SATURN

RESOURCE MANAGEMENT

11.4.2 Mobile-Home Sidewall Insulation

SWS Details: 4.0202.3 MH - Fiberglass Batts; 4.0202.4 MH - Blown Fiberglass; 4.0202.5 MH - Blown Fiberglass Through Penetrations

The sidewalls of many mobile homes aren't completely filled with insulation. This reduces the nominal R-value of the existing wall insulation because of convection currents and air leakage. Consider the following steps for adding insulation to partially filled mobile-home walls.

Sidewall-Insulation Preparation

See "Fiberglass Batts and Blankets" on page 105.

1. Select fiberglass insulation that has a flame spread and smoke development index of 25/450 or less.
2. Check the interior paneling and trim to make sure they are securely fastened to the wall. Remove objects from the interior surfaces of the walls being insulated. Repair holes in interior paneling and caulk cracks at seams to prevent indoor air from entering the wall.
3. Note the location of electrical boxes, wire, to avoid contacting them when you push the fill tube up the wall. Don't insulate next to heat-producing devices like wall heaters.
4. Remove the bottom horizontal row of screws from the exterior siding. If the vertical joints in the siding interlock, fasten the bottom of the joints together with $^1/_2$-inch sheet metal screws to prevent the joints from coming apart. Pull the siding and existing insulation away from the studs, and insert the fill tube into the cavity with the point of its tip against the interior paneling.
5. With 4-by-8 wood siding, drill holes in the exterior siding around the perimeter of the home, parallel to the bottom plate an equal distance apart. Locate the holes under the lowest window sill.
6. For vinyl or metal lap siding, remove a piece of siding near the bottom of the wall. Carefully drill or cut holes in the sheathing to access the cavity.

Batt-stuffing walls: Installers use a flexible plastic plank to stuff a fiberglass batt into an empty or partially filled wall cavity. Installers remove screws from the bottom of the siding. Joints between sheets usually remain locked together during batt-stuffing.

Stuffing Fiberglass Batts into Wall Cavities

Batt stuffing can be a fast and efficient wall-insulation method for older homes with metal siding. Stuffing won't work on every home or in every stud cavity, so you must blow insulation into those un-stuffable wall cavities.

Most batt stuffers are made of clear polycarbonate plastic. Insulators often bend the top of the plastic sheet to make the batt travel better up the wall.

1. Remove the bottom row of screws from the metal siding. If necessary, remove the screws from that attach the siding to the bottom-most belt rail. This can create additional room to stuff the batt if needed.
2. Drive a self-drilling sheet-metal screw into the bottom of each vertical siding joint to prevent these clinched

joints from separating during the batt-stuffing process. The joints can be difficult to rejoin.

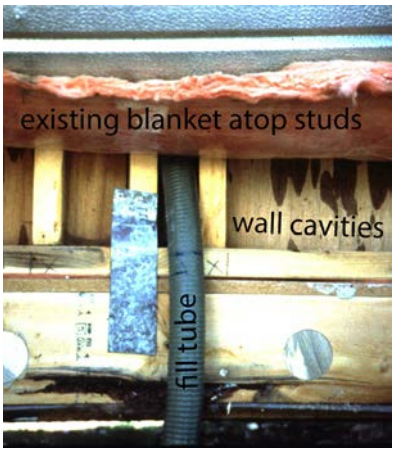
3. Lay a batt on the ground, and place the batt stuffer on top of the batt. Allow the batt to overhang the stuffer, and fold the batt over the stuffer approximately one foot or less.
4. Clamp the batt to the batt stuffer with your gloved hand and place the stuffer and the batt into the bottom of the stud cavity. The batt stuffer hangs out the bottom of the wall.
5. Use one hand to push from the batt stuffer's bottom and the other hand to hold the batt and stuffer steady as it moves up the wall to the top plate.
6. Remove the batt stuffer and force the extra batt into the bottom of the cavity or cut it off.
7. Refasten the siding, using thicker or longer screws if necessary.

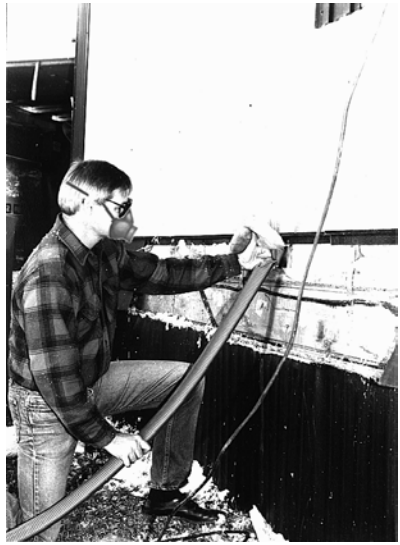
Blowing Fiberglass into Walls

Follow these procedures to blow insulation into the cavities.

1. Push the a flexible fill tube up into the wall cavity until it hits the top plate of the wall. The tube should go in to the wall cavity 7-to-8 feet. Insert the tube so that its natural curvature presses its tip against the interior paneling. When you press the angled tip of the fill tube against the smooth paneling, it is unlikely to snag the existing insulation on its way up the wall. If the fill tube hits a belt rail or other obstruction, twisting the tube helps its tip move past the obstruction.

2. Stuff a piece of fiberglass batt into the bottom of the wall cavity around the tube to prevent insulation from blowing out of the wall cavity. Leave the batt in-place at the bottom of the wall, when you pull the fill tube out of the cavity. This piece of batt acts first as temporary gasket for the hose, and second to insulate the very bottom of the cavity after you remove the hose. This batt also eliminates the need to blow fiberglass insulation all the way to the cavity's bottom, preventing possible spillage and overfilling. If you happen to overfill the bottom of the cavity, reach up inside the wall to pack or remove some fiberglass insulation, particularly any that lies between loose siding and studs.
3. Pull the tube down and out of the cavity about 6 inches at a time. Listen for the blower fan to indicate strain from back-pressure in the wall. Watch for the fiberglass insulation to slow its flow rate through the blower hose at the same time. Also watch for slight bulging of the exterior siding. These signs tell the installer when to pull the tube down.
4. Carefully refasten the siding using the same holes. Select screws that are slightly longer and thicker than the original screws. Repair sheathing, if present and if damaged, with similar material and compatible sealant.





Adding insulation to mobile-home walls: A contractor uses a fill tube to install more insulation in a partially insulated mobile-home wall.