Lite Optimiser – Datasheet LO

Sheet optimising for custom Workshops

The Lite optimiser is designed for the smaller workshop. It is straightforward to use with a minimum of setup. It is for cutting lists with a wide variety of part sizes, small run quantities, typically cut '1 high'. The focus is on material savings rather than cutting time.

It is typically used with Sliding table saws, Vertical panel saws, or smaller Beam saws.

Cutting patterns can be directly downloaded to the Holzma Cadmatic 4 controller.

- Enter part sizes
- Optimise
- Patterns and cutting instructions

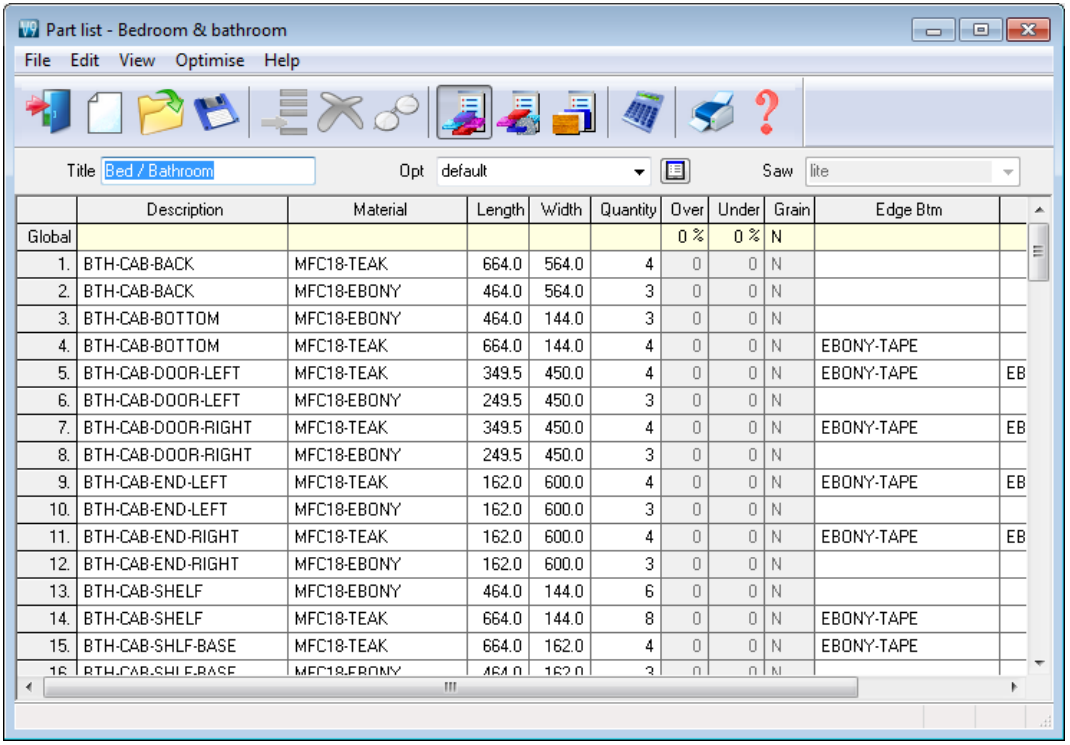
Part sizes

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
- Cut and paste from a spreadsheet
- Import part sizes from external files

The result is a list of part sizes.

The part list is a list of sizes and quantities.

