

THE MIMI FACTORY

Building the Comb Bed

Dimensioned plans, cutting lists, and a step-by-step assembly guide.

STEP 12 OF THE FULL CONVERSION GUIDE

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1. Before you start

We're tackling an essential part of the conversion: the bed. There are already dozens of plans online — here's the method used in the workshop, with exact dimensions and lessons learned from building it several times.

3 principles that drive every dimension in this guide:

- **Bed length** = your height + about 10 cm. The plans below are set to 180 cm — adjust if needed while keeping the same layout logic.
- **44 mm thickness** for all the battens in the load-bearing structure, to keep it sturdy.
- **Leg height: 33 cm.** This leaves room to sit up without hitting the ceiling and lets the frame clear the wheel arches.

⚠ **Check before cutting:** the 33 cm height and the wheel-arch cutout position are given for a Renault Trafic. On your own vehicle, take your own measurements before cutting — an error of a few centimeters here can't be fixed once the battens are cut.

Tools and materials needed

Tools

- Screwdriver drill + 80mm screws minimum
- 60mm screws
- 40mm screws
- Drill + 3mm wood bit (for pre-drilling)
- Tape measure

Materials

- **Structural battens (44×44mm)** — Leroy Merlin ref. 68189170, pack of 4 small-knot planed fir battens, L. ±2.40m (see cutting lists for the number of packs per variant)
- **Slat battens** — Leroy Merlin ref. 88144410, planed knot-free finger-jointed pine batten, 14mm × 37.5mm, 2.5m, to be cut down into 64cm slats
- 2mm spacers
- 5mm spacers
- Wood glue

2. Layout — 2 variants

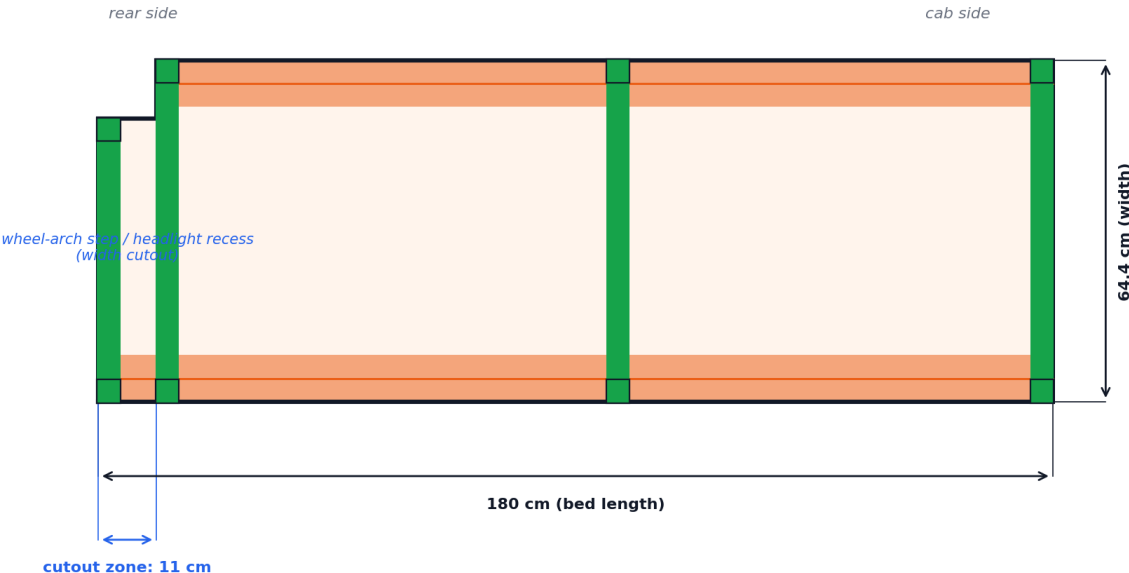
This comb bed is designed as a standalone module: install it wherever you like in your conversion. Pick the variant that matches your vehicle and whether or not there's a headlight recess to work around.

How to read the cutting lists below: each raw batten is 240 cm long. The diagram shows how it's cut into several pieces along with the leftover offcut. Follow the cutting order to minimize waste.

