, the components are copied to the works order for printing on a subcontract advice note.

     Note: If the component quantity does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

   - To save the operation details and return to the Works Order Details window, click OK.

5. To record progress of an operation, click Qty Complete.

   The Qty Complete window appears, prompting for the quantity complete. For more information on tracking works order progress through operations, see *To record progress of a batch* on page 465.

6. To print the works order tracking report, click Print.

7. To re-sequence the operations, click Re-sequence.
8. To view operation time breakdown for the works order, click Times/Costs.
9. To delete an operation if it has not been progressed, select it and press F8.

   Note: The operation is not removed from the original BOM.
10. To continue making changes to the batch Works Order Details, click the Latest Costs tab. To save your batch Works Order Details, click Save.

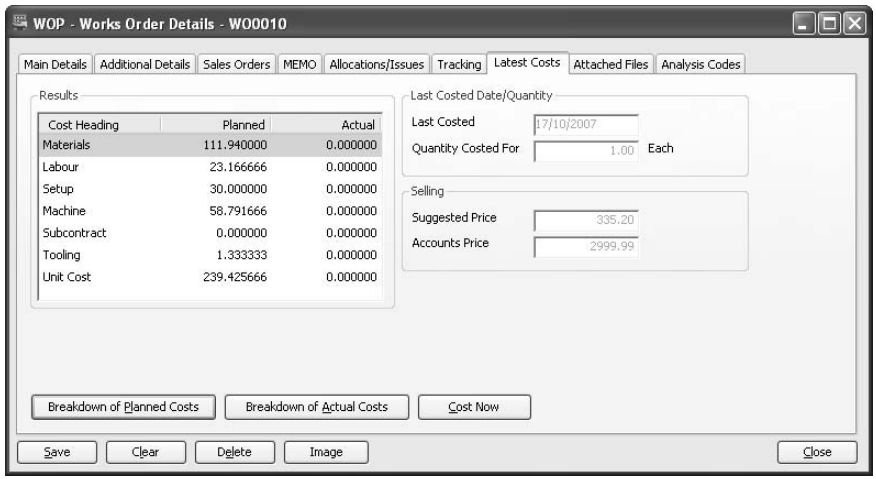
The Latest Costs tab (Batch Works Order)

Use the Latest Costs tab to view a breakdown of the total costs incurred in building the works order.

To view the cost breakdown in a batch works order

1. In the Works Order Details window, click the Latest Costs tab.

   The Latest Costs information appears.



2. To view a graphical breakdown of planned costs, click Breakdown of Planned Costs.
   - To return to the Latest Costs window, click Close.
3. To view a graphical breakdown of actual costs, click Breakdown of Actual Costs.
   - To return to the Latest Costs window, click Close.
4. To perform an updated costing on the works order, click Cost Now.
5. To continue making changes to the batch Works Order Details, click the Attached Files tab. To save your batch Works Order Details, click Save.

The Attached Files tab (Batch Works Order)

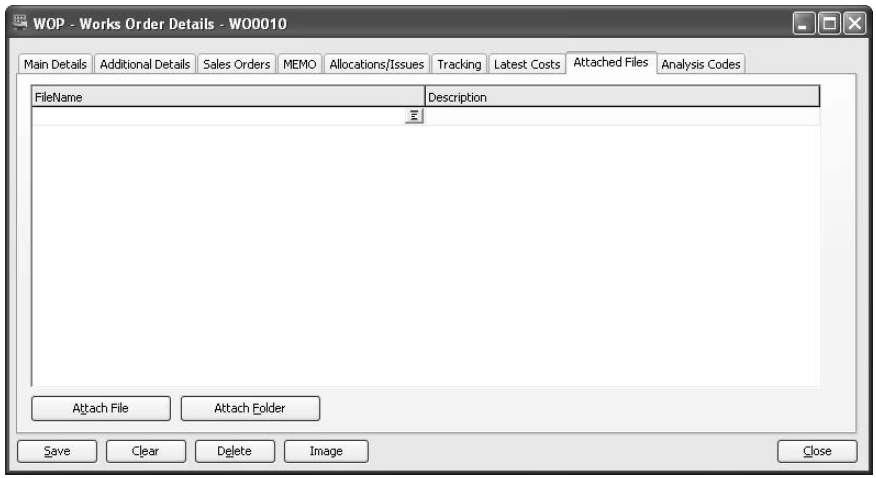
Use the Attached Files tab to open and save any file (for example, Microsoft® Word or Microsoft® Excel documents) connected with a works order. You can also attach the complete contents of a folder. This is particularly useful for storing supporting documentation for each works order, for example, works order specifications.

If you selected 'Copy attached files from BOM/Estimates' within the Works Order Settings (see *The Record tab* on page 343), when you create a works order, any files or folders attached to the BOM or estimate are automatically attached to the works order.

To attach a file or folder to a batch works order record

1. In the Works Order Details window, click the Attached Files tab.

   The Attached Files information appears.



2. To attach a file or folder to a works order record, click Attach File or Attach Folder as appropriate.

   A Choose File(s) or Choose Folder(s) window appears.

   - Select the file or folder you want to attach to the works order.
   - Click Open if selecting a file, or OK if selecting a folder.

     Note: You can only select one file or folder at a time.

     The file or folder you selected appears in the Attached Files list.

3. To open a file or folder, click within the Filename, and click the down arrow alongside the Filename.

4. Enter a description alongside each attachment, if required.

   Note: This is for information purposes only. Manufacturing does not use the description anywhere else.

5. To delete an attached file, select the file and press F8.

   Note: The file is removed from the works order. It remains on your hard disk.

6. To continue making changes to the batch Works Order Details information, click the Analysis Codes tab.
   To save your batch Works Order Details, click Save.

The Analysis Codes tab (Batch Works Order)

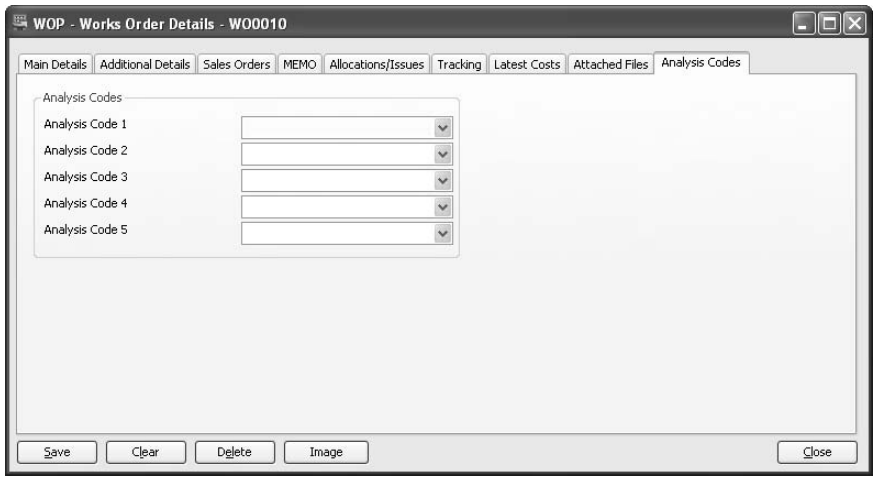
Use the Analysis Codes tab to see the analysis codes assigned to the works order.

These are brought across from the BOM when a works order is created. You can change the analysis codes assigned here, if required.

To maintain analysis codes for a batch works order

1. In the Works Order window, click the Analysis Codes tab.

   The Analysis Codes information appears.



2. Enter or amend the details for up to five unique analysis codes for each works order.

   You can use these for custom reporting.

3. To save your batch Works Order Details, click Save.

Amending a One-Off Works Order

You can amend the detail of a works order at any time. During this process you can also view important information such as the customer details, estimates and actuals, and stages information.

To amend or view a one-off works order

1. From the Navigation Bar, click Works Orders and choose Records > One-Off > Amend Works Order.

   The Works Order Details window appears.

2. Make amendments to the one-off works order Main Details. For more information, see *The Main Details tab (One-Off Works Order)* on page 377.

3. Make amendments to the one-off works order Additional Details. For more information, see *The Additional Details tab (One-Off Works Order)* on page 381.

4. Make amendments to the one-off works order Invoice Description details. For more information, see *The Invoices/Credit Notes tab (One-Off Works Order)* on page 383.

5. Make amendments to the one-off works order Estimate/Actual details. For more information, see *The Estimate/Actual tab (One-Off Works Order)* on page 384.

6. Make amendments to the one-off works order Stages details. For more information, see *The Stages tab (One-Off Works Order)* on page 386.

7. Make amendments to the one-off works order Attached Files details. For more information, see *The Attached Files tab (One-Off Works Order)* on page 389.

8. Make amendments to the one-off works order Analysis Codes. For more information, see *The Analysis Codes tab (One-Off Works Order)* on page 391.

9. When you are satisfied with your entries, click Save.

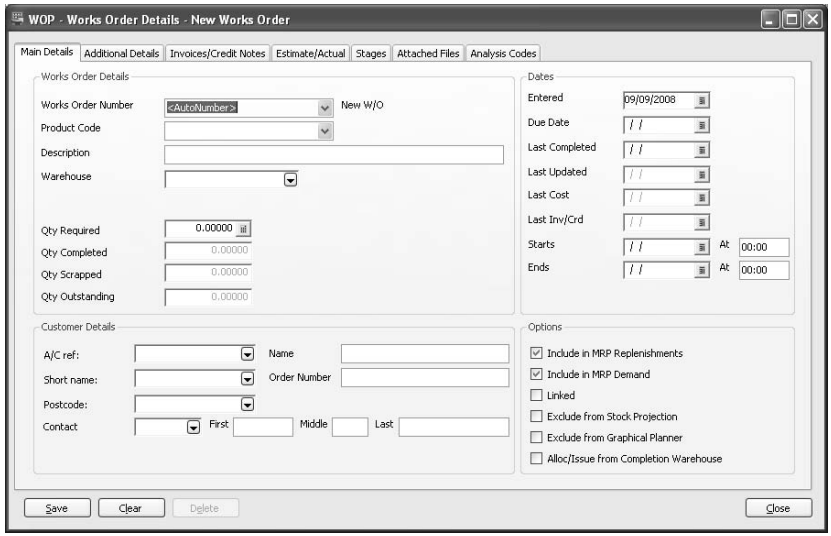
   The works order window closes.

The Main Details tab (One-Off Works Order)

To amend one-off works order main details

1. From the Navigation Bar, click Works Orders and choose Records > One-Off > Amend Works Order.

   The Works Order Details window appears, open at the Main Details tab.



2. Select the Works Order Number.
3. Enter the changes required, according to the following descriptions.

Product Code	Select a Product Code for the one-off works order. The Description appears automatically. If the works order is for an item which does not appear in the Stock Control module, leave the Product Code box empty. For example, a service order item.

Warehouse/Bin	Select the warehouse from the Warehouse drop-down list. If you have entered a Product Code, and the stock item is linked to more than one bin, select the bin required from the drop-down list. If the stock item is only linked to one bin, the bin is displayed automatically alongside the completion warehouse. **Note:** If you change the warehouse and the BOM contains operations, the works order will be excluded from Graphical Planner.
Qty Required	Enter or amend the quantity required. You must enter the quantity of finished items you want to manufacture, even if that quantity is '1'. **Note:** If you are entering a stock item, the quantity you enter must be valid for the stocked unit of the item. If you enter a quantity that is not valid, it is automatically adjusted to the nearest appropriate value.
Due Date	Enter or amend the date by which the works order must be completed. This is also used as the default due date for each stage.
Starts	Enter or amend the date the works order starts. **Note:** If you enter the Starts date and time, click on the '...' (calculate) button alongside to calculate the Ends date and time.
Ends	Enter or amend the date the works order ends. **Note:** If you enter the Ends date and time, click on the '...' (calculate) button alongside to calculate the Starts date and time.

Customer Details	If you are entering details for a customer with an account record in the Sales Ledger: ■ Select the customer account, using the drop-down lists in the A/C, Short name or Postcode boxes. The customer details are displayed in the window automatically. If there is no existing account record in your Sales Ledger: ■ Leave the A/C box blank. ■ Enter the name of the person or company for whom the job is being done in the Name box. ■ Fill in the Contact and Order Number boxes as appropriate.
Include in MRP Replenishments	Select this check box to include finished items on this works order as available to use when MRP demands are calculated.
Include in MRP Demand	Select this check box if you want the components required to fulfil this order to be included when MRP demands are calculated.
Linked	Select Linked if you want to link the works order with a purchase order. The check box is clear by default, but subsequently it will be either selected or clear, depending on your last selection. If you select this check box, any associated purchase orders will only be used to meet the demands for this works order.
Exclude from Stock Projection	Select this check box if you want to exclude this works order from the stock projection calculations.
Exclude from Graphical Planner	Select this check box if you want to exclude this works order from being exported to Graphical Planner. **Note:** This check box is automatically selected and you cannot change it if you have changed the warehouse from that stored on the stock item.
Alloc/Issue from Completion Warehouse	Select this check box if components can only be allocated or issued from the completion warehouse.

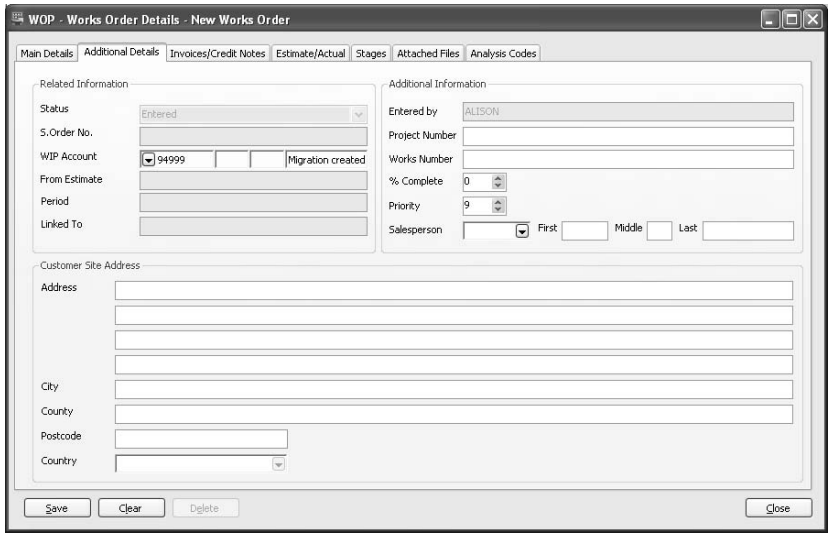
4. To continue making changes to the one-off Works Order Details, click the Additional Details tab.
   To save your one-off Works Order Details, click Save.

The Additional Details tab (One-Off Works Order)

To display the one-off works order additional details

1. In the Works Order Details window, click the Additional Details tab.

   The Additional Details information appears.



2. Enter the changes required, according to the following descriptions.

Status	Change the current status, if you are logged on as Manager. By default, when creating a new works order the status is set to 'Entered'. The status can be: 'Entered', 'Active', 'Part Complete', 'Completed', 'Retention' or 'Cancelled'.
S. Order No.	If you created a sales order when the estimate was put into production, the sales order number will automatically appear within the S.Order No. box.
WIP Account	Enter a nominal account code to hold nominal postings associated with this works order. The default is to leave this box clear. All transactions will then default to the code specified in Works Order Settings.

From Estimate	If the works order is derived from an estimate, the estimate number is displayed.
Period	The period in which the works order starts, is displayed.
Linked To	This shows the Estimate Number the works order is linked to, if appropriate. This works order will only be used to meet the demands from this estimate.
Entered By	This shows who entered the works order.
Project Number	Enter a Project Number for information purposes. This is useful if you have multiple works orders against a project.
Works Number	Enter any alpha/numeric reference. This is for information purposes only.
% Complete	Enter a percentage to indicate how complete the works order is. This is not updated automatically and is for information purposes only.
Priority	The Priority of the works order is shown. Priority range is from -32000 to 32000. The lower the number, the higher the priority, therefore -32000 is the highest priority and 32000 is the lowest priority. This information passes into Graphical Planner and is used during planning. For more information, see *Sage Graphical Planner* documentation.
Salesperson	Enter a salesperson reference, if required. This is for information purposes only.
Customer Site Address	Enter the customer site address, if required. **Note:** You can only enter City, County and Country information if the Use Segmented Addresses option is selected in Accounting System Manager.

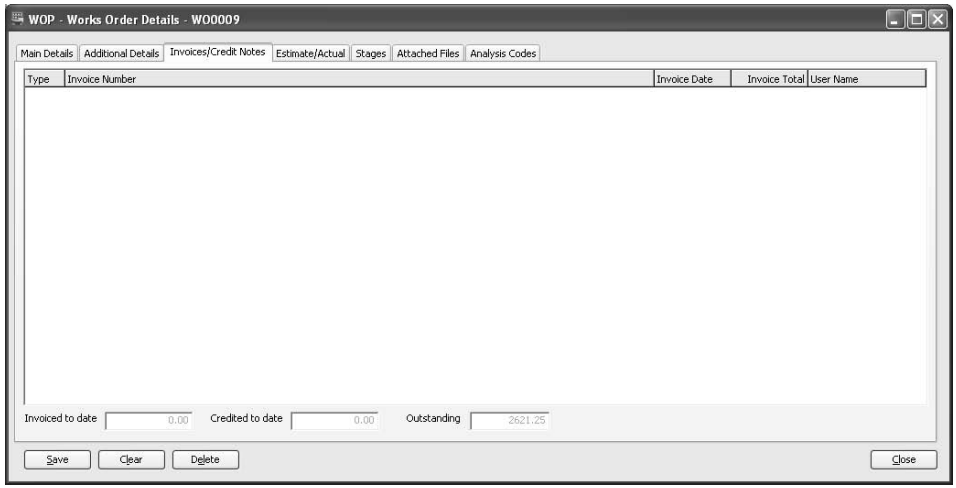
3. To continue making changes to the one-off Works Order Details, click the Invoices/Credit Notes tab.
   To save your one-off Works Order Details, click Save.

The Invoices/Credit Notes tab (One-Off Works Order)

To amend one-off order invoices/credit notes

1. In the Works Order Details window, click the Invoices/Credit Notes tab.

   The Invoices/Credit Notes information appears.



   This tab shows all of the sales invoices/credit notes that have been posted to this works order.

   Note: If no sales order is linked to the works order the form will be blank.

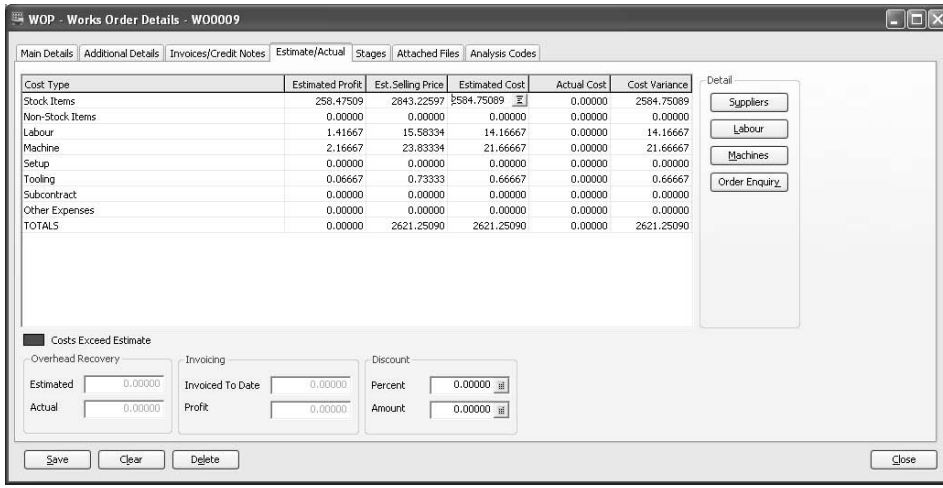
2. To continue making changes to the one-off Works Order Details, click the Estimate/Actual tab.
   To save your one-off Works Order Details, click Save.

The Estimate/Actual tab (One-Off Works Order)

To view one-off works orders estimate/actual details

1. In the Works Order Details window, click the Estimate/Actual tab.

   The Estimate/Actual information appears.



   This window shows all of the accumulated costs that have been posted to this works order. It also shows current profitability (or loss).

   Note: The Cost Variance box is highlighted if a loss is being made in any of the cost headings.

   Additional information is displayed showing discounts, the overhead recovery position, the current value of invoices and the remaining balance to be invoiced.

2. View a breakdown of either estimated or actual costs for any cost heading, by double-clicking in the cell showing the required figure.

   A window opens detailing all of the individual postings.

3. View additional details by clicking one of the following.

Suppliers	Click Suppliers to show a list of suppliers who have supplied goods or services for this works order. **Note:** You can drill-down on a specific supplier (by left clicking twice) to see individual transactions.

Labour	Click Labour to show a list of labour processes that have been used on this works order. **Note:** You can drill-down on a specific process (by left clicking twice) to see individual transactions.
Machines	Click Machines to show a list of machine processes that have been used on this works order. **Note:** You can drill-down on a specific process (by left clicking twice) to see individual transactions.
Order Enquiry	Click Order Enquiry to display a list of purchase orders and works orders that are on-order for the components required by this works order.

Note: All of the information shown is an accumulation of costs for all stages. In addition to this option, profitability can be examined on a stage by stage basis from the Stages tab.

4. To continue making changes to the one-off Works Order Details, click the Stages tab. To save your one-off Works Order Details, click Save.

The Stages tab (One-Off Works Order)

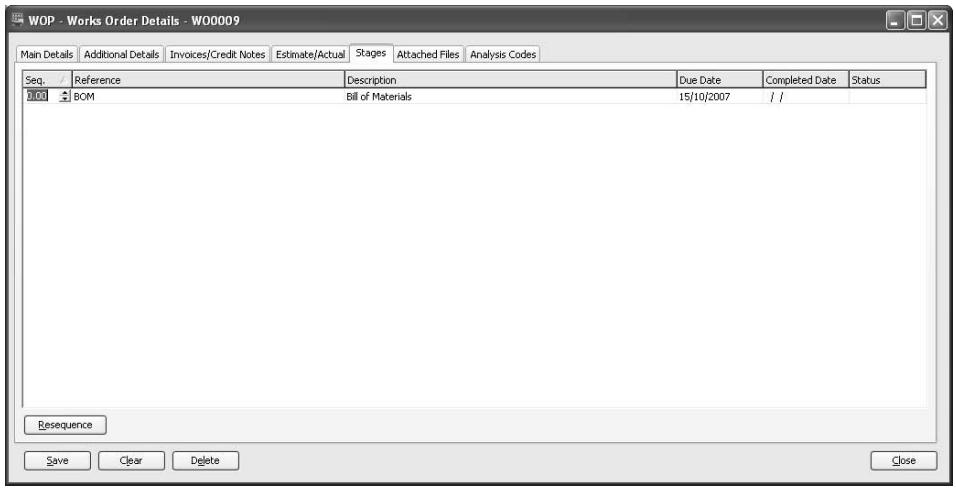
Each works order can be broken down into stages. You can then accumulate costs (Stock, Non-Stock, Operations and Other Expenses) stage by stage.

