



# DIY: Make Your Own Porta Dowel Wine Rack

with DIY specialist, Natasha Dickens from Little Red Industries



"I love the mid-century style of this cute but functional piece of furniture," says DIY specialist, Natasha Dickins, Little Red Industries.

The box was designed to be cut from a single 1200 x 600mm panel. The shelving and legs are made of dowel in various sizes, and there's almost no wastage in this project.

"Porta clear pine products come in manageable sizes and are pre-sanded, which means there's minimum cutting and finishing for a lovely end result," explains Natasha.

The box is 600 x 300 x 300mm and sits on elegantly angled 150mm high legs that add personality and contribute to a retro vibe. "But the best feature is at the back, where you can see the dowel set-out," adds Natasha. This wine rack holds 18 wine bottles and you can completely customise it to complement your home.



## What you'll need

### Materials

To make one 600 x 300 x 300mm box with 150mm high legs:

- 1 x laminated pine panel 1200 x 600 x 19mm
- 6 x Porta clear pine dowel in 1200 x 19mm diameter
- 3 x Porta clear pine dowel 1200 8mm diameter
- 1 x Porta clear pine dowel 1200 x 30mm diameter
- 4 x Leggz angled leg plates
- 4 x Leggz furniture studs, to fit the leg plates
- 4 x Slide Glide nail-on furniture feet
- 40mm Buildex timber screws
- 250ml Boncrete adhesive

Items are available at your local timber and hardware supplier.

### Tools

- Circular saw or handsaw, or have the panel cut professionally
- Drill driver with a set of drill bits
- 19mm holesaw attachment and optional handheld drill press
- Small handsaw or multitool for cutting dowel
- Random orbital sander with 180-grit sanding pads, or a hand-sanding block with 180-grit abrasive paper
- Set square
- Small mallet
- Ruler, measuring tape and pen

## How to make it:



### Step 1 - Cut the panel

Measure the panel to cut it in half lengthways then in half widthways. Keep three pieces as the top, base and back of the box. Cut the fourth piece into two 281mm long pieces for the sides.

**NATASHA'S TIP:** Use a circular saw or handsaw, but if you're not confident, have the panel cut at a hardware store or timber yard for about \$5 per cut.



### Step 2 - Create a grid for the holes

On the back piece, mark a horizontal line 35mm from the bottom, a line 90mm above it, and another 90mm above that (215mm from the bottom). Mark vertical lines 60mm from the sides, 80mm apart.

**NATASHA'S TIP:** If the spaces aren't even, use a different coloured pen, find the centre then mark new lines, work outwards and adjust the width at the edges.



### Step 3 - Get the holes started

Use a drill with a 4mm bit to make shallow starter holes on the grid, in three rows of seven holes.

**NATASHA'S TIP:** An evenly spaced grid of holes supports the dowels, and making the starter holes helps keep the set-out accurate.



### Step 4 - Drill the dowel holes

Change the drill bit to a 19mm holesaw, drill halfway through the pine then turn it over to finish the holes from the other side to avoid breakout.

**NATASHA'S TIP:** For about \$20 each, you can buy a holesaw set and an optional handheld press that attaches to the drill to help keep your technique straight.



#### Step 5 - Countersink pilot holes

Assemble the box, measuring 10mm from the edges and using a countersink drill bit to make pilot holes, with three on each side, about 5mm deep.

**NATASHA'S TIP:** Pilot holes prevent the timber from splitting as the screws go in, and using a two-in-one countersinking bit also creates an indent so the head sits below the surface.



#### Step 6 - Sand over the holes

Use a random orbital sander with 180-grit pad, or a hand-sanding block with abrasive paper to smooth over all the holes.

**NATASHA'S TIP:** If you have breakout, wrap abrasive paper around dowel to lightly sand around the holes.



#### Step 7 - Cut the dowel pieces

Cut 21 lengths of 19mm dowel to 300mm for shelving, cut three lengths of 8mm dowel to 660mm as support rails, cut four lengths of 30mm dowel to 150mm as legs.

**NATASHA'S TIP:** This small Japanese saw cuts with a pulling action, rather than the push of Western saws, making it easier to manoeuvre and do cuts by hand.



#### Step 8 - Drill support rail holes

Use an 8mm drill bit to make holes in the 19mm dowel, 75mm from the ends.

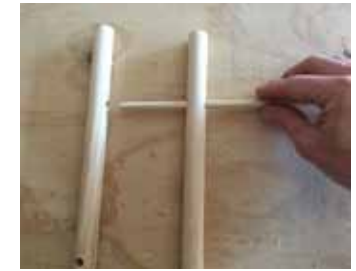
**NATASHA'S TIP:** Drill almost all the way through then turn the dowel over to finish from the other side to avoid breakout.



#### Step 9 - Make holes for support rails

On the sides, measure 75mm from the front, then mark 35mm, 125mm and 215mm from the bottom. Using the 8mm drill bit, make holes all the way through.

**NATASHA'S TIP:** The support rail sits under the neck of the wine bottles to prevent the dowels from spreading when they take the weight.



#### Step 10 - Put shelves together

Thread the 8mm support rails through seven pieces of 19mm dowel and into the sides of the box, with an even overhang each side.

**NATASHA'S TIP:** If pushing 8mm dowel through 8mm holes is a tight fit, give it a quick sand to reduce it slightly.



#### Step 11 - Assemble sides & back

Spread adhesive into the holes and along sides, position the sides and dowels, tapping them into the holes. Work quickly to turn it over and wipe away excess adhesive and secure 40mm screws through the pre-drilled holes. Then use a set square to ensure each dowel is straight and leave to dry.

**NATASHA'S TIP:** Make sure the screw heads are pushed well below the surface to leave room for the dowel plugs.



#### Step 12 - Finish the box

Apply adhesive around the back and sides, position the base and sides, position the base then drill 40mm screws into the countersunk holes and repeat to attach the top.

**NATASHA'S TIP:** Sand over the plugs to make sure they're completely flush and to remove any cutting marks.



#### Step 13 - Hide the screws

Cut leftover 8mm dowel into 10mm-long plugs, dab adhesive onto the screws then tap in the plugs, wiping away excess adhesive and leaving to dry. Trim them flush with the handsaw or a multitool.

**NATASHA'S TIP:** Sand over the plugs to make sure they're completely flush and to remove any cutting marks.



#### Step 14 - Attach the leg plates

Measure 20mm from the edges to position the plates at the corners and secure with the supplied screws. Drill into the centre holes with a 4mm drill bit, being careful not to go right through the timber.

**NATASHA'S TIP:** Check the plates are positioned across the corners of the box and are evenly spaced before drilling.



#### Step 15 - Prepare the legs

Use the 8mm drill bit to make centered holes into the end of each leg, about 50mm deep, then install the stud.

**NATASHA'S TIP:** Insert the stud into your drill, pointy end outwards, the same way you'd use a drill bit. Then use the drill to twist the stud into the leg. Loosen the drill off the stud and repeat for the other legs.



#### Step 16 - Finish the legs

Twist the legs onto the plates, tightening so they angle outwards, then tap in furniture gliders for a professional finish that protects your floor.

**NATASHA'S TIP:** You can add a protective finish by applying clear varnish, clear matt sealer, oil or buffing with a furniture wax.