



## Magi-Cut Intro – Datasheet

Magi-Cut Intro is a straightforward way of generating cutting patterns for a list of parts sizes. It is designed for the smaller workshop using a sliding table saw or vertical saw and is focused on

The overall process is:-

- **Enter or Import part sizes**
- **Optimise**



### Part sizes

The starting point of optimisation is a list of part sizes. This can be produced in a variety of ways:-

- Enter sizes in the 'Part list' grid
- Import part sizes from external files or systems

Some lists can have extra custom fields with information for reports or for part labels. The system also provides a set of pre-defined fields which automatically calculate extra data.

The sizes entered are typically the finished sizes and the part list includes options to adjust the sizes to allow for edging, laminates and re-trimming.

The part list includes a full set of options to edit or insert trims, re-order and change the list.

	Description	Material	Length	Width	Quantity	Over	Under	Grain	Inf
Global						%	%		
1.	BASE-BACK	HARDBOARD-WHITE-4MM	476.0	735.0	1	0	0	N	
2.	BASE-BACK	HARDBOARD-WHITE-4MM	976.0	735.0	1	0	0	N	
3.	BASE-BACK	HARDBOARD-WHITE-4MM	976.0	735.0	1	0	0	N	
4.	BASE-BACK	HARDBOARD-WHITE-4MM	476.0	735.0	1	0	0	N	
5.	BASE-BACK	HARDBOARD-WHITE-4MM	876.0	735.0	1	0	0	N	
6.	BASE-BOTTOM	MEL-CHIP-18MM	464.0	582.0	1	0	0	N	
7.	BASE-BOTTOM	MEL-CHIP-18MM	564.0	582.0	1	0	0	N	
8.	BASE-BOTTOM	MEL-CHIP-18MM	464.0	582.0	1	0	0	N	
9.	BASE-CABINET-BOTTOM	MEL-CHIP-18MM	864.0	582.0	1	0	0	N	
10.	BASE-CABINET-DIVIDER	MEL-CHIP-18MM	560.0	533.0	1	0	0	N	
11.	BASE-CABINET-DOOR	MFC18-OAK	400.0	556.0	1	0	0	X	
12.	BASE-CABINET-DRAWER	MFC18-OAK	400.0	184.3	1	0	0	Y	
13.	BASE-CABINET-DRAWER-LONG	MFC18-OAK	900.0	184.3	1	0	0	Y	

In this example there are a large number of part sizes required in small quantities. Each part has a material code which matches the part to the available materials.

The number of columns in use can be adjusted to match the details required and help with data entry. The global line at the top of the list allows entry values that apply to the whole list and helps to speed up data entry and avoid mistakes.

Part list - Example 2

File Edit View Optimise Help

Title: Example 2 Opt: default Saw: default Cutting list rules: default

Global	Description	Material	Length	Width	Quantity	Over	Under	Grain	Inf
1.	BASE-BACK	HARDBOARD-WHITE-4MM	476.0	735.0	1	0	0	N	
2.	BASE-BACK	HARDBOARD-WHITE-4MM	976.0	735.0	1	0	0	N	
3.	BASE-BACK	HARDBOARD-WHITE-4MM	976.0	735.0	1	0	0	N	
4.	BASE-BACK	HARDBOARD-WHITE-4MM	476.0	735.0	1	0	0	N	
5.	BASE-BACK	HARDBOARD-WHITE-4MM	876.0	735.0	1	0	0	N	
6.	BASE-BOTTOM	MEL-CHIP-18MM	464.0	582.0	1	0	0	N	
7.	BASE-BOTTOM	MEL-CHIP-18MM	564.0	582.0	1	0	0	N	
8.	BASE-BOTTOM	MEL-CHIP-18MM	464.0	582.0	1	0	0	N	
9.	BASE-CABINET-BOTTOM	MEL-CHIP-18MM	864.0	582.0	1	0	0	N	
10.	BASE-CABINET-DIVIDER	MEL-CHIP-18MM	560.0	533.0	1	0	0	N	
11.	BASE-CABINET-DOOR	MFC18-OAK	400.0	556.0	1	0	0	X	
12.	BASE-CABINET-DRAWER	MFC18-OAK	400.0	184.3	1	0	0	Y	
13.	BASE-CABINET-DRAWER-LONG	MFC18-OAK	900.0	184.3	1	0	0	Y	

Example 2 / NUM

Sizes can be entered in millimeters, decimal inches or fractional inches.

## Materials

All materials are stored in the Board library. This is a database of all sheet material and includes quantities and costs. The board library stores records for each material and a record for each board size(including any offcuts) for each material type

Board library

File Edit View Help

Materials

Material	Description	Thickness	Default grain	Book	Material parameters	Picture	Type	Density
MED-DEN-FIBRE-18MM	Medium Density Fibreboard 18mm	18.0	N	0			MDF	0.650
MED-DEN-FIBRE-25MM	Medium Density Fibreboard 25mm	25.0	N	0			MDF	0.650
MIRROR-GLASS	Mirror Glass (sundry)	5.0	N	0			Sundry	0.000
OAK-LAM-1MM	Oak Laminate 1mm	1.0	Y	10			Laminate	0.900
PARTICLBRD-18MM	Particle board 18mm	18.0	N	0				0.550
PARTICLBRD-25MM	Particle board 25mm	25.0	N	0				0.550
MFC18-ASH	Prelaminated - Ash 18mm	18.0	Y	0			MFC	0.400
MFC18-BEECH	Prelaminated - Beech 18mm	18.0	Y	0			MFC	0.400
MFC18-BLACK	Prelaminated - Black 18mm	18.0	N	0			MFC	0.400
MFC18-EBONY	Prelaminated - Ebony 18mm	18.0	Y	0			MFC	0.400
MFC18-OAK	Prelaminated - Oak 18mm	18.0	Y	0			MFC	0.400

Boards for material: MFC18-BEECH Prelaminated - Beech 18mm Thickness:18.0 Book:0

Board code	Type	Length	Width	Informa	Stock	Alloc	Order	Cost	Limit	Bin	Supplier	Min Stk	ReOrd	Grain	Paramete
MFC18-BEECH/01		3050.0	1525.0		1702	0	215	3.210	0			120	150	Y	
MFC18-BEECH/02		2440.0	1220.0		1630	2	205	2.960	0			120	150	Y	

NUM

In this example the material MFC18-Teak has two available board sizes 3050 x 1525 and 2440 x 1220.

The Material column in the part list associates each part with the correct material to use and the optimiser selects the optimum board sizes to use for each job.



**Optimising parameters** are used to describe the type of cutting (trims, re-cuts, headcuts ...). See the '*Parameters*' section for details. Typical parameters are:-

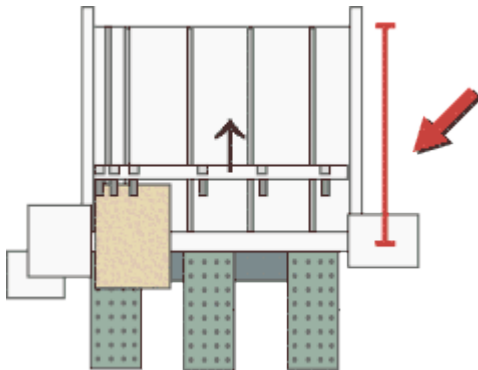
Saw kerf  
Front Trims  
Rear trims  
...

The Front trim parameters, for example, allows the specification of the amount of material including kerf allowed at the front of the board for rips and cross cuts.



**Saw parameters** are used to describe each saw; overall cutting length, position of clamps, size of waste flap ... Typical parameters are:-

Saw model  
Cutting height  
Overall cutting length  
...

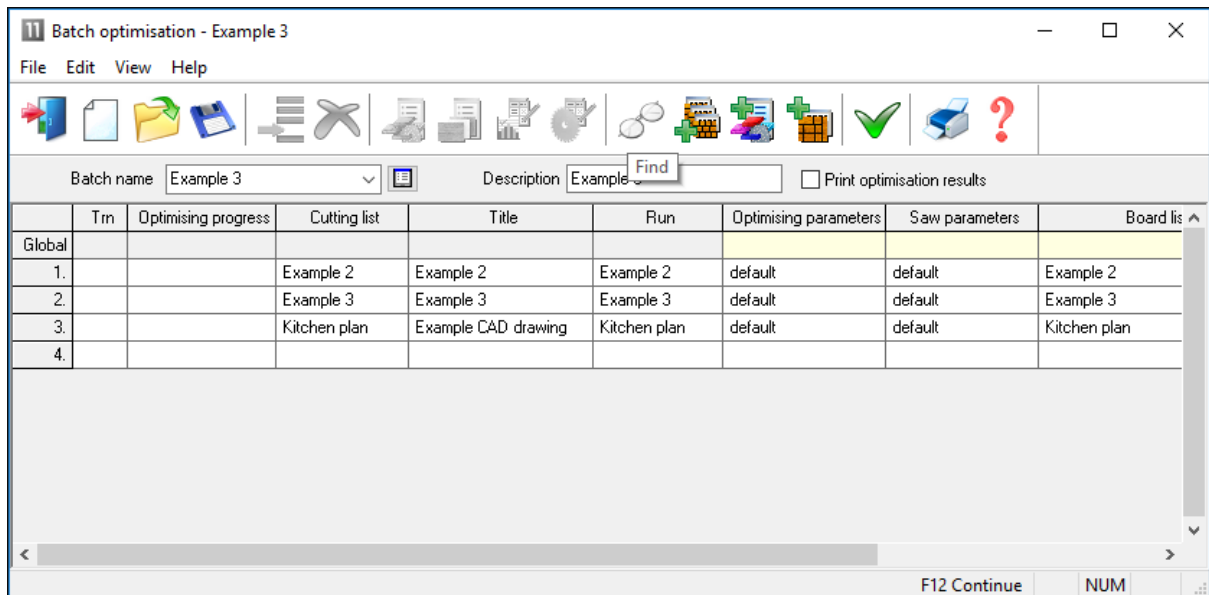


Different parameters list can be set up and used to produce the correct cutting requirements for any list. Typically users set up a handful of parameters lists with commonly used settings and add extra lists for one-off or special jobs.



### **Optimising**

Optimisation produces the pattern layout (balancing cutting times and waste) and a set of details reports for each job. Jobs can be batched together, this is useful when there are lots of small orders in the day.



Batch Optimisation

The results are shown in the section of the program 'Review Runs'.

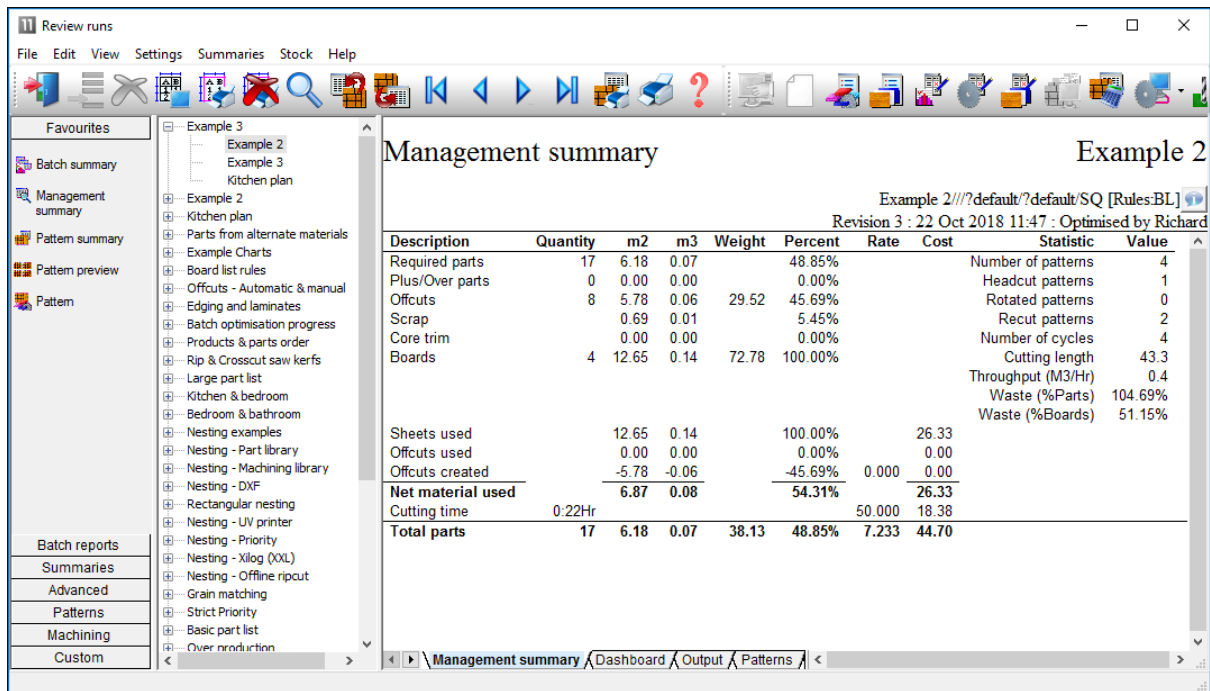
Runs are stored and can be easily recalled for review or adjustments.

Run	Parts produced	Boards	Saw Time	Routing Time	Total Time	Pattern Cost	Qty Parts	Qty Boards	Sheets used	Offcuts created	Qty Ptn	Qty Cyc	Waste (% Boards)	Scrap (% Boards)	Av Offcut	Av Yield
Example 2	6.18	12.65	0.22	0.00	0.22	44.70	17	4	4	8	4	4	51.15	5.45	45.69	48.85
Example 3	6.18	12.65	0.22	0.00	0.22	44.70	17	4	4	8	4	4	51.15	5.45	45.69	48.85
Kitchen plan	65.12	78.89	1.58	0.00	1.58	314.20	218	25	25	9	25	25	17.45	11.80	5.65	82.55
	77.48	104.19	2.42	0.00	2.42	403.60	252	33	33	25	33	33	25.64	10.26	15.38	74.36

Batch summary

Select an item to see the detail of each job.

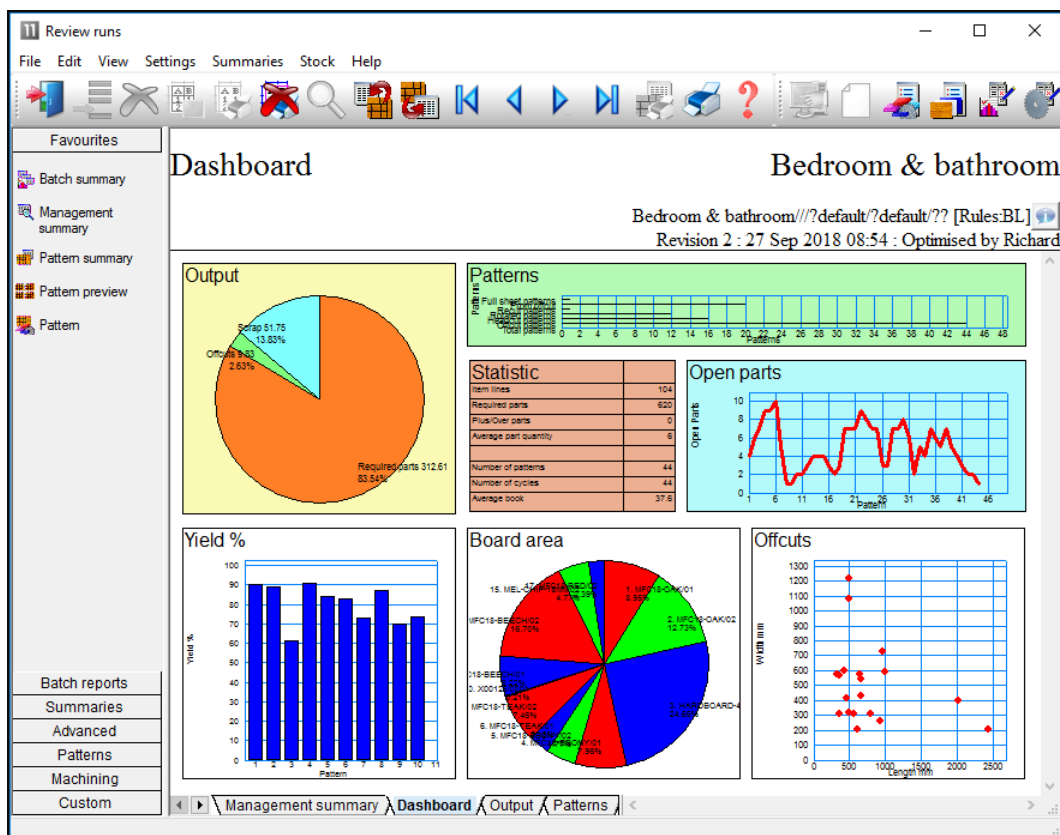
The first report shown is an overall summary of the job.



