

CEILING SYSTEMS

[Between us, ideas become reality.]®

EFFECTS™ Wood Looks Vector™ Installation Instructions

1. GENERAL

1.1. Product Description

Effects Wood Looks Vector is a downward accessible galvanized steel ceiling panel available in standard 24" x 24" size. It is designed to install on a conventional 15/16" wide T-bar suspension system. All full panels can be removed and reinstalled without movement up into the plenum area.

Installed panels are supported by two sides. These edges have specially designed kerf details with springs that allow the panel to move in one direction, disengage from the grid flange and then be lowered out of the ceiling. The other two sides are fitted with reverse tegular edges, which work to center the panel within the grid opening.

An optional fiberglass infill is available for increased sound absorption (Item #820-01-00).

1.2. Surface Finish and Directionality

Effects Vector panels are powder-coated (post-coated) using the FX Technology process, and available extra microperforated or unperforated in standard Cherry (FXCH) and Maple (FXMP) finishes. The perforated finishes have a black acoustical fleece factory-applied to the back side of the panel. The surface of these panels is washable, scrubbable and soil-resistant.

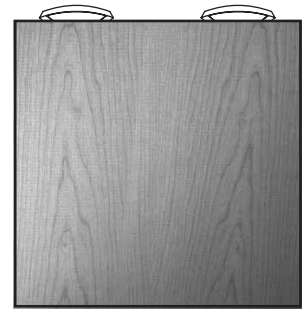
These panels are directional with the wood grain pattern. When installing EFFECTS panels, it is important to note the direction of the wood grain patterns and correctly align each panel for the desired visual effect.

Follow the wood grain pattern during installation of all full panels. Refer to section 5.4 for instructions on how to install cut panels along the perimeters for the best visual consistency. Because of the importance of installing these correctly, it is recommended to install the borders first on cut panel installations.

Each carton contains 50% vertically oriented grain patterns with spring clips on the side and 50% vertically oriented panels grain patterns with spring clips at the top, as shown. This will help provide visual consistency options for cut panel perimeter installations.



50% vertically grained with spring clips on the side



50% vertically grained with spring clips at the top

1.3. Storage and Handling

The ceiling panels shall be stored in a dry interior location and shall remain in cartons prior to installation to avoid damage. The cartons shall be stored in a vertical position. Proper care should be taken when handling to avoid damage or soiling.

NOTE: Effects Vector panels are packaged with the face of the panel toward the outside of the carton. Exercise care in moving and opening cartons to prevent damage to the panel face.

1.4. Interior Applications

Building areas to receive ceilings shall be free of construction dust and debris. Products can be installed in conditions between 32°F (0°C) and 120°F (49°C) and in spaces before the building is enclosed, where HVAC systems are cycled or not operating. Cannot be used in exterior applications, where standing water is present or where moisture will come in direct contact with the ceiling. Cannot be installed over areas such as swimming pools, which provide direct contact with corrosive agents (ie: chlorine).

1.5. Exterior Applications

Effects Wood Looks Vector items (9418U6A1FXCH2, 9418U6A1FXMP2, 2118U6A1FXCH2, 2118U6A1FXMP2) can also be used for nonexposed exterior application except in geographical areas with high concentrations of acid rain. Please refer to the MetalWorks Vector for Exterior Application Installation Instructions (LA-295587) for details for the proper application of these products in areas requiring resistance to wind uplift forces.

1.6. Plenum

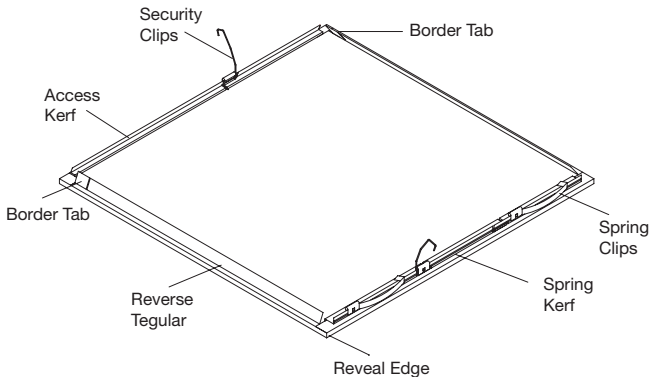
Installation of Effects Vector panels requires 2" of clearance above the suspension system to permit deployment of the security clips.

