

Installing Tile Roofing

Modern clay tiles use an "S" type design rather than the two-piece system that was once common. This simplifies the installation process and saves you time. Due to the contour of the tiles, you'll need plumbing vents and air vents that match the shape of the roofing materials. See the reference list on page 248 for manufacturer information.

Before starting the project, make sure your roof framing can support the weight of the tiles. The materials are very heavy, and roofs designed for asphalt shingles may not have the structural support for clay tile. Check with your building inspector if you're unsure.

Everything You Need

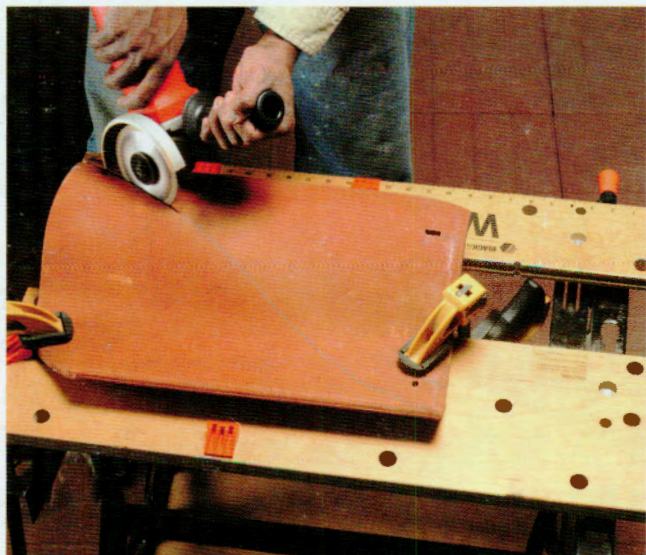
Tools: hammer, tape measure, chalk line, circular saw, jig saw, trowel, diamond saw blade, caulk gun.

Materials: 30# felt paper, ice and water shield, 2 x 6 nailers, 2 x 3 nailers, 2 x 2 nailers, corrosion-resistant 11 gauge nails, roofing nails, sand, portland cement, plastic cement, cement mortar Type M, tile, bird stops, plumbing vents, air vents, roofing sealant, peel-and-stick flashing, plastic cement.

Photo courtesy of M.C.A. Superior Clay Roof Tile



Tips for Installing a Tile Roof



To cut clay tile, use a diamond blade in a circular saw or grinder. Clamp the tile to a worksurface, make your cutting line on the tile, then cut along the line. Be sure to wear safety glasses and a respirator when making the cuts.



Mortar is available premixed, or you can mix it yourself. This project requires cement mortar Type M. To mix it, combine 3 parts portland cement, 1 part lime, and 12 parts sand. Add water and mix until the consistency is like mashed potatoes.

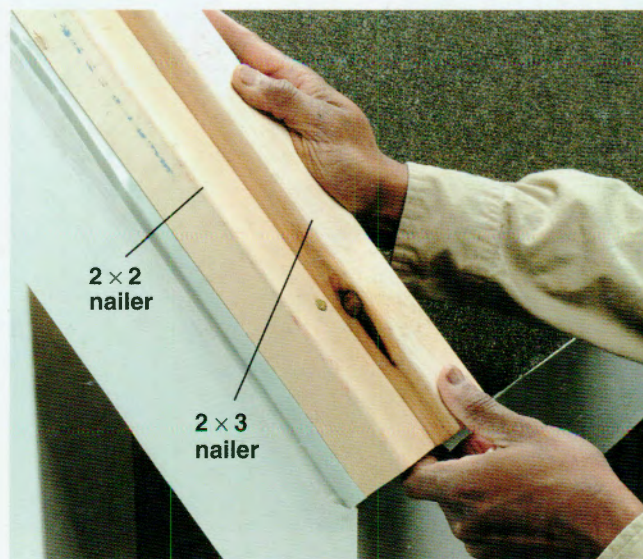


Clay tiles give homes a truly impressive roof that can't be imitated by other materials. The "S" design makes installation easier and less time consuming. Each tile simply overlaps the preceding tile (inset).

