



## Nirvana Technologies Pvt. Ltd.

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

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# PLUS 2D Nesting Software Optimization Report

### General Details:

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

### Stock Details:

| <b>Id</b> | <b>Length</b> | <b>Width</b> | <b>Cost</b> | <b>Qty</b> | <b>Material</b> | <b>Thk</b> | <b>Remarks</b> |
|-----------|---------------|--------------|-------------|------------|-----------------|------------|----------------|
| 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:

| <b>Name</b>         | <b>Fin. Length</b> | <b>Fin. Width</b> | <b>Rotn</b> | <b>Qty</b> | <b>Type</b> | <b>Material</b> | <b>Thk</b> | <b>Remarks</b> |
|---------------------|--------------------|-------------------|-------------|------------|-------------|-----------------|------------|----------------|
| 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:

| <b>Summary of Optimization Results:</b> |         |
|---|---------|
| 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:**

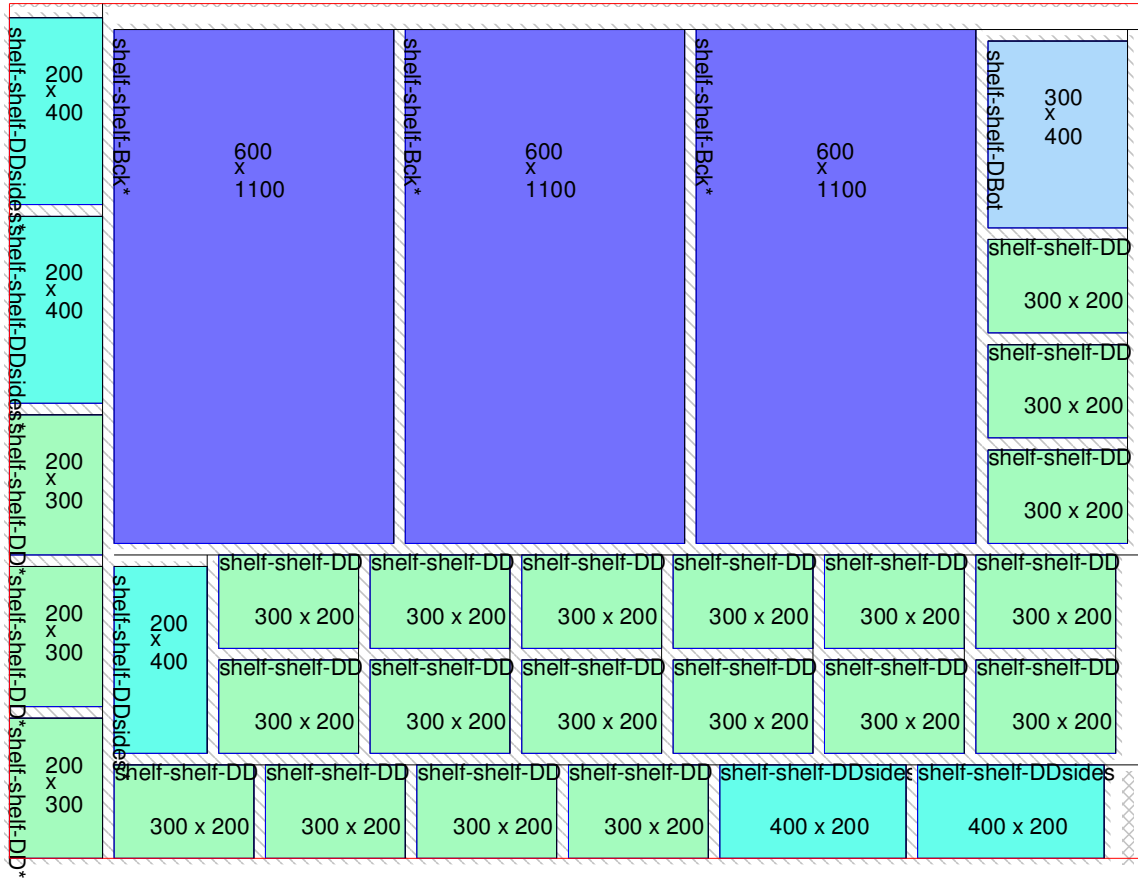
| No | Stk Length | Stk Width | Stk Area | Prt Length | Prt Width | Qty | Part Area | Name                    |
|----|------------|-----------|----------|------------|-----------|-----|-----------|-------------------------|
| 1  | 2440       | 1830      | 4.47     |            |           |     |           |                         |
|    |            |           |          | 300        | 200       | 22  | 1.32      | shelf-shelf-DD          |
|    |            |           |          | 400        | 200       | 5   | 0.4       | shelf-shelf-DDside<br>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<br>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<br>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)

