

How to Build Utility Shelves



1. Mark location of top plates on ceiling. One plate should be flush against wall, and the other should be parallel to first plate, with front edge 24" from the wall. Cut 2×4 top plates to full length of utility shelves, then attach to ceiling joists or blocking, using 3" screws.

2. Mark points directly beneath outside corners of the top plates to find outer sole plate locations, using a plumb bob as a guide. Mark sole plate locations by drawing lines perpendicular to the wall connecting each pair of points.



3. Cut outer 2×4 sole plates and position them perpendicular to the wall, just inside the outlines. Shim plates to level if needed, then attach to floor with a stud gun or 3" screws. Attach a center sole plate midway between the outer sole plates.



4. Prepare the shelf risers by cutting 7/8"-wide, 3/4"-deep dados with a router. Cut dados every 4" along the inside face of each 2 × 4 riser, with the top and bottom dados cut about 12" from the ends of the 2 × 4. **TIP:** Gang-cut the risers by laying them flat and clamping them together, then attaching a straightedge guide to align the dado cuts. For each cut, make several passes with the router, gradually extending the bit depth until dados are 3/4" deep.



5. Trim the shelf risers to uniform length before unclamping them. Use a circular saw and a straightedge guide.



6. Build two center shelf supports by positioning pairs of shelf risers back-to-back and joining them with wood glue and 2 1/2" screws.



7. Build four end shelf supports by positioning the back of a dadoed shelf riser against a 2 × 4 of the same length, then joining the 2 × 4 and the riser with glue and 2 1/2" screws.



8. Position an end shelf support at each corner of the shelving unit, between top and sole plates. Attach the supports by driving 3" screws "toenail" style into the top plate and sole plates.



9. Position a center shelf support (both faces dadoed) at each end of the center sole plate, then anchor shelf supports to the sole plate using 3" screws driven "toenail" style. Use a framing square to align the center shelf supports perpendicular to the top plates, then anchor to top plates.



10. Measure distance between facing dado grooves, subtract 1/4", then cut plywood shelves to fit. Slide the shelves into the grooves.