Note: Works orders must have at least one stage.

To maintain one-off work orders stage details

1. In the Works Order Details window, click the Stages tab.

   The Stages information appears.



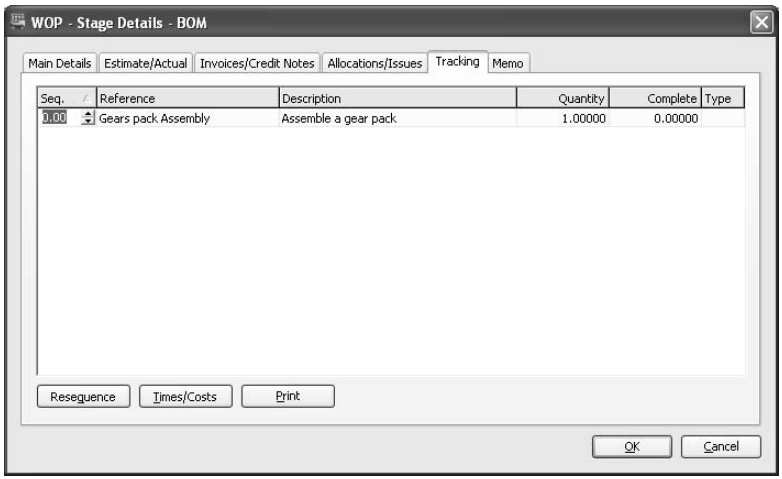
2. For each stage:
   - Enter a Stage Reference. This can be 30 alpha/numeric characters in length.
   - Enter a Stage Description. This can be 60 alpha/numeric characters.
3. To see detailed information about this stage, or to add, amend or remove operations from this works order, click within the Description box. For more information, see *To maintain operations in the one-off works order* on page 386.
4. To continue making changes to the one-off Works Order Details, click the Attached Files tab.
   To save your one-off Works Order Details, click Save.

To maintain operations in the one-off works order

1. In the one-off Works Order Details window, click the Stages tab.
2. Click within the Description box and click the button that appears in the box.

Note: If the stage has not yet been saved you are prompted to save it now.

3. The Stage Details window appears.
   - Select the Tracking tab.



Note: The tracking quantity is the required quantity taken from the estimate.

4. To add an operation, click in the Reference box underneath the last operation displayed, and enter the details.

   A new sequence number is automatically calculated for the operation although you can change this, if required.

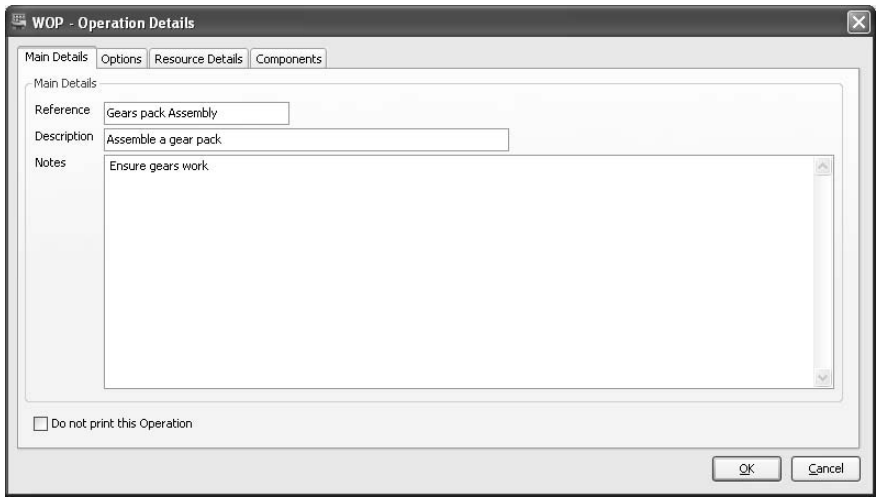
5. To amend an operation, select the required operation and change the details where necessary.

   You can change any details of an operation as long as it has not been progressed.

   The description is brought in automatically from the Operations Register if the item was selected there. You can change it if required.

6. To enter additional information about the operation, click within the Description box and click the button that appears in the box.

   The Operations Details window appears.



This procedure is the same as entering Operation details into the Operations Register. For more information, see *Operations Register* on page 54.

Note: As you enter Operation Details, the total costs by category appear on the Resource Details tab.

- To print components on subcontract advice notes, associate components from the BOM with the operation on the Components tab. When you create a works order from the BOM through Trial Kitting, the components are copied to the works order for printing on a subcontract advice note.

  Note: If the component quantity does not match the unit of measure, the quantity is automatically adjusted to the nearest appropriate value.

- To save the operation details and return to the Stage Details window, click OK.

7. To resequence the operations, click Resequence.
8. To view operation time breakdown for the works order, click Times/Costs.
9. To delete an operation that has not progressed, press F8.

   Note: The operation is not removed from the original BOM.
10. To print an operation, click Print.
11. To save the Stage Details, click OK.

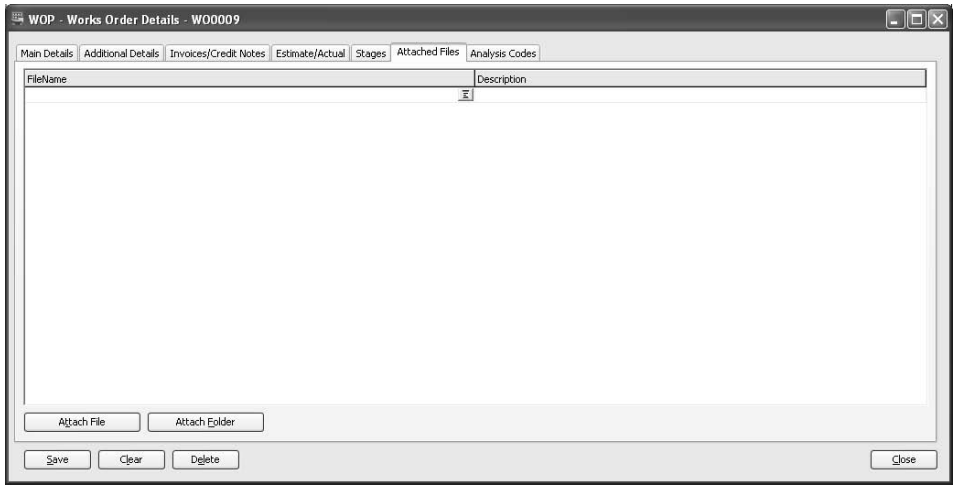
The Attached Files tab (One-Off Works Order)

Use the Attached Files tab to open and save any file (for example, Microsoft® Word or Microsoft® Excel documents) connected with a works order. You can also attach the complete contents of a folder. This is particularly useful for storing supporting documentation for each works order, for example, works order specifications.

To attach a file or folder to a one-off works order record

1. In the Works Order Details window, click the Attached Files tab.

   The Attached Files information appears.



2. To attach a file or folder to a works order record, click Attach File or Attach Folder as appropriate.

   A Choose File(s) or Choose Folder(s) window appears.

   - Select the file or folder you want to attach to the works order.
   - Click Open if selecting a file, or OK if selecting a folder.

     Note: You can only select one file or folder at a time.

     The file or folder you selected appears in the Attached Files list.

3. To open a file or folder, click within the Filename, and click the down arrow alongside the Filename.

4. Enter a description alongside each attachment, if required.

   Note: This is for information purposes only. Manufacturing does not use the description anywhere else.

5. To delete an attached file, select the file and press F8.

   Note: The file is removed from the works order. It remains on your hard disk.

6. To continue making changes to the one-off Works Order Details, click the Analysis Codes tab.
   To save your one-off Works Order Details, click Save.

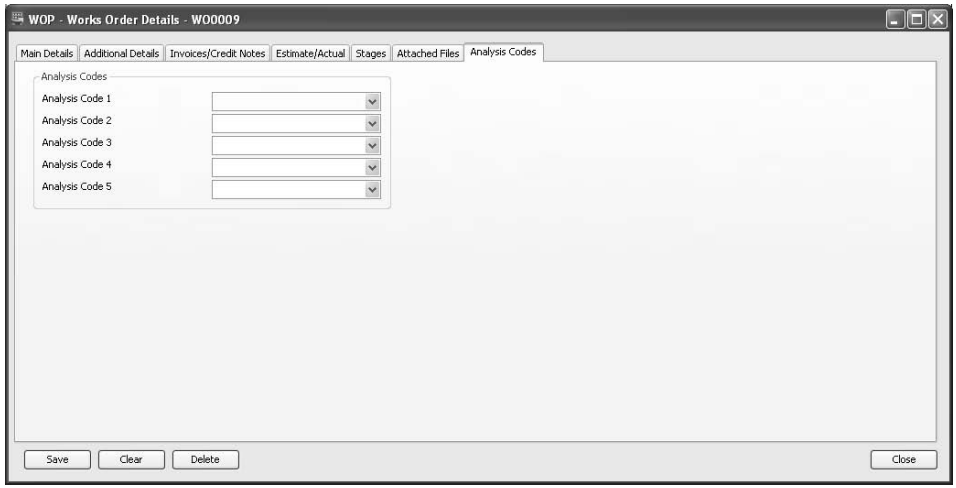
The Analysis Codes tab (One-Off Works Order)

Use the Analysis Codes tab to see the analysis codes assigned to the works order.

To maintain analysis codes for a one-off works order

1. In the Works Order window, click the Analysis Codes tab.

   The Analysis Codes information appears.



2. Enter or amend the details for up to five unique analysis codes for each works order. You can use these for custom reporting.
3. To save your one-off Works Order Details, click Save.

Linking Works Orders

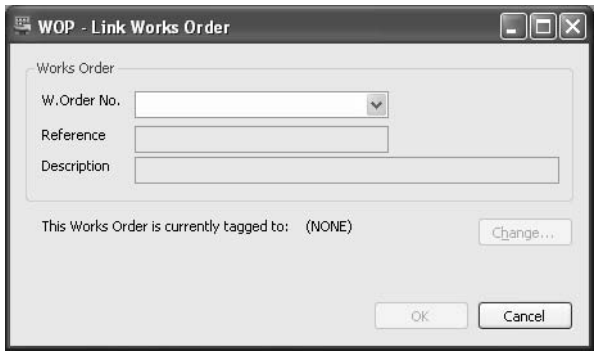
Sales orders can be linked with batch works orders within Sales Order Processing or within MPS. For more information, see your *Sales Order Processing* documentation and *MPS (Master Production Schedule) on page 269*.

If you add additional items to the sales orders you can use this option. You can also make changes to existing links and change temporary tags into permanent links.

To link works orders

1. From the Navigation Bar, click Works Orders and choose Processing > Link Works Order.

   The Link Works Order window appears.



2. Select the works order.

   It can display one of the following 'tagged to' settings:

(NONE)	The works order is not linked to a sales order. You can add a link.
(MULTIPLE)	There is more than one tag present for this works order. **Note:** You cannot change the link for the works order.
(SINGLE - NOT SALES ORDER)	The demand item is not a sales order. **Note:** You cannot change the link for the works order.

(Tag)	There is already a single dynamic tag associated with the sales order. The sales order document number is shown within {}. You can change a tag to a link.
(Link)	A sales order is already linked to the works order. The sales order document number is shown within {}. You can change a link.

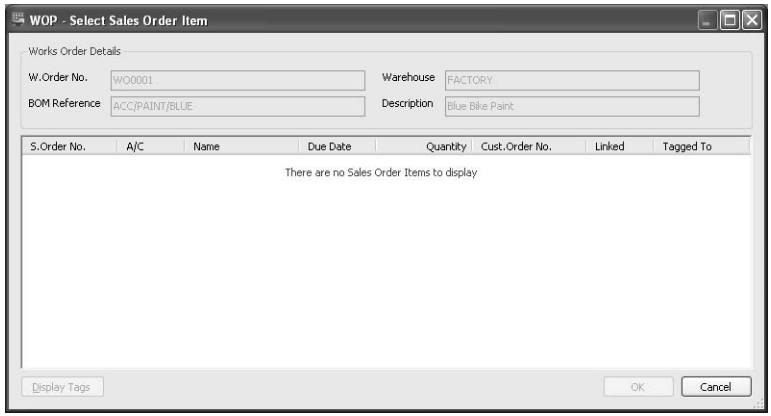
3. If the 'tagged to' setting is (Tag), click Change.

   A message appears which prompts you to confirm that you want to change the tag to a link. Click Yes to continue.

4. If the 'tagged to' setting is (NONE) or (Link), click Change.

   - If the 'tagged to' setting is (Link), a message appears which prompts you to confirm that you want to change the sales order. Click Yes to continue.

   The Select Sales Order Item window appears.



   Note: Each sales order item displayed matches the following criteria:

   - Sales order item lines are fully outstanding.
   - Sales order is not linked or tagged to another works order.
   - The sales order is for the same product as specified in the works order.
   - The sales order warehouse matches with works order warehouse.
   - The sales order quantity is equal to or less than the works order quantity.

5. Select the sales order item required.
6. Click OK.

The new sales order item number is shown in the 'tagged to' setting in the Link Works Orders window.

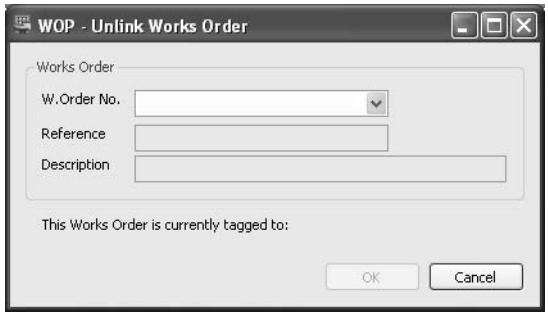
7. Click OK.
   - The sales order item is linked with the works order.
   - The batch works order shows 'Linked To' with the sales order document number in the header.
   - If you re-run MPS, the Master Production Schedule - List shows the sales order is linked and identifies the works order in the Linked To column.

Unlinking Works Orders

You can remove the link between the batch works order and sales order if necessary.

1. From the Navigation Bar, click Works Orders and choose Processing > Unlink Works Order.

   The Unlink Works Order window appears.



2. Select the works order that you want to modify.

   The 'tagged to' setting will show (Link) and the sales order document number the works order is linked to.

3. Click OK.

   You are prompted to unlink the works order.

4. Click Yes to confirm that you want to unlink the works order.

   - The link is removed between the sales order and the works order and any sub assembly works orders.
   - The batch works order will no longer show 'Linked To' and the sales order document number in the header.
   - If you re-run MPS, the Master Production Schedule - List shows the sales order is not linked. The works order number no longer appears in the Linked To column.

Printing Works Order Documents

You can pint four types of works order documents: Picking List, Route Card, Job Sheet and the Operation Card.

Picking lists can be produced if stock has been allocated. The picking list shows all the components required for the build, the quantity required, and the bin location of the component. You can amend the picking list if required. For more information, see *Amending Picking Lists* on page 399.

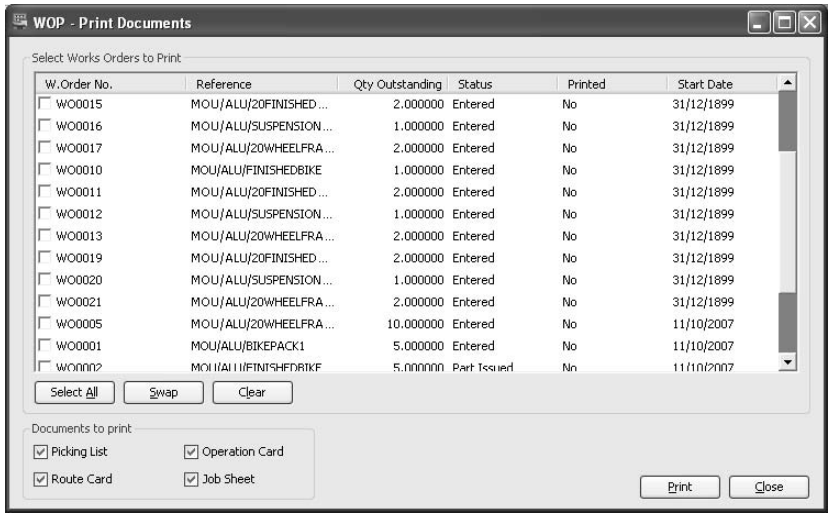
The Route Card, Job Sheet and Operation Card show the same information in varying levels of detail.

Note: Defaults for the documents produced can be selected in Works Order Settings. For more information, see *The Documents tab* on page 341.

To produce works order documents

1. From the Navigation Bar, click Works Orders and choose Print > Documents.

   The Print Documents window appears.



2. Select the required works orders.
3. Select the check boxes for the 'Documents to print'.

   This does not change the defaults you have set up under Works Order Settings.

   Note: You cannot print a picking list if components are not allocated for a works order.
4. To print the selected documents, click Print.

The documents are printed.

Documents are printed to the output mode of your choice, set using File > Choose Output Mode on the Menu Bar. For more information, see *Sage 200 help*.

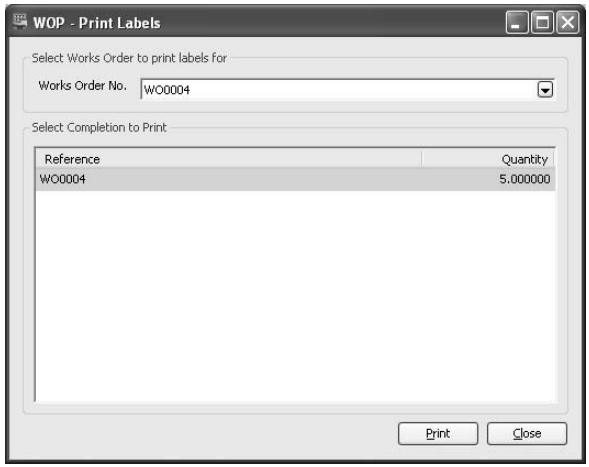
Printing Labels

You can print labels for completed batch works orders if the finished stock item on the works order is set to print labels.

To print labels

1. From the Navigation Bar, click Works Orders and choose Print > Labels.

   The Print Labels window appears.



2. Select the required works order.
3. If there is more than one completion on the batch, select a completion from the completion list.
4. To print the labels, click Print.

   The labels are printed.

   Labels are printed to the output mode of your choice, set using File > Choose Output Mode on the Menu Bar. For more information, see *Sage 200 help*.

Amending Picking Lists

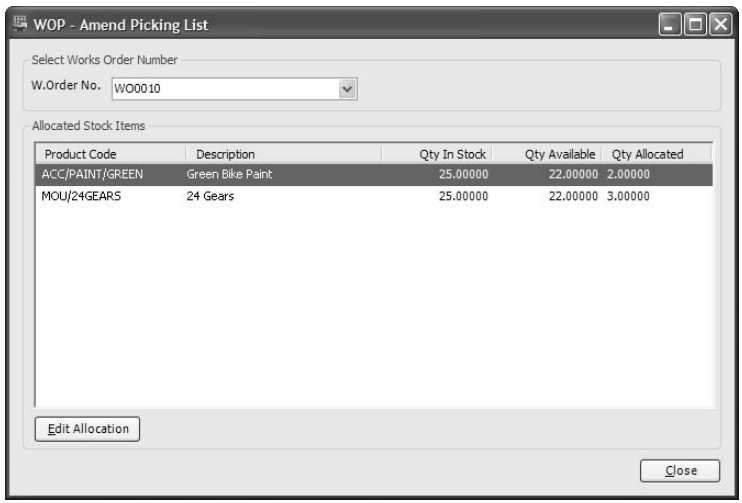
If you need to amend your picking list once you have produced it, you can do so using this process.

Whilst you cannot amend a picking list for an allocation that has already been fully issued, you can amend the picking list for the unissued element of a partially issued works order.

To amend picking lists

1. From the Navigation Bar select Works Orders and choose Processing > Amend Picking List.

   The Amend Picking List window appears.

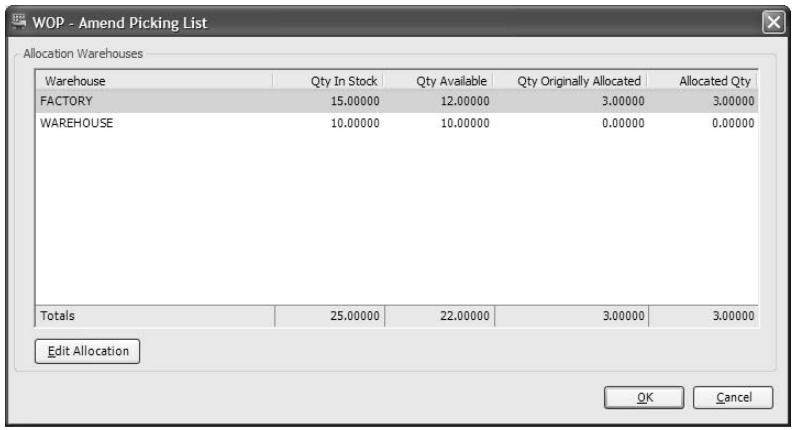


2. Select the works order.

   The works order allocation lines are displayed.

3. Select an allocation and click Edit Allocation.

   The Amend Picking List Allocation Warehouses window appears.

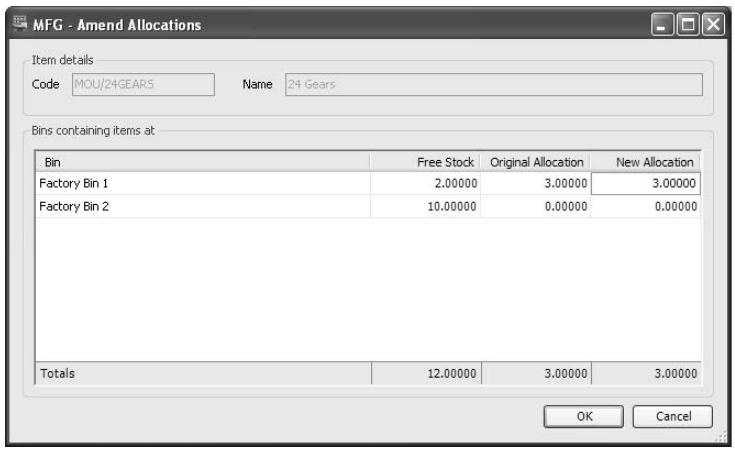


This lists all warehouses which contain stock items on order.

