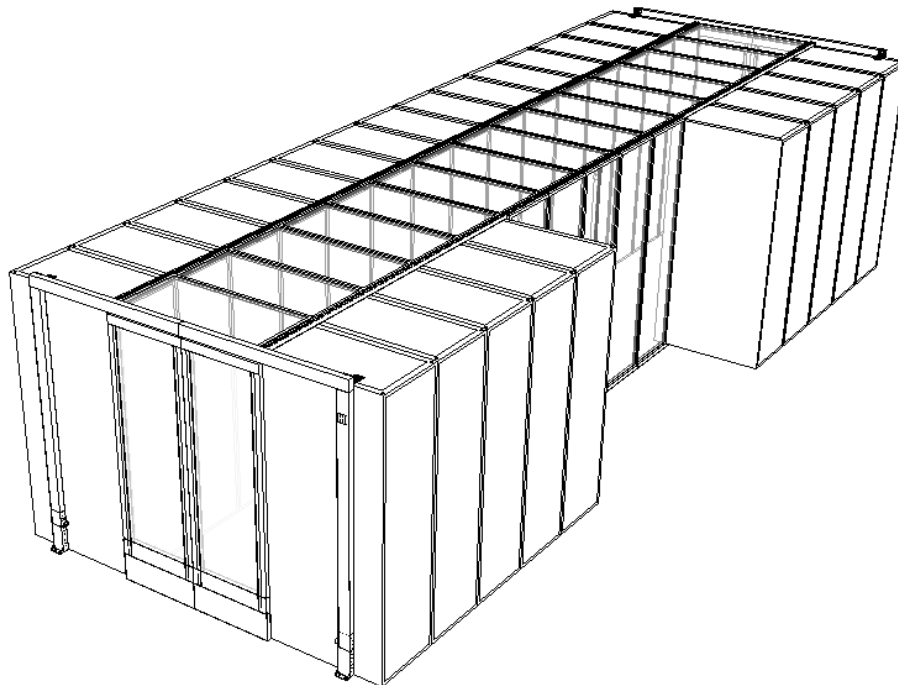




Cabinet Supported Aisle Roof Containment Solution User's Manual

**Version 2.0
December 2013**



Contents

INTRODUCTION

page 3

AISLE CONTAINMENT POLARPLEX™ P2 SLIDING DOOR

pages 4 - 19

CABINET SUPPORTED POLARPLEX™ DROP-AWAY ROOF CONTAINMENT SYSTEM

pages 20 - 25

CABINET SUPPORTED POLARPLEX™ STANDARD PANEL CONTAINMENT SYSTEM

pages 26 - 30

INTRODUCTION

This document is the User's Manual for Polargy's PolarPlex Cabinet Supported Aisle Roof Containment Systems.

Aisle Roof Containment User Manual

Legal Information

The information contained in this guide is subject to change without notice.

Polargy shall not be liable for technical or editorial errors or omissions contained herein; nor is it liable for any injury, loss, or incidental or consequential damages resulting from the furnishing, performance, or use of this material and equipment.

Warranty

Polargy guarantees manufactured products and each part or component thereof against all defects in material and/or workmanship. Polargy agrees to remedy any manufacturing defect either through replacement or repair at no charge provided that the defective unit is returned, transportation prepaid, to Polargy with a Return Material Authorization.

The warranty extends for a period of one year from the date of installation or initial use, provided that this period shall not exceed 18 months from the original date of shipment from Polargy.

Any product that has been repaired or replaced shall be similarly warranted on its repair or replacement for the remaining product warranty period or 90 days from the date of repair or replacement, whichever expires last.

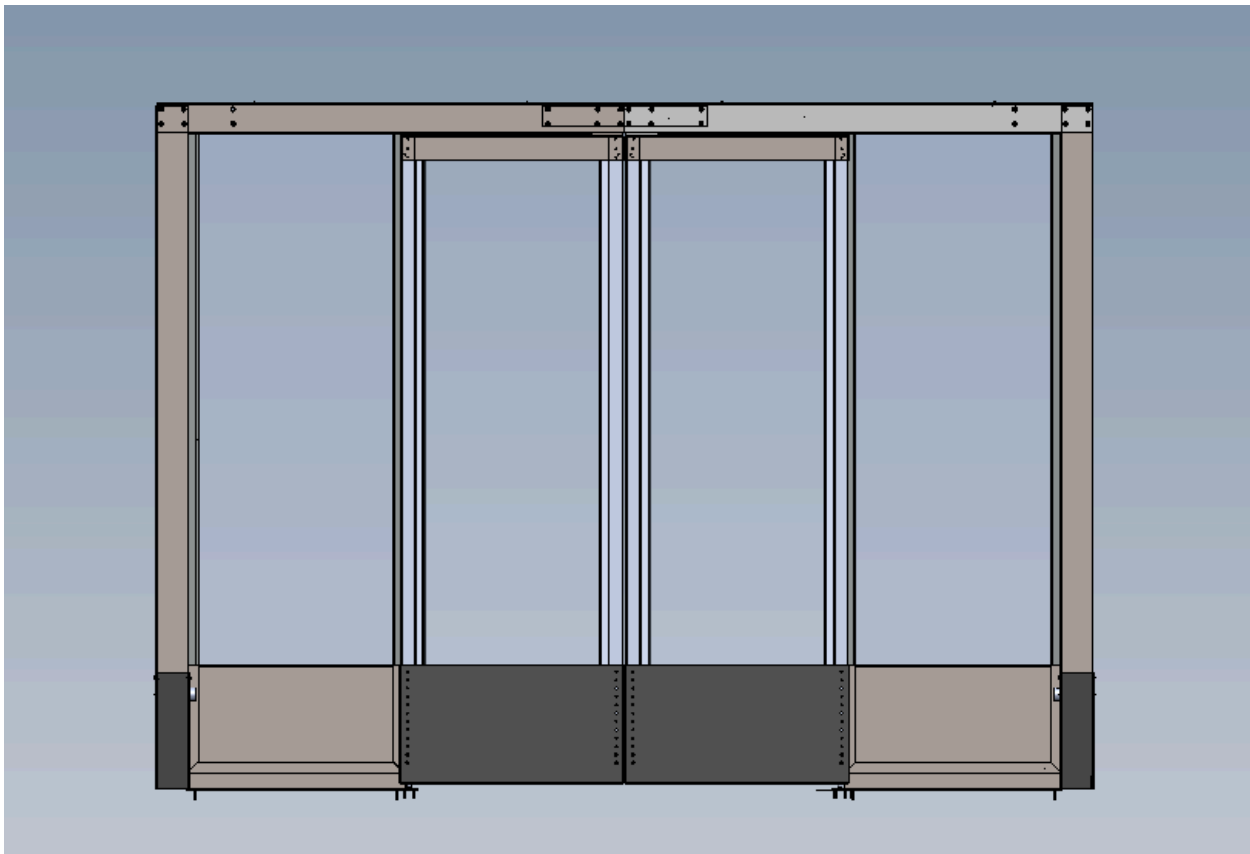
This warranty does not extend to products that have been subjected to neglect, accident or improper use, nor to units that have been altered by non-Polargy personnel.

No warranties other than those set forth in this section are given or implied with respect to the products furnished. Polargy shall, in no event, be liable for consequential damages, for loss, damage or expense directly or indirectly arising from the use of the products, for any inability to use materials or from any other cause.

AISLE CONTAINMENT POLARPLEX™ P2 SLIDING DOOR

INTRODUCTION TO THE POLARPLEX™ P2 SLIDING DOORS

The PolarPlex™ P2 Sliding Doors from Polargy are an adjustable height aisle end containment door. Height adjustments are made by extending the vertical support legs and by adjusting the bottom section of the door itself. Adjustable height side Extender Panels are available for aisles greater than 54" in width. These side extenders increase the aisle width coverage up to 103". The door systems are designed to be compatible with any brand of rack that is between 42U minimum and 50U maximum height (79" – 89"). Doors are available in three sliding options including: double-door, single-door left-hand sliding and single-door right-hand sliding. Doors are finished in flat black with anodized aluminum trims. The doors can be installed onto slab floors or raised access floors. All doors include full-height, twin-wall polycarbonate inserts, an automatic close system, and an optional magnetic hold-open catch.



P2 Sliding Door with Extender Panels

SAFETY INFORMATION



WARNING: Improper use or installation of the Aisle Containment Sliding Doors may lead to serious injury or death. Read and understand all instructions for proper installation and use of this product.

Installation of Aisle Containment Doors may require the use of ladders, scaffolds, and other climbing tools. Follow all climbing device procedures and observe standard safety precautions.

The Aisle Containment Door components are heavy and large. This requires that at least two personnel be used for assembly and installation. Obtain adequate assistance or hire professional equipment riggers.

INTENDED USE

Install the doors only in a restricted service environment, such as a data center. Use indoors only, in environmentally controlled areas; do not use outdoors, in harsh environments, or in air-handling spaces. Not for use in plenums.

STORAGE OF SLIDING DOORS

Aisle Containment Sliding Doors should be stored indoors only in environmentally controlled areas. Do not store outdoors. Do not expose to harsh or humid areas.