VARIANT A — Trafic 2 L2, 180 cm bed, WITH cutout (headlight recess)

4 legs needed

Variant A — Top view — Trafic 2 L2, WITH cutout
Diagram derived from the cutting dimensions — check against your own vehicle before cutting



Variant A — Trafic 2 L2, 180cm bed WITH cutout
5 battens of 2.40 m — cuts in cm

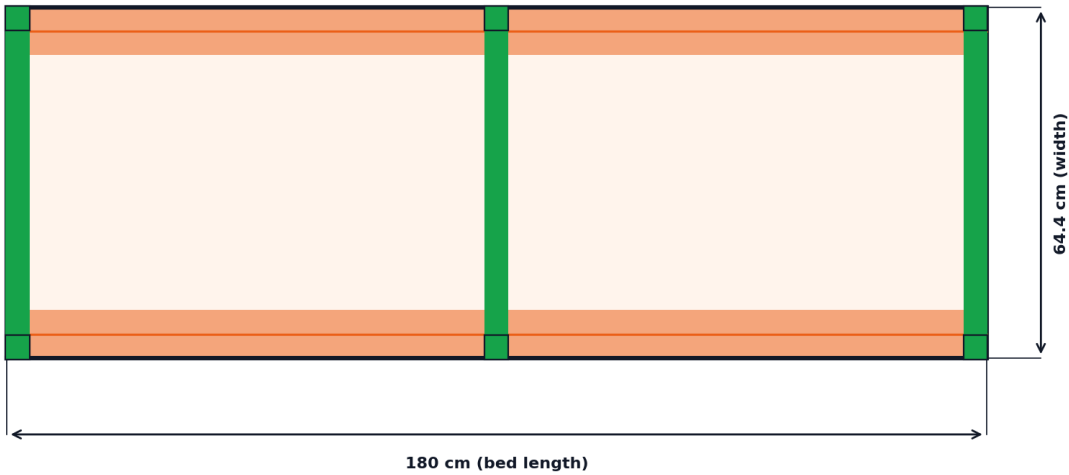
Raw batten length: 240 cm



VARIANT B — 180 cm bed, NO cutout

Simple rectangular frame — only 3 legs needed

Variant B — Top view — 180cm bed, NO cutout
Simple rectangular frame — only 3 legs needed



Variant B — 180cm bed, NO cutout
5 battens of 2.40 m — cuts in cm

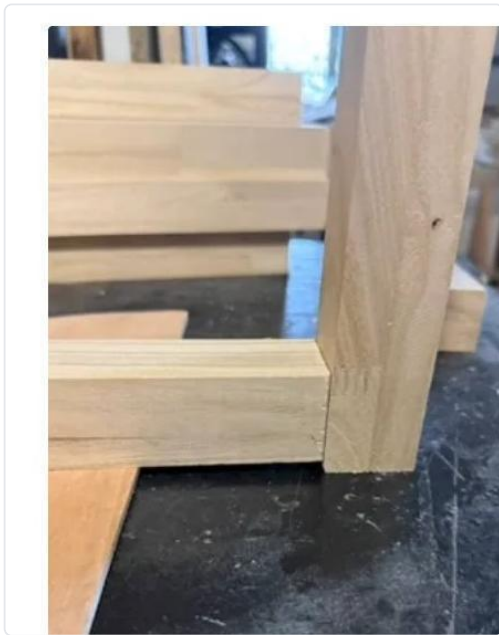
Raw batten length: 240 cm



3. Building it

Step 1 — The legs

- 1 Build 4 legs (only 3 for variant B without cutout). The legs are made from the 33 cm battens; the width pieces are made from the 55.6 cm and 44.6 cm battens.
- 2 For assembly: pre-drill, then use a 10 mm spacer to raise the width batten (see photo). This 10 mm spacer will also help the comb mechanism slide.
- 3 Add a dab of wood glue, then screw with an 80 mm screw.
- 4 Add a bracket or brace with 60 mm screws to stiffen the corner.