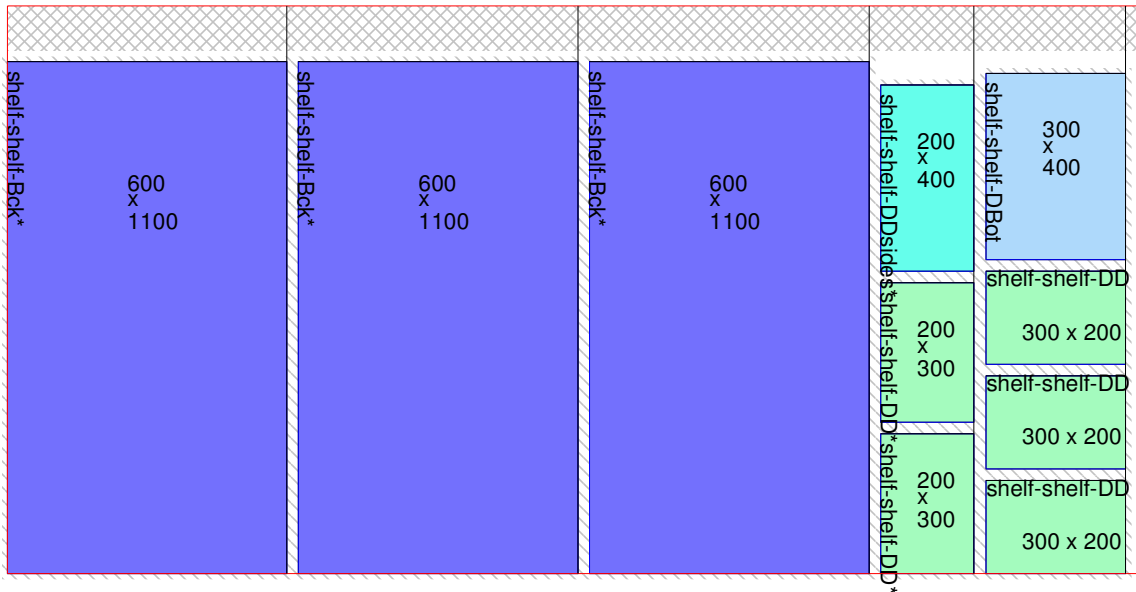
## Bill Of Materials:

| 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)**

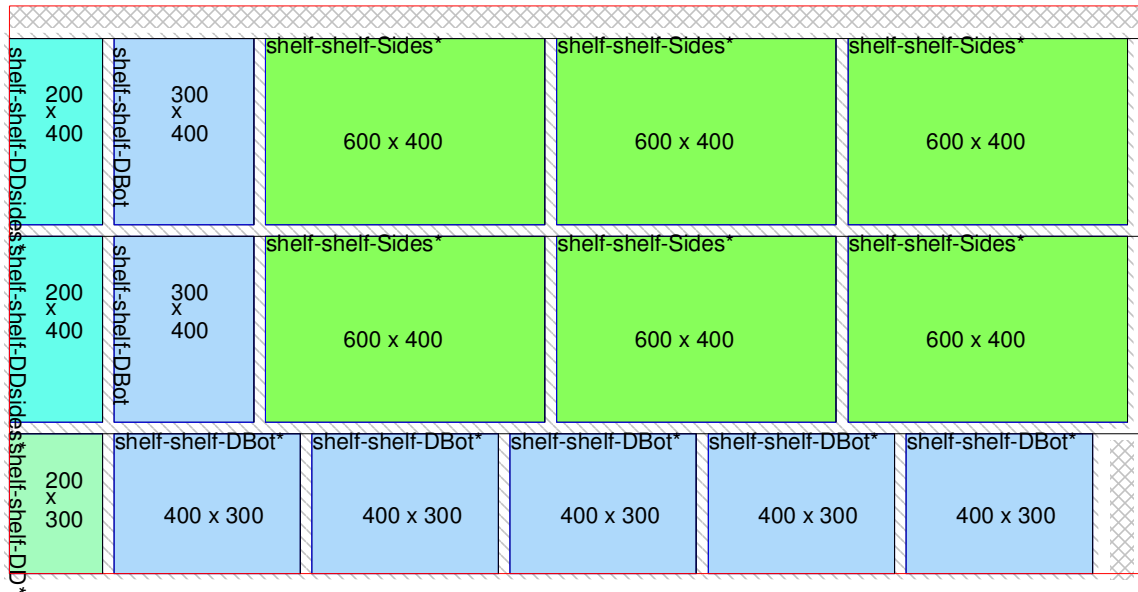
**Bill Of Materials:**

| 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     |

| <b>CutIndex</b> | <b>StartPt X</b> | <b>StartPt Y</b> | <b>EndPt X</b> | <b>EndPt Y</b> |
|-----------------|------------------|------------------|----------------|----------------|
| 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)**

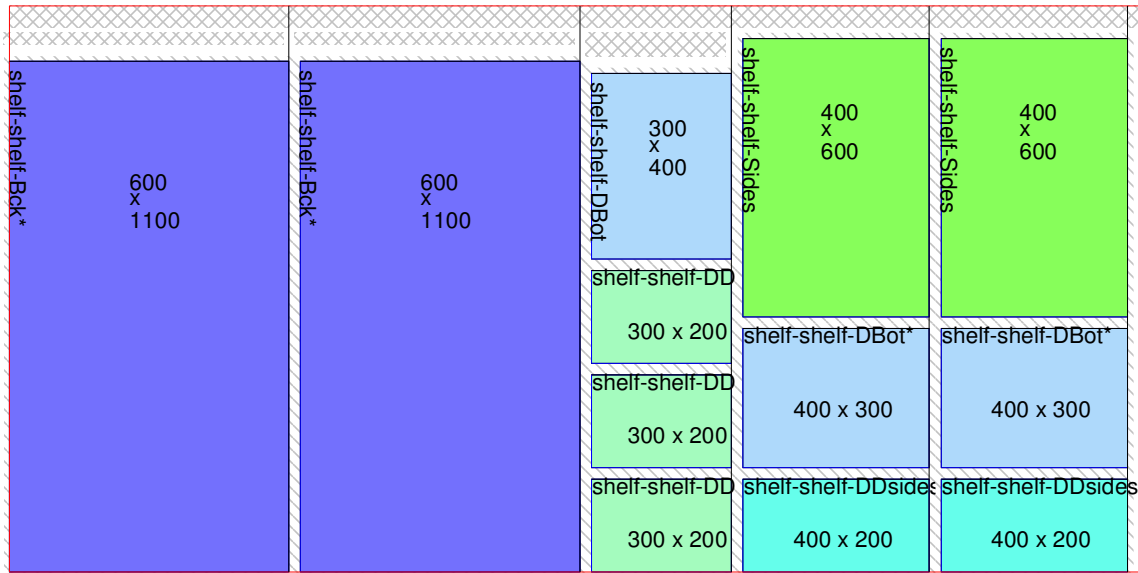
**Bill Of Materials:**

| 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     |

| <b>CutIndex</b> | <b>StartPt X</b> | <b>StartPt Y</b> | <b>EndPt X</b> | <b>EndPt Y</b> |
|-----------------|------------------|------------------|----------------|----------------|
| 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:**

