UltraTouch™ Denim Insulation

# INSTALLATION INSTRUCTIONS

## UltraTouch™ Denim Insulation — Unfaced Batts

**UltraTouch Denim Insulation™** is easy to install and does not require a certified installer. Wherever insulation is installed in a building, it is very important that it fits snugly on all sides. If the insulation is too long for a space, cut it to the correct size. If it is too short, cut a piece to fill the void. For our unfaced batts, simply friction fit the insulation into the cavities.

### PERSONAL PROTECTIVE EQUIPMENT

Safety glasses with side shields are recommended to keep dust out of the eyes. Use ear protection (earplugs, hood, or earmuffs) to prevent airborne dust or fibers from entering the ear, if necessary. Leather or cotton gloves should be worn to protect against mechanical abrasion. Optional: wear a NIOSH-certified disposable or reusable particulate respirator with efficiency rating of N95 or higher *(per 42 CFR 84)* except required when dust or fiber concentrations exceed the applicable exposure limits of dust 15 mg/m3.

### RE-ENTRY AND OCCUPANCY TIMES

The area(s) used during and after installation of UltraTouch Denim Insulation may be used by other trades or occupants. There are no time restrictions for re-entry into the area.

### SITE PREPARATION

Other trades, including but not limited to, electrical, plumbing, and mechanical should have already installed their required materials prior to UltraTouch Denim Insulation being installed. Proper air sealing should be complete prior to batt installation to insure full performance of the recycled denim batts. Verify all holes and seams between sheet goods such as drywall, sheathing, and subflooring at the building envelope are sealed with durable caulk, tape, and/or foam sealants.

### INSULATING CEILINGS:

Ceiling insulation provides important sound control between floors in your home. Properly insulating the ceilings will make your home a more peaceful and quiet place because it will help ensure that footsteps and other sounds do not migrate to other rooms.

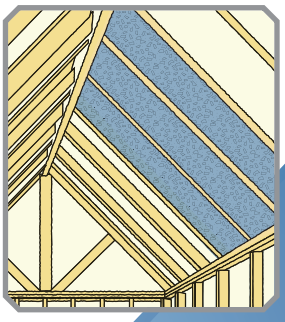
### How to install UltraTouch Denim Insulation in ceilings:

1. Seal around all penetrations in band joists. Any walls that leak water must be repaired before insulating.
2. Caulk where wiring runs through the ceiling joists and around the top of the wall.
3. Gently press the insulation between the joists. When using unfaced batts, allow friction to hold the insulation in place (called "friction fit method"). If a vapor retarder is used, staple it across the unfaced batts. Check to make sure there are no openings where moisture can escape. In attic installations, make sure the insulation completely covers the top plate of the outside wall at the end of each joist run. However, it should not block the flow of air from the eave vents. When installing UltraTouch Denim Insulation in vented attics, a baffle must be installed adjacent to soffit and eave vents. Baffles must maintain an opening equal or greater than the size of the vent and should extend over the top of the attic insulation. The baffle can be of any solid material.

### How to install UltraTouch Denim Insulation in cathedral ceilings:

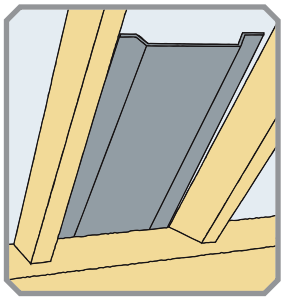
Sloped, vaulted, and cathedral ceilings are different names for essentially the same ceiling construction. Considering there is little or no attic space separating inside and outside air, proper insulation is especially important. Many cathedral ceilings will require that insulation be installed around recessed light fixtures. There are some important safety measures you should be aware of while working with insulation around light fixtures. Please pay specific attention to item #4 in the following instructions.

