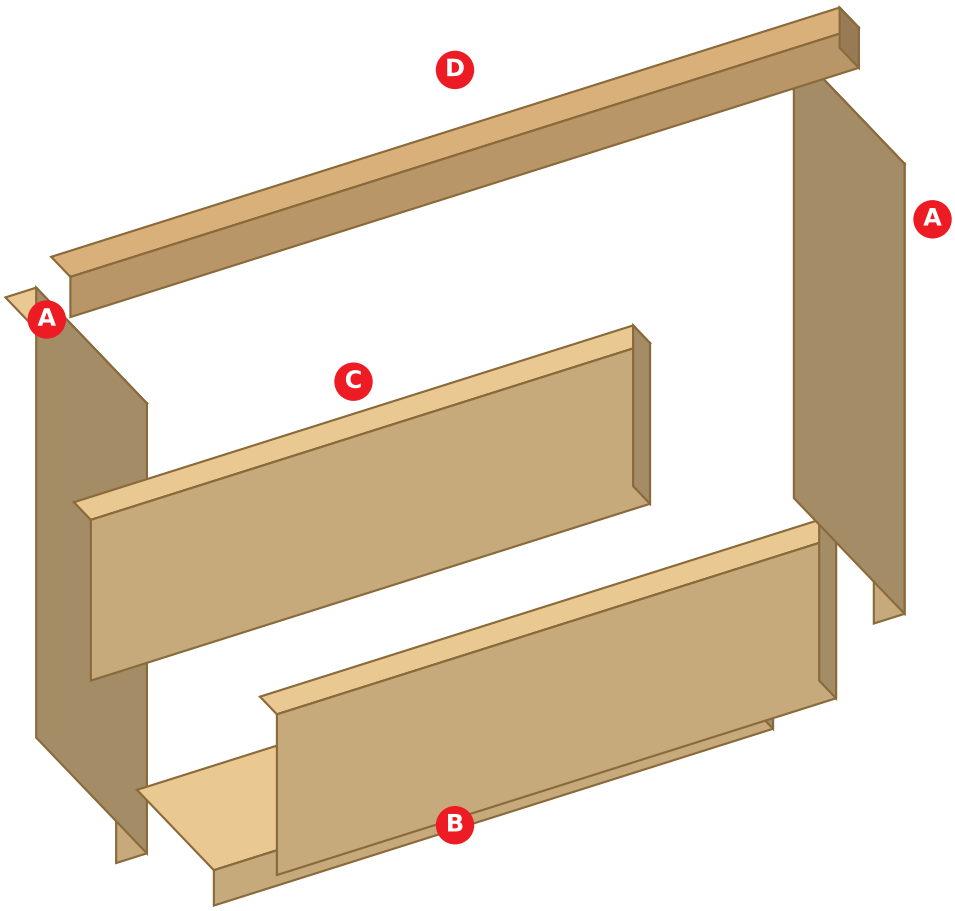
Open-top tote toolbox with a dowel handle

A simple first project from one length of pine PAR 22 x 144mm and a 25mm dowel. Butt joints, glue and screws, no fancy tools needed.

Finished size: 444 long x 144 wide x 280 tall (mm) · Inside: 400 x 100 x 78 deep



Exploded view (not to scale)

A End x2 B Base x1 C Side x2 D Dowel handle x1

How it goes together: the base (B) sits between the two sides (C), bottom edges flush. The two ends (A) cover the ends of the base and sides. The dowel (D) passes through the holes in the ends.

Honest note: this design is untested

I've checked the dimensions on paper, but I haven't built and tested this toolbox in my shop yet. Measure twice, check parts against your own timber, and use your own judgement.

Safety first

Wear eye and hearing protection, and a dust mask when sanding. Keep fingers clear of blades and clamp work before cutting or drilling. Read your tool manuals. Build at your own risk and work within your skills.

Cut list (all sizes in mm)

Part	Name	Qty	Length	Width	Thick	Notes
A	End	2	280	144	22	25mm hole, centre 30mm from top
B	Base	1	400	100	22	Rip from 144 board to 100 wide
C	Side	2	400	100	22	Rip from 144 board to 100 wide
D	Dowel handle	1	444	25	25	25mm dowel; 400 + 2 x 22

Pine used: 2 x 280 + 400 + 2 x 400 = 1760mm, plus saw kerfs. One 2.1m length of 22 x 144 PAR is enough, with a little spare for a test cut. Check: 22 + 100 + 22 = 144 (width) and 22 + 400 + 22 = 444 (length).

Materials

- Pine PAR 22 x 144mm, one length of at least 1.8m (2.1m recommended)
- 25mm wooden dowel, at least 450mm long
- Wood glue (PVA)
- About 20 wood screws, 4 x 40mm (countersunk)
- Sandpaper: 120 and 180 grit
- Optional finish: oil, wax or clear varnish

Tools

- Tape measure, pencil and try square
- Hand saw or circular/jig saw (a table saw makes the rips easier)
- Drill/driver with 3mm pilot bit, countersink bit and a 25mm spade or Forstner bit
- 2 clamps
- Sanding block
- Eye, hearing and dust protection

1. Cut the two ends (A) at 280mm and the three long pieces at 400mm. Square each cut.

2. Rip the base (B) and both sides (C) down to 100mm wide. Measure your real board thickness; if it isn't 22mm, base width = end width minus 2 x board thickness.

3. On each end, mark the hole centre 30mm down from the top, centred across the width (72mm). Clamp a scrap behind and drill the 25mm hole. Round over the top corners if you like.

4. Glue and screw the sides to the long edges of the base, bottom edges flush. Pre-drill 3mm and countersink, 3 screws per side.

5. Glue and screw the ends over the base-and-sides assembly, flush at the bottom and sides. 6 screws per end (2 into the base, 2 into each side).

6. Slide the dowel (444mm) through both holes so it sits flush with the outside of the ends. Fix with a little glue and one screw down through the top of each end into the dowel.

7. Check it sits flat, sand everything (120 then 180 grit), ease sharp edges and apply your finish.

Side profile of an end (A), mm. Dashed lines show where the base and sides meet it.

