

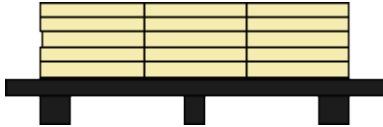
## Destacking & Palletisation - Datasheet DS

### *Efficient offstacking and faster through flow*

The DS module provides for the set up and planning of the destacking process so that parts are distributed to pallets or baseboards efficiently after cutting.

Parts can be destacked manually or with specialised destacking equipment. The DS module is flexible enough to cope with many destack situations including the use of automatic machinery.

A straightforward example is where parts are manually destacked on to fixed size pallets around the saw.



Each location around the saw is a 'Station'.

The optimisation takes account of the destacking requirements and parts are only destacked to stations that are large enough. The required quantity of each part is completed before the station is cleared ready for the next part.



## Destacking parameters

The destacking parameters are used to describe the number, size and type of each station. Typically there might 4 or 5 stations available.

Destacking parameters

Range  
0-9999.9, 0-9999.9,

	Value			
1. Size of station 1	8000.0	3000.0	A	
2. Size of station 2	3000.0	3000.0	A	
3. Size of station 3	6500.0	6500.0	A	
4. Size of station 4	6500.0	6500.0	A	
5. Size of station 5	1000.0	1000.0	M	
6. Size of station 6	4000.0	4000.0	M	
7. Size of station 7	6500.0	6500.0	S	
8. Size of station 8	6500.0	6500.0		
9. Size of station 9	6500.0	6500.0		
10. Size of station 10	6500.0	6500.0		
11. Size of station 11	6500.0	6500.0		
12. Size of station 12	6500.0	6500.0		
13. Size of station 13	6500.0	6500.0		

Print

Cancel

Help

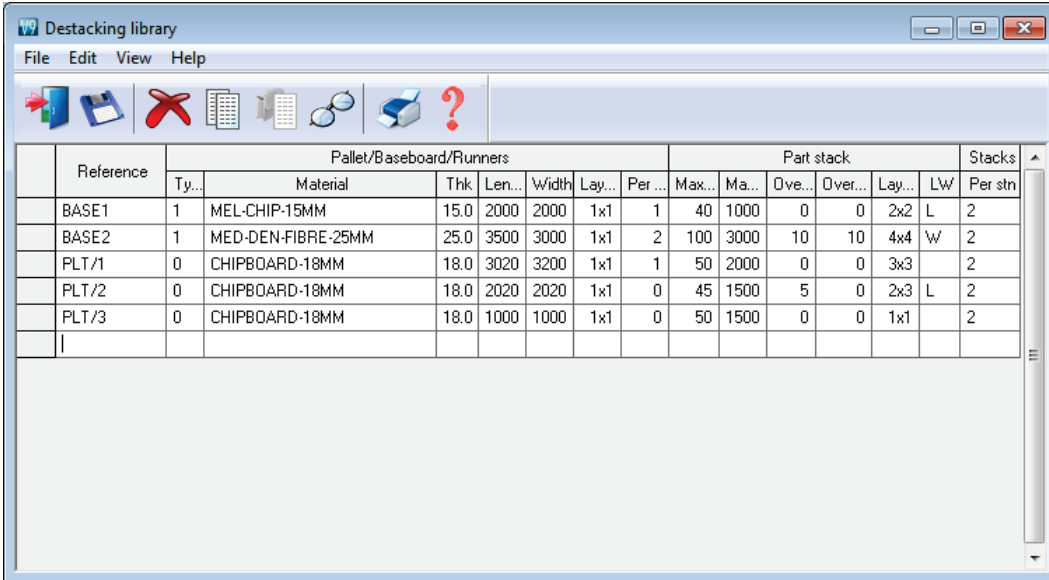
OK

The destacking layout to use is set by information in the Part list (Part list information boxes).

## Destacking library

The layout for destacking on to a pallet or baseboard is at its simplest the number in the length and the number in the width, for example, 3 x 3 or 2 x 1.

