



*Estim for Windows*

**Getting started**

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# 1. Introduction

This manual is intended firstly to help with installing and troubleshooting the software. Secondly, it is to try to give a quick appreciation of how data is used within the system, and where the data should be set up. For more detail of the system, you should consult the online help facility.

## 2. Installation from Download



Your computer must be set with full rights to modify folders and the registry (Administrator).

### 2.1. *License code and Subscription number*

The system will request your unique License code and Subscription number – obtained from the Website shop and emailed to you.

### 2.2. *Initials and password*

You will be asked for initials and password. In a newly installed database, use initials “SUP” (supervisor) and a blank password. Initials and password can be specified in a Windows shortcut to avoid the login screen. There is another user “U1” also in a new installation. It too will not have a password. You will be shown how to create more users and allocate passwords later in this document.

### 2.3. *Options*

Two screens of options will be shown – enter values appropriate for your organisation. See the online help (press F1) for more details of these options.

## *2.4. Printers*

You should have a printer configured as its defaults will be required for any reports you generate.

## *2.5. Database name*

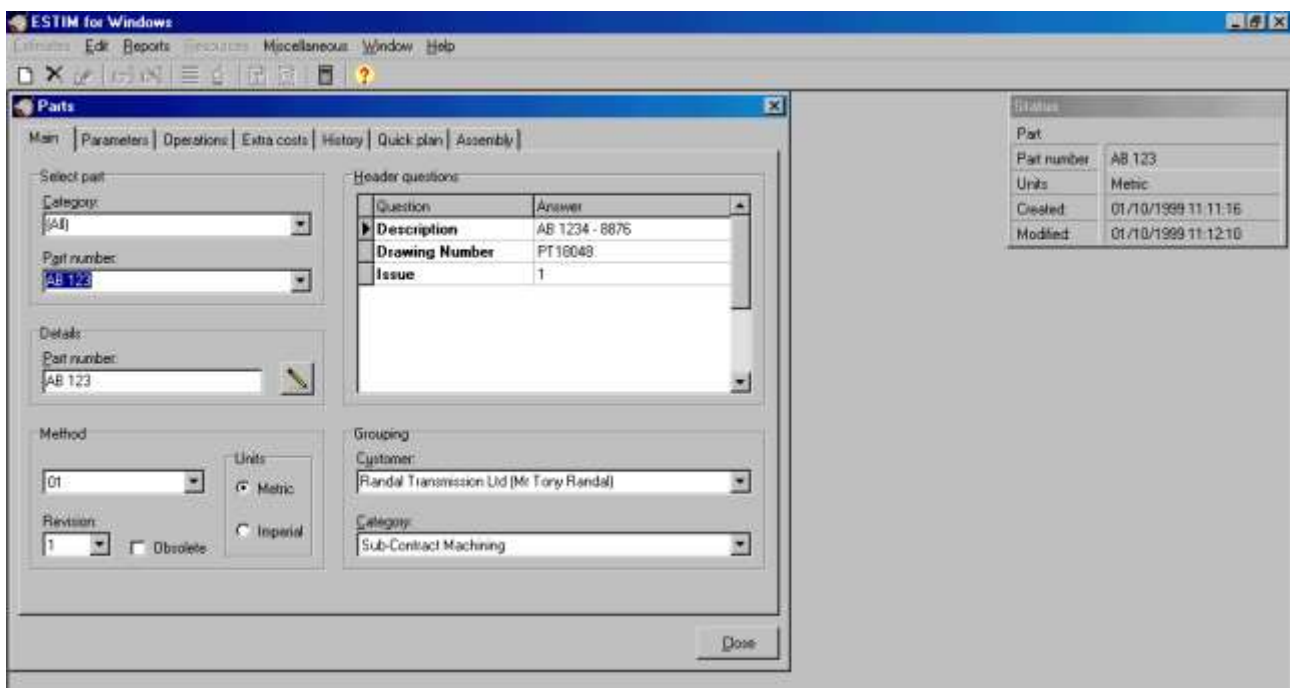
Microsoft SQL should be installed prior to installing ESTIM. The default name is estim but this can be changed using the FindProv utility.

### 3. Entering a part



In the Main Menu

- select Estimating,
- and Part Data.

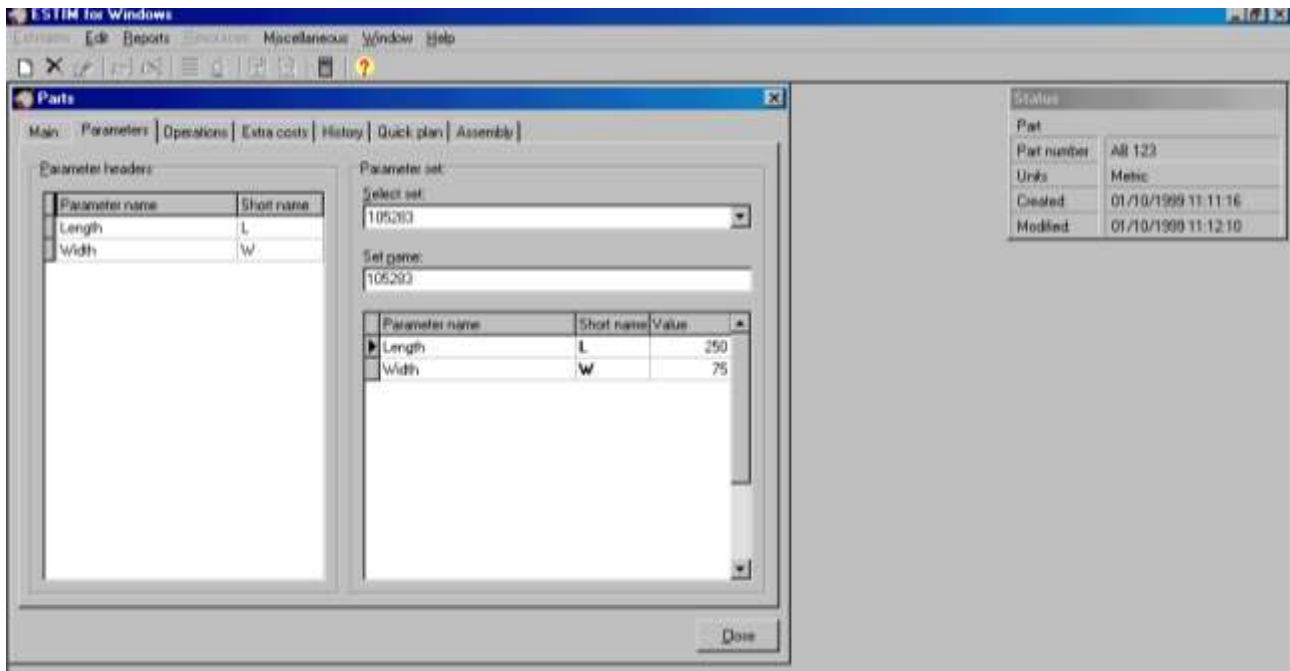


Click New Record icon

- Cursor is now in Part Number field – Enter a new part number;
- Click in the Header Questions – (on the first answer field);
- Default Method and Revision is automatically populated;
- Key-in Header data – this can be used to search for part in the future.
- Select a Category (Mandatory)
- Select a Customer (Optional)

Click Parameters tab

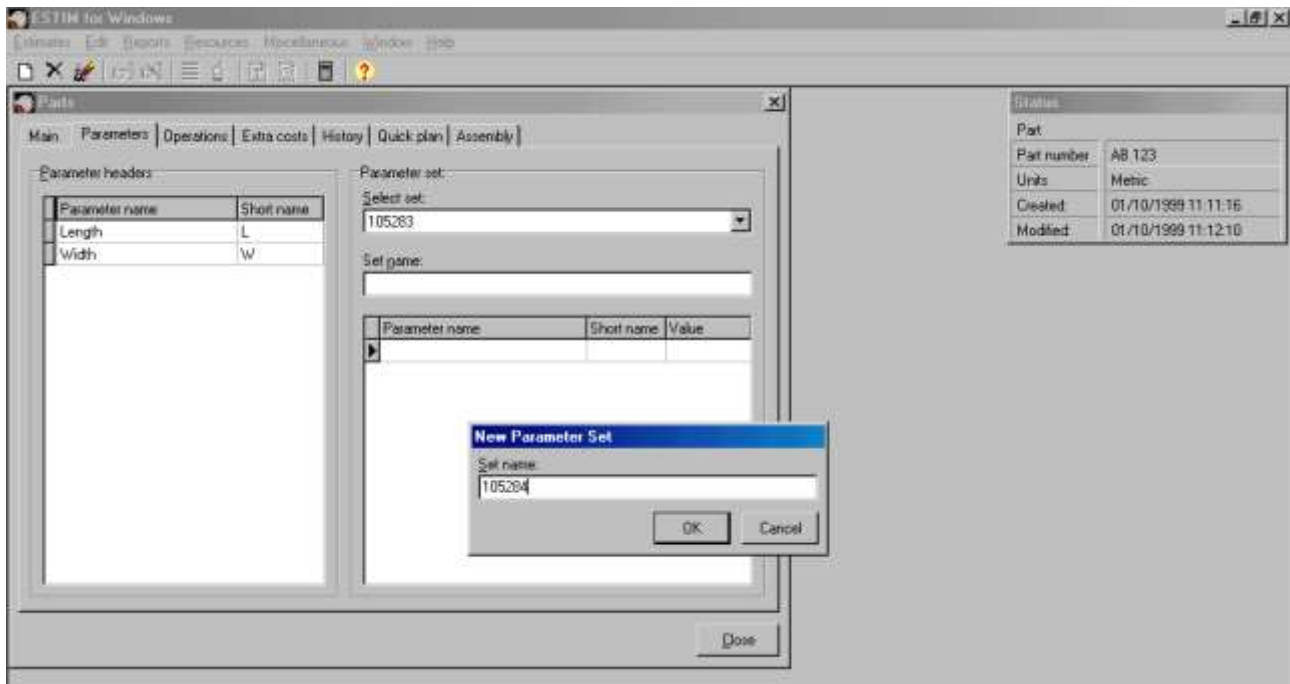
### 3.1. Entering Parameters



This is optional.

