HOW-TO BOOKLET #3025

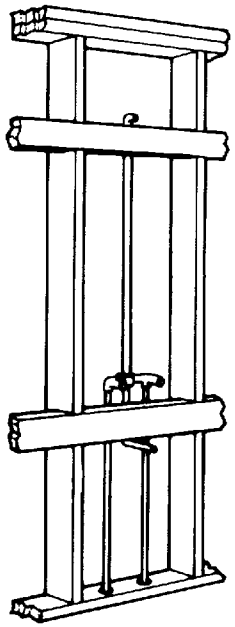
INSTALL SHOWER

TOOL & MATERIAL CHECKLIST

- ❑ Silicone Caulking Compound
- ❑ Framing Materials
- ❑ Pipe
- ❑ Pipe Assembly Materials
- ❑ Tape Measure
- ❑ Shower Components
- ❑ Drill/Bits
- ❑ Pipe Fittings
- ❑ Hammer
- ❑ Wrench Assortment

Read This Entire How-To Booklet for Specific Tools and Materials Not Noted in the Basics Listed Above.

Fig. 1



Framing detail shows configuration of shower head and faucets after completion.

There are three basic shower installations: in an existing bathtub, a pre-formed tub/shower combination, and pre-fabricated or custom-built separate facility. But before undertaking any of these installations, it is suggested that you carefully read How-To Booklets #3012, #3013, #3014, and #3024.

NEW SHOWER IN AN EXISTING TUB

In this installation, the bathtub is already in position and is serviceable. You simply want to install an overhead shower, and wall surrounds, and then connect it to existing plumbing. To do this, proceed as follows.

1. Turn off the water supply at the main shutoff valve. Disassemble the hot and cold water valves above the bathtub. You probably will have to use a screwdriver to remove the escutcheon hiding the assembly in which the faucets are housed. Back out the valves with an adjustable wrench. Now remove the bathtub spout; it usually unscrews counterclockwise. Remove the wallcovering (probably gypsum board) above the tub where the tub's hot and cold water and drain pipes are located. Carefully break into the wall to locate the pipes and then peel off the wallboard. Cover the bottom of the tub and the bathroom flooring with cardboard or a cloth dropcloth. Remove the nails and sticking debris from the edge of the studs to accept the new surrounds or wallcovering later on.

2. Between the studs you will see the piping for the bathtub–a hot water pipe on the left and a cold water pipe on the right. In the center will be another pipe in which the bathtub spout was attached. The supply pipes will have 45-degree elbows to which the faucet housing is attached. Remove the elbows. Then remove the center pipe that runs to the bathtub spout. You now should have two pipes sticking straight up through the floor or a similar configuration.

3. About 78-1/2" above the floor level bridge the studs with a piece of 1x4 and nail this board to the studs. The blocking will be used to support the shower pipe and shower head (**Fig. 1**).

4. Attach a combination water supply and shower faucet housing to the water supply pipes. Then reposition the pipe in the housing for the bathtub spout assembly. You will need a supply pipe for the shower head at the top of the supply pipe. Use a 45-degree elbow at this point, and have the projecting pipe long enough to go through the wallboard covering, which you will install later on.

   You will need a new bathtub spout with a diverter valve in it. The diverter valve is activated by pulling up on a lever on the spout; the water is then "diverted" up the shower water supply pipe.

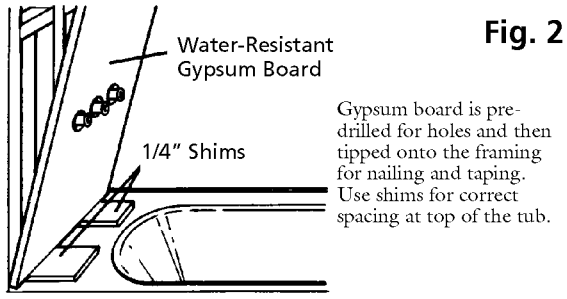


Fig. 2

Gypsum board is pre-drilled for holes and then tipped onto the framing for nailing and taping. Use shims for correct spacing at top of the tub.

5. Attach the faucet, bathtub diverter spout, and shower heads to the piping. Then turn on the water and the faucets to test the system. If you find any leaks, make repairs at this point; the system must be absolutely watertight.