Management summary

The management summary shows the overall yield, costs and type of patterns produced. The 'Runs' window shows the list of optimised jobs so it is easy to quickly check and review on job then another.

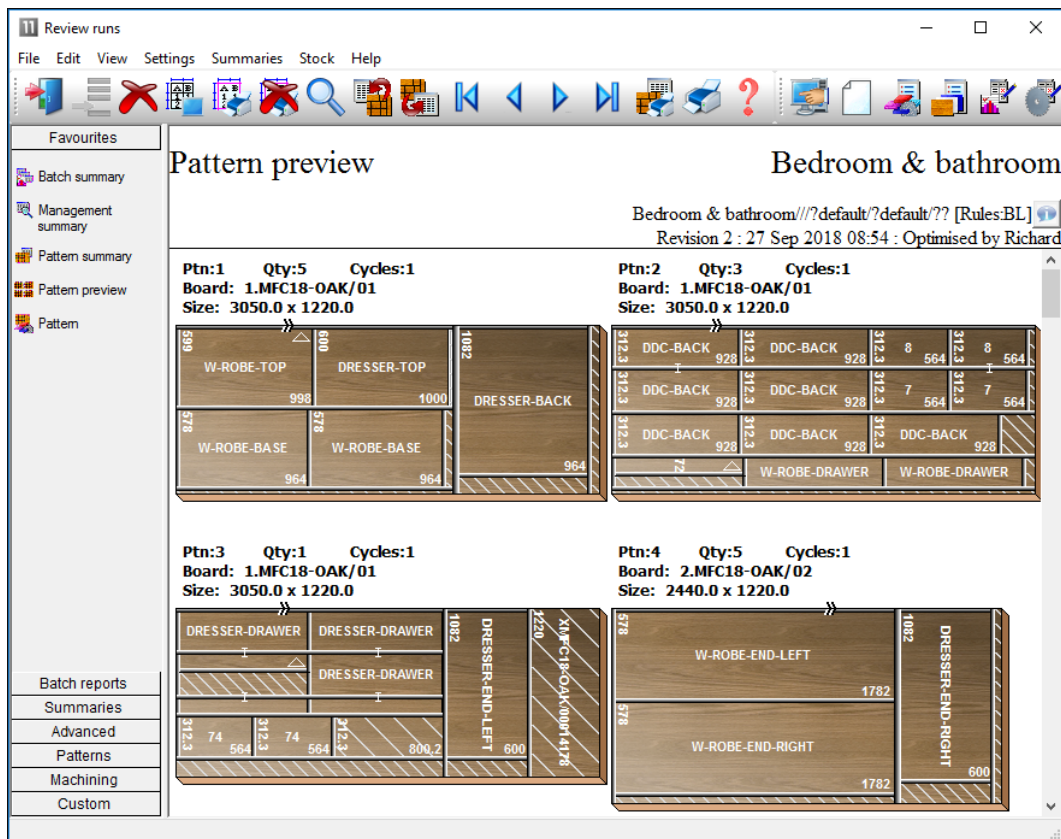
An option at the Management summary is the Dashboard which shows custom snapshots of the data allowing better insight into selected feature of the job.



Dashboard analysis

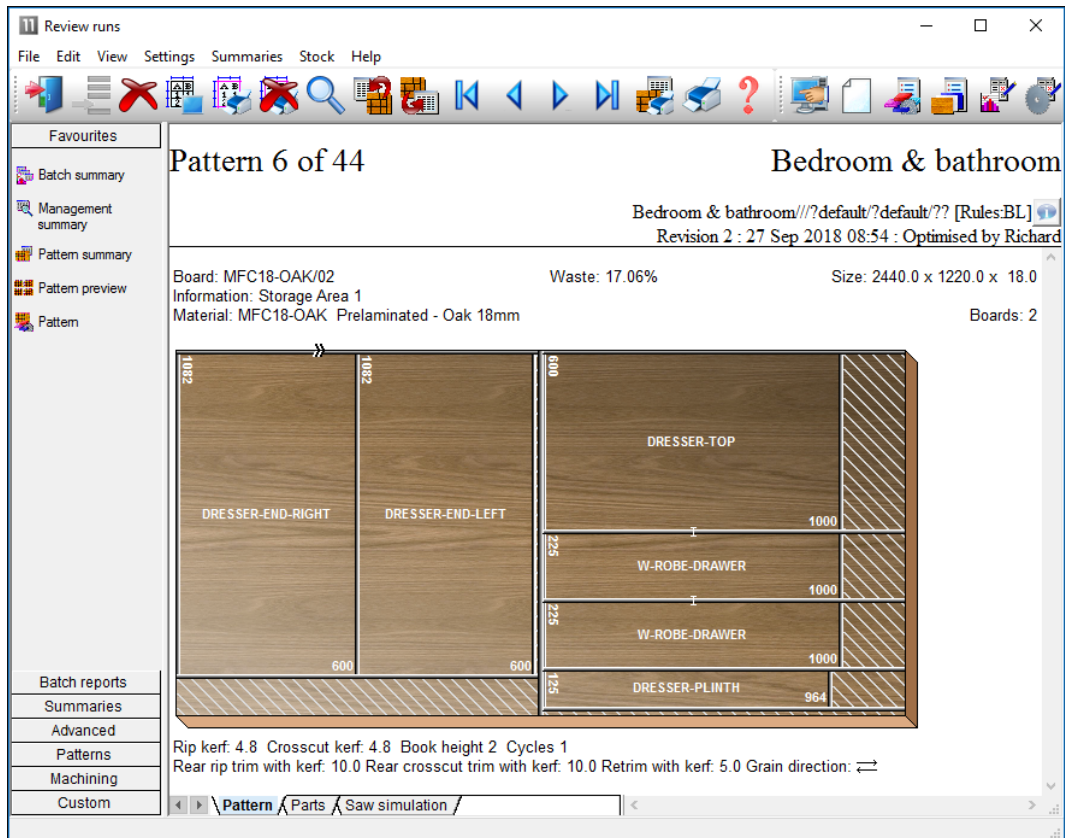
The Dashboard can include a selection of cuts from other summaries so critical aspects of the jobs can be highlighted. The Dashboard and all the charts are fully customisable.

The cutting patterns are shown in a thumbnail overview.



Preview of patterns

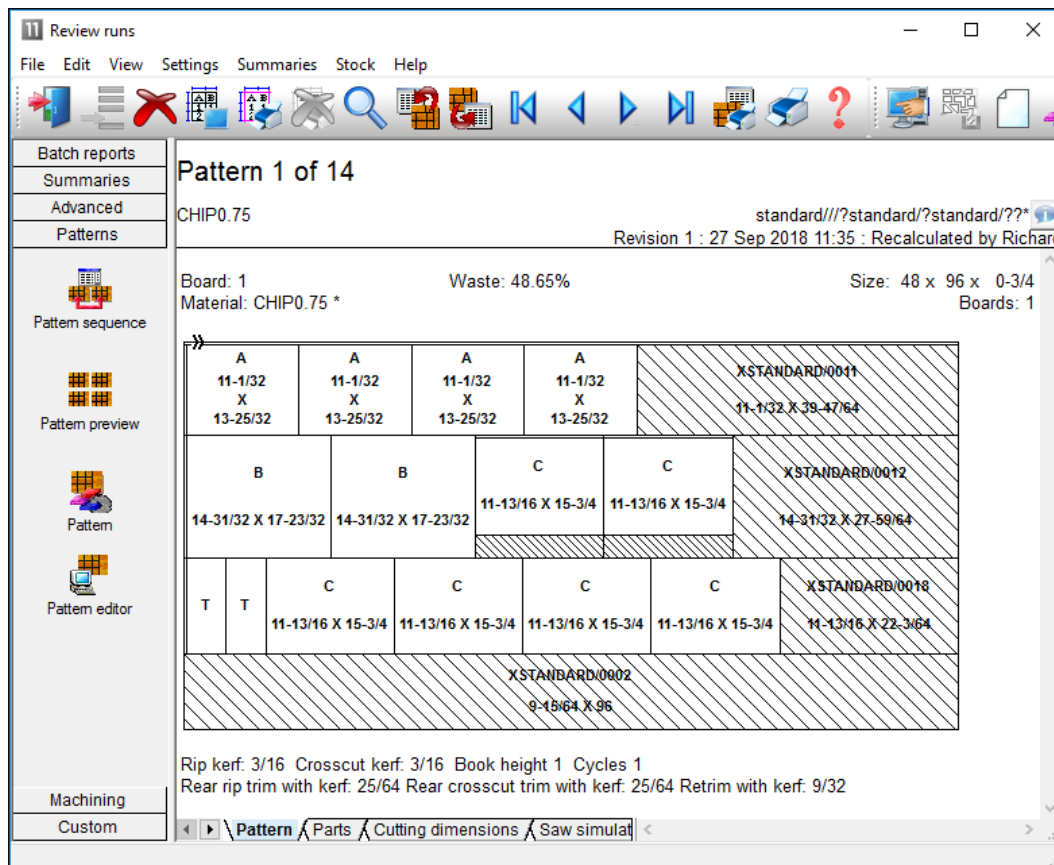
The patterns can be viewed full screen by clicking on the thumbnail, with extra details of each pattern are available on the tabs at the foot of each drawing. The patterns include part label, waste, offcut and the pattern orientation.



Full details of pattern

All reports can be fully customised and the Form & Design option is available for custom reports - fully integrated into the program.

The program also supports decimal and fractional inches.



Pattern - fractional inches

In this example the pattern is shown in an alternative view 'Monochrome'. There are several choices of pattern view.

- Enhanced picture with bitmap or solid colour
- Flat picture with bitmap or solid colour
- Picture with colour for different part type (recut, plus part, offcut ...)
- Monochrome picture

There are a range of reports on the job, including, offcuts, costs, board usage.

### Offcuts

Shows the offcuts produced in a run.



Review runs													
File Edit View Settings Summaries Stock Help													
Favourites													
Batch reports													
Summaries													
Advanced													
Offcut summary													
Distribution summary													
Edging summary													
Machine times													
Saw loading summary													
Destacking summary													
Station summary													
Destacking pictures													
Patterns													
Machining													
Custom													
Bedroom & bathroom													
Revision 2 : 27 Sep 2018 08:54 : Optimised by Richard													
No	Description	Type	Picture	Length mm	Width mm	Total	Area m2	Cost m2	Cost/ Offcut	Total Cost	Weight	Offcuts per pattern	
Offcut value - restocking 17.57 Cost reduction 0.00													
HARDBOARD-4MM* Hardboard 4mm Thickness 4.0 Book 8 Parameters HBD04 Min size 850.0 X 400.0													
1.	XHARDBOARD-4MM/00014169	X		964.0	723.6	1	0.698	0.445	0.310	0.31	2.09	1/17	
						1	0.698			0.31	2.09		
MEL-CHIP-18MM Prelaminated - White 18mm Thickness 18.0 Book 5 Min size 300.0 X 200.0													
2.	XMEL-CHIP-18MM/00014170	X		614.0	207.2	4	0.509	1.570	0.200	0.80	4.58	4/41	
						4	0.509			0.80	4.58		
MFC18-BEECH Prelaminated - Beech 18mm Thickness 18.0 Book 5 Min size 300.0 X 200.0													
3.	XMFC18-BEECH/00014171	X		928.0	260.9	1	0.242	1.605	0.389	0.39	1.74	1/34	
4.	XMFC18-BEECH/00014172	X		320.4	578.0	1	0.185	1.605	0.297	0.30	1.33	1/34	
5.	XMFC18-BEECH/00014173	X		564.4	312.3	1	0.176	1.480	0.261	0.26	1.27	1/40	
6.	XMFC18-BEECH/00014174	X		359.6	312.3	6	0.674	1.480	0.166	1.00	4.85	6/39	
						9	1.277			1.94	9.20		

Review runs Offcut summary

Offcuts can be returned to the board library for use in later runs with the Stock control module.

## Boards

This shows the amount of each board size used in a run.

Review runs													
File Edit View Settings Summaries Stock Help													
Favourites													
Batch reports													
Summaries													
Management summary													
Part summary													
Sundry parts													
Board summary													
Pattern summary													
Input summary													
Material summary													
Advanced													
Patterns													
Machining													
Custom													
Bedroom & bathroom													
Revision 2 : 27 Sep 2018 08:54 : Optimised by Richard													
No	Material	Material Description	Board	Type	Length mm	Width mm	Qty in Stock	Qty Used	Length m	Area m2	Cost		
3.	HARDBOARD-4MM	Hardboard 4mm	HARDBOARD-4MM/01		2440.0	1220.0	782	31		92.28	0.698		
15.	MEL-CHIP-18MM	Prelaminated - White 18mm	MEL-CHIP-18MM/02		2440.0	1220.0	362	6		17.86	3.00		
12.	MFC18-BEECH	Prelaminated - Beech 18mm	MFC18-BEECH/01		3050.0	1525.0	1702	5		23.26	3.00		
13.	MFC18-BEECH	Prelaminated - Beech 18mm	MFC18-BEECH/02		2440.0	1220.0	1628	21		62.51	2.00		
4.	MFC18-EBONY	Prelaminated - Ebony 18mm	MFC18-EBONY/01		3050.0	1220.0	805	8		29.77	5.00		
5.	MFC18-EBONY	Prelaminated - Ebony 18mm	MFC18-EBONY/02		2440.0	1220.0	523	6		17.86	5.00		
1.	MFC18-OAK	Prelaminated - Oak 18mm	MFC18-OAK/01		3050.0	1220.0	428	9		33.49	3.00		
2.	MFC18-OAK	Prelaminated - Oak 18mm	MFC18-OAK/02		2440.0	1220.0	114	16		47.63	2.00		
17.	MFC18-RED	Prelaminated - Red 18mm	MFC18-RED/02		2440.0	1220.0	14	3		8.93	4.00		
7.	MFC18-TEAK	Prelaminated - Teak 18mm	MFC18-TEAK/02		3050.0	1525.0	955	6		27.91	3.00		
6.	MFC18-TEAK	Prelaminated - Teak 18mm	MFC18-TEAK/01		2440.0	1220.0	1020	4		11.91	3.00		
10.	MFC18-TEAK	Prelaminated - Teak 18mm	X00125/0001	X	780.0	1011.0	1	1		0.79	1.00		
11.	MIRROR-GLASS	Mirror Glass (sundry)	MIRROR-GLASS				0	14			3.00		
Total								130		374.19			

Review runs Board summary

## Job costing

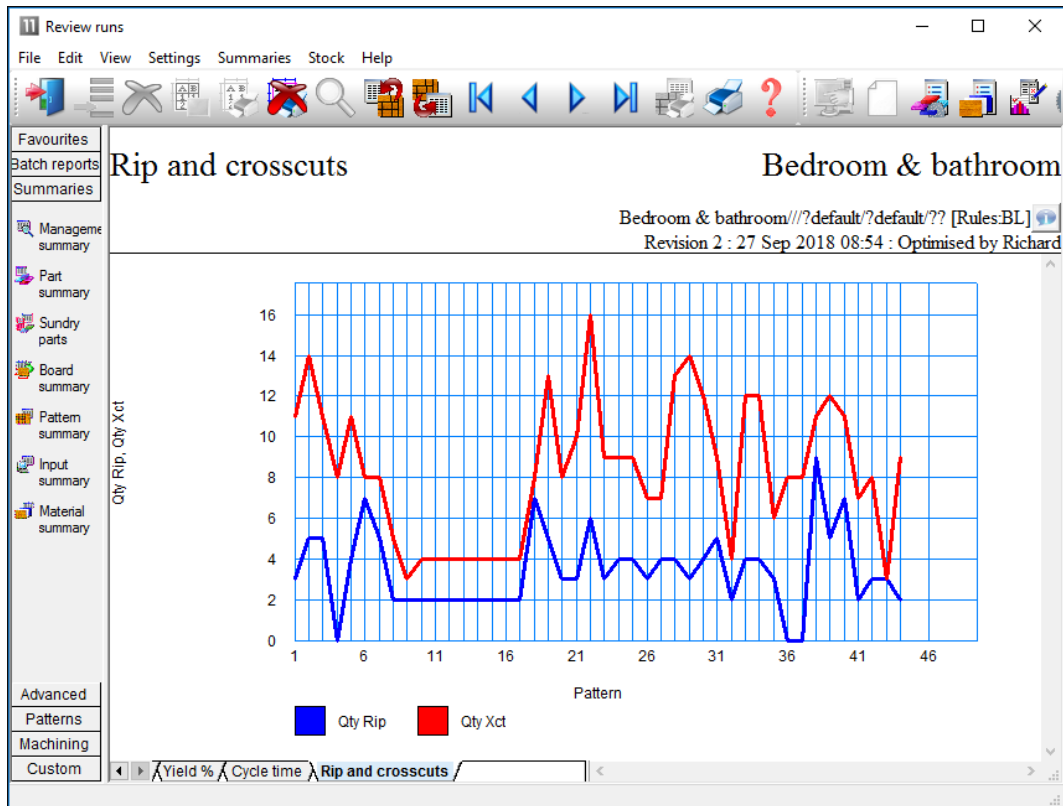
A summary of all the cost centres for a job.