1. Caulk where wiring runs through the ceiling joists and around the top of the wall.
2. Staple prefabricated vent chutes between joists with one end over the wall top plate. Vent chutes ensure there is at least 1" of space between the roof sheathing



and insulation, allowing vapor water to flow out and to cool the roof. Depending on your house, vent chutes may be placed only at the soffit areas or run all the way up to the ridge line.

3. When using unfaced recycled denim insulation, place it between the joists and gently press into position allowing friction to hold it in place.



4. Be sure to keep insulation at least 3" away from recessed lighting fixtures, unless the fixture is IC rated. Also make sure that all insulation is installed a minimum of 3" away from any metal chimneys, gas water heater flues or other heat-generating sources.

## INSULATING EXTERIOR WALLS:

An exterior wall is any wall that faces outside or otherwise separates conditioned spaces from unconditioned spaces. These walls should be thoroughly insulated in order to create the all-important thermal envelope around your living space. Properly insulated exterior walls make all the difference between a comfortable, energy-efficient home and a drafty one.

Take time to fit the insulation carefully so heat cannot escape in the winter and the inside stays cool in the summer. A good, tight insulation job saves energy, saves money, and protects your home for the future.

### How to install UltraTouch Denim Insulation in exterior walls:

1. Place an insulation batt into the wall cavity, making sure that it is the correct size and fits snugly at the sides and ends and does not protrude in the back.

2. If the batt is too long, cut it to fit properly. Don't double it over or compress it. Use a sharp utility knife and straightedge. Cut batts on a smooth, flat surface, and cut them about 1" larger than the framing cavity. If the insulation is too short, cut a small piece sized to fill the gap.
3. Fill in any narrow gaps between joists by forcing pieces of unfaced insulation into the gaps with a screwdriver or putty knife.
4. To control air leakage, apply caulk or foam sealants around openings like window and door frames and any openings where wires or pipes go through the exterior wall.

### Optional — Vapor Retarder installation:

1. To apply the vapor retarder, start at the top plate in one corner of the room.
2. Pull the retarder tight and staple at least every 12 inches.
3. Drive staples at the center of every stud and around openings, working around the room.
4. Overlap the sheets by one complete cavity to minimize leakage. Then staple evenly through, fastening both sheets to the studs at 1 to 2-foot intervals.
5. Pull the retarder tight along the sole plate and staple in the same manner, making sure the staples are driven flat, flush to the stud surface.
6. Trim retarder from covering windows, doors and electrical boxes.

## INSULATING BASEMENTS & CRAWL SPACES

Basement walls and walls in unvented crawl spaces should be insulated to help prevent substantial heat loss. (A crawl space is an unfinished, accessible area below the first floor of a building. An unvented crawl space is part of the basement while a vented crawl space opens to the outside.) UltraTouch Denim Insulation is an excellent choice for installation in finished basements and vented/unvented crawl spaces.

### Installing UltraTouch Denim Insulation in finished basements:

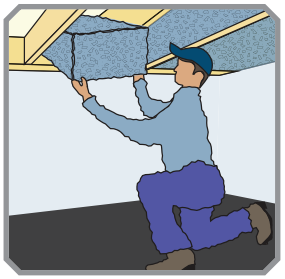
Basement walls provide a unique challenge to be properly insulated, as they are typically constructed out of masonry materials. UltraTouch Denim Insulation is friction fit batt insulation, and therefore requires framing cavities to be created for proper installation.

1. When insulating masonry walls, it is essential to ensure that the masonry has been sealed or waterproofed to prevent any moisture penetration.

2. Once the walls have been sealed, framing cavities should be constructed for proper fitment of UltraTouch Denim Insulation. Choose cavity sizes that are appropriate for the insulations sizes, such as 16" on center or 24" on center. The framing should consist of top/bottom plates as well as vertical studs spaced as described above.
3. Once the framing cavities have been constructed, please refer to instructions for Insulating Exterior Walls found on page 2 of this document.
4. Vapor barrier usage is not recommended for below-grade masonry wall installations.

## How to install UltraTouch Denim Insulation in vented crawlspaces:

If the sub-floor is already in place, the insulation is installed from below, much as it is installed in ceilings.