The styles to use are defined in the Destacking library. In this example there are different styles for baseboards and pallets.



The screenshot shows a software window titled "Destacking library" with a menu bar (File, Edit, View, Help) and a toolbar with icons for file operations and help. Below the toolbar is a table with columns for Reference, Pallet/Baseboard/Runners, and Part stack. The table contains five rows of data representing different stacking styles.

Reference	Pallet/Baseboard/Runners							Part stack						Stacks	
	Ty...	Material	Thk	Len...	Width	Lay...	Per ...	Max...	Ma...	Ove...	Over...	Lay...	LW	Per strn	
BASE1	1	MEL-CHIP-15MM	15.0	2000	2000	1x1	1	40	1000	0	0	2x2	L	2	
BASE2	1	MED-DEN-FIBRE-25MM	25.0	3500	3000	1x1	2	100	3000	10	10	4x4	W	2	
PLT/1	0	CHIPBOARD-18MM	18.0	3020	3200	1x1	1	50	2000	0	0	3x3		2	
PLT/2	0	CHIPBOARD-18MM	18.0	2020	2020	1x1	0	45	1500	5	0	2x3	L	2	
PLT/3	0	CHIPBOARD-18MM	18.0	1000	1000	1x1	0	50	1500	0	0	1x1		2	

The library can hold many hundreds of styles but typically only a handful of styles are required. They can be set to match your requirements for stacking and processing.

## Optimising and Destacking

The Destacking calculations are part of the optimising process and all the information is calculated during optimisation. The destacking style to use for each part is set at the Part list using extra fields (Part list information boxes).

	Description	Material	Length	Width	Quantity	Grain	Part layout	Destack t...
Global		MFC18-BEECH						A
1.	BASE-BACK	MFC18-BEECH	476.0	735.0	90	N	PLT/1	A
2.	BASE-BACK	MFC18-BEECH	976.0	735.0	100	N	PLT/1	A
3.	BASE-BACK	MFC18-BEECH	976.0	735.0	120	N	PLT/1	A
4.	BASE-BACK	MFC18-BEECH	476.0	735.0	210	N	PLT/2	A
5.	BASE-BACK	MFC18-BEECH	876.0	735.0	65	N	PLT/1	A
6.	BASE-BOTTOM	MFC18-BEECH	464.0	582.0	32	N	PLT/1	A
7.	BASE-BOTTOM	MFC18-BEECH	564.0	582.0	100	N	PLT/2	A
8.	BASE-BOTTOM	MFC18-BEECH	464.0	582.0	120	N	PLT/1	A
9.	BASE-CABINET-BOTTOM	MFC18-BEECH	864.0	582.0	90	N	PLT/1	A
10.	BASE-CABINET-DIVIDER	MFC18-BEECH	560.0	533.3	88	N	PLT/3	A
11.	BASE-CABINET-DOOR	MFC18-BEECH	400.0	556.8	22	X	PLT/3	A
12.	BASE-CABINET-DRAWER	MFC18-BEECH	400.0	184.3	120	N	PLT/2	A
13.	BASE-CABINET-DRAWER-LONG	MFC18-BEECH	900.0	184.3	100	N	PLT/1	A
14.	BASE-CABINET-END-LEFT	MFC18-BEECH	582.0	870.0	31	N	PLT/1	A
15.	BASE-CABINET-END-RIGHT	MFC18-BEECH	582.0	870.0	100	N	PLT/1	A
16.	BASE-CABINET-RAIL-BACK	MFC18-BEECH	864.0	150.0	40	N	PLT/2	A

In this example several different pallet layouts are used. In many cases it may be necessary to specify different layouts for different parts, for example, it may be dangerous to stack very small parts in a 4 x 4 layout.

The part list is optimised in the usual way.

