Ceiling System

Staple-up System

Planning and Installation Guide

Choose the Right Installation Method

USG CEILINGS tiles are easy to install. The 12″ x 12″ tiles feature exclusive, self-aligning tongue-and-groove edges, giving the installed ceiling a finished appearance. For most applications, tiles are stapled to 1″ x 3″ furring strips that are attached to the ceiling or to joists.

If you have:

Painted ceilings—If paint and ceiling are in good condition, USG CEILINGS tiles can be adhered to the paint after roughening the surface with sandpaper. Use any good-quality ceiling tile adhesive and follow manufacturer's recommendations. If paint is peeling, furring strips should be installed before tile application.

Cracked ceiling surface—If cracks are minor, follow directions for painted ceilings. If cracks are bad, nail furring strips to joists, then staple or nail ceiling tile to strips.

Open joists—Attach furring strips to exposed joists, then staple or nail ceiling tile to strips.

Old wallpaper—Remove paper carefully and adhere tile to old ceiling. If paper and ceiling are not sound, nail furring strips through ceiling surface into the joists, then apply tiles.

New ceilings—Clean surface carefully to remove dirt and dust, then apply USG CEILINGS tiles with adhesive.

Planning a staple-up ceiling installation

1 Draw the room to scale—Use the graph sheet printed below. Choose a convenient scale, like one square equals one foot. For large spaces, use one square for every four feet. Measure around all walls at ceiling level, including any irregular areas like bays, alcoves, columns, beams and stairwells. Note each dimension on the drawing.

2 Locate room centerlines on the ceiling plan—Draw centerlines and determine distance from each centerline to the wall.

3 Adjust centerlines as necessary to eliminate narrow borders—The wider the border tiles, the better the ceiling appearance. For example, for a 12′6″ x 18′6″ ceiling, counting tiles from the exact center of the room in both directions would result in 12 rows of tile in one direction and 18 in the other, with narrow, 3″ borders. By moving both centerlines 6″, you can create wider, more attractive borders. There are now 11 tile rows in one direction and 17 in the other, with 9″ wide borders.

Estimating Materials

1 Ceiling tile—Count the full-size tiles in the layout. Also determine how many extra whole tiles will be needed to meet partial or perimeter needs.

2 1″x3″ furring strips—Furring strips should run perpendicular to ceiling joists. The first strip should be flush against the wall. The second strip should be at a distance equal to the border tile plus 3/8″. Furring strips then continue across the ceiling at 12″ o.c. Draw the furring strips on the graph and count how many you need.

Important: Use only seasoned kiln-dried softwood to avoid warping. Store in installation area for 24 hours before nailing.