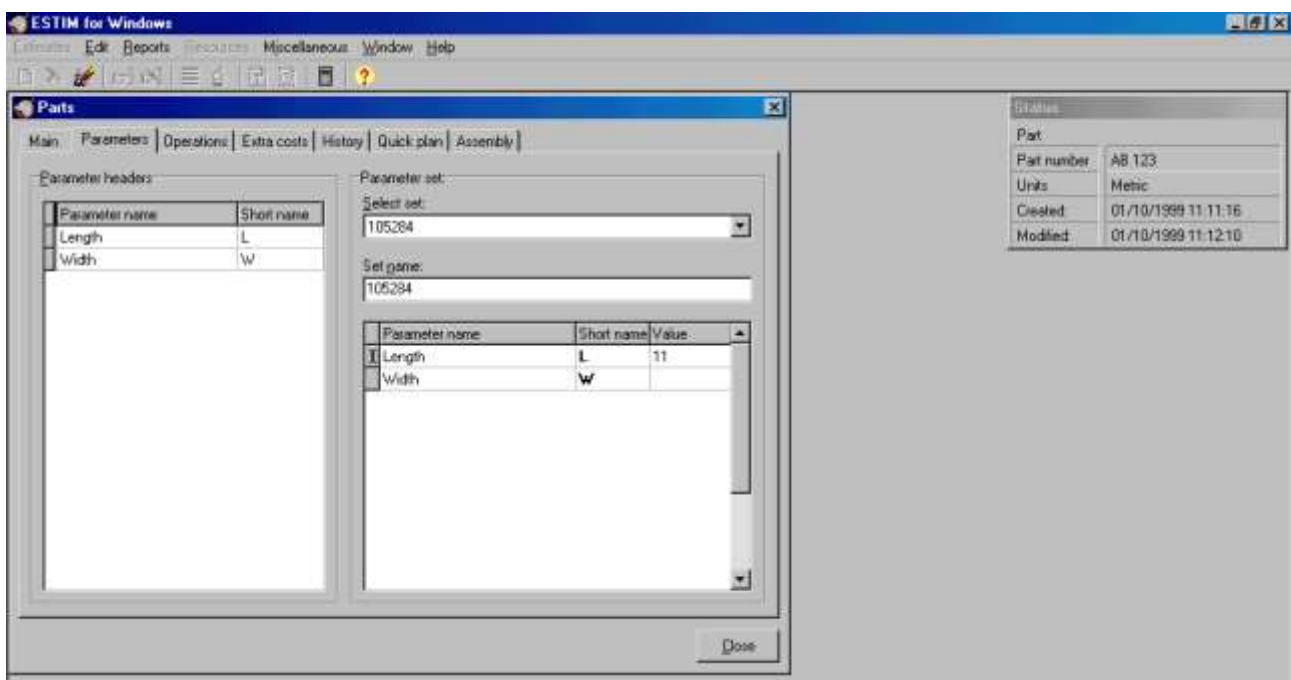
On the Properties tab:

- Click in Parameter name and enter the name of the first parameter;
- Press tab or click in the short name field and enter a capital letter, for example, to represent the name;
- Click New Record or press Tab to enter more parameter names;

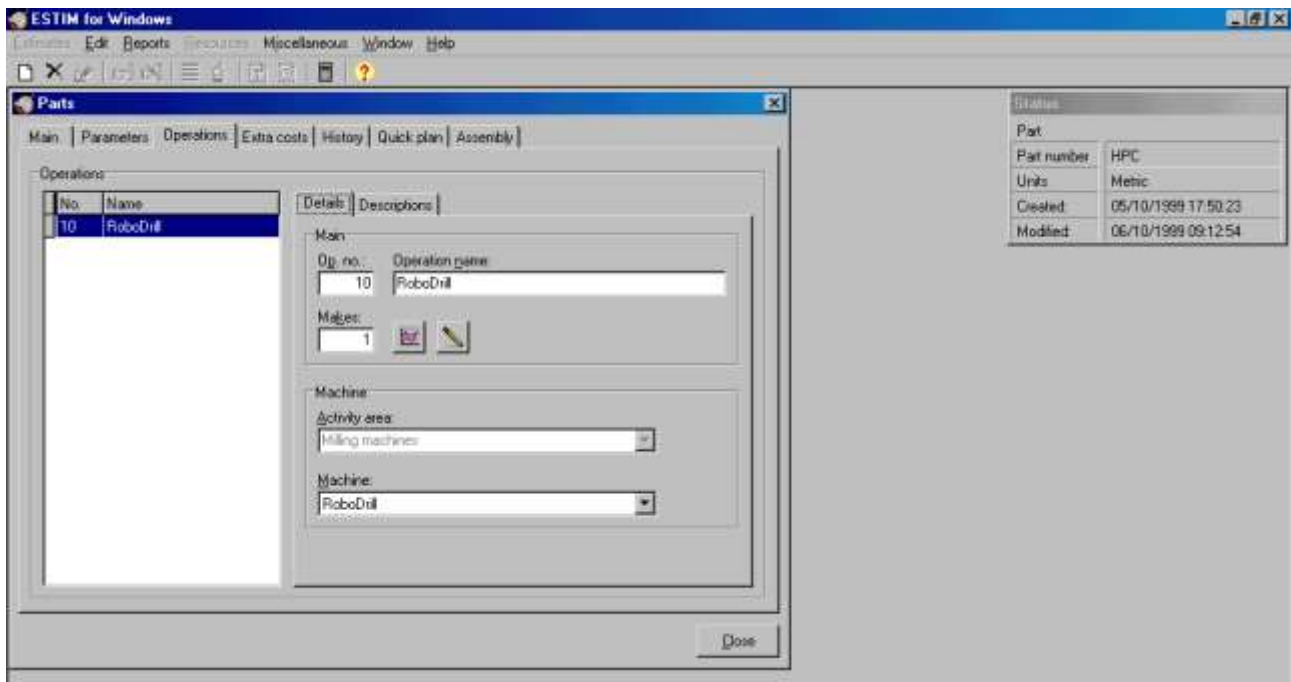


- Click in the Select Set field, or the Set name, field and click New Record;

- 
- Enter a new Set name;
- The parameter names appear;
- Enter values against each parameter;
- To repeat for more sets, click New Record;
- Activate (in the Select Set field) the set of values you want for the creation of the part.
- 