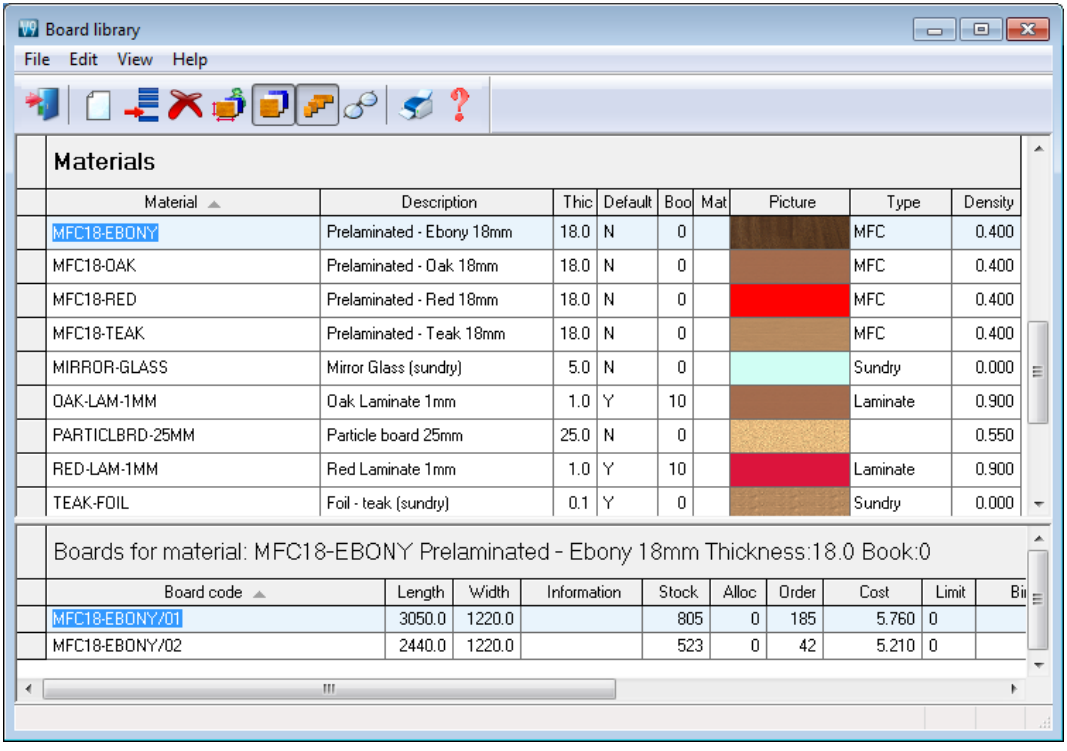


	Description	Material	Length	Width	Quantity	Over	Under	Grain	Edge Btm	
Global						0 %	0 %	N		
1.	BTH-CAB-BACK	MFC18-TEAK	664.0	564.0	4	0	0	N		
2.	BTH-CAB-BACK	MFC18-EBONY	464.0	564.0	3	0	0	N		
3.	BTH-CAB-BOTTOM	MFC18-EBONY	464.0	144.0	3	0	0	N		
4.	BTH-CAB-BOTTOM	MFC18-TEAK	664.0	144.0	4	0	0	N	EBONY-TAPE	
5.	BTH-CAB-DOOR-LEFT	MFC18-TEAK	349.5	450.0	4	0	0	N	EBONY-TAPE	EB
6.	BTH-CAB-DOOR-LEFT	MFC18-EBONY	249.5	450.0	3	0	0	N		
7.	BTH-CAB-DOOR-RIGHT	MFC18-TEAK	349.5	450.0	4	0	0	N	EBONY-TAPE	EB
8.	BTH-CAB-DOOR-RIGHT	MFC18-EBONY	249.5	450.0	3	0	0	N		
9.	BTH-CAB-END-LEFT	MFC18-TEAK	162.0	600.0	4	0	0	N	EBONY-TAPE	EB
10.	BTH-CAB-END-LEFT	MFC18-EBONY	162.0	600.0	3	0	0	N		
11.	BTH-CAB-END-RIGHT	MFC18-TEAK	162.0	600.0	4	0	0	N	EBONY-TAPE	EB
12.	BTH-CAB-END-RIGHT	MFC18-EBONY	162.0	600.0	3	0	0	N		
13.	BTH-CAB-SHELF	MFC18-EBONY	464.0	144.0	6	0	0	N		
14.	BTH-CAB-SHELF	MFC18-TEAK	664.0	144.0	8	0	0	N	EBONY-TAPE	
15.	BTH-CAB-SHLF-BASE	MFC18-TEAK	664.0	162.0	4	0	0	N	EBONY-TAPE	
16.	BTH-CAB-SHLF-BASE	MFC18-EBONY	464.0	162.0	3	0	0	N		

In this example there are a large number of different part sizes required in small quantities. Use the part list editor to check and adjust sizes as required.

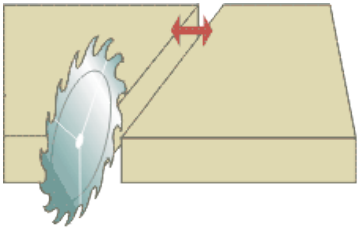
Materials

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

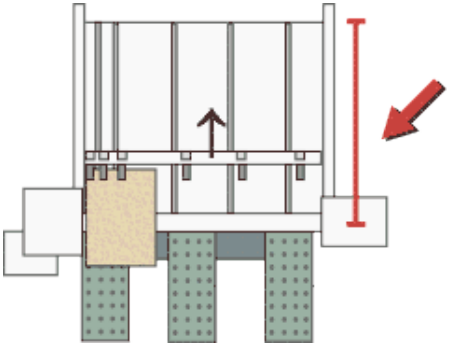


In this example the material MFC18-EBONY has 2 available board sizes 3050.0 x 1220.0 and 2440.0 x 1220.0. The 'Material' column in the Part list associates each part with the correct material to use and the optimiser works out the optimum boards sizes to use for each job.