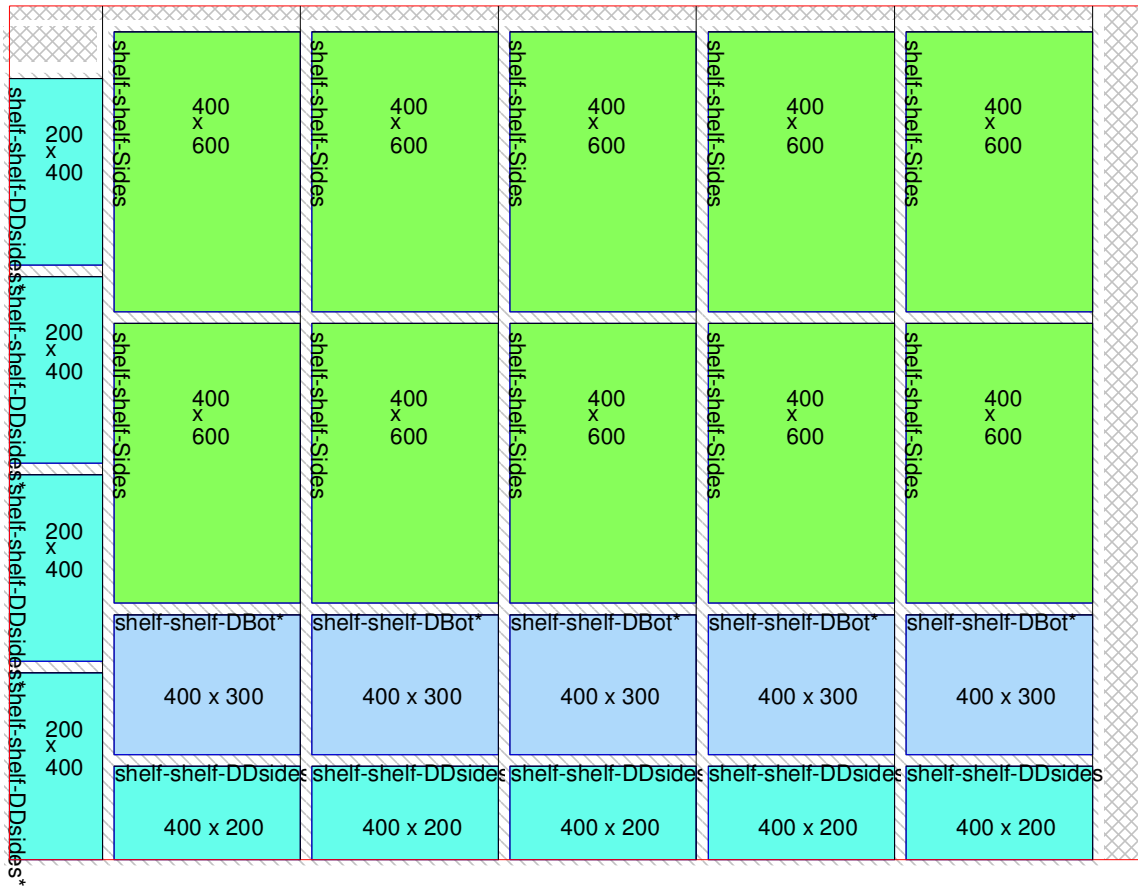
| Name                | Length | Width | Qty | Area | Total Qty. | Prod./Re qd. | Remarks |
|---------------------|--------|-------|-----|------|------------|--------------|---------|
| shelf-shelf-Sides   | 400    | 600   | 2   | 0.48 | 2          | 48/120       |         |
| shelf-shelf-DD      | 300    | 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    |



| <b>CutIndex</b> | <b>StartPt X</b> | <b>StartPt Y</b> | <b>EndPt X</b> | <b>EndPt Y</b> |
|-----------------|------------------|------------------|----------------|----------------|
| 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)**