### 3.2. *Entering Operations*

Click the Operations tab

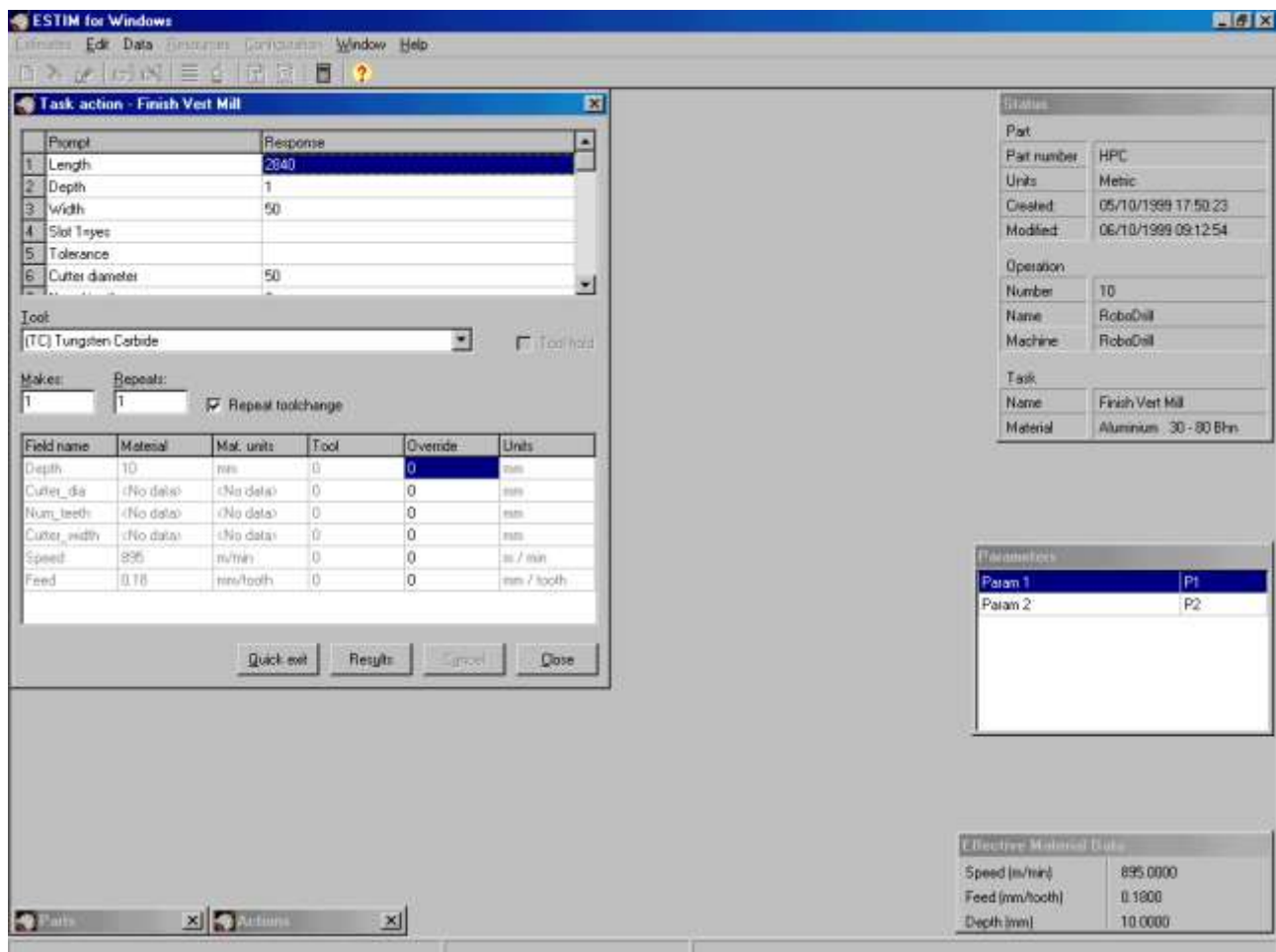
- Click New Record to create a new operation;
- Use the Combo Box to select the Activity Area;
- Use the Combo Box to select the Machine;
- Use the Combo Box to select the Operation name or key in free text
- If the operation name is left blank, the machine name will be inserted by default;
- The Operation name must be a unique name.

### 3.2.1. Entering Actions

Double click the appropriate line in the operations grid to gain access to the task list for this operation (it will be empty of Actions in a new operation).



If a 'First task' has been assigned to the machine, this will be displayed



- Enter the responses to the task.

or

Double click a Task or a Material in the lists on the right to assign an Action to this operation.

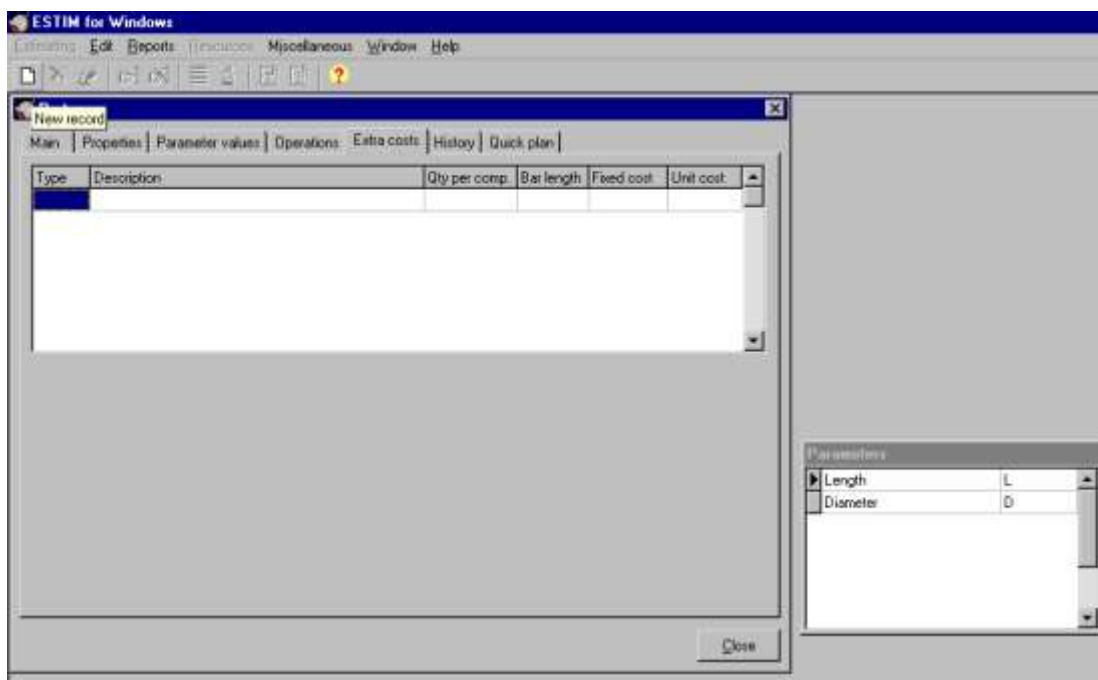
- If you want to use a machining task, a material must have already been selected;

- If you selected a task, a form will open on which you enter the details of the task action;
- You can drag a parameter from the box on the right and drop it into the prompt answer, where you want the value.
- Click Close to accept the task or Results to find out the time allowed for the task.
- You can override the database values for speeds feeds etc.
- Repeat for all Task actions;
- Click Close (bottom right) to return to Operations form.

For more operations click New Record and repeat the previous instructions.

### 3.2.2. Extra Costs

This section is to calculate costs of commodities and materials.



Click the Extra Costs tab on the Part form

- Click New Record to enter a cost consideration;
- Select the type of extra cost item;
- Select and define products, quantities, and dimensions, etc., depending on the type of Extra Cost.

### 3.2.3. Reporting

Click Reports on the menu and select Bid Price;

ESTIM for Windows

Calculating Reporting Resources Configuration Window Help

**Bid Price**

Headers:

Part number: 26679451-Die Forging Labour markup rate (%): 0  
Customer: A. O. Herton Engineering Co. Ltd. Material markup rate (%): 0  
Prices for: Today

No.	Operation name	Set time	Run time	Set cost	Run cost
1030	Cut	0.000	7.712	0.000	2.571
1200	Tiase + Fin Forge	0.000	6.000	0.000	15.000
1900	Dummy Press	30.000	2.400	145.000	11.600
2000	Part Press	30.000	2.400	287.500	23.000
2010	Bosch/Power-Mill	0.000	15.000	0.000	5.750

Type	Description	Qty per comp.	Fixed cost	Cost / unit
Volume	66F85 - 21 - 2014A T61, BAEM 1001	0.012	0.000	24.341
Heat	66F85 - 21 - 2014A T61, BAEM 1001	1.000	0.000	107.100
Item	Aluminum Alloy Swarf	0.969	0.000	-0.700

Quantity	Batch	Unit	L. cost	M. cost	% Mat	% M + S	% A.V.
25	3776.362	151.054	114.56	23.65	15.66	34.72	75.84
50	6725.625	134.512	100.15	23.65	17.58	28.29	74.46
100	12624.150	126.241	92.95	23.65	18.73	24.44	73.63
250	30319.720	121.279	88.63	23.65	19.50	21.87	73.08

Tooling cost: 0.0000

Close

**Status**

Part

Part number: 26679451-Die Forging

Units

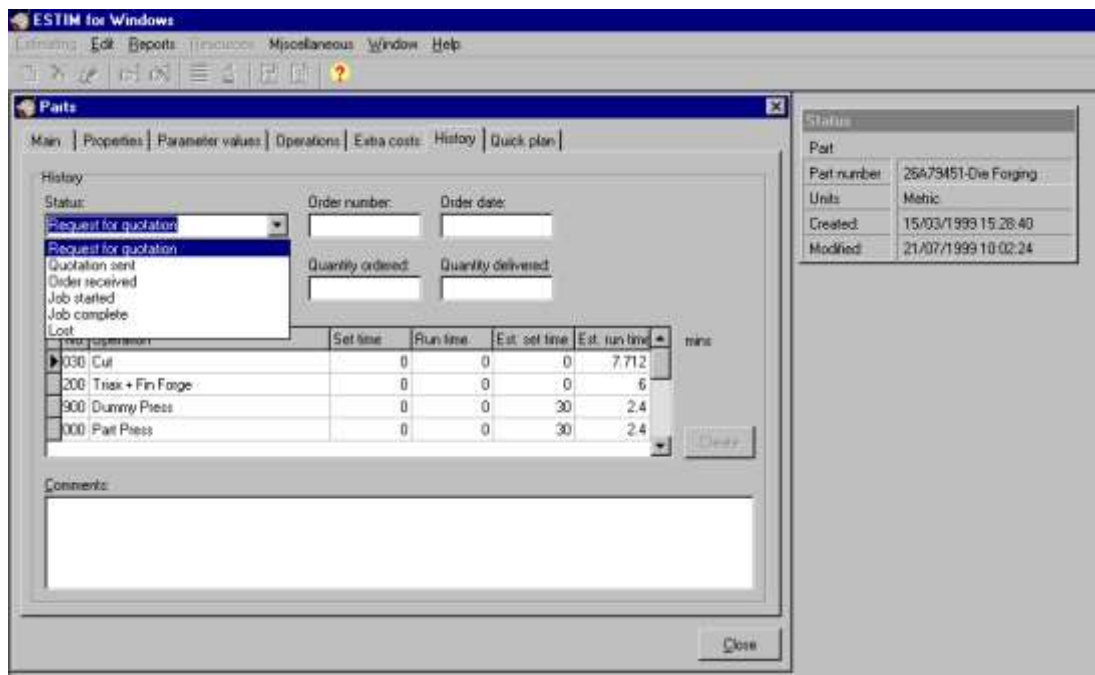
Metric:

Created: 15/03/1999 15:28:40

Modified: 21/07/1999 10:02:24

- Click in the Quantity field (bottom left);
- Enter a quantity value;
- Press arrow down for another quantity or press Tab;
- If reworking an existing Bid Price, red stars may appear in the left column. Click Edit and Re-calculate at the top of the screen.

