



Nirvana Technologies Pvt. Ltd.

E-mail : info@nirvanatec.com Web : <http://www.nirvanatec.com>
Phone: +91-22-21661600 Fax: +91-22-39167297

Bar Nesting Software - PLUS 1D Report

Project Details

Project Name	
File Name	N:/Plus1D/Samples/miter_sample.p1D
Job Order	
Date	Wednesday, February 04, 2009
PLUS 1D Version No.	7.55

Summary of Optimization Results

Project Name	
Number of Layouts	9
Number of Stock Used	30
Total Parts Required	224
Total Parts Nested	224
Total Utilization	97.954
Overall Cost	183000
Minimum Offcut Size	300
Loss per cut	0
Total Part Length	175.538 [m]
Total Stock Length	183 [m]
Total Stock Weight	183
Total Part Weight	189.192
Total Offcut Weight	3.717
Total Scrap Weight	-9.909
Cutting time (in Minutes)	194
Machine loading time (in Minutes)	30
Total Machine (in Minutes)	224

Summary of Layouts

No.	Stock	Size	Qty	Utl %	Rest	Details [PartLength x Qty]
1	S1	6100	5	95.9	250	950x1 775x6 950x1
2	S1	6100	1	96.72	142.26 5	950x1 775x5 950x1 782.735x1
3	S1	6100	7	97.54	100	950x5 782.735x2
4	S1	6100	1	98.89	10	950x3 930x3 750x1

No.	Stock	Size	Qty	Utl %	Rest	Details [PartLength x Qty]
5	S1	6100	7	98.44	37.265	930x6 782.735x1
6	S1	6100	1	99.18	(524.53)	930x3 782.735x2 775.47x2
7	S1	6100	4	99.05	(300.38 5)	775.47x8
8	S1	6100	1	99.05	(478.67 5)	775.47x1 750x7
9	S1	6100	3	99.05	(504.14 5)	750x8

Stock Details

Stock	Length	Qty	Used	Remarks
S1	6100	100	30	

Part Details

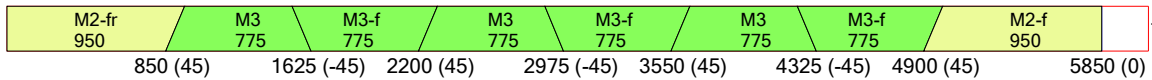
Part	Length	Qty	Cut	Weight	Remarks
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Miter Part Details

Part	Base Length	Left Angle	Right Angle	Height	Qty	Cut	Flip	Weight	Remarks
M1	750	30	-30	100	32	32	Yes	0.75	
M2	850	-45	0	100	50	50	Yes	0.95	
M3	775	45	-45	100	35	35	Yes	0.775	
M4	930	45	0	100	48	48	Yes	0.93	
M5	660	-30	30	100	35	35	Yes	0.775	
M6	725	30	30	100	24	24	Yes	0.783	

Layout 1 of 9

Stock:S1	Length:6100	Qty:5	Utl %:95.90	No Offcuts
[M2] 950x1	[M3] 775x6	[M2] 950x1		
950x1	775x6	950x1		

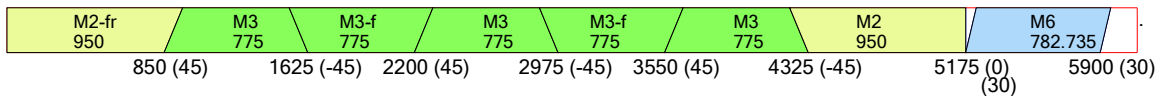


Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	850	45	M2	1	1
2	1625	-45	M3	0	0
3	2200	45	M3	1	0
4	2975	-45	M3	0	0
5	3550	45	M3	1	0
6	4325	-45	M3	0	0
7	4900	45	M3	1	0
8	5850	0	M2	1	0

Layout 2 of 9

Stock:S1	Length:6100	Qty:1	Utl %:96.72	No Offcuts
[M2] 950x1	[M3] 775x5	[M2] 950x1	[M6] 782.735x1	
950x1	775x5	950x1	782.735x1	



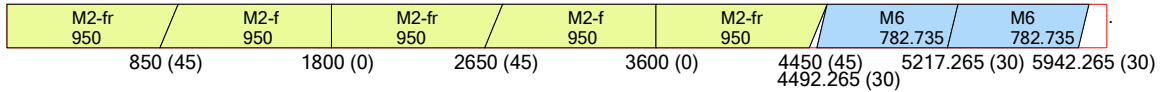
Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	850	45	M2	1	1
2	1625	-45	M3	0	0
3	2200	45	M3	1	0
4	2975	-45	M3	0	0
5	3550	45	M3	1	0

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
6	4325	-45	M3	0	0
7	5175	0	M2	0	0
8	5175	30		0	0
9	5900	30	M6	0	0

Layout 3 of 9

Stock:S1	Length:6100	Qty:7	Utl %:97.54	No Offcuts
[M2] 950x5	[M6] 782.735x2			
950x5	782.735x2			

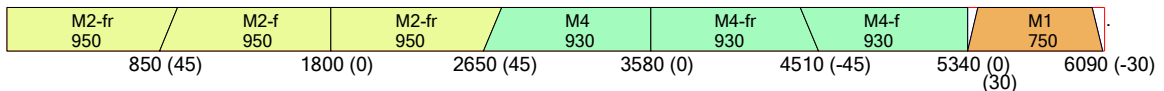


Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	850	45	M2	1	1
2	1800	0	M2	1	0
3	2650	45	M2	1	1
4	3600	0	M2	1	0
5	4450	45	M2	1	1
6	4492.265	30		0	0
7	5217.265	30	M6	0	0
8	5942.265	30	M6	0	0

