BUILDING A SHOWER ENCLOSURE

A new shower stall installed in a corner of a room will require you to build only one wall. If it's in the middle of a wall, two new walls are required. The walls may reach all the way to the ceiling, or they may stop partway up. In the latter case, the top ledge must be covered with tile or another moisture-resistant surface. The opening can have a door, or you can install a curtain rod.

For a corner installation, a one-piece unit *(page 194)* is much simpler to install, though you have a limited choice of colors.

A 32-inch shower base will feel cramped; buy a base that is at least 34 inches. Some bases must be set in thinset mortar or in a bed of sand, while others can be simply placed on the floor.

For details on how to run drain and supply lines, see *pages 178–181.*

PRESTART CHECKLIST

☐ **TIME**
Two or three days to install a base, plumbing, tiled walls, and a shower door

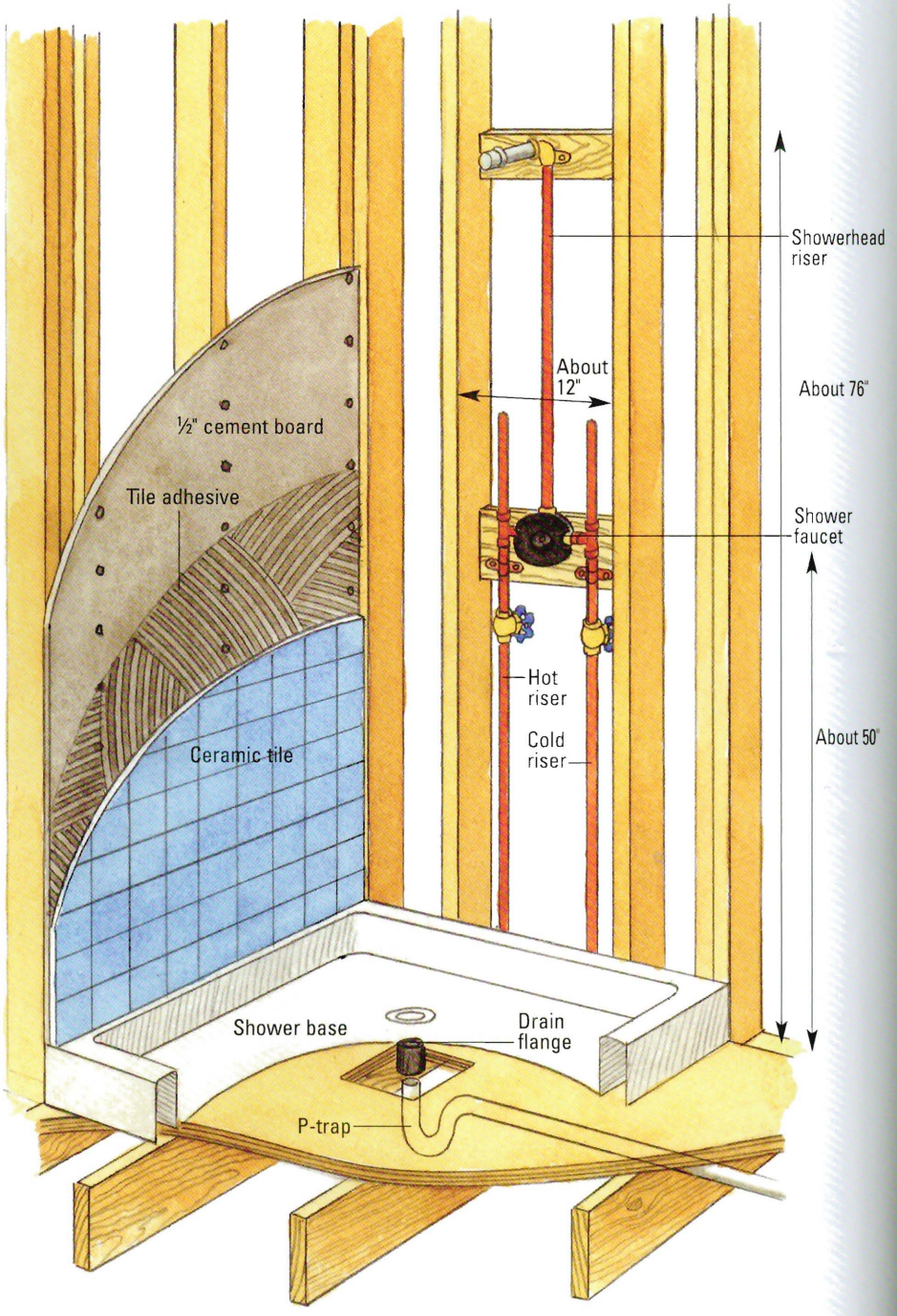
☐ **TOOLS**
Carpentry tools, groove-joint pliers, drill, tools for plastic *(page 142)* and copper pipe *(page 140),* tiling tools, steel rod