NOTE: Light fixtures and air handling systems require more space and will usually determine the minimum plenum height for the installation.

2. PANEL EDGES

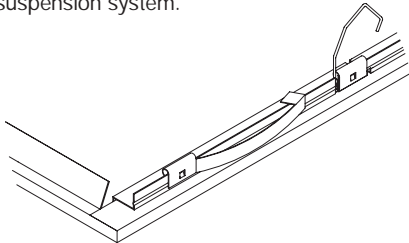
2.1. General

The edges of the Effects Vector panels feature unique detailing. The following section is intended to define and explain the function of the edge details.



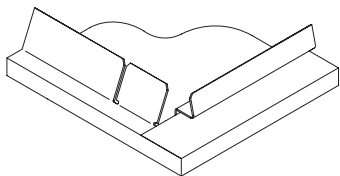
2.2. Spring Kerf

As the name implies, this edge is fitted with two steel spring clips that serve to hold the panel in position. This edge is the first to engage the suspension system.



2.3. Access Kerf

This edge has a simple kerf detail that serves to locate the panel on the grid flange when the springs push in this direction. This edge is opposite the spring kerf, and is the edge that is pressed to disengage a panel for the purpose of attaining "access" to the plenum.



2.4. Reverse Tegular Edges

The two remaining panel edges are formed to fit between the flanges of the grid system. These edges center the panel in the grid opening and are called reverse tegular edges.



3. SUSPENSION SYSTEM

3.1. General

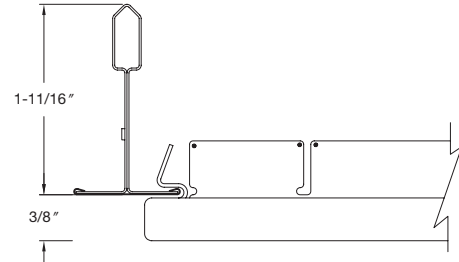
The suspension system for interior applications shall be standard Prelude 15/16" intermediate duty or heavy duty exposed tee grid.

The suspension system, whether new or existing, shall be properly installed and leveled using not less than 12-gauge galvanized steel wire. Suspension system installation shall conform to ASTM C-636 requirements.

3.2. Suspension Grid

Effects Vector panels install in a 2' x 2' module. The main beams shall be spaced 48" o/c. The 48" cross tees shall intersect the main beams at 90° every 24". The 24" cross tees shall be installed at the midpoints of the 48" tees. **The suspension system must be leveled to within 1/4" in 10' and must be square to within 1/16" in 2'.**

These instructions are for flat ceiling installations. For faceted installations of EFFECTS Vector panels, refer to METALWORKS 2' x 2' Faceted installation instructions, LA-297074, at armstrong.com.



3.3. Panel Face Offset

The face of the Effects Vector panel extends 3/8" below the face of the suspension system. The height of components that interface with the ceiling panels, such as sprinkler heads and light fixture trim rings, will have to be adjusted to accommodate this 3/8" offset.

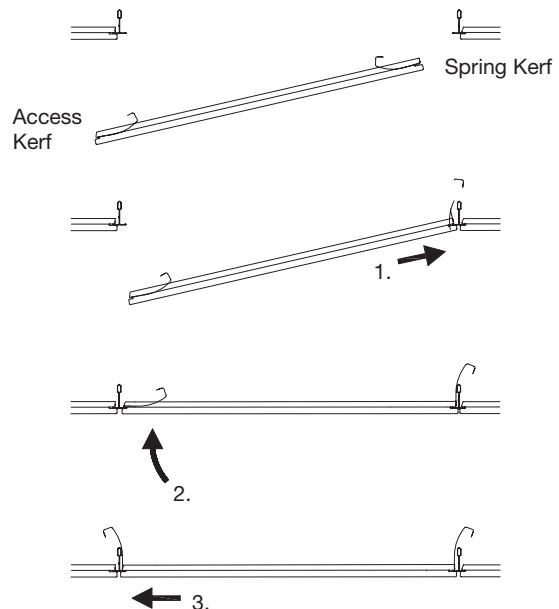
3.4. Panel Penetrations

Holes cut for sprinkler heads and other services that penetrate the ceiling panel must be cut slightly oval shaped to allow the panel to move 1/4" in the direction of the spring kerf edge. Additionally, trim rings for these devices must be wide enough to accommodate this 1/4" movement.