A set of optimising parameters describe the constraints on cutting; saw kerf, trims …

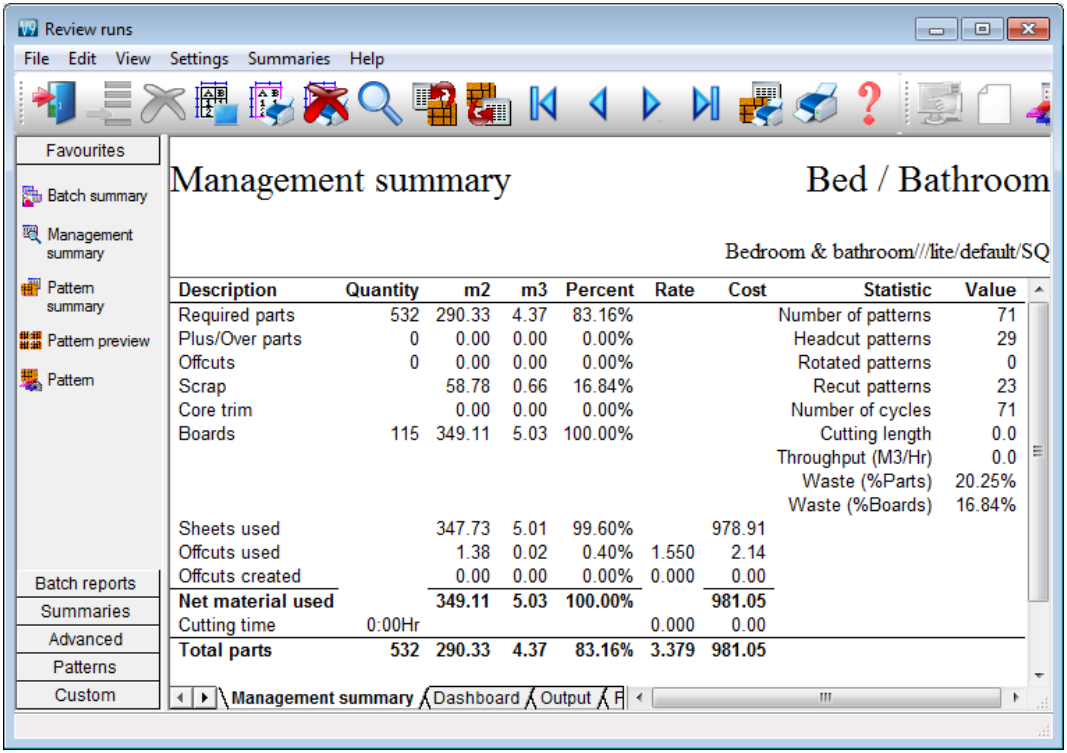


Another set of parameters (Saw parameters) are used to describe each saw; overall cutting length, cutting height …



In this example the overall depth of the saw bed - which determines how boards are placed on the saw.

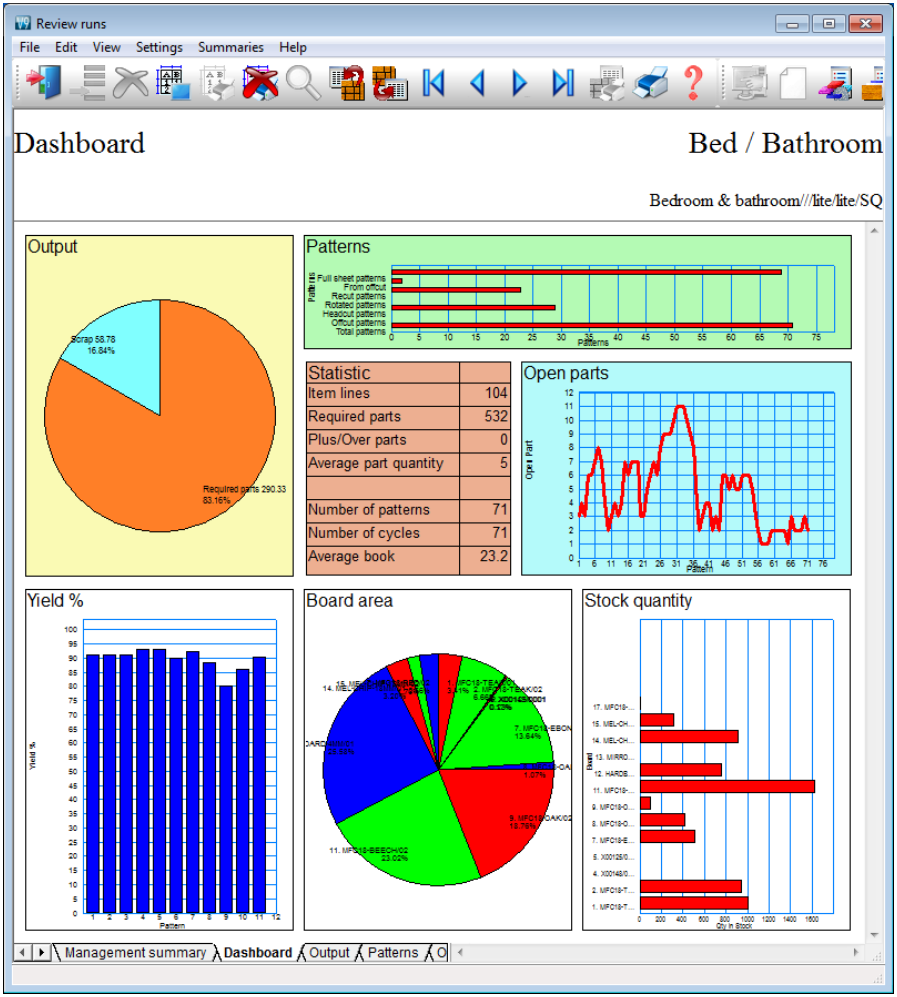
Optimisation produces the pattern layouts and a set of detailed reports on each job. The first report shown is an overall summary.