☐ **SKILLS**
Working with plastic and copper pipe, framing a wall, installing tile

☐ **PREP**
Install a drainpipe with trap in the center of the base, as well as supply pipes, faucet, and shower riser

☐ **MATERIALS**
Shower base, roofing felt, PVC primer and cement, 2×4 studs, cement backerboard, backerboard screws, tiles, tile adhesive, grout, caulk, shower door

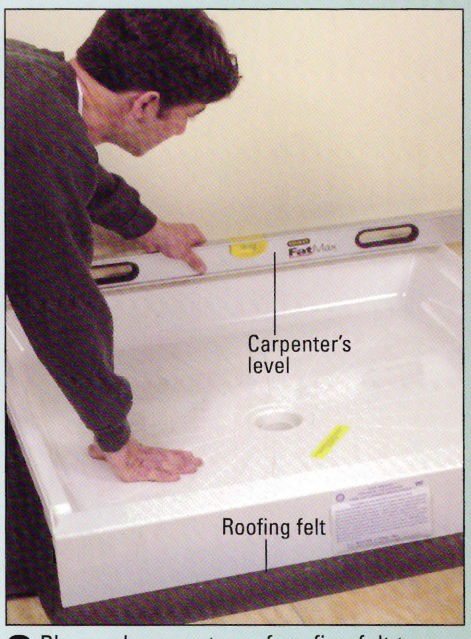
BUILDING A TILED SHOWER ENCLOSURE



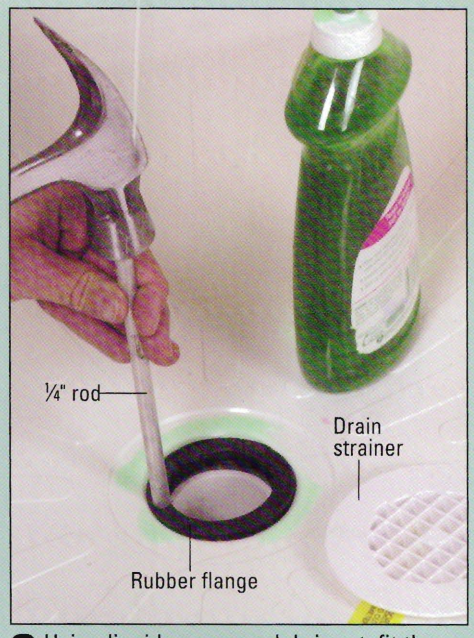
A shower drain should be installed at the center of the shower base. The flange should be level with the floor. Run the supply pipes after the framing is installed.

A. Installing the shower base

1 Set the shower base over the drain to make sure the drain is directly below the opening of the base. Remove the base, then cut and cement an extension to the drainpipe. The extension should be flush with the floor.

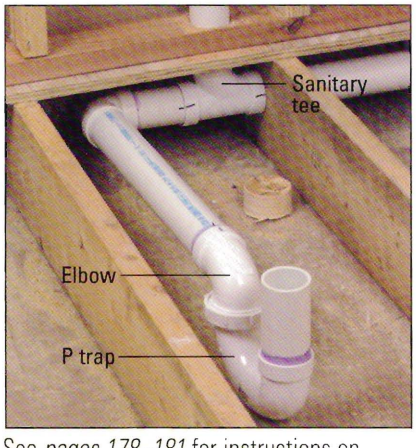


2 Place a layer or two of roofing felt to smooth any unevenness in the floor. (Some manufacturers may require a bed of mortar or sand.) Set the shower base over the drain to confirm that the drain is positioned where you want it. Check for level; shim with roofing felt as needed.



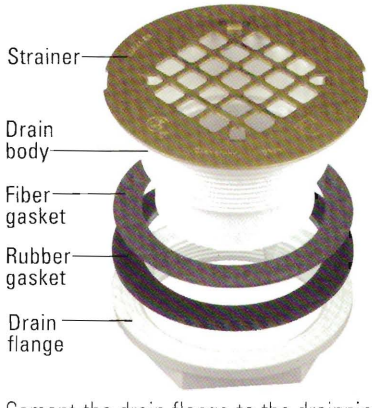
3 Using liquid soap as a lubricant, fit the rubber flange (provided with the shower base) over the drain extension and push it as far down as you can. Tap it all the way in place with a ¼-inch steel rod. Install the drain strainer.

