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PLUS 2D Nesting Software Optimization Report

General Details:

Project Name	
File Name	N:/Plus2D/Samples/lshaped.plj
Job No	
Customer	
CustomerId	
Created By	
Approved By	
Date	Wednesday, July 21, 2010
PLUS 2D Version No.	8.68

Stock Details:

Id	Length	Width	Cost	Qty	Material	Thk	Remarks
stk1	2440	1220	1428.86	100	mdf	12	
stk2	2440	1830	2143.3	100	mdf	12	
stk3	2440	1220	2143.3	100	mdf	18	
stk4	2440	1830	3214.94	100	mdf	18	

Part Details:

Name	Fin. Length	Fin. Width	Rotn	Qty	Type	Material	Thk	Remarks
L1	1225	1025	1	20	DXF	mdf	18	
shelf-shelf-T_Bot	1100	400	1	18	Rect	mdf	18	
shelf-shelf-Sides	400	600	1	120	Rect	mdf	12	
shelf-shelf-DD	300	200	1	60	Rect	mdf	12	
shelf-shelf-DDsides	400	200	1	120	Rect	mdf	12	
shelf-shelf-DBot	300	400	1	100	Rect	mdf	12	
shelf-shelf-Bck	1100	600	1	20	Rect	mdf	12	

Summary of Optimization Results:

Summary of Optimization Results:	
Grinding Margin	0
Saw Width	25
Number of Layouts	9
Number of Stock Used	31
Total Utilization	84.24 %
Total Parts Required	458
Total Parts Nested	458
Reusable Offcuts	10
Total Stock Area	116.1
Total Part Area	90.62
Offcut Area	7.18
Scrap Area	18.3
Total Stock Weight	639.42
Total Part Weight	494.13
Total Offcut Weight	48.26
Total Scrap Weight	99.99
ScrapWt/PartWt	20.24 %

Summary of Layouts:

No	Name	Qty	Util%	Cost	Parts	Offcut Qty - Size
1	stk2	1	85.55	2143.30	31	0
2	stk1	5	83.31	7144.32	50	0
3	stk1	8	83.98	11430.91	128	0
4	stk1	1	83.98	1428.86	12	0
5	stk2	7	83.31	15003.07	168	0
6	stk4	4	84.98	12859.78	24	1,[265X1830]
7	stk4	3	83.35	9644.83	12	1,[340X1830]
8	stk2	1	86.76	2143.30	31	2,[740X1830]
9	stk3	1	94.73	2143.30	2	1,[2440X795]

Parts Summary Table:

No	Name	Size and Mate (L x W, [Mate,Thk])	Nested (Required)	Area	Weight	Remarks
1	L1	1225 x 1025, [mdf,18]	20 (20)	15.5	2175.85	
2	shelf-shelf-T_Bot	1100 x 400, [mdf,18]	18 (18)	7.92	1111.97	
3	shelf-shelf-Sides	400 x 600, [mdf,12]	120 (120)	28.8	2695.68	
4	shelf-shelf-DD	300 x 200, [mdf,12]	60 (60)	3.6	336.96	
5	shelf-shelf-DDsides	400 x 200, [mdf,12]	120 (120)	9.6	898.56	
6	shelf-shelf-DBot	300 x 400, [mdf,12]	100 (100)	12	1123.2	
7	shelf-shelf-Bck	1100 x 600, [mdf,12]	20 (20)	13.2	1235.52	
		Total	458 (458)	90.62	9577.74	

Stocks used details:

No	Name	Length	Width	Avail Qty	Utl Qty	Area	Material	Thk
1	stk1	2440	1220	100	14	41.68	mdf	12
2	stk2	2440	1830	100	9	40.19	mdf	12
3	stk3	2440	1220	100	1	2.98	mdf	18
4	stk4	2440	1830	100	7	31.26	mdf	18
	Total				31	116.1		

Offcut Details :

Id	Length	Width	Cost	Qty	Area	Material	Thk
Off_6_2	265	1830	349.16	4	1.94	mdf	18
Off_7_2	340	1830	447.98	3	1.87	mdf	18
Off_8_2	740	1830	650.02	1	1.35	mdf	12
Off_8_3	400	200	38.4	1	0.08	mdf	12
Off_9_1	2440	795	1396.66	1	1.94	mdf	18
Total				10	7.18		

Parts Cut List:

Name	Length	Width	Qty	Remarks Layout-Qty	Material	Thk
L1	1225	1025	20	7-12/6-8	mdf	18
shelf-shelf-T_Bot	1100	400	18	9-2/6-16	mdf	18
shelf-shelf-Sides	400	600	120	5-70/4-2/3-48	mdf	12
shelf-shelf-DD	300	200	60	8-2/4-3/3-8/2-25/1-22	mdf	12
shelf-shelf-DDsides	400	200	120	8-29/5-63/4-2/3-16/2-5/1-5	mdf	12
shelf-shelf-DBot	300	400	100	5-35/4-3/3-56/2-5/1-1	mdf	12
shelf-shelf-Bck	1100	600	20	4-2/2-15/1-3	mdf	12