Review runs						
File Edit View Settings Summaries Stock Help						
Favourites						
Batch reports						
Job costing						
Fittings						
Operations						
Batch material summary						
Summaries						
Advanced						
Patterns						
Machining						
Custom						
Job costing						
Bedroom & bathroom						
Bedroom & bathroom						
Code	Description	Quantity	Linear	Area	Cost	Total
Board	Material	Quantity		Area	Cost/m2	Total
MFC18-OAK/01	MFC18-OAK 3050.0 x 1220.0	9		33.489	3.300	110.514
MFC18-OAK/02	MFC18-OAK 2440.0 x 1220.0	16		47.629	2.970	141.458
HARDBOARD-4MM/01	HARDBOARD-4MM 2440.0 x 1220.0	31		92.281	0.890	82.130
MFC18-EBONY/01	MFC18-EBONY 3050.0 x 1220.0	8		29.768	5.760	171.464
MFC18-EBONY/02	MFC18-EBONY 2440.0 x 1220.0	6		17.861	5.210	93.055
MFC18-TEAK/01	MFC18-TEAK 2440.0 x 1220.0	4		11.907	3.110	37.031
MFC18-TEAK/02	MFC18-TEAK 3050.0 x 1525.0	6		27.907	3.110	86.792
X00125/0001	MFC18-TEAK 780.0 x 1011.0	1		0.789	1.550	1.222
MFC18-BEECH/01	MFC18-BEECH 3050.0 x 1525.0	5		23.256	3.210	74.653
MFC18-BEECH/02	MFC18-BEECH 2440.0 x 1220.0	21		62.513	2.960	185.038
MEL-CHIP-18MM/02	MEL-CHIP-18MM 2440.0 x 1220.0	6		17.861	3.140	56.083
MFC18-RED/02	MFC18-RED 2440.0 x 1220.0	3		8.930	4.820	43.045
		116		374.191		1082.484
Sundry	Material	Quantity	Linear	Area	Cost	Total
MIRROR-GLASS	MIRROR-GLASS	14			3.200	44.800
		14				44.800
Edging	Description	Quantity			Cost/m	Total
OAK-TAPE-22MM	Oak PVC Tape 22mm	47.460			0.840	39.866
EBONY-TAPE	Ebony PVC Tape 22mm	34.980			0.840	29.383
BEECH-TAPE-22MM	Beech PVC Tape 22mm	21.340			0.720	15.365

Review runs job costing

## Charts and Analysis

Most reports include options to add a graphical view or chart of the report data. Up to 3 custom charts can be defined for each summary.



Review runs chart

The data to highlight in this way typically varies from company to company so there are full facilities for defining data to include and style of chart for each report in Review runs (*Settings - Chart settings*)

## Comparision of Optimisers

	Magi-Cut Intro
<b>Part list</b>	<b>IN</b>
Metric or imperial dimensions	•
Grain/cross grain or ungrained parts	•
Exact quantity or over/under production	•
Maximum part sizes per part list (undivided)	20,000
Mixed material lists – unlimited materials per job	•
User-defined part list information fields	99
Configurable part list editor	•
Grain match – master part templates	•
<b>Import</b>	
Import part/cutting lists from user-defined csv, xls(x)	•
Import board lists from user defined csv, xls(x) files	•
Import patterns – from PTX	•
<b>Cutting List</b>	
Multiple boards & offcut sizes per job	•

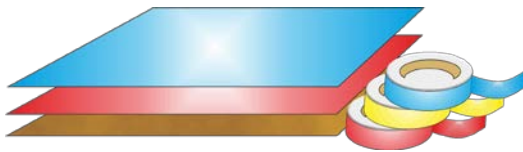
Cutting list rules – user defined tables	•
Allow alternative materials per part	•
<b>Optimising</b>	
Small/medium quantity sheet optimiser	•
Timber/Workshop cross cut optimiser	•
Strip production optimiser	
Full sheet over production optimiser	
Volume optimisation	
Auto optimiser selection	
Pattern complexity controls	Limited
Saw kerf & trim settings	•
Separate kerf for rip and crosscut saws	
Optimisation based on material cost	•
Optimisation based on cost(material + cutting time)	
Vertical strips in head cut patterns	
Maximum part sizes per optimisation	10,000
Maximum pieces per optimisation	10,000
Faster optimisation with multi-core processors	•
Batch optimisation multiple lists- up to 250 jobs	•
strip production optimiser	
Full sheet over production optimiser	
Volume optimisation	
Extended optimisation parameters	Limited
Control of open parts or pallet groups	
Control of 'plus part' preference	
Free cut analysis	
Material parameters	•
Mixed material stacks	
Re-optimisation of remaining (unproduced) parts	
<b>Export</b>	
Export report data to Access database	•
Export Summaries to XLS(X) files	•
Export summaries to pdf	•
Export patterns to DXF files	•
<b>Reports, forms and labels</b>	
Batch, job summaries	•
Part, Baord, Material and Pattern summaries	•
Offcut summary	•
Part costings – Weight calculations	•
Cutting time calculations/saw simulation report	•
Dashboard – graphs and bar charts	•
Configurable reports & summaries	•
Form design – part lists, patterns	•
Label design – includes barcodes and pictures	•
Labels for parts and offcuts	•
<b>Stock</b>	
Material library with boards and offcuts	•
Automatic stock issue from jobs	•
Import adjustment from file	•
Destacking and palletisation	

<b>Patterns</b>	
Thumbnail preview of patterns	•
Pattern display – colour coded or material texture	•
Pattern editor – add, move delete parts	•
Cutting instructions for saw operator	•
Pattern library – standard templates – grain match ptns	•
Manual patterns	•
<b>General</b>	
File Maintenance – copy/delete files	•
Backup & restore data	•
Integrated local (offline) comprehensive help	•
Link to Web site	•
User Profiles	•
Win 7/Win8/Win 10 platforms	•

The following features all come as standard with the Standard Optimiser module.

### **Edges & Laminating**

*Accurate application and costing of edge-banding materials*



The program provides a full set of options to deal with with edged, trimmed and laminated parts. A wide variety of edging methods are:-

- Tape
- Laminate strips
- Solid lipping
- Postform edging
- Bullnose edging
- Laminate front and back
- Core trimming (cutting back before edging)
- Edge before laminating

The edging requirement is set at the part list and can be set for each part. The program automatically calculates the correct cutting sizes required to meet the finished size with edging set at the part list.

Sizes are entered (or imported) via the Part list.

These are typically the finished sizes but where there is edging and laminating the finished size has to be adjusted to the cut size before being sent to the saw.

Part list - Office units										
File Edit View Optimise Help										
Title Office units Opt DEFAULT Saw DEFAULT										
	Description	Material	Length	Width	Quantity	Grain	Edge Left	Edge Right	Face Lamin...	Inf
Global										
1.	F-CUPBOARD-TOP	MFC18-BEECH	700.0	350.0	6	Y	BEECH...	BEECH...		
2.	F-CUPBOARD-SIDE	MFC18-BEECH	332.0	790.0	12	Y	BEECH...	BEECH...		
3.	F-CUPBOARD-BASE	MFC18-BEECH	700.0	350.0	6	Y	BEECH...	BEECH...		
4.	F-CUPBOARD-DOOR	MFC18-BEECH	330.0	790.0	12	Y				
5.	F-CUPBOARD-SHELF	MFC18-BEECH	635.0	340.0	6	Y				
6.	F-CUPBOARD-BACK	HARDBOARD-4MM	665.0	800.0	6	N				
7.	F-CAB-TOP	MFC18-BEECH	450.0	392.0	5	Y				
8.	F-CAB-SIDE	MFC18-BEECH	370.0	585.0	10	Y				
9.	F-CAB-BASE	MFC18-BEECH	450.0	392.0	5	Y				
10.	F-CAB-BACK	HARDBOARD-4MM	420.0	590.0	5	N				
11.	F-CAB-DRW-FRONT	MFC18-BEECH	445.0	290.0	10	Y	BEECH...	3PE-23MM		
12.	F-CAB-DRW-SIDE	MEL-CHIP-15MM	355.0	260.0	20	N				
13.	F-CAB-DRW-BACK	MEL-CHIP-15MM	380.0	240.0	10	N				
Office units / NUM										

Edging - Part list

A set of extra fields (called Information boxes) extend the Part list to allow for the entry of the edging code for each edge of each part. For example, in the above example items such as Top, Side and Base have edging material on some of the edges.

The correct cutting sizes are produced automatically.

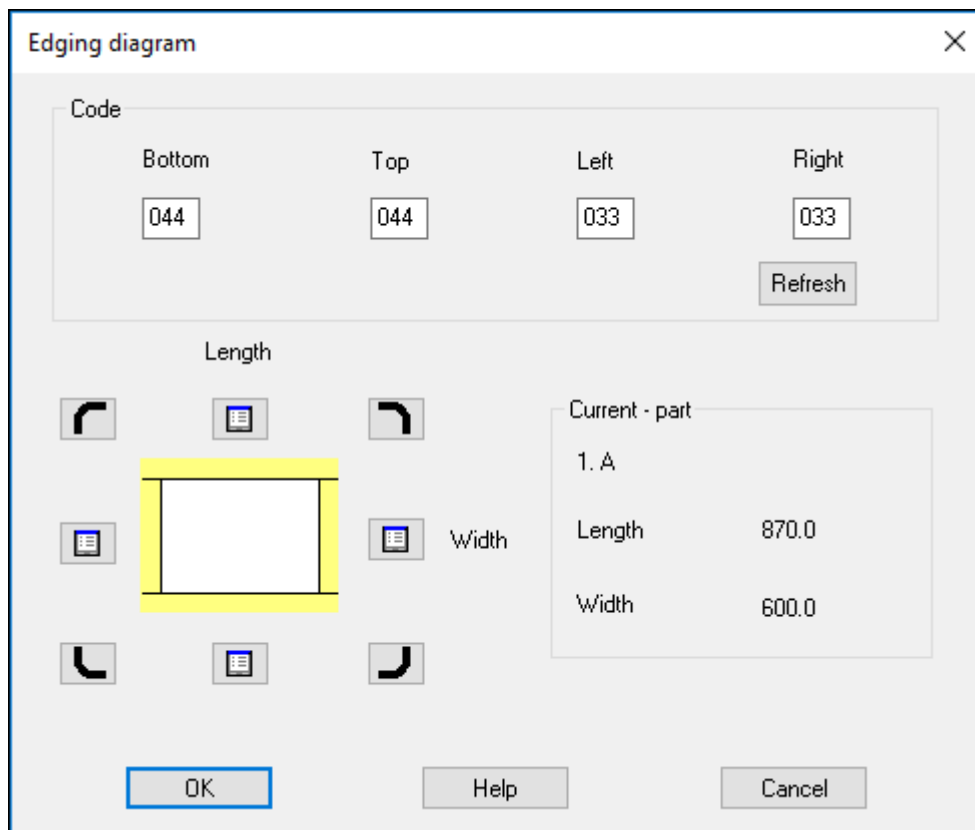
Cutting list - Office units										
File Edit View Optimise Help										
Title Office units Opt DEFAULT Saw DEFAULT										
	Description	Material	Length	Width	Quantity	Grain	Edge Left	Edge Right	Face Lamin...	Inf
Global										
1.	F-CUPBOARD-TOP	MFC18-BEECH	698.0	350.0	6	Y	BEECH...	BEECH...		
2.	F-CUPBOARD-SIDE	MFC18-BEECH	330.0	790.0	12	Y	BEECH...	BEECH...		
3.	F-CUPBOARD-BASE	MFC18-BEECH	698.0	350.0	6	Y	BEECH...	BEECH...		
4.	F-CUPBOARD-DOOR	MFC18-BEECH	330.0	790.0	12	Y				
5.	F-CUPBOARD-SHELF	MFC18-BEECH	635.0	340.0	6	Y				
6.	F-CUPBOARD-BACK	HARDBOARD-4MM	665.0	800.0	6	N				
7.	F-CAB-TOP	MFC18-BEECH	450.0	392.0	5	Y				
8.	F-CAB-SIDE	MFC18-BEECH	370.0	585.0	10	Y				
9.	F-CAB-BASE	MFC18-BEECH	450.0	392.0	5	Y				
10.	F-CAB-BACK	HARDBOARD-4MM	420.0	590.0	5	N				
11.	F-CAB-DRW-FRONT	MFC18-BEECH	443.0	290.0	10	Y	BEECH...	BEECH...		
12.	F-CAB-DRW-SIDE	MEL-CHIP-15MM	355.0	260.0	20	N				
13.	F-CAB-DRW-BACK	MEL-CHIP-15MM	380.0	240.0	10	N				
Office units / NUM										

Edging - Cutting list

For example, a finished length of 332.0 mm requires a cutting size of 330.0 mm if the part is edged by (2mm) tape on each length edge.

The part list can include a field for describing the Edge diagram.

This field can be used to set how adjoining edge pieces butt on to each other or whether they are mitred.

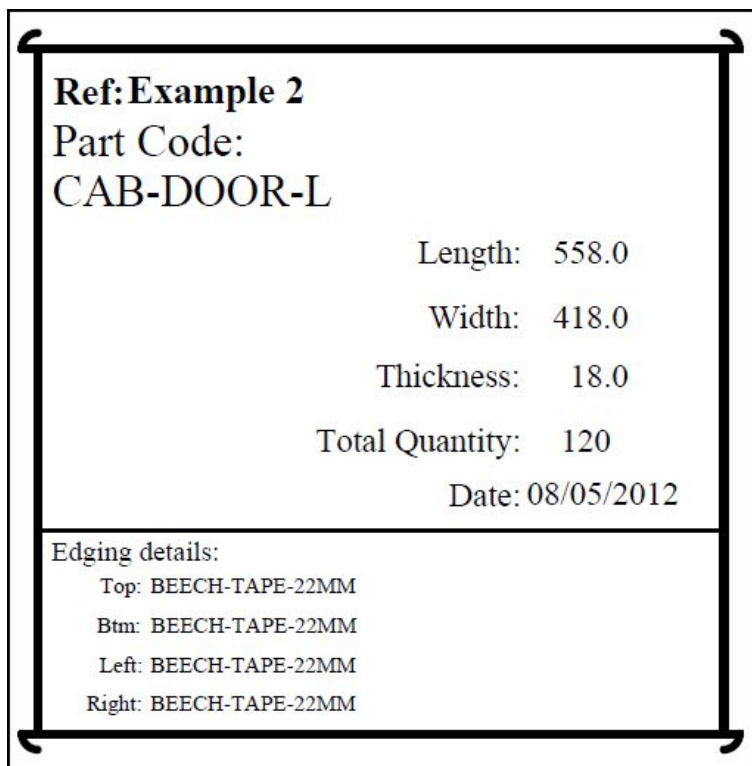


The 'Edging diagram' dialog box is used to configure edging settings. It features a 'Code' section with input fields for Bottom (044), Top (044), Left (033), and Right (033), along with a 'Refresh' button. Below this is a 'Length' section with icons for different edging profiles. A central diagram shows a rectangular part with a yellow border. To the right of the diagram is a 'Width' label and a 'Current - part' table. At the bottom are 'OK', 'Help', and 'Cancel' buttons.

Current - part	
1. A	
Length	870.0
Width	600.0

Edging diagram

This can be used when printing labels for edging to show on the label (at the Edgebender) exactly how the edging is applied.



The 'Edging diagram label' is a template for a label. It includes a header section with 'Ref: Example 2', 'Part Code: CAB-DOOR-L', and dimensions: Length: 558.0, Width: 418.0, Thickness: 18.0. It also shows 'Total Quantity: 120' and 'Date: 08/05/2012'. A section titled 'Edging details:' lists the edging type for each side: Top, Btm, Left, and Right, all specified as 'BEECH-TAPE-22MM'.