REFRESHER COURSE
Installing a drain



See *pages 178–181* for instructions on running a new drain line. A shower drain should be connected directly to a trap. Drain lines must slope at a rate of ¼ inch per running foot and must be properly vented *(pages 182–183)*.

WHAT IF...
The base uses a PVC flange?

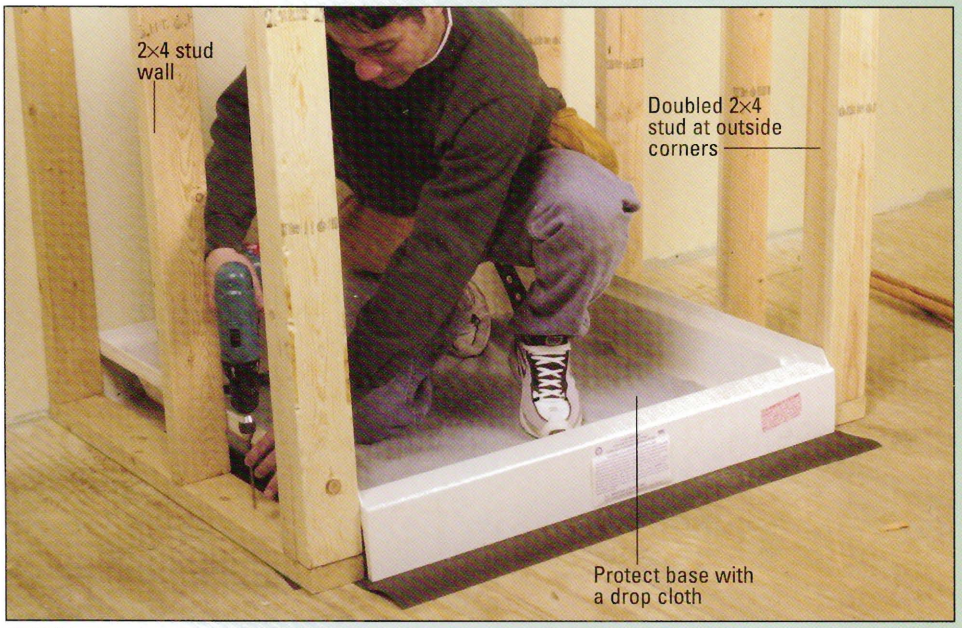


Cement the drain flange to the drainpipe; the flange should be flush with the floor. Set the gaskets on top of the flange. Place the shower base over the drain hole. Check that the gaskets are still in place. Screw the drain body through the hole in the base and into the flange. Attach the strainer.

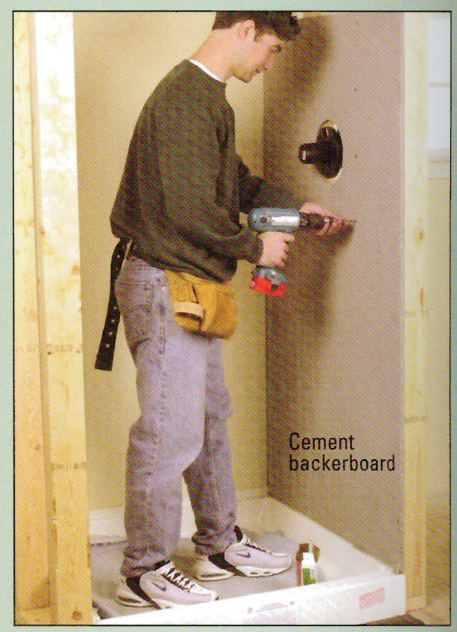
STANLEY PRO TIP
Install a custom-mortared shower base

A custom-mortared shower base frees you from the styles, sizes, and colors available in prefab units. You can have anything you want. Constructing such a base, an endeavor once only within the reach of the pros, is an installation that is increasingly being done by do-it-yourselfers. It relies on a CPE (heavy plastic) liner set inside the frame to waterproof the surface. See *pages 200–205* to learn how to install a mortared shower pan.