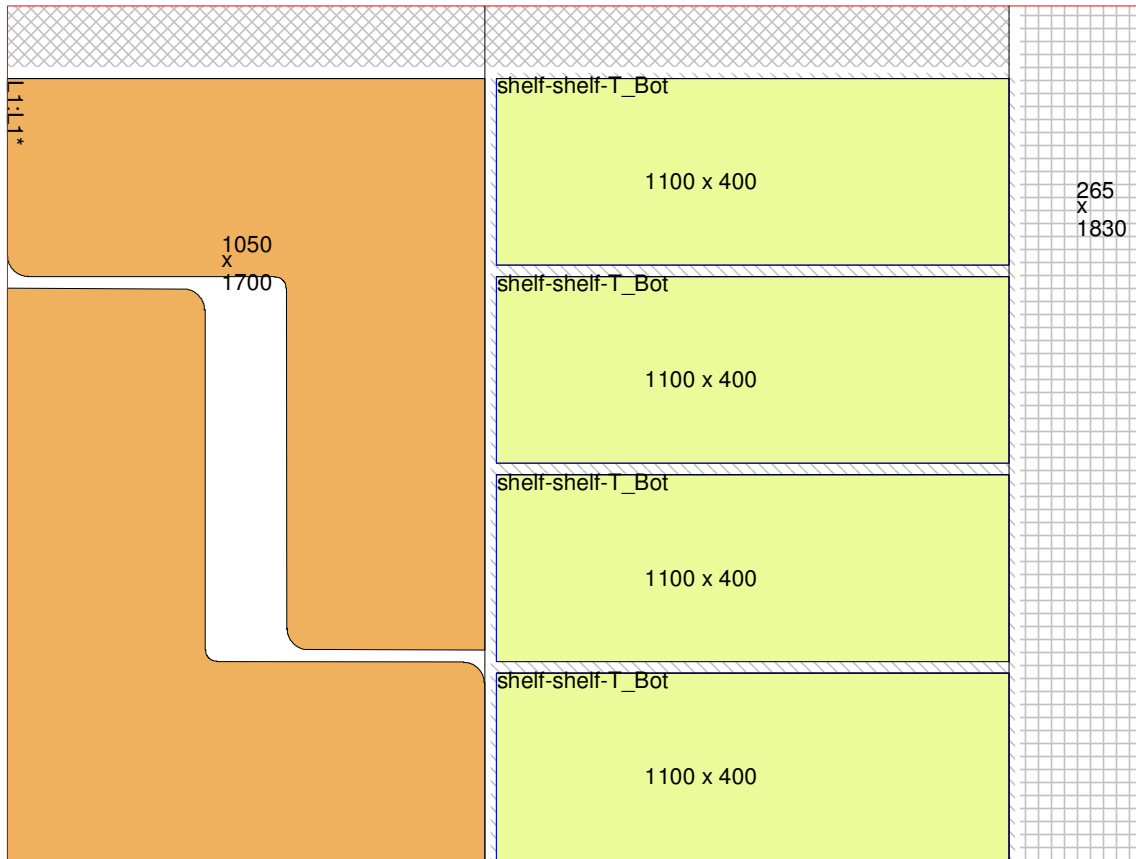
**Bill Of Materials:**

| 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    |

| <b>CutIndex</b> | <b>StartPt X</b> | <b>StartPt Y</b> | <b>EndPt X</b> | <b>EndPt Y</b> |
|-----------------|------------------|------------------|----------------|----------------|
| 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)**