Note: You can choose to supply different quantities from different warehouses but the total you select must not exceed the total allocated quantity.

4. Select the warehouse and click Edit Allocation.

5. **If the component is not traceable**, then all bins linked to the allocation warehouse are displayed.



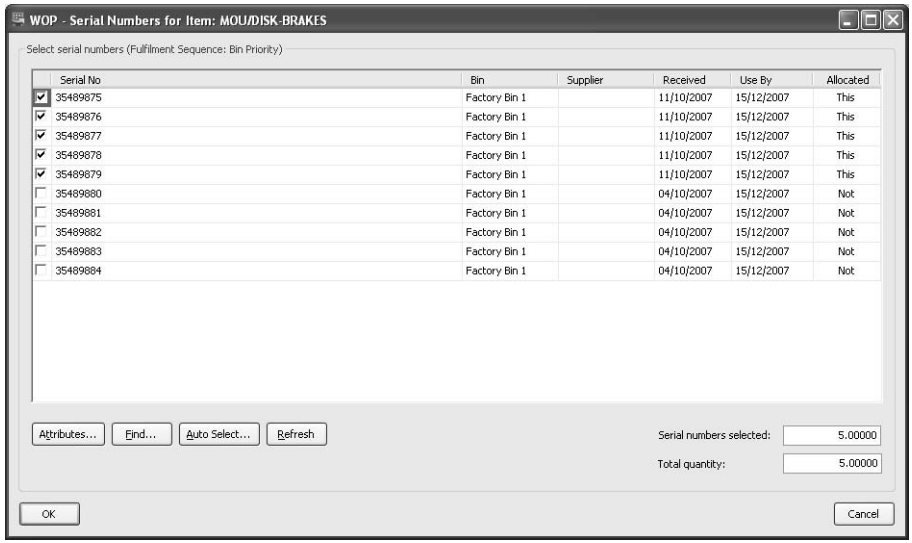
You can:

- Select the bin used for the allocation and enter a New Allocation value.

- Select a bin not already linked to the allocation (if Free Stock exists for the bin) and enter a New Allocation value.
- When you have finished making adjustements, click OK.

Note: The New Allocation value must match the stock item unit of measure. If not, it is automatically adjusted to the nearest appropriate value.

6. **If the component is traceable**, then traceable items currently used at the selected warehouse are displayed with any unallocated traceable items held in the same warehouse.



- To change a component allocation, clear the box for an item that is currently selected and select the box for an item that you want to use instead.

  Note: If the item is batch traceable, enter the quantity of the item to adjust.
- When you have finished making adjustments, click OK.

7. Repeat the adjustment process until all allocation adjustments have been made.

   Works order allocations and stock balances are adjusted.

8. Click Close on the Amend Picking List window.

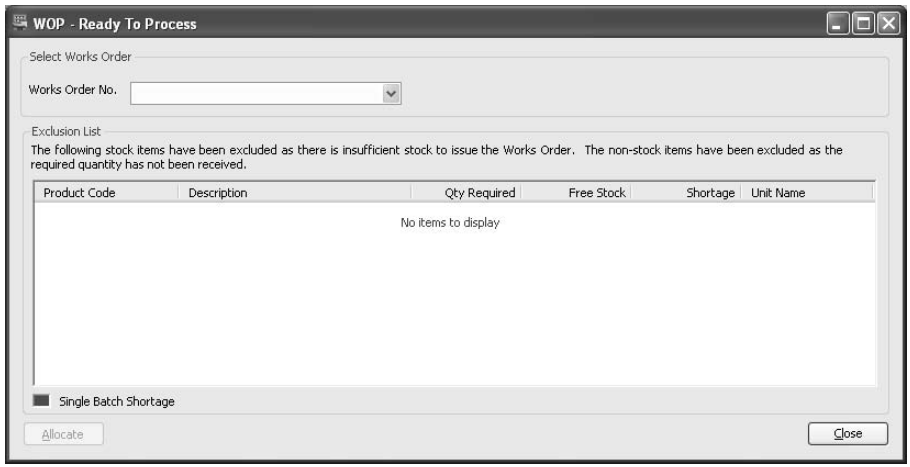
Checking a Works Order is Ready to be Made

This option lets you check whether a works order is ready to be made, that is, if all necessary materials have been received into stock.

To check a works order

1. From the Navigation Bar select Works Orders and choose Processing > Ready to process?

   The Ready To Process window appears.



2. Select the required works order.

   Shortages are listed.

   Note: Single batch shortages are shown in colour.

3. To allocate the components that are not excluded, click Allocate and then follow the steps outlined in *To allocate/unallocate stock against single works orders on page 405*.

4. To return to the Works Orders List, click Close.

Updating Non-stock Deliveries

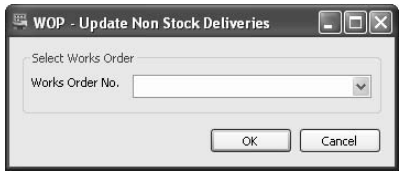
Non-stock deliveries for one-off works orders can be part or fully received, using this option. This is for information only. You can note what is outstanding if a partial receipt is made.

Note: You do not need to use this option to permit further processing of the order.

To update non-stock deliveries

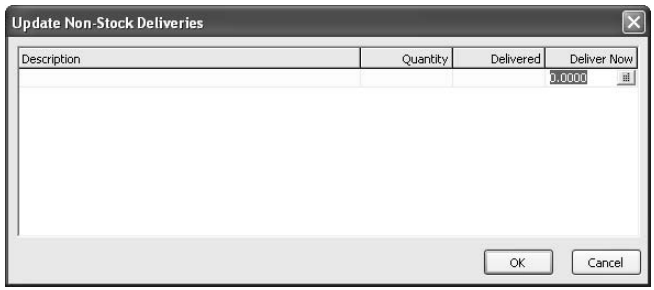
1. From the Navigation Bar select Works Orders and choose Processing > Update Non-Stock Deliveries.

   The Update Non-Stock Deliveries window appears.



2. Select the Works Order No. from the drop-down list.
3. Click OK.

   The Update Non-Stock Deliveries window appears.



   - Enter the delivery quantity in the Deliver Now column.
   - To complete the update, click OK.

Allocating Stock

Note: You must allocate stock before issuing it.

Stock Control records are automatically updated with allocations. This effectively sets the stock aside as marked for production. Since, by definition, allocated stock no longer forms part of your available stock, it cannot be used for sales (for example, spares) and will be excluded from future shortage calculations for trial kitting or production planning.

There are different ways of allocating and unallocating.

- To allocate or unallocate stock for multiple works orders:

  Note: You can allocate or unallocate stock for multiple works orders, if you have chosen to allocate multiple works orders in Works Orders Settings. For more information see *The Allocate/Issue/Complete tab* on page 346.

  - From the Navigation Bar, click Works Orders and choose Works Orders List. Then, select the works orders required in the Works Orders List and choose Stock > Allocate Stock.
- To allocate or unallocate stock for single works orders:
  - From the Navigation Bar, click Works Orders and choose Processing > Allocate Stock.
  - From the Navigation Bar, click Works Orders and choose Works Orders List. Then, ensure that no more than one works order is selected in the Works Orders List and choose Stock > Allocate Stock.

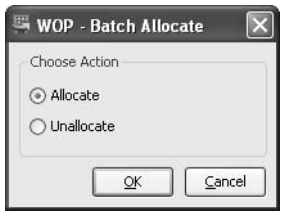
The procedure described below (*To allocate or unallocate stock against multiple works orders on page 404*) should also be followed when unallocating previously allocated stock for multiple works orders. You can also allocate or unallocate stock for individual works orders, whatever the setting in Works Orders Settings. For more information, see *To allocate/unallocate stock against single works orders* on page 405.

To allocate or unallocate stock against multiple works orders

Note: Ensure that the Allow Multiple setting is selected in Works Order Settings. For more information see *The Allocate/Issue/Complete tab on page 346*.

1. From the Navigation Bar, click Works Orders and choose Works Order List.
2. In the Works Order List, select the works orders you want to allocate and choose Stock > Allocate Stock.

   The Batch Allocate window appears.



3. Choose whether you want to Allocate or Unallocate stock.
4. To confirm your choice, click OK.

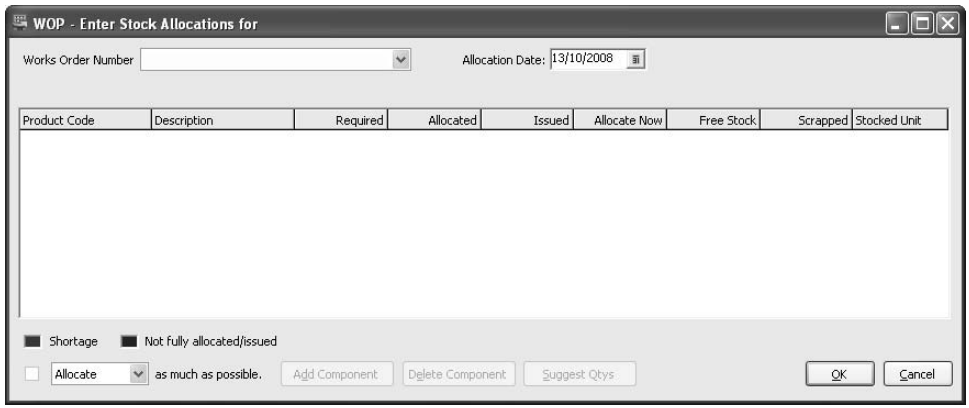
   When the allocating/unallocating process is complete, the status of the works order(s) in the Works Orders List changes to 'Allocated' or 'Part Allocated'. When unallocating, the status of the works order(s) reverts to 'Entered'.
5. Repeat the process for further works orders if necessary.

   Note: You can see the quantities of each item allocated by selecting the Allocations/Issues tab on the works order record. For more information, see *The Allocations/Issues tab (Batch Works Order)* on page 366.

To allocate/unallocate stock against single works orders

1. From the Navigation Bar, click Works Orders and choose Processing > Allocate Stock.

   The Enter Stock Allocations for window appears.



2. Select the Works Order Number from the drop-down list.

3. If you are allocating a one-off works order, select the stage you are allocating to from the Stage drop-down list.
4. Select the Allocation Date.
5. You can:
   - Allocate/unallocate as much stock as possible to the selected works order (see *To allocate/unallocate as much stock as possible* on page 406.)
   - Allocate a specified quantity automatically to the selected works order (see *To allocate a quantity automatically* on page 406).
   - Allocate a specified quantity manually to the selected works order (see *To allocate/unallocate a quantity manually* on page 407)
   - Add components to allocate manually (see *To manually add components to the allocations list* on page 407).

   Note: Quantities entered must be valid for the stocked unit of the item. If not, they are automatically adjusted to the nearest appropriate value.
6. To save the changes, click OK.
7. Repeat for as many works orders as required.

   Note: You can see the quantities of each item allocated by selecting the Allocations/Issues tab on the works order record. For more information ,see *The Allocations/Issues tab (Batch Works Order)* on page 366.

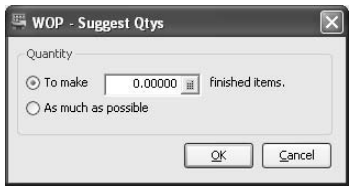
To allocate/unallocate as much stock as possible

1. To allocate as much stock as possible, in the 'Enter Stock Allocations for' window, select the check box and select Allocate from the drop-down list.
2. To unallocate as much stock as possible, in the 'Enter Stock Allocations for' window, select the check box and select Unallocate from the drop-down list.

To allocate a quantity automatically

1. In the 'Enter Stock Allocations for' window, select an item, clear the check box and click Suggest Qtys.

   The Suggest Qtys window appears.



- To request suggested quantities sufficient to make a certain amount of finished items, select the 'To make' option and enter the number of finished items.

  Note: The number of finished items must be valid for the stocked unit of the item. If not, it is automatically adjusted to the nearest appropriate value.
- To suggest as much as possible (obviously restricted by the original required quantity and the current available stock), select the 'As much as possible' option.
- To save the suggested quantities, click OK.

To allocate/unallocate a quantity manually

1. In the 'Enter Stock Allocations for' window, select an item and click in the Allocate Now column to manually enter the quantity to be allocated.
2. Enter a positive quantity to allocate or a negative quantity to unallocate.

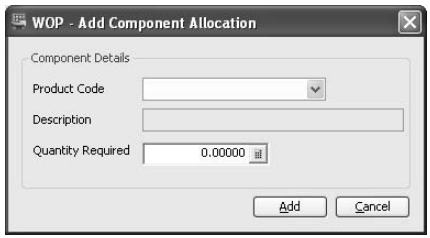
   Note: The quantity you enter must be valid for the stocked item. If not, it is automatically adjusted to the nearest appropriate value.

   You cannot unallocate more than the quantity currently allocated.
3. Repeat the process for other items as required.

To manually add components to the allocations list

1. In the 'Enter Stock Allocations for' window, click Add Component.

   The Add Component Allocation window appears.



2. Select the component you want to add.
3. Enter the quantity required.

   Note: The quantity must be valid for the stocked unit of the item. If not, it is automatically adjusted to the nearest appropriate value.
4. To add the component allocation, click Add.

   The component is added to the stock allocations list for the works order. You can now allocate or unallocate the quantity as required. For more information, see *To allocate/*

unallocate as much stock as possible on page 406, *To allocate a quantity automatically* on page 406 or *To allocate/unallocate a quantity manually* on page 407.

Issuing Stock and Reversing Stock Issues

Note: You must allocate stock before you issue it. For more information, see *Allocating Stock* on page 404.

There are different ways of issuing stock and reversing stock issues.

- To issue stock for multiple works orders:

  Note: You must have chosen to issue multiple works orders in Works Orders Settings. For more information on setting the system to issue multiple works orders, see *The Allocate/Issue/Complete tab* on page 346.

  - From the Navigation Bar, click Works Orders and choose Works Orders List. Then, select the works orders required in the Works Orders List and choose Stock > Issue Stock.

  The process of issuing stock to multiple works orders is entirely automatic. You cannot amend the quantities to be issued during the process.

  Note: You cannot reverse issues for multiple works orders. If you want to reverse issues for a works order you must select the works order as a single works order.

- To issue stock for single works orders:

  - From the Navigation Bar, click Works Orders and choose Processing > Issue Stock.
  - From the Navigation Bar, click Works Orders and choose Works Orders List. Then, ensure that no more than one works order is selected in the Works Orders List and choose Stock > Issue Stock.

  The process of issuing stock for single works orders is manual and you can amend the quantities to be issued during the process.

- To reverse issue stock for single works orders:

  - From the Navigation Bar, click Works Orders and choose Processing > Reverse Stock Issue.

Your stock records are automatically updated when you issue stock or reverse stock issues.

If you are using traceability and you have set up the Stock Control module to allocate batch or serial numbers at despatch, you can select the traceable items manually, for which issues are to be made.

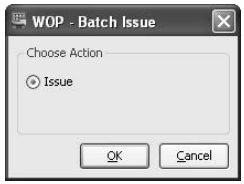
To issue stock for multiple works orders

Note: You must have chosen to issue multiple works orders in order to issue stock for multiple works orders. For more information, see *The Allocate/Issue/Complete tab* on page 346.

1. From the Navigation Bar, click Works Orders and choose Works Order List.

2. In the Works Order List, select the works orders you want to allocate and choose Stock > Issue Stock.

   The Batch Issue window appears.



3. Select Issue.
4. To perform the issue, click OK.

   The system checks for the following conditions in each works order.

   - No outstanding allocations.
   - Negative stock levels for a component that does not allow negative stock.
   - Temporary traceable numbers on traceable components that are linked to the allocation on the works order.

   If any are found in a works order, stock cannot be issued. Therefore, you must confirm that you want to continue issuing stock for the remaining works orders.

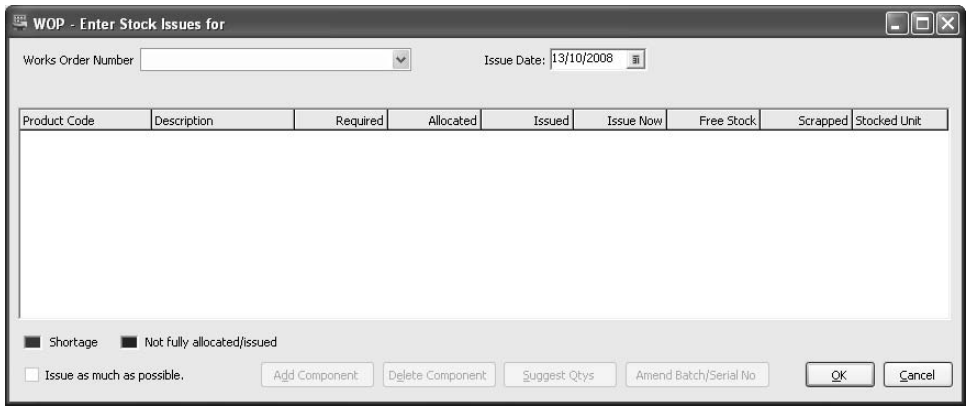
   For all other works orders, stock is issued and the material costs are updated on the works order.

   Note: If you are issuing unplanned materials, the works order costs to update will be calculated using the issue quantity and the costing method of the stock item.

To issue stock for a single works order

1. From the Navigation Bar click Works Orders and choose Processing > Issue Stock.

   The 'Enter Stock Issues for' window appears.



2. Select the required works order from the drop-down list.
3. If you are issuing a one-off works order, select the stage you are issuing to from the Stage drop-down list.
4. Select the Issue Date.
5. Enter the quantities of stock to issue using one of the following methods.
   - Issue as much as possible automatically to the selected works order. For more information, see *To issue as much stock as possible* on page 412.
   - Issue a specified quantity automatically to the selected works order. For more information, see *To issue a quantity automatically* on page 412.
   - Issue a specified quantity manually to the selected works order. For more information, see *To issue a quantity manually* on page 412.

   Note: Quantities entered must be valid for the stocked unit of the item. If not, they are automatically adjusted to the nearest appropriate value.
6. Manually confirm traceable item numbers. This is required for the following items.
   - All traceable items, if Sage 200 is not set to allocate traceable items with stock balances.
   - Any traceable item where the quantity to issue is not the full quantity outstanding on the allocation, and the system is set to allocate traceable items with stock balances.

   For more information on manually confirming traceable item numbers, see *To manually confirm traceable numbers* on page 413.
7. When all amendments have been made, click OK to make the issue.

   Note: The issue will not proceed if the total quantity of each component selected does not match the quantity needed for the build. In this event, a message appears, identifying the component in question.

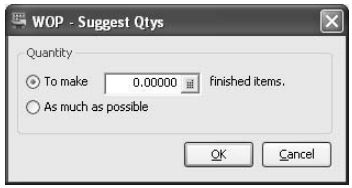
To issue as much stock as possible

- In the 'Enter Stock Issues for' window, select the 'Issue as much as possible' check box.

To issue a quantity automatically

1. In the 'Enter Stock Issues for' window, clear the 'Issue as much as possible' check box and click Suggest Qtys.

   The Suggest Qtys window appears.



2. To request suggested quantities to issue, select the 'To make' option and enter the number of finished items.

   Note: The number of finished items must be valid for the stocked unit of the item. If not, it is automatically adjusted to the nearest appropriate value.

3. To suggest as much as possible (restricted by the original required quantity and the current available stock), select the 'As much as possible' option.

4. To proceed, click OK.

To issue a quantity manually

1. In the 'Enter Stock Issues for' window, click in the Issue Now column for an item.

2. Enter a quantity to issue.

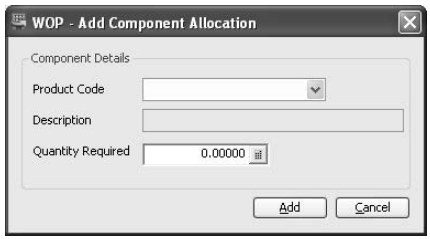
   Note: The quantity you enter must be valid for the stocked item. If not, it is automatically adjusted to the nearest appropriate value.

3. Repeat the process for other items as required.

To manually add components to the issues list

1. In the 'Enter Stock Issues for' window, click Add Component.

   The Add Component Allocation window appears.



2. Select the Product Code you want to add.
3. Enter the quantity required.

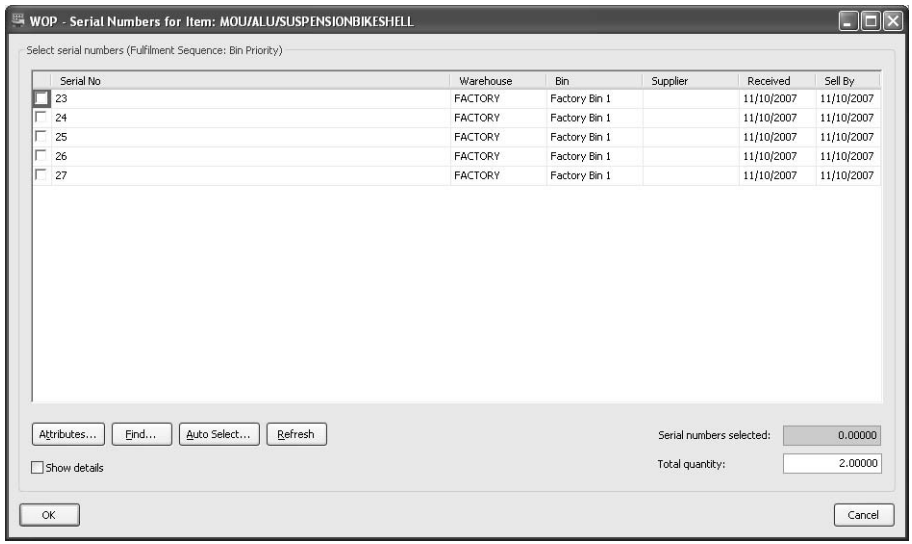
   Note: The quantity must be valid for the stocked unit of the item. If not, it is automatically adjusted to the nearest appropriate value.
4. To add the component allocation, click Add.

   The component is added to the stock issues list for the works order. You can now issue the quantity as required. For more information, see *To issue as much stock as possible* on page 412, *To issue a quantity automatically* on page 412 or *To issue a quantity manually* on page 412.