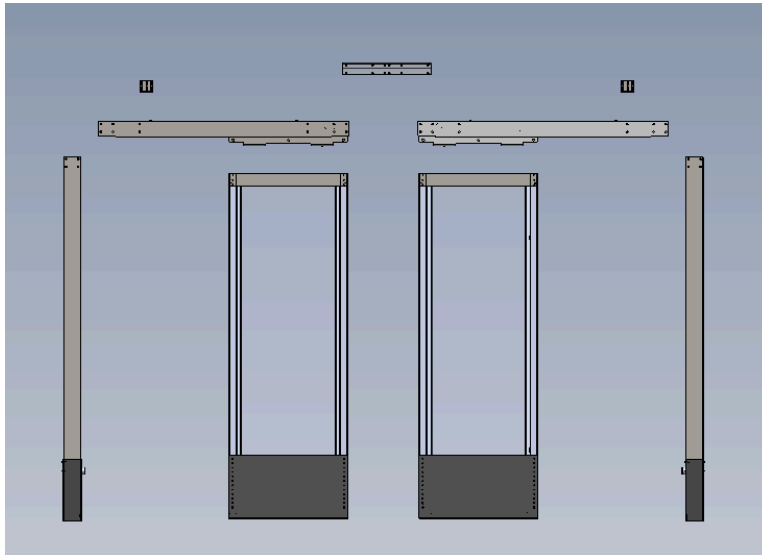
TOOLS REQUIRED FOR INSTALLATION

- 5/32" hex wrench for flange button heads screws and flat head screws
- 1/8" hex wrench for set screws
- Small philips head screwdriver for adjustable door and extender panel screws
- Drill and other tools for making floor and rack attachments

Component Overview

The sliding door assembly comes boxed and is comprised the following basic components:

1. Horizontal Header Track Assembly (2 pieces)
2. Vertical Support Posts (2 posts)
3. Coupler
4. Sliding Door Assemblies (2 doors)
5. Hardware Kit (Roller guides, gaskets, brush grommet, brackets, screws)

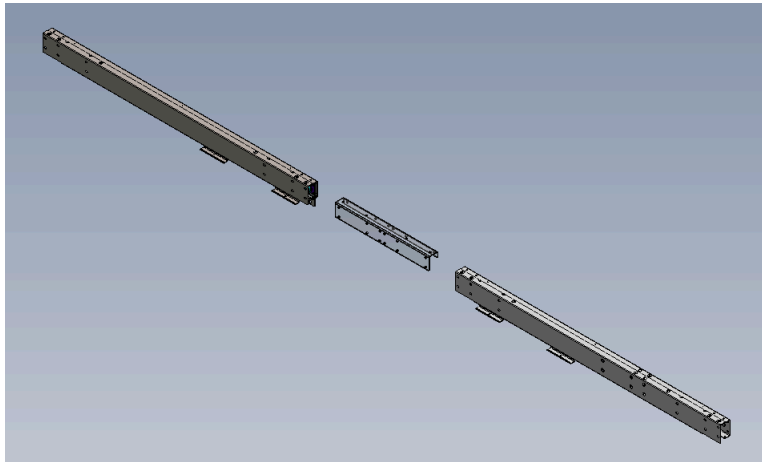


The Extender Panels are comprised the following basic components:

1. Adjustable Height Panels (2 pieces)
2. Gap Filler Gasket
3. Hardware Kit (screws, brackets)

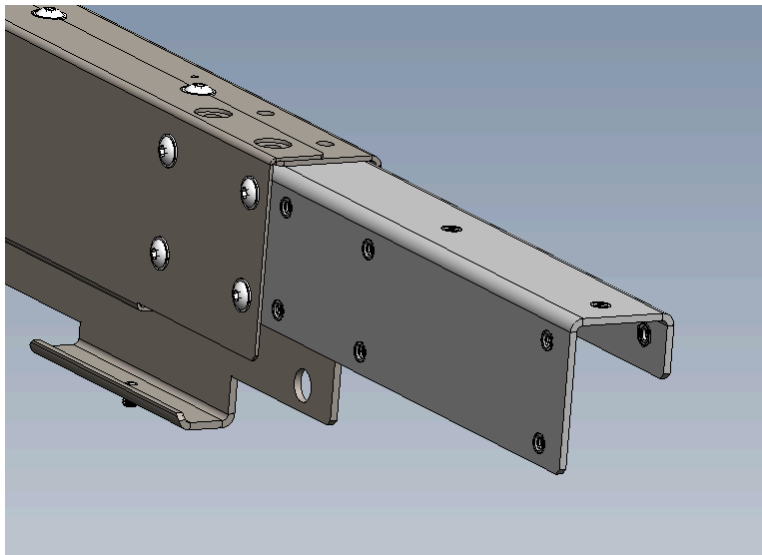
Installation Steps

- 1) Connect the two Header Track Assemblies with the Coupler using flange button head screws and washers.



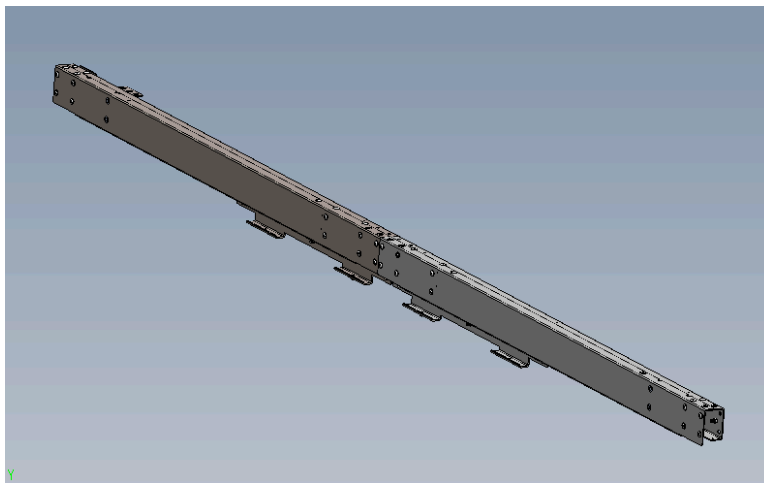
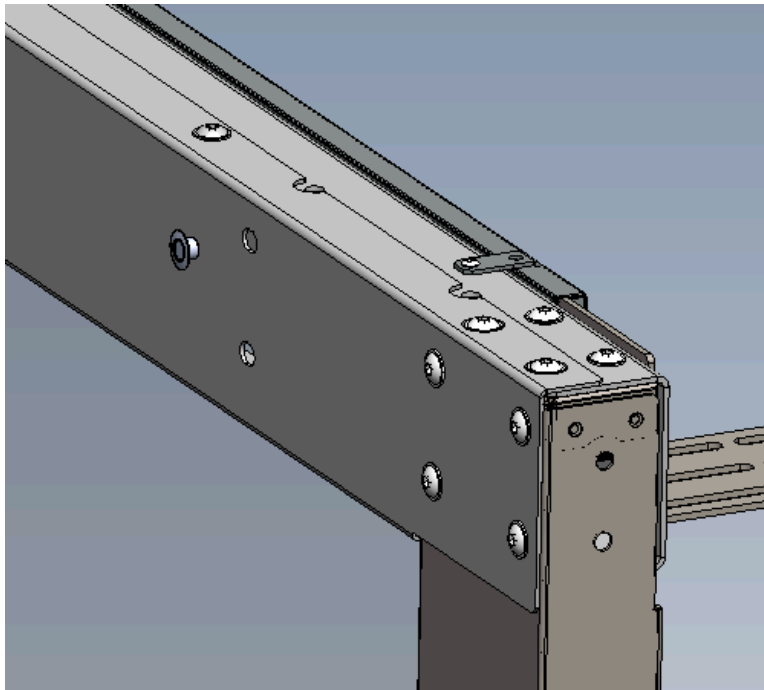
Exploded Header Tracks and Coupler

Important: Install the top four screws first.



One Header Track with Coupler

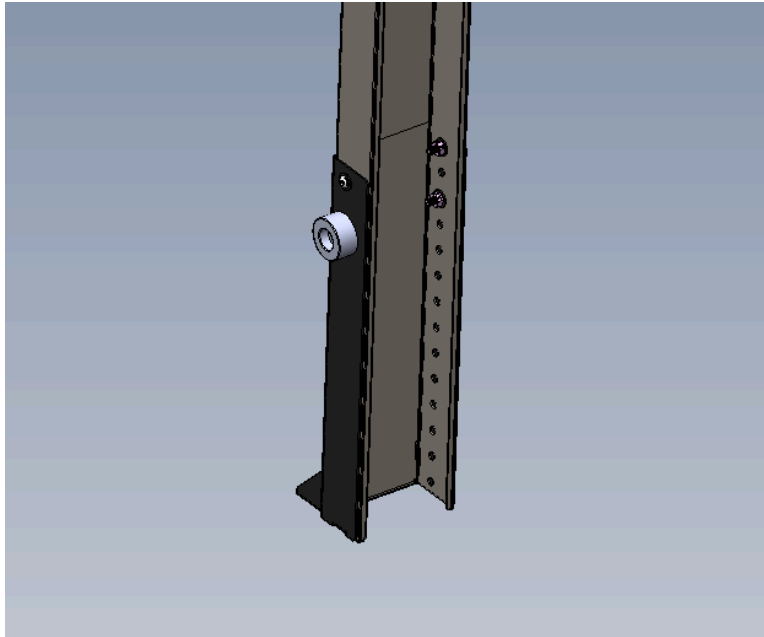
2) Install Cap Plugs into unused header holes.



Completed Header Track Assembly

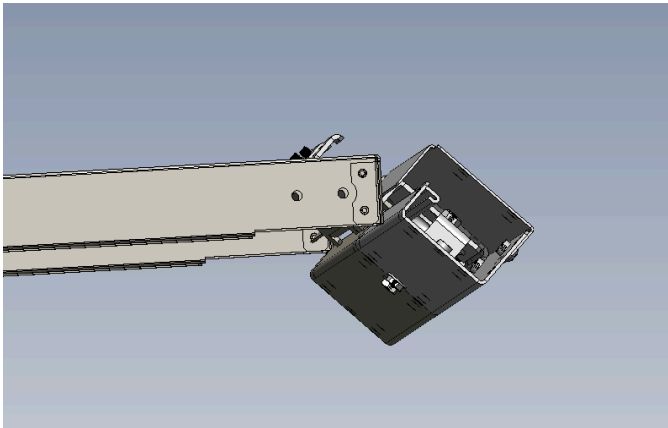
3) Set The Height of the Vertical Support Posts

The vertical support posts are shipped in the lowest position which gives an inside frame opening height of 78.9" and an external frame height of 82.5". Adjust the vertical support footer to create the desired height. Make sure the rubber stops on the Vertical Support Posts are facing inward when they are attached to the Header Track.