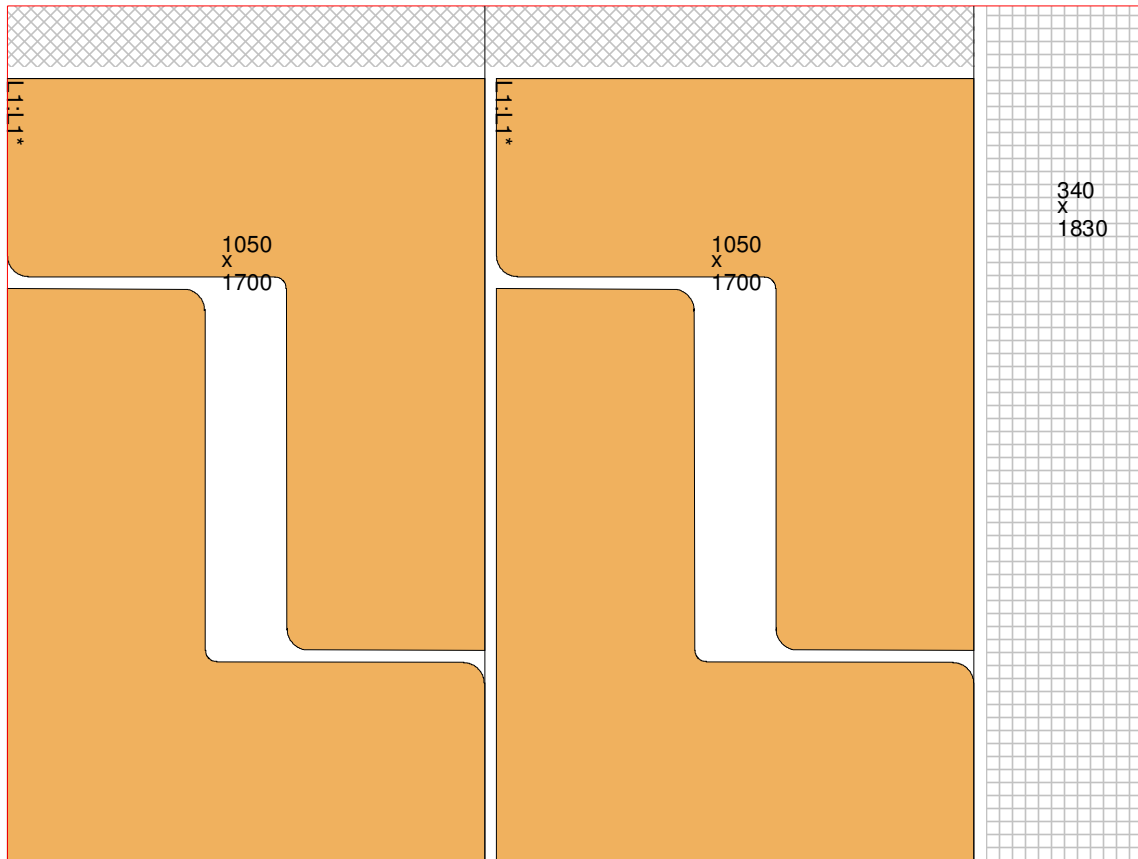
**Bill Of Materials:**

| 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     |

| <b>CutIndex</b> | <b>StartPt X</b> | <b>StartPt Y</b> | <b>EndPt X</b> | <b>EndPt Y</b> |
|-----------------|------------------|------------------|----------------|----------------|
| 5               | 1050             | 825              | 2150           | 825            |
| 6               | 1050             | 1250             | 2150           | 1250           |
| 7               | 1050             | 1675             | 2150           | 1675           |



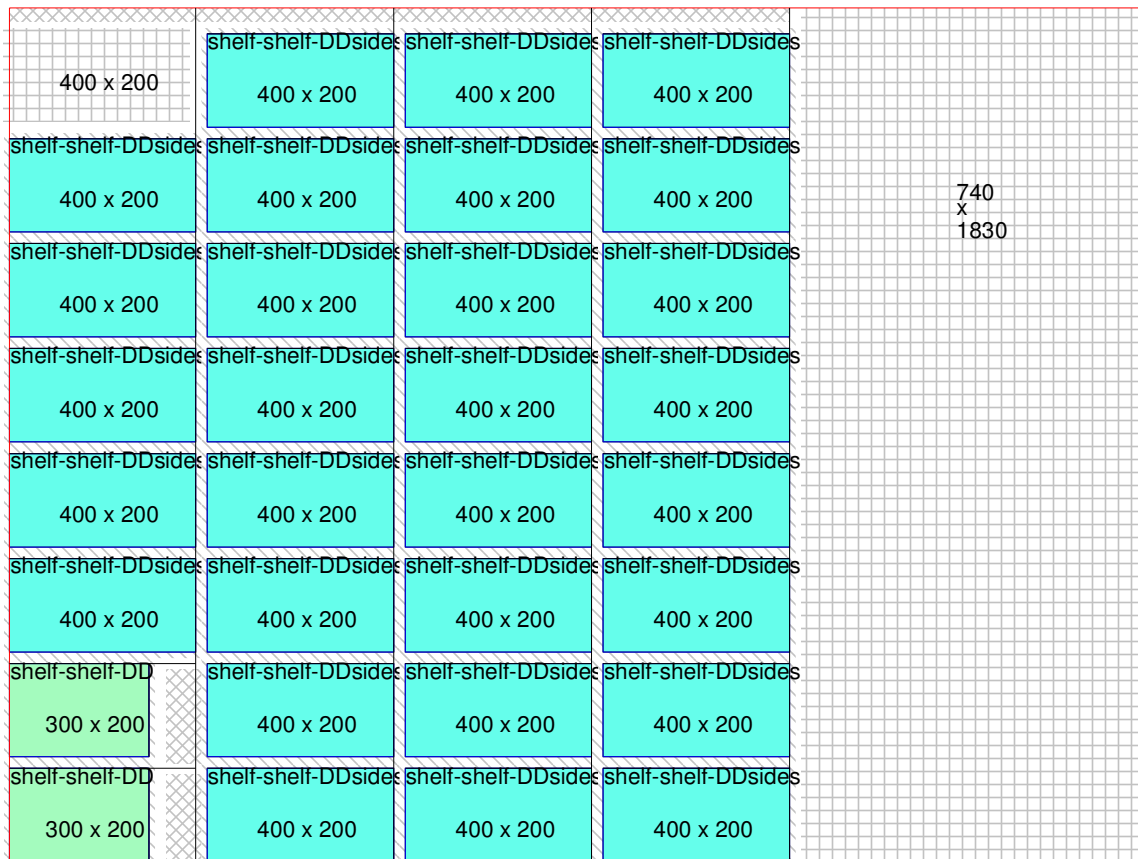
**Layout 7 of 9(Stock:stk4 Dim:2440 x 1830 Qty:3 Material:mdf Thk:18)**