   Note: If you are using multiple locations, you must also select the warehouse and bin for the component.

To manually confirm traceable numbers

1. In the 'Enter Stock Issues for' window, click Amend Batch/Serial No.

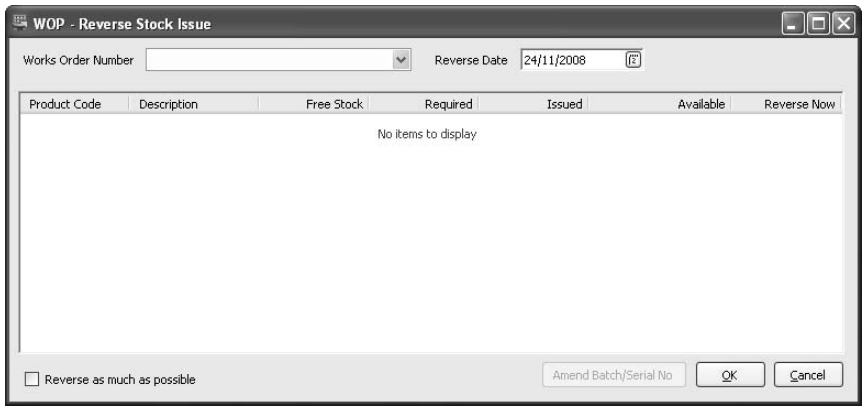


2. Select the batch or serial traceable number items required.
   - If you are amending serial traceable items, select the total quantity of serial items.
   - If you are amending batch traceable items, enter the quantity you want issued against each batch.
3. To save the quantity details, click OK.

To reverse issues for a single works order

1. From the Navigation Bar, click Works Orders and choose Processing > Reverse Stock Issue.

   The Reverse Stock Issue window appears.



2. Select the required works order from the drop-down list.
3. To reverse as much as possible automatically, select the 'Reverse as much as possible.' check box.
4. To manually enter a quantity to reverse, enter a quantity in the Reverse Now box.

   Note: The quantity you enter must be valid for the stocked item. If not, it is automatically adjusted to the nearest appropriate value.

   Note: You can only reverse a quantity that has not been scrapped or completed.

   - If the items to be reversed contain serial numbers, the Serial Numbers for Item window appears, listing the serial numbers to reverse.

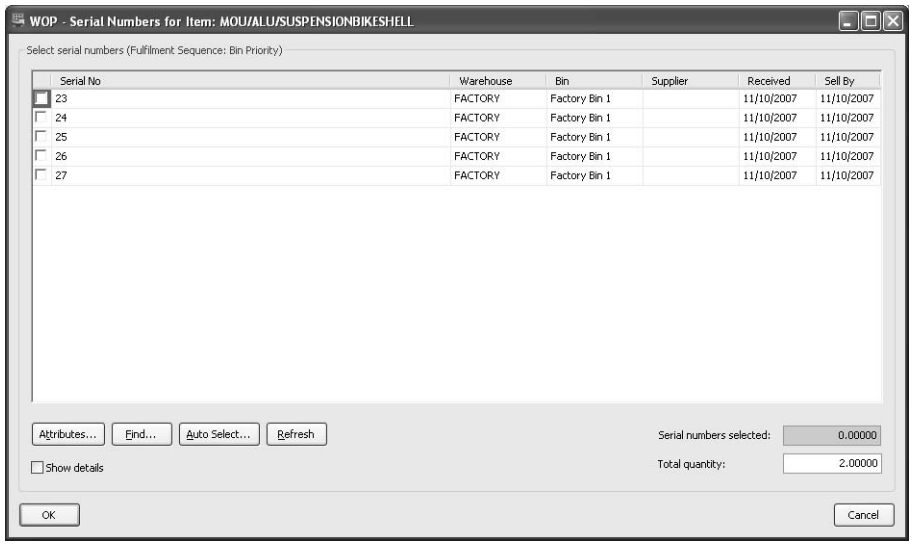
     Confirm the serial numbers for reversal.

     Click OK.
   - If the items do not contain serial numbers but are split across bins, confirm the quantity to be issued at each location.

     Click OK.
5. When you have entered quantity requirements, click OK.

   Goods are returned to the location they were in prior to being issued.

   Stock balances are increased for the returned items using the cost price on the original issue.


WOP - Serial Numbers for Item: MOU/ALU/SUSPENSIONBIKESHELL
Select serial numbers (Fulfilment Sequence: Bin Priority)
Serial No
Warehouse
Bin
Supplier
Received
Sell By
23 FACTORY Factory Bin 1 11/10/2007 11/10/2007
24 FACTORY Factory Bin 1 11/10/2007 11/10/2007
25 FACTORY Factory Bin 1 11/10/2007 11/10/2007
26 FACTORY Factory Bin 1 11/10/2007 11/10/2007
27 FACTORY Factory Bin 1 11/10/2007 11/10/2007
Attributes...
Find...
Auto Select...
Refresh
Serial numbers selected: 0.00000
Total quantity: 2.00000
Show details
OK
Cancel

Scrapping Finished Items

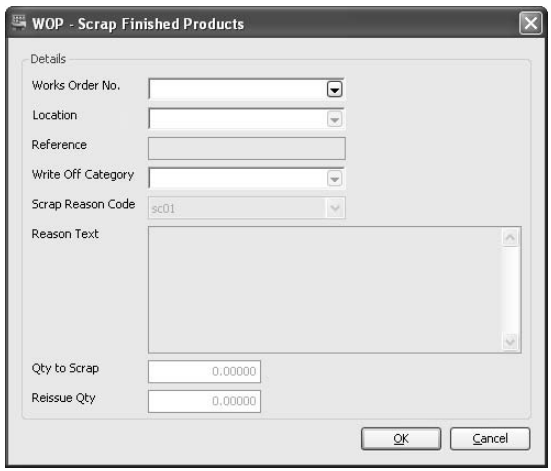
You can scrap traceable finished items and allow replacement materials to be issued. This may mean updating the production plan or raising new works orders or purchase orders.

Note: Untraceable items cannot be traced to a works order. Therefore, these are written off in Stock Control.

To scrap traceable finished items

1. From the Navigation Bar, click Works Orders and choose Processing > Scrap > Scrap Finished Items.

   The Scrap Finished Products window appears.

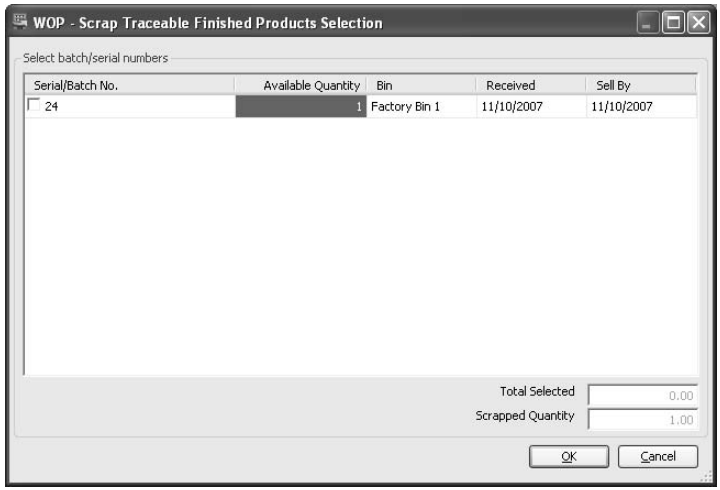


2. Select the works order.
3. Select the location.
4. Enter a reference, if required.
5. Select the Write-Off Category.
6. Select the Scrap Reason Code.
7. Enter the reason for the goods being scrapped in the Reason Text box.
8. Enter the quantity to scrap.

   Note: The quantity must be valid for the stock unit. If not, it is automatically adjusted to the nearest appropriate value.
9. Enter the quantity to re-issue, if required.

Note: The quantity must be valid for the stock unit. If not, it is automatically adjusted to the nearest appropriate value.

10. To proceed, click OK.
11. If you are re-issuing a quantity, the Scrap Traceable Finished Products Selection window appears.



12. Select the item to re-issue from the available serial or batch numbers.

    Note: The Total Selected must match the Scrapped Quantity.
13. To proceed, click OK.
14. Confirm that you want to save changes when prompted.

    A works order is created for the re-issue quantity you specified.

Scrapping Components

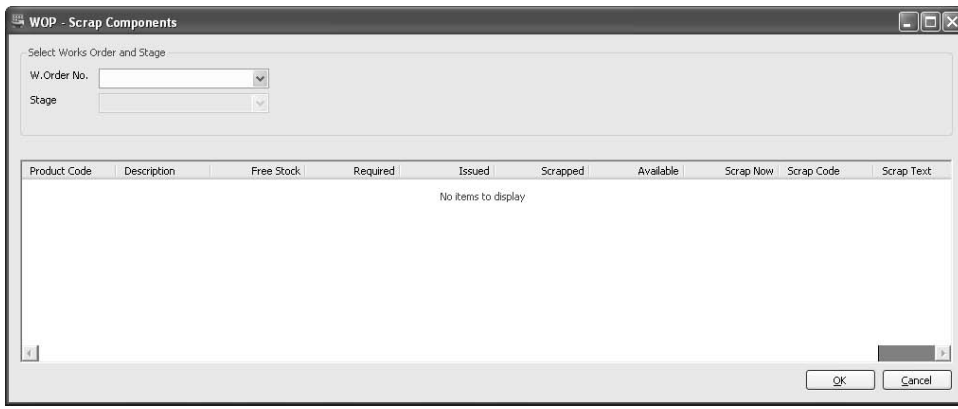
During manufacture, components or raw materials may become spoilt or damaged and need to be scrapped. You can scrap materials after issue. The stock levels are automatically adjusted in the Stock Control module.

If components are traceable and part of a completed item on the works order, they cannot be scrapped. However, you can substitute components to scrap. You may need to do this if you need to replace an item that has failed quality control processes. For more information, see *Substituting Traceable Components* on page 422.

To scrap components for a one-off works order

1. From the Navigation Bar, click Works Orders and choose Processing > Scrap > Scrap Components.

   The Scrap Components window appears.



2. Select the works order from the drop-down list.
3. Select the required Stage from the drop-down list.

   Components issued against this works order are listed. You can view the amount required and the number of components that have been scrapped already.

4. Enter the amount of the components to scrap in the Scrap Now box.

   Note: This must not exceed the quantity that has already been issued. It must be a valid stock unit quantity. If it is not valid, the quantity is automatically adjusted to the nearest appropriate value.

   If the component is traceable, a list of issued traceable items is displayed when you move from the Scrapped box. Select from the list of traceable item numbers those which are to be scrapped to the value of the quantity in the Scrapped box.

If you select a traceable component that has been incorporated in a finished item (a completed works order) then you cannot scrap the item. However, you can substitute the item in the finished item and then scrap the component. For more information, see *Substituting Traceable Components* on page 422.

5. Select the Scrap code relating to the reason behind the scrapping.
6. Enter any additional text required in the Scrap Text box.
7. To proceed, click OK.
8. Confirm that you want to save the changes when prompted.

   If the component is traceable, the record is retained showing that the items were issued to the works order but the record is marked as scrapped.

   A scrap transaction is created and linked to the works order. This shows the date, time, operator, quantity and reason code together with the works order and product.

To scrap components for a batch works order

1. From the Navigation Bar, click Works Orders and choose Processing > Scrap > Scrap Components.

   The Scrap Components window appears.

2. Select the works order from the drop-down list.

   The components issued against the works order are listed. You can view the amount required and the number of components that have been scrapped already.

3. To scrap components, select the required component and enter the total number of components scrapped in the Scrap Now box.

Note: This must not exceed the quantity that has already been issued. It must be a valid stock unit quantity. If it is not valid, the quantity is automatically adjusted to the nearest appropriate value.

4. If the component is traceable, and you enter a scrapped quantity that is less than the quantity issued to the works order, a list of traceable items is displayed when you move from the Scrapped box. You must select from the list of traceable item numbers those which are to be scrapped to the value of the quantity in the Scrapped box.

   If you select a traceable component that has been incorporated in a finished item (a completed works order) then you cannot scrap the item. However, you can substitute the item in the finished item and then scrap the component. For more information, see *Substituting Traceable Components* on page 422.

5. Repeat the above steps for each component.

6. To proceed, click OK.

7. Confirm that you want to save the changes when prompted.

   If the component is traceable, the record is retained showing that the items were issued to the works order but the record is marked as scrapped.

   A scrap transaction is created and linked to the works order. This shows the date, time, operator, quantity and reason code together with the works order and product.

Substituting Traceable Components

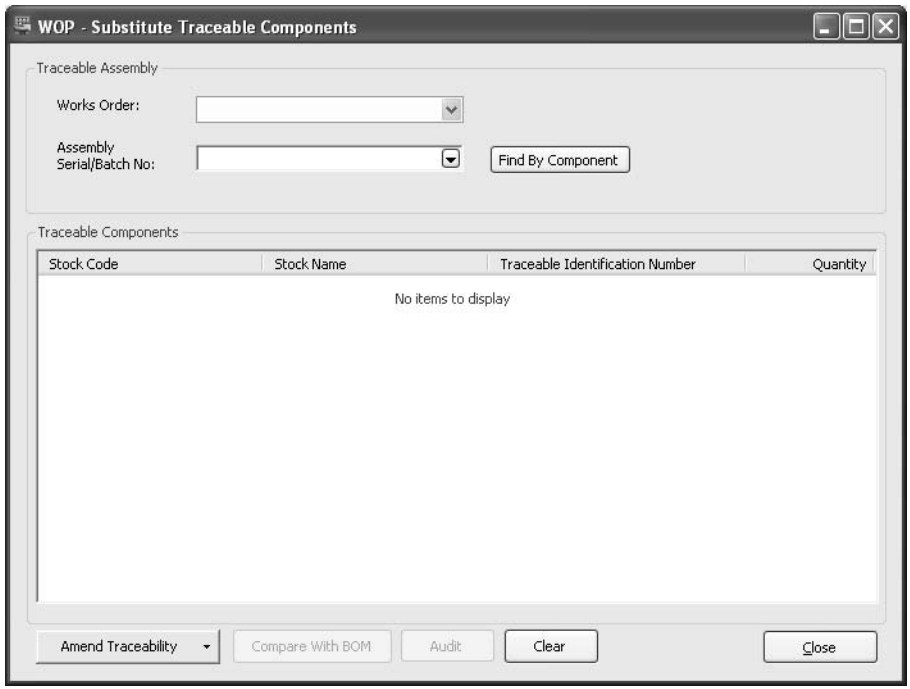
If a traceable component fails a quality check, you can substitute it within a complete batch works order if:

- The component has been used in the manufacture of a traceable finished item.
- The finished item has not been sold or issued.

To substitute traceable components

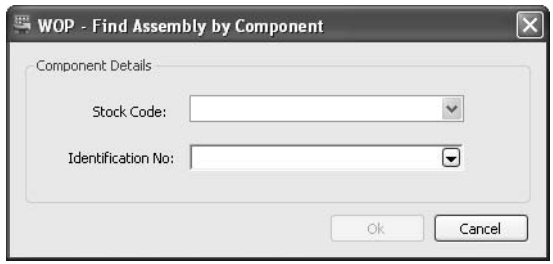
1. From the Navigation Bar, click Works Orders and choose Processing > Substitute Traceable Components.

   The Substitute Traceable Components window appears.



2. Select the Traceable Assembly. You can use one of the following methods:
   - Enter the works order number. Traceable components identified for the assembly, are displayed.
   - Enter the Assembly Serial/Batch No. Traceable components identified for the assembly, are displayed.
   - Click Find By Component.

The Find Assembly by Component window appears.



- Select the Stock Code of the component.
- Select the Identification No of the component.

  Note: If the item is present on multiple works orders, you must select the works order.

Traceable components identified for the assembly, are displayed.

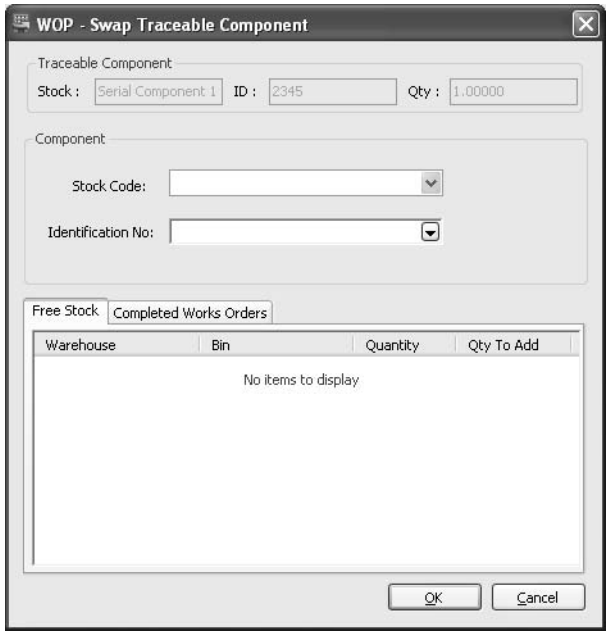
3. Select the operation that you want to perform for the assembly, from the Amend Traceability drop-down list. You can:
   - Swap a component. See *To swap a component on page 423*.
   - Change a component's assembly. See *To change the component's assembly on page 425*.
   - Add a component. See *To add a component on page 425*.
   - Return the component to stock. See *To return the component to stock on page 426*.
   - Scrap the component. See *To scrap the component on page 427*.
4. To compare the stock quantities and the stock items with the current active BOM, click Compare with BOM.

   Note: If you are using BOM Versioning, and have a more recent version of the BOM than the one that was used to create the works order, then the comparison will not be valid because it will be between the works order created from the original BOM and the current active BOM which will be different.
5. To view a list of the changes you have made, click Audit.
6. To clear the displayed details, click Clear.
7. Click OK when you have finished substituting traceable components.

To swap a component

1. Select the traceable component you want to swap, from the list of Traceable Components.
2. Select Swap from the Amend Traceability drop-down list.

The Swap Traceable Component window appears.



3. Select the Component source.

   You can swap a component from free stock (Stock Code), or a component from an existing completed full component traceability works order (Identification No).

   Note: The stock code does not have to match the code on the component you are swapping. However, you cannot swap a component which is linked to other allocations, or a temporary traceable item.

4. Select the component you want to swap.

   - If you selected from Stock Code, select the component from the Free Stock list.
   - If you selected from Identification No, select the component from the Completed Works Orders list.

     The available components are listed.

5. If the component is batch traceable, enter the Qty To Add.

   Note: You can enter a different quantity from the component you are swapping. However, you should ensure that the quantity you are swapping is sufficient to make the finished assembly quantity.

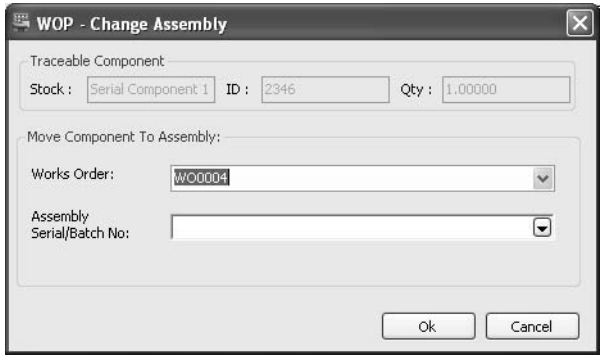
6. Click OK.

The traceable component is swapped with the original component on the assembly's list of traceable components.

To change the component's assembly

1. Select the traceable component from the list of traceable components.
2. Select Change Component's Assembly from the Amend Traceability drop-down list.

   The Change Assembly window appears.



3. Select the Move Component To Assembly details from the drop-down lists.
   - Select a Works Order.

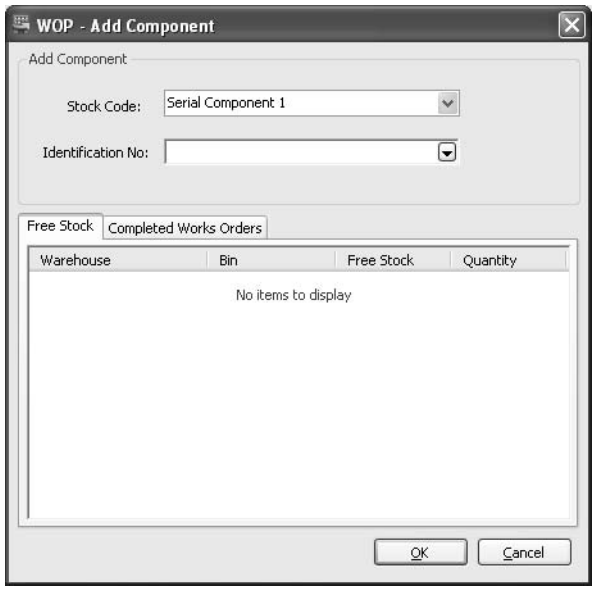
     Note: The current works order is selected by default.
   - Select an Assembly Serial/Batch No.
4. Click OK.

   The traceable component is moved from the current assembly to the selected assembly selected.

To add a component

1. Select Add Component from the Amend Traceability drop-down list.

   The Add Component window appears.



2. Select the component identification.
   - Select the Stock Code.
   - Select the Identification No.

   You can add a component from free stock (Stock Code) or from an existing completed full component traceability works order (Identification No).

   The available components are listed on either the Free Stock tab or the Completed Works Orders tab.
3. Select the Free Stock or Completed Works Orders tab.
4. Select the component from the list of available components.

   If the component is a serial item, only one component item will be listed. If it is part of a batch, many component items may be listed.
5. Enter the Quantity to add for the selected component.
6. Click OK.

   The traceable component is added to the assembly's list of traceable components.

To return the component to stock

1. Select the traceable component from the list of traceable components.
2. Select Return Component To Stock from the Amend Traceability drop-down list.

The Return To Stock window appears.

3. Select the Location to return the component to.

   Note: By default, the location displayed is where the component was issued from originally.

4. If the component is batch traceable, enter the Quantity of the component you are returning to stock.

5. Click OK.

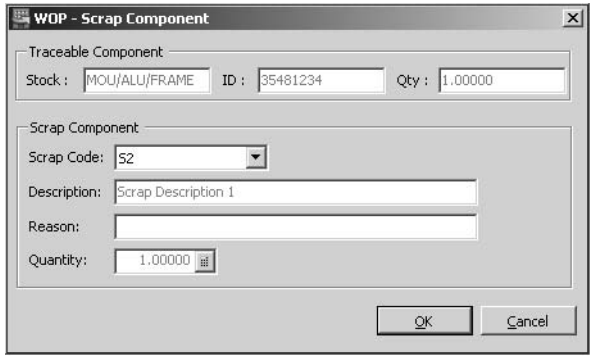
   The component is returned to stock.

