

WOODWORKS Vector

Assembly and Installation Instructions

GENERAL

1.1 Product Description

WoodWorks Vector ceilings consist of perforated and unperforated panels that are downward accessible, and are designed to be installed on a 24mm wide T-Bar suspension system. Available sizes are 600x600mm. All full panels can be removed and reinstalled without the need for access to the plenum. Only two sides support installed panels. These edges have specially designed kerf details, which allow one edge of the panel to be raised slightly off of the suspension system flange, and then moved out of position. The other two sides are fitted with rabbeted edges, which work to center the panel within the suspension system opening

1.2 Material and Surface Finish

The panels are constructed of fibre board bonded together between two layers of laminate finish. All exposed edges are banded with the same finish as the face.

1.3 Storage and Handling

Ceiling components should be stored in a dry interior location and shall remain in cartons prior to installation to avoid damage. The cartons should be stored in a flat, horizontal position. The protectors between panels should not be removed until installation. Proper care must be taken when handling to avoid damage and soiling. Do not store in unconditioned spaces with humidity greater than 70% or lower than 25% RH and temperatures lower than 20°C or greater than 30°C. Panels must not be exposed to extreme temperatures, for example, close to a heating source or near a window where there is direct sunlight.

NOTE: Vector panels feature exposed edges. Exercise appropriate care to avoid unnecessary contact with the panel edges. Remember that the suspension system flanges will not conceal panel edge damage.

1.4 Site Conditions

WoodWorks Vector ceiling panels should be permitted to reach room temperature and have a stabilized moisture content for a minimum of 72 hours before installation. (Remove plastic wrap to allow panels to

climatize.) They should not, however, be installed in spaces where the temperature or humidity conditions vary greatly from the temperatures and conditions that will be normal in the occupied space.

1.4.1 HVAC Design and Operation

Proper design for both supply air and return air, maintenance of the HVAC filters, and building interior space are essential to minimize soiling. Before starting the HVAC system, make sure air supply is properly filtered and the building interior is free of construction dust.

1.4.2 Temperature and Humidity During Installation

WoodWorks ceiling panels are interior finish products that are designed for installation to be carried out in temperature conditions between 20°C and 30°C, in spaces where the building is enclosed, and HVAC systems are functioning and will be in continuous operation. Relative humidity shall not fall below 25% or exceed 70%. Additionally, the fluctuation in relative humidity shall not vary more than 30% over the life of the ceiling panels. There shall be proper ventilation of the plenum in high moisture areas. All plastering, concrete, terrazzo, or any other wet work shall be completely dry. All windows and doors shall be in place. The heating, ventilation, and air conditioning system should be installed and operable where necessary to maintain proper temperature before, during, and after installation of the WoodWorks panels.

1.5 Plenum

Installation of Vector panels requires a minimum of space in the plenum, primarily that which is required to install the hanger wires for the suspension system. 100mm is generally accepted as the minimum practical space that is needed to attach these wires.

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

1.6 Color

WoodWorks panels may have variations in color and grain. To maximize visual consistency, panels should be unpacked and examined collectively to determine the most desirable arrangement for installation. Where consistency is critical, Armstrong can offer custom solutions to meet your budget and aesthetic requirements.

2. PANEL EDGES

2.1 General

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

2.2 Access Kerf Edge

The panel edge designated as "A" has a stepped groove detail and is called the access kerf. This edge is the first to engage the suspension system. Review the drawings below to familiarize yourself with this unique detail. Remember that the "A" edge is always installed first. This panel edge is also the one that must rise when the ceiling must be accessed.



2.3 Registration Kerf

Edge "B" has a single kerf detail that supports the second side and centers the panel in the A – B direction. This edge is referred to as the registration kerf and is opposite edge "A".



2.4 Reverse Tegral Edges

The two remaining panel edges are rabbeted to fit between the flanges of the suspension system. These edges center the panel in the C – D direction and are called reverse Tegral edges.

