



OPEN THE  
POSSIBILITIES

 **Vista Air**<sup>™</sup>  
Vertically Folding Walls



With **Vista Air™ Vertically Folding Walls**, creating a refreshing, open space is as simple as pushing a button. When you need thermal and moisture protection that promotes energy savings and occupant comfort, Vista Air is a barrier you can depend on. When you need to elevate the occupant experience, increase airflow and create unobstructed views, Vista Air rises to the occasion.

# OPEN UP TO VISTA AIR™

Two views. One dynamic space.

With harmonizing design options, lean aluminum construction and the low-profile **Rizon Lift System**—the first wall lift system of its kind—you can be sure that Vista Air won't weigh down your design, or delay construction.







Elevate  
the experience.  
Reveal your Vista.



# Make it YOURS

**Vista Air™ Vertically Folding Walls are available in multiple mounting and cladding options, including metal, wood and glass. Contact Vista Air for more options.**

**Low-Profile. Small Footprint.**

- Features the Rizon™ Lift System instead of counterweights, tension springs, straps, hydraulics or pulleys to simplify installation and minimize maintenance
- Promotes energy efficient spaces
- Made from recycled aluminum

**Our Advantage**

- Furnished and installed less expensively than other products in its class
- Engineers available to assist with design and installation
- Superior service and technical experience provided by Construction Specialties



## Set Your Sights on A NEW RIZON™

**Innovative, low-profile lifting technology**

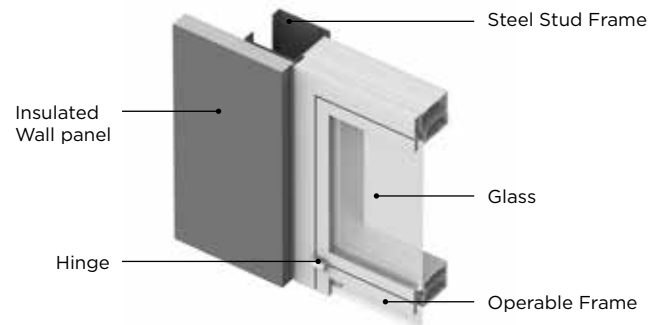
Vista Air Vertically Folding Walls simplify installation and reduce maintenance by utilizing our proprietary Rizon Lift System instead of the counterweights, tension springs, straps, hydraulics or pulleys found in other products in

its class. Self-locking and ultra-reliable, Rizon's smooth meshing gear technology minimizes noise when opening and closing. It also occupies less space than competitive systems, so you can create refreshing, open spaces, with no obtrusive bulkheads or columns.

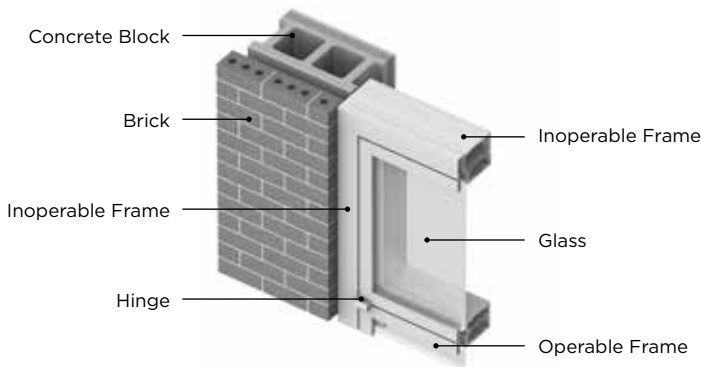
# POSS

# Harmonizing MOUNTING OPTIONS

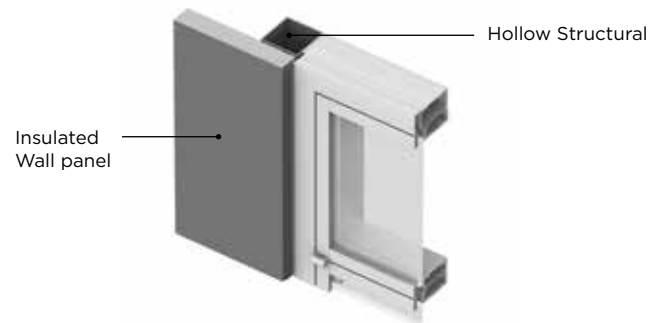
Vista Air™ Vertically Folding Walls can be mounted on most types of structures to provide a continuous, harmonizing aesthetic. Our engineers will work with you to produce a clean design and our certified installers will ensure successful installation with the proper attachment systems.



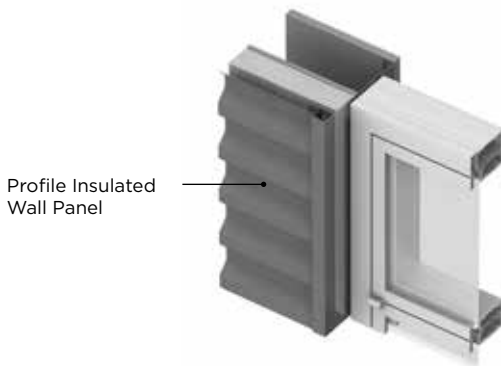
INSULATED WALL PANEL  
(STEEL STUD)



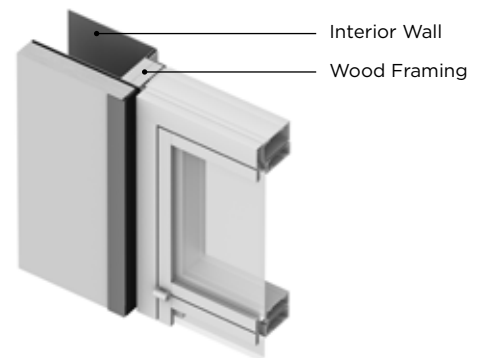
CONCRETE MASONRY UNIT



INSULATED WALL PANEL  
(HOLLOW STRUCTURAL SECTION)



INSULATED WALL PANEL



WOOD FRAMING

IBILITIES

# AIR ON THE SIDE OF EXPERIENCE

When you use Vista Air™ Vertically Folding Walls, you get the experience and expertise you can only get from Construction Specialties, with engineers available to assist with your project from design through installation.