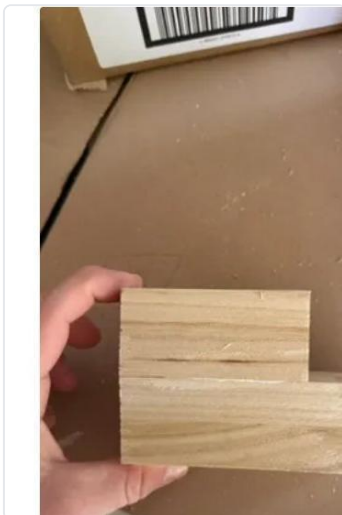


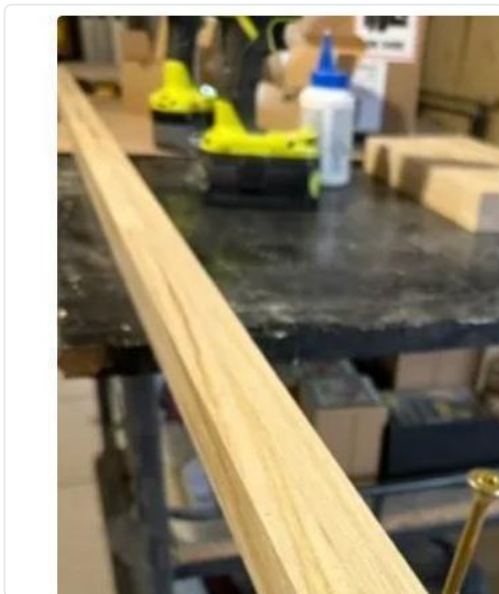
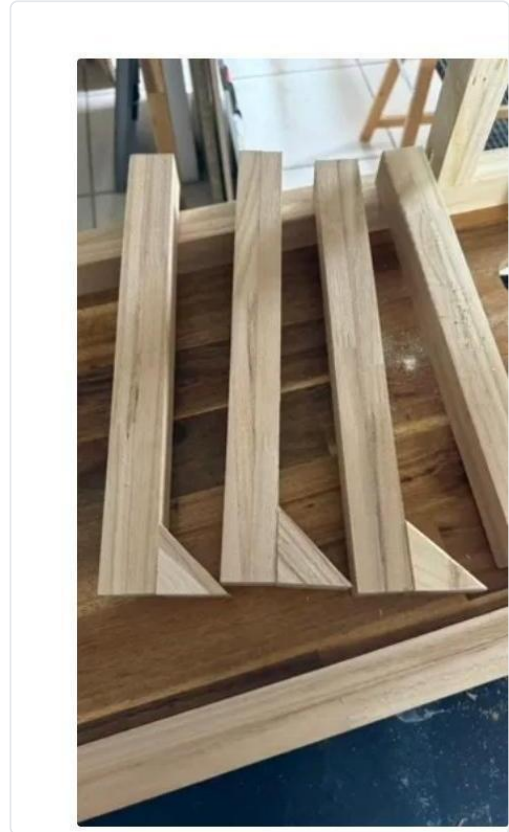




Step 2 — Assembling the frame

- 1 Set the legs in place as shown in the photo, then install the long battens (load-bearing rails).
- 2 They are glued/screwed into the legs with 80 mm screws.
- 3 For variants with a cutout: complete the corner with the two short battens (6.6 cm + 11 cm) forming the L-shaped piece shown below.





Step 4 — The last legs (comb section)

- 1 Build the last legs for the comb section.
- 2 They are glued and screwed from the top with 80 mm screws (photo above, triangular legs).

Step 5 — Holding the mobile leg in place

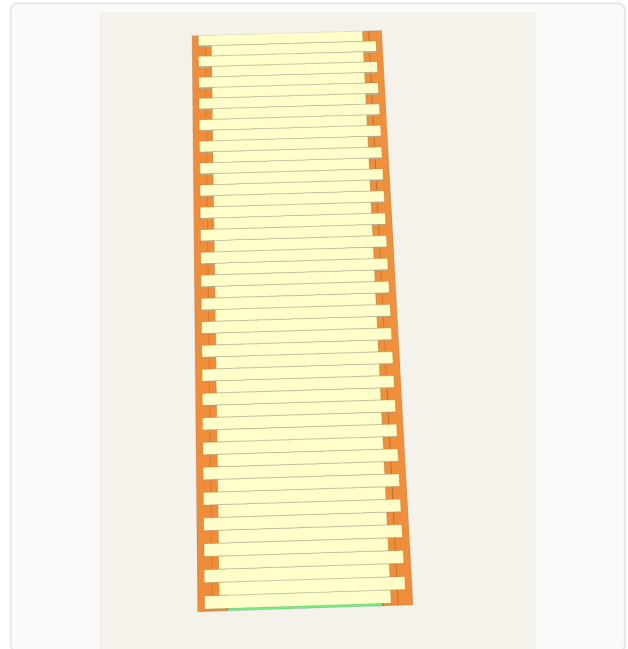
- 1 At this stage, the mobile leg (comb side) isn't fixed to anything yet: you can hold it against the other frame with two clamps.

6. 3D view — the comb mechanism

3D model of the assembly principle, to help visualize how the battens and slats fit together before you start cutting. Base: 190×64.4cm structure with 3 U-shaped legs and 4 battens (2 fixed, 2 mobile).



Assembled view — the staggered slats rest on the 4 battens, which sit on the U-shaped legs.