How to Install a Tile Roof



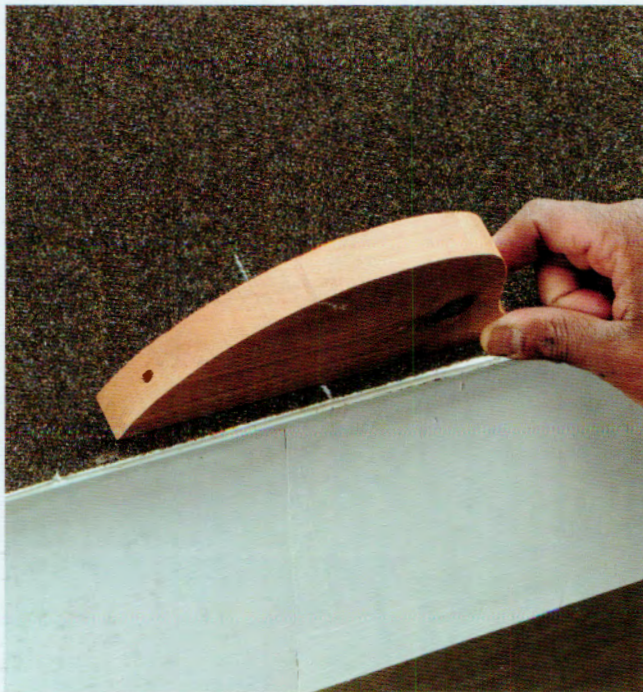
1 Cover the roof with underlayment (pages 62 to 63). Install drip edge (pages 64 to 65) and valley flashing (pages 66 to 67). Nail 2 x 6 lumber on edge over all ridges and hips.



2 Install 2 x 2 nailers along the rake edges of the roof. Butt 2 x 3 nailers against the 2 x 2s and nail them in place.

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How to Install a Tile Roof (continued)



3 Measuring from the outside edge of the 2 × 3 nailer along the left rake edge, make marks on the roof every 12". Center a bird stop over each mark, aligned with the front edge of the roof, and nail in place. Note: bird stops are available from the tile manufacturer, or you can cut your own from wood.



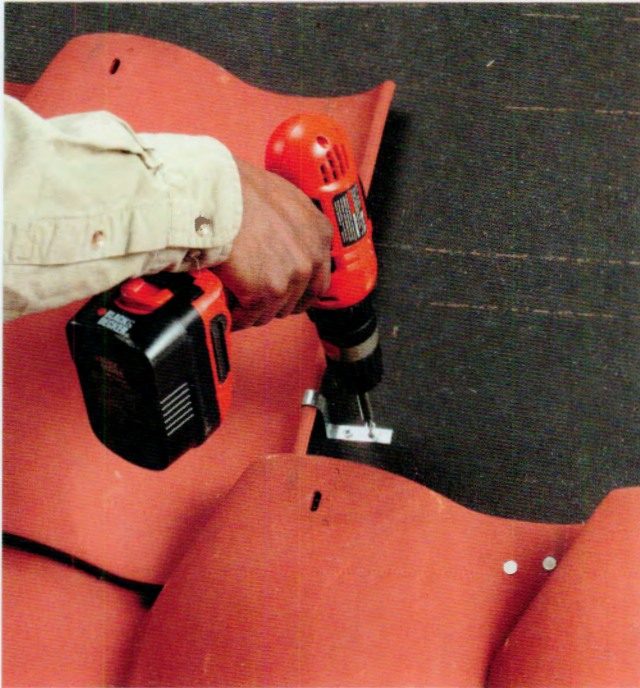
4 Place gable tile over the 2 × 2s along the rake ends of the roof, overhanging the front of the roof by 3". Nail in place, using two 11 gauge nails per tile. Overlap tiles by 3". Note: Be sure to use left gable tiles for the left side and right gable tiles for the right side.



5 Starting on the left side of the roof, place the first field tile over the gable tile and 2 × 3 nailer. Align the end of the field tile with the end of the gable tile. Nail in place with two nails. Install the first course of tiles the same way, placing them over the bird stops.



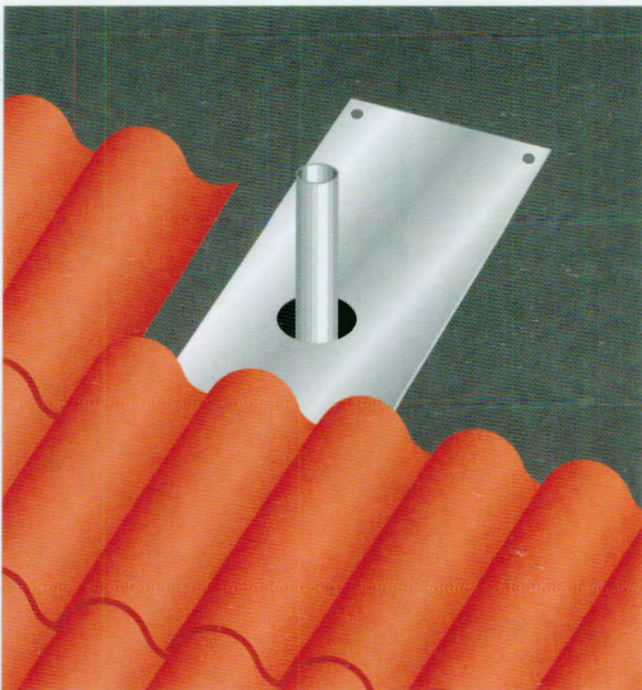
6 Install the next row of tiles on the roof, overlapping the first course by 3". Install remaining courses the same way.