### 3.2.4. Status and Actual Times



Click History tab to set the part status.

- Click Create to generate the table of Estimated Setting and Running Times;
- Double click an operation line to enter the actual time recorded for production;
- You can then compare actual to estimated time in the Manufacturing Performance report.



## 4. Setting-up the database

### 4.1. Users

Select the Configuration menu, then select Users. Create a user name for all staff who will use *ESTIM for Windows* and give them access rights and passwords as necessary.

### 4.2. Header questions

Header questions are used to identify and search for parts. The header question details for parts are entered and displayed on the right-hand side of the part form (below).

The screenshot shows the 'ESTIM for Windows' application window. The 'Parts' form is active, displaying various input fields and a 'Header questions' table. The 'Status' window is also open, showing part details.

**Parts Form Fields:**

- Select part:** Category (dropdown), Part number (dropdown)
- Details:** Part number (text field)
- Method:** Method (dropdown), Units (radio buttons: Metric, Imperial)
- Revision:** Revision (dropdown), Obsolete (checkbox)
- Header questions:** Table with columns Question and Answer.
- Grouping:** Customer (dropdown), Category (dropdown)

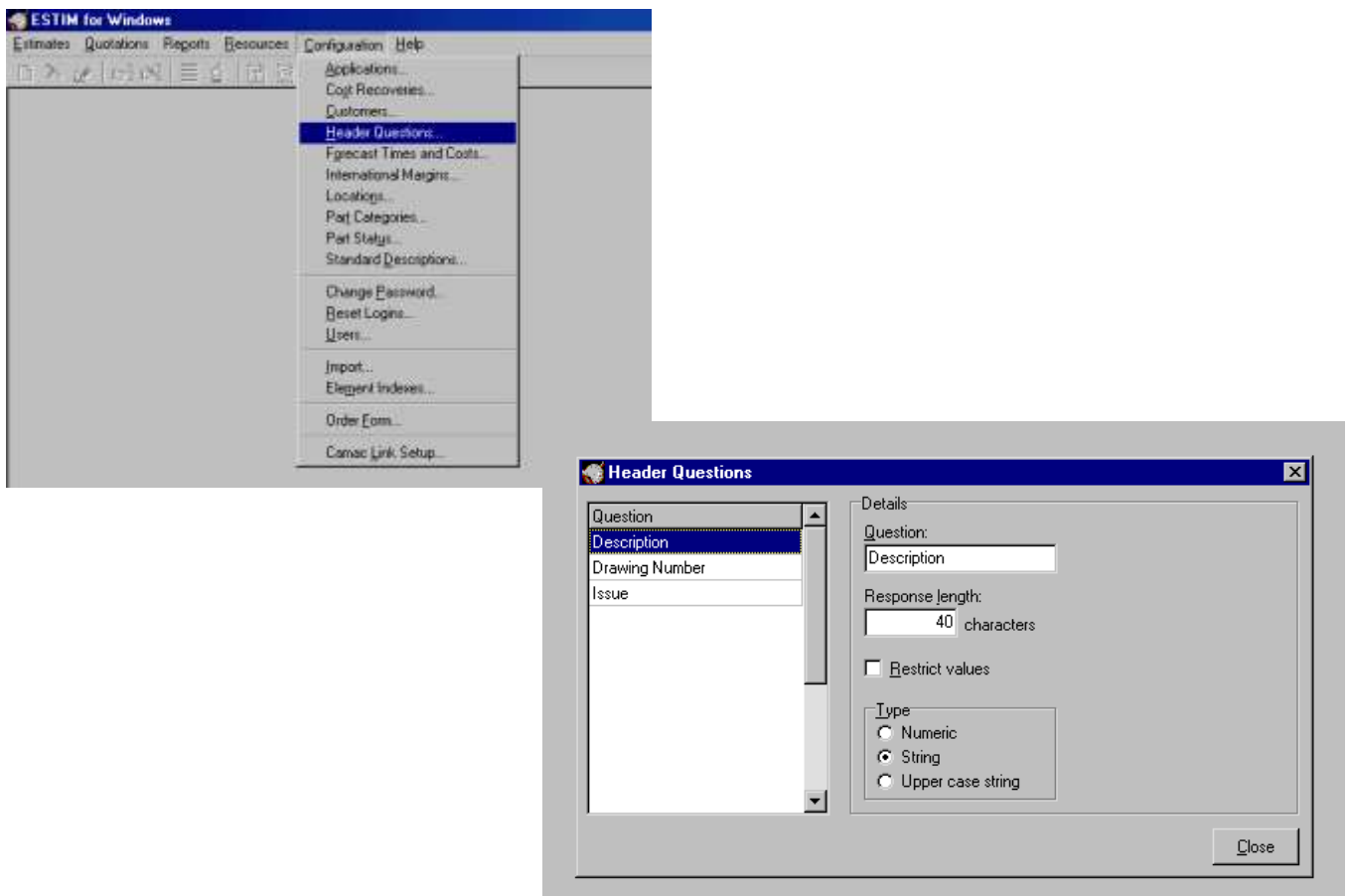
**Header questions Table:**

Question	Answer
Description	Test times
Drawing Number	
Issue	

**Status Window:**

Part	
Part number	HPC
Units	Metric
Created	05/10/1999 17:50:23
Modified	06/10/1999 09:12:54

The questions are user definable and should be set-up when starting to set-up *ESTIM for Windows*. Pick “Header questions” from the “Configuration” menu.



## 5. Loading Data

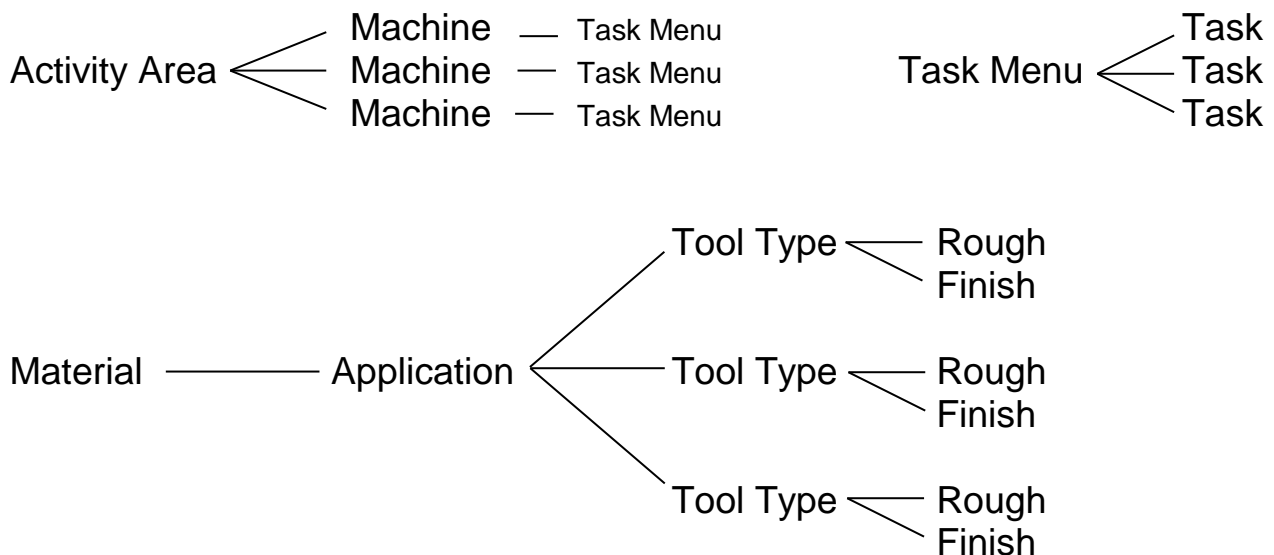
There are a number of relationships between types of data in the *ESTIM for Windows* database, and so some things have to be entered before others. A simple example of this would be to say that a manufacturing resource such as a machine must be defined before it can be used on a part.

In the same way, task menus must exist before a task can be created and associated with that task menu.