Edging diagram label

The edging diagram can be included on each part label to show clearly how the edging is produced. This is available with:-

- Printing labels at the Office
- Printing labels at the Saw (Online label PC)
- Printing labels at the Saw (Cadmatic saw controller)

For the Cadmatic the information is passed to the Cadmatic controller on transfer of data to the saw.

- With the Parts & Labels module the edging requirements can be printed on a label as a bar code and used for processing at the edgebander after cutting.



## Laminating



The part list can also include fields for laminating one or both sides of a part.

Part list - Office units									
File Edit View Optimise Help									
Title Office units Opt DEFAULT Saw DEFAULT									
	Description	Material	Length	Width	Quantity	Grain	Face Laminate	Back Laminate	Inf
Global									
1.	F-CUPBOARD-TOP	MFC18-BEECH	700.0	350.0	6	Y	BEECH-L...	BEECH-L...	
2.	F-CUPBOARD-SIDE	MFC18-BEECH	332.0	790.0	12	Y			
3.	F-CUPBOARD-BASE	MFC18-BEECH	700.0	350.0	6	Y			
4.	F-CUPBOARD-DOOR	MFC18-BEECH	330.0	790.0	12	Y			
5.	F-CUPBOARD-SHELF	MFC18-BEECH	635.0	340.0	6	Y			
6.	F-CUPBOARD-BACK	HARDBOARD-4MM	665.0	800.0	6	N			
7.	F-CAB-TOP	MFC18-BEECH	450.0	392.0	5	Y	BEECH-L...	BEECH-L...	
8.	F-CAB-SIDE	MFC18-BEECH	370.0	585.0	10	Y	BEECH-L...	BEECH-L...	
9.	F-CAB-BASE	MFC18-BEECH	450.0	392.0	5	Y			
10.	F-CAB-BACK	HARDBOARD-4MM	420.0	590.0	5	N			
11.	F-CAB-DRW-FRONT	MFC18-BEECH	445.0	290.0	10	Y			
12.	F-CAB-DRW-SIDE	MEL-CHIP-15MM	355.0	260.0	20	N			
13.	F-CAB-DRW-BACK	MEL-CHIP-15MM	380.0	240.0	10	N			
Office units /									
NUM									

Laminates - part list

The program automatically adds extra items to the cutting list (cutting requirement) to allow for the laminate pieces required.

The laminate size is adjusted to allow for trimming as required.

**Cutting list - Office units**

File Edit View Optimise Help

Title Office units Opt DEFAULT Saw DEFAULT

	Description	Material	Length	Width	Quantity	Grain	Face Laminate	Back Laminate	Inf
Global									
1.	F-CUPBOARD-TOP	MFC18-BEECH	698.0	350.0	6	Y	BEECH-L...	BEECH-L...	
2.	L0001	BEECH-LAM	718.0	365.0	6	Y			
3.	L0001	BEECH-LAM	718.0	365.0	6	Y			
4.	F-CUPBOARD-SIDE	MFC18-BEECH	330.0	790.0	12	Y			
5.	F-CUPBOARD-BASE	MFC18-BEECH	698.0	350.0	6	Y			
6.	F-CUPBOARD-DOOR	MFC18-BEECH	330.0	790.0	12	Y			
7.	F-CUPBOARD-SHELF	MFC18-BEECH	635.0	340.0	6	Y			
8.	F-CUPBOARD-BACK	HARDBOARD-4MM	665.0	800.0	6	N			
9.	F-CAB-TOP	MFC18-BEECH	450.0	392.0	5	Y	BEECH-L...	BEECH-L...	
10.	L0007	BEECH-LAM	470.0	407.0	5	Y			
11.	L0007	BEECH-LAM	470.0	407.0	5	Y			
12.	F-CAB-SIDE	MFC18-BEECH	370.0	585.0	10	Y	BEECH-L...	BEECH-L...	
13.	L0008	BEECH-LAM	390.0	600.0	10	Y			
14.	L0008	BEECH-LAM	390.0	600.0	10	Y			

Office units NUM

Laminates - cutting list

## Edging summary and costs

The edging summary gives full details of the edging requirements including the costs.

**Review runs**

File Edit View Settings Summaries Stock Help

Edging summary Example of edging and laminates

Edging and laminates:///default/?default/SQ [Rules:CL,BL]

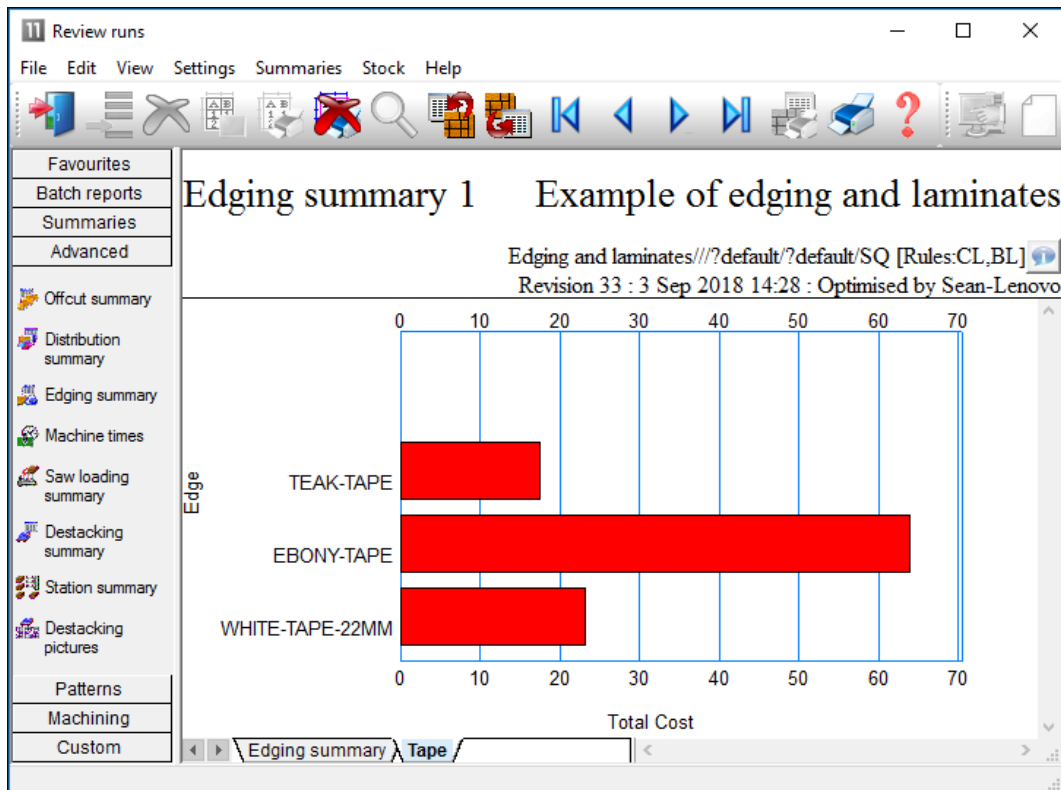
Revision 33 : 3 Sep 2018 14:28 : Optimised by Sean-Lenovo

Code	Description	Material	Thickness	Cost	Total	Total
				m	m	Cost
WHITE-TAPE-22MM	White PVC Tape 22mm		1.0	0.550	42.36	23.30
TEAK-TAPE	Teak PVC Tape 22mm		1.0	0.840	21.00	17.64
EBONY-TAPE	Ebony PVC Tape 22mm		1.0	0.840	76.20	64.01
<b>Total</b>						<b>104.95</b>

Edging summary

Edging summary

The Edging summary can include a custom graphic representation of the data.



Edging summary - chart

The printed part costing report includes the cost of edging material and the edgebander costs.

Part costing - full						Edging example		
No	Code / Description	Material / Description	Length	Width	Quantity	Part costing - full		
					Time Use	Rate	Cost	
1.	CVR/TP	MFC18-BEECH	920.0	420.0	1			
	Edge Btm: BEECH-TAPE-22MM	Edge Top: BEECH-TAPE-22MM	Edge Left: BEECH-TAPE-22MM					
	Finished size: 920.0 x 420.0	Part graining: Grained	Volume: LOW	Part area m2: 0.4				
	Edgebander: N/A							
	CVR/TP	MFC18-BEECH	919.0	418.0	0.384	3.649	1.402	
	BEECH-TAPE-22MM	Beech PVC Tape 22mm			2.320	0.720	1.670	
	Saw				0:50 0.014	50.000	0.697	
	Edgebander				1:20 0.022	30.000	0.663	
					Total cost :		4.432	
2.	FRT/END	MFC18-BEECH	750.0	420.0	2			
	Edge Top: BEECH-TAPE-22MM	Finished size: 750.0 x 420.0	Part graining: Grained					
	Volume: LOW	Part area m2: 0.3	Edgebander: N/A					
	FRT/END	MFC18-BEECH	750.0	419.0	0.314	3.649	1.147	
	BEECH-TAPE-22MM	Beech PVC Tape 22mm			0.770	0.720	0.554	
	Saw				0:44 0.012	50.000	0.607	
	Edgebander				0:26 0.007	30.000	0.217	
					Total cost :		2.526	
3.	FRT/TOP	MFC18-BEECH	690.0	420.0	2			
	Edge Btm: BEECH-TAPE-22MM	Edge Top: BEECH-TAPE-22MM	Edge Left: BEECH-TAPE-22MM					
	Finished size: 690.0 x 420.0	Part graining: Grained	Volume: LOW	Part area m2: 0.3				
	Edgebander: N/A							
	FRT/TOP	MFC18-BEECH	689.0	418.0	0.288	3.649	1.051	
	BEECH-TAPE-22MM	Beech PVC Tape 22mm			1.860	0.720		
	Saw				0:41 0.011	50.000		
	Edgebander				1:12 0.020	30.000		
					Total cost :			

Edging - part costing

The operational details and costs of each Edgebander are set up in the Edging parameters and the Machining rate parameters. These include options such as:-

- Overlap for edging
- Gap between parts
- Edgebander speed
- Double sided or not
- ...



### Edging library

The details of the edging materials and operations are set up in the Edging library. This can be customised to match many different edging methods, for example, whether edging is applied before laminating, whether a core trim is taken, the type of edging ...

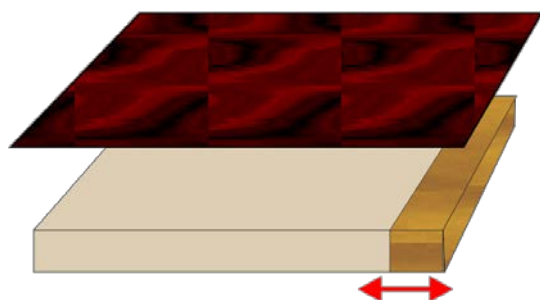
Edging library									
File Edit View Help									
	Code	Description	Material	Grain	Fu...	Thick...	Core...	Cost	Edge first ^
▶	ASH-TAPE-22MM	Ash PVC Tape 22mm		N	1	1.5	0.0	0.750	N
	BEECH-LAM	Beech Laminate		Y	3	1.0	0.0	1.450	N
	BEECH-TAPE-22MM	Beech PVC Tape 22mm		N	1	1.0	0.0	0.720	N
	BULLNOSE	Bull nosed edge		N	5	0.0	0.0	0.000	N
	CORE-TRIM	Oversize cutting		N	0	0.0	20.0	0.000	N
	EBONY-LAM	Ebony Laminate	EBONY-LAM-1MM	Y	3	1.0	0.0	1.450	N
	EBONY-TAPE	Ebony PVC Tape 22mm		N	1	1.0	0.0	0.840	N
	GREEN-TAPE-22MM	Green PVC Tape 22mm		N	1	1.0	12.0	0.550	N
	LBROWN-TAPE	Light Brown Tape		N	1	1.0	0.0	0.730	N
	MAHOGANY-LIP	Solid Mahogany lip		N	2	25.0	10.0	1.850	N
	OAK-LAM	Oak Laminate	OAK-LAM-1MM	Y	3	1.0	0.0	1.360	N
	OAK-TAPE-22MM	Oak PVC Tape 22mm		N	1	1.0	0.0	0.840	N
	POSTFORM	Postformed edge		N	4	0.0	0.0	0.000	N
	RED-TAPE-22MM	Red PVC Tape 22mm		N	1	1.0	0.0	0.750	N
	TEAK-LAM	Teak Laminate	TEAK-LAM-1MM	Y	3	1.0	0.0	1.400	N
	TEAK-TAPE	Teak PVC Tape 22mm		N	1	1.0	0.0	0.840	N
	WHITE-TAPE-22MM	White PVC Tape 22mm		N	1	1.0	0.0	0.550	N
*									

Edging library

For example, where a core trim is specified, this indicates that the core material is trimmed first before edging is applied. This is quite common, for instance with doors, where solid wood edges are often applied before laminating.

- Where there are a large number of different laminates for example with laminate colours the Board library can be used instead of the edging library for describing the laminates - this is often more convenient for sheet laminates.

The core trim, for example, allows for the removal of core material ready for solid wood lipping.



Lipping

The laminate size is automatically adjusted to take account of the lipping.



### **Edging parameters**

The tolerances and settings for applying edging and laminates are set via the Edging parameters (Main screen - Parameters - Edging).

**Edging parameters**

Set the parameters for laminate use

Range: 0 - 999 Millimetres

Overlap for laminates: On laminate length (total)

Overlap for laminates: On laminate width (total)

Core oversize for laminating

On core length (per edge)

On core width (per edge)

Add to laminate size

Laminate overlap per edge

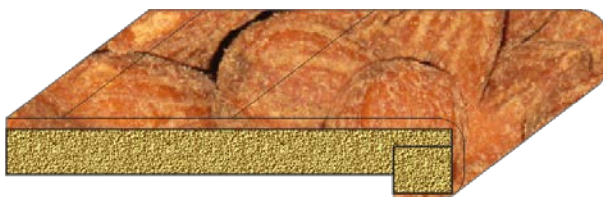
On bull nosed edges

On post formed edges

OK Print Help Cancel

Edging parameters

This includes the details for more complex edges such as Post form and bullnose edges.



### **Summary of Edging & Laminating**

Maximum items in library	99999
Maximum length of edge code	25
Maximum laminates in board library	Unlimited
Edges	•
Laminates	•
Costing	•
Edging diagram with labels	•
Edging Summary	•



## For better management and tracking of parts

The Parts Library feature provides a database for parts and used with the form and label designer provides extensive facilities for managing extra data for parts.

It is especially useful where the same parts are used again and again in different cutting lists or where extra information is needed for each part for later processing, admin, or bar codes,

Parts can be added to any cutting list with minimum data entry - this saves times and avoids costly mistakes.

### Part library

The data entry screen provides an easy way to enter part details.

Edge Btm	@EDGING@
Edge Top	@EDGING@
Edge Left	@EDGING@
Edge Right	@EDGING@
Face Laminate	
Back Laminate	
Edge Diagram	
Finished size	
Drawing name	
Step angle	
Priority	
Mirrored	
Small part	
Alternative material(s)	
Part graining	
Volume	
Template - Router	
Part area m2	
Edgebander	

Part library

The part details include the standard items such as material code, length and width but any amount of user defined information can be stored with each part using extra fields (information boxes). This extra data can also be included on labels and reports to help with later processing of the part.

The part library can also include a picture of the part from the Machining library or a graphics file such as BMP, JPG or MPR(X).

For some parts it is often useful to include a picture of the part on a label to help identify the part quickly.