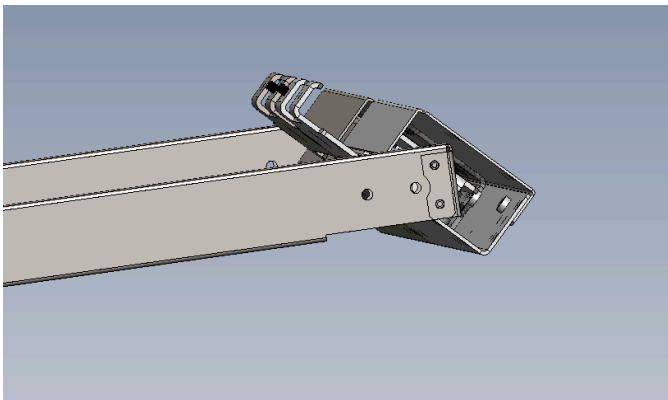


4) Attach the Vertical Support Posts to the Header Track. (This is a two man job)

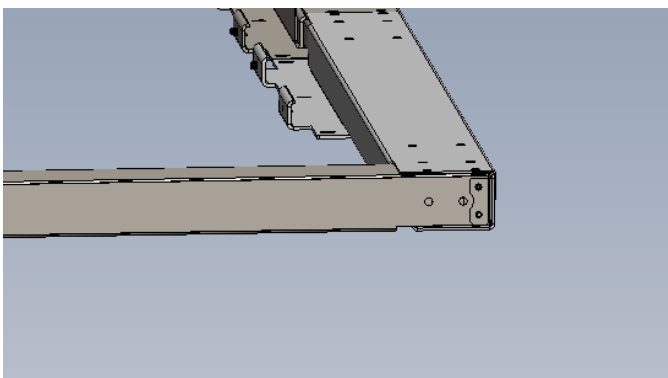
The header needs to be tilted about 45 degrees, then slide the vertical posts partially into the header sides, then tilt the header back flat and push the posts in the remaining inch or so. Then secure with flange button head screws. (Another alternative is to remove the Header Track face plate, install the Vertical Posts, then re-attached the face plate.)



#1 Tilt Header

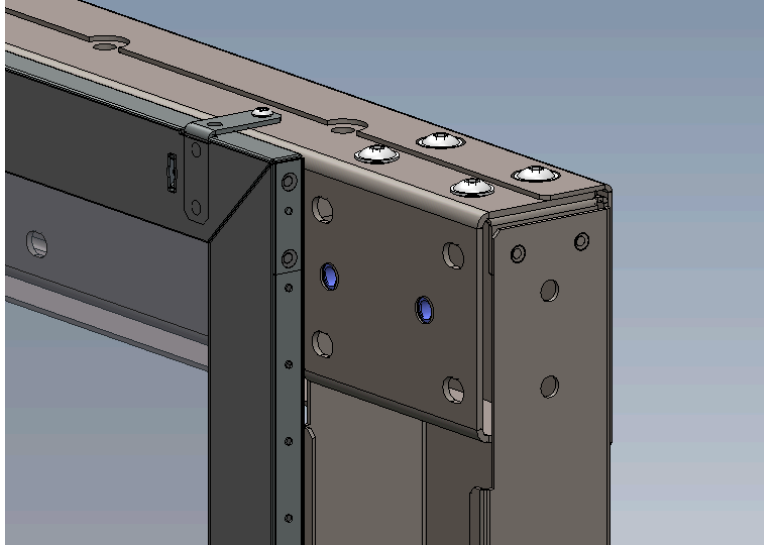


#2 Slide Posts Partially On



#3 Tilt Header Back Flat, Push Posts In

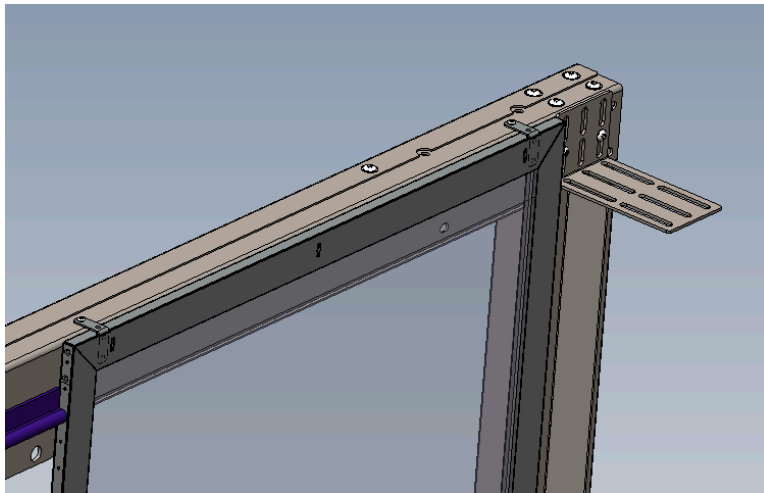
5) If Extender Panels are being used, adjust the height of the panels to match the height of the top of the Header Track.



Extender Panel Behind Header Track

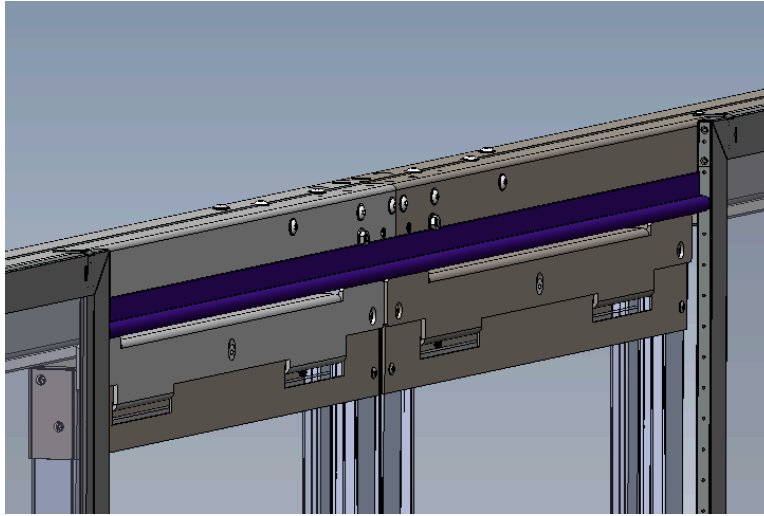
6) Attach the Header Track Assembly/Vertical Support Posts to the Racks with the brackets.

NOTE: If Extender Panels are being installed, place the Header Track/Vertical Posts temporarily offset from the racks by about 2". Next, slide the Extender Panels into place, then push the entire assembly flush against the racks. Last, secure the Extender Panels to the Header, then the Header to the racks.



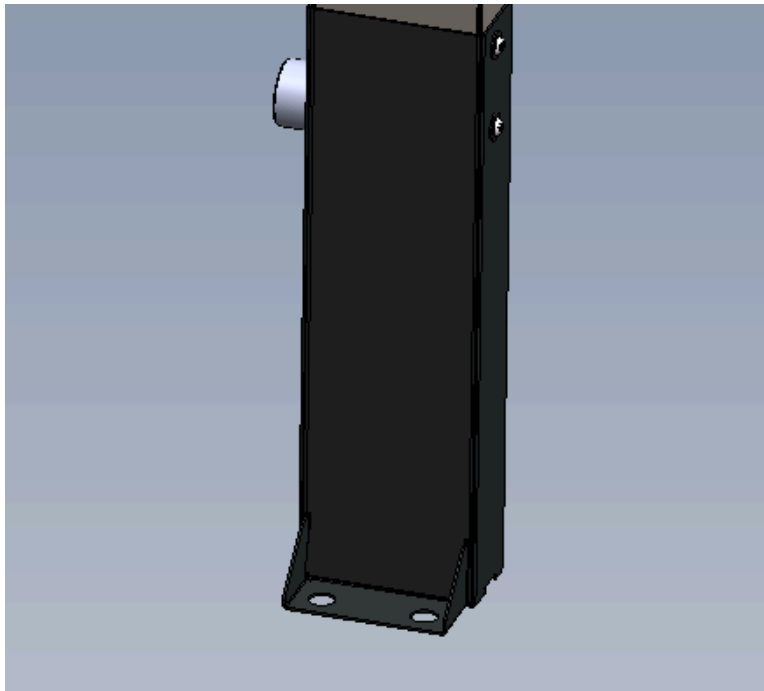
Extender Panels Attach at Top with Two Brackets

NOTE: Attach Gap Filler Gasket between the Extender Panels. Gasket attaches to back of Header Track.



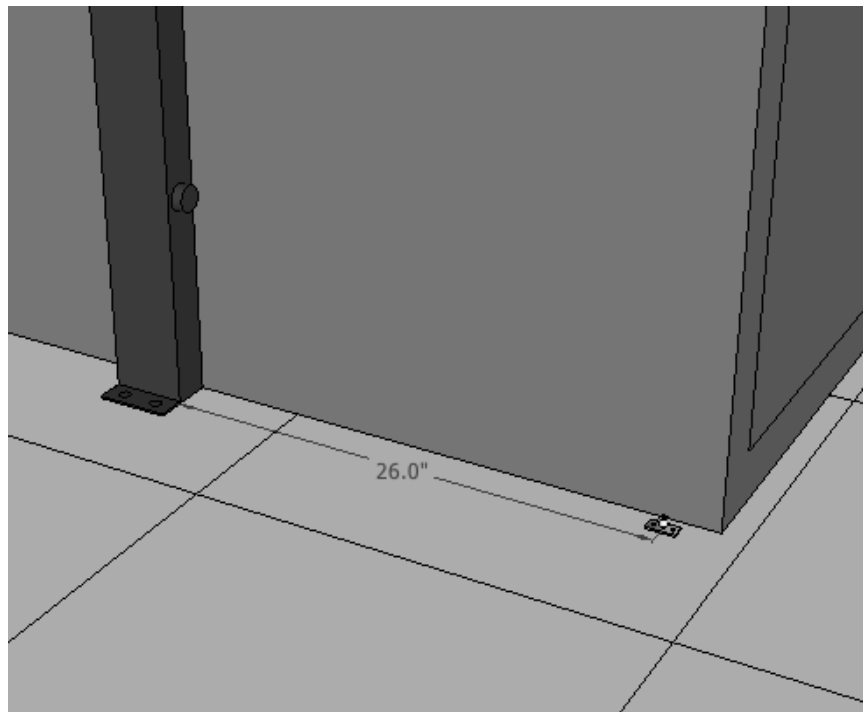
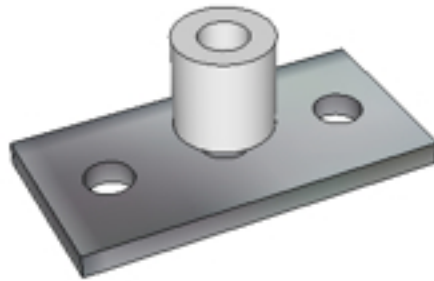
Gasket Shown in Purple but is Black

7) Secure the Vertical Support Post feet to the floor with hardware (not provided) as needed for the floor type and conditions. Hole diameter is 9/16".