**Review runs**  
 File Edit View Settings Summaries Help

**Destacking pictures** Example 10

MFC18-BEECH Example 10///default/default/M2

Part:1:BASE-BACK	Quantity:90	Part:2	Quantity:100	Part:3	Quantity:120																		
Stacks:1 Stn:11 Patterns:7-38		Stacks:1 Stn:1 Patterns:1-35		Stacks:2 Stn:2 Patterns:2-38																			
Pallet:1500x1200		Pallet:1500x1200		Pallet:1500x1200																			
Style:PLT/1	Quantity:1	Style:PLT/1	Quantity:1	Style:PLT/1	Quantity:2																		
<table border="1"> <tr><td>BASE-BACK!</td><td>BASE-BACK!</td></tr> <tr><td>476 X 735</td><td>476 X 735</td></tr> <tr><td>BASE-BACK!</td><td>BASE-BACK!</td></tr> <tr><td>476 X 735</td><td>476 X 735</td></tr> </table>	BASE-BACK!	BASE-BACK!	476 X 735	476 X 735	BASE-BACK!	BASE-BACK!	476 X 735	476 X 735		<table border="1"> <tr><td>BASE-BACK!</td><td>BASE-BACK!</td></tr> <tr><td>976 X 735</td><td>976 X 735</td></tr> </table>	BASE-BACK!	BASE-BACK!	976 X 735	976 X 735		<table border="1"> <tr><td>BASE-BACK!</td><td>BASE-BACK!</td></tr> <tr><td>976 X 735</td><td>976 X 735</td></tr> </table>	BASE-BACK!	BASE-BACK!	976 X 735	976 X 735			
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976 X 735	976 X 735																						
BASE-BACK!	BASE-BACK!																						
976 X 735	976 X 735																						
Part:4	Quantity:210	Part:5:BASE-BACK	Quantity:65	Part:6	Quantity:32																		
Stacks:2 Stn:7 Patterns:5-41		Stacks:1 Stn:3 Patterns:3-33		Stacks:1 Stn:22 Patterns:12-39																			
Pallet:1500x1200		Pallet:1500x1200		Pallet:1500x1200																			
Style:PLT/1	Quantity:2	Style:PLT/1	Quantity:1	Style:PLT/1	Quantity:1																		
<table border="1"> <tr><td>BASE-BACK!</td><td>BASE-BACK!</td></tr> <tr><td>476 X 735</td><td>476 X 735</td></tr> <tr><td>BASE-BACK!</td><td>BASE-BACK!</td></tr> <tr><td>476 X 735</td><td>476 X 735</td></tr> </table>	BASE-BACK!	BASE-BACK!	476 X 735	476 X 735	BASE-BACK!	BASE-BACK!	476 X 735	476 X 735		<table border="1"> <tr><td>BASE-BACK!</td><td>BASE-BACK!</td></tr> <tr><td>876 X 735</td><td>876 X 735</td></tr> </table>	BASE-BACK!	BASE-BACK!	876 X 735	876 X 735		<table border="1"> <tr><td>6</td><td>6</td><td>6</td></tr> <tr><td>6</td><td>6</td><td>6</td></tr> </table>	6	6	6	6	6	6	
BASE-BACK!	BASE-BACK!																						
476 X 735	476 X 735																						
BASE-BACK!	BASE-BACK!																						
476 X 735	476 X 735																						
BASE-BACK!	BASE-BACK!																						
876 X 735	876 X 735																						
6	6	6																					
6	6	6																					

Patterns  
Machining  
Custom

The Destacking pictures show the layout for each part. These can be used for controlling and checking the destack process.

There are two other destacking reports: Station summary and Destacking summary.

## Station summary

This shows how each station is loaded and the order of parts arriving at each station.

The screenshot shows a software window titled 'Review runs' with a menu bar (File, Edit, View, Settings, Summaries, Help) and a toolbar with various icons. On the left is a sidebar with a 'Favourites' list containing: Offcut summary, Distribution summary, Edging summary, Machine times, Saw loading summary, Destacking summary, Station summary, and Destacking pictures. Below this are 'Patterns', 'Machining', and 'Custom' sections. The main area displays a report titled 'Station summary' for 'MFC18-BEECH' under 'Example 10'. The report includes a table with columns: Bsb No, Length mm, Width mm, Bsb Qty, Part No, Part / Description, Part Qty, Part Ln, Part Wd, Part Orientat..., and Part Ht. The table is divided into four station numbers, each with a sub-total row.