To scrap the component

1. Select the traceable component from the list of traceable components.

2. Select Scrap from the Amend Traceability drop-down list.

   The Scrap Component window appears.



3. Select the Scrap Code. The Description is shown automatically.

4. Enter Scrap Text which describes the reason for scrapping the component.

5. If the component is batch traceable, enter the component Quantity you are scrapping.
6. Click OK.
   The component is written off.

Entering Operation Times and Costs

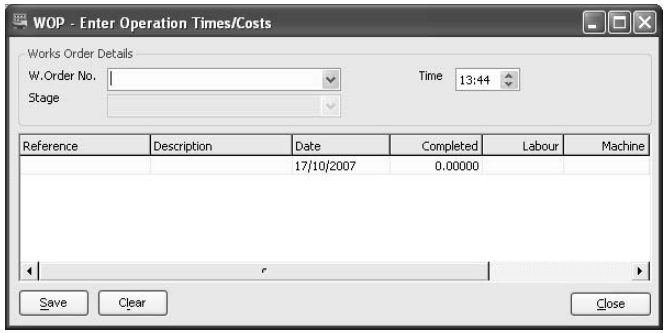
You can enter progress and times of operations against a works order. For those works orders created from an estimate (one-off works orders) you can compare actual times entered here, against your original estimated times.

For works orders not created from an estimate (batch works orders), the procedure for entering operation times varies slightly. It is assumed these entries will be made using one of the works order documents, for example the Job Card, Route Card or Operation Card.

To enter operation times

1. From the Navigation Bar, click Works Orders and choose Processing > Enter Costs > Operation Times/Costs.

   The Enter Operation Times/Costs window appears.



2. Select the works order from the drop-down list.
3. If the works order is a one-off operation, select the Stage from the drop-down list. The operation details are displayed in the window.
4. If the operation is not on the list (it is an addition to the estimated operations) or if the works order is a batch order (the works order was not created from an estimate), you will need to enter a Reference and Description manually.

   Note: Once created, operations are permanently stored against works orders.
5. If appropriate, enter the quantity now completed.

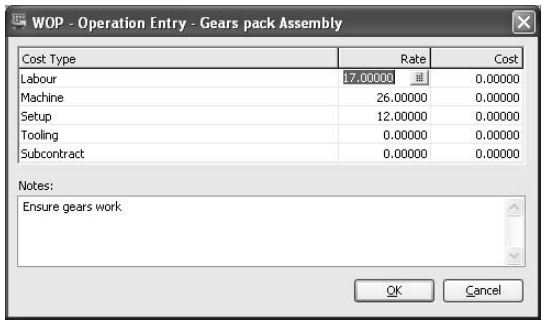
   If this is not a batch works order, leave the quantity as '0' (zero), or enter '1' as appropriate.
6. Enter the labour, machine, setup and subcontract cost times.

   Note: Manufacturing has a unique entry system for entering times. You can enter time in any of the following formats:
   Entering 65 would display 65h 0m (65 hours zero minutes).

Entering 6{space}5 would display 6h 5m (6 hours 5 minutes).
Entering 6h5m would display 6h 5m (6 hours 5 minutes).
Entering 65m would display 1h 5m (1 hour 5 minutes).

7. Enter the costs by clicking within the Costs box and clicking the down arrow.

   The costs so far recorded against the operation are displayed, broken down over the various cost headings.



   - If the operation has been stored via an estimate or from the Operations Register, the cost of the time entered will already have been calculated for each category.

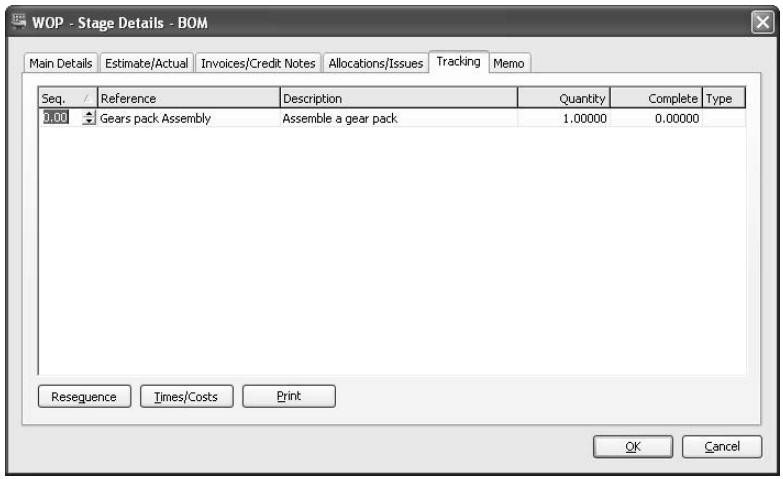
     If this is an additional operation not drawn from the Operations Register you will need to enter rates as appropriate.
   - Enter any notes required on this screen for information purposes only.
   - To save the details, click OK.

8. To save the information, click Save.

To view operation details for a one-off works order

1. From the Navigation Bar, click Works Orders and choose Records > One-Off > Amend Works Order.
2. Select the works order.
3. Select the Stages tab.
4. Click within the Description box.
5. Click on the box at the right hand edge of the Description box, to display the Stage Details information.
6. Click the Tracking tab.

   The Tracking information appears.



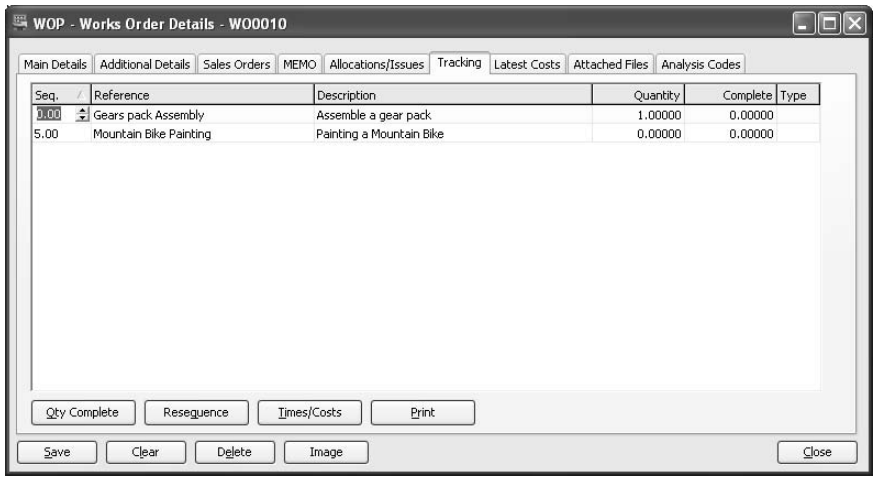
7. Select the operation Reference and click Times/Costs to view additional information about times and costs entered against each cost category for the operation.
   - When you have finished viewing additional information, click Close.
8. To continue, click OK.

   Note: You can view the cost that you entered, and see if what you estimated was greater or less than the actual costs by looking at the Estimate/Actual tab for the works order against the stage. For more information, see *The Stages tab (One-Off Works Order)* on page 386.
9. To close the Works Order Details window, click Close.

To view operation details for a batch works order

1. From the Navigation Bar, click Works Orders and choose Records > Batch > Amend Works Order.
2. Select the works order.
3. Click the Tracking tab.

   The Tracking information appears.



4. Select the operation Reference and click Times/Costs to view additional information about times and costs entered against each cost category for the operation.
   - When you have finished viewing additional information, click Close.
5. To close the Works Order Details window, click Close.

Posting Actual Times and Costs to Works Orders

The Timesheets option lets you post actual times and costs to works orders. This is similar to what you can do from within Operation Times, but the information is entered from employee timesheets rather than Route Cards, Job Sheets or Operation Cards.

All of the employees time can be entered on this screen, even if it does not directly apply to a works order. The Non-Chargeable Time option lets you record these costs.

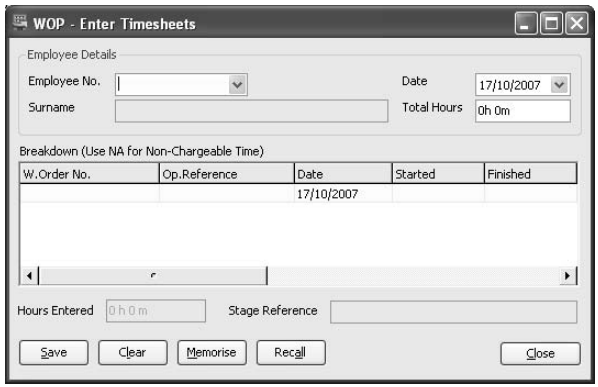
Before continuing, ensure that you have set up any necessary records in the following modules:

- Labour Categories. For more information, see *Labour Categories* on page 82.
- Employees. For more information, see *Employees* on page 84.
- Non-Chargeable Time. For more information, see *Non-chargeable Time* on page 90.

To enter timesheets

1. From the Navigation Bar, click Works Orders and choose Processing > Enter Costs > Timesheets.

   The Enter Timesheets window appears.



2. Select the required Employee No. from the drop-down list.

   The employee's surname appears automatically.

3. Enter the date you want to use as a default for the breakdown entry.

4. If you have turned on the option to enable Total/Analysis Checking in Works Order Settings, enter the total number of hours the employee has worked in this period. For more information, see *The Timesheets/Labels tab* on page 344.

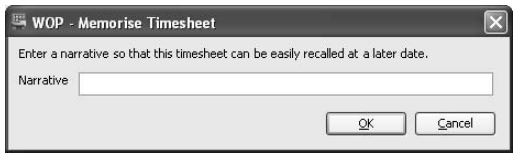
   Note: The hours analysed for the breakdown must equal the total hours entered here.

5. Enter chargeable or non-chargeable time. For more information see *To enter chargeable time* on page 436 and *To enter non-chargeable time* on page 435.
6. Click within the Category Ref. box and select the required labour category.

   Note: The category applies to this one entry; further postings will use the category stored against the employee record. If you want to change the labour category an employee is assigned, you should do this through the Employees module. For more information, see *Employees* on page 84.
7. Repeat the process for the other items until the whole timesheet has been entered.
8. To post the timesheet, click Save.

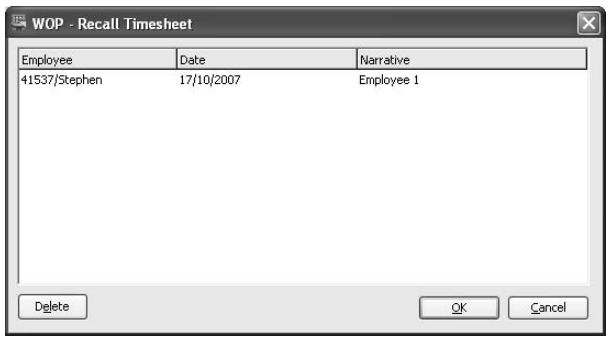
   Note: Remember that if you have turned on the option to enable Timesheet Total/Analysis Checking in Works Order Settings, you will not be able to leave this screen unless the breakdown hours analysed is equal to the total hours entered.
9. To store this timesheet as a template for future timesheets, click Memorise.

   The Memorise window appears.



   - Enter a narrative to be associated with this timesheet.
   - To save the timesheet with the narrative, click OK.
10. To recall a memorised timesheet, click Recall.

    The Recall Timesheet window appears.



   - Select the timesheet you want to recall.

- To recall the timesheet, click OK.

The timesheet details are displayed on screen. You can process the timesheet as normal.

11. To delete a memorised timesheet, click Recall.

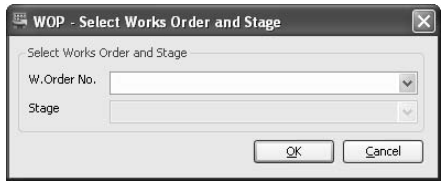
    The Recall Timesheet window appears.

    - Select the timesheet you want to delete.
    - To delete the timesheet, click Delete.

To enter non-chargeable time

1. In the Enter Timesheets window, click within the W. Order No. column.
2. To enter times and costs which apply to a works order, select the works order in the following way.
    - Click on the box at the right hand edge of the W.Order No. box, to display the Select Works Order and Stage window.

      The Select Works Order and Stage window appears.

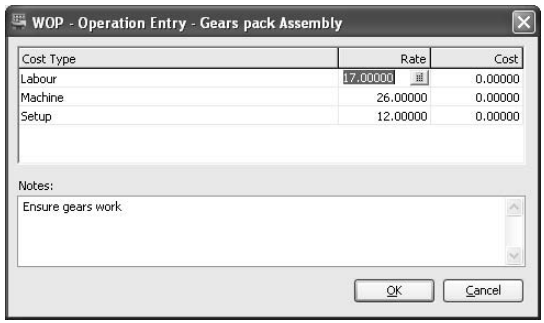


3. To enter times and costs which do not directly apply to any works order, enter 'NA' in the W. Order No. column.
4. Enter the labour time spent on this non-chargeable activity.

    Note: Manufacturing has a unique entry system for entering times. You can enter time in any of the following formats:
    Entering 65 would display 65h 0m (65 hours zero minutes).
    Entering 6{space}5 would display 6h 5m (6 hours 5 minutes).
    Entering 6h5m would display 6h 5m (6 hours 5 minutes).
    Entering 65m would display 1h 5m (1 hour 5 minutes).

    Note: Machine, setup and quantity completed are irrelevant for non-chargeable entries.
5. Click within the Costs column and click the down arrow to enter rates and costs for the entry.

    Any costs so far recorded against the entry are displayed and broken down over the various cost headings.



- If you have decided not to use the employee rate for timesheets then you will need to enter the rate of this activity manually. If you don't enter the rate manually, the cost of the time entered will already have been calculated.
- Enter any notes on this screen for information purposes only.
- To save your details, click OK.

To enter chargeable time

1. In the Enter Timesheets window, click within the W. Order No. column.
2. Click on the box at the right hand edge of the W.Order No. box, to display the Select Works Order and Stage window.
   - Select the works order from the drop-down list.
   - If you choose a one-off works order, select the stage from the Stage drop-down list.
   - Click OK.
3. Click within the Op. Reference column.
4. Click on the box at the right hand edge of the Op. Reference box, to display the Select Operation window.
   - Select the operation that this employee has performed. This is important so the works order can be progressed automatically.
   - To proceed, click OK.
5. Enter the quantity completed.
6. Enter the period of time taken for Labour, Machine and Setup.

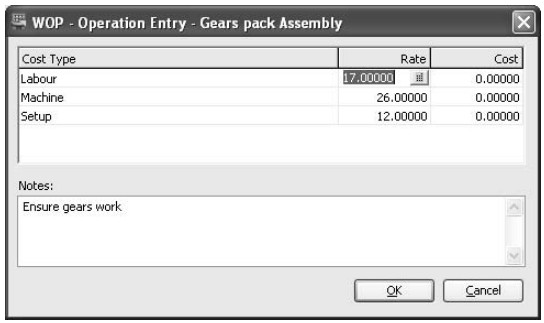
   You can enter a Started and a Finished time. These values are used as to calculate the time spent on a works order. After you have entered both times, the duration will be calculated and then entered automatically in the Labour box.

   Note: Manufacturing has a unique entry system for entering times. You can enter time in any of the following formats:

Entering 65 would display 65h 0m (65 hours zero minutes).
Entering 6{space}5 would display 6h 5m (6 hours 5 minutes).
Entering 6h5m would display 6h 5m (6 hours 5 minutes).
Entering 65m would display 1h 5m (1 hour 5 minutes).

7. Click within the Costs column and click the down arrow to enter rates and costs for the entry.

   The costs so far recorded against the entry are displayed, broken down over the various cost headings.



- If you have decided not to use the employee rate for timesheets then the rate from the operation will be used.
- You may also enter any notes on this screen for information purposes only.
- To save the details, click OK.

Making Postings for Non-stock/Other Expenses

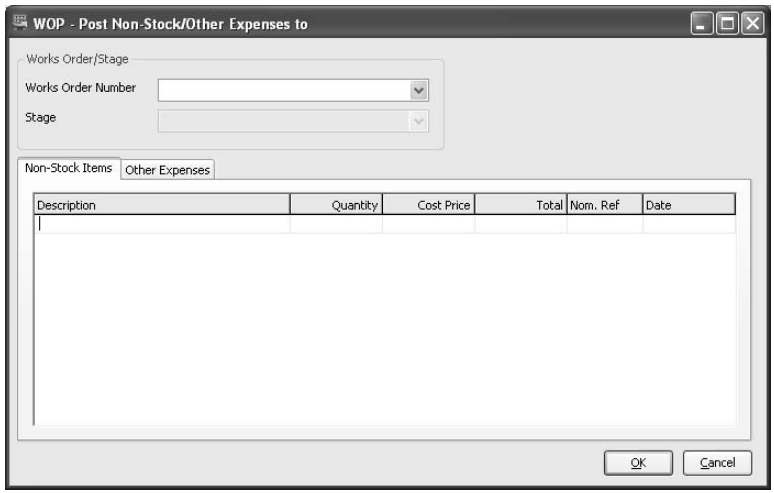
(One-off Works Orders Only)

Most costs entered through Manufacturing can be posted using the Stock, Operation Times and Timesheets routines. The Non-Stock/Other Expenses option enables postings against one-off works orders for costs which cannot be entered elsewhere within the system. Examples of such costs are payments made out of petty cash, or purchases of items not being processed through the Purchase Ledger. These Non-Stock/Other Expenses may optionally update your Nominal Ledger, depending upon your setting in Nominal Ledger Settings. For more information, see *Nominal Settings* on page 37.

To make postings for non-stock or other expenses

1. From the Navigation Bar, click Works Orders and choose Processing > Enter Costs > Non-Stock/Other Expenses.

   The Post Non-Stock/Other Expenses window appears.



Note: Since the cost types Operation Times and Stock Items are entered under their own headings, only two cost types are available on this screen, Non-Stock Items and Other Expenses. If non-Stock items are processed through the Purchase Ledger, they would be entered under Purchase Invoices.

For more information about the options on the tabs, please see the following sections.

Non-stock Items

To enter non-stock items

1. In the Post Non-Stock/Other Expenses window, select the Works Order Number.
2. Select the Stage.
3. Select the Non-Stock Items tab.
4. Enter a description for this entry, followed by a quantity and cost price'.

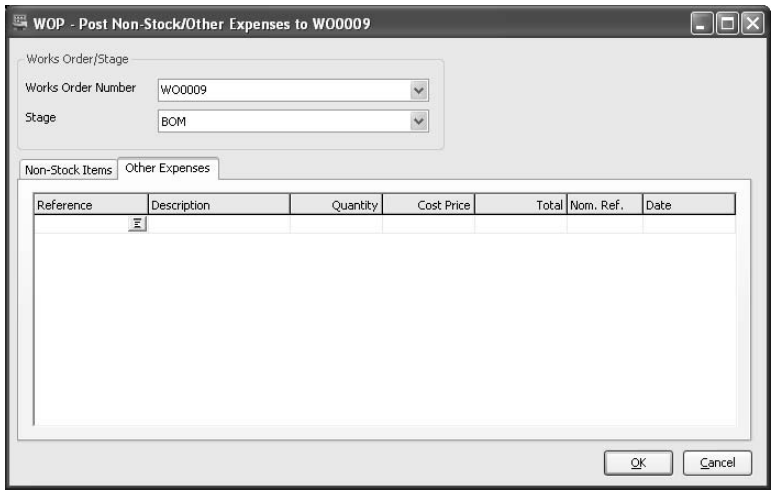
   The Total will then be calculated.
5. If you are updating your Nominal Ledger with this posting, you may now enter an appropriate Nom.Ref. and confirm or amend the accounts to be debited and credited.
6. Repeat the above procedure to make further entries.
7. On completion click OK.

Other Expenses

Specific other expenses must be set up prior to using this option. If you have not already defined these costs see *Expense Types* on page 88.

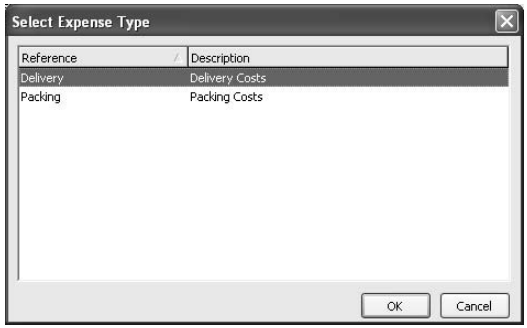
To enter other expenses

1. In the Post Non-Stock/Other Expenses window, select the Works Order Number.
2. Select the Stage.
3. Select the Other Expenses tab.



4. Click within the Reference box.
5. Click on the box at the right hand edge of the Reference box to display the Select Expense Type window.

   The Select Expense Type window appears.



   - Select the Expense Type and click OK to return to the Other Expenses tab.

     The Reference, Description, Cost Price and Date are automatically entered in the relevant columns of the Other Expenses tab. The Nom. Ref. is entered if this has been set up within the Expense Types register.

6. Enter a quantity and move to the Total box.

   Manufacturing calculates and inserts the total automatically for you.

7. Repeat the above procedure to make further entries.
8. On completion, click OK.

Costing a Works Order

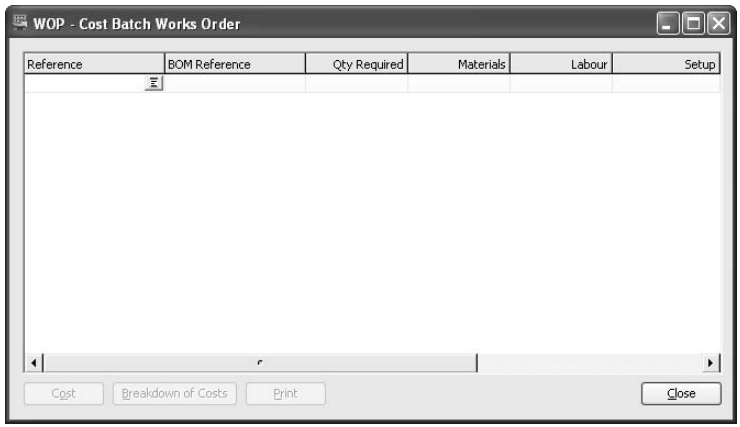
(Batch Works Orders Only)

Manufacturing keeps a record of the theoretical cost of each batch works order. This record is not automatically updated when individual costs change, or for the first calculation of the costs, but is updated when the works order has been completed. As a result, you may notice an apparent discrepancy between the results of a costing, before and after production. This is because when production is complete, Manufacturing calculates the costing using actual costs.