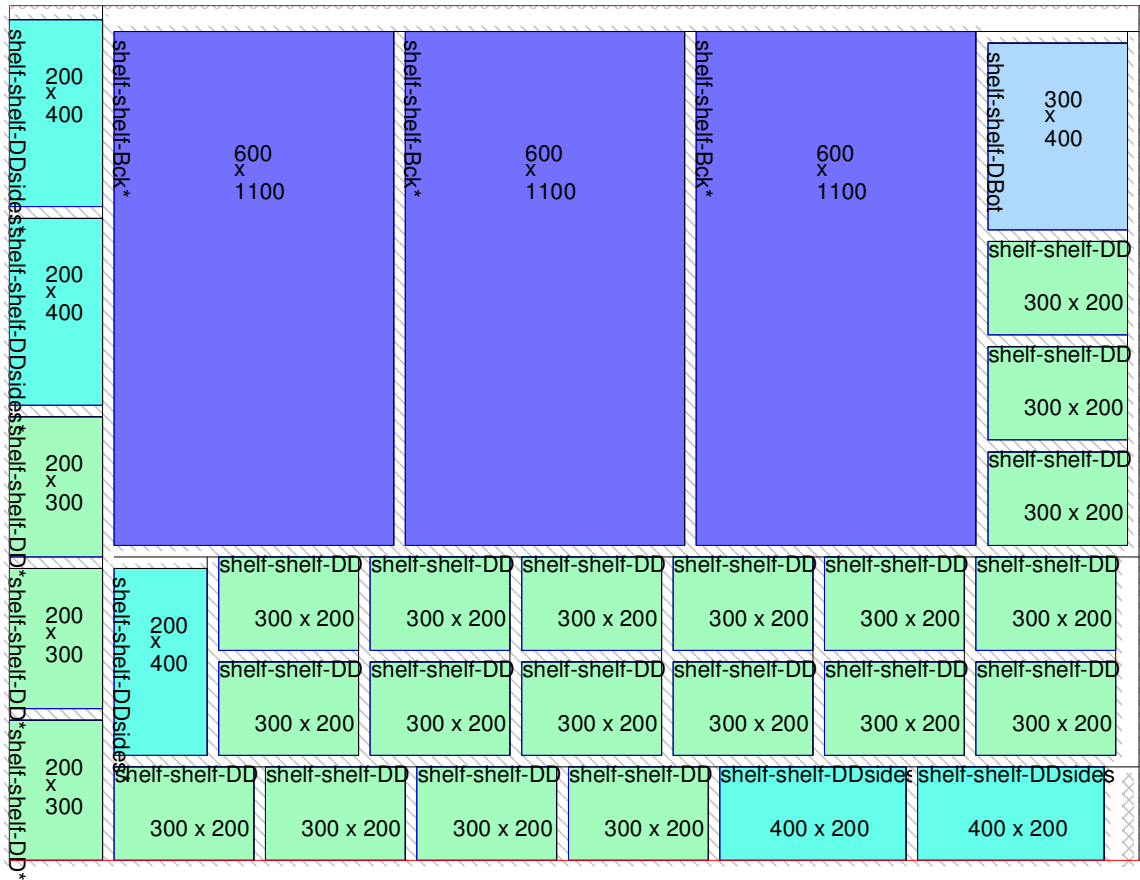
Detailed table about Stocks & Parts:

No	Stk Length	Stk Width	Stk Area	Prt Length	Prt Width	Qty	Part Area	Name
1	2440	1830	4.47					
				300	200	22	1.32	shelf-shelf-DD
				400	200	5	0.4	shelf-shelf-DDside s
				300	400	1	0.12	shelf-shelf-DBot
				1100	600	3	1.98	shelf-shelf-Bck
			85.55 %				3.82	
2	2440	1220	2.98					
				300	200	5	0.3	shelf-shelf-DD
				400	200	1	0.08	shelf-shelf-DDside s
				300	400	1	0.12	shelf-shelf-DBot
				1100	600	3	1.98	shelf-shelf-Bck
			83.31 %				2.48	
3	2440	1220	2.98					
				400	600	6	1.44	shelf-shelf-Sides
				300	200	1	0.06	shelf-shelf-DD
				400	200	2	0.16	shelf-shelf-DDside s
				300	400	7	0.84	shelf-shelf-DBot
			83.98 %				2.5	
4	2440	1220	2.98					

No	Stk Length	Stk Width	Stk Area	Prt Length	Prt Width	Qty	Part Area	Name
				400	600	2	0.48	shelf-shelf-Sides
				300	200	3	0.18	shelf-shelf-DD
				400	200	2	0.16	shelf-shelf-DDside s
				300	400	3	0.36	shelf-shelf-DBot
				1100	600	2	1.32	shelf-shelf-Bck
			83.98 %				2.5	
5	2440	1830	4.47					
				400	600	10	2.4	shelf-shelf-Sides
				400	200	9	0.72	shelf-shelf-DDside s
				300	400	5	0.6	shelf-shelf-DBot
			83.31 %				3.72	
6	2440	1830	4.47					
				1225	1025	2	1.55	L1
				1100	400	4	1.76	shelf-shelf-T_Bot
			84.98 %				3.31	
7	2440	1830	4.47					
				1225	1025	4	3.1	L1
			83.35 %				3.1	
8	2440	1830	4.47					
				300	200	2	0.12	shelf-shelf-DD
				400	200	29	2.32	shelf-shelf-DDside s
			86.76 %				2.44	
9	2440	1220	2.98					

