

METALWORKS™ Vector®

Assembly and Installation Instructions

1. GENERAL

1.1 Product Description

MetalWorks 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 suspension system flange, and then be lowered out of the ceiling. The other two sides are fitted with rabbeted edges, which work to center the panel within the suspension system opening.

An optional fiberglass infill is available for increased sound absorption (item 8200100).

A matching 24" x 24" single slot air diffuser is available. It is manufactured from steel and is available standard in the White (WH) finish (item 8400800).

Use items 6466M1WH2 and 6466M2WH2 for unexposed exterior applications.

These instructions are for flat ceiling installations. For faceted installations of MetalWorks Vector panels, refer to MetalWorks 2' x 2' Faceted installation instructions, BPLA-297074, at armstrong.com/installationinstructions.

1.2 Surface Finish

MetalWorks Vector panels are powder-coated (post-coated) and available microperforated or unperforated in standard White (WH), Silver Grey (SG), and Gun Metal Grey (MY) 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, soil-resistant, and non-directional.

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: MetalWorks 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 Site Conditions

1.4.1 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 (i.e., chlorine).

1.4.2 Exterior Applications

MetalWorks Vector items 6466M1WH2 (unperforated) and 6466M2WH2 (microperforated) are recommended for non-exposed exterior applications except in geographical areas with high concentrations of acid rain. Other colors are also available, including Effects™ Wood Looks Vector options.

Only these specific suspension system items and accessories should be used for wind uplift application.

Prelude® Main Beam	item 7301G90
Prelude Cross Tee	item XL7321G90
Angle Molding	item HD7801G90
Angle Molding	item 7807
Brace Attachment Clip	item BACG90
Universal Wall Anchor	item 300140

See MetalWorks Vector for Exterior Application installation instructions, BPLA-295587, or visit armstrong.com/installationinstructions.

1.5 Plenum

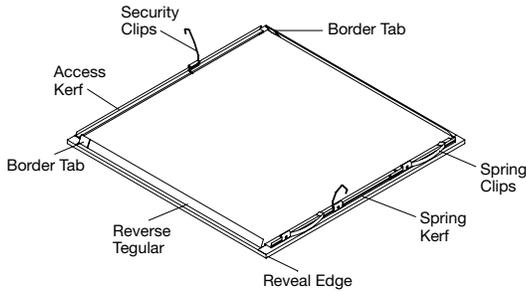
Installation of MetalWorks™ Vector® panels requires 2" of clearance above the suspension system to permit deployment of the security clips.

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

2. PANEL EDGES

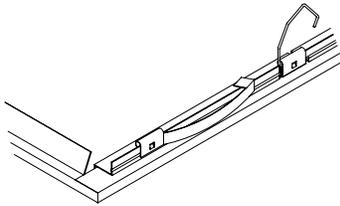
2.1 General

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



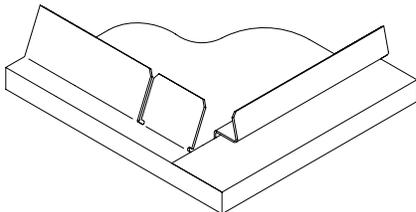
2.2 Spring Kerf

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.



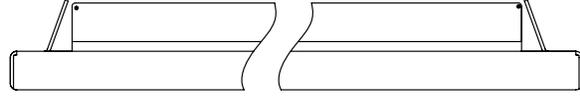
2.3 Access Kerf

This edge has a simple kerf detail that serves to locate the panel on the suspension system 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 rabbeted to fit between the flanges of the suspension system. These edges center the panel in the suspension system opening and are called reverse Tegular edges.



3. SUSPENSION SYSTEM

3.1 General

The suspension system shall be standard Prelude® 15/16" Intermediate-duty or Heavy-duty Exposed Tee suspension system. 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 C636 requirements.

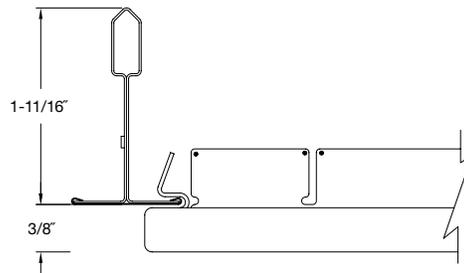
These instructions are for flat ceiling installations. For faceted installations of MetalWorks Vector panels, refer to MetalWorks 2' x 2' Faceted installation instructions, BPLA-297074, at armstrong.com/installationinstructions.

3.2 Suspension System

MetalWorks Vector panels install in a 24" x 24" 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'.**

3.3 Panel Face Offset

The face of the MetalWorks 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.