To cost a works order

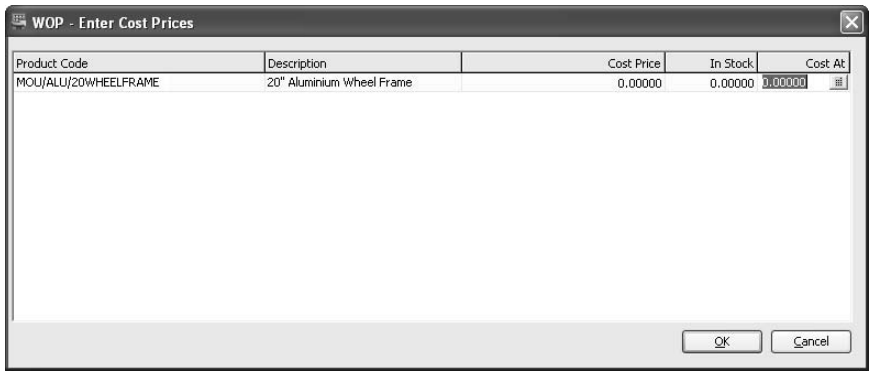
1. From the Navigation Bar, click Works Orders and choose Processing > Cost Works Order.

   The Cost Batch Works Order window appears.



   Note: You can also cost works orders from on the Latest Costs tab within the batch Works Order Details window. For more information see *To display current latest costs on page 443*.

2. Select the required works order from the Reference drop-down list.
3. To calculate the costs, click Cost.
4. If the Ignore Zero Costs check box is not selected, and the costing process encounters an item with a zero cost, the Enter Cost Prices window appears.



- Enter the cost for the item.
- Click OK to return to the Cost Batch Works Order window.

5. To produce a report detailing the current works order costs, click Print.
6. To display a graphical breakdown of the costs, click Breakdown of costs. For more information on viewing current latest costs and graphical breakdown, see *The Latest Costs tab (Batch Works Order)* on page 372.

   Note: The unit cost of any manufactured item may vary depending upon the size of the batch. This is due to the setup costs and any variable subcontract costs which may be spread over a greater number of units.
7. To close the Cost Batch Works Order window, click Close.

To display current latest costs

1. From the Navigation Bar, click Works Orders and choose Records > Batch > Amend Works Order.
2. In the Works Order Details window, display the details for the required works order.
3. Click the Latest Costs tab.
4. Click the Breakdown of Planned Costs option to display a graphical breakdown of the planned costs or click Breakdown of Actual Costs to display a graphical breakdown of the actual costs.
5. Click Cost Now to calculate the works order costs.
6. Click Close, to close the window.

Creating/Updating BOM

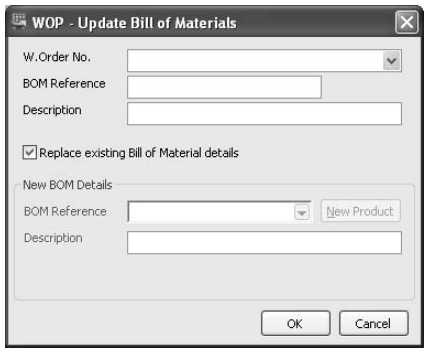
(Batch Works Orders Only)

For batch works orders, as you can amend the working BOM, you can also update the amendments and write these amendments back to the Bill of Materials module, either as an update to the original BOM, or as a completely new BOM.

To update the BOM

1. From the Navigation Bar, click Works Orders and choose Processing > Update BOM.

   The Update Bill of Materials window appears.



2. Select the required works order from the drop-down list.
3. To update the original BOM and replace the existing information, select the 'Replace existing Bill of Material details' check box.

   Note: This replaces any information you had previously for this bill of materials.
4. To write a new bill of materials, clear the 'Replace existing Bill of Material details' check box, and choose a product to create the new bill of materials for.
   - Select an existing product in the Stock Control module from the BOM Reference drop-down list.
   - Create a new product by clicking New Product, and entering the details in the Stock Control module directly.

     Note: You cannot choose an existing product that already has a BOM created.
5. To confirm the amendments, click OK.

Converting a One-off Works Order into a BOM

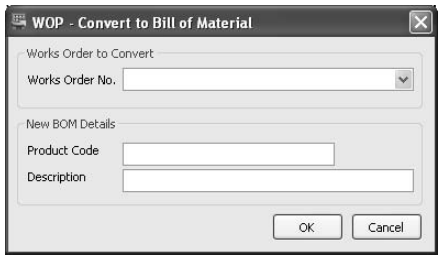
(One-off Works Orders Only)

You can convert your one-off works orders into standard BOMs. This option handles the creation of stock items in the Stock Control module automatically. In addition, you are prompted to create stock items for all of the non-stock items that exist on the works order.

To convert a works order into a BOM

1. From the Navigation Bar, click Works Orders and choose Processing > Convert One-Off to BOM.

   The Convert to Bill of Material window appears.



2. Select the required works order from the drop-down list.
3. Enter the Product Code and Description for the new BOM.

   Note: You cannot enter an existing Product Code.
4. To convert the works order to a BOM, click OK.

   If you have non-stock items on this works order, the Enter New Stock Item window appears for each item. You must enter a stock code for every non-stock item on the estimate.

   When you have entered your product codes, the new BOM appears in the Bill of Materials List.

Enquiring on Orders

Use Order Enquiry to check whether you have ordered everything you need to fulfil the works order.

For Order Enquiry to give accurate results, perform the following before running the process.

- Allocate Stock
- Run MRP

Order Enquiry relies on the tags generated by the Run MRP process.

The enquiry will show a list of components for the works order selected in the Works Order No. box. If the Multi-Level check box is selected, components are also listed for all associated sub-assembly works orders.

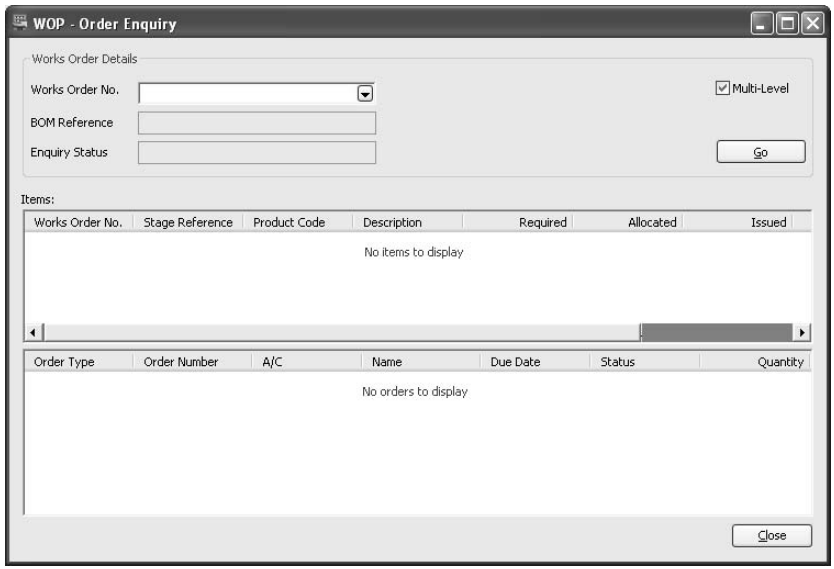
The enquiry also lists purchase orders or works orders raised for components.

Note: You can also access the Order Enquiry window through the Order Enquiry button on the Allocations/Issues tab for batch works orders, or the Estimate/Actual tab for one-off works orders.

To enquire on orders

1. From the Navigation Bar, click Works Orders and choose Processing > Order Enquiry.

   The Order Enquiry window appears.



2. To show components for associated sub-assembly works orders along with the highest level works order in the Works Order No. item section of the window, select the Multi-Level check box.

   This ensures all works orders associated with the one you enter in the Works Order No. box are displayed in the Works Order No. item section of the window.

   Note: The Multi-Level check box is selected by default. Clear the Multi-Level check box if you do not want to list all associated works orders in the Works Order No item section of the window.

3. Select the required works order from the Works Order No drop-down list.

4. Click Go.

   Works orders are shown in the Works Order No. section of the window.

   The Enquiry Status box indicates generally how many items are outstanding and need to be ordered to fulfil the works orders.

5. If some or all items are outstanding in the Enquiry Status box, check the figure in the Qty Outstanding column to determine the stock shortfall that still needs to be ordered.

6. Select a component in the Works Order No. item list to display purchase or works orders raised for that component. Purchase or works orders raised are displayed in the Order Type section of the window.

7. Double-click the purchase order or works order to display further information about when it was raised, when the due date is, and so on.

8. To close the enquiry screen, click Close.

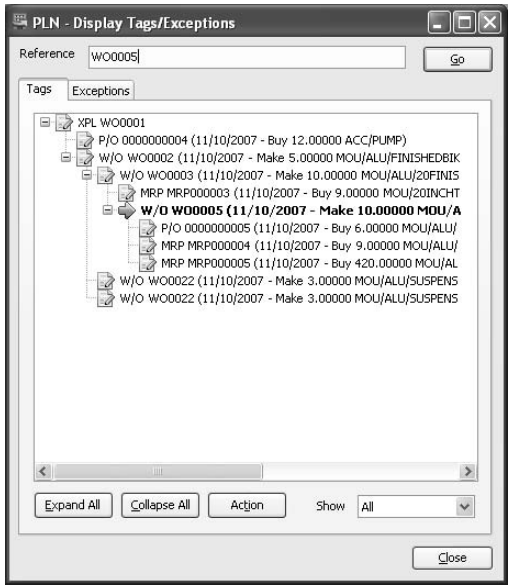
Viewing Tags and Exceptions

You can find and view all tags and exceptions with a particular recommendation reference, purchase order number, works order number or sales order number.

To view tags and exceptions

1. From the Navigation Bar, click Works Orders and choose Tags/Exceptions.

   The Display Tags/Exceptions window appears.



2. Enter the Reference required and click Go.

   The tags and exceptions are displayed on the Tags and Exceptions tabs. By default, tags are fully expanded.

3. To collapse tags or exceptions, click the minus sign ('-') next to the higher level tag or exception, or click Collapse All.

4. To expand tags or exceptions, click the plus sign ('+') next to the higher level tag or exception, or click Expand All.

5. To close the window, click Close.

Viewing Subcontracting Operations

(Batch Works Orders Only)

By default, when you click Works Orders from the Navigation Bar, the Works Orders List is displayed. You can switch to the Subcontracting List to view all the subcontracting operations for all of the live works orders.

To view subcontracting operations

1. From the Navigation Bar, choose Works Orders > Subcontracting > Subcontracting List.

   The Subcontracting List appears.

2. Select the option that you require from the icons at the top of the Subcontracting List or from the Navigation Bar.

Record	Click Record to display details about the subcontract operation.
Raise Purchase Orders	Click Raise Purchase Orders to raise purchase orders for the selected subcontract operations. ■ Select the works orders you want to raise purchase orders for. ■ Change the supplier, quantity to order, cost price, lead time, order date or due date, if required. ■ Click Raise Orders.
Despatch	Click Despatch to enter the quantity being despatched to a subcontractor. ■ Select a supplier to whom you are despatching subcontract materials, and then select the subcontract operation from the W. Order No. drop-down list. The system checks whether or not a purchase order has been placed with the supplier for this operation. If not, the row is highlighted as a warning but you can continue to despatch to the supplier. The system also checks whether the quantity despatched exceeds the outstanding quantity for the operation.
Print Advice Note	Click Print to print or re-print advice notes.

Waiting to be posted

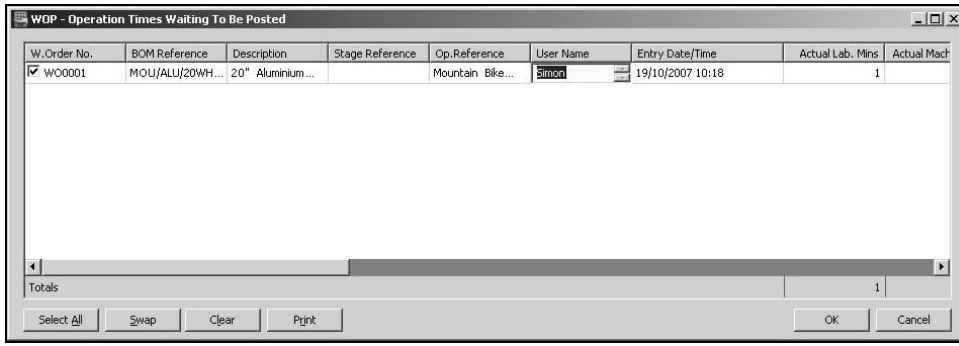
Note: This option is only applicable if you are using the Operation Times module. For more information, see the *Sage 200 Operation Times* documentation.

If you have selected Use Batch Updates (see *The Operation Times tab* on page 350) then all postings made using Operation Times, whether manually, or via terminals, will be stored in the waiting postings file for review before they are posted to the works orders. This option allows complete control over postings made on the shop-floor and also allows for additional postings to be made to the Nominal Ledger.

To view the waiting postings file

1. From the Navigation Bar, click Works Orders and choose Operation Times > Waiting to be Posted.

   The Operation Times Waiting To Be Posted window appears.



   This window shows all of the postings that have been made, either manually or from terminals, using Operation Times.

2. The postings are grouped by works order number, stage and then operation reference.

   Note: This is for ease of reference, but you can change this by dragging and dropping the column headers.

3. As these are actual postings from the shop floor, you must take care when modifying the information.

4. To delete postings, highlight the entry and press F8.

5. To update the actual costs against the various works orders, click Post Operation Times and click Yes to confirm that you want to make the postings.

   Note: Postings cannot be reversed once they have been posted.

The actual costs are updated, nominal postings are made (if nominal integration is set), and entries removed from the waiting postings file.

Monitoring Employees Logged onto Works Orders

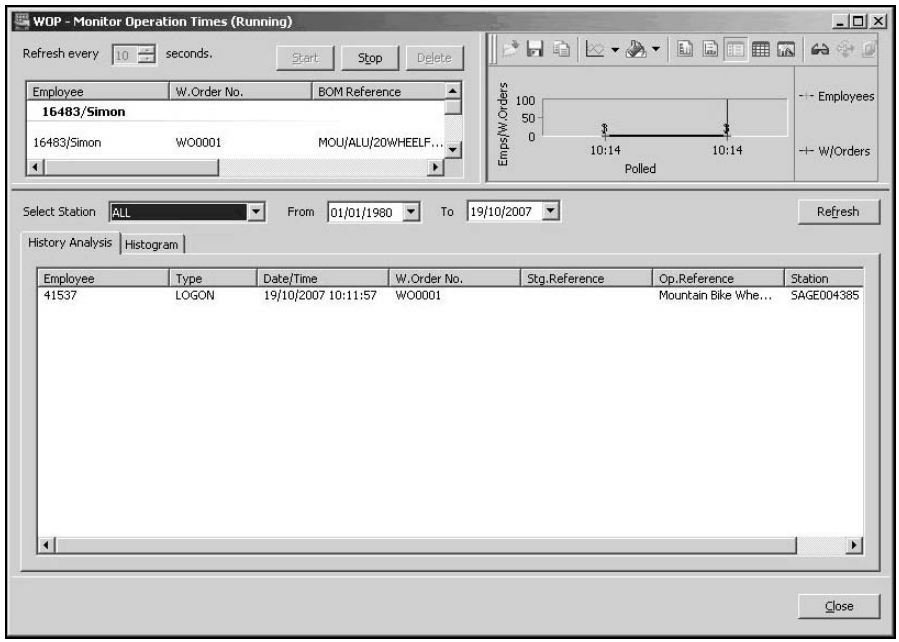
Note: The Monitor option is only applicable if you are using the Operation Times module. For more information, see the *Sage 200 Operation Times* documentation.

This option allows you to monitor in real-time the number of employees logged onto works orders. You can also review the log files that Operation Times collates, so that proper analysis can be undertaken.

To monitor employees logged onto works orders

1. From the Navigation Bar, click Works Orders and choose Operation Times > Monitor > Summary.

   The Monitor Operation Times window appears.



   Note: If you use the Retrospective Posting mode to enter data, you will have only one entry in the log file for a job. If you use the online processing mode where you log on and log off jobs, you will have two entries for each time you log on and off that job.

2. To monitor the activity, confirm the 'Refresh every' interval; then click Start.
3. To stop monitoring, click Stop.

4. The grid in the top left hand side of the window shows a list of works orders that each employee is currently logged onto.
5. If you need to force an employee to log off, highlight the entry, and click Delete.

   Note: This does not log the employee off; it permanently deletes the entry from the database. Therefore, any times that have accumulated for that entry will not be written to the works order.
6. On the right-hand side, a graph shows the number of employees and the number of works orders that are logged on at each interval level.
7. At the bottom of the screen, you can perform an analysis of the logs generated by each station.
   - Select a station, ensure the dates are correct for the time period you want to analyse, and click Refresh.

     The log file information appears.
8. To view the information graphically, click the Histogram tab.

   Note: The scale of the graph defaults to showing 100 employees. You can amend the scales to what is most appropriate for your needs.
   - Double-click on a bar on the histogram to drill down and see the detail for that bar.
9. To close the window, click Close.

Maintaining Works Orders

You can replace components in many works orders and BOMs at the same time, using the Replace Component routine.

The routine in 'Works Orders' is exactly the same as in Bill of Materials. For more information, see *Replace Component* on page 161.

To replace components

- From the Navigation Bar, click Works Orders and choose Maintenance > Replace Component.

Preparing Works Orders Reports

Works order reports are available in three categories from the 'Works Orders' menu: 'Batch', 'One-Off' and 'Subcontracting'.

Batch Works Orders Reports

The following batch works orders reports are available.

- Actual Labour Summary

  This provides a summary on the actual labour used in the works order. It may be listed by BOM reference, or by works order.

- Actual Labour Times

  This report provides detail on the labour times in the works order. You may produce the report with or without costs for individual or for all employees.

- Actual Op Times

  This indicates the actual times taken during the works order operations. You may produce the report with or without costs for all works orders, by BOM reference, by works order, for outstanding works orders, or for works orders that have work in progress.

- Allocations/Issues

  This report shows the works orders allocations and issues.

- Costing Analysis

  This shows an analysis of the works order costs.

- Labour Time Comparison

  This provides a comparison of the time taken in various labour activities. It may be by works order, for all works orders, or by BOM reference.

- List

  You can produce a detailed or a summary list of batch works orders.

- Operation Times - Currently Processing

  This provides a list of operation times for operations that are currently processing.

- Outstanding Works Orders

  This lists your outstanding works orders. It may be by BOM reference or by status.

- Waiting Postings

  This lists postings that have not yet been made to the works order.

- What's Needed

  List what is needed for the works order by BOM reference or by status.

- Work In Progress

This report shows the work that is in progress in the works orders and may show all costs for the current work in progress or a valuation of the costs. Valuation may be presented by works order.

- Work To Report

  This lists the work that is needed to report on the works orders.

- Works Order Tracking

  This report tracks the works orders and shows where they are in their operational sequence.

- Works Orders by Sales Order

  This report will show you which works orders apply to your sales orders.

One-Off Works Orders Reports

The following one-off works orders reports are available.

- Actual Labour Summary

  This provides a summary on the actual labour used in the works order. It may be by works order.

- Actual Labour Times

  This report provides detail on the labour times in the works order. You may produce the report with or without costs for individual or for all employees.

- Actual Op Times

  This indicates the actual times taken during the works order operations. You may produce the report with or without costs for all works orders, by works order or for outstanding works orders.

- Allocations/Issues

  This report shows the works orders allocations and issues. It may be listed by product.

- Costs vs Revenue

  This shows an analysis of the works order costs against the expected revenue, for all stages or by stage.

- Detailed Estimated vs Actual

  This provides a comparison of the estimate against the works order. It may show variances only or those works orders that fall outside the allowed variance.

- Due Date Report

  This report shows the due dates for all works orders.

- Job Tracking Report

  This report indicates how the works orders have progressed.

- Labour Time Comparison

  This provides a comparison of the time taken in various labour activities. It may be by works order or for all works orders.

- List

  You can produce a detailed or a summary list of one-off works orders.

- Non-Stock Entries

  This lists non-stock entries for the works orders.

- Operation Times - Currently Processing

  This provides a list of operation times for operations that are currently processing.

- Operation Times - Estimate vs Actual

  This report provides a comparison of the operation times listed in the estimate against the actual operation times in the works order.

- Stock Items Report

  This provides a list of stock items used in the works orders.

- Transaction Report

  This provides a list of works orders transactions.

- Waiting Postings

  This lists postings that have not yet been made to the works order.

- Work In Progress

  This report shows the work that is in progress in the works orders and may show all costs for the current work in progress or a valuation of the costs. Valuation may be presented by works order.

- Work To Report

  This lists the work that is needed to report on the works orders.

- Works Order Tracking

  This report tracks the works orders and shows where they are in their operational sequence.

Subcontracting Reports

The following subcontracting reports are available.

- Work In Progress Report

  This report on the progress of subcontracts may be for all works orders, by product, supplier or works order.

To prepare works orders reports

1. From the Navigation Bar select Works Orders, and choose Reports.
2. Select the required sub-category of report - Batch, One-off or Subcontracting.
3. Select the report required from the list of available reports in the menu.

   For more information on preparing reports, see *Sage 200 help*.

To customise works orders reports

You can edit or copy report layouts, or create a new report layout, using Sage Report Designer. For more information, see *Sage Report Designer* documentation.

Note: We advise you to copy your existing report layouts before you edit them. If you edit the standard report layouts, future amendments by us will overwrite your changes.

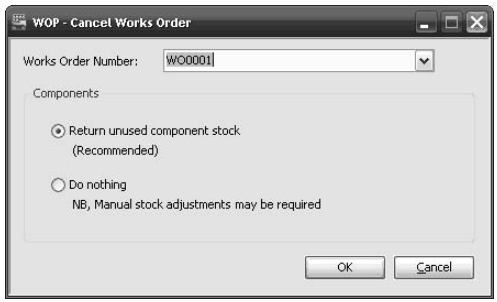
Cancelling Works Orders

Cancelling a works order prevents any further processing on that works order. Upon cancellation, any stock allocation entries are reversed and, where appropriate, issues are returned to stock. Once cancelled, the works order cannot have stock issued to it, or be marked as completed.