No	Stk Length	Stk Width	Stk Area	Prt Length	Prt Width	Qty	Part Area	Name
				1100	400	2	0.88	shelf-shelf-T_Bot
			94.73 %				0.88	

Details of each Layout:



Layout 1 of 9(Stock:stk2 Dim:2440 x 1830 Qty:1 Material:mdf Thk:12)

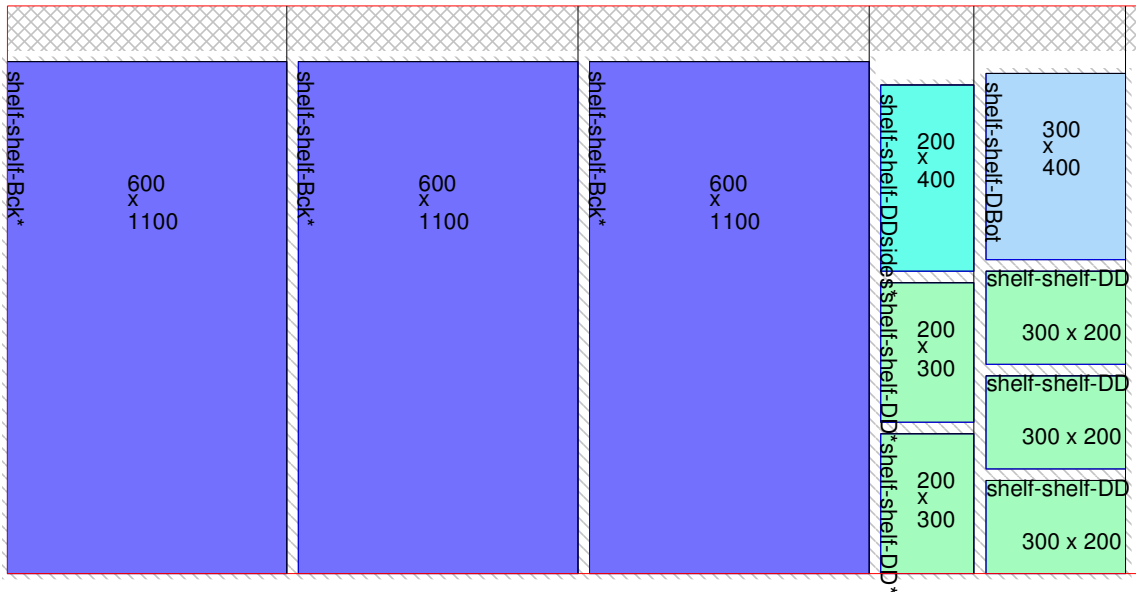
Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
shelf-shelf-DD	300	200	22	1.32	22	0/60	
shelf-shelf-DDsides	400	200	5	0.4	5	0/120	
shelf-shelf-DBot	300	400	1	0.12	1	0/100	
shelf-shelf-Bck	1100	600	3	1.98	3	0/20	
Total			31	3.82	31		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	200	0	200	1830
2	0	300	200	300

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
3	0	625	200	625
4	0	950	200	950
5	0	1375	200	1375
6	0	1800	200	1800
7	2425	0	2425	1830
8	225	200	2425	200
9	525	0	525	200
10	850	0	850	200
11	1175	0	1175	200
12	1500	0	1500	200
13	1925	0	1925	200
14	2350	0	2350	200
15	225	650	2425	650
16	425	225	425	650
17	225	625	425	625
18	750	225	750	650
19	450	425	750	425
20	1075	225	1075	650
21	775	425	1075	425
22	1400	225	1400	650
23	1100	425	1400	425
24	1725	225	1725	650
25	1425	425	1725	425
26	2050	225	2050	650
27	1750	425	2050	425
28	2375	225	2375	650
29	2075	425	2375	425
30	225	1775	2425	1775
31	825	675	825	1775
32	1450	675	1450	1775
33	2075	675	2075	1775
34	2400	675	2400	1775
35	2100	875	2400	875
36	2100	1100	2400	1100
37	2100	1325	2400	1325
38	2100	1750	2400	1750



Layout 2 of 9(Stock:stk1 Dim:2440 x 1220 Qty:5 Material:mdf Thk:12)