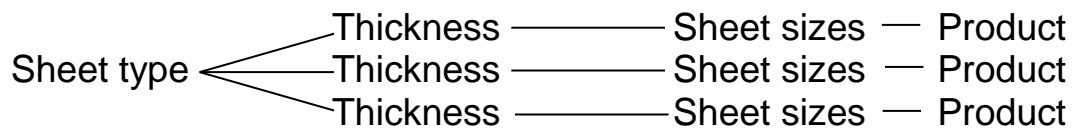
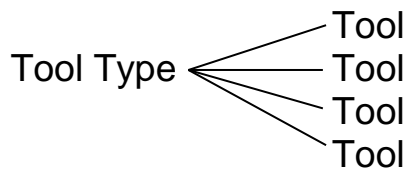
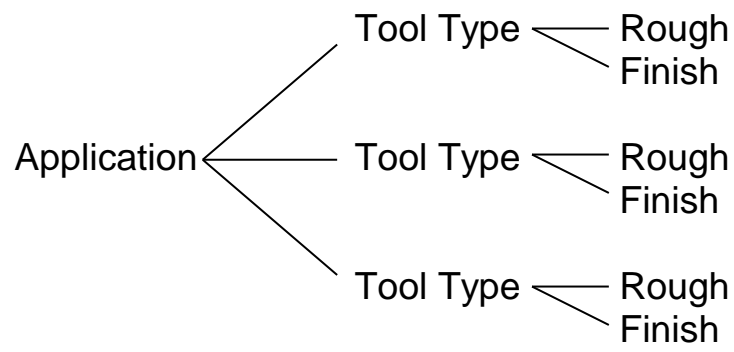
The list below is a rough guide to the best order in which to enter data:

- ◆ Task menus & Tasks
- ◆ Learning curves
- ◆ Activity areas , Machines (including power, thrust, and torque values)
- ◆ Tool types & Tools (cutting tools)
- ◆ Materials (including speeds and feed data)
- ◆ Suppliers, Product look-ups (categories, discount rates, etc.), Product data (e.g. costs), Sheet library

## 6. Data Linkage chart

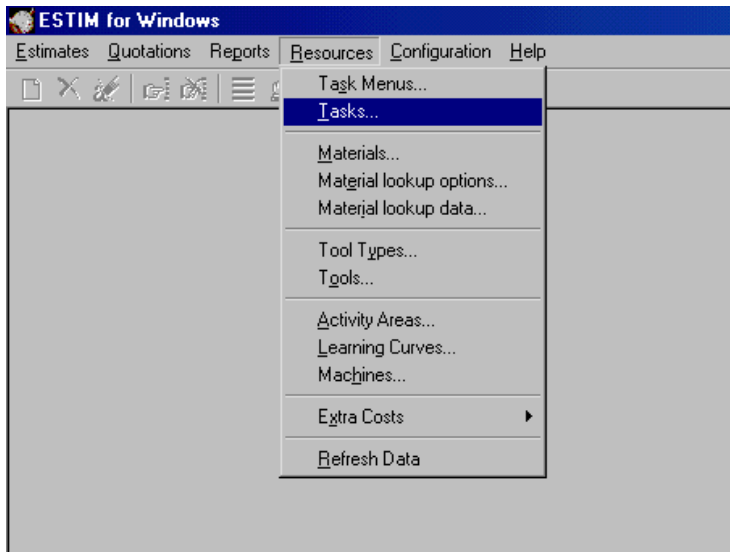






## 7. Loading Resources data

Resource data is accessed from the Resources menu (below).



### 7.1. Task menus

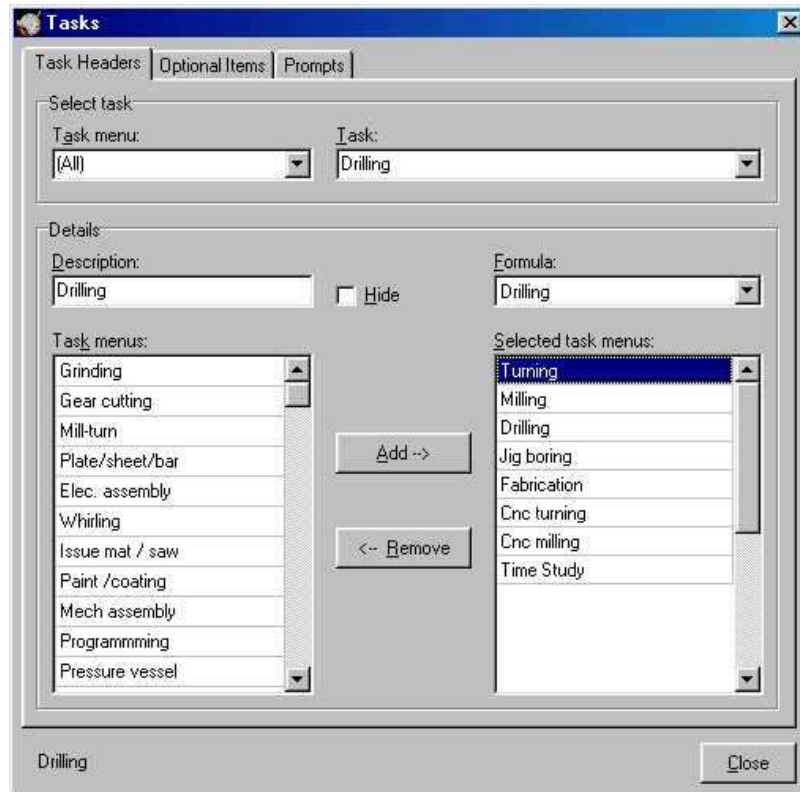
Task menus are a means of grouping tasks (such as drill hole, rough vertical mill or laser cut circle) in a way that ensures only the appropriate tasks are available for the operation. A task menu is associated with one or more machines.

Tasks and task menus should require little or no adjustment for the majority of conventional and modern manufacturing plants.

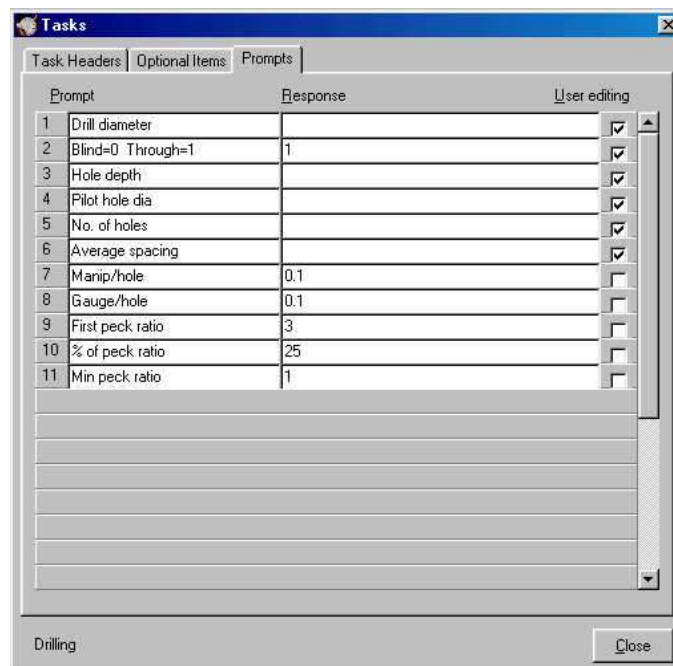


New menus can be created – only menus with no associated tasks or machines can be deleted. The position of the menu in the list can be changed using drag and drop.

## 7.2. Task definition



Prompt settings for most formula types are pre-set – details of these are in the on-line help.

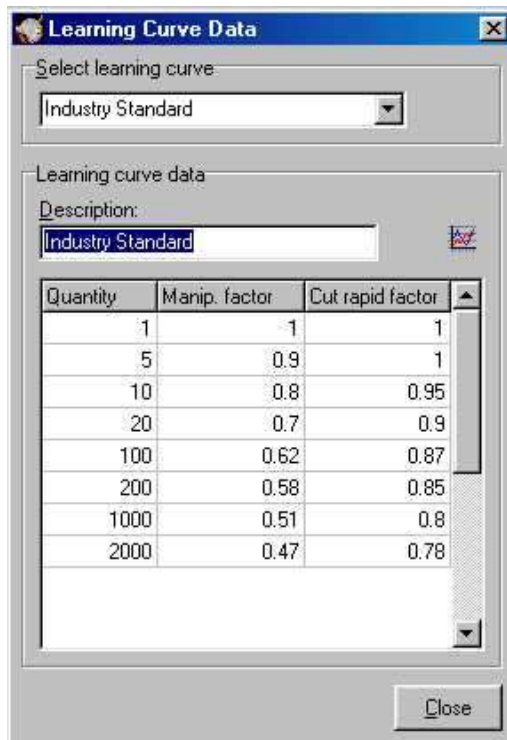


Enter your own Set-up and Load tasks for your range of machines.

Note that a task cannot be deleted if it is used in a part, if it is defined as the 'First Task' of a machine, or if the task is chained by another task.