To cancel works orders

1. From the Navigation Bar, click Works Orders and choose Records > Cancel Works Order

   The Cancel Works Order window appears.



2. Select the required works order from the drop-down list.
3. If the works order has been part completed, or is being made to satisfy sales orders, select what you want to do with issued component stock.
4. To continue, click OK.

   The works order status changes to cancelled.

   Allocations are reversed and issues are returned to stock.

   Note: Any necessary adjustments in stock are made directly in the Stock Control module.
5. If the works order is being made to satisfy sales orders, choose how you want to handle any sales orders attached to the works order.
6. Click OK to complete the cancellation.

Completing Works Orders

When manufacturing processes are complete, works orders need to be flagged as Completed. Completion increases the stock levels of the finished item.

In addition to completing works orders, in order to update the costs of the finished items and update the Nominal Ledger, if required, you also need to close works orders after you have completed them. For more information, see *Closing Works Orders* on page 470.

The processes for completion differ depending on whether you are working with batch works orders or one-off works orders. For more information see, *Completing Batch Works Orders* on page 460 and *Completing One-Off Works Orders* on page 466.

Completing Batch Works Orders

You can complete a batch works order with a quantity above the value requested on the order.

Note: You cannot fully complete a works order that is linked with a sales order, if the works order quantity does not satisfy the sales order quantity.

The recording of a works order as Completed can either be done on final completion of the whole batch, part completion of a batch, or production can be tracked through the various operations to completion.

Note: Stock must be issued to the works order before it can be flagged as complete unless you have set the Allow at any time completion option within Works Order Settings. For more information, see *The Allocate/Issue/Complete tab* on page 346.

The procedure for completing works orders in whole or part batches depends on whether you have chosen to allow multiple (batches) works orders and are in fact processing more than one works order at one time.

- If you have selected the Allow Multiple (batches only) option within Works Order Settings (see *The Allocate/Issue/Complete tab* on page 346) and are processing more than one batch works order at one time, you cannot record completion of part of a batch. The system will complete the full quantity on the works order regardless of the levels of components issued to the works order. For more information, see the section *To complete multiple batch works orders* on page 461.
- If you have selected the Allow Multiple (batches only) option but are only processing one batch works order, or if you have not selected the option to allow multiple batch works orders, you can record part completions and leave balances outstanding. You can also mark a works order as complete even though a different quantity has been manufactured. If MRP has been run and you have set the Allocate Parent Works Orders option within Works Order Settings, you can also allocate completed stock to tagged works orders (those works orders that have given rise to the current works order). For more information, see the section *To complete single batch works orders* on page 461.

To track goods through the manufacturing process, enter the quantities currently completed at each operation. Once the goods have passed through all the operations required, you can mark

the works order as completed. For more information, see *To record progress of a batch* on page 465.

In order to update the costs of the finished items and update the Nominal Ledger, if required, you also need to close works orders after you have completed them. For more information, see *Closing Works Orders* on page 470.

To complete multiple batch works orders

1. From the Navigation Bar, click Works Orders and choose Works Orders List.
2. In the Works Orders List, select the batch works orders to complete.
3. Click Complete.
4. Confirm that you want to complete the works orders.

   An order is excluded from completion if it has:

   - No component issued to it.
   - Outstanding allocations.
   - Traceable finished items with traceable components.
   - A link to a sales order with a higher quantity than that entered for completion on the works order.

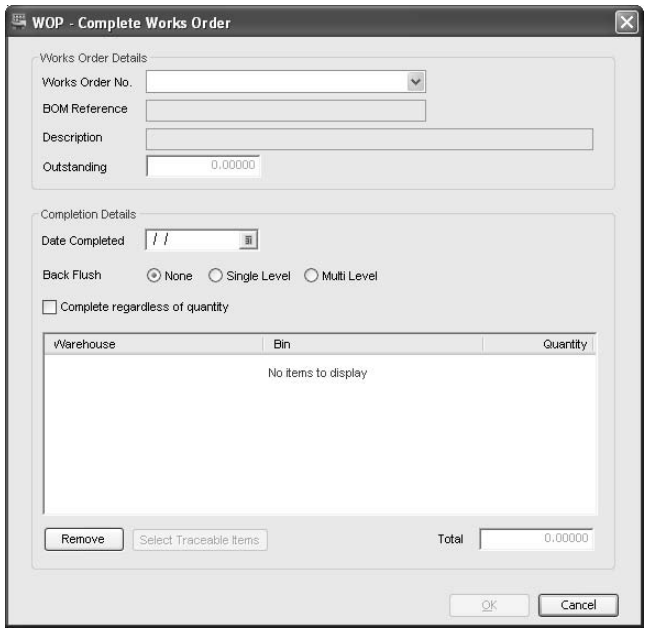
   Manufacturing updates your stock records in the Stock Control file.

   The status of your selected works order changes to 'Completed'.

To complete single batch works orders

1. From the Navigation Bar, click Works Orders and choose Processing > Complete.

   The Complete Works Order window appears.



2. Select the required works order from the drop-down list.
3. Enter the Date Completed. This defaults to the system date.
4. The Backflushing selection defaults to the default entered in the Allocate/Issue/Complete tab in Works Order Settings.

   Note: Backflushing cannot take place where there is a shortage of components, and multi level backflushing is only available if you are using MRP to raise works orders.

   - To issue raw materials retrospectively for the works order, select Single Level.
   - To issue raw materials retrospectively for sub-assemblies, select Multi Level.
   - To issue no materials retrospectively, select None.
5. Select the 'Complete works order regardless of quantity' check box, to mark the works order as entirely complete whether the quantity corresponds to the original works order quantity or not. Leave the check box clear to show an outstanding balance against partially complete works orders.
6. Enter the completed quantity in the Quantity column.

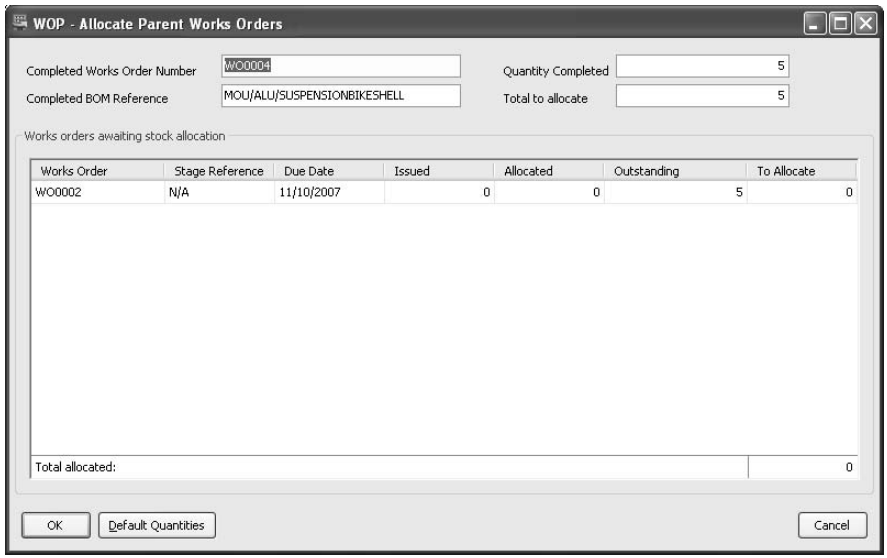
   If the works order is linked with a sales order, the quantity must be equal to or greater than the sales order quantity.

   Note: If the quantity does not match the stocked unit of the finished product it is automatically adjusted to the nearest appropriate value.

7. Enter the location of the components.
   - If you are using multiple locations, enter the completion quantity over the various Warehouse and Bin locations.
   - If the finished item is traceable, and the Stock Control is set to generate traceable numbers automatically then you can change the location from that entered, if required. Otherwise, confirm the traceable item numbers to be given to the completed stock and specify the location into which each item is placed. If there are traceable components, you must match the traceable components to traceable finished items on an additional form. You will not be able to do this if you are fully completing a works order where the quantity of the serial numbered components is not divisible by the works order quantity. In this case, the form will not appear.

     Note: If you are part completing a works order that has serial number components, the component quantity must be divisible by the works order quantity.
   - If you have set works orders to Allocate Sales Orders on completion, a list of sales that have unallocated lines for the completed item is shown, allowing you to allocate the stock to the relevant lines. By default, completed stock will be allocated to the sales orders linked to the works order but you can change this. The entire completed quantity does not have to be allocated to the sales orders.
8. To complete the process, click OK
9. Confirm the quantity completed when prompted.
10. If any tagged works orders exist for the completed works order, the Allocate Parent Works Orders window appears.

    Note: MRP must have been run and the Allocate Parent Works Orders option within Works Order Settings must be set.



The orders are sorted by delivery date.

11. Amend the quantity To Allocate.
    - To use default quantities, click Default Quantities.

      The quantities are fully allocated against order, from oldest to newest until the completion quantity has been exhausted.
    - To enter quantities manually, enter the quantities in the To Allocate box for each order.

    Note: You cannot allocate more than the outstanding quantity.
12. To perform the allocations, click OK.

    The program checks that physical stock is available for allocating by comparing the free stock with the To Allocate quantity. The Quantity Allocated figure on the product record and the Allocations/Issues record for the product are updated. The status of the works order is changed to 'Part Allocated' or 'Allocated' if the status is 'Entered' or 'Part Allocated'.
13. Labels will be printed or previewed (if necessary) and the Latest Costs window appears automatically if you set the relevant option. For more information, see *The Allocate/Issue/Complete tab* on page 346.
14. If you entered a completed quantity less than the original works order quantity, and have chosen to complete the works order regardless of the quantity entered, a confirmation message appears.

- Click Yes to return all unused components relating to the difference between the original works order quantity and the quantity now declared as completed. You do have the opportunity to adjust the quantities to be returned to stock.
- Click No to prevent any adjustments to stock.

Manufacturing automatically updates the stock record with the quantity of stock completed and the cost to complete the works order.

Note: The quantity used for costing purposes is always the original works order quantity. This is so that large batches of daily counts can be entered without affecting the overall unit cost.

To record progress of a batch

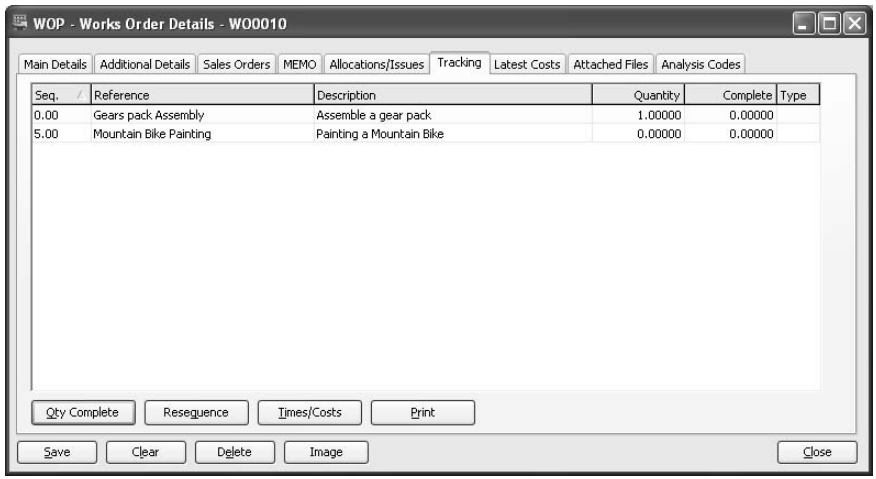
1. From the Navigation Bar, click Works Orders and choose Records > Batch > Amend Works Order.

   The Works Order Details window appears.

2. Select the works order.

3. Click the Tracking tab.

   The Works Order Tracking information appears.

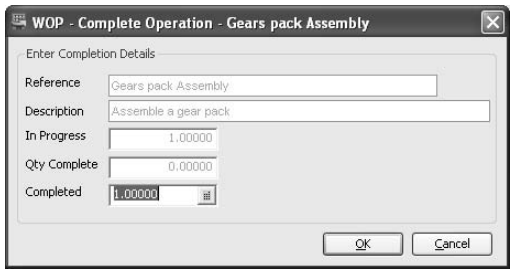


   Operations required to complete the works order are listed in sequence order.

4. To record the progress of production, select an operation.

5. Click Qty Complete.

   The Qty Complete window appears.



- Enter the quantity that has now passed through the selected operation in the Completed box.

  This defaults to the outstanding quantity.

  This quantity is automatically rolled forward as the In Progress quantity for the following operation, leaving any balance still to be completed.

6. Continue as necessary to record the progress of the works order.

   When you have entered a completed quantity for the final operation, the Complete Works Order window appears.

   You can now enter the completed information. For more information on entering the information see *To complete single batch works orders* on page 461.

Completing One-Off Works Orders

When a one-off works order has been finished you should record its completion so that final profitability reports may be printed.

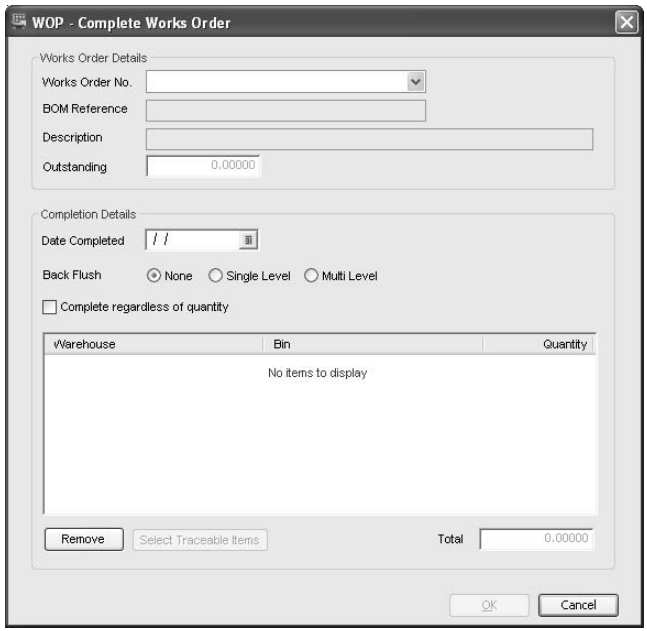
If MRP has been run and you have set the Allocate Parent Works Orders option within Works Order Settings, you can also allocate completed stock to tagged works orders (those works orders that have given rise to the current works order).

In order to update the costs of the finished items and update the Nominal Ledger, if required, you also need to close works orders after you have completed them. For more information, see *Closing Works Orders* on page 470

To complete one-off works orders

1. From the Navigation Bar, click Works Orders and choose Processing > Complete.

   The Complete Works Order window appears.



2. Select the required works order from the drop-down list.

   The BOM Reference, Description and Outstanding quantity are displayed automatically.

3. Select the 'Complete works order regardless of quantity' check box, to mark the works order as entirely complete whether the quantity corresponds to the original works order quantity or not. Leave the check box clear to show an outstanding balance against partially complete works orders.

4. Enter the completed quantity in the Quantity column. This defaults to the number Outstanding.

5. Enter the location of the components:

   - If you are using multiple locations, enter the completion quantity over the various Warehouse and Bin locations.
   - If the finished item is traceable, and the Stock Control is set to generate traceable numbers automatically then you can change the location from that entered, if required. Otherwise, confirm the traceable item numbers to be given to the completed stock and specify the location into which each item is placed. If there are traceable components, you must match the traceable components to traceable finished items on an additional form. You will not be able to do this if you are fully completing a works order where the quantity of the serial numbered components is not divisible by the works order quantity. In this case, the form will not appear.

Note: If you are part completing a works order that has serial number components, the component quantity must be divisible by the works order quantity.

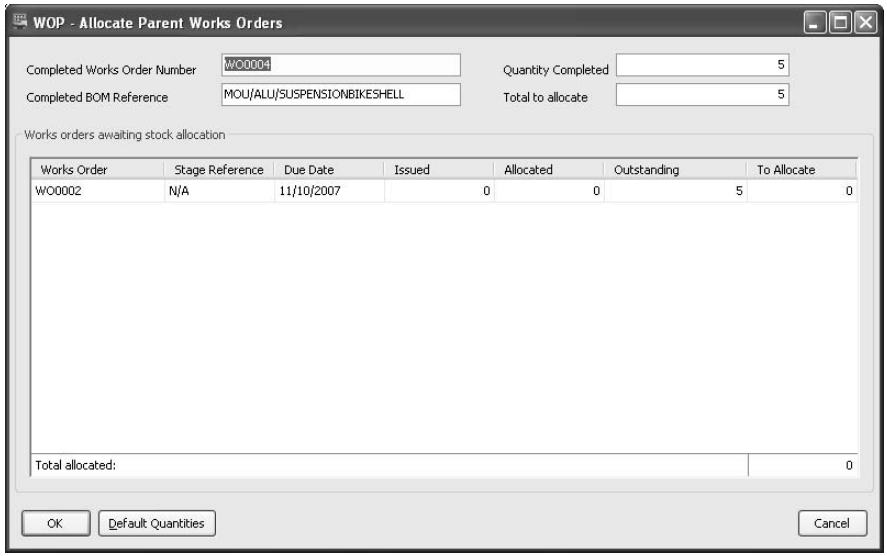
- If you have set works orders to Allocate Sales Orders on completion, a list of sales that have unallocated lines for the completed item is shown, allowing you to allocate the stock to the relevant lines. By default, completed stock will be allocated to the sales orders linked to the works order but you can change this. The entire completed quantity does not have to be allocated to the sales orders.

6. To complete the process, click OK.
7. Confirm the quantity completed when prompted.

   Note: If the quantity does not match the stock unit of the finished product, it is automatically adjusted to the nearest appropriate value.

8. If any tagged works orders exist for the completed works order, the Allocate Parent Works Orders window appears.

   Note: MRP must have been run and the Allocate Parent Works Orders option within Works Order Settings must be set.



The orders are sorted by delivery date.

9. Amend the quantity To Allocate.
   - To use default quantities, click Default Quantities.

     The quantities are fully allocated against order, from oldest to newest until the completion quantity has been exhausted.

- To enter quantities manually, enter the quantities in the To Allocate box for each order.

Note: You cannot allocate more than the outstanding quantity.

10. To perform the allocations, click OK.

    The program checks that physical stock is available for allocating by comparing the free stock with the To Allocate quantity. The Quantity Allocated figure on the product record and the Allocations/Issues record for the product are updated. The status of the works order is changed to 'Part Allocated' or 'Allocated' if the status is 'Entered' or 'Part Allocated'.

11. Labels will be printed or previewed (if necessary) and the Latest Costs window appears automatically if you set the relevant option. For more information, see *The Allocate/Issue/Complete tab* on page 346.

12. If you entered a Completed quantity less than the original works order quantity, and have chosen to complete the works order regardless of the quantity entered, a confirmation message appears.

    - Click Yes to return all unused components relating to the difference between the original works order quantity and the quantity now declared as completed. You do have the opportunity to adjust the quantities to be returned to stock.
    - Click No to prevent any adjustments to stock.

    Manufacturing automatically updates the stock record with the quantity of stock completed and the cost to complete the works order.

    Note: The quantity used for costing purposes is always the original works order quantity. This is so that large batches of daily counts can be entered without affecting the overall unit cost.

Closing Works Orders

Some costs associated with a works order may not be known until after the finished item has been completed and added to the company's stock so that it can be sold.

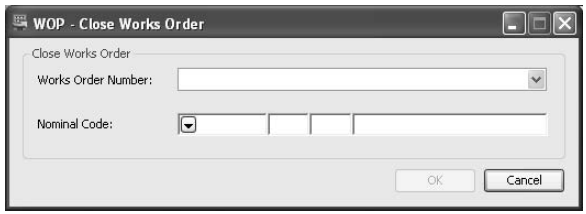
When you have completed works orders, stock levels of the finished item are increased. You must close the works orders in order to update the costs of the finished items and update the Nominal Ledger. For more information on completing works orders, see *Completing Works Orders* on page 460.

Note: You can only close a completed works order.

To close works orders

1. From the Navigation Bar, click Works Orders and choose Processing > Close.

   The Close Works Order window appears.



2. Select the Works Order Number that you want to close.
3. By default, the default asset nominal account to post the cost to is displayed.

   If the works order is for a stock item, this defaults to the asset account for the stock item. If it is for a service one-off works order, it defaults to the one-off asset account set in Manufacturing System Manager (see *Nominal Settings on page 37*).

   Select a different account if required, from the Nominal Code drop-down list.
4. Click OK.

   The unit cost of the finished goods is calculated by dividing the total cost of the works order by the number of completed items. The stock records are updated with the calculated unit costs, and the work in progress and asset of stock records are updated in the Nominal Ledger. The works order is marked as closed.

Creating an Estimate from a Completed Works Order

(One-off Works Orders Only)

You can create an estimate based on the items used in a completed one-off works order. All of the stock items, non-stock items, operations and other expenses that have been used during production will be included in the estimate.

Note: Any items originally estimated for but not used in the completed works order, will not be included in the new estimate.

To create an estimate from a completed one-off works order

1. From the Navigation Bar, click Works Orders and choose Processing > Create Estimate from One-Off.

   The Create Estimate For One-Off Works Order window appears.

2. Select the required works order from the drop-down list.
3. Enter the Estimate No.

   Note: If the setting Automatic Estimate Numbers is set in Estimate Settings then the estimate number will be created automatically. For more information, see *The Numbering tab* on page 173.
4. The customer account on the existing works order is displayed by default. Select the account for whom you are creating the estimate, from the A/C, Short name or Postcode drop-down list.

   The Name and Contact details appear automatically.
5. To create the estimate, click OK.

   The new estimate will be listed in the Estimating module.

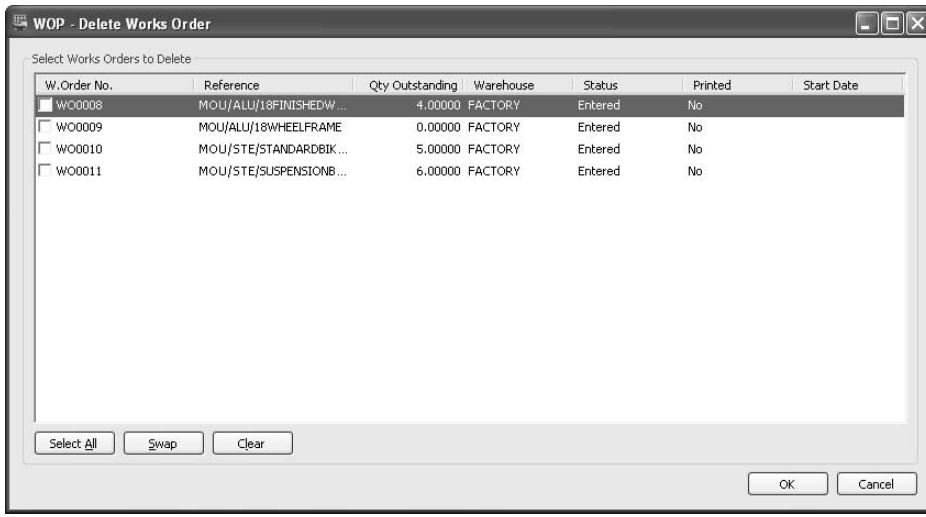
Deleting Works Orders

As Works Orders are cancelled or closed you can remove them.