4. PANEL INSTALLATION & REMOVAL

4.1. General

Effects Vector ceiling panels are easily installed and removed from below the suspension system without the aid of tools or special equipment, allowing easy downward access to the plenum.



4.2. Installing Full Size Panels

The Effects Vector panels are installed in a simple three step process.

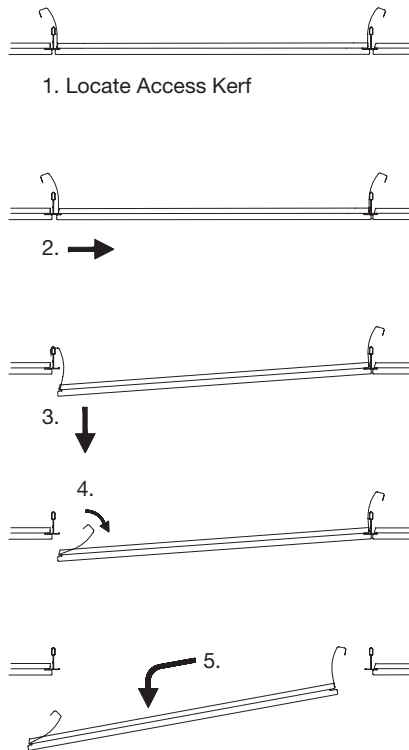
- STEP 1: Fully insert the spring kerf onto the exposed grid flange.
STEP 2: Raise the panel into the grid module until horizontal.
STEP 3: Slide the panel in the direction of the access kerf to fully position and center the panel in the grid.

NOTE: The security clips are automatically positioned when the grid flanges enter the kerfs.

4.3. Orientation of Full Panels for Visual Consistency

Install all full sized panels with the wood grain facing in the same direction to achieve visual consistency.

NOTE: Since each carton contains 50% each of two different visual orientations of panels (see 1.2), you will not have access consistency as you do with MetalWorks Vector panels since the spring kerfs and clips will be on different sides for half of the panels.



4.4. Panel Removal

Removal is simply the reverse of installation.

- Step 1: Locate the access kerf by pushing on the panel edges until the panel moves.
Step 2: Push on the access kerf edge until it clears the grid flange.
Step 3: Lower the kerfed edge of the panel and locate the security clip.
Step 4: Hold the panel with one hand while pushing the security clip away from the cross tee.
Step 5: Slide the panel back and down, to remove it from the grid module.

NOTE: Do not allow the panels to hang by the security clips while working in the plenum.

5. PERIMETER DETAILS

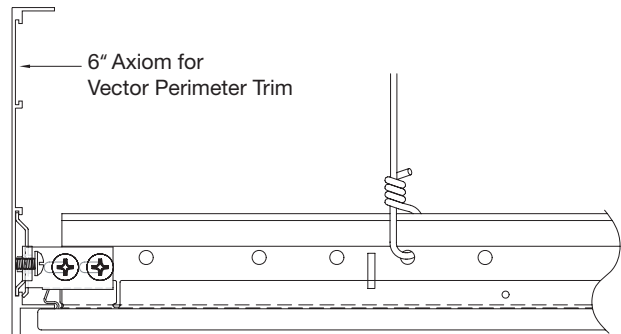
5.1. General

While the actual materials used to trim out the perimeters of an Effects Vector installation are varied, installations will fall into one of two categories; either the panels will all be full size or the cut edges will rest on and be concealed by some form of molding. Given the directionality of the EFFECTS panels, full size panel installations are recommended. However, cut panel installations are possible and the two different panel types included in each carton will allow you to achieve a consistent visual effect. See section 5.4 for details and important visual considerations.