B. Framing the shower



1 With the shower base in place, build 2×4 walls for the sides. Remember that the studs will be covered with ½-inch-thick cement board, plus the tiles (usually about ⅜ inch thick). No studs should be more than 16 inches apart. On the plumbing wall, space the studs so you can position the shower faucet—a pair of studs spaced about a foot apart will accommodate most faucets. Install horizontal braces to support the faucet and the showerhead arm. Some bases may require a ledger *(page 186)*. Install the supply pipes and faucet, following instructions on *pages 184–185, 210–211*.

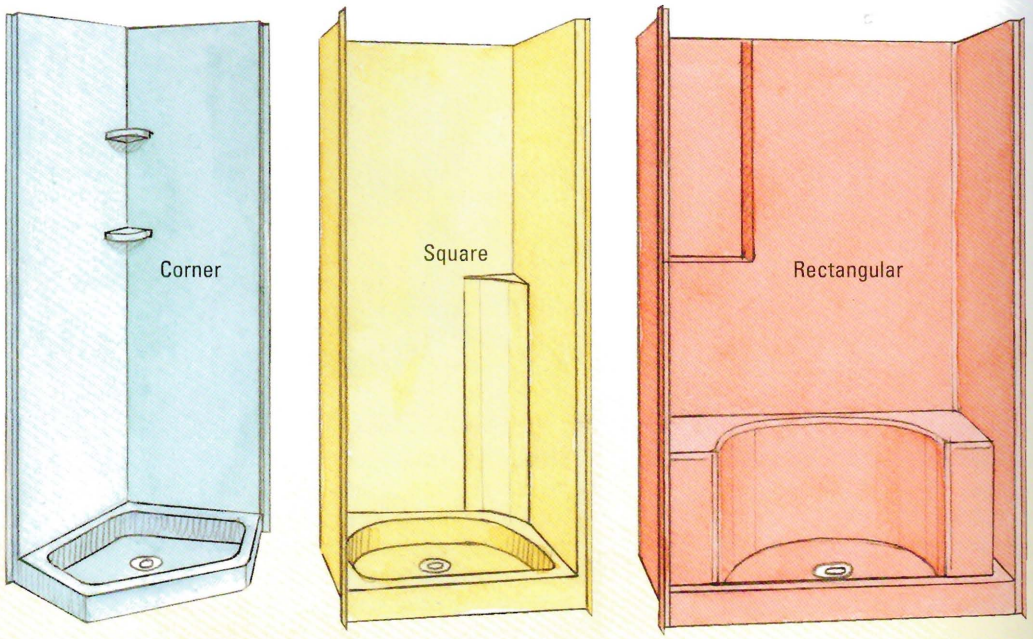


2 Cut pieces of cement backerboard to fit. Cover all wood surfaces with the backerboard. Attach them to the studs with backerboard screws. Check that the wall surface is smooth and even because the tiles will follow any contours. Before tiling fill the gap at the bottom with caulk.

One-piece shower units

Corner and rectangular shower stalls—made of acrylic fiberglass or polystyrene—are much easier to install than a custom-made enclosure. One-piece units are designed for new construction only because they are too large to fit through a door. Three-piece units are quickly assembled and are ideal for remodeling.

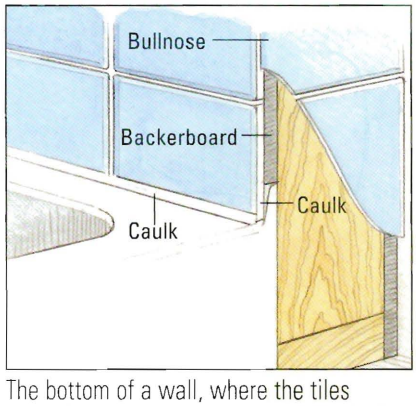
Two or three walls of these units must be installed up against solid walls. A corner unit can be installed in any corner that is reasonably square. A rectangular or square unit requires an opening of the correct width and height.



3 Cover the backerboard with ceramic tile or with a prefab tub surround kit *(pages 190–191)*. Consult a book on tiling for guidelines on selecting, laying out, and cutting tile. In general, tiling should be planned to minimize small pieces. Wherever a tile edge will be exposed, install a bullnose piece, which has one finished edge (see illustration below). Use a notched trowel to apply thinset mortar or organic tile adhesive, then set the tiles. Use a tile-cutting hole saw for the faucet and showerhead stubouts. Once all the tiles are applied, allow the adhesive to set overnight.

