

# Metallaire™ Installation Instructions

## CEILING INSTALLATION INSTRUCTIONS

### NAIL-UP INSTALLATION

**CAUTION:** The edges of the metal panels are sharp! Wear heavy protective gloves when handling the metal panels.

Metallaire™ panels are steel and designed to emulate an antique tin type visual. Periodic “wrinkles” or dents may cause the panel to appear not to be flat; these characteristics add to the antique affect and are not considered manufacturing defects.

### Preparation for Nail-up Ceiling Panel Installation

You may find it beneficial to rent or build scaffolding so you can reach the ceiling comfortably and walk about freely without climbing up and down ladders.

**NOTE:** Metallaire panels come preprimed. Remove protective PVC film before or during installation.

*Installing Metallaire decorative metal panels is a two-person installation;* one person is needed to hold the panel in position and the other person is needed to fasten it.

### Installation of Substrate

#### Plywood option:

Check the joists to see if they are level or flat. To do this, mark a level line around the room using a laser, water level, or carpenter's level. Stretch several strings from side to side using the level line as a reference. Mark where you will fasten 3/8-in or 1/2-in plywood or OSB (oriented strand board) sheets to the ceiling. Measure from the strings to the bottom of the joists. Secure shims to the joists at the points where the plywood will be fastened. This will ensure that the plywood will be level (or flat). The shims you install to level the plywood must be fastened to joists.

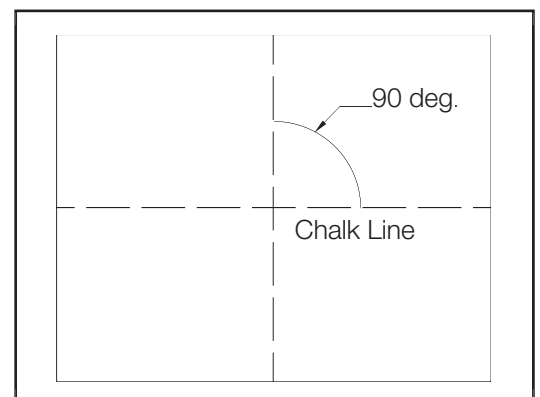
If you are installing over an existing plaster or drywall ceiling, locate the hidden joists by using a purchased stud finder or by tapping on the ceiling until you hear a solid thud. Drive in a nail to ensure you found a joist. Tap to the side of this joist to find the next joist. Joists are usually 16-in or 24-in on center. Find and mark the location of each joist.

### Lay Out the Room

Measure the room to determine the layout of the panels. The metal panels are 24-3/8-in x 48-3/8-in. The 3/8-in oversize measurement is to account for the overlap when panels meet. The full-size decorative metal panels will be installed in the center of the room. You will install border panels along the edges of the room. Border panels have shallower embossing than the decorative panels and form a more attractive interface with the cornice.

The layout should be balanced so the borders on opposite sides of the room are equal. To do this, find the center of the room in both directions. Strike a chalk line in one direction down the center of the room. Find the center of the room in the other direction and strike another chalk line at a 90-degree angle to the first (**See Illustration A**).

Determine the direction you want to run the 2-ft x 4-ft panels in the room. Starting with a full panel near the center of the room aligned with the two chalk lines, measure how much is left at the wall when the last full panel would be installed. If this border is too large or too small, shift the center line half the panel width (or length) short of the center of the room. Do the same in the other direction and shift the other center line if necessary. Resnap the chalk lines to indicate the new “centering.” Use the resulting chalk lines as a guide to install the full panels.



**Illustration A**

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## Wood Furring Option:

Nail furring strips to the ceiling around the perimeter of the room about 1-1/2-in from the walls. Nail furring strips across the joists where the panels will overlap each other every 24-in (check your layout for these locations). Nail furring on 12-in centers between the furring you have already installed. Shim the furring to make it level. Fasten cross furring to the ceiling where the panels will overlap on the ends (again, check your layout for these locations).

## Border Panel Installation

Install border panels first. Once you know the width of the borders on each side of the room, cut and install border panels to reach from the wall to 1 inch past the edge of where the last full panel will be installed along that wall. You can use tin snips or electric sheet metal shears to cut the panels. *Use cone head nails to secure the panels to the plywood or furring strips.*

With the long edge of the border panel against the wall, place the nails close to the wall so that the cornice will hide the nails when it is installed later. Nail the other long edge of the border panels very close to the edge toward the center of the room. The full panels will later hide these nails. Overlap the border panels when they meet by 1/2-in – 3/4-in. Complete the border panel installation around the perimeter of the room.

When the border panels meet each other, there will be high spots on one panel meeting low spots on the other panel. Tap these high spots down using a nail head or small tack hammer.