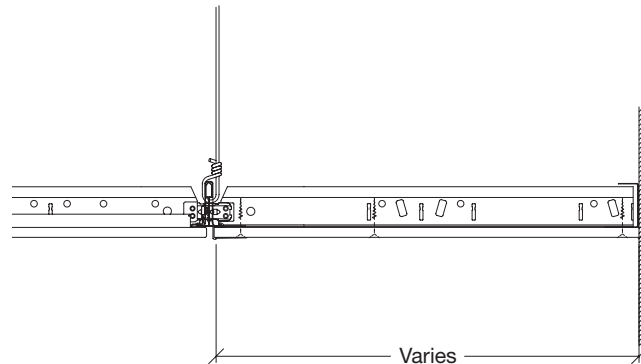
5.2. Full Panel Installations

In all cases, the size of the grid opening must be maintained at exactly 23-1/16". Squaring of the grid is also important and must be watched carefully when drywall borders are being applied.

The detail below shows a full size panel installation of EFFECTS Vector with AXIOM™ as the perimeter trim for floating installations. Consideration should be given to what color trim to use with EFFECTS panels. Tech Black is recommended.



For wall-to-wall applications, also consider using a drywall surround, such as pictured below.

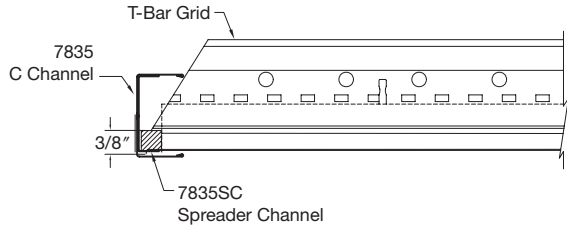


5.3. Cut Panel Installations

Another option is to have the grid system raised above the trim by 3/8". This clearance will allow the face of the panel to pass over, and rest upon the support leg of the trim.

5.3.1 Cut Panels With C Channel

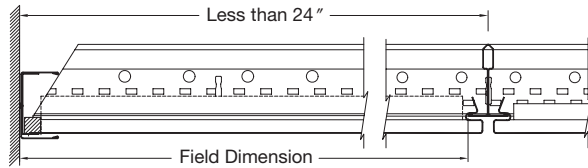
Support the face of the panel on a "C" Channel (Item #7835). When this option is used, the face of the grid must be held 3/8" above the lower flange of the channel molding. Consideration should be given to what color trim to use with EFFECTS panels. Tech Black is recommended.



5.3.1.1. Insert spreader channels (Item # 7835SC) into the "C" Channel and over the cut edge of the ceiling panel to ensure close contact with the molding.

5.3.2. Measuring the Panel

Measure the distance from the vertical wall surface to the closest edge of the grid flange. Transfer this dimension to the face of the panel. Note: It is always the spring kerf panel edge that is cut off of border panels.

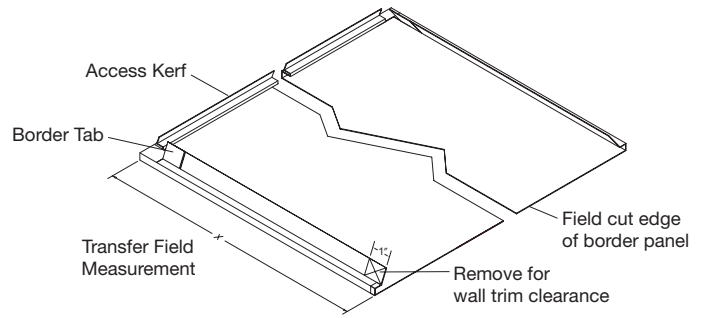


5.3.3. Cutting and Installing the Panel

⚠ CAUTION

Cut edges of metal parts can be extremely sharp! Handle metal carefully to avoid injury. Always wear safety glasses and gloves when working with metal.

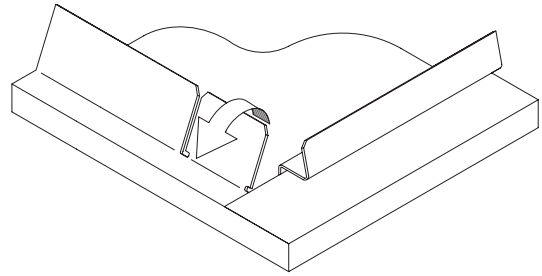
5.3.4. Cut the panel as marked.