4 Mix a batch of latex-reinforced grout and use a grout float to first push the grout into the joints; then scrape away most of the excess. Wipe several times with a damp sponge, working to create consistent grout lines. Allow to dry and buff with a dry towel. Caulk all the inside corners.

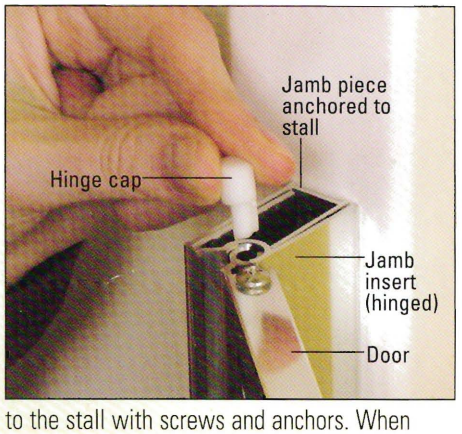
CAULK THE EDGES OF THE STALL



The bottom of a wall, where the tiles meet the shower base, must be installed correctly or water will seep behind the tiles and damage the studs. Install the backerboard to the top of the base's flange and fill the gap below with caulk. Apply tiles and apply a bead of caulk.

Installing a shower door

Measure the opening and select a door with a frame you can adjust to fit your unit. Follow manufacturer's instructions. In general you'll begin by cutting the jamb piece to size and installing a bottom track and seal. Each jamb is made of two interlocking pieces. One attaches



to the stall with screws and anchors. When both jambs are installed, decide which way the door should swing and install the hinged insert with the clamps provided. Slide the door in place, cap, and add the door handle. Install the other jamb insert and adjust.

TILING A SHOWER ENCLOSURE OR TUB SURROUND

Because a shower enclosure is a wet installation, you must waterproof the walls and the framing. Use felt paper in combination with cement backerboard, but not with greenboard or waterproofed gypsum board.

A bathtub introduces additional challenges. If the tub is level, set a full tile at its top edge. To help hide the awkward appearance of an out-of-level tub, make the bottom row of tiles at least three-fourths of a tile high.

For a shower enclosure, extend the tile and the backerboard at least 6 inches above the showerhead. For a tub surround only, install the backerboard and tile 12 inches above the tub.

PRESTART CHECKLIST

☐ **TIME**
About 20 minutes per square yard to prepare and set tile

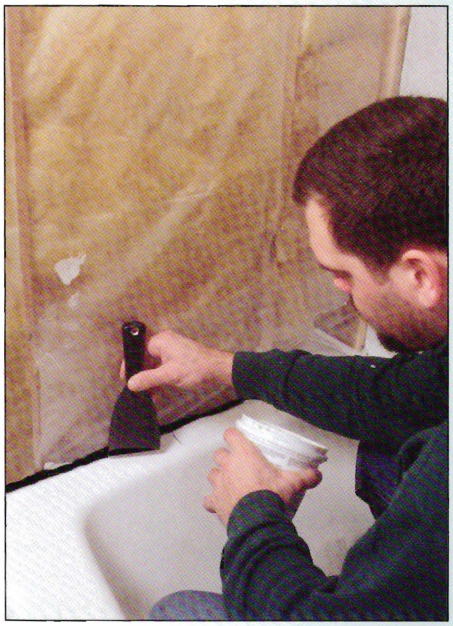
☐ **TOOLS**
Utility knife, stapler, hair dryer, 4-foot level, tape measure, chalk line, carbide scriber, margin trowel, notched trowel, straightedge, drill, snap cutter or wet saw, nippers, grout knife, putty knife, masonry stone, caulk gun, grout float