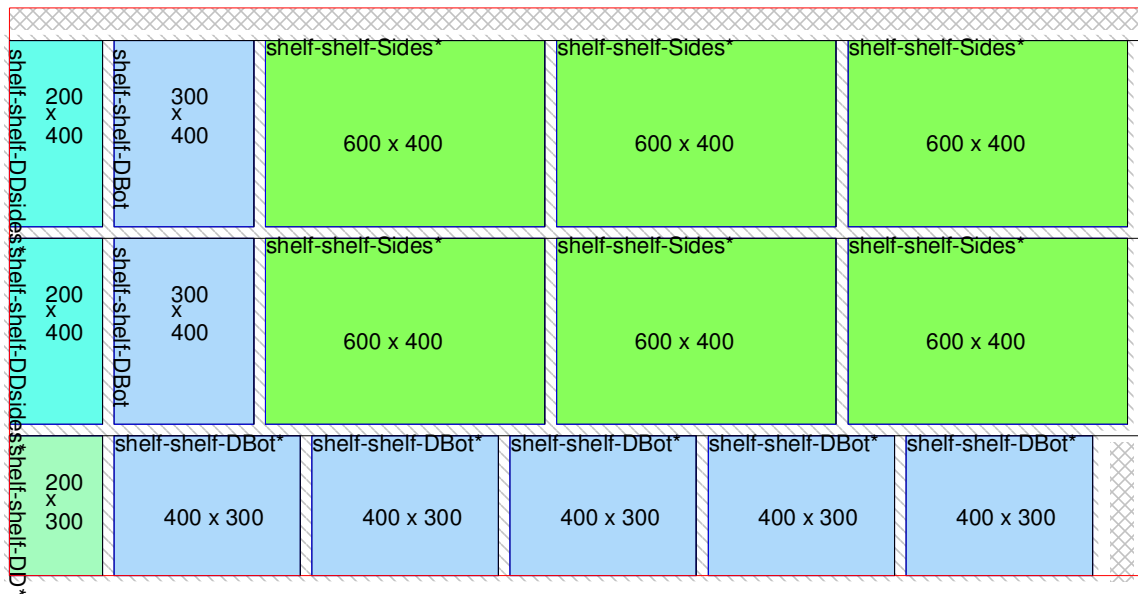
Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
shelf-shelf-DD	300	200	5	0.3	25	22/60	
shelf-shelf-DDsides	400	200	1	0.08	5	5/120	
shelf-shelf-DBot	300	400	1	0.12	5	1/100	
shelf-shelf-Bck	1100	600	3	1.98	15	3/20	
Total			10	2.48	50		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	600	0	600	1220
2	0	1100	600	1100
3	1225	0	1225	1220
4	625	1100	1225	1100
5	1850	0	1850	1220
6	1250	1100	1850	1100
7	2075	0	2075	1220
8	1875	300	2075	300
9	1875	625	2075	625
10	1875	1050	2075	1050
11	2400	0	2400	1220
12	2100	200	2400	200
13	2100	425	2400	425

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
14	2100	650	2400	650
15	2100	1075	2400	1075



Layout 3 of 9(Stock:stk1 Dim:2440 x 1220 Qty:8 Material:mdf Thk:12)

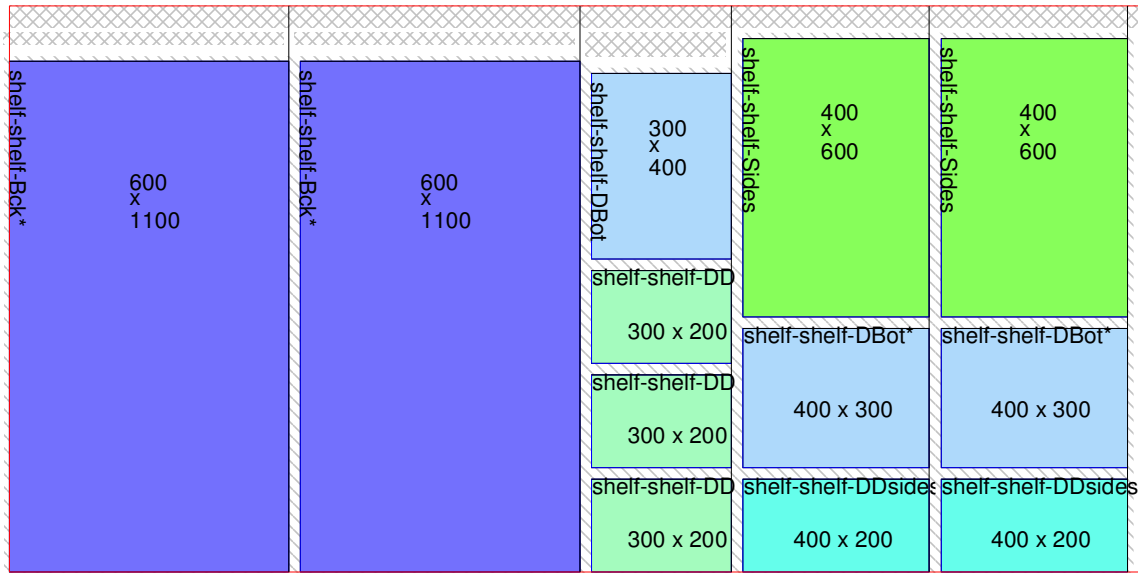
Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
shelf-shelf-Sides	400	600	6	1.44	48	0/120	
shelf-shelf-DD	300	200	1	0.06	8	47/60	
shelf-shelf-DDsides	400	200	2	0.16	16	10/120	
shelf-shelf-DBot	300	400	7	0.84	56	6/100	
Total			16	2.5	128		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	0	300	2440	300
2	200	0	200	300
3	625	0	625	300
4	1050	0	1050	300
5	1475	0	1475	300
6	1900	0	1900	300
7	2325	0	2325	300
8	0	725	2440	725
9	200	325	200	725
10	525	325	525	725
11	1150	325	1150	725
12	1775	325	1775	725
13	2400	325	2400	725