To delete works orders

1. From the Navigation Bar, click Works Orders and choose Records > Delete Works Order.

   The Delete Works Order window appears.



2. Select the required works orders.
3. To delete the works orders, click OK.

Chapter 13

Operation Times

Operation Times is an additional Manufacturing module which puts you in charge of your manufacturing shop floor operation times. It runs alongside Works Orders.

The following sections provide a high level introduction to using Operation Times. Before proceeding, we recommend that you read *Sage Operation Times* documentation in full.

In this chapter:

How Operation Times integrates with Works Orders 474

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How Operation Times integrates with Works Orders

You can use operation times to collect information about job times. You set up preferences for how you want Operation Times to work within Works Orders. For more information, see *The Operation Times tab on page 350*.

Depending on how you set it up, you can enter information after the jobs are completed, or record the time as you do the jobs. For more information, see *Sage Operation Times* documentation.

If you are using Operation Times, you can monitor the work jobs and times from within Works Orders. For more information, see *Waiting to be posted on page 450* and *Monitoring Employees Logged onto Works Orders on page 452*.

Setting Up Operation Times within Works Orders

Operation Times lets you collate times and costs for employees on works orders. By default, it works with the company chosen when it is installed. You can change the company if you select the 'Allow selection of companies' setting within the Operation Times tab of Works Orders Settings. For more information on this setting and all other Operation Times settings, see *The Operation Times tab on page 350*.

Using Operation Times

You can run Operation Times retrospectively, or in real time. This depends on whether you selected the Retrospective Posting check box within Works Orders Settings. For more information, see *The Operation Times tab on page 350*.

When you enter job information retrospectively, you enter all the information at once. When you enter the information in real time, you log onto the works order, then do the work. When you finish you log off the job and confirm the time spent on the job. For more information, see *Sage Operation Times* documentation.

The information is posted either to the waiting postings file or direct to the works order, depending on how you set up 'Operation Times'. For more information, see *The Operation Times tab on page 350*

To use operation times

- Run Operation Times.

  For more information, see *Sage Operation Times* documentation.

Monitoring Activity

If you are using waiting postings, you can make adjustments within Works Orders. For more information, see *Waiting to be posted on page 450*. You can also check jobs and times by *Monitoring Employees Logged onto Works Orders on page 452*.

Chapter 14

Glossary of Terms

This chapter contains definitions of frequently used manufacturing terms and a list of acronyms that are used in Manufacturing.

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Glossary 477

List of Acronyms

A/C	Account
AI	Adjustment In
AO	Adjustment Out
ATP	Available to Promise
BOM	Bill of Materials
CRP	Capacity Requirements Planning
ERP	Enterprise Resource Planning
GI	Goods Inward
GRN	Goods Received Note
JIT	Just In Time
MI	Movement In
MPS	Master Production Schedule
MRP	Materials Requirements Planning
MRP II	Manufacturing Resource Planning
MSM	Manufacturing System Manager
NA	Not Applicable
NS	Non-stock
O/B	Opening Balance
ODBC	Open Database Connectivity
OE	Other Expenses
O/S	Outstanding
PC	Purchase Credit Note
PI	Purchase Invoice
POP	Purchase Order Processing
SC	Sales Credit
SCM	Supply Chain Management
SI	Sales Invoice
SOP	Sales Order Processing
SR	Sales Receipt
WC	Works Order Cancellation
WI	Works Order Issue
WIP	Work In Progress

Glossary

A

Action Date	The date whereby the next stage in the process is actioned.
Advice Note	A note to a purchaser advising on the intended purchase.
Analysis Codes	Codes used for analysing and reporting on your estimates. You may attach five different analysis codes to each estimate for reporting purposes. For example, you might want to analyse your estimates by industry type and area. Therefore, you would set up analysis codes, 'Industry Type' and 'Area'.
ATP	For more information see *Available to Promise* on page 477.
Automatic Resolution of Conflict	Conflict in a schedule is automatically resolved within the system. This option is not currently offered within Sage 200 Manufacturing although you can resolve conflicts yourself manually using Graphical Planner. For more information, see *Production Scheduling* on page 487.
Available to Promise	Stock or planned stock not committed to a definite customer order.

B

Backflush	The process of moving materials automatically from stock to work in progress based on standard quantity required. **Note:** Without data accuracy and discipline, backflushing can lead to inaccurate inventory records and is therefore not recommended.
Backwards Planning	The system works out when you should start work in order to meet the delivery date.
Balance Sheet	A report on the assets and liabilities of a business, usually at the end of an accounting period. A balance sheet must balance: debits must equal credits.

Barcode	A unique code identifiable by a barcode reader. This can be printed out on various works order documentation, such as picking lists. Using barcodes allows you to speed up the entry of information into the system.
Bill of Materials	The Bill of Materials module allows stock explosion with unlimited components on unlimited levels.
Blow-through Phantom	A phantom BOM usually contains components that are assembled and used in other BOMs. During assembly, the phantom's components are listed in the top level instead of the phantom BOM itself. The components are 'blown through' to the top level. Blow-through phantom is a term that describes the process of blowing through components from a phantom BOM to the top level. For more information see, *Phantom Bill of Materials* on page 486.
BOM	A list of components that are needed to make up an item of stock or a sub-assembly.
BOM Header	The product code for the finished item or sub-assembly, and any manufacturing instructions relating to the whole build.
Bucket	A time period (for example, a day) in which all demands or requirements are added together and treated as one.
Bulk Issue	The issue of stock in bulk.

C

Calibration	The process of testing and measuring a machine's response against its expected response.
Calibration History	A record of the tests and results of the calibration process on the machines used within the system.
Calibration Interval	The length of time between required calibration testing for a machine.
Capacity Requirements Planning	The method of evaluating what quantity of materials can be processed on a machine or in a production unit.

Certificate of Conformity	A certificate, issued with a product, which states that the product conforms to standard.
Charge Rate	The rate at which a product or service is charged. It tends to be related to the unit of sale. For example, in 35 pence per mile, 35 pence is the charge rate. Per mile is the unit of sale.
Chargeable Time	Time which can be charged to a specific works order.
Components	Raw materials used to manufacture finished goods.
Conflict	Demands for resource are too high on a particular date.
Consignment Stock	Stock that is only paid for when it is used.
Critical Resource	Anything which limits the company's ability to accept an order from a customer. Often this is final assembly labour or equipment. It can include, however, the capacity of earlier processes or even a vendor's capabilities.
Cross Machine Planning	Machine groups are used to assist planning. All machines in a group typically perform the same function. Instead of applying a single machine to a BOM, you apply a machine group to the BOM. Graphical Planner automatically selects a machine from the machine group to perform the work, based on capacity and loading.
CRP	For more information see *Capacity Requirements Planning* on page 478.
Cumulative Lead Time	The total time required to make a part.
Custom Layouts	Alternative layouts to standard reports.

D

Day Code	A code used to identify the day during receipt of goods. It is used as standard in food processing industries. It is also used in other inustries, for example, the pharmaceutical industry.
Default	Information that your computer uses in the absence of other information. Your computer operates in a default way,

	using default information it has been provided with. It will continue to do this until you instruct it otherwise.
Despatch Note	A note issued with goods to the customer.
Direct Expenses	Expenses incurred in the manufacture and sale of a product or service, that is, trading expenses. For example, wages, advertising, sales promotions and machine costs.
Discount	The amount by which a bill is reduced. Discount can be given because the customer is buying in bulk, spending large amounts or receiving discount for prompt payment. It can also be given to a preferred customer.
Down Time	The time that machines, or people are unavailable for production work.
Drawing Register	A record of drawings relating to manufactured items. Details include drawing number, revision details and the physical location of the drawing. Drawings can be cross-referenced to BOMs so that drawing numbers and revision dates appear on Works Orders documentation.

E

Effectivity Dates	These specify the date to change from using one stock component to another. If you are using old stock before new, these dates need to be continually adjusted. This is because the production schedule changes, stock adjustments are made, and so on. A better route is via the Phantom Bill of Materials. For more information, see *Phantom Bill of Materials* on page 486.
Employees	The option to store details about your employees. For example, you can store name, address, clock number, charge rate, labour category and so on.
Enterprise Resource Planning	Manufacturing Resource Planning (MRPII) plus resource planning for non-manufacturing areas (plant maintenance, human resource planning, and so on).
ERP	For more information, see *Enterprise Resource Planning* on page 480.

Estimates	Forecast project costs, based on expected costs of labour, machinery and operation times. In Manufacturing, estimates are produced for one-off items or non-repetitive batches.
Estimating	The process of forecasting your project costs.
Expense Types	Costs which do not fall into any other category. These can be used in estimates and in actual transactions.
Explosion	Breakdown of an item into a greater level of detail. For example, BOM requirements can be exploded into component parts. Items planned in MPS can be exploded by MRP to produce detail material and capacity requirements for the item.

F

Fence	For more information, see *Time Fence* on page 491.
Finished Goods	Top level BOM. Contains raw materials and/or components.
Finite Capacity Planning	Computer controlled rescheduling of works orders based on preset capacity resource levels and fixed scheduling rules.
Forwards Planning	You enter the date to start work in order to meet delivery.

G

Goods Received Notes	Notes which record delivery of goods from suppliers.
Graphical Planner	For more information, see *Production Scheduling* on page 487.

H

Horizon Date	A date beyond which data will not be included in the schedule. Data with a due date beyond the horizon date will not be read into the production schedule by MPS (Master Production Scheduling).

I

Infinite Capacity Planning	Material and capacity planning which is not constrained by anything.

J

JIT	For more information, see *Just In Time* on page 482.
Job	The physical tracking of a manufacturing operation within a factory.
Job Card	A job report that shows the original status of the job in production. It also shows the job stages, with the most recent update, the current job time elapsed and expenses.
Job Ready	The option to check whether a job is ready for manufacture, that is, whether all materials have been received into stock.
Just In Time	The reduction of wasteful activities, that is, anything that adds cost but not value to the end product. Examples include production or delivery in excess of requirements, movement of parts and inspection not integrated into the system.

K

Kaizen	Continuous improvement by small changes.
Kanban	A communication method used to authorise that the system is ready to receive a part. For example, an allocated space on the floor indicates that a part is needed to fill the space. An empty container indicates that parts are needed to fill the container.
Kitting	The act of picking parts from stock that are required to produce a released works order.

L

Labour Category	A skillset definition that allows employees to be grouped according to their function within the production process. This grouping can be used when entering timesheet information or in the Operation Times module.
Labour Costing	Details of labour costs required by a particular operation.
Labour Process	The definition in the Labour Register of a process such as cutting, drilling, assembly or inspection. The record defined has a unique reference, a description, notes and an hourly charge rate for the process.
Labour Register	Holds details of all labour manufacturing processes including times and related costs.
Lead Time	The number of working days elapsing between placing an order for an item and taking delivery. Within some systems lead time means the total time to manufacture.

M

Machine Costing	Details of machine costs required by a particular operation.
Machine Record	The definition in the Machine Register of a machine. The record defined has a unique reference, a description, notes and an hourly charge rate for the machine. It may also hold the number of operating hours before full service and/or ordinary service. Machine type, serial number, location, certificate requirements, calibration requirements and history are stored. Also stored are the operating hours the machine may be used each day.
Machine Register	Holds details of machines used in manufacturing processes, including hourly rates.
Manufacturing Operations	Tasks, such as 'Installing' or 'Fitting', which can be used across BOMs or estimates.

Manufacturing Resource Planning	The integrated planning of a company's material, equipment and people to meet the business plan. The integration requires that the same information (sales forecast, BOM, actual orders, and so on) is used throughout the company.
Manufacturing System Manager	The Manufacturing System Manager module lets you set up common controls to use in the other Manufacturing modules. It is also where you set up the common registers, such as Operations, Machine and Labour.
Master Production Scheduling	The planning of production (usually end item production) to satisfy current and forecast sales orders. The sum of MPS items must equal the agreed sales and operations plan for the items over each planning period. Planning periods are normally a month or a four week period. Items planned within MPS are exploded by MRP (Materials Requirements Planning) to produce the detail material and capacity requirements.
Materials Requirements Planning	A software option that automatically recommends purchase orders, transfers and work orders to balance supply and demand.
Materials Traceability	The ability to track the movement historically of materials used in production and manufacture of jobs. This is normally by means of serial or batch numbers assigned to the items.
Maximum Build Quantity	The maximum number of finished goods you can build with current levels of stock.
Microsoft® SQL Server Database	A relational database management and analysis system. **Note:** A Microsoft® SQL Server database must be installed on your computer before you install Sage 200 Manufacturing. The server database manages your data and ensures the optimisation of networked resources within your system.
MPS	For more information, see *Master Production Scheduling* on page 484.

MRP

For more information, see *Materials Requirements Planning* on page 484.

MRP II

For more information, see *Manufacturing Resource Planning* on page 484.

MSM

For more information, see *Manufacturing System Manager* on page 484.

N

Nominal Ledger

This is the core ledger in the accounting system. It is updated by most of the transactions posted in all other accounting ledgers. Nominal Account balances provide the Trial Balance, Profit and Loss and Balance Sheet financial statements.

Non-chargeable Time

Time which does not directly apply to any job and therefore cannot be charged to a works order.

Non-stock Items

Items which do not have a product record set up in Stock Control. Such items are usually bought for a specific job.

Non-working Periods

Periods when the company shuts down or when a resource is unavailable. You can build up a table of categories to which time can be booked, such as training, downtime and sickness. These are taken into consideration when calculating capacities and start/end dates of jobs during planning. They are also used in the Timesheets option.

O

Opening Balances

The balance of accounts when initially opened, or when carried over from a previous accounting period.

Operating Hours

The number of hours a machine operates during each day. This is defined in the Machine Register. You can also specify a number of operating hours before a full or ordinary service is required for the machine.

Operation Card

A report providing details about the operation status.

Operation Times	A module that allows you to collate times and costs for employees on the shop floor.
Operations	The labour and/or machine processes required to manufacture an item.
Operations Register	This holds details of frequently used operations. Using the register enables fast creation of BOMs or estimates.
Overhead	A manufacturing or production expense other than direct labour or materials.
Overhead Recovery	The process of recovering overhead costs in production analysis costing. It is also known as absorption costing. Within Manufacturing, overhead recovery processing lets you make manual or automatic Nominal Ledger postings relating to overheads recovered.

P

Phantom Bill of Materials	A BOM that is not used as as a stock component or in raising works orders. A phantom is created and structured to contain groups of components, like a standard BOM. It is used in printed reports on stock structures. It can be used to collapse the sub-assemblies to reduce work in progress (wip) and lead-time. It operates as a standard sub-assembly. However, the product code for the finished item does not appear on a higher level works order. Within Manufacturing, the components and operations of phantoms (and nested phantoms) are added to the top-level works order. These components and operations are given a sequence number of zero. In some manufacturing systems, phantoms are employed instead of effectivity dates, to use up old stock before introducing replacement parts. If so, the old item is created as a phantom with the new item, the child of the old. Old stock is used up before new stock is ordered. When a phantom has zero stock, it is deleted and the new item is made part of the original BOM.

	Phantoms are also known as non-returnable assemblies and blow-throughs.
Picking List	A report that shows the components required for a build. It shows the quantity required, and the bin location of the components. It is used in the warehouse to assemble the components required for production.
Piece Work	The cost per item (piece). Piece work provides wage labour where workers are paid per unit of production instead of by labour time.
Production Planning	Calculation and display of the resources required to satisfy sales orders and production for stock.
Production Scheduling	A tool for managing production schedules graphically. You can resolve machine conflicts and then address the question of optimum efficiency. Or you can work towards optimum efficiency and then deal with machine conflicts. You control start/finish times for labour and machine operations.
Profit and Loss	A report showing business income and expenditure over an accounting period.
Prospects	Prospective customers who do not exist in the Sales Ledger.
Prospects Database	Where information about prospective customers is held.
Purchase Credits	Notes issued to you if you have returned goods to a supplier. They are normally issued when goods or services are faulty or when the purchase invoice was incorrect.
Purchase Invoices	Issued to you by suppliers as request for payment in respect of the supply of goods or services.
Purchase Ledger	This stores details of your suppliers, and invoices, credit notes and discounts sent to you by suppliers.
Purchase Order Processing	The administrative functions based around processing purchase orders.

Purchase Orders	Documents that state the quantity, description and price of goods and services ordered. They also specify agreed payment terms and discounts, delivery details and other agreements pertinent to the purchase and its supply.
Purchase Payments	Payments made by you to suppliers in respect of invoices for goods and/or services supplied to you.

Q

Quality Standard	The standard against which the quality of parts and production processes are measured during manufacturing.
Quantity on Hand	Total nettable stock for a part.

R

Raw Materials	The base materials from which sub-assemblies, components and finished goods are made.
Recost Bill of Materials	The process of calculating the cost of a BOM when prices, components or operations change.
Recost Estimates	The process of calculating the cost of an estimate to reflect stock price changes.
Re-sequence Bill of Materials Components	The process of allocating sequence numbers to BOM components or operations. You can allocate sequence numbers in steps larger than '1' to provide gaps in the numbering sequence. This allows new components or operations to fit into the sequence, if required.
Repeating Job	The requirement to build the same item over several time periods.
Retentions	Moneys retained for a period of time after production. Retentions provide incentives to contractors to avoid or eliminate defects in the goods or services supplied.
Route Card	A report on the route of components and operations within production.

Routing	A list of operations, in sequence, needed to manufacture a part. A routing should include the amount of resource required at each work centre the part passes through. Tooling should also be included in a part's routing. Routing information should be held for every manufactured part and used for capacity planning and costing.
Run Time	The time taken for an operation to complete. This includes machine set-up time.

S

Safety Stock	The minimum level of stock. Safety stock lets you offer shorter lead times to customers. It also provides continuity of supply if requirements are uncertain. Uncertainties can be due to unreliable machines, fluctuating yields, absence, and so on.
Sales Credits	Notes issued to customers when sales invoices are cancelled. They are normally issued when goods or services are faulty or when the sales invoice was incorrect.
Sales Forecast	The best estimate of future requirements. This is used as input to the MPS (Master Production Schedule). Forecast orders received should be subtracted from the forecast to leave a residual forecast in the master schedule. Total demands can then be calculated as orders plus residual forecast for each time period.
Sales Invoices	Issued to your customers as requests for payment in respect of goods or services supplied.
Sales Ledger	This stores details of your customers. It also holds details of invoices, credit notes and discounts sent to customers and all receipts received from customers.
Sales Order Processing	The administrative functions based around processing sales orders.
Sales Orders	Documents that state the quantity, description and price of goods and services ordered. They also specify agreed payment terms and discounts, delivery details and other agreements pertinent to the sale and its supply.

SCM	For more information, see *Supply Chain Management* on page 491.
Scrap	The loss of a completed part.
Scrap Percent	A percentage allowance for scrap when issuing a BOM.
Setup Time	The time to set up a machine or production unit to perform an operation.
Shelf Life	The length of time a product or service is marketable.
Six Sigma	A measurement of process quality. If you use six sigma methodology, you use all the quality tools available to improve your processes. By doing so, you aim to have no more than '3.4' failures in one million units of production.
Stage Templates	Stage templates provide basic information for stages. They can be applied to different estimates and then tailored to suit.
Stages	Estimating jobs involves breaking the jobs down into stages for accumulation and analysis of job costs. Each job must have at least one stage.
Standard Hours	The most usual unit of measure for capacity planning.
Stock	Goods or raw materials held by a business for resale.
Stock Control	Recording stock details and tracking stock levels.
Stock Forecasting	Predicting stock levels based on future stock movements.
Sub-assembly	When raw materials or components make a part of a finished product. The sub-assembly may be combined with other components or with other sub-assemblies in the manufacture of finished goods.
Sub-assembly Levels	Levels equate to building blocks. The lowest level of sub-assembly provides the building block for the next level, and so on to the finished product.

Subcontract Operations	Operations that are subcontracted to external departments or organisations.
Supply Chain Management	Control of the supply of parts from vendor to customer. Supply Chain Management is also used for short cycle manufacturing, which is the manufacturing element of JIT (Just In Time).

T

Time Fence	A point in time when planning rules change. In Master Production Scheduling (MPS), two time fences may be set. Between today's date and the first time fence, only orders should be read. Between the two time fence dates, both forecasts and orders should be read. Following the second time fence, only forecasts should be read.
Timesheets	The option to post times and costs to jobs.
Tooling Costs	Costs incurred through designing, manufacturing and purchasing production tools. Tooling costs depend on whether tools can be used once only, across jobs or are correct for the job.
Traceability	The option to track materials through the system. This is usally by means of serial or batch numbers.
Tracking	Monitoring works orders through the operations shown on a routing. Anticipated delay reporting can eliminate the need for tracking.
Transaction Log	Computer record of MRP material movements.
Trial Balance	A report showing the company's nominal account net balances (either credit or debit) at a given time.
Trial Kitting	Testing the provision of stock for assemblies and showing possible production quantities. Reports show the availability of materials in stock, on order and due for delivery.

U

Unit of Sale	The measure of the sale. For example, per keg, per metre, per box, where keg, metre or box is the unit of sale.

W

Water Beetle	The process of distributing parts around site kanban locations regularly.
WBS	For more information, see *Work Breakdown Structure* on page 492.
WIP	For more information, see *Work In Progress* on page 492.
Work Breakdown Structure	Methodology that supports project cost reporting.
Work Centre	People and equipment treated as one resource for capacity planning purposes.
Work In Progress	A product's value as it moves through production. This is increased by issuing stock and decreased by completing works orders, returning or scrapping stock.
Works Order	The authority to produce a part using the components specified on a BOM and the process specified on the routing.
Works Order Processing	The process of managing works orders. This includes allocating and issuing raw materials/components, and recording progress of operations to completion. On completion, works orders are costed and finished stock is updated. Goods are despatched in the usual way.

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