☐ **SKILLS**
Ability to use hand tools, cordless drill, and trowels

☐ **PREP**
Repair structural defects, remove finished wall material to studs

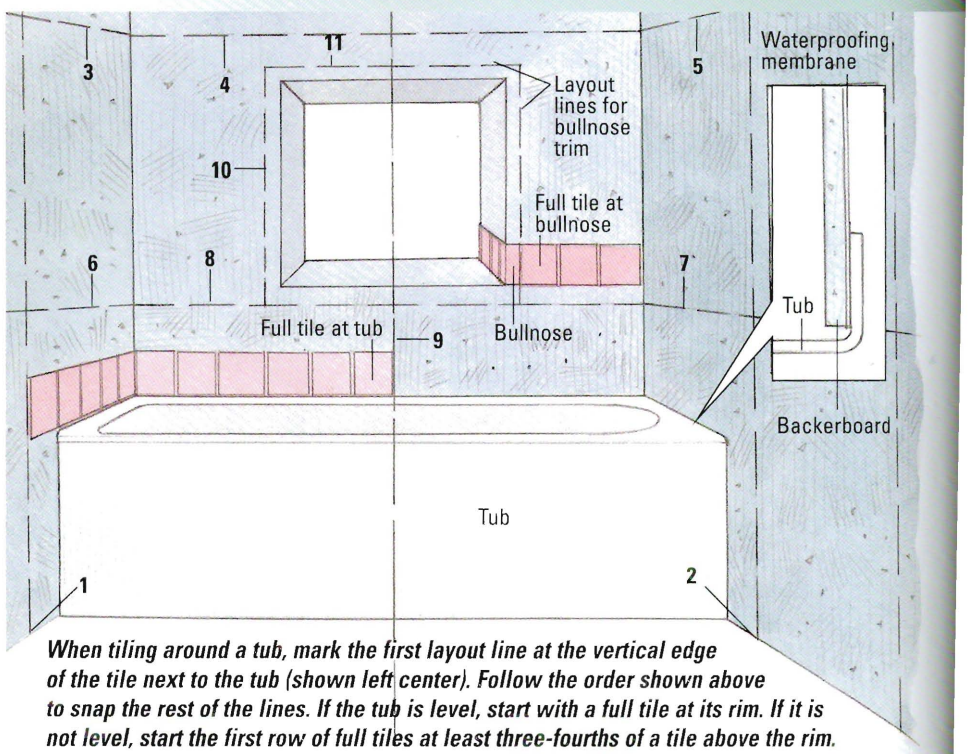
☐ **MATERIALS**
Asphalt roofing cement, 15-pound felt paper, staples, bucket, thinset, dimensional lumber for battens, backerboard, screws, tape, tile, spacers, caulk, grout, rags, sponge, water, tile base or bullnose, nylon wedges, accessories

A. Preparing the substrate



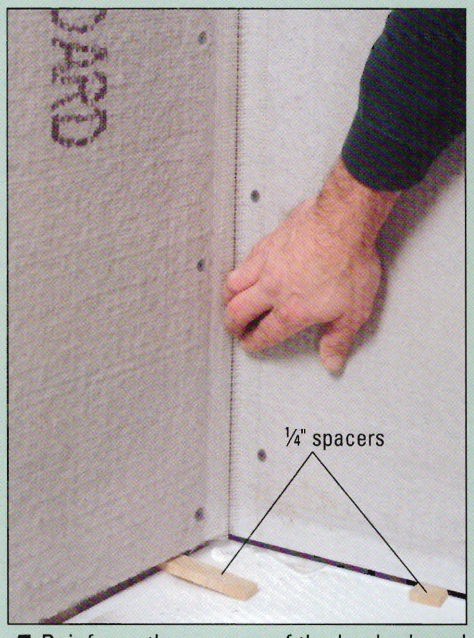
1 Apply asphalt roofing cement to the flange of the tub. This is the place where most tub and shower surrounds fail; water that gets into this joint will migrate upwards, and down into the floor. The asphalt cement seals the tub to the waterproofing felt or 4-mil poly sheet.

2 Cut a piece of felt paper long enough to turn all corners and cover the surface in a single run. Apply asphalt mastic to the studs, then staple the paper, warming it with a hair dryer before pressing it into the corners. Overlap top pieces on lower ones and seal overlaps with asphalt mastic.



When tiling around a tub, mark the first layout line at the vertical edge of the tile next to the tub (shown left center). Follow the order shown above to snap the rest of the lines. If the tub is level, start with a full tile at its rim. If it is not level, start the first row of full tiles at least three-fourths of a tile above the rim.

3 Cut backerboard so its edges will be centered on the studs and fasten it to the studs with backerboard screws. When fitting backerboard above a tub, leave a ¼-inch gap between the bottom edge of the board and the tub rim.