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## Sustainability

Our commitment is to not only create products that contribute toward lowering the environmental impact of buildings, but also to conduct business in a manner that has minimal impact on the environment. Vista Air™ Vertically Folding Walls are manufactured with recycled aluminum while also promoting energy efficiency through their dynamic functionality.

## Comfortably Compliant

The design of Vista Air Vertically Folding Walls accounts for safety and governmental codes. VAVFW products are manufactured to be in compliance with UL 325 safety standards.

## The CS Difference

With Vista Air, you'll also benefit from the category leadership, manufacturing excellence and superior service of Construction Specialties—a leader in architectural specialty products for more than 65 years. With operations throughout the world, CS is dedicated to supporting the commercial building community with a range of products including: Acrovyn® Wall and Door Protection, Pedisystems® Entrance Flooring, Expansion Joint Covers, Cubicle Track and Curtains, Smoke and Explosion Venting Systems, Architectural Grilles, Architectural Louvers, Sun Control Systems and Vista Air Vertically Folding Walls. Visit [c-sgroup.com](http://c-sgroup.com) for more information.

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## OPEN THE POSSIBILITIES

For more information, visit [VistaAirWalls.com](http://VistaAirWalls.com) or call **800-414-9883**.

Patent Pending

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Images are artists' renderings

 **Vista Air**<sup>™</sup>  
Vertically Folding Walls





OPEN THE POSSIBILITIES

Artist's Rendering

## Two views. **One dynamic space.**

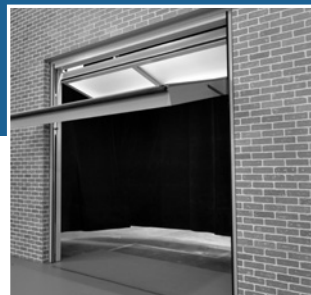
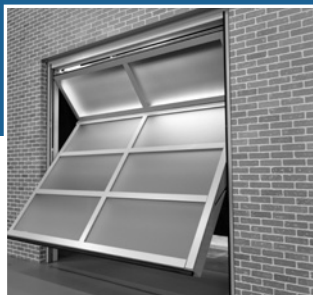
Create flexible, dynamic spaces that open or close with the push of a button, with Vertically Folding Walls from Vista Air™, a division of Construction Specialties.

Closed, Vista Air provides a thermal and moisture barrier that promotes energy savings, occupant comfort and protection from the elements. Open, it offers an unparalleled occupant experience with uninhibited airflow and unobstructed vistas.

Either way, you get a thin, clean design with various mounting options, glass colors and cladding materials to harmonize seamlessly with adjacent features. And, thanks to its innovative bi-fold wall technology and lean aluminum construction, Vista Air Vertically Folding Walls are lighter than other open air wall solutions and easier and more affordable to install.

 **Vista Air**<sup>™</sup>  
Vertically Folding Walls

# When installation and maintenance grinds your clients' gears...Open up to Vista Air™



## Features & Benefits

- Effectively creates two spaces in one
- Multiple cladding options, including metal, wood and glass
- Multiple glass options
- Rizon Lift System simplifies installation & reduces maintenance
- Rizon Lift System is lighter and easier to install than counterweight-driven systems
- Furnished and installed less expensively than other products in its class
- Engineers available to assist with design and installation

## Rizon™ Lift System

Vista Air Vertically Folding Walls simplify installation and reduce maintenance by utilizing the Rizon Lift System instead of counterweights, tension springs, straps, hydraulics or pulleys as found in other systems. This innovative system utilizes advanced sensors to ensure safe operation.

With Vista Air, new design possibilities are just beyond the horizon. With the low-profile, ultra-quiet Rizon Lift System, you can rest assured that your pursuit of a sleek, open aesthetic will be free of obstructions. Easy to install, reliable and durable, the Rizon Lift System makes working with Vista Air Vertically Folding Walls a breeze.

## Go with the Flow. Design Sustainably.

Our commitment is to not only to create products that contribute toward lowering the environmental impact of buildings, but also to conduct business in a manner that has no negative impact on the environment. Vista Air Vertically Folding Walls are manufactured with recycled aluminum while also promoting energy efficiency through their dynamic functionality.

## Comfortably Compliant

The design of Vista Air Vertically Folding Walls accounts for safety and governmental codes. VAVFW products are manufactured to be in compliance with UL 325 safety standards.