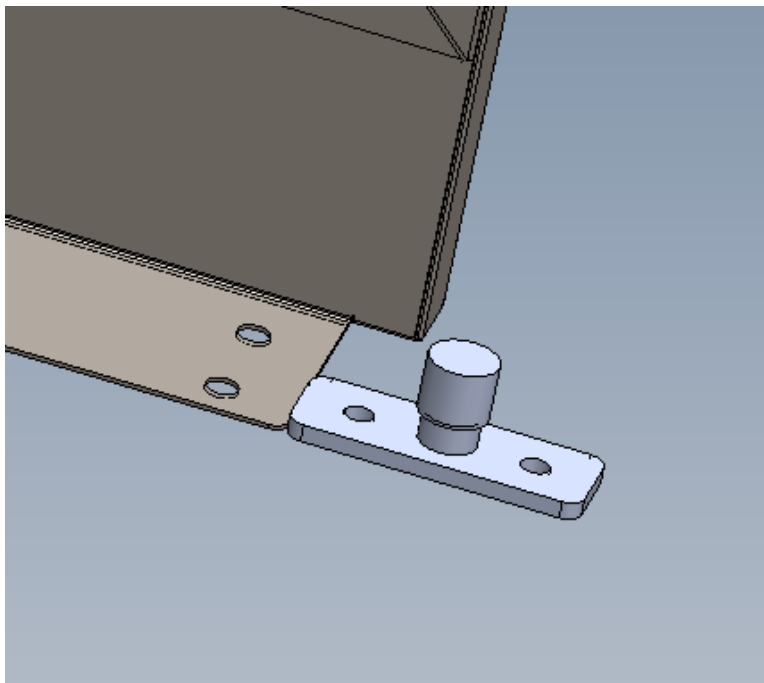
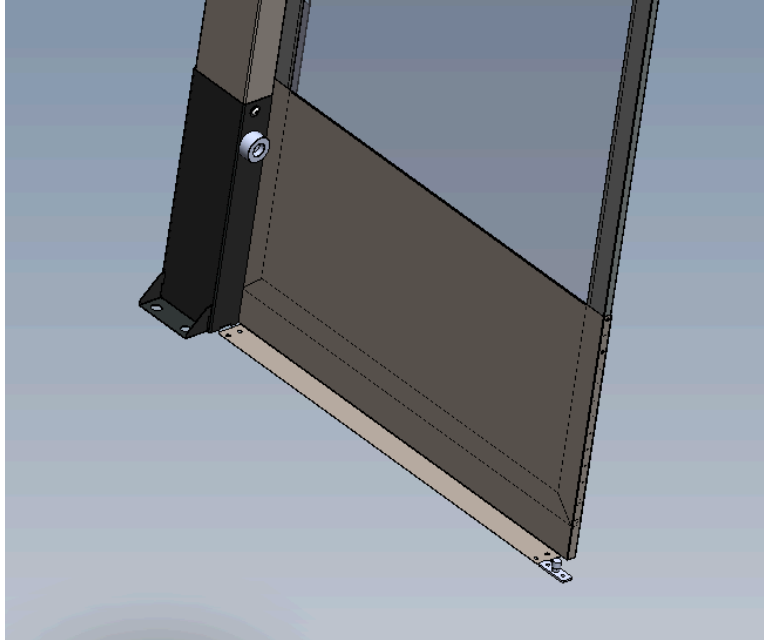


8) Secure the Roller Guide to the floor.

Place the roller guide inline with the door center-line and at 26" from the inside vertical post to the center to the roller. If floor is not level, guide may require shimming to insure roller engages bottom of door track.

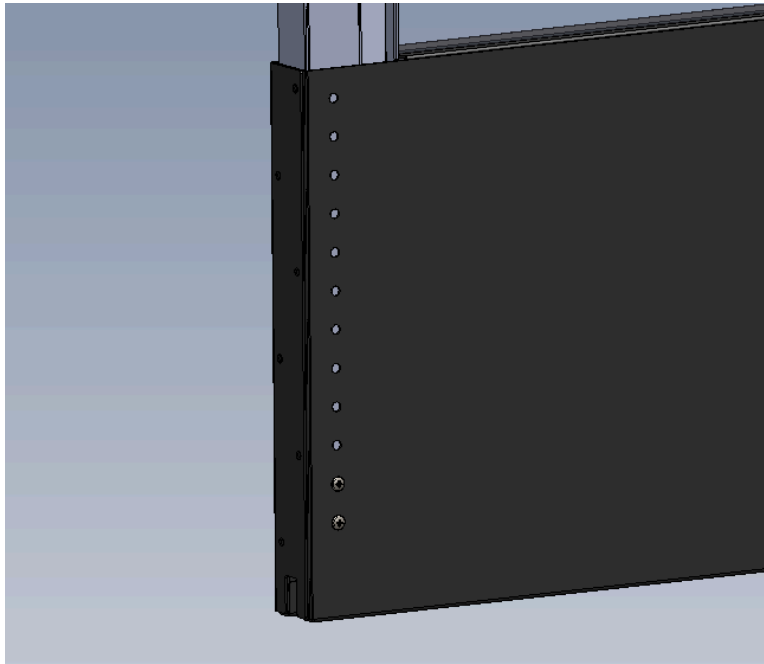


NOTE: If the Extender Panels are being installed, then place the Roller Guide at the inside edge of the flange on the bottom of the Extender Panel.



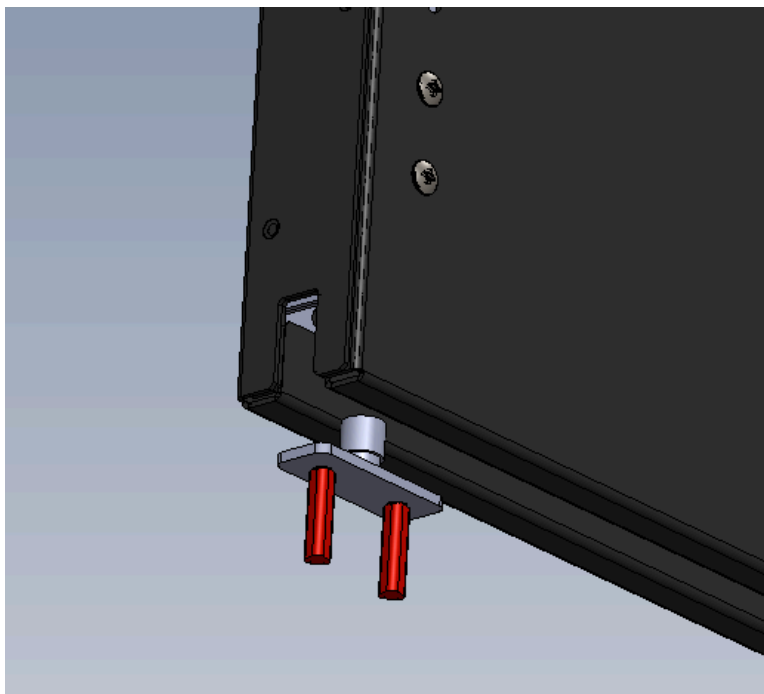
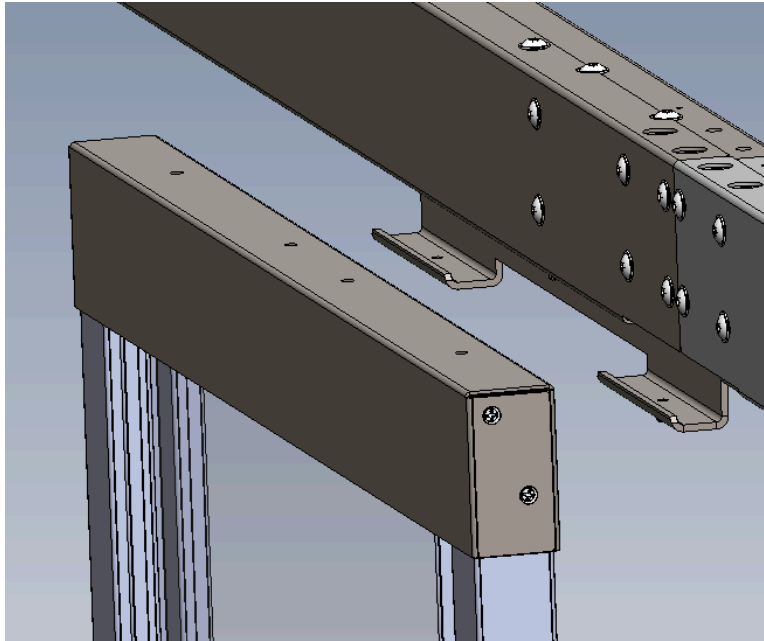
9) Adjust the height of the doors.

The door is delivered in the shortest setting. To extend the door, simply remove the screws, slide the bottom piece to the desired location and re-attach the screws.

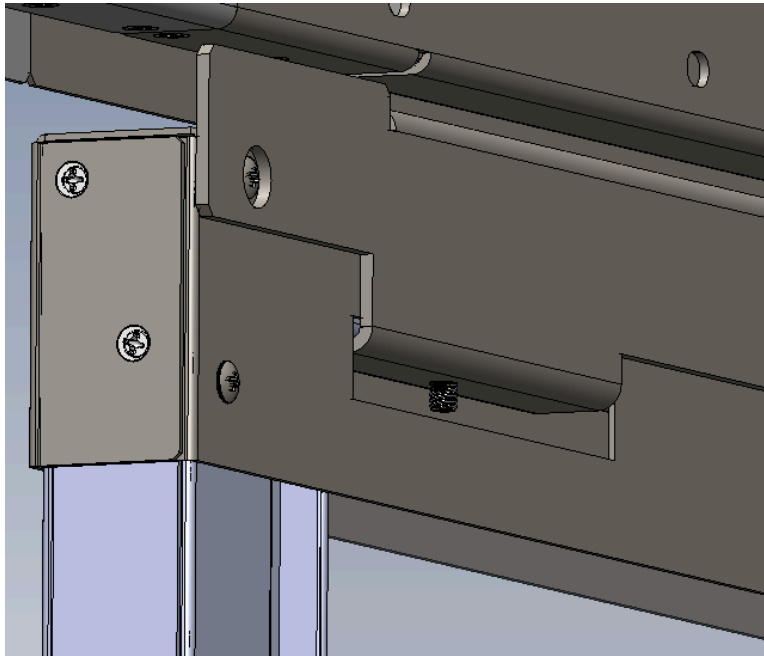


10) Attach the Doors to the Header.