Description	Quantity	m2	m3	Percent	Rate	Cost	Statistic	Value
Required parts	532	290.33	4.37	83.16%			Number of patterns	71
Plus/Over parts	0	0.00	0.00	0.00%			Headcut patterns	29
Offcuts	0	0.00	0.00	0.00%			Rotated patterns	0
Scrap		58.78	0.66	16.84%			Recut patterns	23
Core trim		0.00	0.00	0.00%			Number of cycles	71
Boards	115	349.11	5.03	100.00%			Cutting length	0.0
							Throughput (M3/Hr)	0.0
							Waste (%Parts)	20.25%
							Waste (%Boards)	16.84%
Sheets used		347.73	5.01	99.60%		978.91		
Offcuts used		1.38	0.02	0.40%	1.550	2.14		
Offcuts created		0.00	0.00	0.00%	0.000	0.00		
Net material used		**349.11**	**5.03**	**100.00%**		**981.05**		
Cutting time	0:00Hr				0.000	0.00		
Total parts	**532**	**290.33**	**4.37**	**83.16%**	**3.379**	**981.05**		

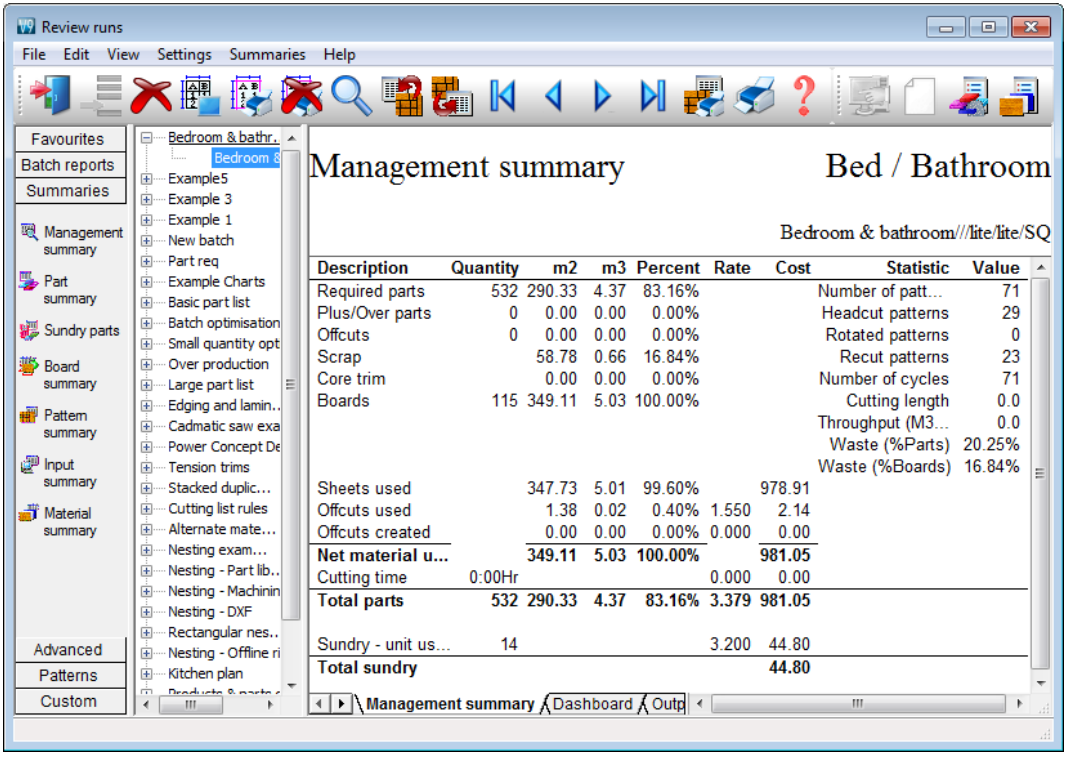
The summary shows the overall values for a job, for example, yield, material costs and types of pattern used.

The Management summary includes the Dashboard which provides a graphical view of the summary.