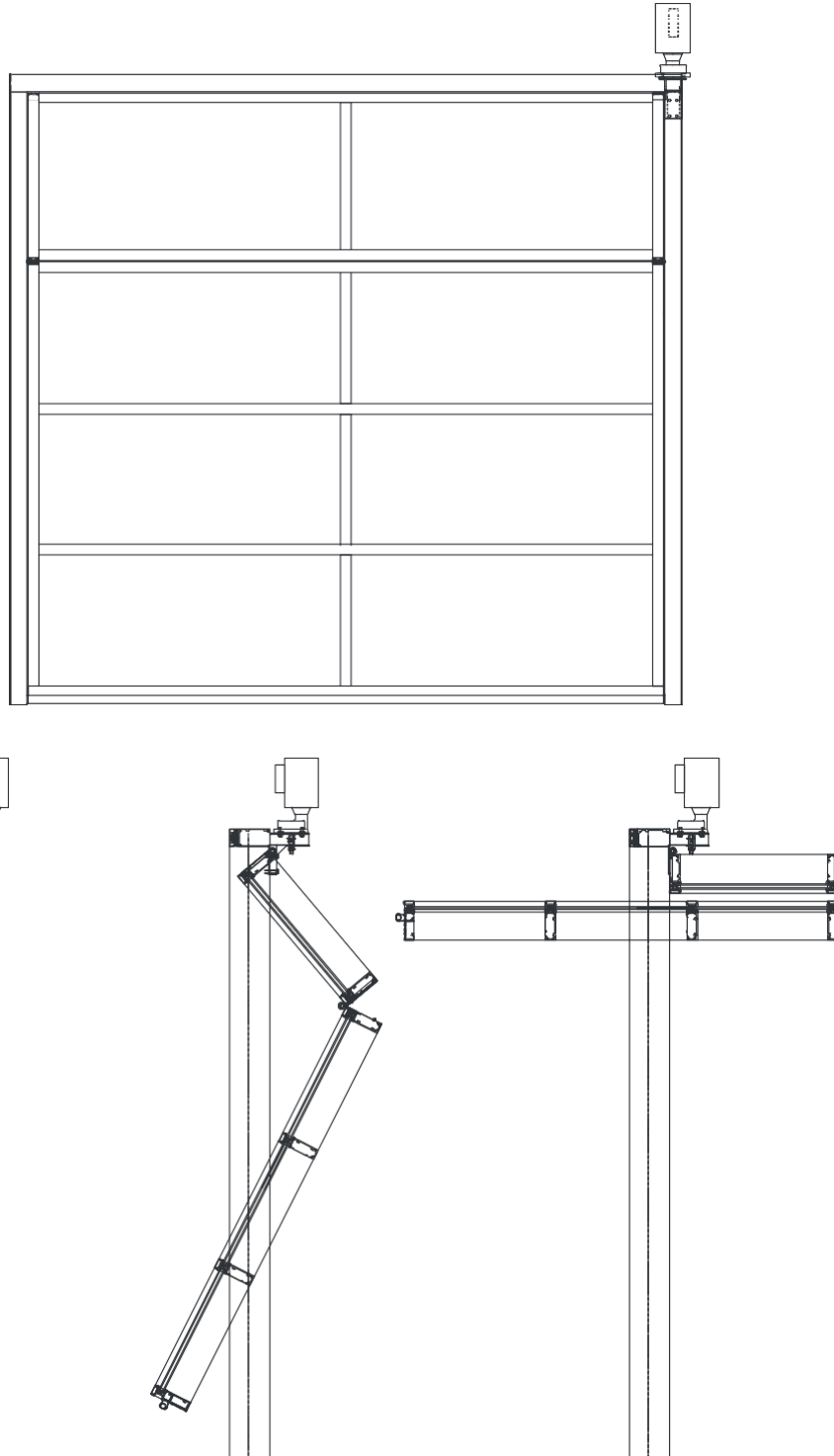
## Look Further. Learn More.

For more information, visit [VistaAirWalls.com](http://VistaAirWalls.com) or call 800-414-9883.



## Installation Instructions for Vista Air™ Vertically Folding Walls

Use these instructions in conjunction with your shop drawings to see the specifics that are particular to the model you are installing. Images below only represent the basic framework of the Vista Air™ Vertically Folding Wall (VA-100). Read these instructions completely before starting installation.



## Table of Contents

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### **Part 1: Preparation**

- A. Inspect material received
- B. Clear work space
- C. Tools required
- D. Check rough opening

### **Part 2: Installation of Frame**

- A. Layout perimeter frames
- B. Install perimeter frames
- C. Verify trolleys are level
- D. Install lead screw drive train

### **Part 3: Motor and Controls**

- A. Install drive mount
- B. Install motor and main drive chain
- C. Mount control box
- D. Electrical wiring
- E. Remove temporary locking pins

### **Part 4: Install Vista Air Wall Panel**

- A. Install upper panel
- B. Install lifting wheel brackets
- C. Install lower panel
- D. Install lower cam wheels

### **Part 5: Install Glass**

- A. Prep window frames for glass
- B. Install glass
- C. Install motor housing
- D. Install interior snap covers

### **Part 6: Adjust Sill Gasket Carrier**

### **Part 7: Adjust Optional Photo eye**

### **Part 8: Wiring Diagram**

*See Electrical Instructions for motor and electrical set-up*



## Part 1: Preparation

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- A.** Inspect packaging, uncrate carefully. Leave upper and lower panel sitting in crate (only take off top and sides of crate). Check components against packing list and parts list.
- B.** Clear workspace around wall opening. Let other workers in the area know that the opening will be inaccessible once installation has begun until it is complete. No hoses or cords should be run through the wall opening.
- C.** Required tools:
- Tape measure
  - Drill/drill bits + extensions
  - Screw gun (Phillips, flat head, sockets)
  - 360 Laser Level
  - Pliers (make sure you have needle nose)
  - Center hole punch (under sized based on perimeter fasteners, only required for metal substrates)
  - Protection for Vista Air product on the ground (use a mat, thick cardboard, padding, etc.)
  - Lift straps (optional)
  - Chain tension tool
  - Chain tool (chain breaker)
  - Allen keys
  - Clamps and clamping devices
  - Full set of open-ended wrenches (or socket wrench) 7/16", 3/8" & 9/16"
  - Rubber mallet
  - Hammer
  - Scissors or razor blade (cutting glazing gaskets)
  - Caulk gun
  - Torque Wrench
  - Dolly/wheel carts (optional)
  - Dow Corning 795 sealant
  - Blue Loctite 243