6. Turn off the water at the main valve once again and disassemble the faucets and bathtub spout. Fit and mark the wall board panel to cover the wall, locating the holes for the shower head and faucets (**Fig. 2**). The holes will have to be a tad oversized to go over the fittings. Don't be alarmed. Escutcheon plates over the shower head and faucets will cover the holes. Water-resistant gypsum board is recommended for the wall covering. It is known in stores as greenboard. Nail the panel to the studs; you do not have to tape the joint–if the joints fit tight–since the tub area must be covered with ceramic tile to make the shower area watertight. Do not use the shower until the tile is in position. Water will ruin the gypsum board panels and you will have to replace them.

   Once the panel is fastened into position, install the faucets and spout. Turn on the water for just a second or two and test the system. Dry the gypsum board with toweling and tile the walls to complete the job.

INSTALLING BATHTUB WALL SURROUNDS

Surround panels are often used in place of ceramic tile. They are made of polyester-reinforced fiberglass finished with a tough, abrasive and stain resistant polyurethane coating. This wall system is designed for easy installation with any conventional 5' bathtub no wider than 32" front to back, or 57" to 60" in length. The system is universal so it can be installed with either a righthand or lefthand draining bathtub. The tub surrounds can be installed over any solid, firm surface such as drywall, plaster, plastic, or ceramic tile. To install tub surround, proceed as follows:

1. Measure the exact position of the fitting outlets and mark the positions on the appropriate end panel with a pencil.

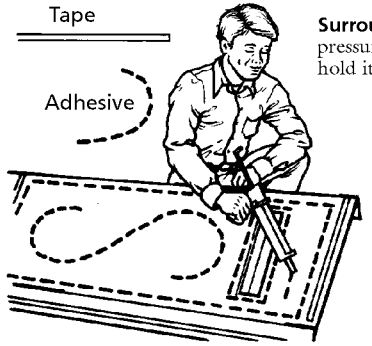
CAUTION: The end panels are not interchangeable. Be sure you are marking the correct panel. Use a drill, hole saw, or saber saw to cut holes 1/2" larger than the diameter of the fittings.

2. Place the panel in position and check the fit at the tub rim and the corners. Mark the correct position with a vertical line on the back wall.

3. Apply the special adhesive to the end panel as shown by the dotted lines in **Fig. 3**. Keep the adhesive 1" from both the tape and panel edges. Remove the paper covering from the pressure sensitive tape.

4. Carefully line up the panel along the vertical line you have just drawn and swing the panel into position as you would close a door. Press the panel firmly to the wall, making sure all tape and adhesive is in good contact with the wall. Repeat the procedure for the other end panel.

5. Position the center panel on the back wall midway between the end panels and mark the position on both the panel and wall with a pencil as shown in **Fig. 4**.



Surround panels have pressure sensitive tape to hold it in position.

Fig. 3

6. Apply the adhesive to the back of the panel, adding a circle of adhesive around the soap dish area. Remove the paper covering from the pressure sensitive tape. Using a pencil line as a guide, hang the center panel on the end panels at the top and press firmly to the wall, starting at the top center of the panel, and continuing down and out toward the sides.
7. Apply a bead of caulking around the tub top, and along the top edge of the panels, following the instructions on the tube. The front edge and overlapping seams can be caulked if desired, but is not necessary for a watertight seal.
8. Matching panel apron strips are usually provided to finish the walls below the end panels when the panels extend beyond the front edge of narrower bathtubs. Cut with a jig or saber saw to make a perfect fit to the bathtub apron. After you are satisfied with the fit, remove the paper backing from the pressure sensitive tape and position the strips on the wall.

INSTALLING A TUB/SHOWER COMBINATION

You can remove the bathtub and install a combination tub/shower unit in its place. Or, you can install the unit from scratch. The techniques are similar for both. But before you purchase a pre-fabricated tub/shower unit, make sure that you can get the unit through the bathroom door and the entrance door to your home. The installation itself is as follows.