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
14	0	1150	2440	1150
15	200	750	200	1150
16	525	750	525	1150
17	1150	750	1150	1150
18	1775	750	1775	1150
19	2400	750	2400	1150



Layout 4 of 9(Stock:stk1 Dim:2440 x 1220 Qty:1 Material:mdf Thk:12)

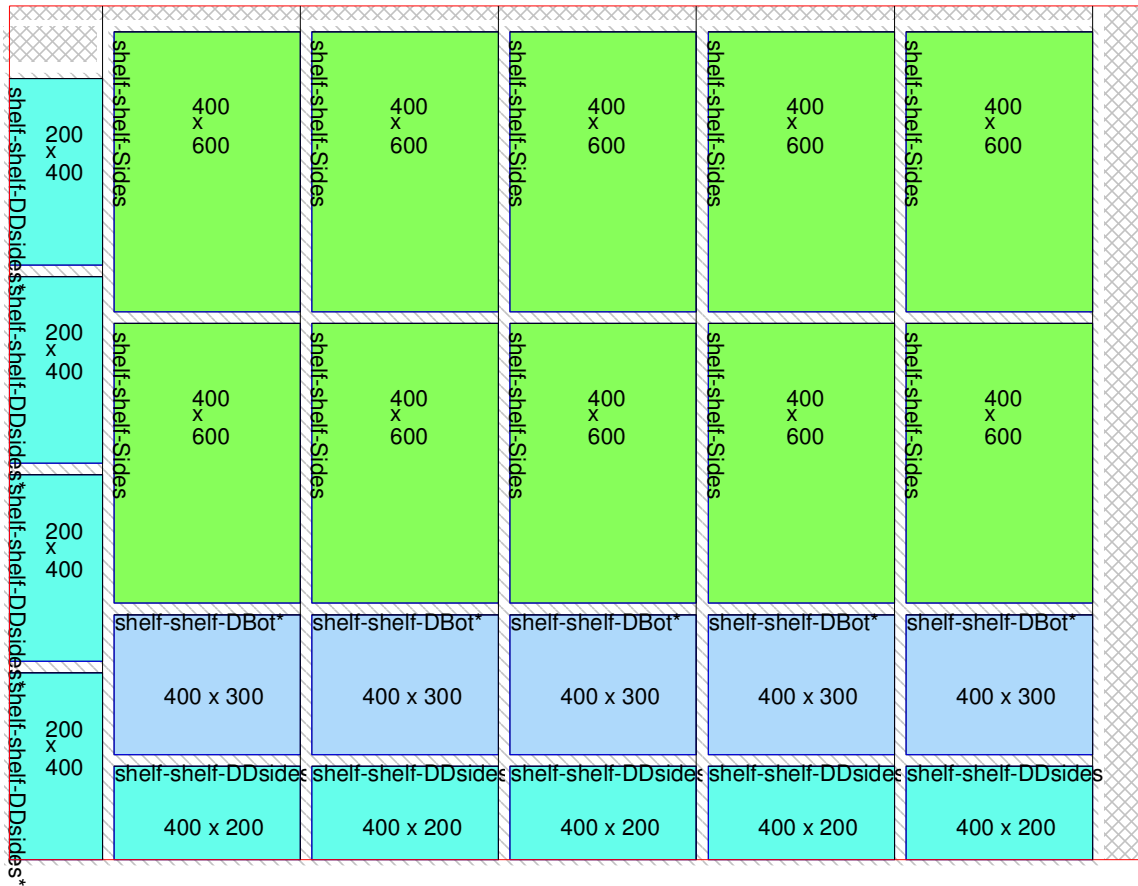
Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
shelf-shelf-Sides	400	600	2	0.48	2	48/120	
shelf-shelf-DD	300	200	3	0.18	3	55/60	
shelf-shelf-DDsides	400	200	2	0.16	2	26/120	
shelf-shelf-DBot	300	400	3	0.36	3	62/100	
shelf-shelf-Bck	1100	600	2	1.32	2*	18/20	
Total			12	2.5	12		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	600	0	600	1220
2	0	1100	600	1100
3	1225	0	1225	1220
4	625	1100	1225	1100
5	1550	0	1550	1220
6	1250	200	1550	200
7	1250	425	1550	425
8	1250	650	1550	650
9	1250	1075	1550	1075
10	1975	0	1975	1220
11	1575	200	1975	200
12	1575	525	1975	525
13	1575	1150	1975	1150

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
14	2400	0	2400	1220
15	2000	200	2400	200
16	2000	525	2400	525
17	2000	1150	2400	1150



Layout 5 of 9(Stock:stk2 Dim:2440 x 1830 Qty:7 Material:mdf Thk:12)