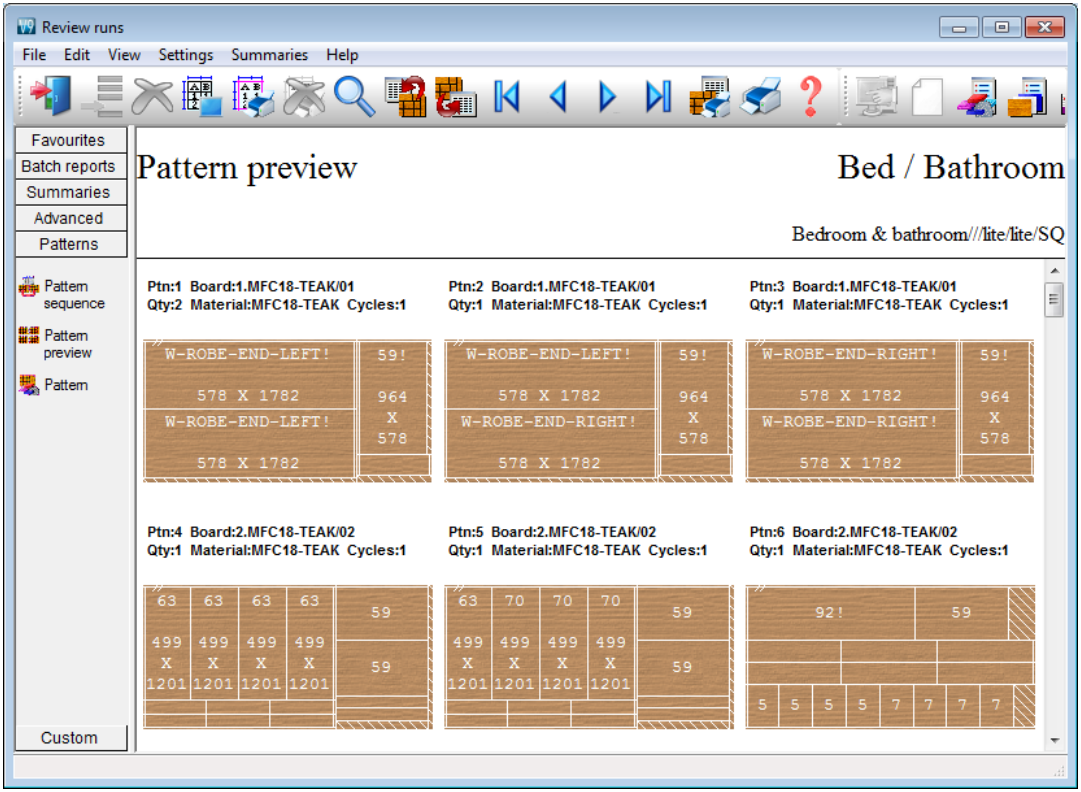
This can be customised for almost any view and to include charts from other summaries.

A window (Runs pane) shows the list of optimised jobs so it is easy to quickly check and review one job then another.



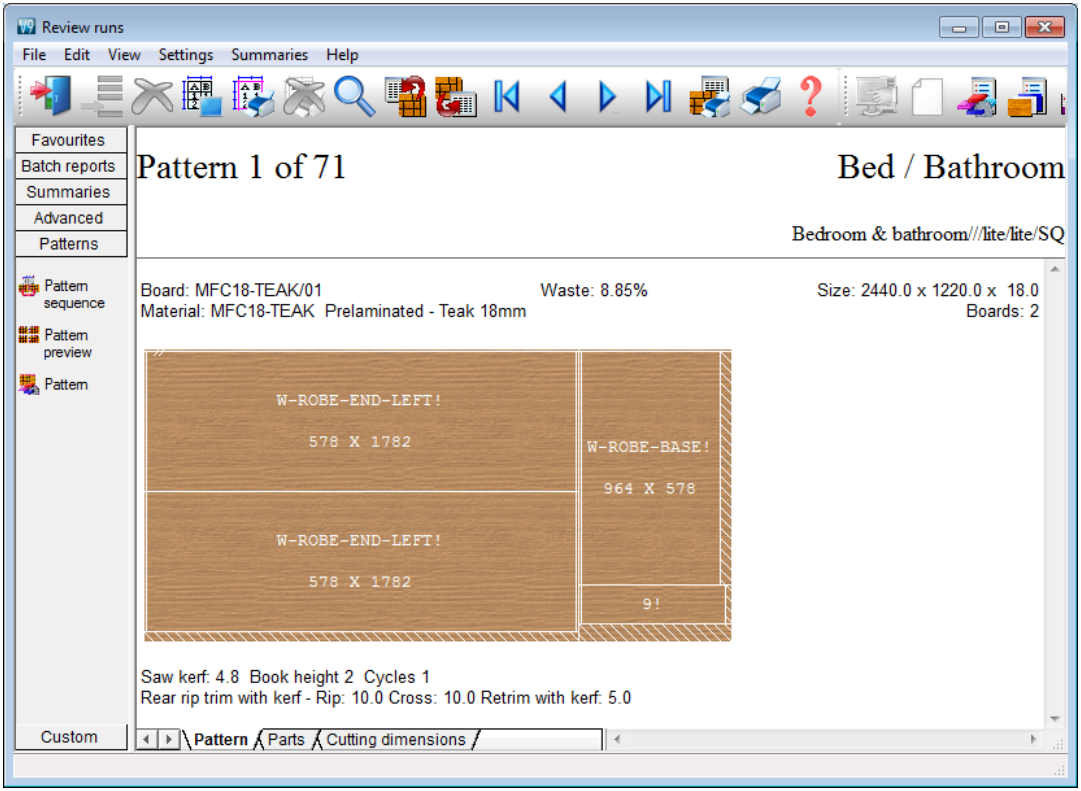
Use the tree to move between jobs.