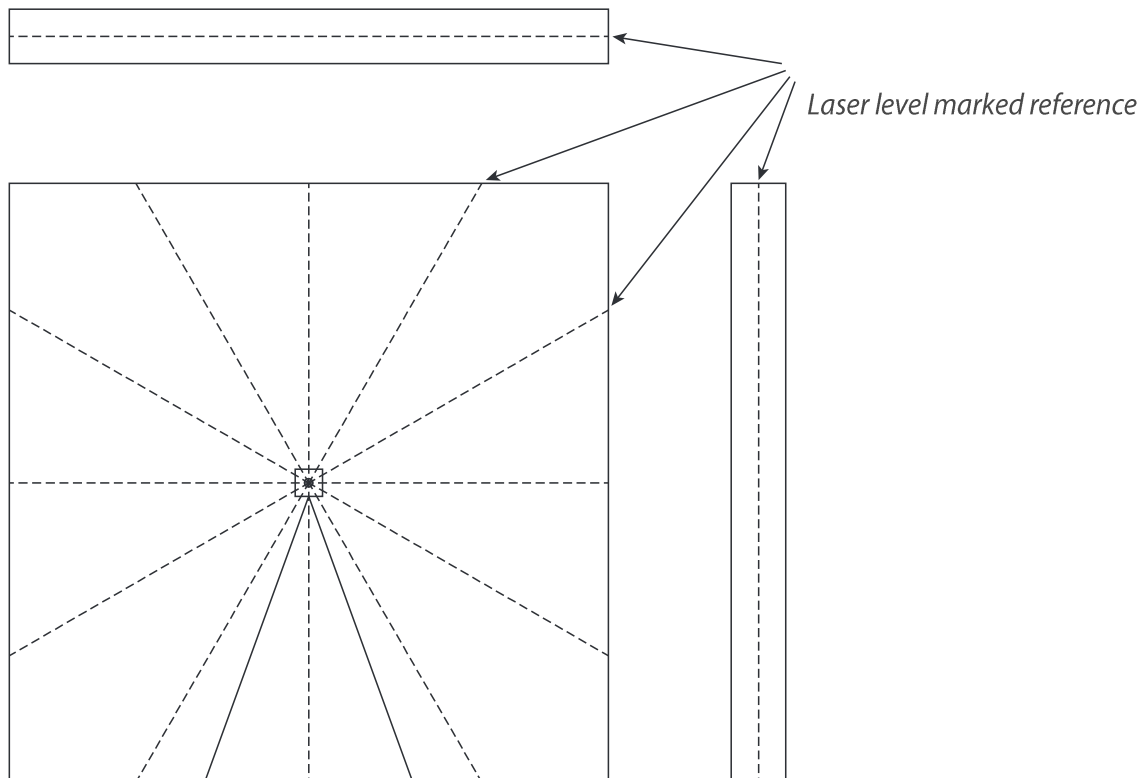
### Wiring and electrical tools and supplies:

- Small flat heads and Philip for wire terminals
- Wire strippers; wire crimpers; wire nuts; female disconnect terminals)
- 18-gauge wire (colors needed; blue, yellow, black, green, white, brown and red) enough length to run from bottom of door to the control box location
- 12-gauge wire (colors needed; red, white, orange, black/white) enough length to run from motor to control box

### D.

1. Check your rough opening for squareness and dimensions. Ensure that the finished floor height matches the shop drawings.

2. Check that there is clearance for the VA-100 frame assembly.
3. Check that the mounting substrates are the same material as those on the shop drawings.
4. Using the laser, mark vertical reference lines on rough opening sides for use in positioning the front plane of the fixed jambs and the fixed head in the vertical plane.
5. Using the laser, mark horizontal reference lines on rough opening sides for use in positioning the fixed jambs at equal heights.



## Part 2: Assembly - Installation of Frame and Upper Wall Panel

- A. Lay out perimeter frames (Vista Air to identify: VA-100 jamb, VA-100 head, etc.)

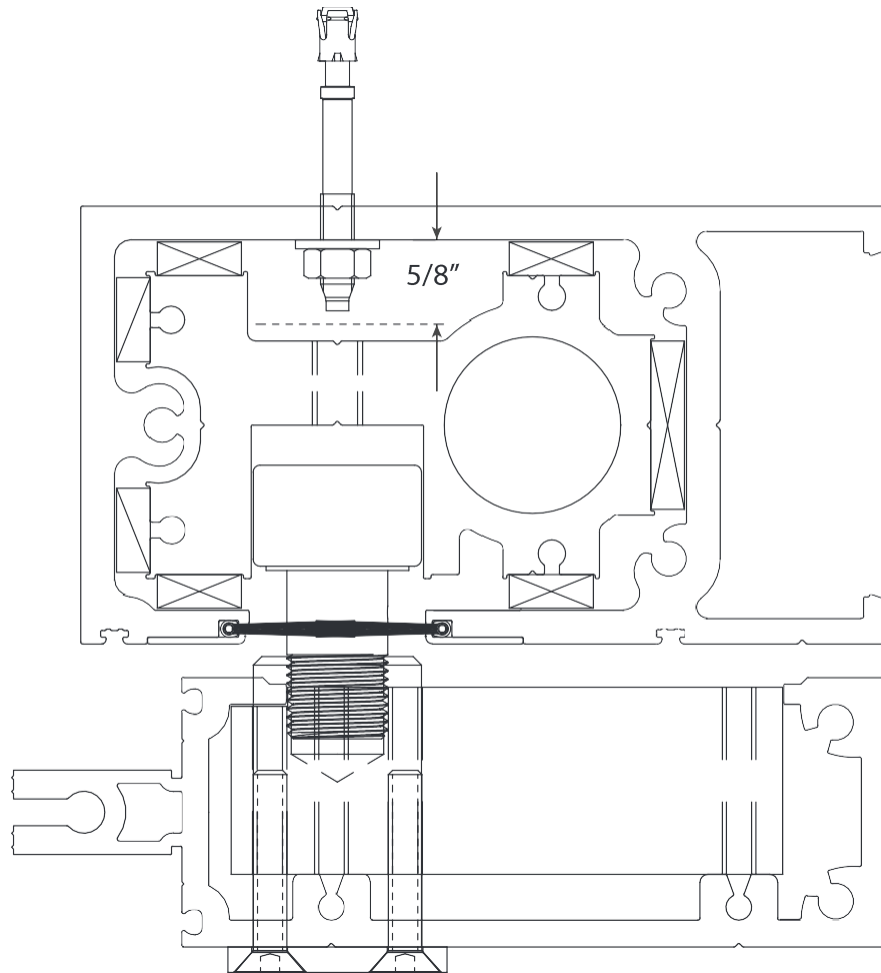
NOTE: Trolleys have been factory positioned and locked in the fixed jambs. DO NOT MOVE TROLLEYS. 2.2.