## Full Decorative Panel Installation

Install full panels starting in the center of the room. Align the edges of the first panel with the perpendicular chalk lines and nail the panel in place. Nail down the center of the panel using cone head nails every 12-in before nailing the edges. Place cone head nails alongside the buttons or raised bumps along the edges to secure the first panel. These nails will not interfere with the overlap of the next full panel.

When the panels overlap, the buttons will fit over each other like a ball and socket. Drive cone head nails *directly through the buttons every 6-in* at the edges of the panels. Tighten any seams that are not closed by tapping against the overlapping edge with a block of wood and a hammer. When four panels overlap at a corner, you might have to predrill a hole through the four layers of metal for the cone head nail.

## Cornice Installation (Used only with nail-up panels)

Install the cornice so it covers an equal amount of the ceiling and the wall. Fasten the cornice to the ceiling with cone head nails driven through the buttons. We suggest that you predrill the buttons on the cornice. This makes it much easier to nail the cornice to the ceiling. If you predrill the cornice, *drill the buttons from the back side*, as the drill will walk off the button if you drill from the front side. It is not necessary to drive cone head nails in the bottom of the cornice. The nails in the top will hold the cornice tight against the wall.

You can make inside corners relatively easy by installing wood blocks (plinths) in the corners of the room so the cornice simply butts against them (**See Illustration B**). They can be made from solid wood or made up from lumber pieced together. No miters or coping necessary. We recommend finishing the wood block the same as the panels to create a pleasing appearance.

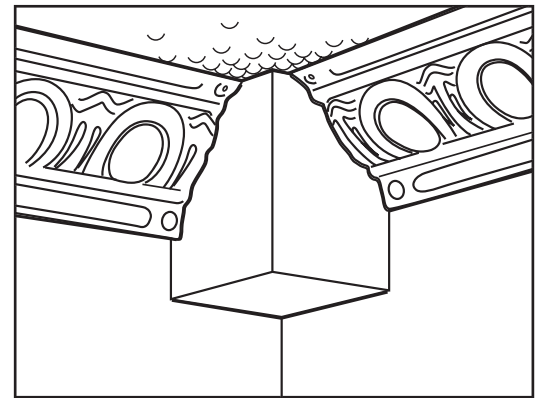


Illustration B

Plinth Option

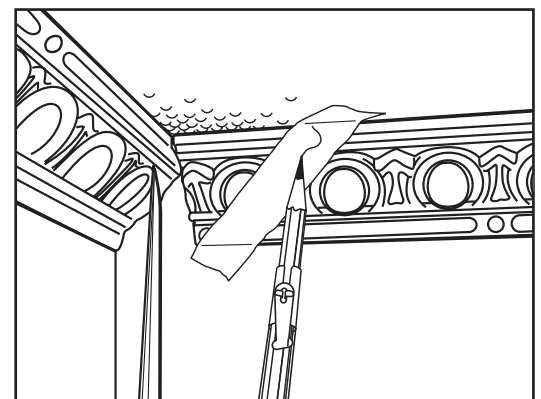


Illustration C

Cope Option

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You can also cope inside corners. Butt one piece into the corner. Then trim the second piece on the adjacent wall to fit. First place a strip of masking tape across the end of a scrap piece of molding. (See Illustration C). Hold the scrap molding in the corner and use a compass or scribing tool to transfer the profile of the nailed-in-place piece to the scrap piece.

Cut along the scribed line and test fit the coped cut. You may have to make some minor trim cuts to make the parts fit. Once the coped end fits, you can use it as a template to mark a length of cornice for installation. If you are using bare steel that will be painted, you can use putty to fill in any bad fitting joints.

*Outside corners are the toughest ones to make.* Use masking tape to define a line parallel to the wall where the cornice will meet the ceiling (See Illustration D). Do this on each side of the outside corner.

Hold a piece of cornice against one wall aligning it with the tape on the ceiling. Let it extend out past the corner and past the intersecting masking tape. Mark the molding at the bottom where it intersects the corner, and at the top where it meets the tape intersection (See Illustration E). Draw a line to connect these two marks.

Cut the molding with snips. Do the same for the other side of the corner using another piece of cornice. Check the fit of the two pieces. Trim and fit the two pieces until the joint makes a satisfactory appearance. Use these pieces as templates for marking and cutting the actual pieces that will be installed. If the moldings will be painted, fill the joint line with caulk. If the moldings will be left unpainted, file the joint until it fits. It takes time and patience to make a good fit.

## METAL LAY-IN PANEL INSTALLATION

**CAUTION:** The edges of the metal panels are sharp! Wear heavy protective gloves when handling the metal panels.

**NOTE:** Metallaire panels come pre-painted. Remove protective PVC film before or during installation.

Lay out and hang grid as you would for any other 2-ft x 2-ft ceiling panel.

