A WOODWORKING BENCH

The top of the bench should be made of hard wood, the end frames can be made from softwood. It can be fitted with both types of wooden vice. The bench can either be fixed permanently with glue and screws or bolted together for easy transport.

<table>
<thead>
<tr>
<th>Name of Part</th>
<th>No</th>
<th>L</th>
<th>W</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bench Top</td>
<td>2</td>
<td>1500</td>
<td>240</td>
<td>40</td>
</tr>
<tr>
<td>Bench Sides</td>
<td>2</td>
<td>1500</td>
<td>140</td>
<td>40</td>
</tr>
<tr>
<td>Centre Panel</td>
<td>1</td>
<td>1500</td>
<td>280</td>
<td>20</td>
</tr>
<tr>
<td>Top Rail</td>
<td>2</td>
<td>650</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>Bottom Rail</td>
<td>2</td>
<td>780</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>Legs</td>
<td>4</td>
<td>710</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>Stretcher Rail</td>
<td>1</td>
<td>1120</td>
<td>80</td>
<td>40</td>
</tr>
</tbody>
</table>

Key
1 – Bench Top
2 – Centre Panel
3 – End Frame
4 – Bench Top
5 – Stretcher Rail
6 – End Frame

(all dimensions in mm)
End sections

To make the end frames

Top rail: Make 2
Bottom rail: Make 2
Leg: Make 4

Glue the top rail into the legs
Glue the legs onto the bottom rail

The joints can be dowelled to make them strong

Bench Top: Make 2
Stretcher rail: Make 1

Cut a 20 mm x 20 mm
Bench top: Make 2
Cut two halving joints 12mm deep to take the legs

Countersink the heads of the screws in 12mm Holes 12 mm Deep

Finished bench top
Finished end frame
To fix the bench permanently together, glue the stretcher rail into the end frames and screw the tops on with 2" No 8 wood screws.

Carpentry vice

This vice is very simple to make yet extremely effective. It can easily be fitted to any kind of workbench.

Cutting list

<table>
<thead>
<tr>
<th>Name of Part</th>
<th>No</th>
<th>L</th>
<th>W</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wedges</td>
<td>2</td>
<td>300</td>
<td>75</td>
<td>12</td>
</tr>
<tr>
<td>Arms</td>
<td>2</td>
<td></td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>Jaw</td>
<td>1</td>
<td>600</td>
<td>110</td>
<td>40</td>
</tr>
<tr>
<td>Jaw Guide</td>
<td>1</td>
<td>700</td>
<td>80</td>
<td>40</td>
</tr>
</tbody>
</table>

For easy transport, the bench can be bolted together.

Use:
4 – 125mm x 10 mm on top
4 – 75mm x 10mm on the side
2 – 100mm x 10mm on stretcher bolts

Countersink the heads of the screws in 12mm holes 12mm deep

Key
1 - Wedges
2 - 3 x 100 x 6 bolts
3 - Bench
4 - Jaw Assembly
5 - Jaw Guide
6 – 3 x 6 Nuts

(all dimensions in mm)
Jaw assembly

To make the jaw assembly

Jaw Guide: make 1
Drill 3 x 6 mm bolt holes

Secure the joint with 12mm dowels
Glue the jaw assembly together

Arms: make 2
12mm thro mortise

* To find this dimension measure the width of bench top and add 15mm

Jaw Guide: make 1
Drill 3 x 6 mm bolt holes
To fit the vice

Cut slots in centre panel for wedges

Cut slots in the bench side for the arms of jaw assembly

Bolt the jaw guide under bench top

Wedges: make 2 12 mm thick

Use a mallet to tighten and loosen the vice

References and further reading

*Woodworking* Practical Action Technical Brief
*Woodworking ~ Treatment and Preparation* Practical Action Technical Brief
*Non Poisonous Timber Protection* Practical Action Technical Brief
*How to Make a Jackplane* Practical Action Technical Brief
*Oil Soaked Wood Bearings* Practical Action Technical Brief