5.3.5. See MetalWorks Cutting Instructions (LA 295518) for detailed information about cutting Armstrong metal ceilings. This document discusses the advantages and disadvantages of several types of equipment and how they are used when cutting our products.

5.3.6. When fiberglass infill is used, it also must be cut to size. This is best done with a large pair of shears or scissors. Reseal the poly bag with packing tape prior to installation.

5.3.7. Border Tabs Reach over top of the suspension system and fold the border tabs down to secure the cut panels in the grid system.



5.4. Visual Consistency on Cut Panel Installations

It is recommended to install border panels first on cut panel installations. When installing, be sure to check for the wood grain pattern visual consistency. Utilizing all of the panels in the carton, which include two different panel types with one having the spring clips turned 90°, it is possible to achieve consistency in the direction of the wood grain. However, you will see the "point" of the wood grain oriented in opposite directions on two borders. See below illustration.



MORE INFORMATION

For more information, or for an Armstrong representative, call 1 877 ARMSTRONG.

For complete technical information, detail drawings, CAD design assistance, installation information and many other technical services, call TechLineSM services at 1 877 ARMSTRONG or FAX 1 800 572 TECH.

For the latest product selection and specification data, visit armstrong.com/ceilings.

U.S. Patents 5,417,025; 5,253,463; 5,355,646

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CEILING SOLUTIONS



CEILING SYSTEMS

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EFFECTS™ Wood Looks Perimeter Trim – Installation Instructions

1. GENERAL

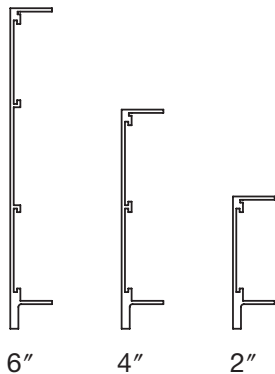
1.1 Description

Effects perimeter trim is a unique perimeter trim system designed specifically for use with Effects Wood Looks Tegular and Vector™ ceiling panels from Armstrong. It is designed for full panel installations, but may also be used for field cut border panels.

The finned edge on the Effects perimeter trim duplicates the 1/4" panel reveal at the edges of Effects Vector installation. This option is for full panel installations only.

The flat edge on the Effects perimeter trim is used for Tegular full panel installations and must be used for all cut Tegular and Vector panels

Three profile heights are available. 2" Effects PT with a nominal 2" profile height, 4" Effects PT with a nominal 4" profile height, and 6" Effects PT with a nominal 6" profile height.



Effects perimeter trim profiles

Effects perimeter trim comes in straight sections and can be field cut or mitered using a power miter saw equipped with a blade designed to cut aluminum.

Effects Vector panels install on 15/16" wide T-Bar grid and Effects Tegular panels install on 9/16" wide grid.

These instructions are divided into four sections detailing material delivery, component assembly, installation and final detailing. Please carefully review all appropriate sections for your Effects ceiling panel type (i.e. Vector or Tegular) before proceeding with installation.

2. MATERIAL DELIVERY

Effects perimeter trim components and hardware are delivered to the job site in specially designed packaging. Exercise appropriate care to protect the finished surfaces of the perimeter trim.

3. COMPONENT ASSEMBLY

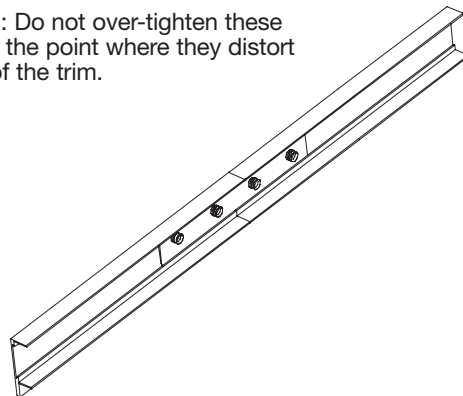
3.1 Splice Plates

Steel splice plates are used to align and secure all joints between sections of Effects perimeter trim. The two-inch high profile will require one FXSPLICE plate at each joint. Four and six inch high profiles require two FXSPLICE plates at each joint. Splice plates are secured to the trim sections using factory-installed set screws. Where desired, it may be beneficial to caulk or tape the backside of the joints to prevent light transmission.