3. SUSPENSION SYSTEM

3.1 General

600x600mm panels can be installed in a suspension system layout with main beams at 1200mm centers. The suspension system shall be standard 24mm Prelude 43 exposed tee grid. The installation shall, in all cases, conform to the requirements of the International Building Code and its referenced standards. Included in these requirements is the use of stabilizer bars or BERC2 clips to positively prevent the suspension system from separating at the walls. Additionally, walls or soffits that serve to support a panel edge must be braced to structure so as not to allow movement greater than 3mm when subjected to design lateral force loads. When such bracing is not practical or is not effective, additional mechanically connected suspension system components shall be provided to capture all edges of every panel. Axiom® Perimeter Trim connected to the suspension system with AXTBRCl clips will also meet this requirement. 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.

3.2 Suspension System

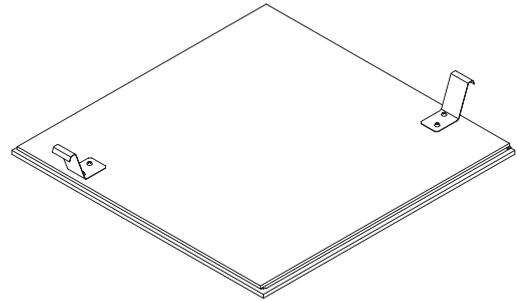
For 600x600mm Vector panels, the main beams shall be spaced 1200mm O.C. The 1200mm cross tees shall intersect the main beams at 90° every 600mm. The 600mm cross tees shall be installed at the midpoints of the 1200mm tees. When 600x600mm panels are to

be used, hanger wires shall be installed not more than 1200mm on center along the length of the main beams. **Installation on suspension systems that do not meet this tolerance will produce unacceptable panel alignment.**

3.3 Safety Clips

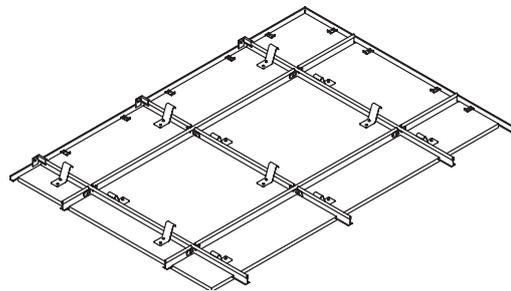
The weight of the panels and the downward nature of the access suggest the need for a mechanism to prevent panels from dropping when disengaged from the suspension system. Two safety clips are provided for each 600x600mm panel. Clips and screws for all panel sizes are shipped with the panels within the carton.

These clips must be attached to each panel by means of the screws provided. Pre-drilled pilot holes are located along each kerfed edge of the panel.



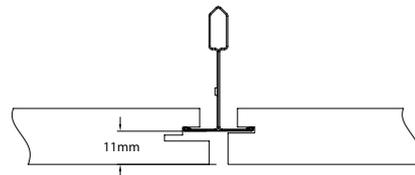
3.4 Seismic Hold Down Clips

Seismic Hold Down Clips are required for all installations. Two clips are required for each panel. Locate a clip near each end of the kerfed edge and then at 600mm centers. Clips should be applied to the suspension system before the placement of the panels.



3.5 Panel Face Offset

The face of the Vector panel extends 11mm below 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 11mm offset.



3.6 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 6mm in the direction of the "A" edge. Additionally, trim rings for these devices must be wide enough to accommodate this 6mm movement.

4. PANEL INSTALLATION AND REMOVAL

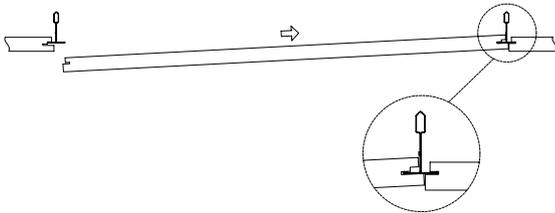
4.1 General

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.

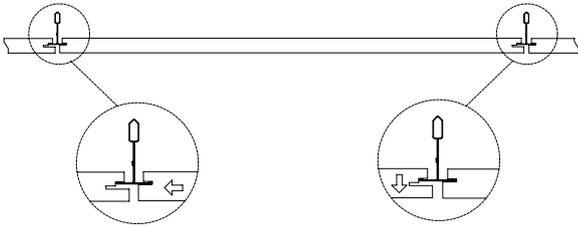
4.2 Installing Full-size Panels

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

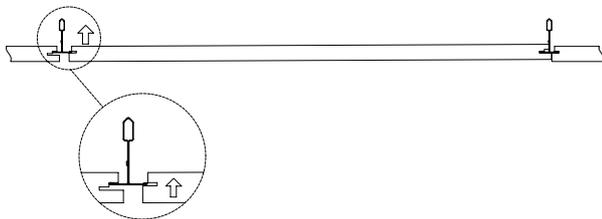
STEP 1: Fully insert the deepest kerf of edge "A", the access kerf, onto the exposed suspension system flange.