The cutting patterns are shown in a thumbnail preview.



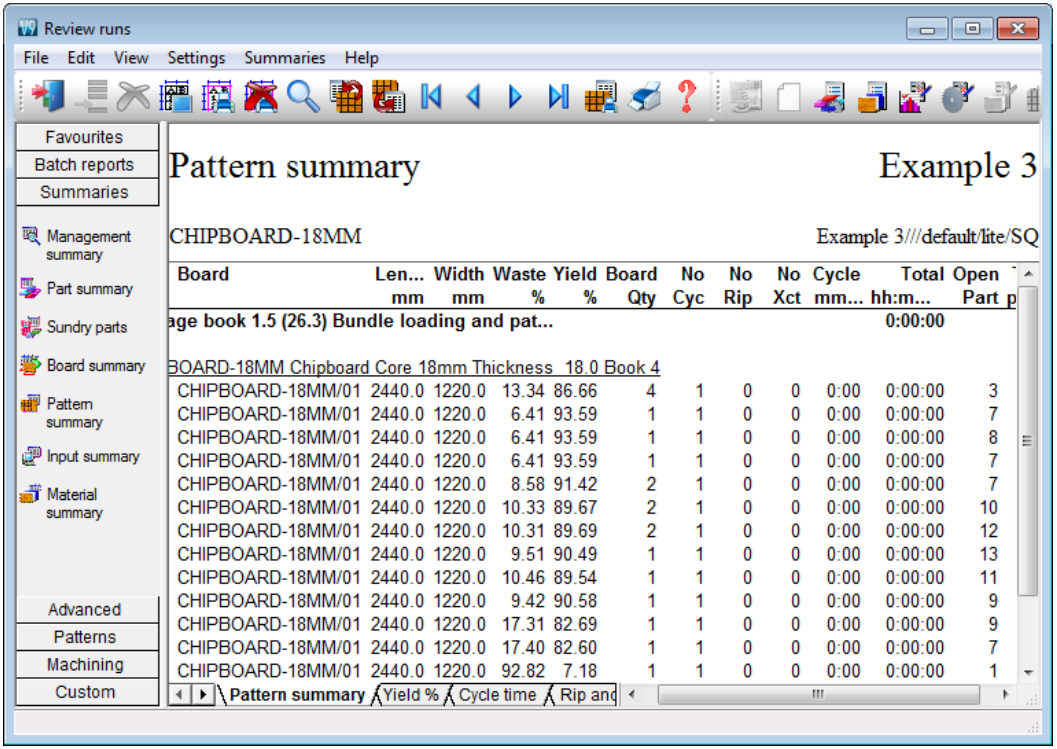
Click on a thumbnail for a detailed view.

The full screen view shows the full details of each pattern.



The tabs at the foot of each pattern show further details.

The various summaries include a list of patterns and cutting quantities, summary of parts produced, and a list of boards used.