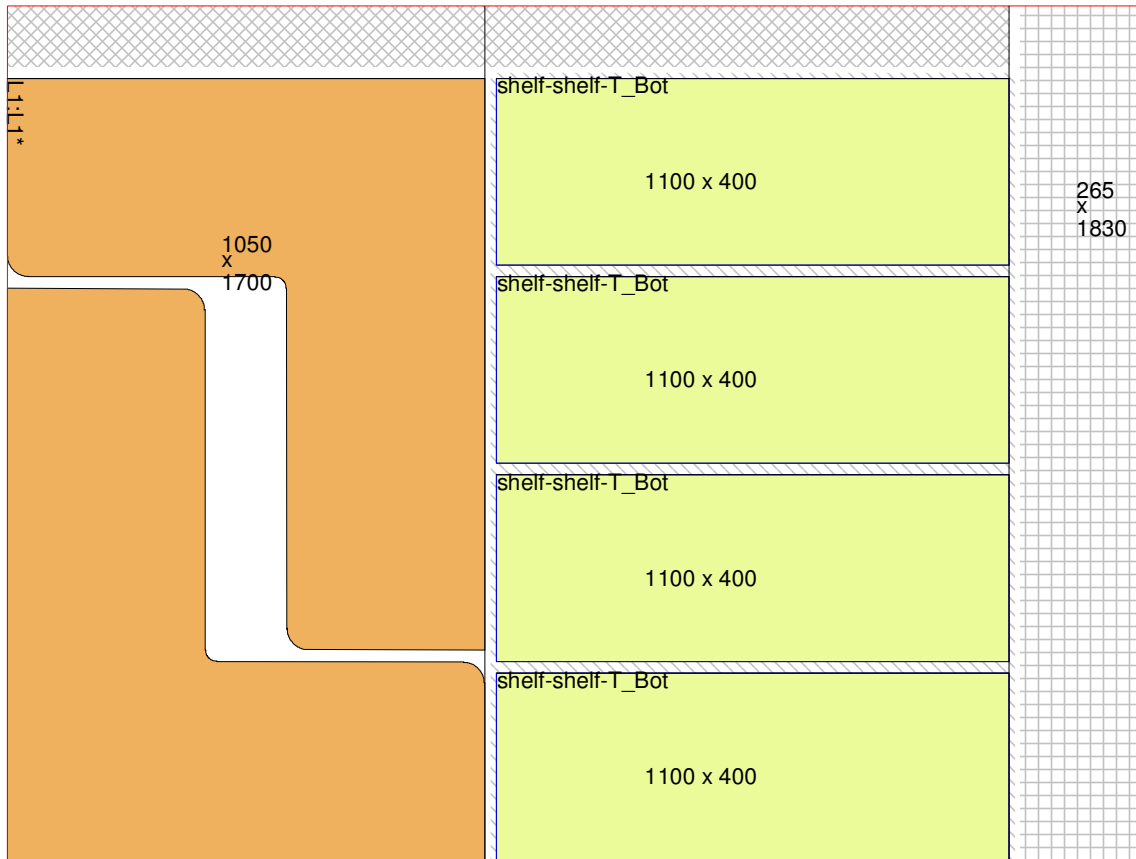
Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
shelf-shelf-Sides	400	600	10	2.4	70*	50/120	
shelf-shelf-DDsides	400	200	9	0.72	63	28/120	
shelf-shelf-DBot	300	400	5	0.6	35*	65/100	
Total			24	3.72	168		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	200	0	200	1830
2	0	400	200	400
3	0	825	200	825
4	0	1250	200	1250
5	0	1675	200	1675

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
6	625	0	625	1830
7	225	200	625	200
8	225	525	625	525
9	225	1150	625	1150
10	225	1775	625	1775
11	1050	0	1050	1830
12	650	200	1050	200
13	650	525	1050	525
14	650	1150	1050	1150
15	650	1775	1050	1775
16	1475	0	1475	1830
17	1075	200	1475	200
18	1075	525	1475	525
19	1075	1150	1475	1150
20	1075	1775	1475	1775
21	1900	0	1900	1830
22	1500	200	1900	200
23	1500	525	1900	525
24	1500	1150	1900	1150
25	1500	1775	1900	1775
26	2325	0	2325	1830
27	1925	200	2325	200
28	1925	525	2325	525
29	1925	1150	2325	1150
30	1925	1775	2325	1775



Layout 6 of 9(Stock:stk4 Dim:2440 x 1830 Qty:4 Material:mdf Thk:18)