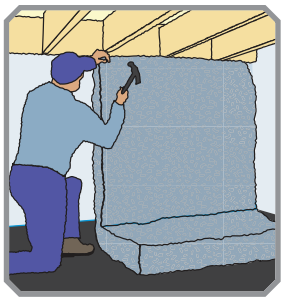


1. Prior to installing the batt insulation, fit a separate vapor retarder into the cavities, in direct contact with the sub-floor.
2. Proceed with a friction fit installation of the batt into the cavities. Insulation should be secured to floor joists or crawl space cavities in the same manner as floor applications, using either a mesh or wire support system.

## Installing UltraTouch Denim Insulation in unvented crawlspaces

In an unvented crawl space, the general rule is to insulate the perimeter walls. This will eliminate the need to separately insulate water pipes and heating ducts.

1. Cover the ground with sheets of 6-mil plastic film. The sheets should overlap each other by approximately 12 inches and extend a minimum of 6 inches up the walls.
2. Tape the film in place at the walls and hold the seams in place with tape, scrap lumber, or rocks. After the ground is covered, you're ready to install the insulation.
3. Locate the header joists, which run across the ends of the floor joists. Measure and cut pieces of unfaced insulation and place them against the header joists between each floor joist. Completely fill the spaces enclosed by the sub-floor, sill, and floor joists.



4. Install lengths of standard batts or the wider basement blanket insulation to the sill using furring strips to nail the insulation to the edge of the sill plate. The insulation should be cut long enough to hang down the wall and extend two feet into the crawl space. It can also be installed horizontally in the same manner.
5. Anchor the insulation as close as possible to the wall where it meets the ground using 2x4s.
6. Locate the stringer joists, which run parallel to floor joists. Position an insulation blanket against the underside of the sub-floor and staple or nail it directly to the stringer joist. Or you may attach the blanket to the top of the sill, and wedge smaller pieces between the sill plate and sub-floor. (This technique takes longer, but provides better thermal protection at the joist.) The insulation should be cut long enough to hang down the wall and extend two feet into the crawl space. It can also be installed horizontally in the same manner.
7. Anchor the insulation as close as possible to the wall where it meets the ground using 2x4s.
8. Make sure all pieces of insulation are tightly butted together. Be sure they fit snugly, without gaps between them. Taping is not usually necessary. An alternate way of fastening basement blankets to the walls in crawl spaces is using a Hilti-type gun to drive the fasteners into the concrete.

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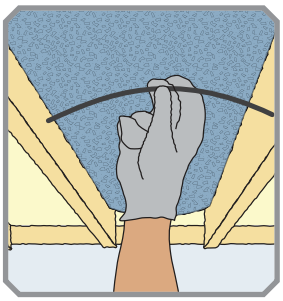
## INSULATING FLOORS:

Underfloor means the floor above an unheated crawl space, garage, porch or basement. Once the undefloors are properly insulated, you will increase the overall comfort and energy efficiency of your home because underfloor insulation provides valuable sound control and thermal control. The procedure for installing insulation in underfloors is similar to installing ceiling insulation.



1. Caulk where wiring runs through the floor joists and around the top of the wall.
2. Prior to installing the batt insulation, fit a separate vapor retarder into the cavities, in direct contact with the sub-floor.
3. Gently press the insulation between the joists. Allow friction to hold the insulation in place.

The easiest and most effective method of holding insulation in place is to use straight, rigid wire fasteners (preferably galvanized), with pointed ends. The fasteners are made for joist spacing of 12, 16, 18, 20 and 24 inches, and may be used against wood, metal or concrete.

The fasteners, which are slightly longer than the joist spacing, are placed by hand between the joists and bowed upwards into the insulation, causing the insulation to be in contact with the subflooring. Install the fasteners so they hold the insulation in contact with the subfloor but avoid unnecessary compression. Spacing of fasteners is as required to prevent sagging of the insulation, normally 12–24" apart and not more than 6" from ends of the insulation.