Top view — the staggered pattern: every other slat rests on the fixed pair of battens, the rest on the mobile pair.



Structure detail — the 3 fixed U-shaped legs and the extra leg carrying the mobile battens.



Comb open — the mobile part (battens 2/4 + every other slat) slides out to double the bed's width.

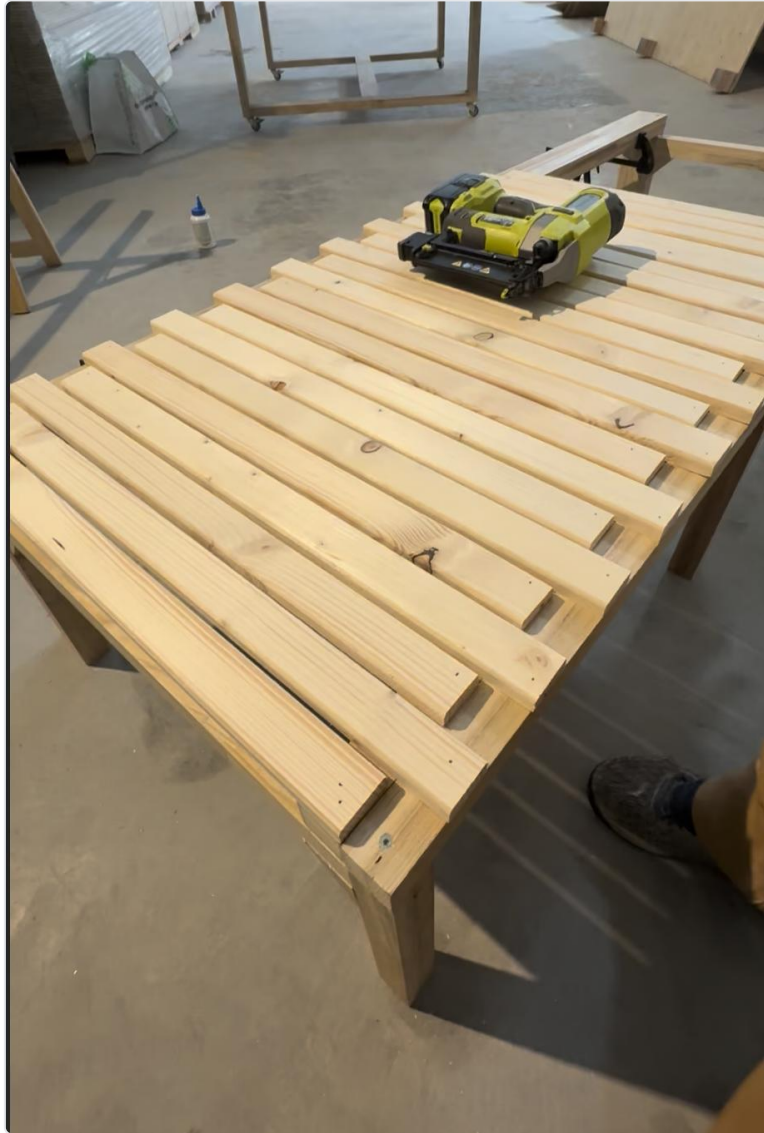
Note: this model illustrates the general principle of the comb mechanism (two sets of battens and slats that interlock and slide). The exact sliding clearance and the precise fixing of the mobile leg still need to be validated on the real prototype before finalizing the cutting lists.



4. Fitting the slats

- 1 The slats to cut are 64 cm long. Use the wood from the supplies list or real bed slats.
- 2 The slats are spaced with a 5 mm spacer. They can also be raised with a 2 mm spacer to improve the sliding action if needed.
- 3 Fix the slats in a staggered pattern, with two fixing points per slat to prevent any sideways movement.





Useful reference: on the Trafic / Vivaro / Primastar / Talento, the gap between the left leg and the center leg is 96 cm — this puts a leg on each side of the wheel arch.

5. Points to check before cutting

A summary of the checks to run on your own vehicle before cutting — most plans found online don't mention these, and it's usually where things go wrong:

- **Leg height (33 cm):** check that it clears your wheel arch and that you can sit up without hitting the ceiling.
- **Bed length:** set it to your height + 10 cm, not just the 180 cm given here.
- **Headlight recess:** the step dimension (11 cm in variant A) depends on the exact van model — measure yours before cutting the final piece.
- **Number of legs:** 4 in variant A (with cutout), 3 in variant B (without) — don't cut more "leg" battens than needed until you've confirmed which variant you're using.