### 7.3. Learning curves

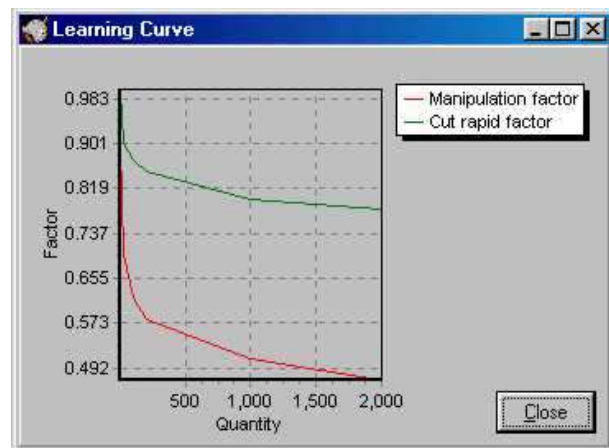
Attached to a machine, a learning curve is a means of reducing the time allocated to manual tasks and machine rapid movements in accordance with batch size. The more familiar the operators become with a task, the faster the operator will become.



The 'Learning Curve Data' dialog box contains a 'Select learning curve' dropdown menu set to 'Industry Standard'. Below it is a 'Description' field also containing 'Industry Standard'. A table displays learning curve data for various quantities, with columns for Quantity, Manip. factor, and Cut rapid factor. The data points are as follows:

Quantity	Manip. factor	Cut rapid factor
1	1	1
5	0.9	1
10	0.8	0.95
20	0.7	0.9
100	0.62	0.87
200	0.58	0.85
1000	0.51	0.8
2000	0.47	0.78

A 'Close' button is located at the bottom right of the dialog box.



One pair of curves can be used for all resources, or each resource could have its own.

## 7.4. Activity areas

A way of grouping resources, an activity area is probably a physical area in a factory in which several machines are located. It allows for short, simple menus from which to select a machine.



Activity areas can be hidden if not required, thus allowing redundant plant to be taken out of the plant list, or new prototype equipment to be entered for temporary trials.

New activity areas can be created by using the New Record button on the toolbar. The position of items in the list can be changed using drag and drop. Areas can be deleted only when all machines in the area have first been deleted. (Note that a machine cannot be deleted if a part has been defined using that machine.)

## 7.5. Machines

A resource is referred to as a machine, although it may be as simple as a staff member with hand tools, or it could be a complex machine tool.

The screenshot shows a 'Machines' dialog box with the following fields and options:

- Headers** | Costs and Times | Speeds | Feeds | Power | Physical Properties | Miscellaneous
- Select machine**
  - Activity area: Machine Shop
  - Machine: Horiz Borer
- Details**
  - Description: Horiz Borer
  - Cost centre: 44
  - Activity area: Machine Shop
  - Units: ☒ Metric ☐ Imperial
- Tasks**
  - Task menu: Milling
  - First task: Set-Up Miller
  - Learning curve: --
  - ☐ Enable learning curve
- Machine Shop Horiz Borer
- Close

The various tabs give access to sections of data fully defining the machine's physical properties and commercial considerations.

Note for learning curves: enable curves with the check box before selecting the appropriate curve.

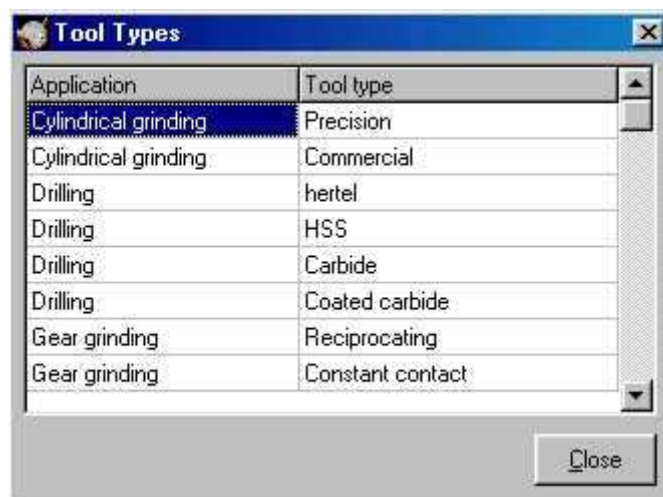
## 7.6. Applications

These are fixed names within *ESTIM for Windows* used to identify the type of calculation necessary to calculate the manufacturing time. You cannot change, add or delete these applications.



## 7.7. Tool types

For each application there must be at least one tool type. For example, the application "Drilling" will have HSS tools and maybe carbide types.



## 7.8. Tools

Cutting tools are grouped according to the Tool Type. For example, application “Drilling” with Tool Type HSS may have Jobber drills as well as Long series drills – each may have particular cutting conditions to consider.

**Tools**

Main Details | Dependent Parameters

Select tool

Application:  Tool type:

Tool:

Details

Application:  Tool type:

Description:

Cost to use per min:  £

Units: ☒ Metric ☐ Imperial

Close

## 7.9. Materials

Material cutting performance data is also grouped by Tool Type. For example, a particular steel will have cutting speeds for High Speed Tools and Carbide tools. It can have more – just define more tool types and make reference to each type when storing speeds and feeds.

**Materials**

Headers | Speeds and feeds

Select speeds and feeds

Application:  Tool type:  Cutting condition: ☒ Rough ☐ Finish

Speed and feed data

Application:  Tool type:  Cutting condition: ☒ Rough ☐ Finish

Machining power factor:  cm²/kW/min

Diameter	Speed	Feed
1.5	21	0.025
3	34	0.075
6	34	0.13
12	34	0.3
18	34	0.45
25	34	0.55
35	34	0.65

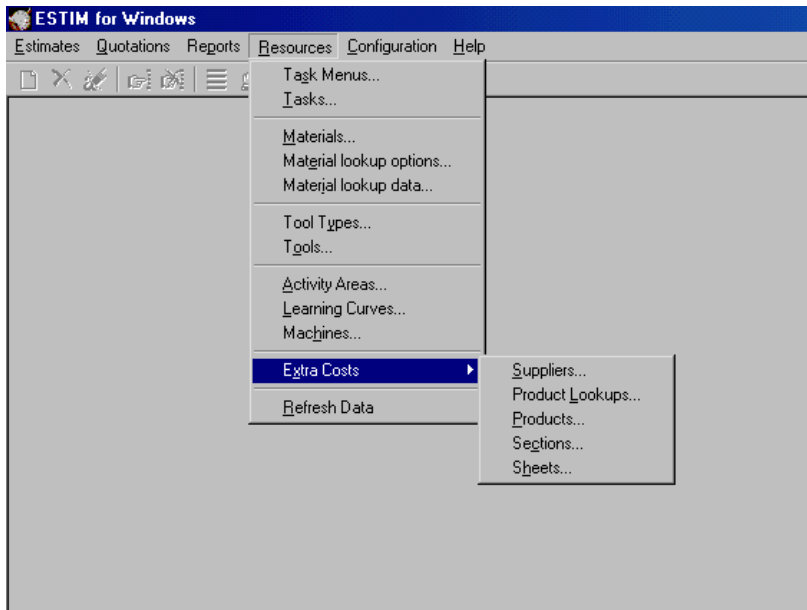
Speed units: m/min  
Feed units: mm/rev  
Dimension units: mm  
Time units: minutes