When you use the lay-in border panel, you should reinforce the back of the panel so it does not sag. You can do this by nailing the panel to furring strips as shown using cone head nails. Make the furring strips about 3/4-in shorter than the panel.

**NOTE:** If you are going to paint the panels, paint them before installing them using an oil-based paint. Water based paints may rust the panels.

Due to the strains put on the metal panels when they are embossed, you may find it necessary to use hold-down clips to keep the panels flat in the grid.

Panels can be cut with tin snips or with electric metal shears.

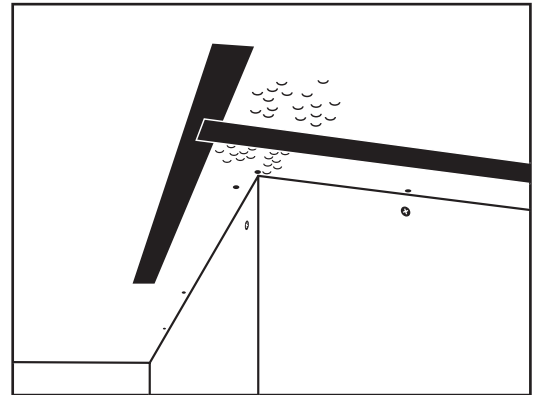


Illustration D

Outside Corner

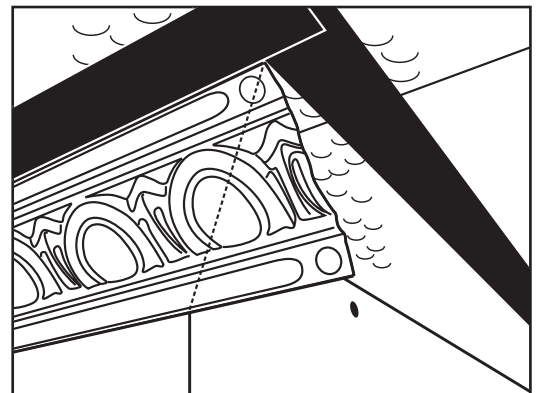
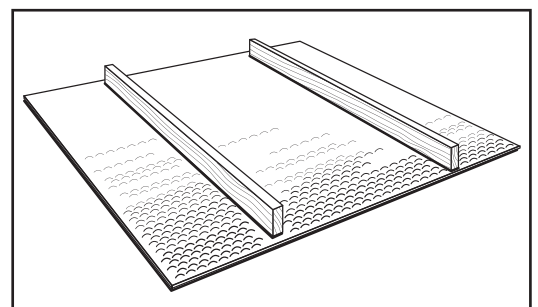


Illustration E

Outside Corner



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## ACCENT CEILING CLOUD INSTALLATION

Accent ceiling cloud installation requires a minimum of two people. Please wear appropriate safety equipment. This installation is similar to the nail-up installation, but the ceiling does not go wall to wall. Accent ceilings are typically installed below a finished drywall ceiling on a backer layer of 3/8-in or 1/2-in plywood or OSB (oriented strand board).

### Preparation for Accent Ceiling Cloud Installation

Start by determining the size and shape of the accent ceiling. You will need this information when you move to work on the ceiling.

Check the ceiling to see if it is level and flat. Locate the ceiling joists with a stud finder or by knocking on the drywall. The backer material will need to be attached to the ceiling joists. Mark your joist locations on the drywall. Mark the center and the perimeter location of your accent cloud on the ceiling. It is best to have any joints in the backer material located along a joist.

Use the above information to layout and mark your joists on the backer material and center lines for aligning the Metallaire™ panels. Cut your backer to size. You will also want to mark and cut openings for any light fixtures at this time.

Install your backer material to your drywall with appropriate length screws, making sure there is a solid connection with the joists. You may need to sand any joints if there is lipping in the backer material.

### Installing your Metallaire™ Panels

Depending on the size of your accent cloud, you may want to start with the first metal panel centered on the accent cloud or with the 4 corners of the panels meeting at center line. Working from the center to the perimeter of the accent ceiling, attach the panels to the backer material with cone head nails (*sold separately*). Nail the panels to the backer every 6-in. The panels will overlap 3/8-in creating a perfect 24-in x 48-in pattern. When 4 panels overlap you may need to predrill the corner nail hole. Continue attaching the panels until the entire cloud is covered. Trim the perimeter tiles with tin snips or an electric metal shear.

Finish off the perimeter of the accent cloud with wood molding painted to coordinate with the metal ceiling.