Typical procedure:

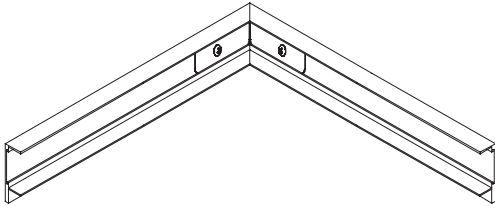
- 3.1.1 Position the splice plate in the bosses on the inside of the trim.
- 3.1.2 Pull the Effects perimeter trim tightly together for the best fit.
- 3.1.3 Use a 1/8" hex key wrench to tighten the set screws that secure splice to trim.

CAUTION: Do not over-tighten these screws to the point where they distort the face of the trim.



3.2 Corner Assembly

- 3.2.1 Effects perimeter trim can be field mitered using a power miter saw equipped with a blade designed to cut aluminum.
- 3.2.2 Bend the FXSPLICE splice plate at the center notches to form the desired angle.
- 3.2.3 Position the mitered corner for correct alignment and tighten the two setscrews on the FXSPLICE plate.



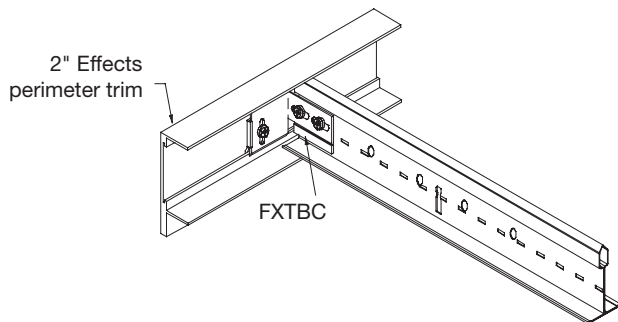
3.3 Effects T-Bar Connector Clips

T-Bar Connector Clips are used to attach the Effects perimeter trim to the supporting suspension system members. These two-piece clips are supplied as an assembled unit with the steel locking screw factory installed. One clip is required at each location where the grid system intersects the perimeter trim.

T-Bar Connector Clips are attached to the grid members using screws supplied by the installer. Framing screws (#6 x 7/16" or 1/2" lg.) are typical.

Typical procedure:

- 3.3.1 Cut grid to length
- 3.3.2 Attach clip to grid member
- 3.3.3 Engage clip in lower perimeter trim bosses and tighten locking screw



4. GENERAL INSTALLATION PROCEDURES

4.1

Lay out and install the suspension system according to the reflected ceiling plan.

Effects perimeter trim works with Effects Tegular and Vector panels. Installation procedures will be described separately for each type of panel.

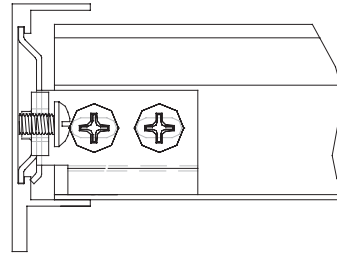
4.2 Effects Wood Looks VECTOR Full Panels

4.2.1 Cut and install the grid to maintain precisely 23-1/16" between the outer edge of the 15/16" T-bar grid and the inner edge of the Effects perimeter trim. The grid must rest approximately 1/4" to 3/8" on the perimeter trim flange.

4.2.2 The correct length for the Effects perimeter trim, when measured along the inside edge, will be 15/16" less than the nominal dimension of the full panel installation.

EXAMPLE: The nominal dimension of a four panel wide cloud would be 96". The Effects perimeter trim should be cut to 95-1/16" measured along the inside edge.

4.2.3 Attach the Effects T-Bar Connector Clips (FXTBC) to each perimeter section of grid. Rest the bottom of the FXTBC on the grid flange. Insert one #7 x 7/16" framing screw (or equivalent) in the middle of the slot.



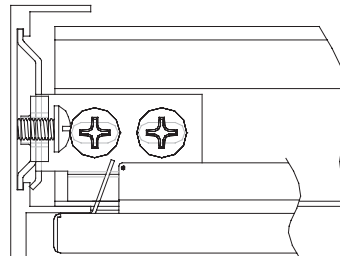
4.2.4 Install the Effects perimeter trim

Hang the sections of perimeter trim with fin side down for Vector, onto the grid system by engaging the top ear of the connector clips under the boss of the perimeter trim. Slide the back plate downward to engage the lower boss on the trim and secure by tightening the locking screw.

