

Boxes on castors



A simple storage solution

Castors make these boxes easy to handle, and lids ensure the dust is kept out!

Each box is 270mm high, 350mm wide and 612mm deep.

You'll need:

8 x Fronts/backs: 16mm MDF, 350mm long x 250mm wide

8 x Sides: 16mm MDF, 600mm long x 250mm wide

4 x Bottoms: 9mm MDF, 600mm long x 338mm wide

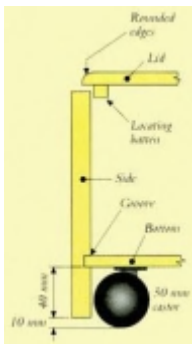
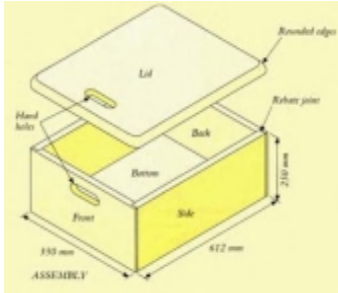
4 x Lids: 9mm MDF, 600mm long x 338mm wide

8 x Locating battens: 12 x 12mm timber, 326mm wide

Note: One sheet of each thickness of MDF will make 4 boxes.

You'll also need: 3 sheets 120 grit sandpaper; 3 sheets 180 grit sandpaper; 2 sheets 220 grit sandpaper; PVA adhesive; 30mm bullet-head nails; finish of choice; 4 x 50mm castors per box; 12mm x 6 gauge screws.

Assembly (click on images to enlarge)



Tools

Tape measure, Pencil, Panel saw, Jigsaw, Tenon saw, Hole saw: 30mm (optional), Portable circular saw (optional), Straight edge, Smoothing plane, Electric router (optional), Router bit: 10mm straight and 6mm rounding, Chisel: 25mm, square, Marking gauge (optional), Hammer, Nail punch, Cork sanding block, Portable electric drill, Drill bits: 3mm high-speed steel (HSS) bit, Screwdriver (to suit castors), Dust mask, safety glasses, hearing protection.

Here's how:

Cutting the material

1. Mark out all the parts on the material, ensuring each part is there and on the right thickness of board. Allow enough clearance between each piece to cut and straighten (about 5mm).
2. Cut out the pieces using either a panel saw or jigsaw. If preferred, use a circular saw, with a straight edge to ensure the cuts remain straight. Trim the pieces to size with a smoothing plane or a router, using a straight edge to guide the router. Use the square to

check that all edges and faces are square. Alternatively, ask your timber supplier to cut the pieces to fit.

3. Take one front piece and measure up 40mm from the bottom edge. Mark a parallel line the full length of the material. This is where the bottom of the box will be inserted, allowing 10mm clearance off the floor for the castor (adjust this distance if you are using castors other than 50mm). Using a saw and chisel or a router with 10mm bit, cut a 10mm deep groove the full length of the material. Fit one of the bottom pieces into this groove and ensure it fits neatly. Complete bottom groove on the inside face of all the front, back and side pieces.



To make the groove for the bottom using a router, set the fence guide to 40mm and cut the full length.

4. On the front and back pieces, cut rebates in the inside face (the same side as the groove) of both ends. Make the rebates 10mm deep and 16mm wide, using the router, or a circular saw or tenon saw and chisel.

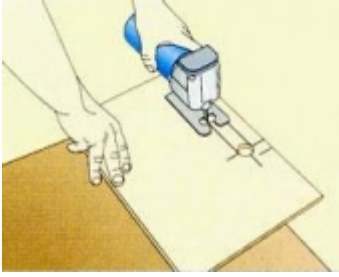


Cut a rebate 10mm deep and 16mm wide in both ends of the inside face of the front and back pieces.

5. Select the lids and round all four corners and the top edges to a 6mm radius, using the smoothing plane and 220 grit sandpaper, or the router with a 6mm rounding over bit inserted.

Making hand holes

6. To make a hand hole, select the front piece of one box and mark the centre on the top edge. Measure 50mm to the left of this point and square a line across the face. Repeat this to the right of the centre point. Measure 40mm down the face on these lines and place a mark. Centre the hole saw on each of these points and drill through the piece (or use an electric drill with high-speed bit). Join the drill holes by drawing lines across top and bottom edges, creating a long oval shape. Cut out with the jigsaw. Smooth the edges of the hole with sandpaper. Make a hole in each front piece and each lid, positioning the holes in the lids in the same way.



To make a hand hole, drill two holes with a hole saw and join them together using the jigsaw.

Assembling the box

7. Take one side and a front, apply adhesive to the rebate joint and assemble the joint by placing the side piece into the rebate. Using 30mm bullet-head nails, nail through the side piece into the rebate joint, ensuring that the grooves in both pieces are lined up so that the bottom will fit easily.

8. Repeat this process to attach the back to the remaining side. Select one half of the box and fit the bottom into the groove. Apply adhesive to the rebate joints and attach the remaining half of the box. Nail the rebate joints together.

9. Punch all nails to ensure that the joints fit tightly. Before the adhesive sets, check that the box is square by measuring the diagonals. If necessary, apply light pressure to the longer diagonal until it is square.

Making the lid

10. Take two 12mm x 12mm battens per lid and glue and nail them to the underside of each lid, 12mm in from the front and back edges respectively and positioned so they finish 12mm in from the sides. The battens should fit neatly inside the box when the lid is in position to prevent it sliding off.

Finishing

11. Wearing a dust mask, sand all edges well using 120 grit sandpaper. Apply the finish of your choice.

12. On the underside of the box, measure in 40mm from each side at the corner. Mark this with a pencil and drill a 3mm pilot hole. This will be the outside corner of the castor mounting plate and allow sufficient room for the castor wheel to swivel. Attach the castor with a 12mm x 6 gauge screw, ensuring the plate is parallel to the outside edge of the box. Drill the remaining pilot holes and fix the screws. Fix the remaining castors in the same manner.