Bsb No	Length mm	Width mm	Bsb Qty	Part No	Part / Description	Part Qty	Part Ln	Part Wd	Part Orientat...	Part Ht
<u>Station number 1</u>										
PLT/1	1500.0	1200.0	1	2.	BASE-BACK	100	2	1	!	50
			1			100				
<u>Station number 2</u>										
PLT/1	1500.0	1200.0	2	3.	BASE-BACK	120	2	1	!	50
			2			120				
<u>Station number 3</u>										
PLT/1	1500.0	1200.0	1	5.	BASE-BACK	65	2	1	!	50
			1			65				
<u>Station number 4</u>										
PLT/2	1300.0	1000.0	0	7.	BASE-BOTTOM	100	2	1		45
			0			100				

Like all reports the report can be customised as required.

## Destacking Summary

This shows for each cutting pattern how the parts are produced and the sequence they arrive at stations.

**Destacking summary** Example 10

MFC18-BEECH Example 10///default/default/M2

Ptn	Open Parts	No	Part / Description	Length mm	Width mm	Stn	Qty	Group / Pictures
1	1	2	BASE-BACK	976.0	735.0	1	66	2 1!
2	2	3	BASE-BACK	976.0	735.0	2	12	2 1!
3	6	5	BASE-BACK	876.0	735.0	3	8	2 1!
		7	BASE-BOTTOM	564.0	582.0	4	4	2 1
		25	BASE-END-RIGHT	582.0	870.0	5	4	2 1
		29	BASE-PLINTH	564.0	125.0	6	2	2 3
4	6	2	BASE-BACK	976.0	735.0	1	1	2 1!
		3	BASE-BACK	976.0	735.0	2	5	2 1!
5	7	3	BASE-BACK	976.0	735.0	2	5	2 1!
		4	BASE-BACK	476.0	735.0	7	2	2 1
6	10	23	BASE-END-LEFT	582.0	870.0	8	7	2 1
		24	BASE-END-LEFT	582.0	870.0	9	1	2 1
		40	BASE-SHELF	464.0	400.0	10	1	3 3
7	14	1	BASE-BACK	476.0	735.0	11	6	2 2!
		9	BASE-CABINET-BOTTOM	864.0	582.0	12	2	1 2
		21	BASE_DRAWER	500.0	186.3	13	2	1 1

Report data can be exported to an external file or system if required.

The Destacking information is shown in the 'Review runs summaries'.

The optimisation automatically includes an advanced algorithm that ensures optimisation takes account of the stations sizes set in the Destacking parameters.

This ensures that when the patterns are cut in the order set by the optimiser the parts leaving the saw can be smoothly stacked on the stations available and that there are empty stations available as required.

- All the reports can be easily printed and used at the Destacking area or for planning.
- For Holzma/Bargstedt destacking machinery the destacking information can be downloaded (via the Saw interface) for use by automatic destacking machinery.
- Labels for each pallets and/or each stack can be printed in the office if used with the 'Parts & Labels' (PL) module.



## Baseboards

Many customers offstack to cut to size baseboards rather than pallets.

**Review runs**

File Edit View Settings Summaries Help

**Destacking pictures** Example 10

MFC18-BEECH Example 10///default/default/M2

Part:1.BASE-BACK Quantity:90 Part:2 Quantity:100 Part:3 Quantity:120  
 Stacks:1 Stn:11 Patterns:7-38 Stacks:1 Stn:1 Patterns:1-35 Stacks:1 Stn:2 Patterns:2-38  
 Baseboard:6 952x1470 Baseboard:1 1952x1470 Baseboard:1 1952x1470  
 Style:BASE1 Quantity:1 Style:BASE1 Quantity:1 Style:BASE1 Quantity:1