STEP 2: Raise the "B" edge of the panel, the registration kerf, into the suspension system opening until the kerf lines up with the suspension system flange.



STEP 3: Slide the panel so that the registration kerf on edge "B" engages the suspension system flange. Ensure that the access kerf on edge "A" drops down into the correct position.



4.3 Orientation of Full Panels

Install all full-sized panels with the "A" edge facing in the same direction to provide access consistency. Align panels as you proceed to ensure a uniform reveal width in both directions. Pay particular attention to this alignment process. Minor variations in placement can be difficult to see from the scaffold, but will become obvious when looking down long runs of panels.

4.4 Panel Removal

Press against the panel face to identify the edge that raises easily. This is the "A" edge. Move the A edge up and toward the web of the suspension system member until the "B" edge disengages and drops out of the ceiling plane.

5. PERIMETER DETAILS

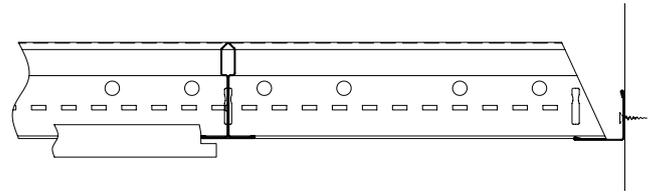
5.1 General

Perimeters must be detailed as described in the following section.

5.2 Suspension System Resting on Perimeter Trim

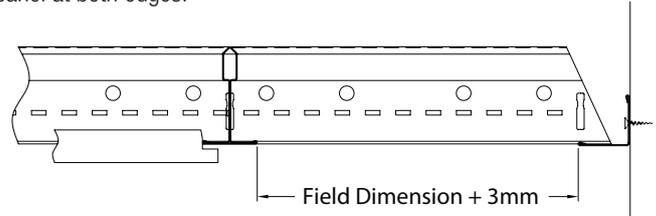
The face of the suspension system components rests directly on the molding or trim flange. The border panels are cut to butt against the

molding as shown here. The grain pattern on the panels dictates that they can be rotated 180°, but not 90°. Cutting borders will require two different techniques, one to use when the kerfs are perpendicular to the wall and another when they are parallel.



5.2.1 Kerfs Perpendicular to the Wall

Measure the size of the opening from the edge of the T-Bar to the edge of the molding and add 3mm. Measure and mark the face side of the panel at both edges.



5.2.2 Cutting the Panel

Cut the panel using standard woodworking tools and, where possible, a straight edge. A table saw is recommended for straight cuts and a bandsaw for curved cuts. In general, these practices will be typical of those employed in finish carpentry.

CAUTION! WOOD DUST. Sawing, sanding, and machining wood products can produce dust. Airborne wood dust can cause respiratory, eye, and skin irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans. Precautionary measures: If power tools are used, they should be equipped with a dust collector. If high dust levels are encountered, use an appropriate designed dust mask. Avoid dust contact with eyes and skin. First Aid Measure in case of irritation: Flush eyes or skin with water for at least 15 minutes.

5.2.3 Installing the Border Panel

Install these borders just like full-size panels. Place the cut edge toward the wall and engage the "A" edge on the suspension system flange, rotate the "B" edge up into the suspension system opening, and draw it back into place.

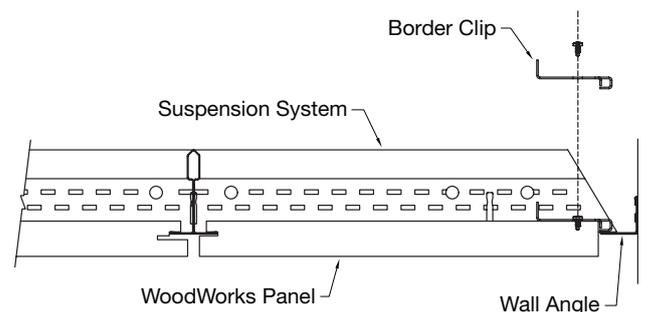
5.2.4 Kerfs Parallel to the Wall

Measure the panel as described in section 5.2.1. Mark and cut the panel so as to retain the "A" edge.