**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:**

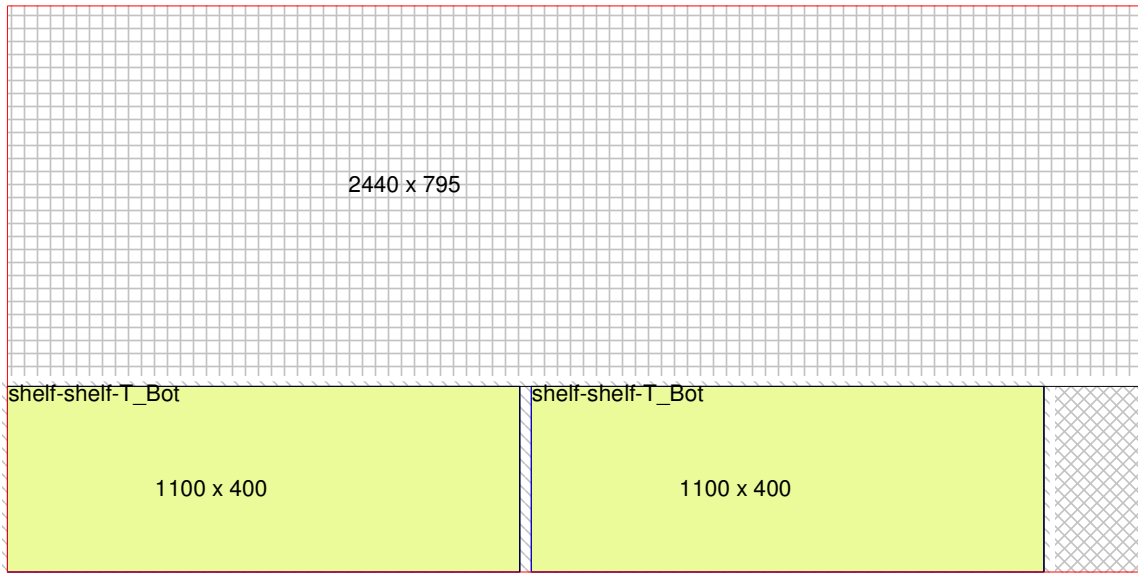
| Name                | Length | Width | Qty | Area | Total Qty. | Prod./Re qd. | Remarks |
|---------------------|--------|-------|-----|------|------------|--------------|---------|
| shelf-shelf-DD      | 300    | 200   | 2   | 0.12 | 2*         | 58/60        |         |
| shelf-shelf-DDsides | 400    | 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     |