1	1	BASE-BACK	BASE-BACK	BASE-BACK	BASE-BACK
		976 X 735	976 X 735	976 X 735	976 X 735
1	1	BASE-BACK	BASE-BACK	BASE-BACK	BASE-BACK
		976 X 735	976 X 735	976 X 735	976 X 735

Part:4 Quantity:210 Part:5.BASE-BACK Quantity:65 Part:6 Quantity:32  
 Stacks:2 Stn:7 Patterns:5-41 Stacks:1 Stn:3 Patterns:3-33 Stacks:1 Stn:22 Patterns:12-39  
 Baseboard:6 952x1470 Baseboard:2 1752x1470 Baseboard:16 928x1164  
 Style:BASE1 Quantity:2 Style:BASE1 Quantity:1 Style:BASE1 Quantity:1

4	4	BASE-BACK	BASE-BACK	6	6
		876 X 735	876 X 735		
4	4	BASE-BACK	BASE-BACK	6	6
		876 X 735	876 X 735		

Patterns  
Machining  
Custom

Destacking pictures for baseboards are shown above.

The program also provides a cutting list for the Baseboards ready for optimising.

	Description	Material	Length	Width	Quantity	Grain	Part layout	Destack t...
Global		MEL-CHIP-15MM				N		
1.	2*	MEL-CHIP-15MM	1952.0	1470.0	2	N		
2.	5	MEL-CHIP-15MM	1752.0	1470.0	1	N		
3.	7	MEL-CHIP-15MM	1128.0	1164.0	1	N		
4.	25*	MEL-CHIP-15MM	1164.0	1740.0	6	N		
5.	29	MEL-CHIP-15MM	1128.0	250.0	1	N		
6.	4*	MEL-CHIP-15MM	952.0	1470.0	3	N		
7.	40	MEL-CHIP-15MM	928.0	800.0	1	N		
8.	9	MEL-CHIP-15MM	1728.0	1164.0	1	N		
9.	21	MEL-CHIP-15MM	1000.0	372.5	1	N		
10.	34*	MEL-CHIP-15MM	1928.0	300.0	2	N		
11.	11	MEL-CHIP-15MM	800.0	1113.5	1	N		
12.	12	MEL-CHIP-15MM	800.0	368.5	1	N		
13.	13	MEL-CHIP-15MM	1800.0	368.5	1	N		
14.	28*	MEL-CHIP-15MM	1928.0	250.0	2	N		
15.	39	MEL-CHIP-15MM	1928.0	800.0	1	N		
16.	6*	MEL-CHIP-15MM	928.0	1164.0	2	N		
17.	27*	MEL-CHIP-15MM	928.0	250.0	2	N		

This list can be optimised in the usual way.

### **Flexible Destacking**

The destacking options are very flexible and can be set up for:-

- Offstacking to the floor (no station sizes)
- Offstacking to a mix of automatic and manual stations
- Offstacking to include one or more 'Overflow' stations
- Use of 'Pallet groups'

## **Pallet groups**

The program also includes more general options to take account of Pallet groups. For example, a field (information box) is available at the part list to set a pallet group number for each part.

This ensures the optimisers arrange the pattern layouts so parts in the same pallet group are finished before considering parts from other pallet groups. This speeds up later production and assembly operations and helps with delivery times for specific parts.

For example, a customer recently needed to set up their system to produce 1 job at a time and used the Pallet group option for this. The flexibility of the optimisers also allowed 'changeover' patterns where one group finished and the next started so waste was minimised.

## **Summary of Destacking**

- Destacking requires optimising module: PO

	DS	DS + PL
Maximum items in library	9999	9999
Maximum number of stations	20	20
Automatic machinery	•	•
Manual destacking	•	•
Allow overflow stations	•	•
Pallet groups	•	•
Fixed pallets	•	•
Baseboards	•	•
Destack to floor	•	•
Labels for stacks or pallets		•
Destack pictures	•	•
Destack summary	•	•
Station summary	•	•
Download to destack machinery	•	•