

Finger-joint box 200 x 150 x 100 mm

Project instructions for this exact design (fingerprint ad738dba484d). Generated from the validated design; the cutting files are in cut_files/.

Project overview

- Assembled size (W x D x H): 200 x 150 x 103 mm
- Material: Plywood 3 mm, 3 mm thick
- Parts: 7 pieces (7 different) on 2 sheets
- Construction: Finger-jointed box with removable cap lid
- Fabrication: Laser cutting

Tools and supplies

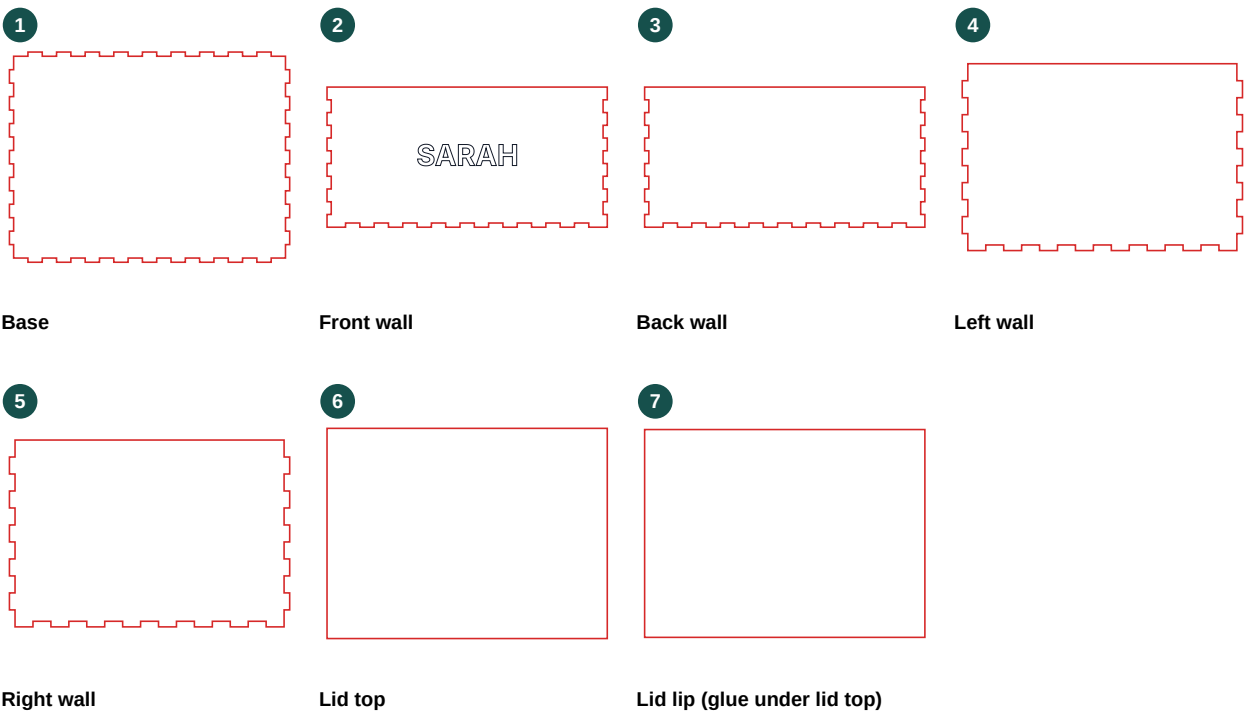
- Laser cutter or engraver - The files are prepared for laser cutting.
- Calipers - To confirm the sheet thickness the design uses.
- Wood glue - The assembly steps glue the finger joints.
- Clamps or masking tape - To hold the joints square while the glue sets.

Parts and measurements

Numbers match the assembly guide. Measure one part after importing to confirm the scale.

#	Part	Qty	Width mm	Height mm	Thk mm
1	Base	1	200	150	3
2	Front wall	1	200	100	3
3	Back wall	1	200	100	3
4	Left wall	1	150	100	3
5	Right wall	1	150	100	3
6	Lid top	1	200	150	3
7	Lid lip (glue under lid top)	1	193.4	143.4	3

Part outlines (not to scale)



Cutting preparation

Files: cut_files/sheet-01.svg, cut_files/sheet-01.dxf, cut_files/sheet-02.svg, cut_files/sheet-02.dxf, cut_files/cut-sheets-1to1.pdf, cut_files/cut-sheets-tiled-A4.pdf

Sheets: #1 600 x 400 mm (6 parts); #2 600 x 400 mm (1 parts)

Kerf: Not applied

Layer	Operation	Length m
ENGRAVE_VECTOR	Vector engraving outlines (text, decoration). Fill or line-engrave per your m	0.382
CUT_OUTER	Through-cut: outer perimeter of each part. Cut last.	4.85

Material notes

- Plywood varies in thickness and can warp; measure the actual sheet and keep it flat on the bed.
- Glue layers and knots can change cut quality; inspect the sheet before cutting.

Before you cut

- Import without scaling and confirm part 1 (Base) measures 200 x 150 mm.
- Measure your sheet: the design uses 3 mm.
- No kerf compensation is applied: parts come out slightly smaller by your machine's kerf. Cut a test joint first.
- Check that each sheet (600 x 400 mm) fits your machine.

Using the files: Laser cutter

Use: cut_files/sheet-NN.svg or cut_files/sheet-NN.dxf (one per sheet)

1. Import the SVG or DXF into your laser software without scaling (choose millimetres if asked).
2. Confirm the size: measure one part against the part list in these instructions.
3. Map layers to operations: CUT_OUTER (red) and CUT_INNER (orange) cut through, SCORE (blue) is a light line, ENGRAVE_VECTOR (black) engraves.
4. Order the job: engrave and score first, inner cuts next, outer cuts last.
5. Check the sheet fits your bed and the material is the one listed here, at the measured thickness.
6. Run your machine's own calibration (focus, material test) and cut one small test part or joint first.

Checks

- Imported size matches the part list.
- Every layer has an operation.
- Material and thickness match these instructions.
- The sheet fits the bed with clamps clear of the cut paths.

Safety

- Never leave a running laser unattended.
- Run the extraction or ventilation for the whole job and until the smoke clears.
- Keep a suitable fire extinguisher within reach.
- Only cut materials your machine maker lists as safe; never laser PVC or vinyl.
- Wear the eye protection your machine requires when the lid can be opened.

Not provided by DIYCutLab

- Power, speed, passes and focus settings - determine them with your own material tests.

Assembly

Finger-jointed box with removable cap lid - 7 different parts, 7 pieces in total. Steps come from the design's own construction data.

Step-by-step diagrams are in instructions/assembly-guide.pdf.

Assumptions used by the design

- Outside dimensions 200 x 150 x 100 mm; inside 194 x 144 x 97 mm.
- Material thickness used for all joints: 3 mm (nominal).
- Finger pattern: 11 fingers of 9.091 mm on vertical edges; 19 x 10.211 mm along the width; 15 x 9.6 mm along the depth.
- Joint fit clearance: 0 mm per notch.
- Removable cap lid: lip 193.4 x 143.4 mm with 0.3 mm clearance per side.
- Front wall: Engraved text "SARAH" centred on the outside face.

Limits

- Validation checks geometry - closed outlines, sizes, fit and file round-trips - not your machine, its settings, the material or the strength of the finished piece.
- Always cut or print one test piece first.