4.2.4.1 Complete the installation of all perimeter trim sections. Install and secure the splices.

4.2.4.2 Make adjustments as necessary to properly align and space the complete installation. Insert a second framing screw in each of the FXTBC's to secure the system.

4.2.5 Install the Effects Vector panels as per instructions. The bottom of the Vector panel will be flush with the perimeter trim fin and maintain the 1/4" reveal along the perimeter.



Note – Never install the Effects Vector panel spring edge against the perimeter trim. The spring edge should always be engaged to grid.

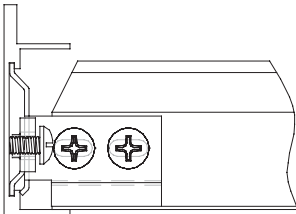
4.3 Effects Wood Looks TEGULAR Full Panels

4.3.1 Cut and install the grid to maintain precisely 23-7/16" between the outer edge of the 9/16" grid and the inner edge of the Effects perimeter trim. The grid must rest approximately 1/4" on the perimeter trim flange.

4.3.2 The correct length for the Effects perimeter trim, when measured along the inside edge, will be 9/16" less than the nominal dimension of the full panel installation.

EXAMPLE: The nominal dimension of a four panel wide cloud would be 96". The Effects perimeter trim should be cut to 95-7/16" measured along the inside edge.

4.3.3 Attach the Effects T-Bar Connector Clips (FXTBC) to each perimeter section of grid. Rest the bottom of the FXTBC on the grid flange. Insert one #7 x 7/16" framing screw (or equivalent) in the middle of the slot.



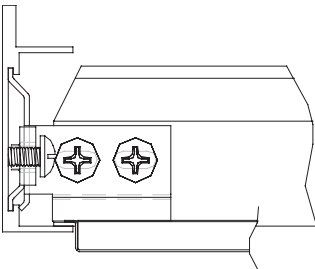
4.3.4 Install the Effects perimeter trim

Hang the sections of perimeter trim with the flat side down for Tegular, onto the grid system by engaging the top ear of the connection clips under the boss of the perimeter trim. Slide the back plate downward to engage the lower boss on the trim and secure by tightening the locking screw.

4.3.4.1 Complete the installation of all perimeter trim sections. Install and secure the splices.

4.3.4.2 Make adjustments as necessary to properly align and space the complete installation. Insert a second framing screw in each of the FXTBC's to secure the system.

4.3.5 Install the Effects Tegular panels as per instructions.



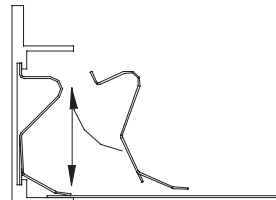
Note - The screws in the FXTBC may interfere with the insertion of the panel along the perimeter trim. Fit the panel edge into the grid at the sides and slide the panel back under the screws until the panel drops into the grid.

4.4 Effects Wood Looks CUT Border Panels

4.4.1 The cut edge of all Effects panels must rest on the perimeter trim flange. All installations with cut borders will have the Effects perimeter trim installed with the flat side down.

4.4.1.1 Perimeter trim hold-down clips

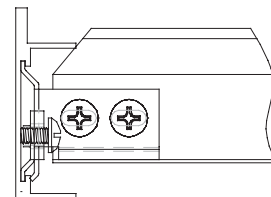
Effects perimeter trim hold-down clips (FXSPTHDC, 10 pcs/ctn) are an available accessory and must be ordered separately for cut border installations. Effects perimeter trim hold-down clips are used to secure the cut edges of Vector and Tegular metal ceiling panels. Insert one clip for every foot of perimeter trim, or as needed to maintain contact between the panel edge and perimeter trim flange. Insert the top of the clip into the perimeter trim first. Press up to compress the clip and insert the bottom leg into the perimeter trim.