Estimating

Install Your Tile Ceiling, Step by Step

Locate and Mark Guidelines
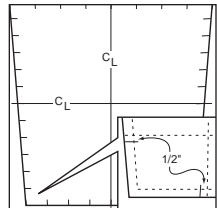
1 Mark centerlines. Mark ends of actual or adjusted centerlines on ceiling perimeter. **Important**: Because you need to compensate for the width of the stapling flange, do not snap chalk lines at the centerlines. Instead, determine the starting corner for your installation. Then, to compensate for the width of stapling flange, re-mark the centerlines an additional 1/2″ away from the starting corner. Snap chalk lines at these adjusted positions.
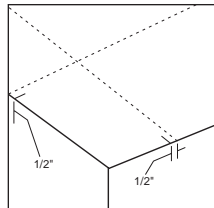
Stapling flanges will align on chalk lines, and the face of tile will be correctly positioned when work reaches the center of the room.
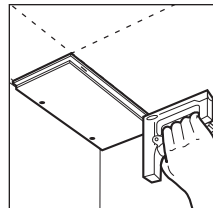
2 Locate guidelines for the starting corner. To locate the position of the guidelines for the two border rows that meet at the starting corner, add 1/2″ to the width of the border tiles, as determined by the layout. Then mark the total distance along the starting edges of the ceiling.
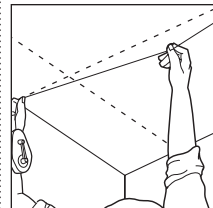
**3 Make sure guidelines are parallel to centerline.** Snap a chalk line to make these starting guidelines.
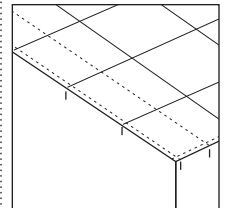
4 Locate center and border guidelines. If you are installing furring strips, mark the position of the center and border guidelines on the wall, about 1″ below the ceiling. After the furring strips are installed, snap chalk lines across the faces of the strips.
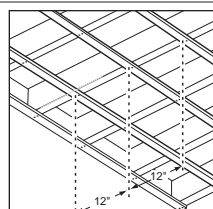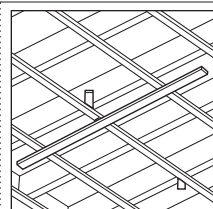
Attach Furring Strips
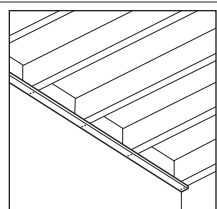
1 Nail the first strip. Always install furring strips perpendicular to ceiling joists. Nail the first furring strip flush against the wall. Use two 8d nails at each joist crossing.
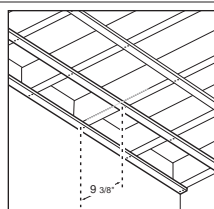
2 Nail the second strip. Position the second furring strip so that the center of the strip is at a distance from the wall equal to the width of the border tile plus 3/8″. For example, if the border tile width is 9″, the center of the furring strip should be 9-3/8″ from the wall.

3 Continue to install strips across the ceiling, 12″ on center. On center, or o.c., is distance between the center of one strip to the center of the next. Stagger strips where possible so that ends do not line up on the same joist. Furring strips should always butt together in the center of a joist, and never in the space between joists.
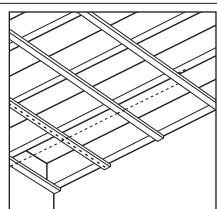
4 Make sure strips are level. Use a long straight edge to make sure furring strips are level. Use wood shims, where necessary, to level.
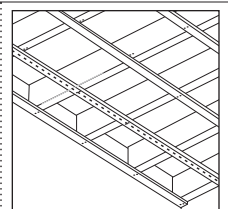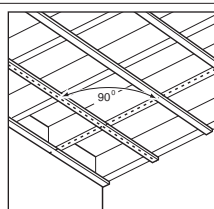
5 Mark starting corner. Select your starting corner by snapping a chalk line down the middle of the furring strip (width of the border tile plus 3/8″).
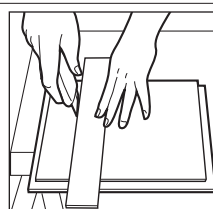
Cut Tile

6 Mark border tile. Measure out from the adjacent wall the length of the border tile plus 3/8″. Mark this point on the second furring strip. Snap a chalk line at this point across the faces of the furring strips.

7 Check chalk lines. Make sure that the chalk lines at the starting corner intersect at exactly 90 degrees.

1 For border rows. Use a saw to cut tiles as work progresses. Always measure dimensions of border tiles on the face side of the tiles. Cut excess material from tongue edge of tile for the two starting border tiles. Cut excess material from the flange edge for the two finishing rows. **Important:** Walls are rarely perfectly square, so border tiles may have to vary slightly in size to accommodate imperfections. Measure for each border tile before cutting.
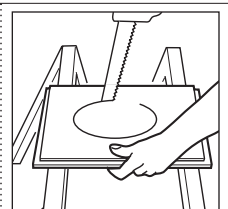
2 For openings in ceiling. Use a coping saw for cuts at light fixtures, pipes, columns, etc. Cut excess material at tongue edge of tile. Cut tile to accommodate light fixtures, pipes, etc.
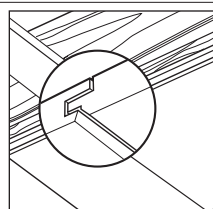
Attach Tile with Staples
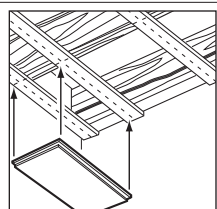
1 Position the first tiles. Place first border tile in starting corner with stapling flanges toward center of room. Align it and succeeding border tiles on chalk line that has been snapped on face of furring strips. Do not align on wall/ceiling angle, since wall may not be straight.
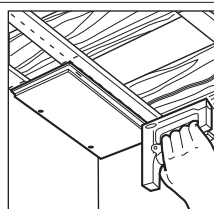
2 Staple the tiles. Hold tile in place and fasten with trigger-type automatic stapler. Drive four staples through the flanges of each tile as shown here. Face-nail wall edges of border tiles with 1-1/8″ 13-ga. blue plasterboard nails with 5/16″ heads, driven close to the wall so that molding will cover nailheads.