1. Check pre-drilled anchor holes into the VA-100 frames for fastener locations against the shop drawings. Fasteners shall be as called out on shop drawings. Use supplied templates to drill into perimeter.
2. Using the reference marks on the rough opening sides, install the fixed jambs. Ensure that the opening of the jambs are on the inside of the opening (refer to shop drawings). Shim between the fixed jambs and building as required. Ensure that distance from inside faces of both jambs match jamb day light opening on shop drawings. Check this dimension at 12" increments for



entire height of Vista Air jambs. Note: Shims must be positioned so that the fixed jambs are fully supported across their depth with no rocking.

3. Make sure that the anchor heads do not project into the jamb more than  $5/8$ " to prevent any interference with trolley travel. See sketch below.

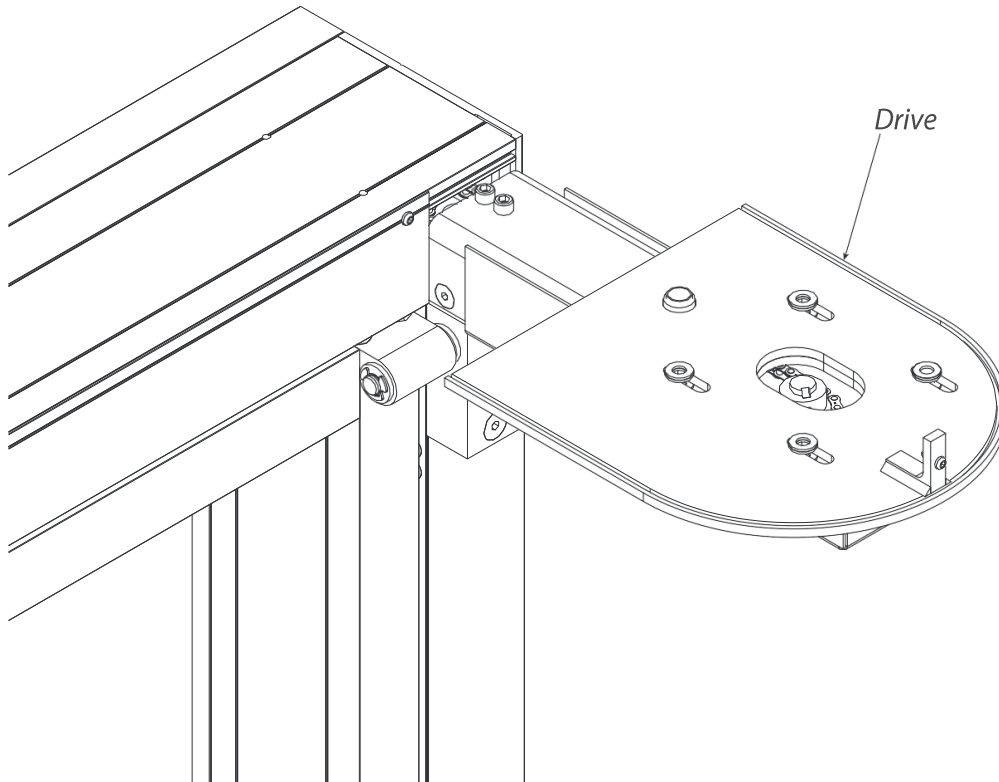


4. Using the reference marks on the rough opening top, install fixed head. Hard shim as necessary to ensure fixed head is level in opening. The exterior face of the fixed jambs must be in the same plane as the exterior face of the fixed head. Install bolts that secure head and jambs together with head/jamb angle (angle is factory-attached to jambs).
  5. Check the fixed frame squareness using diagonal measurements. The difference between the diagonal measurements should not exceed  $1/4$ ".
- B.** Using the top of the trolley for reference and using the laser level, make sure both trolleys are at the same height. If they are not, remove the lead screw lock O-ring and lead screw lock located at the top of the lead screw. Rotate the lead screw until the top of the trolleys are at the same height.

- C. Remove the lead screw lock O-ring and lock from the other lead screw. The locks are no longer needed.
- D. Inside the fixed head and jambs, fit lead screw drive chain around sprockets and connect with included chain link. This chain must be installed on the lower sprocket of the drive side. Remove any links required to remove any slack in the chain.