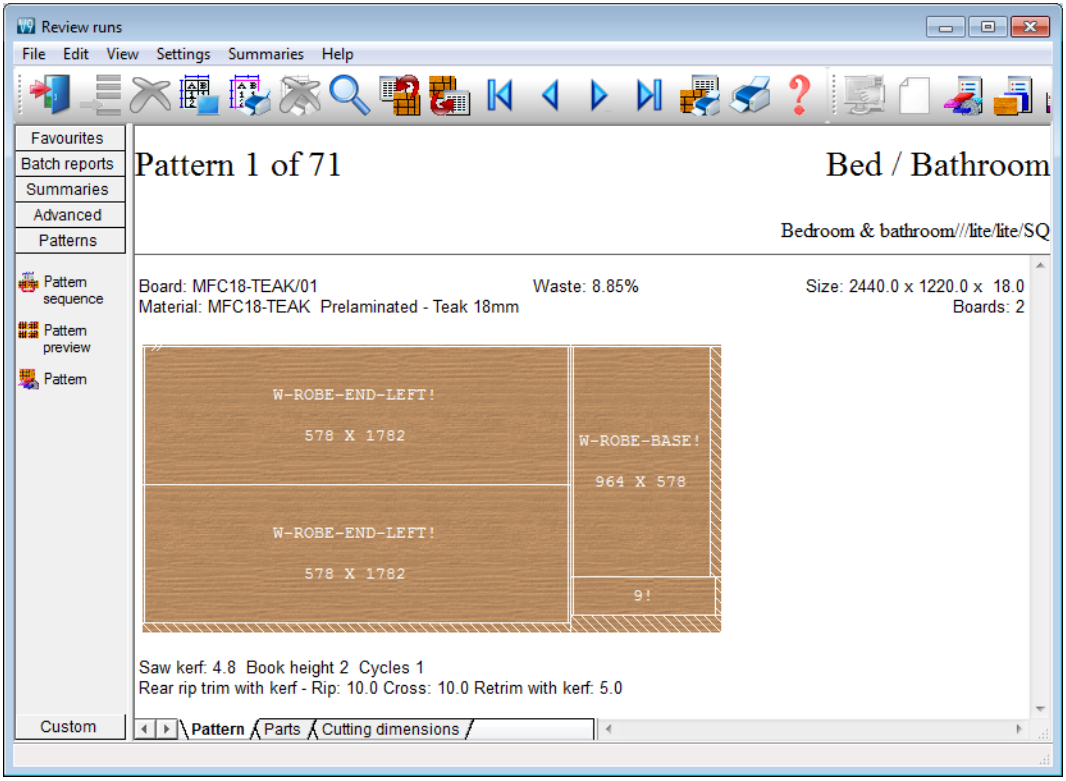


Summaries available include:-

```
Management summary
Pattern summary
Part summary
Board summary
Material summary
Sundry parts
```

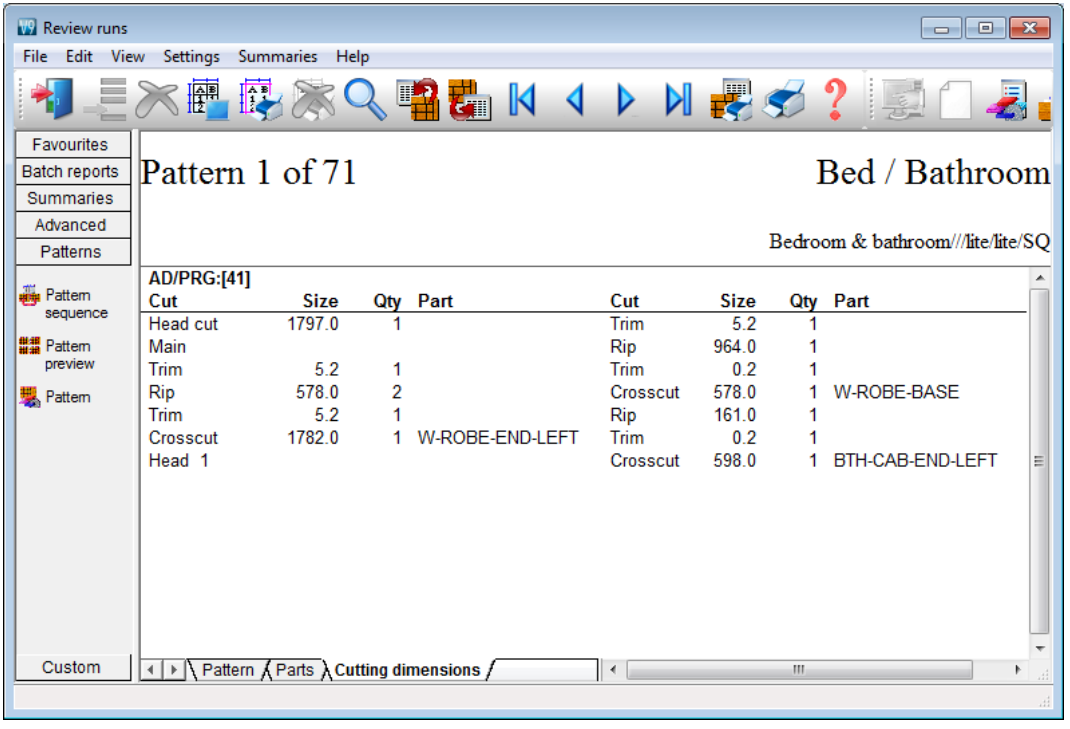
Cutting dimensions

The cutting dimensions for each pattern are shown on a tab at the foot of each pattern.



The tabs at the foot of the pattern give access to the different sets of information about the pattern.

The cutting dimensions are listed for each pattern.



Cut	Size	Qty	Part	Cut	Size	Qty	Part
Head cut	1797.0	1		Trim	5.2	1	
Main				Rip	964.0	1	
Trim	5.2	1		Trim	0.2	1	
Rip	578.0	2		Crosscut	578.0	1	W-ROBE-BASE
Trim	5.2	1		Rip	161.0	1	
Crosscut	1782.0	1	W-ROBE-END-LEFT	Trim	0.2	1	
Head 1				Crosscut	598.0	1	BTH-CAB-END-LEFT

The dimensions (and the pattern) can be printed for use at the saw.

The pattern print shows the full details for each pattern.