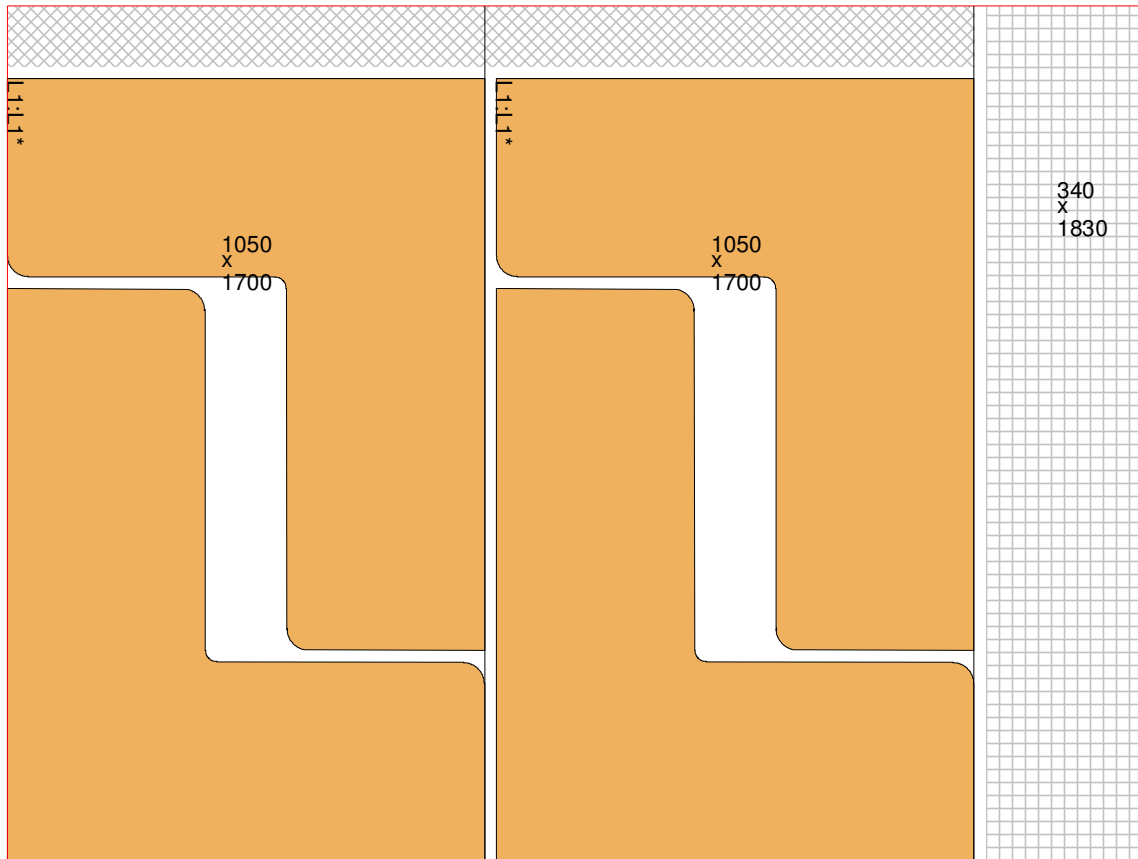
Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
L1	1225	1025	2	1.55	8	0/20	
shelf-shelf-T_Bot	1100	400	4	1.76	16	0/18	
Total			6	3.31	24		
Offcuts							
Off_6_2	265	1830	1	1.94	4		
Total			1	1.94	4		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	1025	0	1025	1830
2	0	1675	1025	1675
3	2150	0	2150	1830
4	1050	400	2150	400

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
5	1050	825	2150	825
6	1050	1250	2150	1250
7	1050	1675	2150	1675



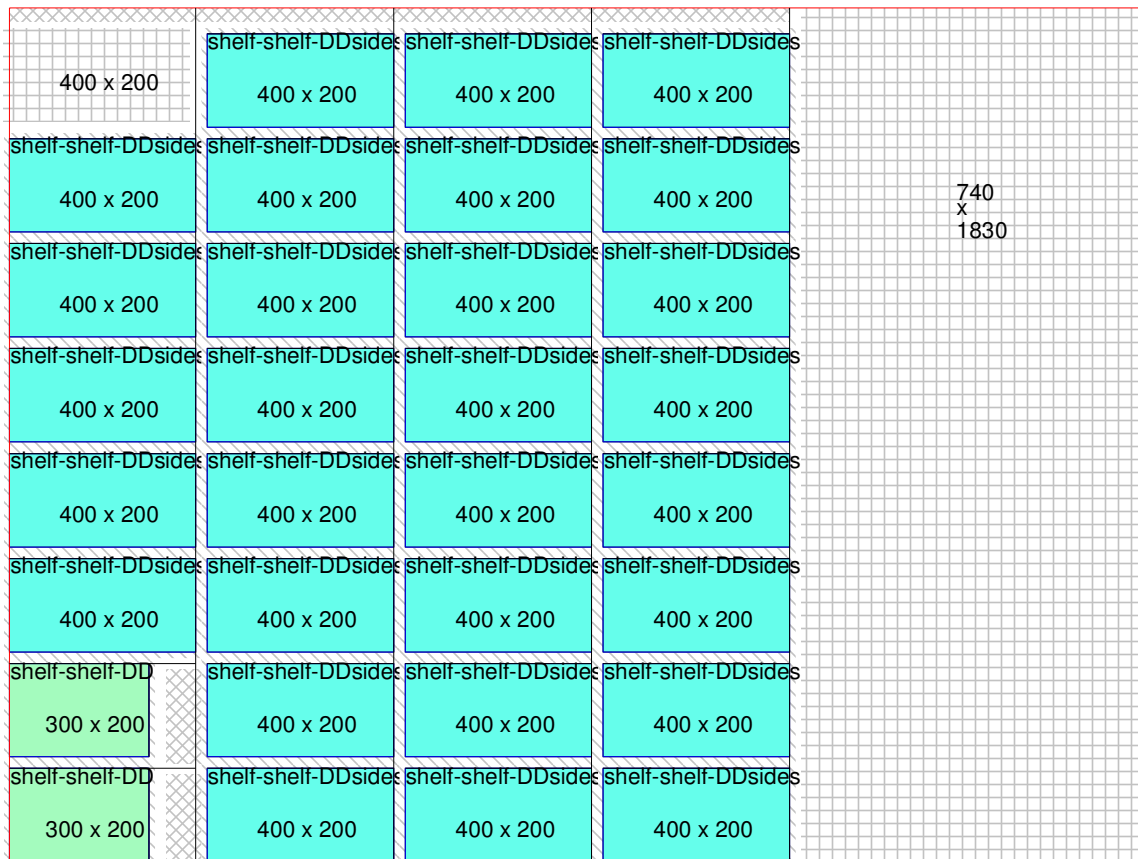
Layout 7 of 9(Stock:stk4 Dim:2440 x 1830 Qty:3 Material:mdf Thk:18)

Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
L1	1225	1025	4	3.1	12*	8/20	
Total			4	3.1	12		
Offcuts							
Off_7_2	340	1830	1	1.87	3		
Total			1	1.87	3		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	1025	0	1025	1830
2	0	1675	1025	1675
3	2075	0	2075	1830
4	1050	1675	2075	1675



Layout 8 of 9(Stock:stk2 Dim:2440 x 1830 Qty:1 Material:mdf Thk:12)

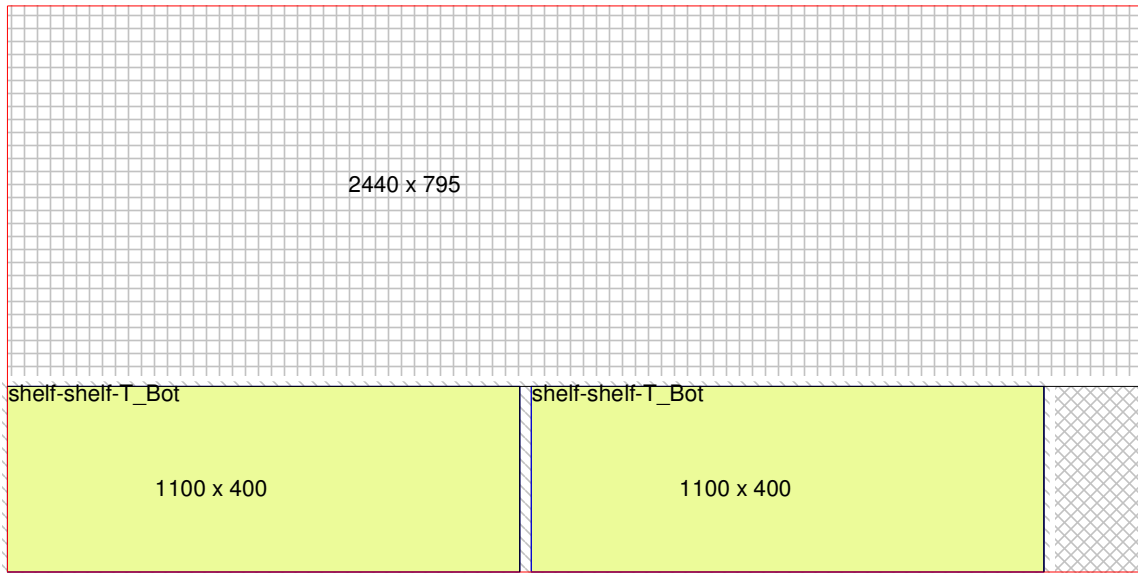
Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
shelf-shelf-DD	300	200	2	0.12	2*	58/60	
shelf-shelf-DDsides	400	200	29	2.32	29*	91/120	
Total			31	2.44	31		
Offcuts							
Off_8_2	740	1830	1	1.35	1		
Off_8_3	400	200	1	0.08	1		
Total			2	1.43	2		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	400	0	400	1830
2	0	200	400	200
3	300	0	300	200

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
4	0	425	400	425
5	300	225	300	425
6	0	650	400	650
7	0	875	400	875
8	0	1100	400	1100
9	0	1325	400	1325
10	0	1550	400	1550
11	825	0	825	1830
12	425	200	825	200
13	425	425	825	425
14	425	650	825	650
15	425	875	825	875
16	425	1100	825	1100
17	425	1325	825	1325
18	425	1550	825	1550
19	425	1775	825	1775
20	1250	0	1250	1830
21	850	200	1250	200
22	850	425	1250	425
23	850	650	1250	650
24	850	875	1250	875
25	850	1100	1250	1100
26	850	1325	1250	1325
27	850	1550	1250	1550
28	850	1775	1250	1775
29	1675	0	1675	1830
30	1275	200	1675	200
31	1275	425	1675	425
32	1275	650	1675	650
33	1275	875	1675	875
34	1275	1100	1675	1100
35	1275	1325	1675	1325
36	1275	1550	1675	1550
37	1275	1775	1675	1775



Layout 9 of 9(Stock:stk3 Dim:2440 x 1220 Qty:1 Material:mdf Thk:18)

Bill Of Materials:

Name	Length	Width	Qty	Area	Total Qty.	Prod./Re qd.	Remarks
shelf-shelf-T_Bot	1100	400	2	0.88	2*	16/18	
Total			2	0.88	2		
Offcuts							
Off_9_1	2440	795	1	1.94	1		
Total			1	1.94	1		

Cutting Instructions:

CutIndex	StartPt X	StartPt Y	EndPt X	EndPt Y
1	0	400	2440	400
2	1100	0	1100	400
3	2225	0	2225	400