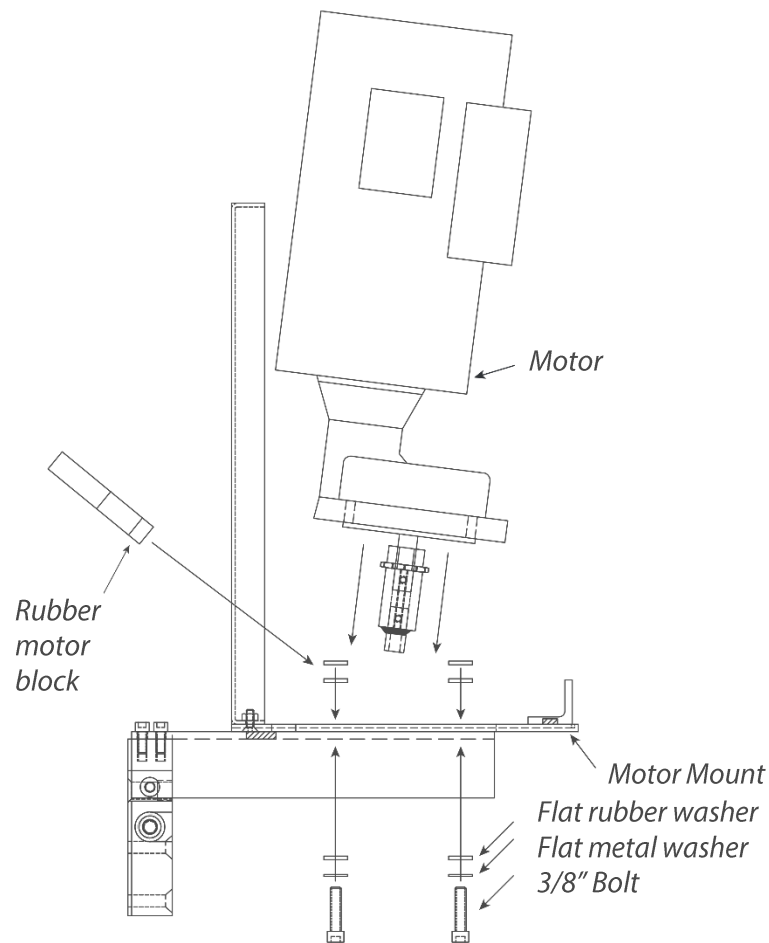
### Part 3: Motor and Controls

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- A. Install drive mount to hinge block and feed drive chain through drive mount.



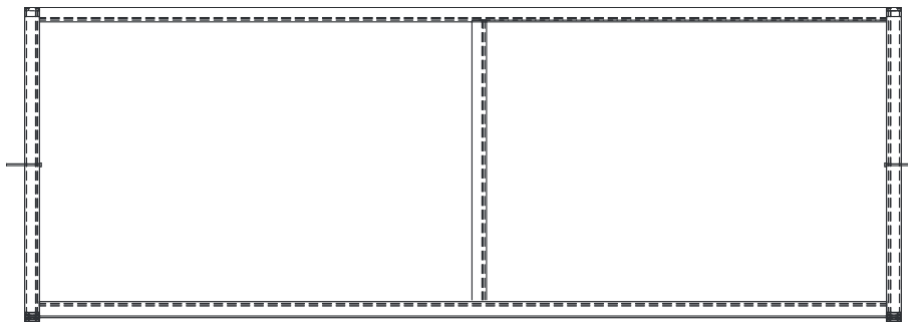


- B. Install motor to drive mount, Use two rubber washers between the motor and mount, and one rubber and one metal washer between the bolt head and motor mount for each of the 4 bolts. Tighten the bolts to hand tight and then give one full turn extra.
- C. Fit main drive chain around sprockets. Adjust the drive mount to take up any slack in the chain. Make sure that the limit switch wires pass through the middle of the drive chain.
- D. Insert the rubber motor block between the rear of the motor and the rear motor cover making sure it is pressed tight against the rear of the motor. Trim if necessary.
- E. Using the rubber motor block as a guide, mark the motor mount through the two  $\frac{1}{4}$  clearance holes. Remove the rubber block and drill (2)  $\frac{1}{4}$ " clearance holes in the motor mount where marked.
- F. Reinstall the rubber motor block and bolt into place from the underside of the motor mount Bolts going up).
- G. Mount the control box in the chosen location (wires must not be more than 100 feet long from motor to control box).
- H. Wire the control box, motor power, and control switch for temporary operation per the Electrical Installation Instructions. Connect the control box to temporary power provided by the GC.
- I. Operate Vista Air motor to make sure trolley travels full height and back. Return position of the trolley to lowest height. The limit switches at top and bottom should be shop adjusted, so the trollies will not over travel.
- J. Install the fixed head cover.

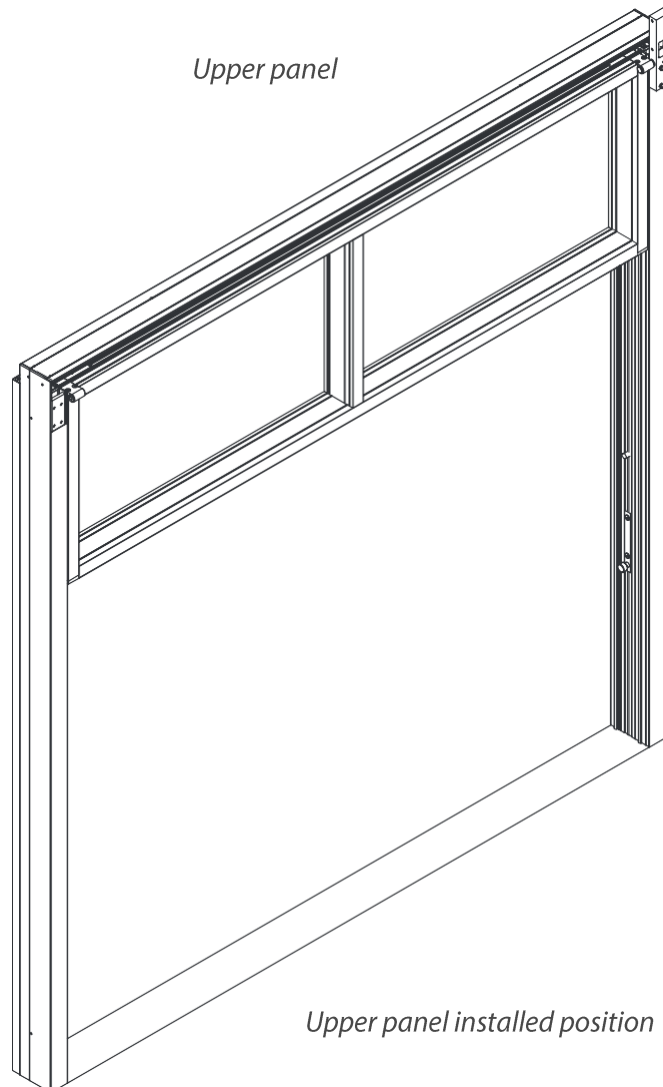
## Part 4: Install Vista Air Wall Upper Panel

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- A. Position upper panel inside of Vista Air jambs. Using temporary lift pins, insert pins into holes on each side of upper panel so that the pin rests on cam wheel support block (See shop drawings for this reference). Operate Vista Air VA-100 to raise upper panel into position. With hinges aligned, install hinge pins from the interior, outward. Remove temporary lift pins and install factory painted plugs. Operate Vista Air VA-100 to lower trolley to bottom position.