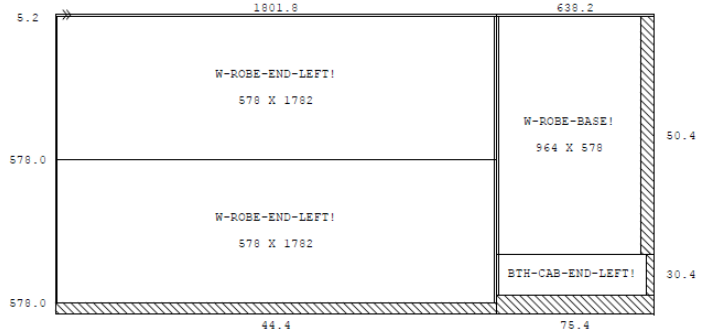
DEMO USER 1 | Magi-Cut Modular V9.0 | Wednesday 23 May 2012 10:56

Pattern 1 of 71

Bed / Bathroom

Bedroom & bathroom///lite/lite/SQ

Board: MFC18-TEAK/01 | Waste: 8.85% | Size: 2440.0 x 1220.0 x 18.0
Material: MFC18-TEAK Prelaminated - Teak 18mm | Boards: 2



Saw kerf: 4.8 Book height 2 Cycles 1
Rear rip trim with kerf - Rip: 10.0 Cross: 10.0 Retrim with kerf: 5.0

No	Part Description	Length mm	Width mm	Total Prod	Cut	Per brd	Per ptn	To cut
9.	BTH-CAB-END-LEFT	161.0	598.0	4	NIL	1	2	2
	1.Edge Btm EBONY-TAPE, 2.Edge Top EBONY-TAPE, 3.Edge Left EBONY-TAPE, 8.Finished size 162....							
59.	W-ROBE-BASE	964.0	578.0	10	NIL	1	2	8
	8.Finished size 964.0 x 578.0, 15.Part graining Non Grained, 16.Volume LOW, 18.Part area m2 0.6, 19.E...							
86.	W-ROBE-END-LEFT	578.0	1782.0	5	NIL	2	4	1
	8.Finished size 578.0 x 1782.0, 9.Drawing name 00000067, 15.Part graining Non Grained, 16.Volume L...*							
				19	NIL			11

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Cut	Size	Qty	Part
Head cut	1797.0	1	
Main			
Trim	5.2	1	
Rip	578.0	2	
Trim	5.2	1	
Crosscut	1782.0	1	W-ROBE-END-LEFT
Head 1			

Saw Interface

Optimising data can be sent directly to a saw with the Holzma Cadmatic 4 controller. The program is already set up for this.

Comparison of Optimisers

	Lite	Standard	Professional
Part List	**LO**	**SO**	**PO**
Metric or Imperial dimensions	●	●	●
Grain/cross grain or ungrained parts	●	●	●
Exact quantity or over/under production	●	●	●
Maximum part sizes per part list (undivided)	10,000	20,000	20,000
Mixed material lists - unlimited materials per job	●	●	●
User-defined part list information fields	99	99	99
Configurable part list editor	●	●	●
Grain match - master part templates		●	●
Import			
Import part/cutting lists from user-defined csv, xls(x)	●	●	●
Import board lists from user-defined csv, xls(x) files	●	●	●
Import patterns - from PTX		●	●
Cutting list			
Multiple boards & offcut sizes per job	●	●	●
Cutting list rules - user defined tables	●	●	●
Allow alternative materials per part		●	●

Comparison of Optimisers (continued)

	Lite	Standard	Professional
Optimising	**LO**	**SO**	**PO**
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	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	10,000	10,000
Maximum pieces per optimisation	10,000	10,000	Unlimited
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 part priorities			●
Control of 'plus part' preference			●
Free cut analysis			●
Material parameters		●	●
Mixed material stacks			●
Re-optimisation of remaining (unproduced) parts			●

Comparison of Optimisers (continued)

	Lite	Standard	□rofessional
Export	**LO**	**SO**	**PO**
Export report data to Access database	●	●	●
Export summaries to XLS(X) files	●	●	●
Export summaries to PDF	●	●	●
Export patterns to DXF files	●	●	●
Reports, forms and labels			
Batch, job summaries	●	●	●
Part, Board, 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 bar codes & pictures	●	●	●
Labels for parts and offcuts	●	●	●
Stock			
Material library with boards and offcuts	●	●	●
Automatic stock issue from jobs	●	●	●
Import stock adjustment from file	●	●	●

Comparison of Optimisers (continued)

	Lite	Standard	Professional
Patterns	**LO**	**SO**	**PO**
Thumbnail preview of patterns	●	●	●
Pattern display - colour coded or material texture	●	●	●
Pattern editor - add, move, delete parts	●	●	●
Cutting in□tructions for saw operator	●	●	●
Pattern Library -standard templates -grain match ptns.		●	●
Manual patterns		●	●
Beam saw interface			
Transfer to Single saw - Cadmatic 4 only	●	●	●
Transfer to online label PC		●	●
Transfer to Single saws - most types		●	●
Transfer to Angular saws			●
Transfer to Weeke Cutting centre			●
Transfer to Multiple saws/multiple saw parameter files		●	●
Tension trims, split waste, waste strip setting		●	●
Support for PCD device/split program fence		●	●
Support for combiTec - recut processing parameters			●
General			
File maintenance - copy/delete files	●	●	●
Backup & restore data	●	●	●
Integrated local (offline) comprehensive help	●	●	●
Link to website	●	●	●
User profiles	●	●	●
Windows XP/Vista/Win7/Win8 platforms	●	●	●