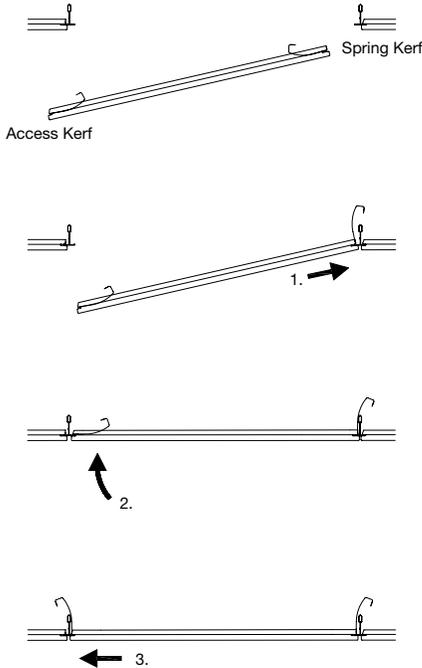
4. PANEL INSTALLATION & REMOVAL

4.1 General

MetalWorks™ 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 panels are installed in a simple three-step process.



STEP 1: Fully insert the spring kerf onto the exposed suspension system flange.

STEP 2: Raise the panel into the suspension system module until horizontal.

STEP 3: Slide the panel in the direction of the access kerf to fully position and center the panel in the suspension system.

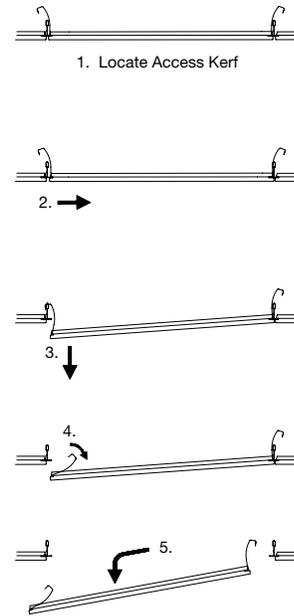
NOTE: The security clips are automatically positioned when the suspension system flanges enter the kerfs.

4.3 Orientation of Full Panels

Install all full-sized panels with the spring kerfs facing in the same direction to provide access consistency.

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 suspension system 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 suspension system module.

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

5. PERIMETER DETAILS

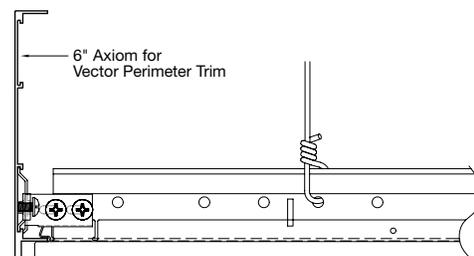
5.1 General

While the actual materials used to trim out the perimeters of a MetalWorks 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.

5.2 Full Panel Installations

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

The detail below shows a full-size panel installation of MetalWorks Vector with Axiom® as the perimeter trim.

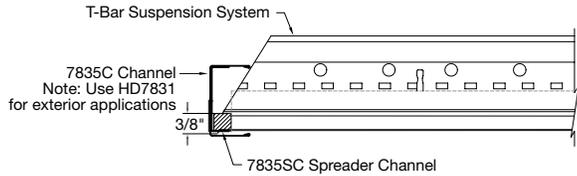


5.3 Cut Panel Installations

Another option is to have the suspension 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

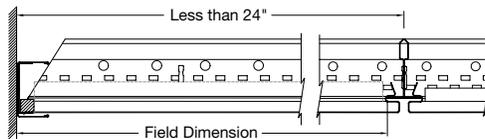
Support the face of the panel on a "C" Channel (item 7835). When this option is used, the face of the suspension system must be held 3/8" above the lower flange of the channel molding.



5.3.1.1 Insert a spreader channel (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 suspension system flange. Transfer this dimension to the face of the panel.

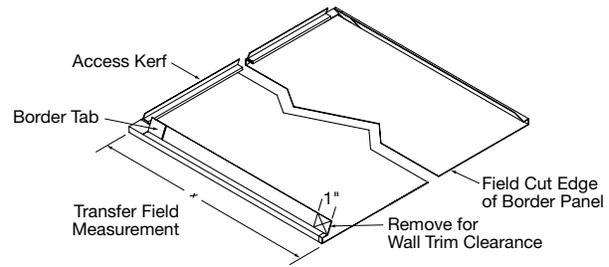


NOTE: It is always the spring kerf panel edge that is cut off of border panels.

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. Refer to MetalWorks™ Edge Cap installation instructions BPLA-297304 for more information on installing Edge Caps with cut MetalWorks panels.

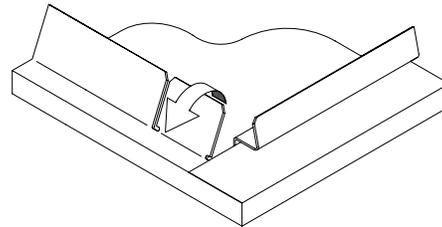


5.3.4 Cut the panel as marked.

5.3.5 See MetalWorks Cutting Instructions (BPLA-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 polybag 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 suspension system.



6. SEISMIC

MetalWorks Vector® shall be installed to meet the minimum requirements established in the ASTM E580 standard and any other requirements established by local code. The requirements listed here represent the manufacturer's minimum acceptable installation recommendations, and may be subject to additional requirements established by the local authority having jurisdiction.

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.

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

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