## SPECIAL INSTALLATION TIPS & TECHNIQUES:

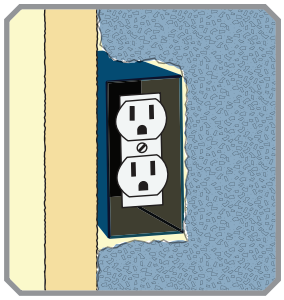
### Installing insulation around Heat-producing Surfaces:

Keep all insulation at least 3" away from combustible sources such as chimneys, non-IC fixtures and heated flue pipes. (furnace, water heater, etc)

### Insulating around Electrical Boxes:

Installing insulation around junction boxes that house electrical receptacles and switches, and around wiring in walls and ceilings requires some special techniques. When cutting insulation around wiring, be sure to keep your utility knife clear of the wires.

### Junction Boxes:



1. Hold the insulation up in the wall cavity and check where the junction box lines up.
2. Cut a notch in the insulation for the junction box. Place that cutout of insulation behind the junction box, and then insert the rest of the batt in the cavity.

### Wiring in Walls:

When electrical wiring passes through a stud cavity, split the insulation with a utility knife and fit half in front of and half behind the wire so that the wire is nested inside the insulation. If the wiring is located close to the inside surface, then press insulation behind the wiring.

### Wiring in Ceilings:

Insulation should be placed between electrical wiring and the ceiling.

## INSULATING AROUND PIPES & PLUMBING:

In almost any insulation project, you are bound to encounter plumbing pipes in walls and ceilings. It's important to insulate around these obstacles properly, especially in exterior walls where an improper installation could lead to frozen pipes. Remember, in that particular application, the object is to block cold air from the pipes.

You should have no problem tucking UltraTouch Denim Insulation into position. Take your time to ensure that the insulation fills the width of the cavity, and do your best to eliminate gaps wherever possible. Never stress pipes by inserting the insulation too forcefully or tightly.

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In walls where plumbing fixtures are to be placed, insulation must be installed first. Where there is plumbing in exterior walls, install the insulation BEHIND the pipes, between the pipes and the exterior.

To protect pipes from freezing, insulation should never be placed between the pipes and the warm side of the wall. For vented crawl spaces in cold climates where water pipes run through the joists, install insulation below the pipes to protect them from freezing.

## INSULATING AROUND WINDOWS:

Exterior Wall Windows - Apply sealants around all windows. Sealants can eliminate drafts, provide thermal resistance, and keep out moisture, dust and insects. The sealants you will be using are generally of two types: Caulk and Urethane Foam.

CAULK is a paste-like material that cures to a solid state. It is applied with a caulking gun to seal small cracks or gaps. As you apply the caulk to these small spaces, move at a slow, steady pace, forcing caulk into the gap. Smooth excess caulk with your fingertip or a putty knife before it dries.

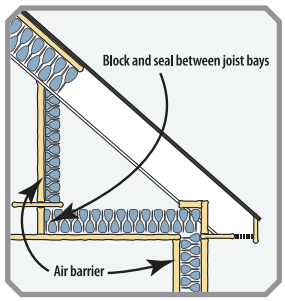
URETHANE FOAMS are liquid materials that expand rapidly as they set to a semi-rigid state. They are used to fill larger gaps and holes. The most common type is available in an aerosol can or a large canister. To apply urethane foam, follow the directions on the label. Place the nozzle over one end of the gap, and then squeeze the trigger while dragging the nozzle across the gap. Because this material will expand, do not overfill the gap. Use small scraps of insulation to fill in the cracks around windows and doors. Separate the insulation from the facing and use a putty knife or screwdriver to work it into spaces between studs or anywhere you can see daylight. This is an important quality step on every job.