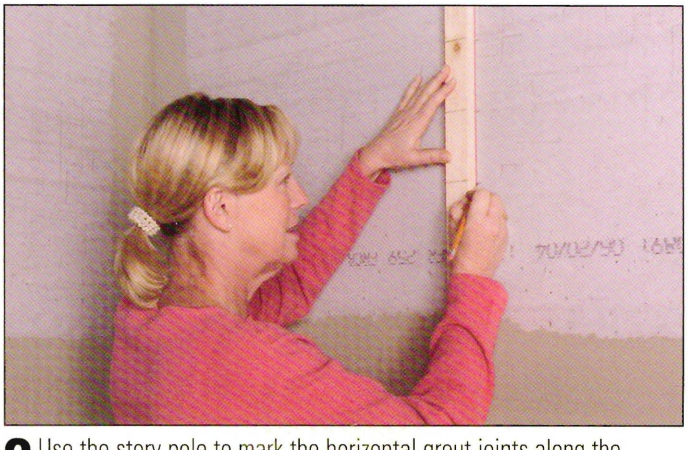


4 Reinforce the corners of the backerboard with fiberglass mesh tape. Skim-coat the tape with thinset, let it dry, and sand smooth. Repeat the process, feathering the edge of the thinset. The spacers create a ¼-inch gap for the bead of caulk.

5 Caulk the gap at the bottom of the backerboard with clear or white silicone caulk. The caulk seals the joint between the tub and backerboard, and allows for some expansion and contraction of the different materials.

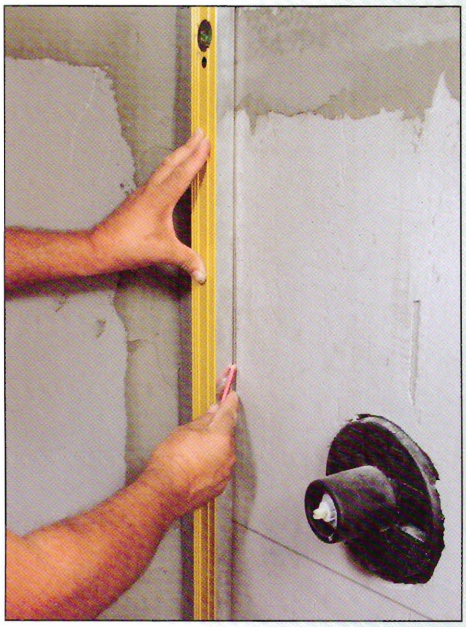
Using a story pole

1 Make a story pole to mark the tile layout on walls. For square tiles set a row of tiles (and plastic spacers if they will be used) in the selected pattern on a flat surface. Mark a straight 1×2 to match the tile spacing. Include any narrow trim tiles or accent tiles. For rectangular and odd-shape tiles, make separate sticks for the horizontal and vertical layouts.



2 Use the story pole to mark the horizontal grout joints along the vertical reference line, beginning at the mark for the top row of tiles. If the cut tiles at the tub edge will be less than half the height of a full tile, move the top row up half the height of a tile. Note: If tiling to a ceiling, evenly divide the tiles to be cut at the ceiling and tub edge.

B. Installing the tile



1 Using a dimensional layout drawing, locate the point on which a horizontal and vertical grout line will fall. Hold a 4-foot level on both planes and mark reference lines. Then snap layout grids whose dimensions equal the width of the tiles and grout joints.

2 Tack a batten on the bottom of the wall, if necessary *(page 106)*, and prepare enough adhesive to cover the number of layout grids you can lay before the adhesive begins to set up. Set field tiles on the back wall first. Don't set tiles around fixtures yet.

3 When the back wall is done, set the side walls. Start from the front, leaving cut tiles for the back edge at the corner of the adjoining wall. Tape the tiles if necessary to hold them in place *(page 106)*. Remove excess adhesive from the joints; let it cure.

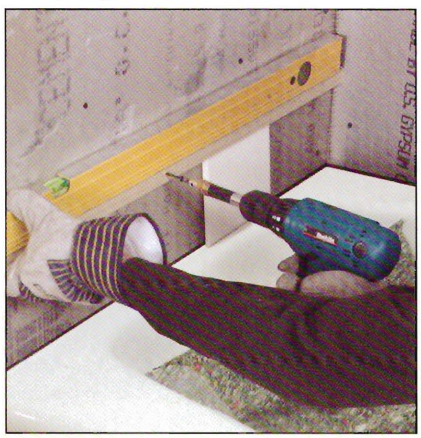
STANLEY PRO TIP

Cut the corners

Cut the tile at the corner of the tub carefully. This cut can be somewhat tricky, so it's best to lay out the curve on a cardboard template and transfer the line to the tile. Make relief cuts and bite out the curve with nippers.