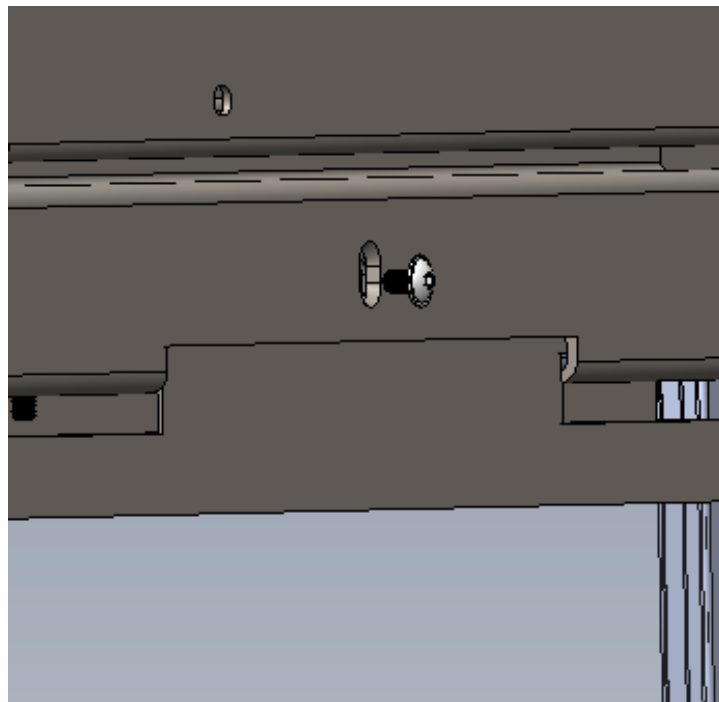
Match the door slots to the carriage hooks; place the door onto the hooks while simultaneously positioning bottom door gap over roller. Confirm the door slides back and forth smoothly.



11) Level, if necessary, with set screw using 1/8" hex wrench.

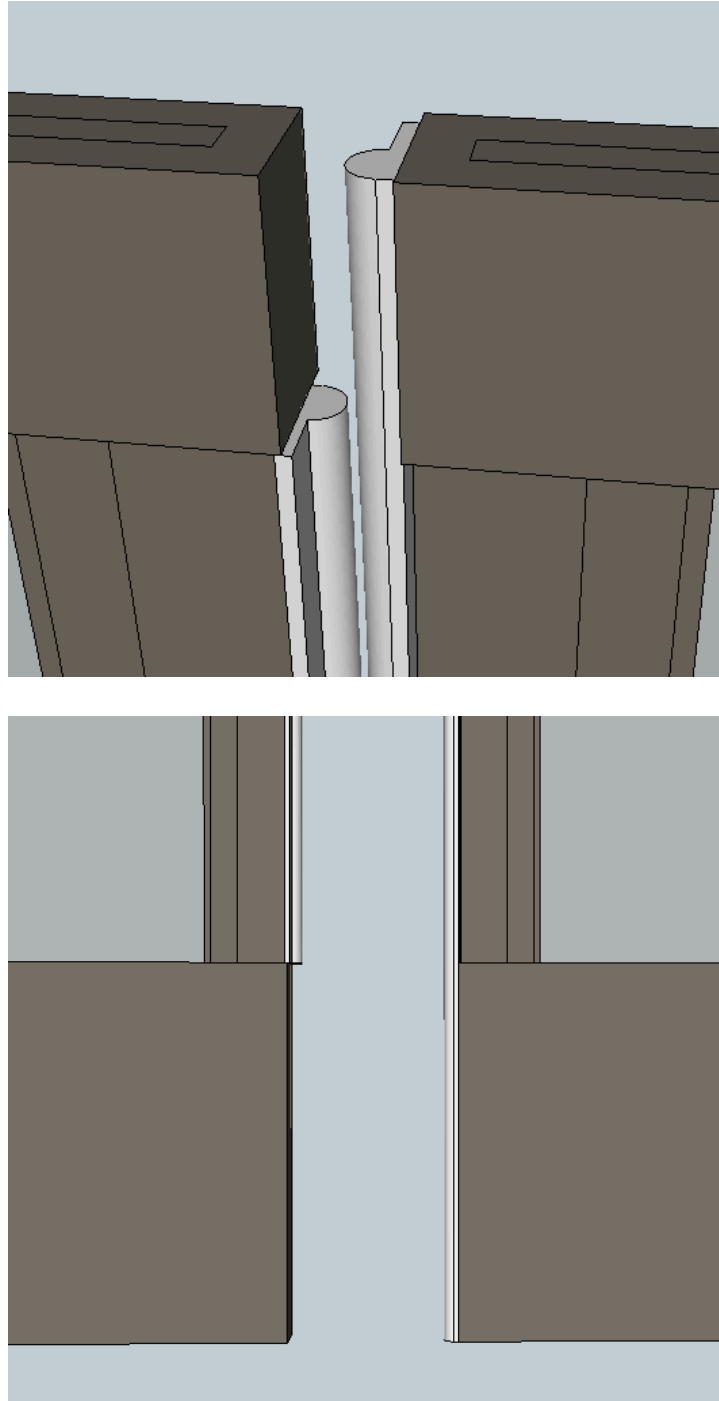


12) Secure with button head screw using 5/32" hex wrench.



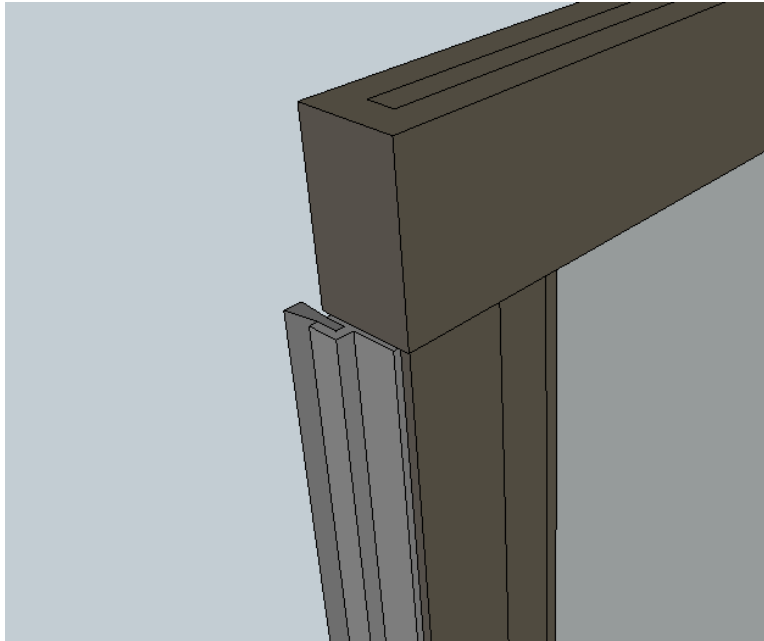
13) Attach Seal Gaskets

Attach the gaskets to the inside edge of the doors. Select one door and run gasket runs the entire length of door. On the opposite door, run the gasket only between the upper and lower sections as shown below. Cut to size with scissors.



14) Attach Brush Grommets

The strip brush grommet runs 5' and is attached to door starting just below the top head piece of the door. The brush grommet is attached with self tapping screws in the position as shown below.



CABINET SUPPORTED POLARPLEX™ DROP-AWAY ROOF CONTAINMENT SYSTEM

INTRODUCTION TO THE POLARPLEX™ ROOF AISLE CONTAINMENT SYSTEM

The PolarPlex™ Drop-Away Panels a Roofing Option for an Aisle Containment System. These unique panels are attached to the cabinets and are deployed horizontally across the aisles to create a tight containment barrier. The panels are made of an aluminum frame with a special translucent insert. The panels are UL-listed for use below sprinkler heads and the inserts are heat sensitive and promptly move out of their setting in high heat. The panels are custom sized for each installation.

SAFETY INFORMATION



WARNING: COLD AISLE CONTAINMENT ROOF PANELS ARE DESIGNED TO BE SECURELY ATTACHED TO THE ROOF STRUCTURE OF THE INSTALLED CABINETS.

DO NOT LEAVE ASSEMBLY UNSECURED TO CABINETS.

CABINETS MUST BE STABILIZED PRIOR TO AISLE CONTAINMENT ROOF SYSTEM ASSEMBLY.

CAUTION SHOULD BE EXERCISED TO ENSURE THE CABINET LOAD RATING IS NOT EXCEEDED.

INTENDED USE

Drop-Away Roof Panels are for use only in a restricted service environment, such as a data center. Use indoors only, in environmentally controlled areas; do not use outdoors, in harsh environments, or in air-handling spaces. Not for use in plenums.

STORAGE OF DROP-AWAY ROOF PANELS

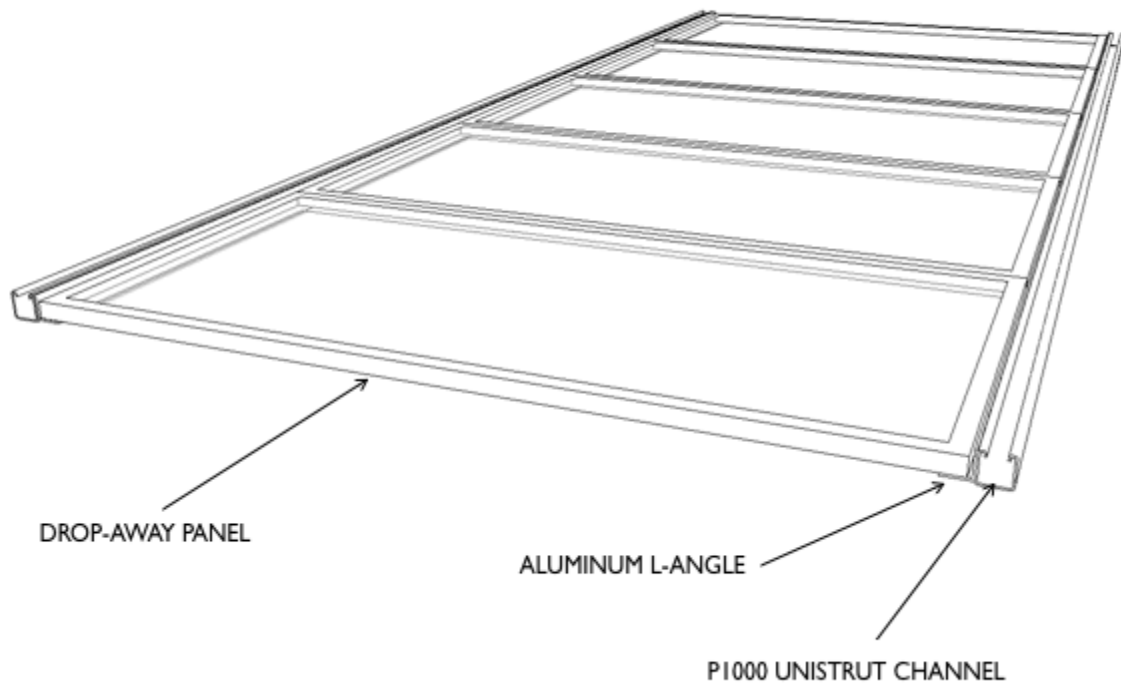
Aisle Containment Drop-Away Panels should be stored indoors only in environmentally controlled areas. Do not store outdoors. Do not expose to high temperatures.