For a more dimensional cloud, use 2 x 4s to drop the accent cloud further from the drywall ceiling. Install the backer material to the 2 x 4s and follow the previous instructions to install the Metallaire™ panels. Use trim and crown molding to cover the perimeter, and paint.

## WALL INSTALLATION INSTRUCTIONS

### BACKSPLASH INSTALLATION

**CAUTION:** The edges of the metal panels are sharp! Wear heavy protective gloves when handling the metal panels.

Prepare the wall for installation by cleaning it thoroughly. Protect work surfaces from getting nicked by the sharp edges of the metal backsplash.

Metallaire backsplash panels are sized to fit most standard kitchens, but measure the cabinet to counter distance and determine if you need to trim the pieces.

Measure and use tin snips, or an electric rotary tool with the appropriate metal cutting blade, to make cut outs for receptacles, light switches, and other obstacles on the wall. You will use an adhesive to secure the metal panels to the backsplash area. Be sure to use an adhesive that will adhere to both the metal panels and to the wall surface where the panels are to be mounted. Suggested adhesives include Liquid Nails® or AcrylPro®. Follow the adhesive manufacturer's instructions for proper usage and application. Armstrong World Industries, Inc. does not guarantee the performance of these adhesive products, either alone or in conjunction with Armstrong® products.

Ensure wall is clean and clear of debris. Apply the adhesive and place the Metallaire panel into position on the wall. Press firmly when it is in the correct position. Each panel overlaps the next on its nail rail, located on the perimeter of each panel.

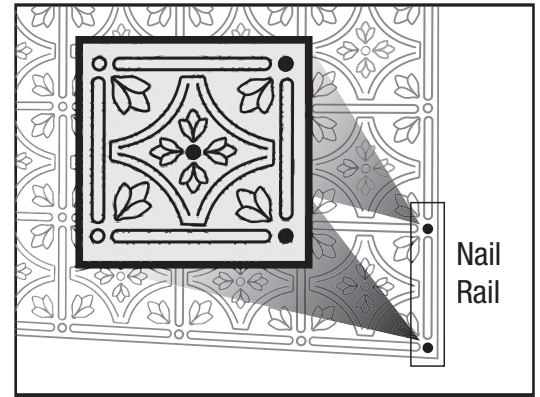
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Use just enough Metallaire cone head nails (*sold separately*) to secure the panels to the wall while the adhesive sets up. If desired, you may place additional cone head nails for a preferred visual effect. Hammer the cone head nails into the panel through the buttons on the nail rail (**See Illustration F**) until the head of the nail sits on the button. Hammering the nail any further into the button will dent the panel. Do not remove the nails.

Caulk the bottom of the backsplash panel where the panels meet the counter top. A clear painters caulk or clear silicone is best to use.

You may choose to use Metallaire Girder Nosing (*sold separately*), or a wood molding of your choice, to create a border or cover the edge of the backsplash installation. Paint the wood trim to match the metal panel, or paint to match the color of the kitchen cabinet trim.



**Illustration F** Cone Head Nail Placement

## ACCENT WALL INSTALLATION

Please wear appropriate safety equipment. This installation is similar to the backsplash installation, with the addition of a backer layer of 3/8-in or 1/2-in plywood or OSB (oriented strand board).

### Preparation for Accent Wall Installation

Start by determining the size and shape of the accent wall. Remove all outlet covers and wall mounted fixtures and check the wall to see if it is flat. Locate the studs with a stud finder or by knocking on the drywall. The backer material will need to be attached to these studs. Mark your stud locations on the drywall. Mark the center and the perimeter of your accent wall. It is best to have any joints in the backer material located at a stud.

Use the above information to layout and mark the stud locations on the backer material. Also mark the center lines for aligning the Metallaire™ panels. Cut your backer to size. You will also want to mark and cut openings for outlets and fixtures.

Install your backer material to your drywall with appropriate length screws, making sure there is a solid connection with the studs. You may need to sand any joints if there is lipping in the backer material.

### Installing your Metallaire Panels

Depending on the size and shape of your accent wall, you may want to start with the first metal panel centered or with the 4 corners of the panels meeting at center line. Working from the center to the perimeter, attach the panels to the backer with cone head nails and adhesive (*sold separately*). Use enough nails to hold the panels in place as the adhesive sets. Select an adhesive that is appropriate for metal and the backer material. Additional cone head nails can be used to achieve your intended visual. The panels will overlap 3/8-in creating a perfect 24-in x 48-in pattern. When 4 panels overlap you may need to predrill the corner nail hole. Continue attaching the panels until the backer is covered. Trim the perimeter tiles with tin snips or an electric metal shear.

Finish off the perimeter of the accent wall with wood molding painted to coordinate with the metal.

## TELL US WHAT YOU THINK!

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