TACK A BATTEN

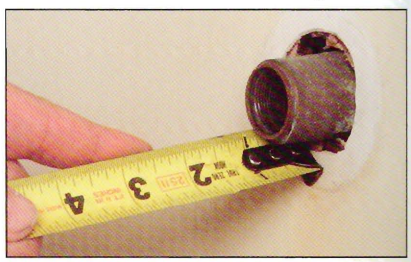
Keeping the tiles level



To keep the first row (and all that follow) level, tack a 1× batten to the backerboard one full tile width above the tub. Cover the tub with heavy paper to protect it from damage it might incur as you tile the wall.

REFRESHER COURSE

Measure the thread length

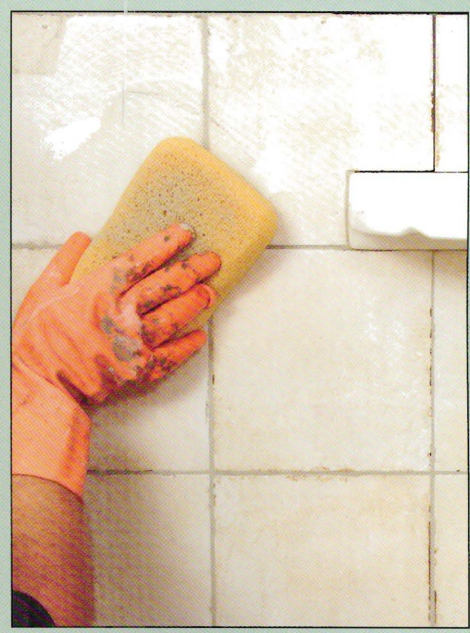


If you are tiling over existing wall tile or installing new tile with backerboard, the combined thickness of the new materials may exceed the length of the threads on the faucet valves. The threads of the valves need to extend beyond the new wall.

Before you install any tile, measure the depth of the threads. If they are less than the thickness of the new materials, you'll have to install new faucets—a job best left to a plumber.

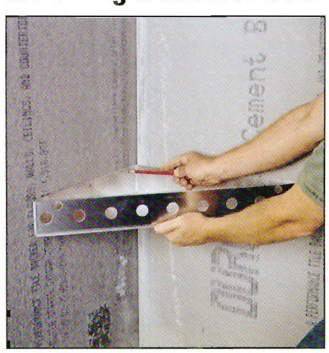
4 When the adhesive has dried overnight, cut and set the edge tiles and remove excess adhesive from the joints. Then mark, cut, and install the tile around the showerhead and faucets. Leave at least ¼ inch around the fixtures and fill that recess with silicone caulk. Let the adhesive cure.

5 When the adhesive is dry, clean the surface and joints of any remaining excess. Mix grout and apply it with a grout float, forcing it into the joints in both planes. Let the grout cure until a damp sponge won't lift the grout out of the joints.

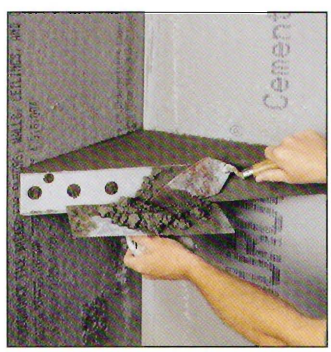


6 To scrape excess grout off the surface, hold the float almost perpendicular to the tile and work diagonally to avoid pulling the grout from the joints. Dampen a sponge, wring it out thoroughly, and clean the surface twice, smoothing the joints. Scrub off the haze with a clean rag.

Installing a shower bench



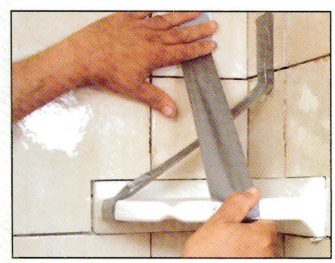
1 Set the bench against the walls in its location and mark mounting holes. Drill mounting holes completely through substrate. Attach the bench form with screws, then remove the screws and fill the fastener holes with adhesive caulk. Refasten the bench to the wall.



2 Caulk all the edges at the wall with silicone caulk. Apply stiff mortar to completely fill the bench. Slope the mortar from the back to the front, packing it tightly.

3 Pack mortar into the bench form, filling any voids. Tile the bench before you tile the walls. Use bullnose for the edges or round the edges of field tiles with a masonry stone.

Installing surface-mounted fixtures



When you set the wall surface, leave a space for surface-mounted accessories, such as soap dishes, cutting the tile around it if necessary. Use a margin trowel to apply mortar to both the recess and the back of the accessory and press the unit into place. Keep it centered with wedges. Tape it in place until the mortar dries, then caulk the joint.