INSTALLING THE DROP-AWAY ROOF PANEL SYSTEM

Component Overview

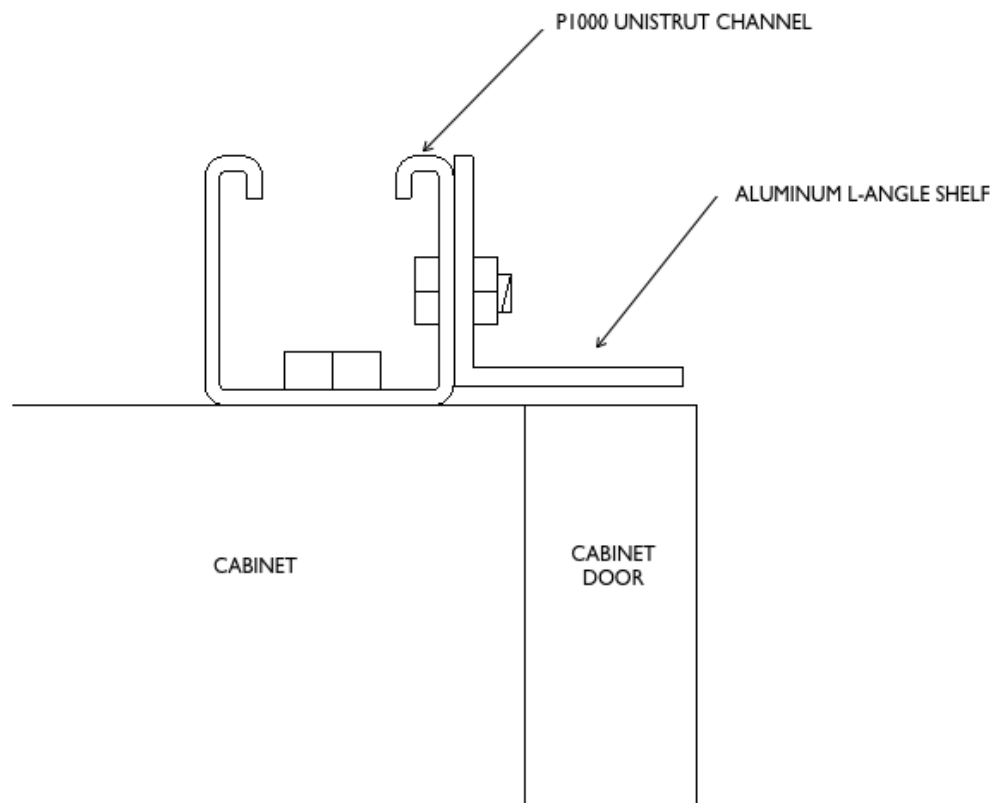
The Drop-Away Roof Panel System is comprised the following basic components:

1. Drop-Away Panels (Sized to project)
2. Aluminum L-Angle for Panel Shelf (2 sets, one for each side of aisle)
3. P1000 Unistrut (provided by others)
4. Miscellaneous nut and bolt hardware (provided by others)



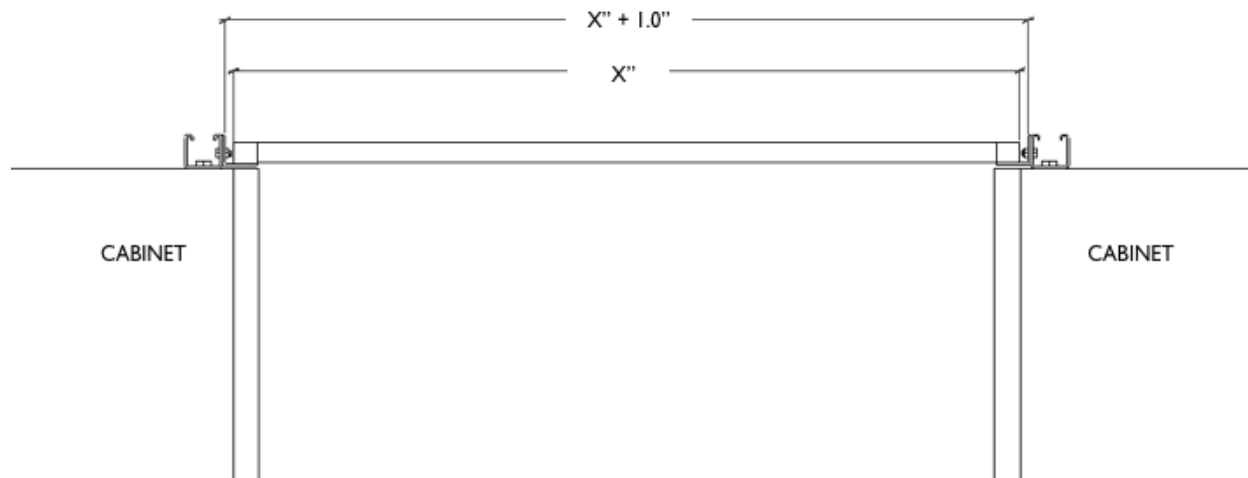
Basic Supporting Framework Design

- 1) The Drop-Away Panels are supported by a two piece framework of an Aluminum L-Angle (the shelf) attached to Unistrut which is attached to the tops of the cabinets.
- 2) The 1.5" x 1.5" Aluminum L-Angle is bolted to the P1000 Unistrut
- 3) The L-Angle is bolted flush to the top of the Unistrut channel so that there is a small 0.125" gap below the L-Angle so that it does not interfere with the cabinet door.
- 4) This L-Angle/Unistrut combination is bolted to the tops of the cabinets.



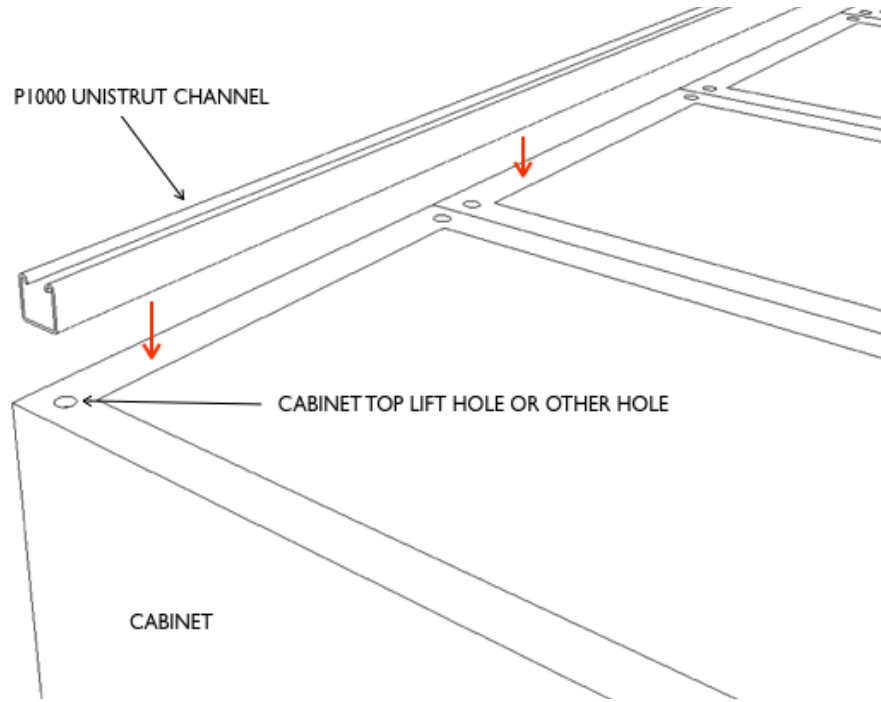
Determining the Supporting Frame Layout

- 1) Drop-Away Panel Length, previously determined, is used to set the spacing between rows of the P1000 Unistrut/Panel Shelf L-Angle.
- 2) Add 1.0" to the length of the panel to determine the distance between inside edges of the P1000 Unistrut.
- 3) For example, if the panels are 54.0" long, then set the distance between the inside edges of the P1000 Unistrut at 55.0".

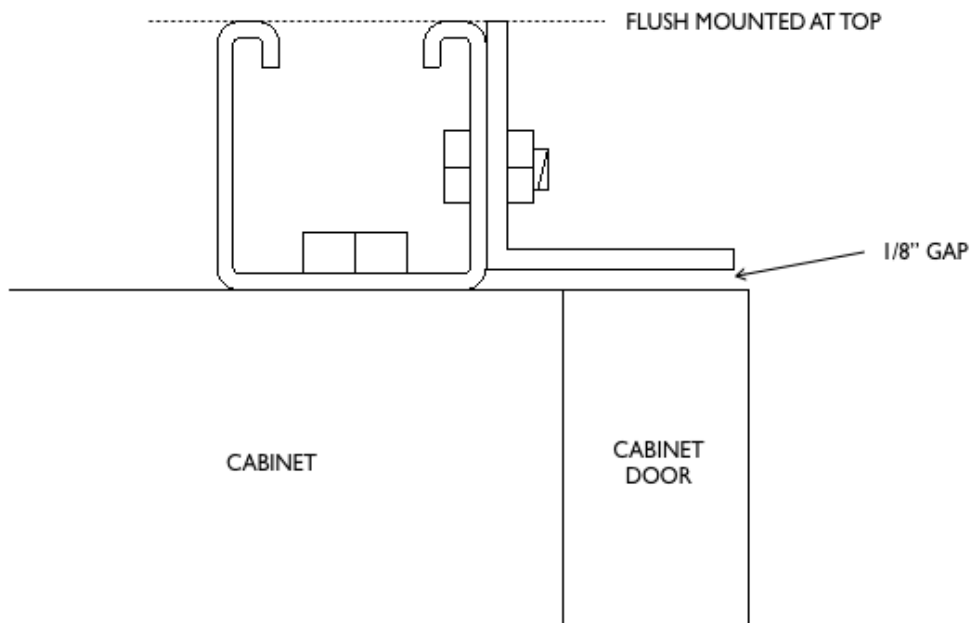


Installing the Supporting Frame

- 1) Attach the P1000 Unistrut to the tops of the cabinets. Sometimes, existing cabinet top holes can be used, other times new holes may need to be drilled.