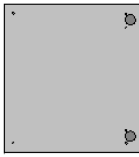
Ref: Example 1 GLOBAL FURNITURE LTD




Part code: DOORS-3TD

Material: Prelaminated - Black 18mm

**Length: 620.0 mm      Width: 425.0 mm**

Finished size: 620.0 x 425.0 **QTY: 1**



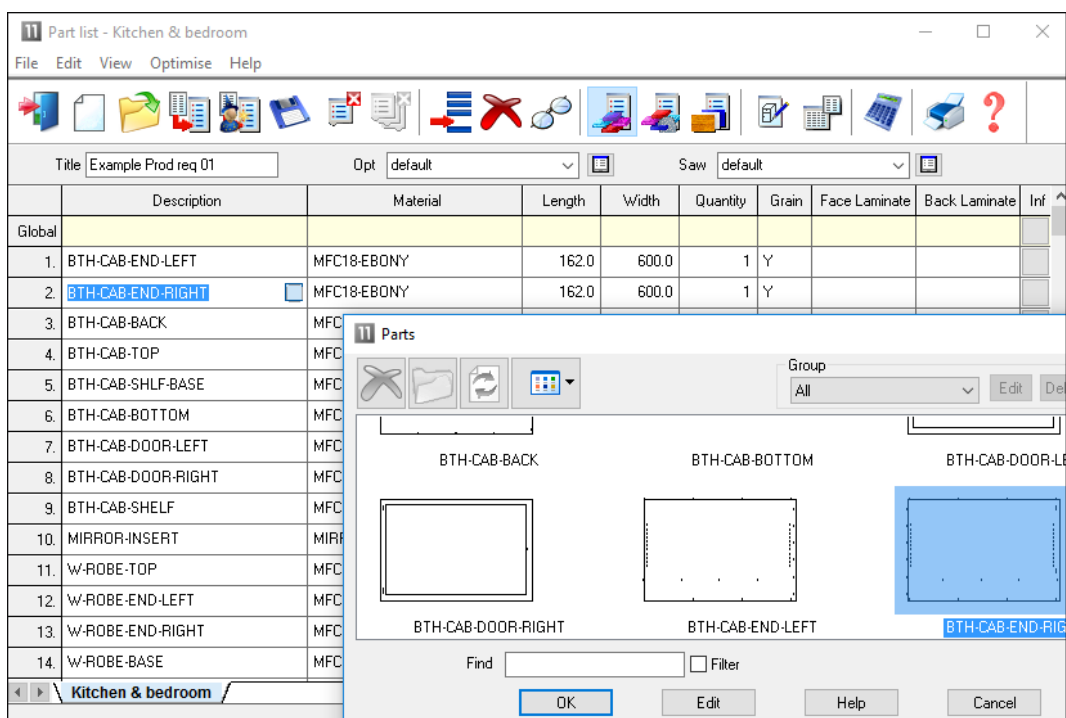
  
DOORS-3TD  
  
MFC18-BLACK  
  
EXAMPLE1 EXAMPLE1

15/02/2012

Part label

At any cutting list the items in the library can be accessed by a single click and the part can be added to the list.

Typically only one or two items of information need to be adjusted such as the quantity required or possibly the material to use.



Cutting list - part library

## **Form & Label designer**

The program includes a designer screen so that almost any style of label (typically a small adhesive label) or a full form (a one page report or a route card) can be set up.

### ***These are labels or forms for printing in the office***

The data on the form or label can be chosen from any of the data set up for each part in the Part database. For example:-

Material code  
Length

Width  
 ...  
 Part drawing  
 User defined details  
 Barcodes  
 Logos  
 ...

The designer allows for the creation of a barcode for any of the items on the form or label, for example, barcodes for the part code and quantity.

Part label

The designer screen is easy to use and a variety of templates are already set up to use as a starting point.

Label designer

Each label or form is fully customisable. The designers include several options to help create effective designs.



- Grid, guidelines and snap options - to help place items on the design
- Different templates - with alternative designs and styles
- Quick preview - to check the layout
- Data preview - to make an accurate check of the layout

### **Parts & Labels with Products & Quotes (PQ) module**

When used with the PQ module the Part library extends the flexibility of the program since it can be used to define parts using variables and formulae for the part information.

The same part entry in the part library can be used for a range of colours, materials or sizes.

Edge Btm	@EDGING@
Edge Top	@EDGING@
Edge Left	@EDGING@
Edge Right	@EDGING@
Face Laminate	
Back Laminate	

*Part library and PQ module*

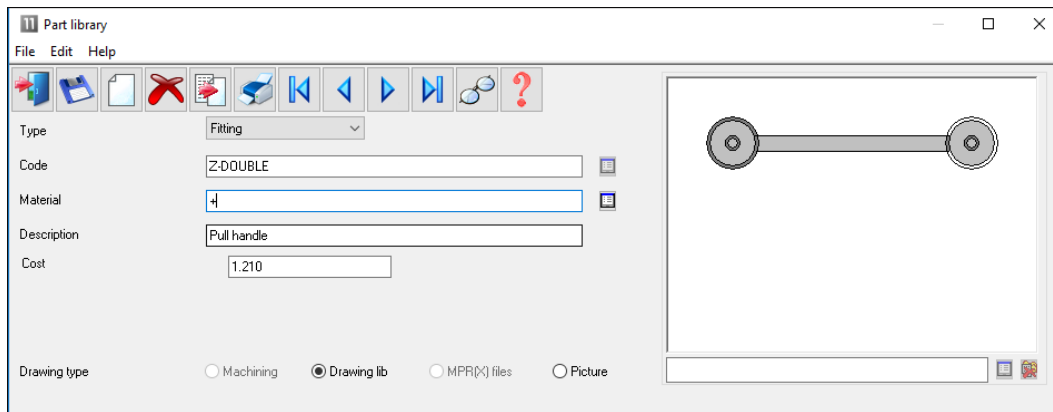
In this example the Material is defined by a variable '@DOORMATERIAL@' and the Length and Width are defined by formulae. This single part library entry can produce the correct specification for a range of cabinet doors in different materials, colours and sizes.

### **Fittings, Sundry parts, Operations**

#### ***Requires the PQ module***

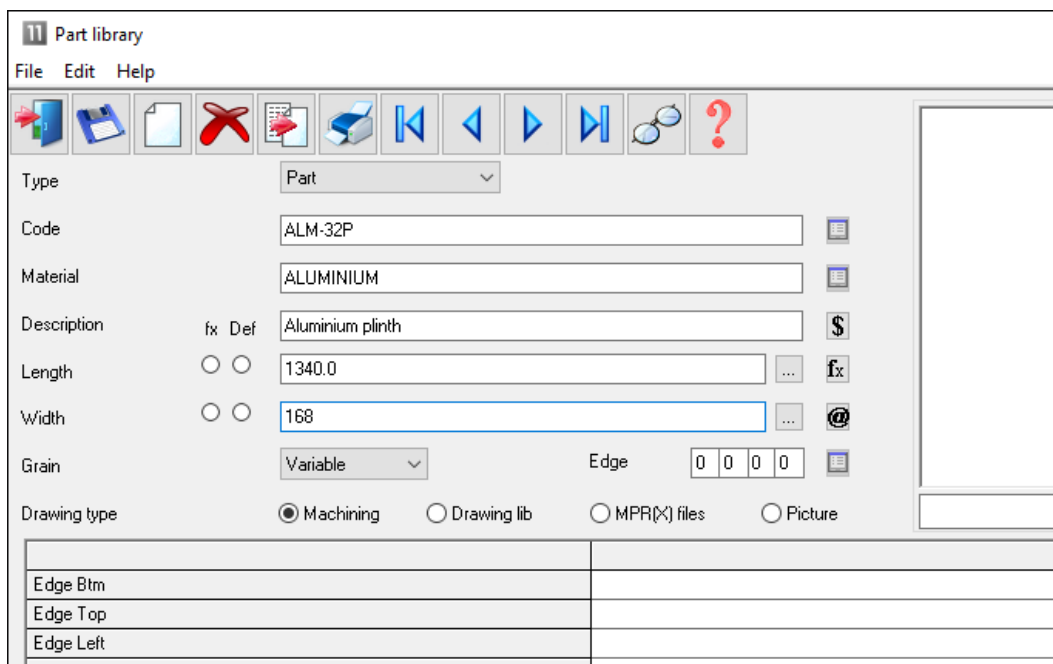
The parts database can also include fittings (hardware).

Fittings can include typical ironmongery items such handles, hinges and brackets and also larger 'bought in' appliances.



*Part library - Fittings*

The library can also include 'bought in' or sundry parts that are required but are ready to use.



*Part library - sundry parts*

The operations required for each part can also be included in the database.

These are items such as, clamping, assembly, packing - where these can be allocated on a 'per part' basis.

**Part library**

File Edit Help

Type: Operation

Code: Y-ASSEMBLY

Material: -OF

Description: Cabinet Assembly

Cost: 6.500

Drawing type: ☐ Machining ☒ Drawing lib ☐ MPR(X) files ☐ Picture

Part library - operations

These items are added to the 'Order' so that a full specification (and costing) of the job is available.

**Quotes / orders - Products & parts order**

File Edit Options Help

Order: Products & parts order Order date: 28/05/2012 Customer code: CS1001 Customer name: Kitchens Direct Delivery date: 11/06/2012

Contact: John Smith Terms: 30 Days Status: Estimated

Invoice address: Ashford Road Birmingham Postcode: B11 2RX

Delivery address: Unit 7 Canal Road Birmingham Postcode: B12 4J

Notes: Credit OK No Sat Deliveries

Extra customer information: ...

Taken by: Customer reference: Description: Example of quote Optimising: DEFAULT Over: 0

Variables: Mode: Edit

Single base unit

No	Code	Information	Product			Part					Qty	Unit price	Total price
			Width	Height	Depth	Material	Length	Width	Grain	Edge			
1	BASE-SINGLE	Single base unit	500.0	870.0	600.0						7	40.00	280.00
2	BASE-SINK	Sink base unit	1000.0	870.0	600.0						2	40.56	81.12
3	WALL-DOUBLE	Double wall unit	1000.0	750.0	300.0						5	34.48	172.40
4	WALL-SINGLE	Single wall unit	500.0	750.0	300.0						3	21.12	63.36
		Deliver separately											
5	F-UNIT-DOOR	Fixed size unit door				MFC18...	495.0	570.0	Y	0000	4	3.61	14.44
6	F-UNIT-END-LEFT	Fixed size unit end left				MEL-CH...	585.0	870.0	N	0000	4	4.06	16.24
7	F-UNIT-END-RIGHT	Fixed size unit end right				MEL-CH...	585.0	870.0	N	0000	4	4.06	16.24
8	Z-SINGLE	Single Knob									23	0.95	21.85
9	Y-PACKING	Packing									14	6.00	84.00
10													
11													
12													
13													
14													
15													
16													

Quote / order

## Parts & Labels with the Machining Interface

The Part library is fully integrated with the Machining Interface; the part picture can be a machining drawing from the parametric Machining library. So any pictures and details created in the machining library can be passed through to the part label or form.

The part library can also be integrated with:-

- External bitmap (BMP, JPG) drawing
- WoodWop MPR(X) drawings

### Parts & Labels with the Online PC option

The Online PC option can be used for designing and printing labels at the saw, it is typically used where there is no saw controller or the saw controller only has limited set of options.

Information and labels are automatically sent to the Online PC option to allow the viewing and printing of part information at the Saw.

### Summary of Parts and Labels

*- The form and label designer is not directly used for printing labels at the saw (other than via the Online PC option). It can be used to create designs for some saw controllers (e.g. Cadmatic) but there are often also label design options with many saw controllers.*

	Parts & Labels	Parts & Labels + Online PC
Maximum items in library	99999	99999
Parts	•	•
Sundry parts	•	•
Fittings	•	•
Operations	•	•
Maximum length for part code	50	50
Form designer and templates	•	•
Label designer and templates	•	•
Parametric parts	•	•
Parametric drawings	•	•
External part drawings	•	•
Printing at Office	•	•
Printing at Saw		•
Import parts to database	•	•
Import external drawings to database	•	•

- The number of designs for the form designer or label designer is unlimited.*
- Printing at the Saw is typically handled by software at the saw controller.*

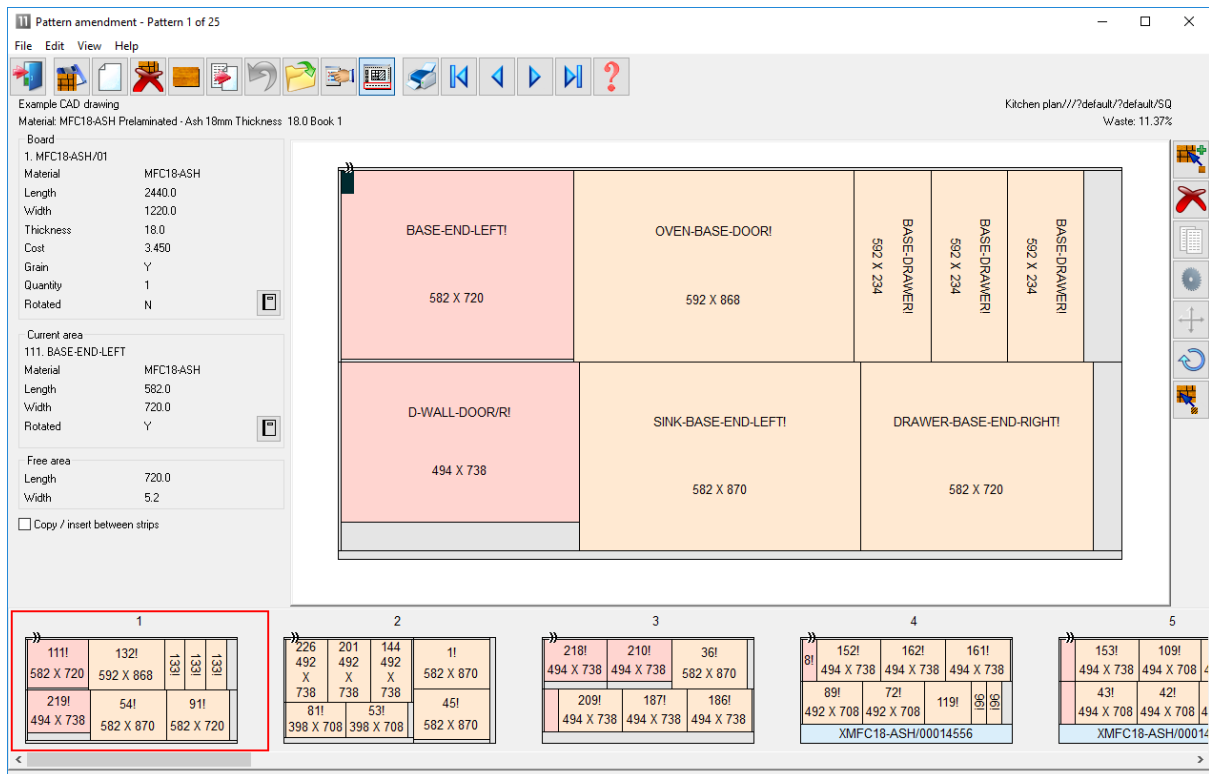
### Pattern amendment

#### **Edit patterns and create new patterns manually (without optimising)**

Pattern amendment can be useful for including last minute production changes and for using up offcuts.

Simple double click the Pattern screen from Review runs and you can start editing patterns.

The program displays the pattern editor (pattern amendment).



*Pattern amendment*

The pattern is shown at the right and information about the pattern is shown to the left. The bottom pane (Preview bar) shows a thumbnail view of the patterns in the run.

From this point you can add, copy or delete parts, copy or delete strips, insert or delete head cuts, fill in offcuts and make any change to an existing pattern that you need. You can also change the board quantity and the board rotation and the size of the board or place the existing set of parts on a different board.

Parts can be moved or copied from the pattern shown to patterns in the preview bar - making it easy to alter or adjust patterns.

*The program checks all the actions you take and will prevent you moving or copying items to areas that are too small or creating a pattern that violates the basic parameters such as trims.*

**Board information** - At the top left of the screen is information about the current board (Item no, board code, material code, length, width, thickness, cost and quantity). Note that the board item number is the item number of the board in the working board list.

To edit the current board (change the run quantity, rotate the board) select the 'Properties' button in the Board information section of the screen. The Boards dialog is displayed and you can use this to change the current board.

1. MFC18-ASH/01	
Material	MFC18-ASH
Length	2440.0
Width	1220.0
Thickness	18.0
Cost	3.450
Grain	Y - Yes
Quantity	1
Rotated	<input type="checkbox"/>

Pattern amendment - board information

**Current Area information** - As the cursor moves around the pattern information about the area under the cursor is shown in the Current Area information at the left of the screen.

Current area	
111. BASE-END-LEFT	
Material	MFC18-ASH
Length	582.0
Width	720.0
Rotated	Y

Pattern amendment current area

If the cursor is positioned on a part, the following information is shown: Item Number, Description, Material, Length, Width, Rotated (y/n). This is the main part information from the part list.

If the cursor is positioned on an area of waste (offcut or scrap) the window shows a description of offcut or scrap also the length and width of the area. When you add a part the program works out how many of each part fill the space you are adding to and automatically inserts the correct number of items. You can also create new parts (that are not in the part list or part library - enter a part code and the dimensions and any other information).

**Free Area information** - At the bottom of the information at the left of the screen is the Free Area information - this shows the size of the waste at the end of the strip that the cursor is on.