Mild Steel 150-200 Bhn

Close

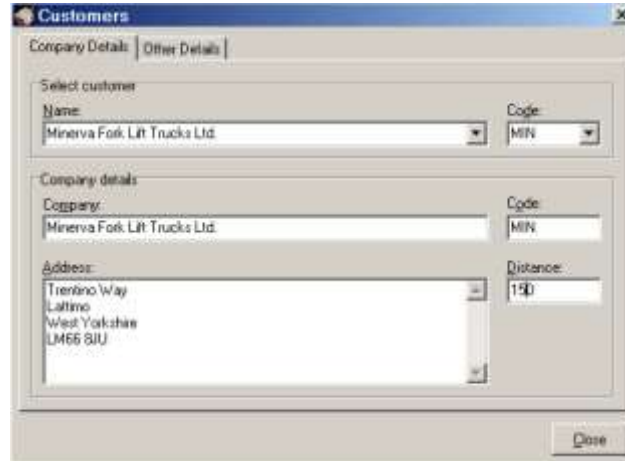


## 7.10. Extra costs database



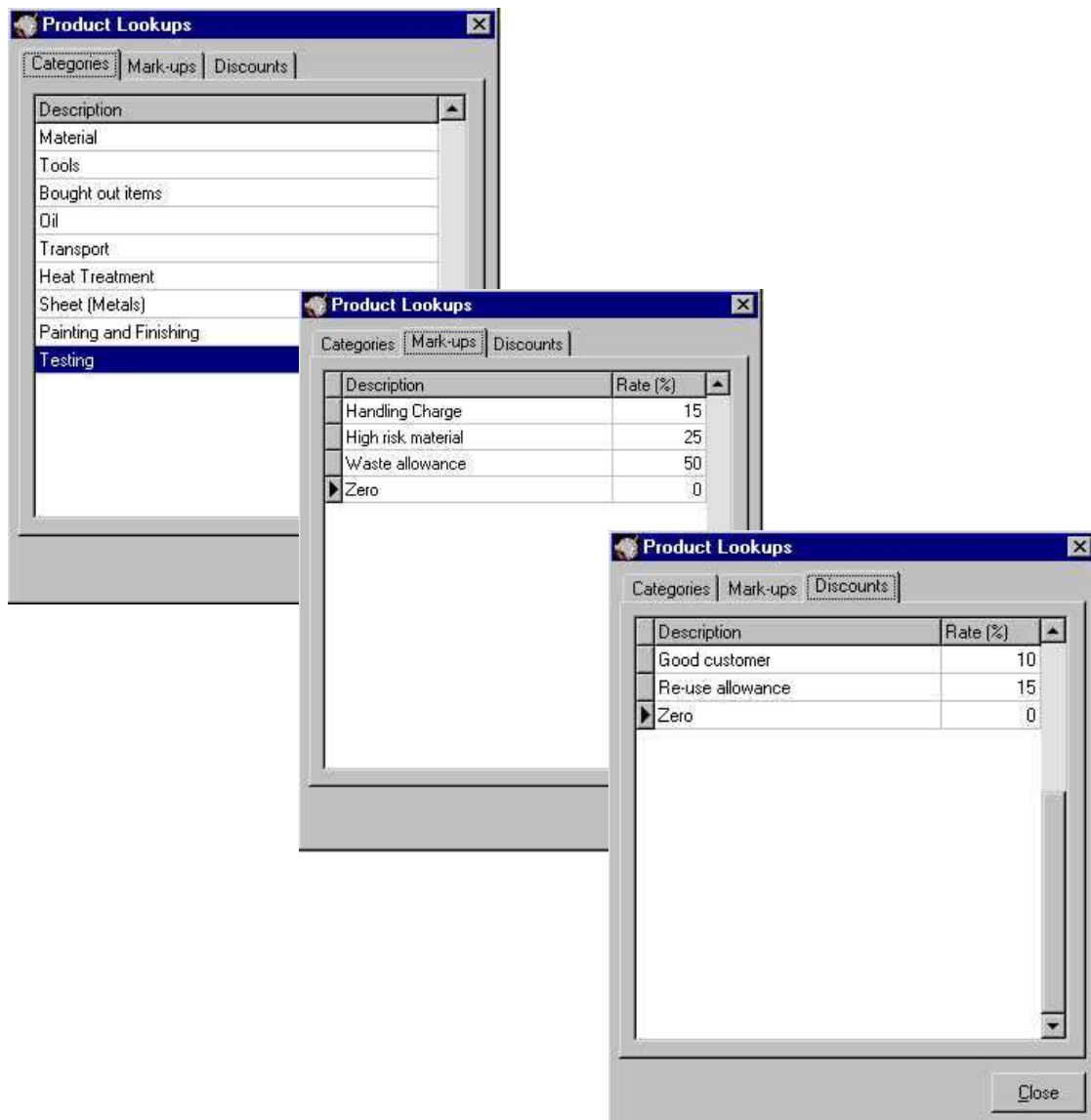
## 8. Suppliers details

Configuration - Customers



### 8.1.1. Product lookups – categories, discounts & markups

You will find these in Resources – Extra costs



## 8.1.2. Products prices and quantities

Resources Extra costs - Products

**Products**

Headers | Prices

Select product

Category: (All) Supplier: (All) Product code: ALUM 5005

Details

Supplier product code: ALUM 5005 Description: Aluminium 5005 2.0 to 8.0 mm Thick (Price per tonne)

Supplier: BSD Ltd Category: Sheet (Metals)

Discount: Zero Markup rate: Handling Charge

Buyer product code: ALUM 5005 Density: 2.71 tonnes/m<sup>3</sup>

Bar length: 0 mm Furnace time: 5 hours / load

Close

**Products**

Headers | Prices

Ordering costs

Free deliv. min. order: Delivery method: Delivery cost: £

Cost break:

Quantity	Cost/unit (£)
1	1910.00

Alternative products

Close

### 8.1.3. Sheet library

**Sheets**

Select sheet:  
ALUM\_5005 2.0-1

Details:

Description:  
ALUM\_5005 2.0-1

Product:  
MS CHEQUER

Thickness:  
2 mm

X: 2000 mm Y: 1000 mm

Labour handling time: mins Labour handling cost: 1 £

Close

#### 8.1.4. Sheet allocation

There are a number of methods to calculate sheet material costs.

Here is shown an example of how a sheet cost can be shared for various batch quantities.

**ESTIM for Windows**  
Estimates Edit Reports Resources Configuration Window Help

**Bid Price**

Headers:  
Part number: Material calcs Labour markup rate (%): 0  
Customer: Material markup rate (%): 0  
Prices for: Today

No.	Operation name	Set time	Run time	Set cost	Run cost
-----	----------------	----------	----------	----------	----------

Type	Description	Qty per comp.	Fixed cost	Cost / unit
Sheet	Steel at £275 / Tonne, 6	1.000	58.286	

Quantity	Batch	Unit	L. cost	M. cost	H. cost	% Mat	% M + S	% A.V.
1	58.286	58.286	0.00	58.29	0.00	100.00	100.00	0.00
10	58.286	5.829	0.00	5.83	0.00	100.00	100.00	0.00
20	58.286	2.914	0.00	2.91	0.00	100.00	100.00	0.00
45	58.286	1.295	0.00	1.30	0.00	100.00	100.00	0.00
47	116.573	2.480	0.00	2.48	0.00	100.00	100.00	0.00

Tooling cost: 0.0000

Close

300 x 250 x 6 mm at 7.87 tonnes/cu m at £275 per tonne is £0.971438

A sheet of 3000 x 1500 x 6 cost £58.28625

There is space for 300 \* 9 and 5 \* 250 with say 5mm between each 45 in total.

Divide 58.28 by 45 to get unit price £1.29525

In this example, there is no material mark-up, no discount, no supplier minimum order value, no delivery cost and no sheet handling cost.

This is an example of the Extra cost (Sheet)

The screenshot shows the 'ESTIM for Windows' application window. The 'Parts' window is active, displaying a table of components and their costs. The table has columns for Type, Description, Qty per comp, Bar length, Fixed cost, and Unit cost. The data is as follows:

Type	Description	Qty per comp	Bar length	Fixed cost	Unit cost
Sheet	Steel at £275 / Tonne, 6	1.00		58.296	0.000
C. sheet	Special sheet	1.00		58.296	0.000
Sheet	Steel at £275 / Tonne, 6	1.00		1.296	0.000
C. sheet	Special sheet	1.00		58.296	0.000
C. sheet	Just one piece	1.00		0.971	0.000

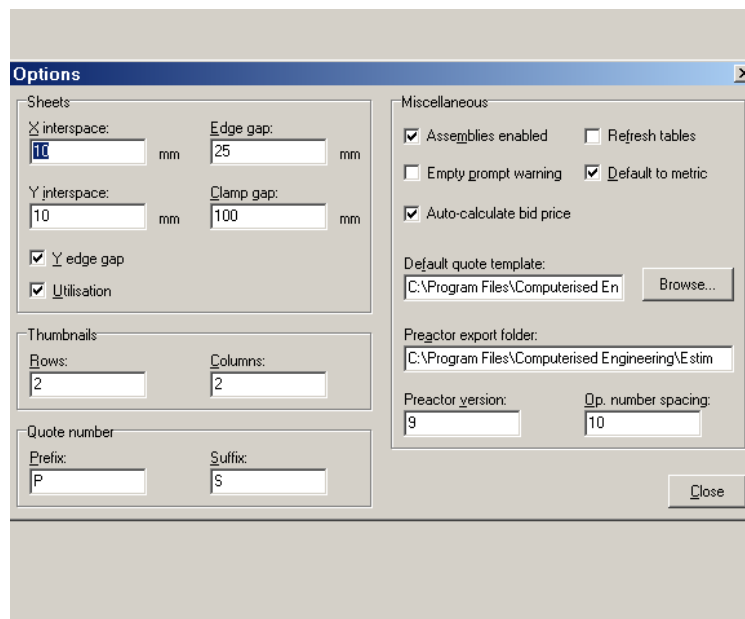
Below the table, there are input fields for 'Sheets' and 'Thickness'. The 'Product' field is set to '0001CHK' and the 'Thickness' field is set to '6 mm'. There are also input fields for 'Component length', 'Component width', 'Interspace', 'Edge gap', and 'Clamp gap'. The 'Quantity' field is set to '1'. The 'Whole sheet' checkbox is unchecked.

The tick box for Whole sheet will cost in the full material value or just to cost of the amount used for the Quantity.