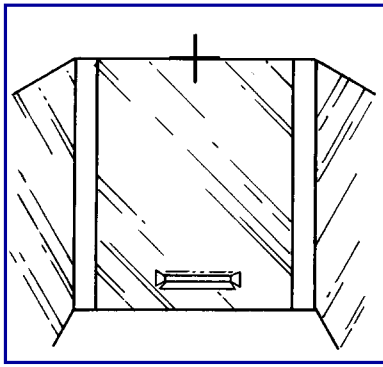


Fig. 4
Marking the center panel

1. Build the walls for the unit, using 2x4 framing with the studs placed 16" on center. Then install the piping and the drain. Instructions with the kit will give you the right measurements for pipe/drain locations. If not, you will have to measure them, using the unit for a guideline. If the unit is one-piece, leave off the two outer studs on the wall until the unit is in position. This will give you room to fit the unit perfectly in position. To help soundproof the tub/shower area, we recommend that you insulate between the studs with foil-faced insulation batts (**Fig. 5**). Slice the foil with a utility knife in several spots to let moisture vapor through.
2. On the unit, mark the spots for the faucets and diverter valve spout, spout nipple, and shower pipe. You may be able to do this by fitting the unit in position. If not, measure and mark the hole locations and then drill them through the proper panel. Drill pilot holes—especially in fiberglass–and go easy with the final drilling. Fiberglass is brittle.
3. Install the water-resistant gypsum board (greenboard) on the framing and, if the unit does not go from floor-to-ceiling, the wallboard joints will have to be taped since part of the wall will show. It is best to set the unit against gypsum board for sound conditioning purposes, although you don't have to do this.
4. Tip the tub/shower enclosure into position from the foot end (**Fig. 6**). Then locate the openings on the other end and nail in the two studs you left out for positioning. If you can, jockey the unit so the bottom of the front flange of it sets across the opening of the framework. Lower the other end of the unit, and flush it against the back of the opening (**Fig. 7**).

   If the unit is in four pieces, install the tub first. Then caulk the channels with sealer (if the tub has channels), and fasten the enclosure walls to the tub and to each other. You may need wooden shims to level the unit before you fasten it in place. Level at this point.
5. Drill pilot holes and fasten the enclosure to the studs with roofing nails, usually, unless the manufacturer specifies otherwise.

   The kit may have trim pieces that go between the enclosure to the wallboard. If so, fasten these on. If not, you can cover the vertical flanges by covering them with wallboard or gluing and tacking a pre-fitted piece of wallboard over the flanges to hide them.

INSTALLING A STALL SHOWER

There are two basic choices when it comes to installing a new shower: buying a pre-fabricated shower stall unit or building a custom-made stall from scratch. Three types of ready-made shower stalls are available:

Freestanding Units. A shower that is freestanding can be installed in a corner, along a wall, or even away from any walls. They come in a variety of sizes, shapes, and either plastic or metal, including 32" or 36" squares, corner units with a rounded or angled front, and circular units for installation away from walls. Most are available in sections (fixtures not included) and need to be assembled.

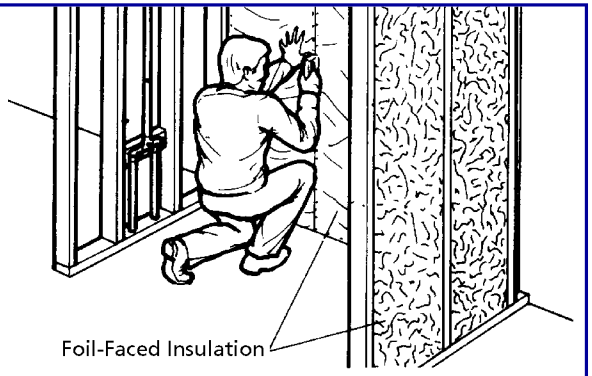


Fig. 5
Frame walls and add insulation to deter escaping sound from shower.

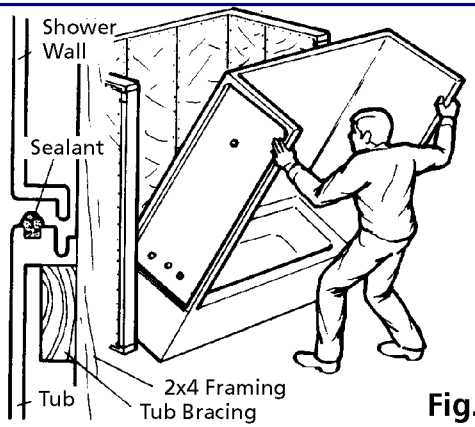


Fig. 6

Put enclosure into framing, locate openings, and then nail in end studs. Set enclosure on front edge and "walk" it back.