5.2.5 Attach Border Clips

Apply WoodWorks Vector Border Clips to the cut edge of the panel as shown. Use one screw in each clip. Clips and screws for all panel sizes are shipped within the carton box. Two number of clips to be used with each panel.

Install Vector Safety Clips in the same pattern as on full-size panels.



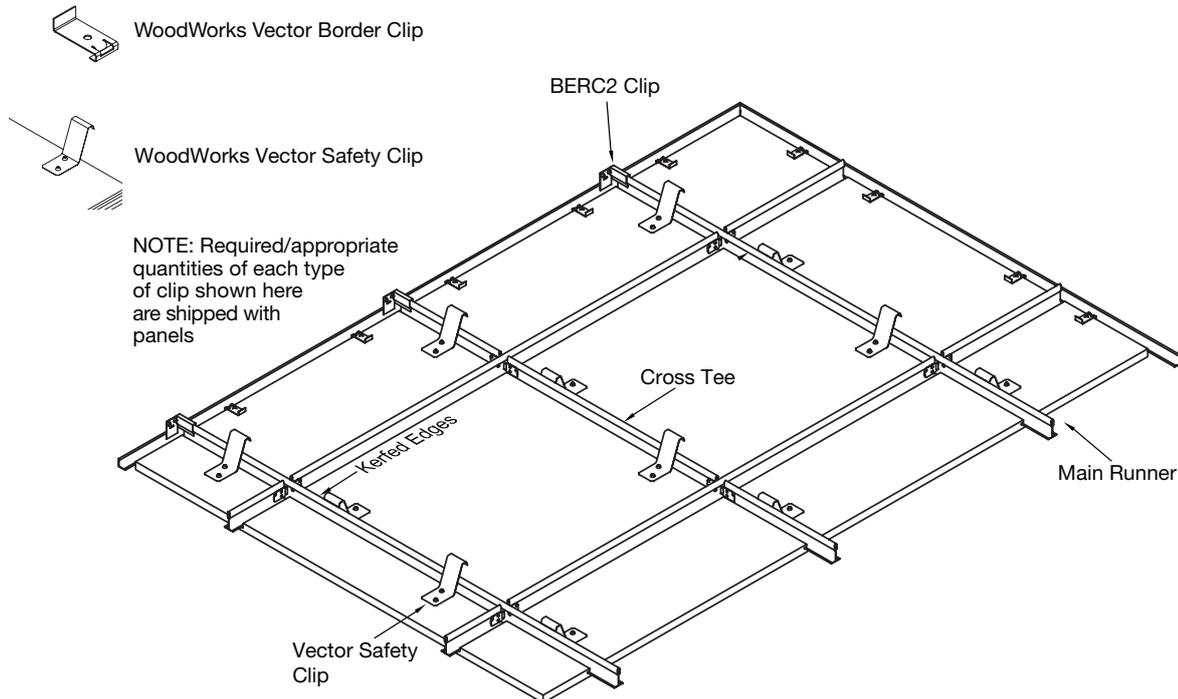
5. 2.6 Installing the Panel

Engage the kerfed edge of the panel on the suspension system flange parallel to the wall. Rotate the cut edge up into the suspension system opening and draw the panel toward the wall until the border clips rest on the molding and the "A" edge drops into place.

5. 2.7 Corner Panel Installation

Preparation of the corner panel will require the removal of two edges. Mark and cut the panel to retain a portion of the "A" edge. Support the opposite side of the panel by installing WoodWorks Vector Border Clips as detailed above.

WoodWorks Vector Typical layout



Knauf Ceiling Solutions (India) Private Limited

Boomerang, A-304, Chandivali Farm Road (near Chandivali Studio) Andheri (E), Mumbai - 400 072.

Contact us: 1860 266 7080 | e-mail : Helpdeskindia@knaufarmstrong.com