FXSPTHDC
Hold-down clip

4.4.2 Effects Vector CUT Border Panels

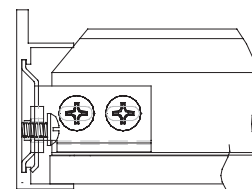
The face of Effects Vector panels is 3/8" below the face of the grid. Since the cut panel edge must rest on the perimeter trim flange, the grid must be raised 3/8" above the perimeter trim flange. To do this, you must use the optional Effects Vector T-bar Connector Clip (FXVTBC, 10 pcs/ctn) ordered separately for cut border installations. A clip is required for each end of grid attached to the perimeter trim.



Use FXVTBC to raise grid 3/8",
rest clip on grid flange

Lay out and cut the grid 1/4" larger than the required border size. Install the FXVTBC with the clip resting on the grid flange for the proper 3/8" clearance. Insert one #7 x 7/16" framing screw (or equivalent) in the middle of the slot.

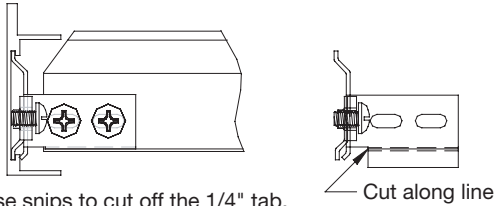
Install the perimeter trim using same method as full panel installation. Follow the installation instructions for Effects Vector panels. Install hold-down clip FXSPTHDC as required.



Effects Vector cut border,
rest cut panel edge on
bulkhead flange

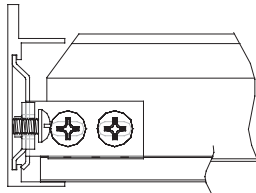
4.4.3 Effects Tegular CUT Border Panels

The face of Effects Tegular panels is 1/4" below the face of the grid. Since the cut panel edge must rest on the perimeter trim flange, the grid must be raised 1/4" above the perimeter trim flange. To do this, you must modify the Effects T-bar Connector Clip (FXTBC). Use snips to cut off the 1/4" tab at the bottom of the clip. A clip is required for each end of grid attached to the perimeter trim.



Use snips to cut off the 1/4" tab, rest clip on grid flange

Lay out and cut the grid 1/4" larger than the required border size. Install the modified FXTBC with the clip resting on the grid flange for the proper 1/4" clearance. Insert one #7 x 7/16" framing screw (or equivalent) in the middle of the slot. Install the perimeter trim using same method as full panel installation. Follow the installation instructions for Effects Tegular panels. Install hold-down clip FXSPTHDC as required.



Effects Tegular cut border, rest cut panel edge on bulkhead flange

4.5.2 Main beams must be supported 4' on center or by calculation based on actual ceiling weight.

4.5.3 Cross tees located closest to the corners of the perimeter trim and then at 4' centers must be supported by wires closer to the trim than the midpoint of the tee.

4.5.4 Installations in areas requiring seismic restraint may require wires attached to each grid member within 8" of the cut end. Lateral force bracing shall be consistent with locally approved standards or as detailed in the specifications.

5. FINAL DETAILING

5.1

Check and adjust the alignment of Effects perimeter trim components and ceiling panels.

5.2

Clean exposed surfaces as required. Effects perimeter trim and panels may be wiped down with a mild household cleaner to remove fingerprints, oil, etc.

5.3

For light cove applications, a dark latex chalk or tape should be applied to the inside of all seams if light leaks are apparent.

4.5 Add additional hanger wires as required.

4.5.1 The manufacturer requires that Effects perimeter trim and their supporting suspension systems be installed and supported in a manner that complies with all applicable codes and standards. Typically this will require the use of #12 Ga. Galvanized, soft annealed steel wire or equivalent. Specification and approval of alternate materials should be by design professionals familiar with the project. Mechanics should exercise care in the application of hangers to minimize the visual impact on the finished installation. Wire wraps should be tight and neat, and where appropriate, the wires may be painted to blend into the background as much as possible.

MORE INFORMATION

For more information, or for an Armstrong representative, call 1 877 ARMSTRONG.

For complete technical information, detail drawings, CAD design assistance, installation information and many other technical services, call TechLine™ services at 1 877 ARMSTRONG or FAX 1-800-572-TECH.

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