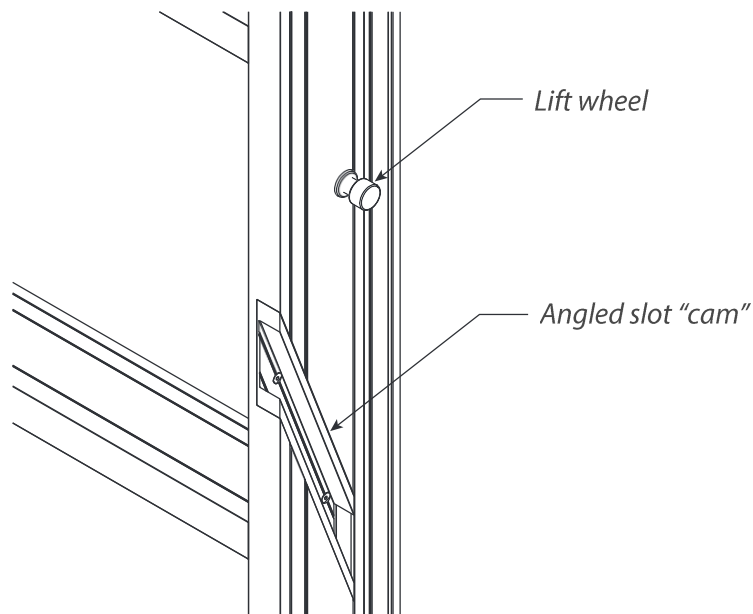
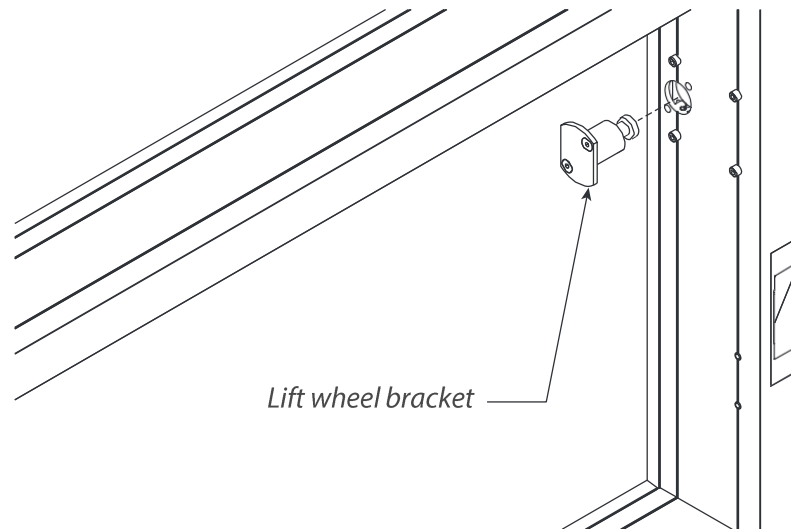