### Basement Windows:

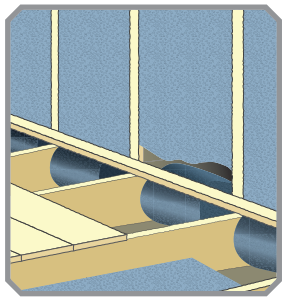
If there are windows in your basement wall, you can make a metal window frame and attach it to the walls around the window. Cut out insulation and tuck it behind the frame to finish. Another method is to attach furring strips to the wall around the windows and staple insulation to the strips, then tape.

### Insulating Knee Walls:

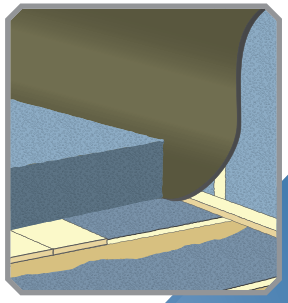
Knee walls are the short low walls that separate conditioned from unconditioned space in a finished attic with sloped ceilings. These attics can be a source of significant heat loss, so they should be thoroughly air sealed and insulated. The typical treatment is to insulate the walls and floors of these cavities.




1. After creating access to each cavity, install baffles to allow ventilation air to flow from the eave vents (if present) up over the horizontal insulation in the floor of the cavity.
2. Also install baffles to allow the air to flow between the roof deck and the insulation in the sloped ceiling cavities (as described for cathedral ceilings).
3. Install blocking under the knee walls to prevent warm air in the floor cavity under the adjacent room from flowing out into the knee wall attic.



4. Install batts in the walls. If using a vapor retarder, the vapor retarder should be installed toward the interior of the home. Friction-fit batts are well suited to this application, since the positioning of the facing makes it difficult to secure the insulation with staples.
5. Install an air barrier material, such as house wrap or foam board across the attic side of the batts and seals all the seams.
6. Install insulation across the floor of the attic. Start installation on one side of the attic, place insulation between the joists and work toward the center. If necessary, push insulation under eaves with a broom handle or long stick.



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### INSULATING AROUND DUCTWORK:

To insulate around heat ducts in ceilings or floors, cover ducts with insulation so the air temperature in the ducts can be maintained more efficiently. In basement ceilings, whenever possible, pull the insulation behind any ductwork.

### INSULATING RECESSED LIGHTS IN CEILINGS AND ATTICS:

Recessed lighting fixtures, as well as fan motors and other heat sources protruding into the ceiling, area potential fire hazard. Building and fire codes require that there be at least 3" clearance from any heat-generating source including: metal chimneys, gas water heater flues, unless the fixture is IC rated. This rating will be clearly marked on the fixture. To ensure that a 3" clearance is maintained, you can install baffles made from, cardboard or sheet metal around the heat source. If there are facing materials, trim them around the baffle to ensure adequate clearance from the fixture.

### INSULATING NON-STANDARD SIZED CAVITIES:

1. Cut or tear the insulation and facing about an inch wider than the space using a sharp utility knife against a safe backstop, such as an unfinished floor or other smooth, flat surface. Always cut on the unfaced side of the batt.
2. For shorter spaces, cut the insulation to fit properly. Do not double it over or compress it.
3. If it takes more than one batt to fill the height of a wall cavity, make sure the two pieces are butted together and fit snugly.

### INSULATING ATTIC HATCHES & PULL-DOWN STAIRWAYS:

Hatches, pull-down stairways and other attic access holes should also be insulated to the same R-value as your attic. Many attics are filled with loose-fill insulation, which does not work for hatches or pull-down stairways. Batt insulation however, can be glued directly to a scuttle hatch.

Pull-down stairways may require a build-up framework to lay batts on and around. If you have pull-down attic stairs or an attic door, seal these similarly: Weatherstrip the edges and put a piece of rigid foam board insulation on the back of the door.

For more information contact:
SECOND SKIN AUDIO
1859 LINDBERGH ST, STE. 200
CHARLOTTE, NC 28208
800-679-8511

or visit us online:
www.secondskinaudio.com