Note the X & Y Interspace, Edge and Clamp gap

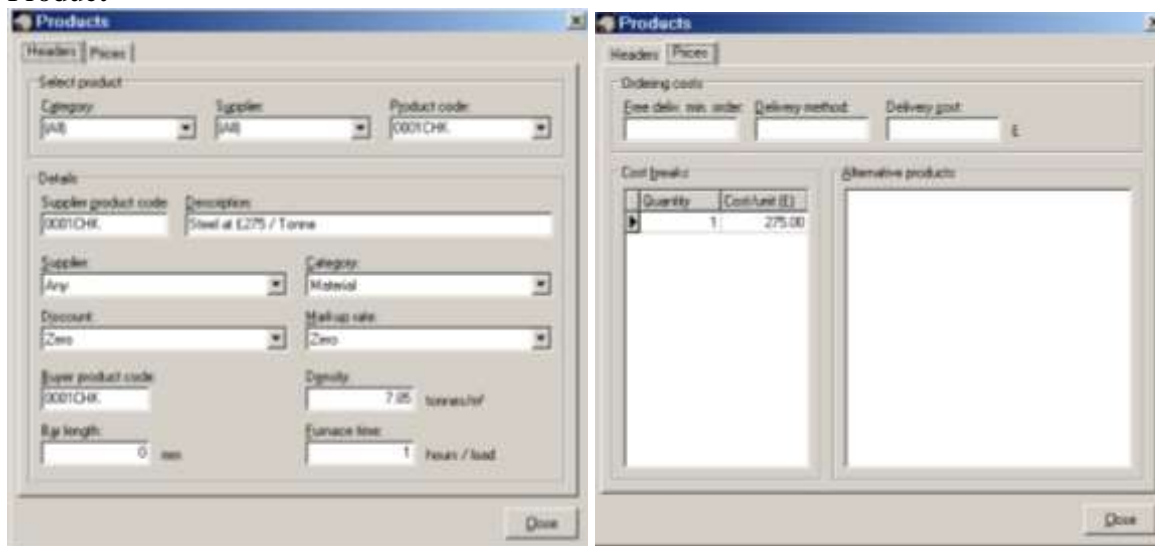
You can set the defaults for spacing in

Main menu – Estimates – Options



The Options dialog box is divided into several sections. The 'Sheets' section includes 'X interspace' (10 mm), 'Edge gap' (25 mm), 'Y interspace' (10 mm), 'Clamp gap' (100 mm), and checkboxes for 'Y edge gap' and 'Utilisation'. The 'Thumbnails' section has 'Rows' (2) and 'Columns' (2). The 'Quote number' section has 'Prefix' (P) and 'Suffix' (S). The 'Miscellaneous' section includes checkboxes for 'Assemblies enabled', 'Empty prompt warning', 'Auto-calculate bid price', and 'Refresh tables', along with a 'Default to metric' checkbox. It also features a 'Default quote template' field with a 'Browse...' button, a 'Preactor export folder' field, and 'Preactor version' (9) and 'Qp. number spacing' (10) fields. A 'Close' button is at the bottom right.

## 1. Product



The Products dialog box has two tabs: 'Headers' and 'Prices'. The 'Headers' tab contains a 'Select product' section with 'Category' (Any), 'Supplier' (Any), and 'Product code' (0001CHR). Below this is a 'Details' section with fields for 'Supplier product code', 'Description' (Steel at £275 / Tonne), 'Supplier', 'Category' (Material), 'Discount' (Zero), 'Markup rate' (Zero), 'Super product code', 'Density' (7.85 tonnes/cf), 'Rip length' (0 mm), and 'Furnace time' (1 hours / load). The 'Prices' tab contains an 'Ordering costs' section with 'Est. deliv. cost', 'order', 'Delivery method', and 'Delivery point'. Below this is a 'Cost break' table with columns 'Quantity' and 'Cost/unit (£)' showing a single row with quantity 1 and cost 275.00. There is also an 'Alternative products' section.

2. Then define a sheet that refers to this product

If a cost is needed for a single piece of material, define it as a custom sheet with the sheet size equal to the component and ignore the tap for Custom sheet and component sizes. The look up to the product will provide the means to calculate cost from volume/density/mass and price per tonne.

**Parts Window Table:**

Type	Description	Qty per comp	Std length	Feed cost	Unit cost
Sheet	Steel at £275 / Tonne, 6	1.00		58.266	0.000
C. sheet	Special sheet	1.00		58.266	0.000
Sheet	Steel at £275 / Tonne, 6	1.00		1.295	0.000
C. sheet	Special sheet	1.00		58.266	0.000
C. sheet	Just one piece	1.00		0.971	0.000

**Custom sheet details:** Custom sheet component size

Description: Just one piece      Product: 0001CHK

Thickness: 6 mm      X: 300 mm      Handling time: 0.00 mins

Quantity: 1      Y: 250 mm      Handling cost: £      [F Whole sheet]

**Bid Price Window Table:**

No.	Description	Qty	Unit	Feed cost	Unit cost
1	Sheet - Steel at £275 / Tonne, 6	1.000		58.266	
2	Sheet - Steel at £275 / Tonne, 6	1.000		1.295	

**Summary Table:**

Quantity	Batch	Unit	L. cost	M. cost	H. cost	S. Mat	S. M + S	S. A. V
1	93.902	58.902	0.00	58.58	0.00	100.00	100.00	0.00
10	71.239	7.124	0.00	7.12	0.00	100.00	100.00	0.00
20	84.191	4.218	0.00	4.21	0.00	100.00	100.00	0.00
40	116.573	2.591	0.00	2.59	0.00	100.00	100.00	0.00
47	177.449	3.776	0.00	3.78	0.00	100.00	100.00	0.00

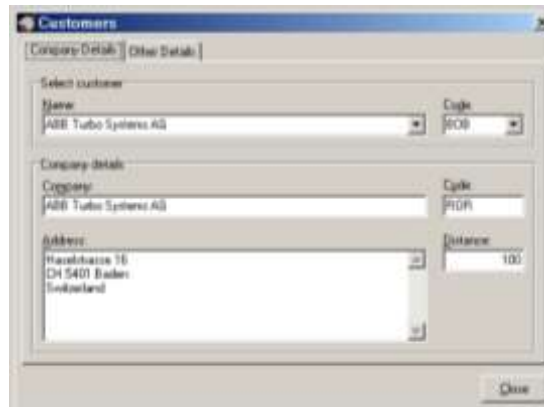
Tooling cost: 0.0000



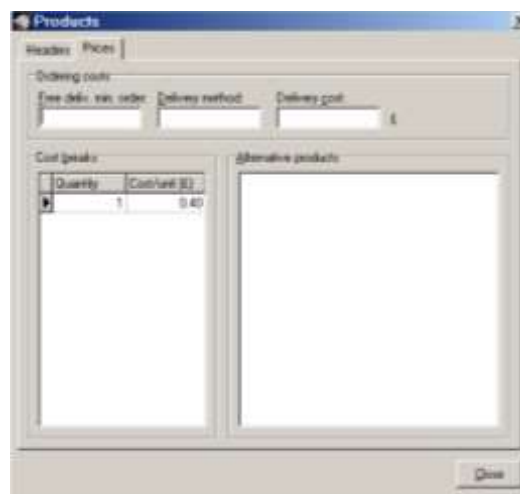
## 9. Delivery cost

Transport costs related to distance to the customer is calculated from the distance value in the customer file.

Configuration / Customers



Define a Product in Resources - Extra costs having a unit cost per distance unit (Miles / Kilometre)



Bought out item & tool have distance field which is a multiplier on quantity.

Double-click distance field to copy the distance value from the customer data.

Export data will contain the cost of delivery but does not detail the actual distance or the cost per unit distance.

Convert bought-out to custom item ignores distance – quantity can be adjusted.

Populate the Customer file distance fields and then restart ESTIM.



If you want to have a cost to delivery any quantity, use Extra Cost Tool or Extra cost Bought Out Item and tick the One per batch box.

If you want to allow delivery for each part delivered, use Extra cost Bought Out Item but do not tick One per batch.

If you change the customer, you must revisit the delivery item and re-double click the distance field.

If you want to override the customers distance, simply key in the preferred distance value.

## 10. Estimating

- ◆ Using the newly loaded data
- ◆ Using data delivered with your system
- ◆ Printing Reports
- ◆ Parameterised parts (Loaded from ASCII file)
- ◆ Repeats and Makes

## 11. Recall a Part

- ◆ Techniques to quickly find parts, by:
- ◆ Category
- ◆ Customer
- ◆ Header question
- ◆ Thumbnails

## 12. Assemblies

- ◆ Enable in System Options
- ◆ Build relationships of parts and products

## 13. Quotations

- ◆ Create a quotation from defined parts

## **14. Modify an Estimate**

- ◆ Change a task
- ◆ Insert an operation or task
- ◆ Move Copy Delete operations and task

## **15. Extra Costs**

- ◆ Extra costs database Insert
- ◆ Adding material and tooling costs to a part
- ◆ Markup rates
- ◆ Sheet Utilisation Sheets.DAT Analysis file

## **16. Library of Standard Texts**

- ◆ Operator instruction
- ◆ Tooling descriptions

## **17. Formula Codes**

- ◆ How the times are calculated
- ◆ for all machining and non-machining tasks

## **18. Data Interchange Techniques**

- ◆ Database ASCII Export/Import
- ◆ Network - shared data - Borland BDE administrator
- ◆ Microsoft Office Word - Access - Excel links
- ◆ Preactor Links Version 8 and version 9
- ◆ Emtrac links

## **19. Report writing**

- ◆ How to design new reports
- ◆ How to use reports to export data