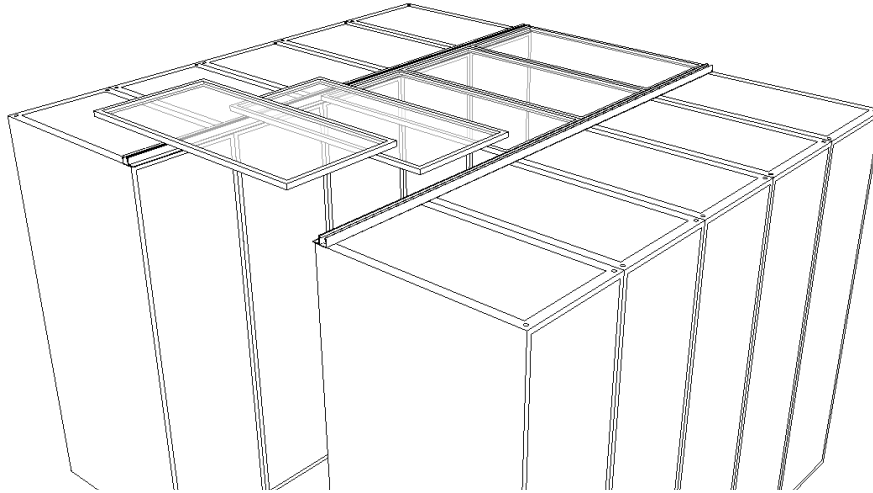


- 2) Attach the Aluminum L-Angle to the Unistrut such that there is a 1/8 gap below the bottom of the L-Angle.

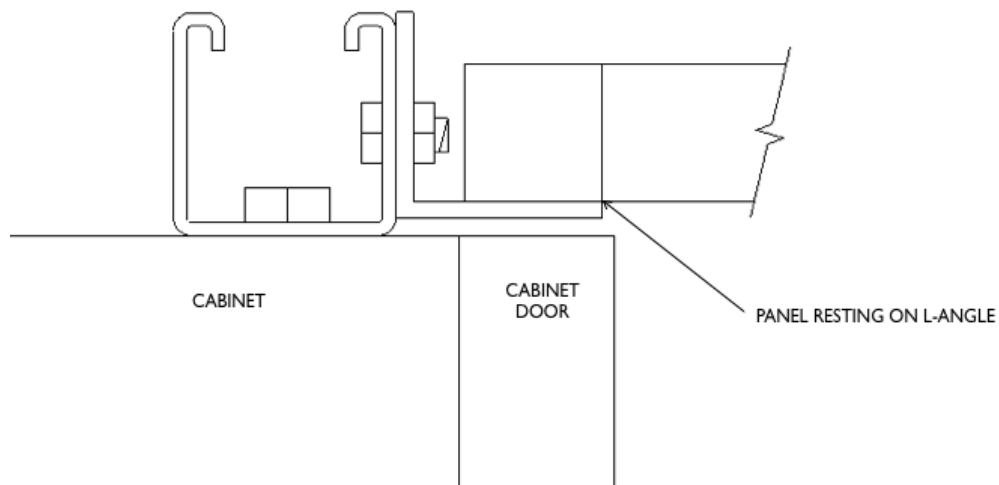


Installing the Drop-Away Panels

- 1) The Drop-Away Panels are simply lifted into place and set onto the L-Angle shelves.



- 2) The Drop-Away Panels rest on the horizontal edge of the L-Angles and are captured by the vertical edges of the L-Angles so that they do not fall out.
- 3) Optional 3M Dual Lock tabs are available to further secure the panels.



CABINET SUPPORTED POLARPLEX™ STANDARD PANEL CONTAINMENT SYSTEM

INTRODUCTION TO THE POLARPLEX™ STANDARD PANELS

The PolarPlex™ Standard Containment Panels are deployed vertically, either above the cabinets or next to the cabinets to seal off empty rack spaces. The panels are made of an aluminum frame with a twin-wall polycarbonate insert. The panels are custom sized for each installation.

SAFETY INFORMATION



WARNING: VERTICAL CONTAINMENT PANELS ARE DESIGNED TO BE SECURELY ATTACHED TO THE ROOF STRUCTURE OF THE INSTALLED CABINETS OR TO THE FLOOR.

DO NOT LEAVE PANELS UNSECURED ON THE CABINETS.

CABINETS MUST BE STABILIZED PRIOR TO INSTALLATION OF THE STANDARD PANELS.

CAUTION SHOULD BE EXERCISED TO ENSURE THE CABINET LOAD RATING IS NOT EXCEEDED.

INTENDED USE

Standard Panels are for use only in a restricted service environment, such as a data center. Use indoors only, in environmentally controlled areas; do not use outdoors, in harsh environments, or in air-handling spaces. Not for use in plenums.

STORAGE OF STANDARD PANELS

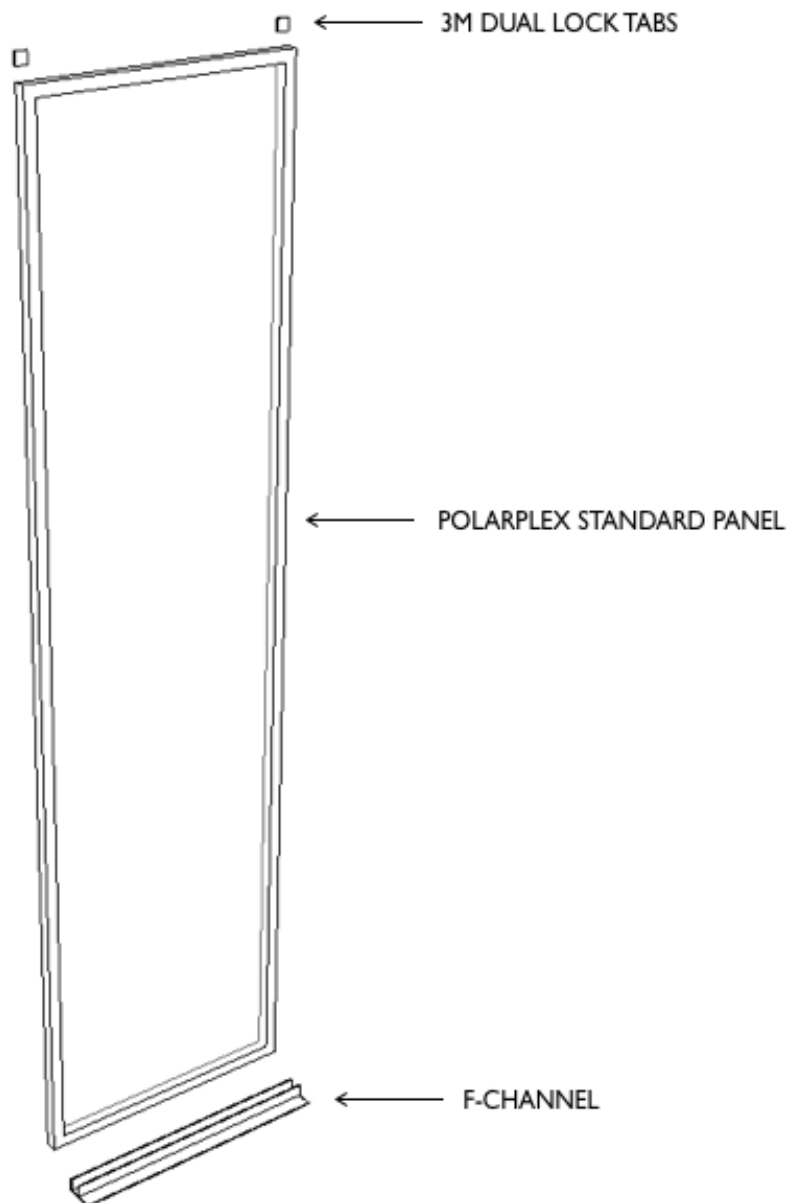
Aisle Containment Standard Panels should be stored indoors only in environmentally controlled areas. Do not store outdoors.