Free area	
Length	106.0
Width	592.0

Pattern amendment - free area

When the cursor position is within a recut the free area refers to the waste below the recut (not the

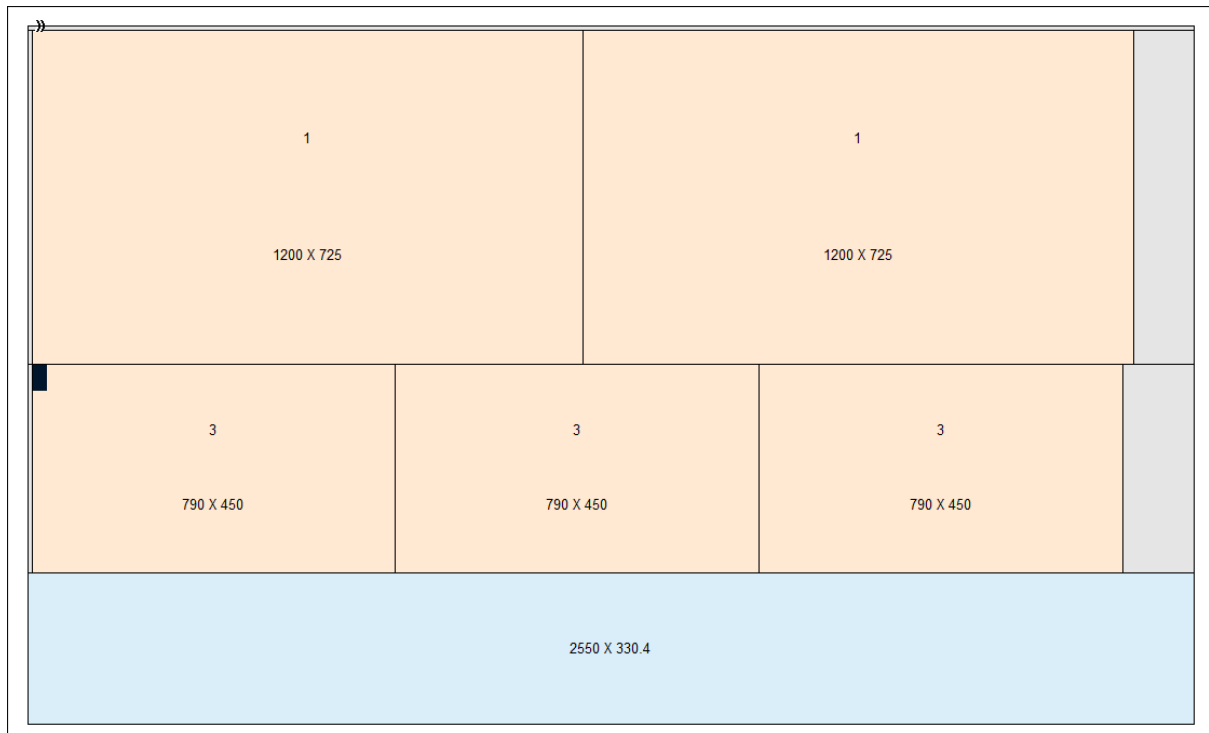
waste at the end of the strip).

**Manual patterns** - You can also create patterns manually with the MANUAL PATTERNS option on the OPTIMISE menu at the Part list screen.

#### Pattern amendment - example

In this example we are deleting a large part from an optimised run and adding in its place some plinths which are urgently required to replace 80 damaged plinths from a previous order.

We first locate the pattern with the part to delete and select the part by placing the cursor on it or by using the space bar.

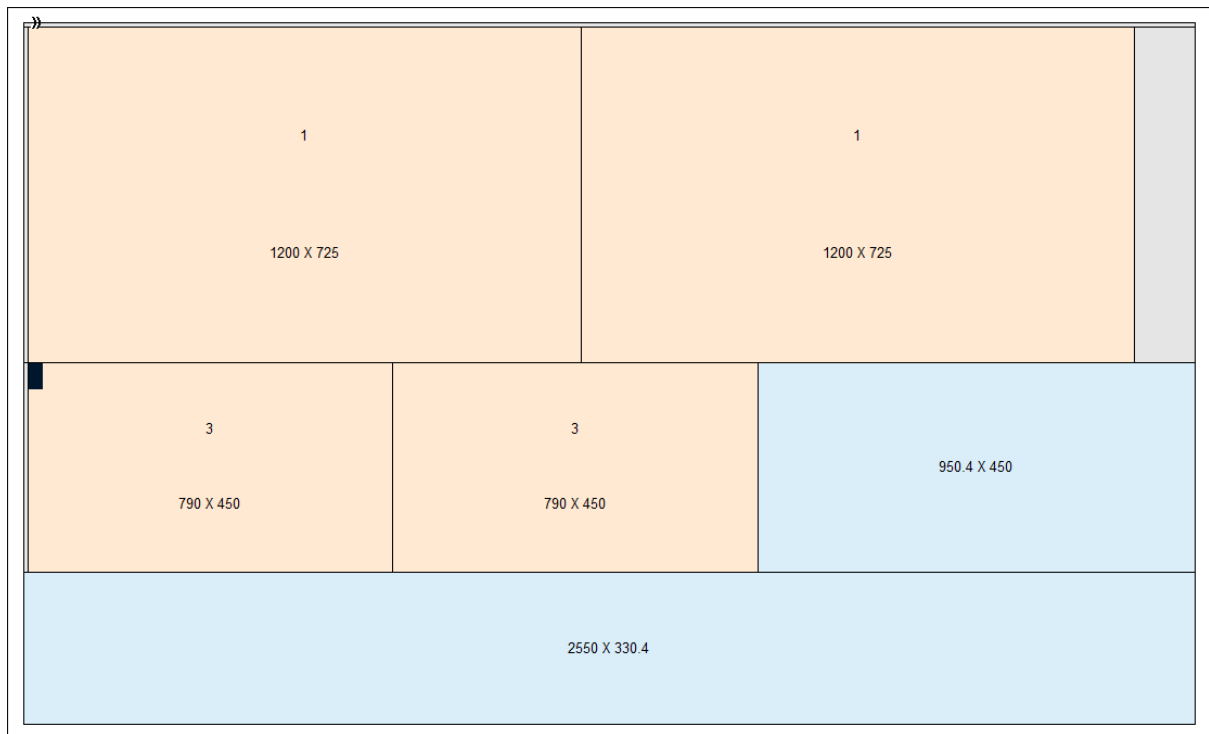


*Pattern amendment – edit*

Part 3 will be deleted and the area reused with some other parts that have become more urgent.

Take care when manually adjusting patterns because if too many changes are made then this may produce very inefficient cutting - in this case it is better to change the part list and re-optimize.

Select DELETE or the DEL button to remove the part.

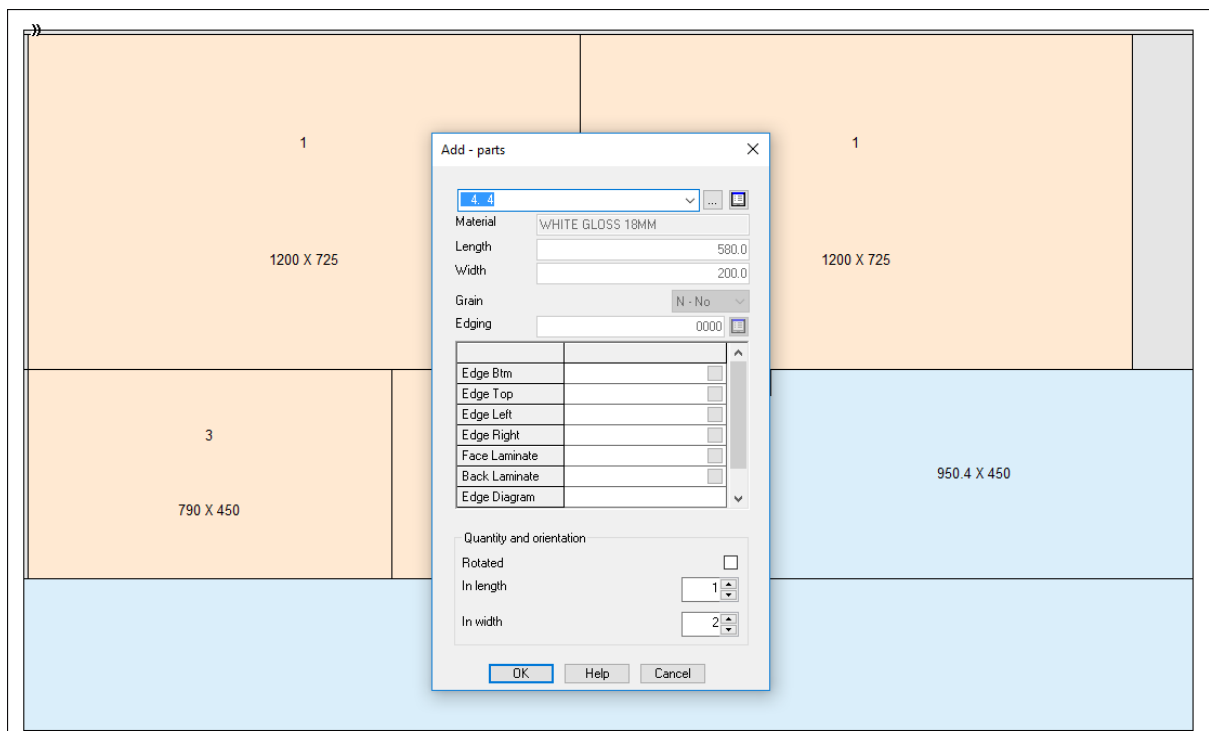


*Pattern amendment – edit*

The Area is shown as an offcut (or waste) as a shaded or coloured area.

The size of the waste area is shown. Note that not all of the area may be available because trims still need to be taken into account.

We now use the ADD option to add the parts required.



*Pattern amendment - add part dialog*

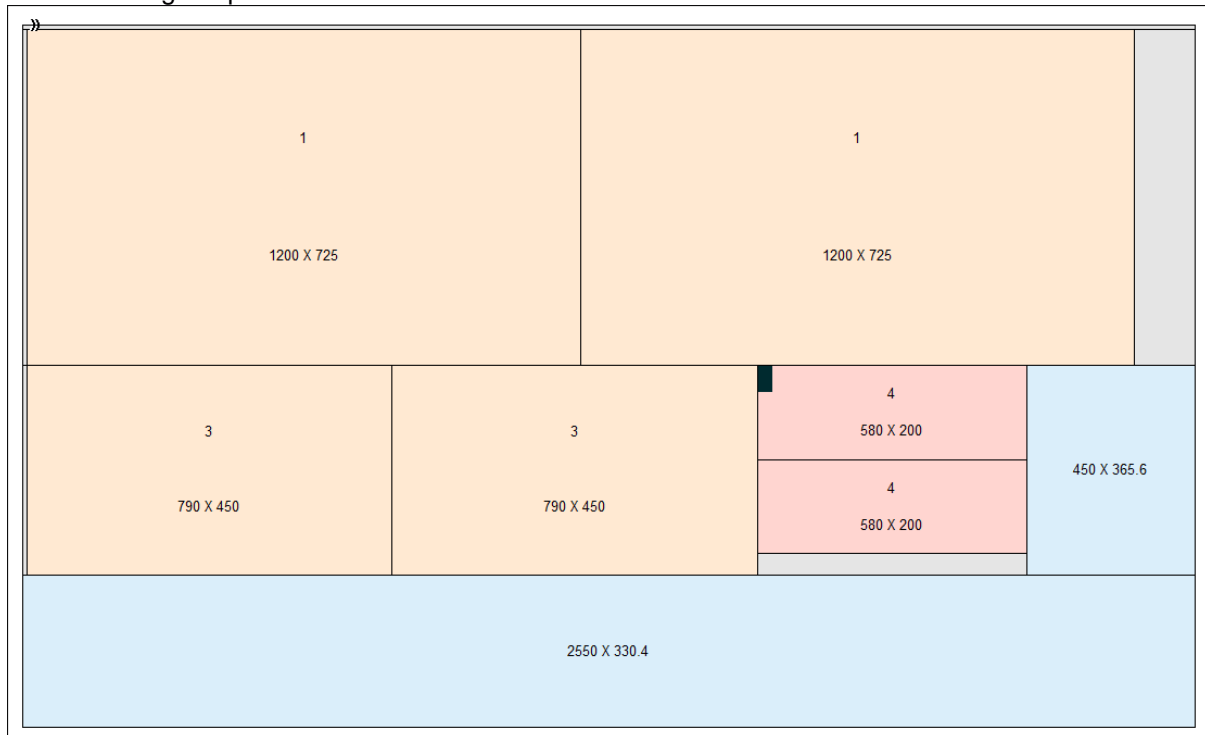
The ADD dialog automatically shows the number that fit in the length and width.



In this case the part was added from the part library as it was in the original part list.

It is also possible to use parts not from existing lists or enter a part sizes manually.

After checking the part select Ok to add



Pattern amendment – edit

*Note - deleting a part from a pattern with run quantity of '5' deletes 5 of that part from the run.*

**Material** - the material of any added parts must match the board material.

### Pattern Amendment Summary

Manual editing of optimised patterns	•
Import of patterns	•
Addition of parts from the existing run	•
Addition of plus parts from the part library	•
Export of patterns	•



### Machining interface

#### *For fast set up of CNC machinery*

Where parts contain additional machining such as grooves, routs, drilling and cut-outs the Machining interface module is used to create and store the part drawings (via the Machining library) and also send the correct machining instructions for each part to the CNC machining centres.

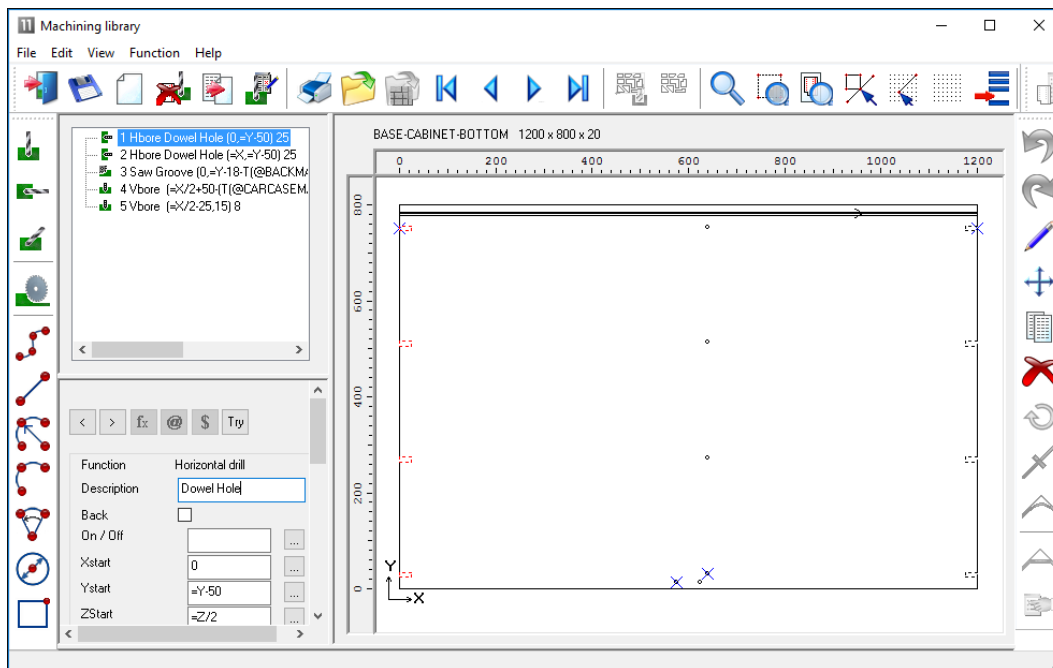
Most machining centre formats are supported including DXF, Homag/Weeke WoodWop, and other proprietary formats.

*The MI module requires one of the Optimiser modules SO, PO or the Nesting optimiser (NE) for shaped parts.*

The machining editor provides full facilities for creating machining drawings. A wide variety of machining functions are provided:-

- Saw groove
- Horizontal drilling
- Vertical drillings
- Cut-outs
- Arc router
- Circle router
- Pockets
- Contours
- Vacuum pods
- ...

The machining library contains the part drawing and instructions.



*Machining library*

The panes at the left show the details of each instruction and the full part is shown in the diagram at the right.

Drawings can be set up with formulae so they are fully parametric and automatically adjust if the part size changes. Common machining patterns can be dealt with by one drawing assigned to many different parts.

The above example shows a set of drilling and routing instructions for a part.

**Machining Instructions** - At the left of the screen is the FUNCTION toolbar to select the type of machining operation (such as drilling or routing).

Enter the details of each operation in the boxes to the right of the toolbar. The part drawing illustrating the machining is shown in the area to the far right of the screen. The drawing is built up as you enter machining operations.

For example, for a vertical drill operation enter the co-ordinates of the first hole - depth and diameter of the hole and the number, separation and direction of the repeated holes.

You can also enter the tool number and other machine specific details.