When applying tiles, be certain the tongue-and-groove edges are snugly fitted, but not forced together.
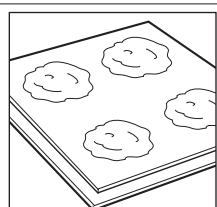
Attach Tile with Adhesive

Before beginning work, check painted surfaces for compatibility with adhesive. Use a good-quality ceiling tile adhesive and follow the manufacturer's directions.
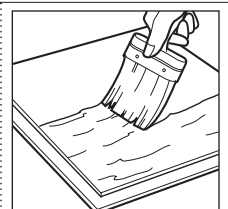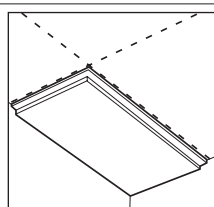
1 Prime tile. Priming ensures good bond between back of tile and adhesive. Use a brush to wipe a thin coat of primer over the back of the tile.

Attach Tile with Adhesives

2 Apply adhesive. Keep adhesive 2″-2-1/2″ from edge of tile. Then apply golfball-sized daubs of adhesive to the spots on the tile. Never apply adhesive to the ceiling.
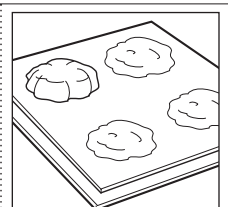
3 Attach the first tile. Place first border tile in starting corner with flanges toward center of room. Press firmly upward, compressing adhesive until tile back is 1/4″-1/8″ from ceiling. Adjust until tile face is level and edges are aligned on guidelines.
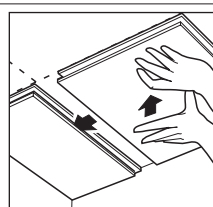
4 Attach the second tile. Put adhesive on tile. Place tile gently against ceiling, about 1/2″ from first tile. Press firmly upward and slide toward the first tile until edges are fully engaged and tile is level. Repeat until ceiling is covered, except for tiles in finishing rows.
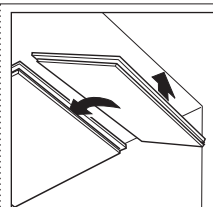
5 Install finishing rows. Apply adhesive to back of cut tile, then lightly engage tongue-and-groove edges and press tile upwards in a hinging motion. Do not slide tile horizontally between preceding row and the wall. **Important:** On uneven surfaces increase the thickness of the adhesive to compensate for the low areas, so that the joints and surfaces of tile will be level. Also, if a tile is in final position and is noticeably below the level of the adjoining one, remove it and add more adhesive. Never pull tile away from the base to create a level joint or surface.
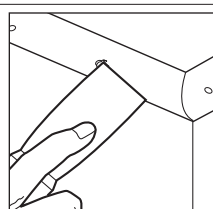
Finish the Ceiling
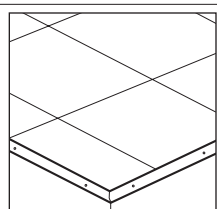
Finish ceiling with molding to conceal the border nailheads and give a finished appearance.
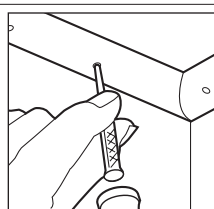
Attach molding with finishing nails driven into studs, not into furring strips.

Countersink nails and finish with a putty stick.