Layout 4 of 9

Stock:S1	Length:6100	Qty:1	Utl %:98.89	No Offcuts
[M2] 950x3	[M4] 930x3	[M1] 750x1		
950x3	930x3	750x1		

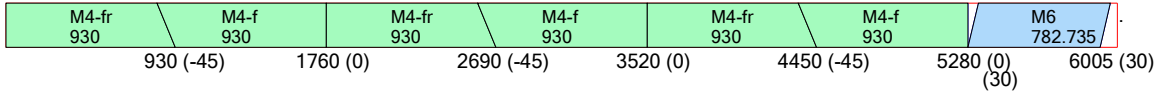


Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	850	45	M2	1	1
2	1800	0	M2	1	0
3	2650	45	M2	1	1
4	3580	0	M4	0	0
5	4510	-45	M4	1	1
6	5340	0	M4	1	0
7	5340	30		0	0
8	6090	-30	M1	0	0

Layout 5 of 9

Stock:S1	Length:6100	Qty:7	Utl %:98.44	No Offcuts
[M4] 930x6	[M6] 782.735x1			
930x6	782.735x1			

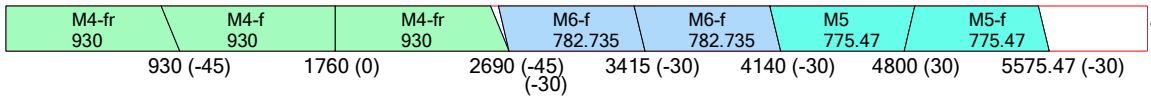


Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	930	-45	M4	1	1
2	1760	0	M4	1	0
3	2690	-45	M4	1	1
4	3520	0	M4	1	0
5	4450	-45	M4	1	1
6	5280	0	M4	1	0
7	5280	30		0	0
8	6005	30	M6	0	0

Layout 6 of 9

Stock:S1	Length:6100	Qty:1	Utl %:99.18	Offcut:524.53
[M4] 930x3	[M6] 782.735x2	[M5] 775.47x2		
930x3	782.735x2	775.47x2		



Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	930	-45	M4	1	1
2	1760	0	M4	1	0
3	2690	-45	M4	1	1
4	2690	-30		0	0
5	3415	-30	M6	1	0
6	4140	-30	M6	1	0
7	4800	30	M5	0	0
8	5575.47	-30	M5	1	0

Layout 7 of 9

Stock:S1	Length:6100	Qty:4	Utl %:99.05	Offcut:300.385
[M5] 775.47x8				
775.47x8				

M5 775.47	M5-f 775.47	M5 775.47	M5-f 775.47	M5 775.47	M5-f 775.47	M5 775.47	M5-f 775.47
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57.735 (-30) 717.735 (30) 1493.205 (-30) 2153.205 (30) 2928.675 (-30) 3588.675 (30) 4364.145 (-30) 5024.145 (30) 5799.615 (-30)

Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	57.735	-30		0	0
2	717.735	30	M5	0	0
3	1493.205	-30	M5	1	0
4	2153.205	30	M5	0	0
5	2928.675	-30	M5	1	0
6	3588.675	30	M5	0	0
7	4364.145	-30	M5	1	0
8	5024.145	30	M5	0	0
9	5799.615	-30	M5	1	0

Layout 8 of 9

Stock:S1	Length:6100	Qty:1	Utl %:99.05	Offcut:478.675
[M5] 775.47x1	[M1] 750x7			
775.47x1	750x7			

M5 775.47	M1 750	M1-f 750	M1 750	M1-f 750	M1 750	M1-f 750	M1 750
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57.735 (-30) 717.735 (30) 1467.735 (-30) 2102.265 (30) 2852.265 (-30) 3486.795 (30) 4236.795 (-30) 4871.325 (30) 5621.325 (-30)

Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	57.735	-30		0	0
2	717.735	30	M5	0	0
3	1467.735	-30	M1	0	0
4	2102.265	30	M1	1	0
5	2852.265	-30	M1	0	0
6	3486.795	30	M1	1	0
7	4236.795	-30	M1	0	0
8	4871.325	30	M1	1	0
9	5621.325	-30	M1	0	0

Layout 9 of 9

Stock:S1	Length:6100	Qty:3	Utl %:99.05	Offcut:504.145
[M1] 750x8				
750x8				

M1 750	M1-f 750	M1 750	M1-f 750	M1 750	M1-f 750	M1 750	M1-f 750
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0 (30) 750 (-30) 1384.53 (30) 2134.53 (-30) 2769.06 (30) 3519.06 (-30) 4153.59 (30) 4903.59 (-30) 538.12 (30)

Cut Details

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
1	0	30		0	0

Cut No	Cut Position	Angle	Part No	Flipped	Rotated (180)
2	750	-30	M1	0	0
3	1384.53	30	M1	1	0
4	2134.53	-30	M1	0	0
5	2769.06	30	M1	1	0
6	3519.06	-30	M1	0	0
7	4153.59	30	M1	1	0
8	4903.59	-30	M1	0	0
9	5538.12	30	M1	1	0

Offcut/Drops List

No.	From Stock	Size	Qty	Weight
1	S1	524.53	1	0.525
2	S1	300.385	4	0.3
3	S1	478.675	1	0.479
4	S1	504.145	3	0.504

Material Usage Summary (All Lengths in "[m]")

Section	Used Len	Used Wt	Scrap Len	Total Scrap Weight	Off Len	Total Offcut Weight
	183	183	2.363	2.363	3.717	3.717