To move directly to a machine operation (for example to edit the details) click on the relevant part of the drawing. The current instruction is highlighted.

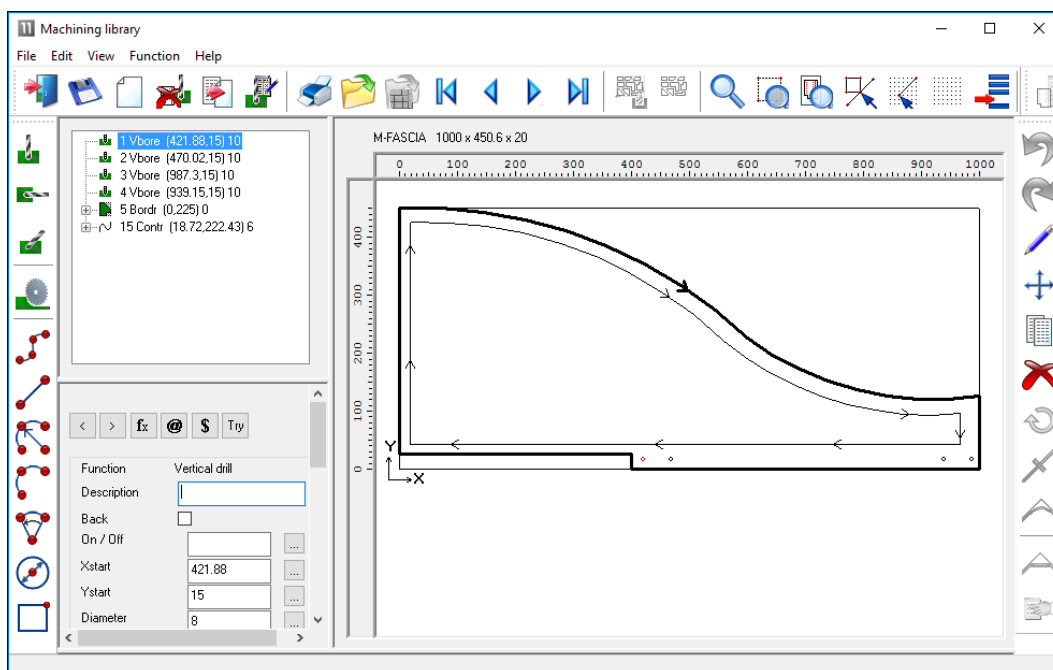
You can also use the mouse to enter instructions, for example, to specify the start and end of a groove.

*External drawings* – where the drawings are external files such as DXF or Homag/Weeke MPR(X) the Machining editor can still be used to view and adjust drawings and the drawing information is sent to a machining centre via the Machining Interface.

DXF drawings suitably layered can also be imported to the Machining library.

### **Shaped parts**

The drawing editor allows for contours to define shaped parts.



*Shaped parts*

Each machining instruction can include extra tooling information to allow for tool speeds, tool path compensation etc.



Use the mouse to quickly draw the function and use the boxes at the left to add the detailed measurements where required.



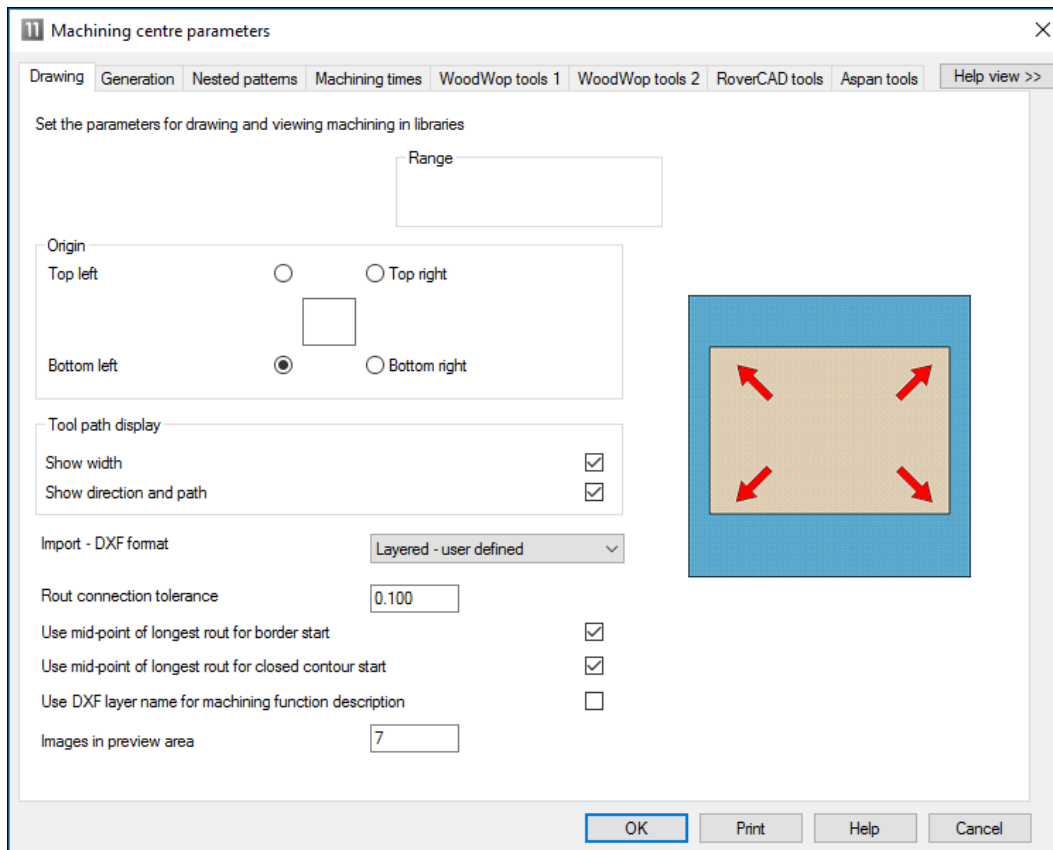
### **Machining parameters**

The transfer of machining data to CNC machines is set up via the following parameters:-

Machining centre parameters

Machining centre transfer parameters

The machining centre parameters set up the general features for the machining drawings/instructions such as the Drawing origin, and specific features for proprietary machines such as the 'Park mode' for Homag/Weeke WoodWop.



**Machining centre parameters**

Set the parameters for drawing and viewing machining in libraries

Range

Origin

Top left ☐ Top right ☐

Bottom left ☒ Bottom right ☐

Tool path display

Show width ☒

Show direction and path ☒

Import - DXF format Layered - user defined

Rout connection tolerance 0.100

Use mid-point of longest rout for border start ☒

Use mid-point of longest rout for closed contour start ☒

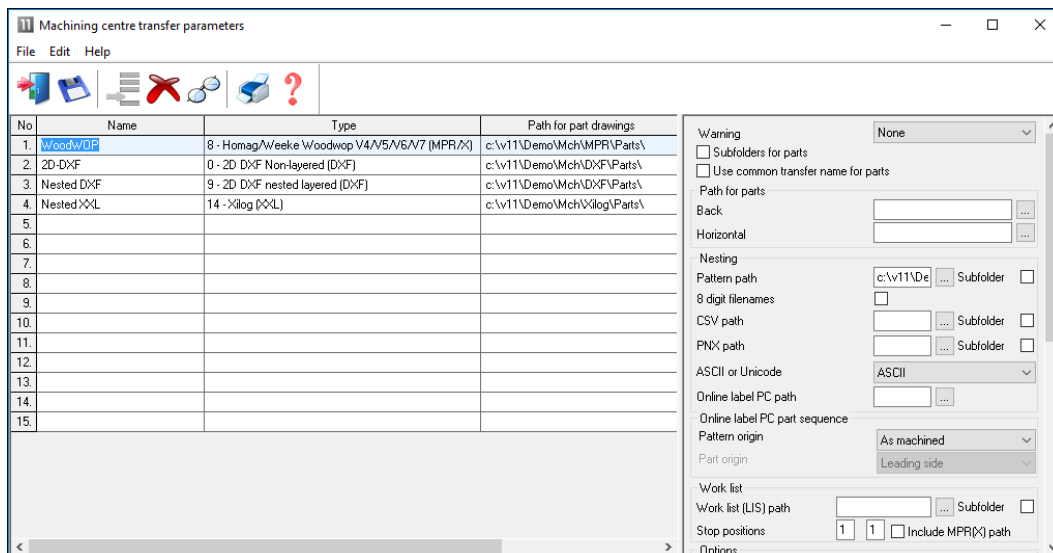
Use DXF layer name for machining function description ☐

Images in preview area 7

OK Print Help Cancel

*Machining centre parameters*

The Machining centre transfer parameters control the transfer of data to the machining centre. File format, where files are located and whether there are separate files for Front and Back instructions.



**Machining centre transfer parameters**

File Edit Help

No	Name	Type	Path for part drawings
1.	WoodWOP	8 - Homag/Weeke Woodwop V4/V5/V6/V7 (MPR(X))	c:\v11\Demo\Mch\MPR\Parts\
2.	2D-DXF	0 - 2D DXF Non-layered (DXF)	c:\v11\Demo\Mch\DXF\Parts\
3.	Nested DXF	9 - 2D DXF nested layered (DXF)	c:\v11\Demo\Mch\DXF\Parts\
4.	Nested XCL	14 - Xilog (XCL)	c:\v11\Demo\Mch\Xilog\Parts\
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

Warning: None

☐ Subfolders for parts

☐ Use common transfer name for parts

Path for parts

Back:

Horizontal:

Nesting

Pattern path: c:\v11\De... Subfolder ☐

8 digit filenames ☐

CSV path:  Subfolder ☐

PNX path:  Subfolder ☐

ASCII or Unicode: ASCII

Online label PC path:

Online label PC part sequence

Pattern origin: As machined

Part origin: Leading side

Work list

Work list (LIS) path:  Subfolder ☐

Stop positions: 1 1 ☐ Include MPR(X) path

Options

*Machining centre transfer parameters*

A wide range of transfer formats are supported:-

Homag/Weeke WoodWop V4/V5/V6/V7 (MPR(X))  
 Homag Weeke WoodWop V2.5 (MPR)  
 2D DXF non layered  
 2D DXF layered  
 D DXF layered

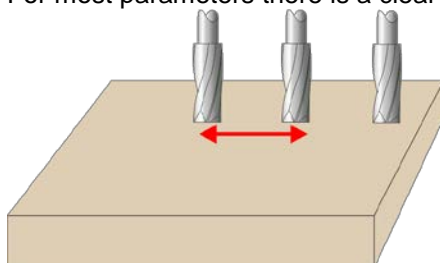
Biesse RoverCad (CID)  
Morbidelli Aspan V3.2 (ASC)  
Morbidelli Aspan V4.0 (ASC)  
Busellato Autolink (DXF)  
ASCII/Unicode PTX  
MDB PTX

The machining centre transfer parameters also include a 'Tooling replacement table', so that tooling instructions can be translated to a specific format for a machine. This allows for a single set of drawings which can then be interpreted for different CNC machines.

No.	Instruction	Replacement	Material
1.	D0wEL	T=7:EM=0	
2.	T=1	T=101	
3.			

*Machining centre transfer parameters Tooling*

For most parameters there is a clear picture of the setting involved and examples of the set up.



*Tooling*

### **Machining summary and costs**

The summary reports in Review runs, for example, Job costing, include the details for machining where these are relevant.

Review runs

File Edit View Settings Summaries Stock Help

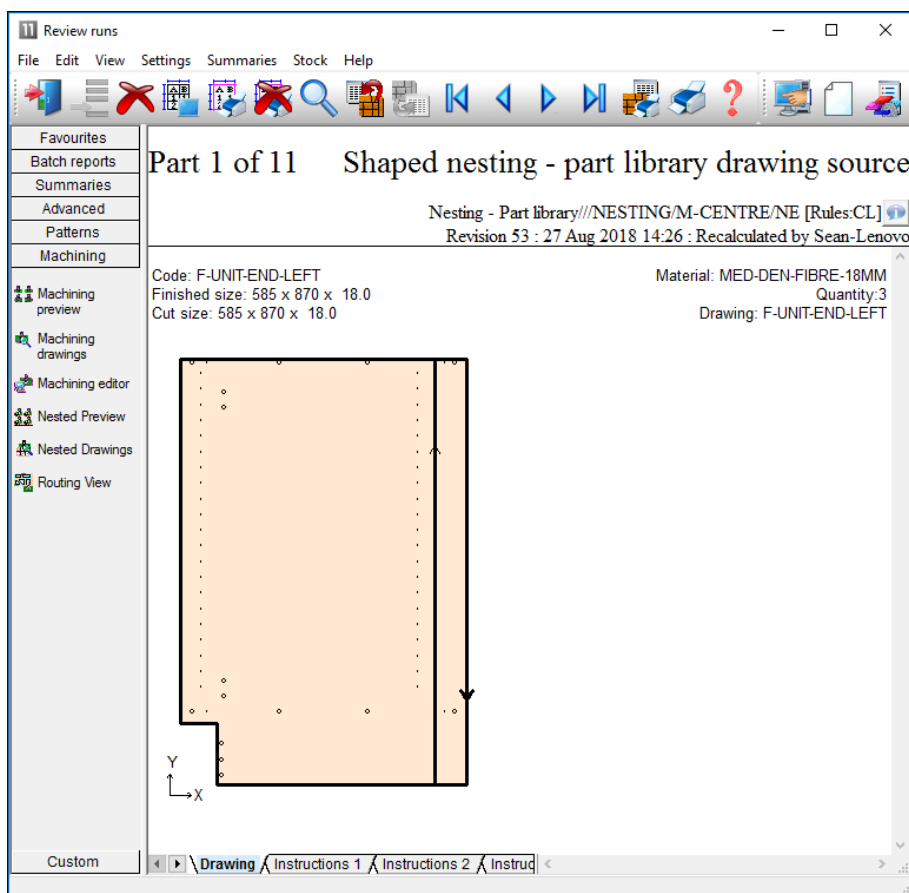
<

Machining job costing report

There are several specific reports and options for Machining under the 'Machining' tab.

### Machining drawing

The machining drawing shows each drawing fully resolved.



The drawing shown has been resolved to absolute values ready for transfer.

## Machining Instructions









At the foot of each machining drawing are a set of tabs showing the full machining instructions.

The screenshot shows the 'Review runs' application window. The title bar reads 'Review runs'. The menu bar includes 'File', 'Edit', 'View', 'Settings', 'Summaries', 'Stock', and 'Help'. The toolbar contains various icons for file operations, navigation, and printing. On the left, a sidebar lists 'Favourites', 'Batch reports', 'Summaries', 'Advanced', 'Patterns', and 'Machining'. The main area displays 'Part 1 of 11 Shaped nesting - part library drawing source'. Below this, it says 'Nesting - Part library\\NESTING\\M-CENTRE\\NE [Rules:CL]' and 'Revision 53 : 27 Aug 2018 14:26 : Recalculated by Sean-Lenovo'. A table of machining instructions is shown with columns: No, Fn, Description, Xstart, Ystart, Diameter, Wid/ang, Depth, Offset, Rpt, Dir, and Tool. The table contains 9 rows of data. At the bottom, a tab bar shows 'Custom', 'Drawing', 'Instructions 1', 'Instructions 2', and 'Instrud', with 'Instructions 1' selected.

No	Fn	Description	Xstart	Ystart	Diameter	Wid/ang	Depth	Offset	Rpt	Dir	Tool
001	Vbore	Shelf hole	485	200	8		6	32	20	0	
002	Vbore	Dowel hole	560	861	10		6	178.33	3	L	
003	Vbore	Dowel hole	560	150	10		6	178.33	3	L	
004	Vbore	Hole	540	861	8		6	485	1	L	
005	Vbore	Hole	540	150	8		6	485	1	L	
006	Vbore	Shelf hole	45	200	8		6	32	20	0	
007	Vbore	Hinge hole	90	770	10		6	32	1	0	
008	Vbore	Hinge hole	90	180	10		8	32	1	0	
009	Vbore	Dowel	85	20	10		6	32	2	0	

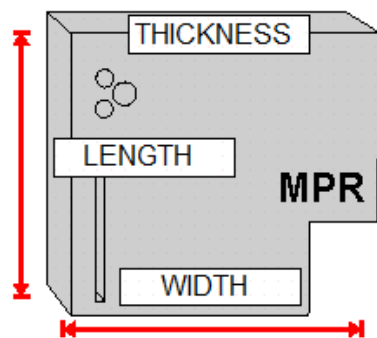
At Review runs the instructions are resolved to absolute values.

With the parts and labels feature route cards or labels for each machined parts can be printed at the office.