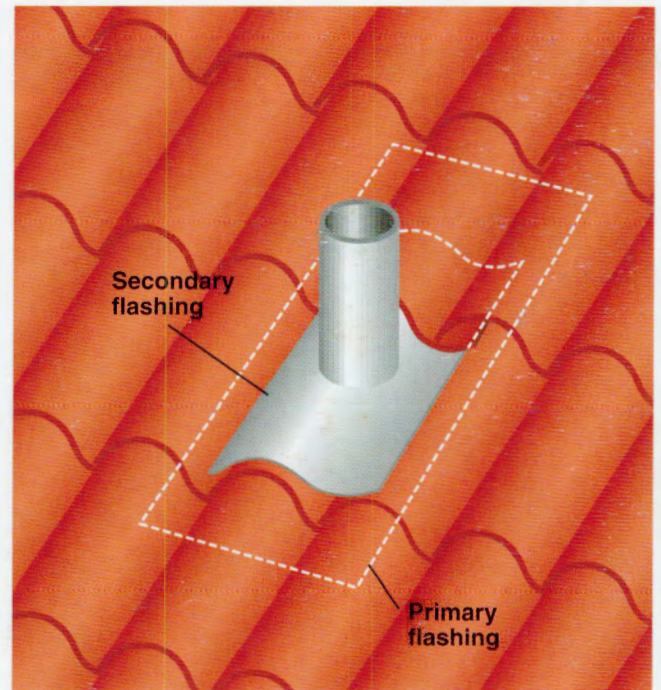
Option: In areas subject to high winds, install 2½" stainless steel hurricane clips. Install the clip on the side lap of the tile, near the front edge. Fasten to the roof deck with a 1½" screw. Use one clip per tile.



7 Cut tile parallel to the center of the valley flashing. Tiles should overlap the edges of the flashing by at least 4".



8 Place primary metal flashing over a plumbing vent and nail in the corners. Install tile over the front of the flashing.



9 Cover the back edge of the flashing with felt paper. Install tile over the flashing and vent. Apply roofing sealant along the underside of the secondary flashing, then place it over the tiles and vent. Overlap the back edge of the flashing with the next row of tiles.

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How to Install a Tile Roof (continued)



10 At dormers, chimneys, and walls, install pan flashing at least 4" up the wall and a minimum of 6" along the roof. Turn up the outside edge of the flashing 1½". Install counterflashing over the pan flashing. Note: The top edge of the counterflashing must be installed under the wall siding or placed in the mortar between bricks in the chimney. The flashing may still be present from the old roof.



11 Install a 2 x 3 nailer along the turned-up edge of the pan flashing. Set the tile over the nailer and nail it in place.



12 When the roofing abuts a wall of the house, install tile up the roof to the wall. Apply cement mortar generously between the tops of the tiles and the wall, filling in any gaps. Place 3 x 4 flashing over the mortar, then place counterflashing over that.



13 Mark roof vent locations between rows of tiles and between rafters. Follow manufacturer's guidelines for the size of the opening. Cut out the opening, using a jig saw or circular saw.



14 Apply roofing sealant along the bottom of the primary roof vent, then install it over the opening, using roofing nails driven every 4" through the flange. Seal the flange with peel-and-stick flashing. Place the secondary vent over the primary vent and nail it to the roof. Overlap the lip with the next piece of tile.



15 Mix cement mortar Type M and apply it around the nailers at the hips and peak. Also apply mortar over the tops and in between tiles abutting the nailers.



16 Center ridge tiles over the hips and peak. Apply a small amount of plastic cement on the nose of each ridge tile. Overlap the tiles for a 16" exposure, placing the tile over the plastic cement on the previous tile. Nail the ridge tiles, using two nails per tile.



17 Mix one part Type 1 portland cement with three parts sand, add water sparingly for a thick consistency, to create a rich cement mortar. Apply the mortar along the exposed edges of the hip and ridge tiles.