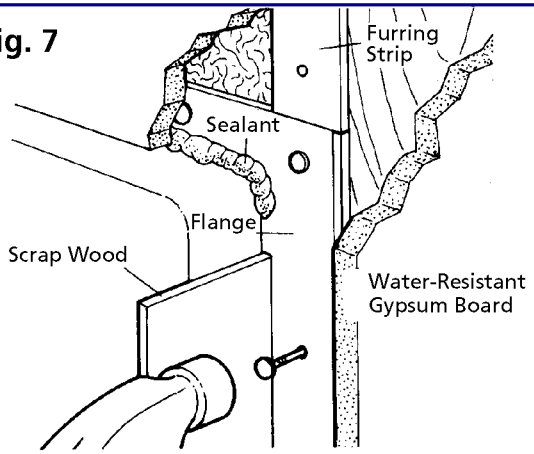


Fig. 7

Nail flanges of enclosure to framing, protecting enclosure with piece of scrap wood. Fill channels and joints with plenty of sealant.

One-Piece Alcove. This type of shower stall is molded from fiberglass and must be installed in a framed opening. Some are square, with either 32", 36", or 40"on each side. Others are rectangular, usually 32" x 48", or five-sided corner units, either 36" or 40" on the long sides. Before purchasing this type, be sure you can get it through the house and into the bathroom.

Sectional Units. These units come three-piece or five-piece shapes, and can be purchased with a shower pan, or without one if you are using the stall for an existing shower. The sections can be carried through any doorway.

The advantage of pre-fabricated shower stalls is their simplicity of installation. In fact, they are installed in basically the same way as the tub/shower combination previously described. After completing the framing (**Fig. 8**), follow the manufacturer's instructions for measurement and installation.

INSTALLING A CUSTOM-MADE SHOWER

A shower built from scratch offers greater choices of size, shape, color, and materials, but also takes more time and effort. To construct a custom shower stall, proceed as follows:

1. Build the framing–2x4s–to enclose the shower which should be 36-3/16" x 36" maximum. This size may be determined by the size of the shower pan that you buy (**Fig. 8**).
2. Install the plumbing. The drain for a 36" shower must be 18" from the back wall and centered between the side walls. If the shower will go on a concrete floor, a recess must be cut in the floor.

   The openings in the shower pan will hold molded-in drains that are supplied with the kit. The openings and their sizes will differ, depending on whether the floor is wood or concrete. The waste line should extend 1/2" above the subfloor or the concrete slab.
1. Install the shower pan after you check codes to see if oakum and lead are required. If the code is out of date, that method of sealing the drain will be required, and the 1/2" projection of the drain line is okay. If the code permits and you are installing a kit, use a plastic seal that is packaged with the shower.

   Nail the pan to the studs with No. 6 x 1-1/2" large-headed roofing nails, after the pan has been leveled with cedar shingle shims.
3. Install the shower faucets and shower head. Connect the pipes to the water supply and turn on the water at the main supply valve where you turned it off. For just a second, turn on the shower. Then check the pipes and drain for leaks. If you spot trouble, make repairs at this point. Then remove the valves and the shower head.
4. Measure, mark, and cover the wall framing with water-resistant gypsum board (green-board) and tape the joints above the shower head level. Cut the openings in the gypsum board for the fixtures and replace them. Escutcheons will cover the holes, which will be slightly enlarged to fit the faucet stems and shower head.

   To complete the project, tile the walls with ceramic tile. Or, you can use plastic panels that are cemented or mechanically fastened to the wall and trimmed with molding. The panels should have gypsum wallboard backing.

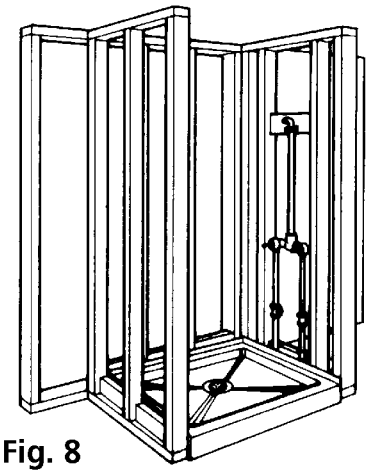


Fig. 8

Typical framing detail for shower stall