INSTALLING THE POLARPLEX™ STANDARD PANELS

Component Overview

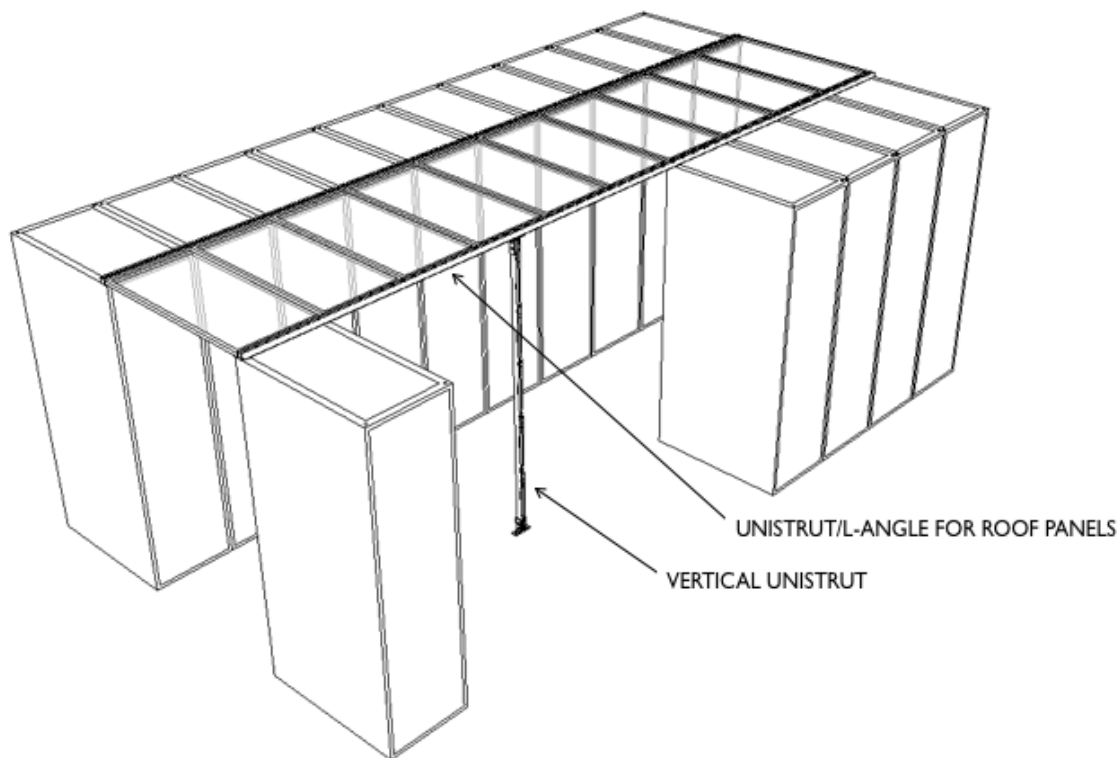
The Standard Containment Panel System is comprised the following basic components:

1. Standard Panels (Sized to project)
2. Aluminum F-Channel for bottom of panels
3. 3M Dual Lock tabs
4. Miscellaneous securing hardware for F-Channel (provided by others)
5. P1000 Unistrut and standard Unistrut hardware as needed (provided by others)



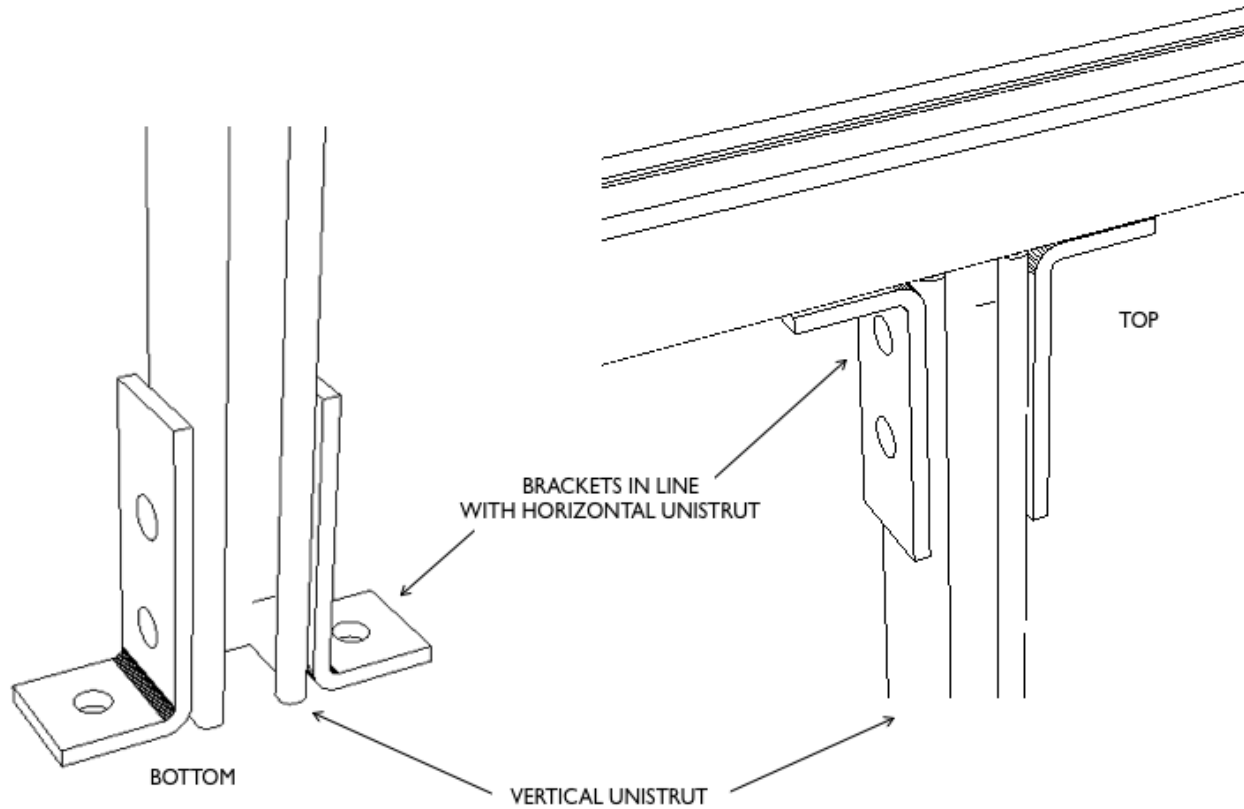
Basic Supporting Framework Design

- 1) There is an existing two piece framework of an Aluminum L-Angle and Unistrut on the cabinet tops that supports the Drop-Away Roof Panels.
- 2) This Unistrut framework serves as the upper support of the Standard Panels, along with the floor F-Channel and 3M Dual Lock.
- 3) For 24" to 96" empty sections between racks, the support of the adjacent cabinets is sufficient to hold the Unistrut.
- 4) For empty sections beyond 96", then additional vertical Unistrut is added.
- 5) The brackets for the vertical Unistrut should be in line with the horizontal Unistrut so that there is a clear mounting surface for the Standard Panels.



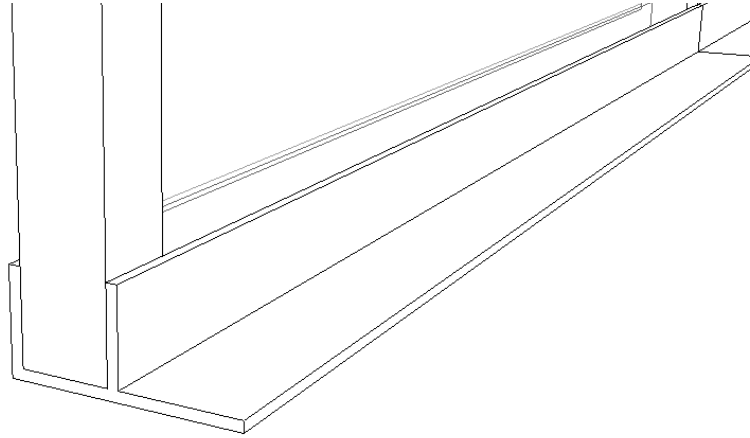
Installing the Vertical Unistrut to the Horizontal Unistrut

- 1) On the bottom attach two standard 90-degree brackets to the vertical P1000 Unistrut such that the brackets are in line with the horizontal Unistrut roof support.
- 2) At the top attach two standard 90-degree brackets to the vertical P1000 Unistrut such that the brackets are in line with the horizontal Unistrut roof support.

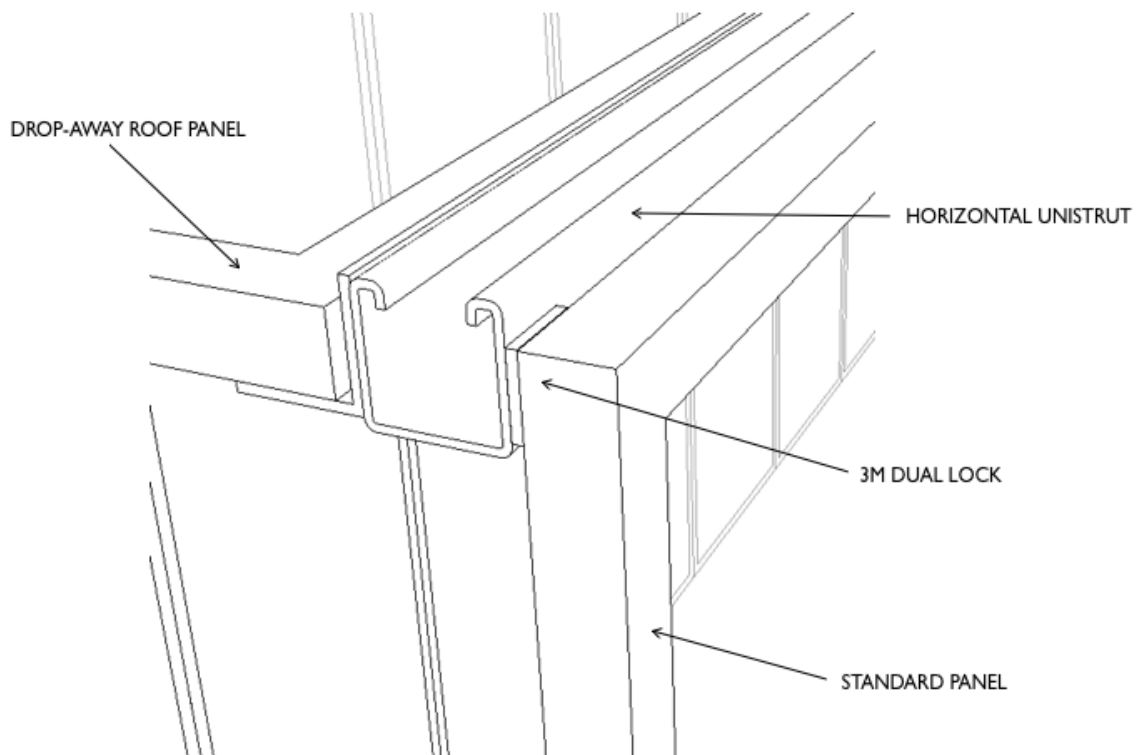


Installing the PolarPlex™ Standard Panels

- 1) Secure the F-Channel to the floor in a position such that the channel is aligned to the outside edge of the horizontal Unistrut above.



- 2) Add two 3M Dual Lock Tabs to the two upper corners of the Standard Panel.
- 3) Insert the bottom of the Standard Panel into the F-Channel.
- 4) Press the top of the Standard Panel against the horizontal Unistrut/3M Dual Tabs to secure it in place.



Polargy Contact Information

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