Optimised Parts				
Run:Nesting - Part library				
Edgebander setup time: 0:00    Saw setup time: 0:00				
Part code:F-UNIT-END-LEFT Material code:MED-DEN-FIBRE-18MM Length: 585.0    Width: 870.0 Quantity:    3 Non Grained Ref. Code: MEDF-U3		Bottom edge: Top edge: Left edge: WHITE-TAPE-22MM Right edge:	Drawing name: 0011429F Part Volume: LOW	
Part code:F-UNIT-END-RIGHT Material code:MED-DEN-FIBRE-18MM Length: 585.0    Width: 870.0 Quantity:    2 Non Grained Ref. Code: MEDF-U2		Bottom edge: Top edge: Left edge: Right edge: WHITE-TAPE-22MM	Drawing name: 0011430F Part Volume: LOW	
Part code:N-BTH-WORKTOP Material code:MED-DEN-FIBRE-18MM Length: 1500.0    Width: 620.0 Quantity:    3 Non Grained Ref. Code: MEDN-B3		Bottom edge: Top edge: Left edge: Right edge:	Drawing name: 0011431F Part Volume: LOW	
Part code:N-OCT-TABLE Material code:MED-DEN-FIBRE-25MM Length: 965.0    Width: 965.0 Quantity:    3 Non Grained Ref. Code: MEDN-O3		Bottom edge: Top edge: Left edge: Right edge:	Drawing name: 0011432F Part Volume: LOW	

With the pattern editor last minute adjustments can be made to any drawing before sending the data to the CNC machining centre.

*External drawings* - The drawing editor and transfer of data to a CNC machine can be integrated with the use of external drawing files such as DXF and MPR(X).



In this case the stand-alone drawings can be used with parts so items do not have to be duplicated in the machining library or drawn twice.

### Summary of Machining Interface

	MI
Machining Drawings	99999
Machining functions (drill, route, ...)	•
Support for proprietary formats	•
Support for DXF	•
Transfer to Machining centre	•
Shaped drawings	•
Labels for drawings	•
Parametric drawings	•



## **Forms & Labels**

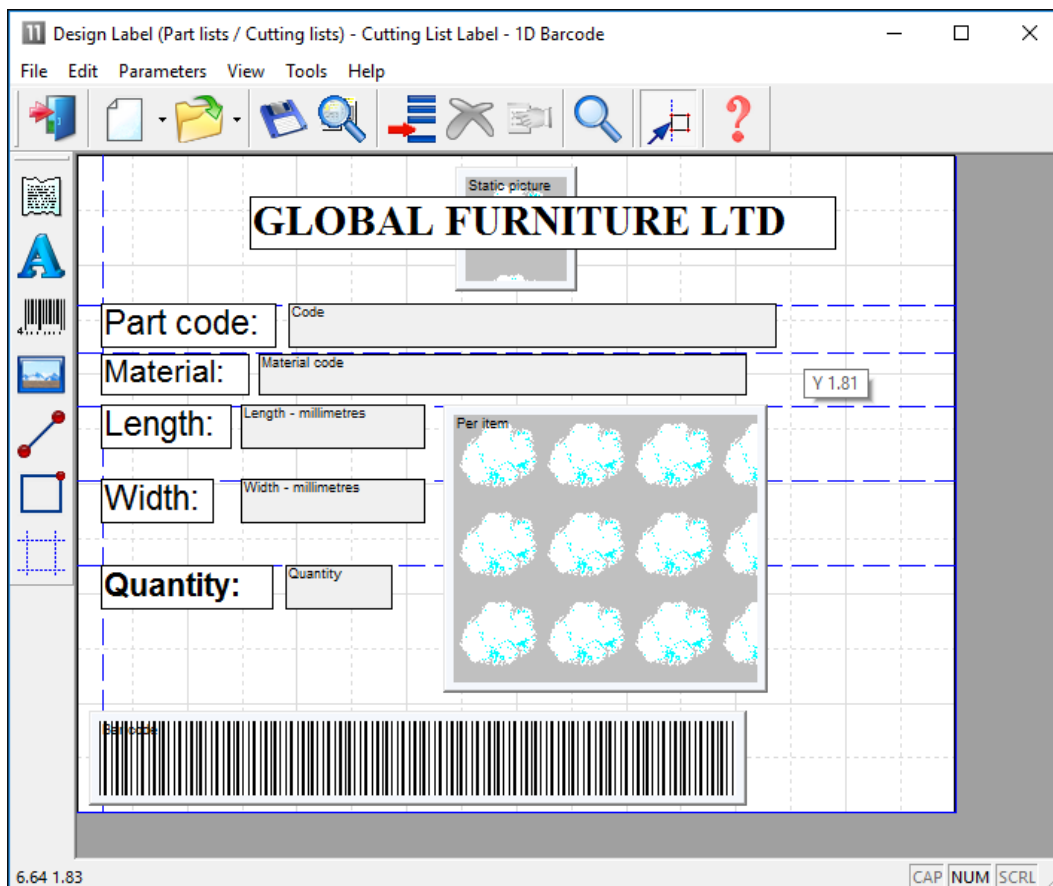
Use the Design options to create templates for forms and labels. Labels are typically for printing labels in the office for parts or products but also can be used to design labels for the Cadmatic saw controllers or the Online PC saw interface for labels at the saw.

Forms are typically for adding brand new custom forms to Review runs or providing a full set of order or stock documentations; Invoices, despatch notes, worksheets ...

Types of forms or labels available to create:-

Quotes / Orders  
Product requirements  
Part lists / Cutting lists  
Cutting patterns  
Runs  
Saw (for labels only)

The following example shows a design for a label at the Design screen.



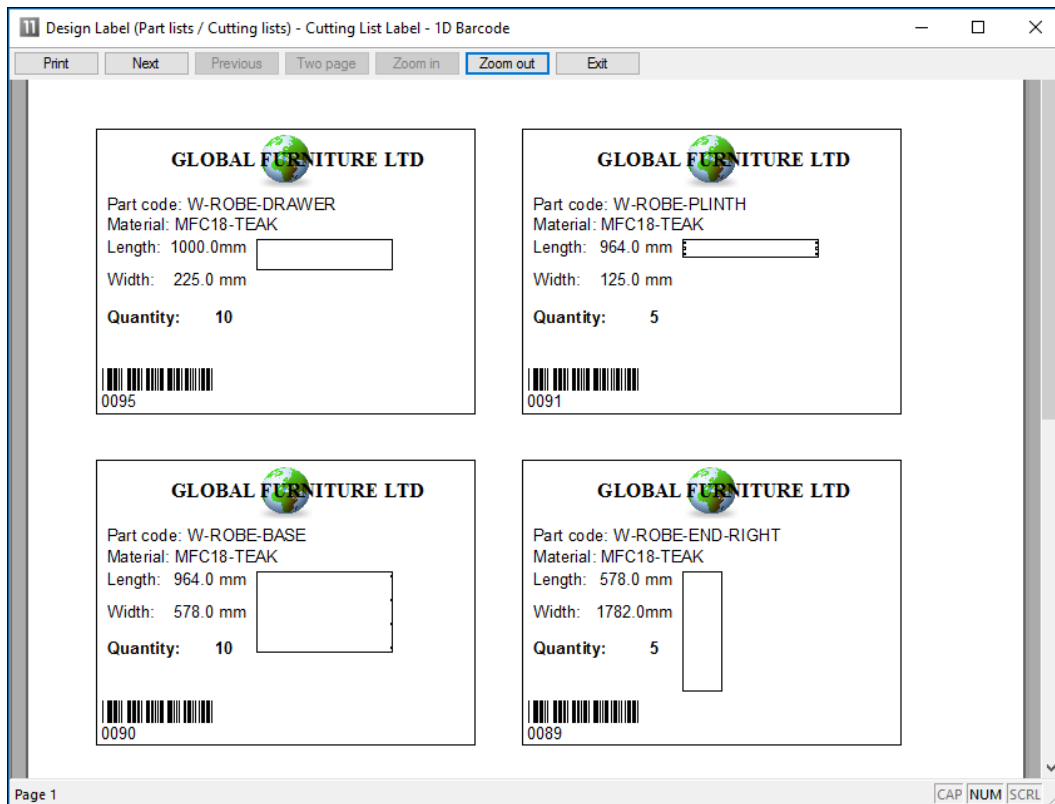
Label design

To design a form or label create a template that describes the items of information (objects) on the label or form; where they are placed and special effects such as pictures or colour. Once the template is saved it can be used by the program for printing that style of label or form.

*Many users typically only need one or two templates for all their part and product labels but may need several templates for forms such as invoices, despatch notes, waybills and so on.*

*Standard templates* - There are several standard templates supplied with the software which you can use as a starting point for your templates. Use the SAVE AS option to take a copy of the standard form and always make changes to the copy.

The form or label design can be previewed to see what the design looks like.





*Preview of printed labels*

When creating a NEW design use the OBJECT TOOLBAR (at the left) to place label design elements on the label. The main elements are:-



- Text boxes - fixed text to describe the data
- Data boxes - for the variable data (e.g. part codes)
- Lines - to draw lines on the label
- Picture boxes - for part drawings or logos
- Barcode boxes - for bar codes (e.g. bar code for part code and quantity)

Use the properties box to change any features, for example, to fine tune the position of the item.

The forms or labels can be set up to print in a wide variety of layouts; continuous, 2 per page ...

<b>Ref:</b> Bedroom & bathroom		<b>GLOBAL FURNITURE LTD</b>	
Part code: DRESSER-END-LEFT			
Material: Prelaminated - Oak 18mm			
<b>Length: 600.0 mm</b>		<b>Width: 1082.0mm</b>	
Finished size:		<b>QTY: 1</b>	
	 DRESSER-END-LEFT		
22/08/2012			

<b>Ref:</b> Bedroom & bathroom		<b>GLOBAL FURNITURE LTD</b>	
Part code: DRESSER-END-LEFT			
Material: Prelaminated - Oak 18mm			
<b>Length: 600.0 mm</b>		<b>Width: 1082.0mm</b>	
Finished size:		<b>QTY: 1</b>	
	 DRESSER-END-LEFT		
22/08/2012			

Printed labels

## Forms

Design a form in the same way as a label - the main differences are that a form (like an invoice) usually contains a section with a list of varying data items (e.g. products and prices) and uses page numbers, headings, and continuation pages etc.

The screenshot shows the 'Design Form (Quotes / orders) Initial - Order Estimate - 2D Barcode' window. The interface includes a menu bar (File, Edit, Parameters, View, Tools, Help) and a toolbar with icons for file operations, zooming, and help. The main workspace is a grid where a form is being designed. The form includes a header for 'GLOBAL FURNITURE LTD' with a 'Static picture' and 'Zoom' controls. Below the header is the company address: 'Furniture House, 27 Wood Lane, Bristol, BS1 2XR, UK'. A section titled 'Order estimate' contains fields for 'Estimate date', 'Date', 'Estimate no.', 'Reference', 'Our ref', 'Taken by', 'Your ref', and 'Customer ref'. There is also a 'Customer address' field and a 'Customer name' field. A barcode is visible on the left side of the form. At the bottom, there is a table with columns for 'Item', 'Code', 'Information', 'Width', 'Height', 'Depth', 'Quantity', 'Unit £', and 'Total £'. The table has two rows: one for 'Additional instructions' and one for 'Variable'. The bottom right corner of the window shows 'CAP NUM SCRL'.

Form design

The page size, margins and other general features can be configured for each form or label from the parameters menu.

With labels set the frequency with which labels are produced, per part, per part type, per stack etc.

## Custom Reports / Summaries

Form design can also be used to create fully customised reports for runs (optimising results). This can be useful for tailoring documents to suit the production process. Emphasising important data, removing details, matching the order of data to the company standard ...

Here is part of a design for a custom report for a cutting list summary.

The screenshot shows a software window titled "Design Form (Part lists / Cutting lists) Initial - Cutting List Form - TD Barcode". The interface includes a menu bar (File, Edit, Parameters, View, Tools, Help) and a toolbar with various icons. The main design area is a grid with several form elements:

- Company Header:** "GLOBAL FURNITURE LTD" in a large box, with "Furniture House, 27 Wood Lane, Bristol, BS1 2XR, UK" and contact information below it.
- Form Fields:** Fields for "ID reference", "Reference", "Title", "Description", "Date", and "Time" are visible on the right side.
- Table:** A table with columns: "Item", "Part code", "Material details", "Part area", "Length", "Width", and "Qty". The "Material details" column contains a barcode.
- Page Footer:** "Page 19" and "CAP INUM SCRI" are visible at the bottom.

Custom report design

The layout and information on the report can be fully customised. The above design produces the following style of report or summary.

Review runs

File Edit View Settings Summaries Stock Help

Cutting List Form - 1D Barcode 1 of 47

Example CAD drawing

Kitchen plan:///default/?default/SQ

Revision 1 : 28 Sep 2018 11:37 : Optimised by Sean-Lenovo

**GLOBAL FURNITURE LTD**






Furniture House, 27 Wood Lane, Bristol, BS1 2XR, UK  
Telephone: +44 (0)117 933 6323 Fax: +44 (0)117 933 6487

Job reference:  
Kitchen plan

Title:  
Example CAD drawing

Date:  
18/10/2018

**Cutting list details**

Item	Part code	Material details	Part area m2	Length	Width	Qty
3	BASE-BACK	Material: HARDBOARD-WHITE-4MM Hardboard 4mm - White  HARDBOARD-WHITE-4MM	0.00	476.0	710.0	1
16	BASE-BACK	Hardboard 4mm - White  HARDBOARD-WHITE-4MM	0.00	976.0	710.0	1
26	BASE-BACK	Hardboard 4mm - White  HARDBOARD-WHITE-4MM	0.00	976.0	710.0	1
37	BASE-BACK	Hardboard 4mm - White  HARDBOARD-WHITE-4MM	0.00	976.0	710.0	1
47	BC-BASE-BACK	Hardboard 4mm - White  HARDBOARD-WHITE-4MM	0.00	976.0	710.0	1

Page 1

### Custom reports in Review runs

For run based custom reports it is often more convenient to integrate the reports in Review runs so that they appear on the Report bar - like any other report.

Any reports created via this option are automatically added to the report bar under the 'Custom' tab.

Review runs

File Edit View Settings Summaries Stock Help







Optimised Part Details - 1D ... Example CAD Drawing

Kitchen plan:///DEFAULT/?DEFAULT/SQ [Rules:CL,BL] Revision 6 : 27 Aug 2018 14:26 : Recalculated by Sean-Lenovo

**Optimised Parts**

Run: Kitchen plan Description: Example C

Edgebander setup time: 0:05 Saw setup time: 0:00

<b>Part code:</b> BASE-CABINET-END-LEFT <b>Material code:</b> MEL-CHIP-18MM <b>Length:</b> 581.0 <b>Width:</b> 870.0 <b>Quantity:</b> 1 Non Grained <b>Ref. Code:</b> MELBAS1		<b>Bottom edge:</b> <b>Top edge:</b> <b>Left edge:</b> OAK-TAPE-22MM <b>Right edge:</b>	<b>Drawing name:</b> 00014463 <b>Part Volume:</b> LOW  <b>FIN SIZE</b> 582.0 X 870.0
<b>Part code:</b> BASE-CABINET-END-RIGHT <b>Material code:</b> MEL-CHIP-18MM <b>Length:</b> 581.0 <b>Width:</b> 870.0 <b>Quantity:</b> 1 Non Grained <b>Ref. Code:</b> MELBAS1		<b>Bottom edge:</b> <b>Top edge:</b> <b>Left edge:</b> OAK-TAPE-22MM <b>Right edge:</b> OAK-TAPE-22MM	<b>Drawing name:</b> 00014464 <b>Part Volume:</b> LOW  <b>FIN SIZE</b> 582.0 X 870.0
<b>Part code:</b> BASE-CABINET-DRAWER-LONG <b>Material code:</b> MFC18-OAK <b>Length:</b> 898.0 <b>Width:</b> 182.3 <b>Quantity:</b> 1 Grained <b>Ref. Code:</b> MFCBAS1		<b>Bottom edge:</b> OAK-TAPE-22MM <b>Top edge:</b> OAK-TAPE-22MM <b>Left edge:</b> OAK-TAPE-22MM <b>Right edge:</b> OAK-TAPE-22MM	<b>Drawing name:</b> 00014465 <b>Part Volume:</b> LOW  <b>FIN SIZE</b> 900.0 X 184.3

Custom report

These reports can also be accessed from the main screen as forms (*Print - Forms - Runs*).

### Forms and Labels Summary

Create custom forms	•
1D and 2D barcodes supported	•
Template form and labels supplied	•
Local Integrated help	•