*Upper panel*



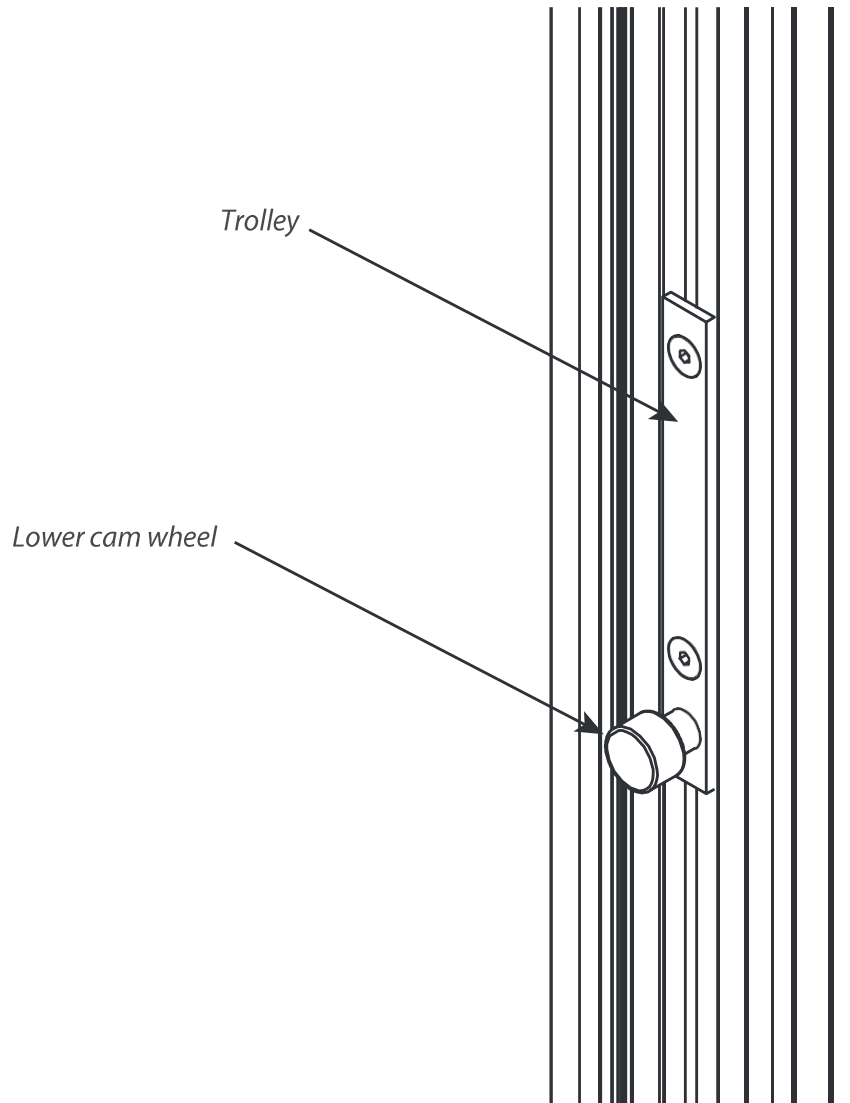
*Upper panel installed position*

- B. With trolley at its lowest height, position lower panel in perimeter opening and install the lift wheel brackets as shown below on both sides of lower panel. Lifts may need to raise the panel to get it into position, so the lift wheels sit in the correct position on the trollies. This may require tilting the lower panel at an angle to make sure lift wheel sits inside of trolley and not on top of trolley.



- C. Slope the lower panel so that the top of the panel is on the interior side. Operate the motor until you can rotate the upper and lower panels together so the pins connecting the hinges (upper and lower panel) can be installed. Hinge Pins should be installed from the exterior inward for the jamb hinges. Intermediate hinge pins can be installed from either side. Install snap rings onto hinge pins and tighten the 6-32 setscrew on the hinges that have them.

- D. After slipping on cam wheel bearing spacer onto separate cam wheels, apply supplied blue Loctite onto each lower cam wheel threads. With the lower panel still sloped, install the lower cam wheels into each trolley.

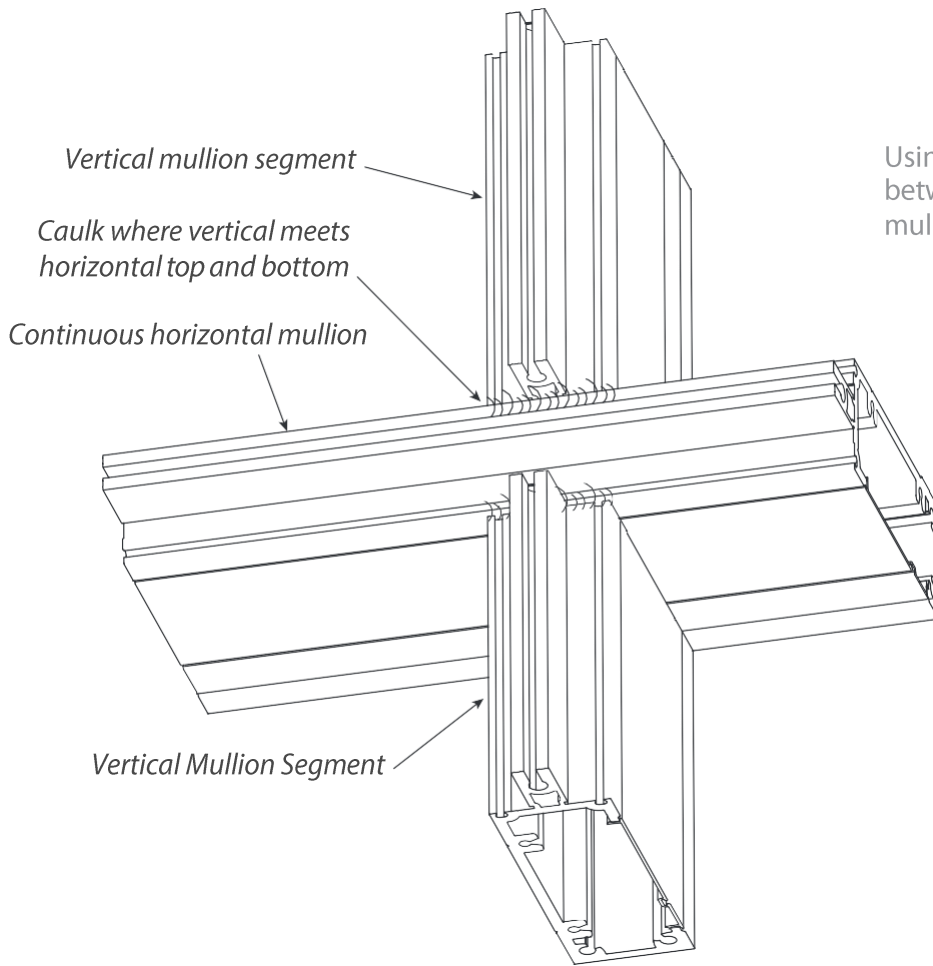


## Part 5: Install Glass

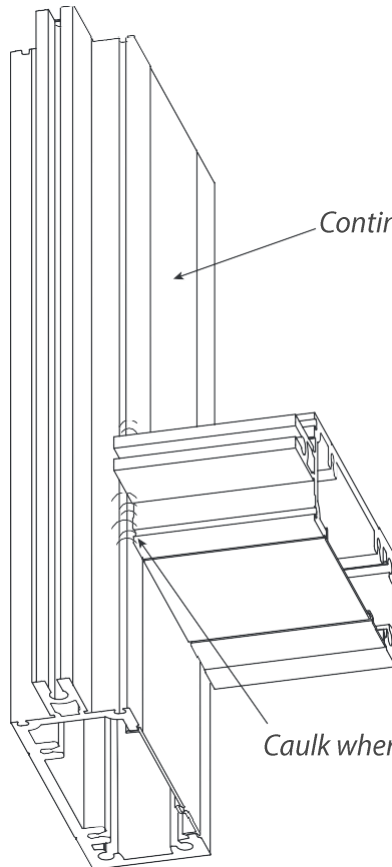
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- A. Prepare frames for glass; Lay out pressure plates, snap covers, gaskets and setting blocks.
1. Inside glass gaskets are shop attached as well as pressure plate gaskets
- B. Using Dow Corning 795, seal inside of glazing pocket everywhere the vertical member meets the horizontal members.



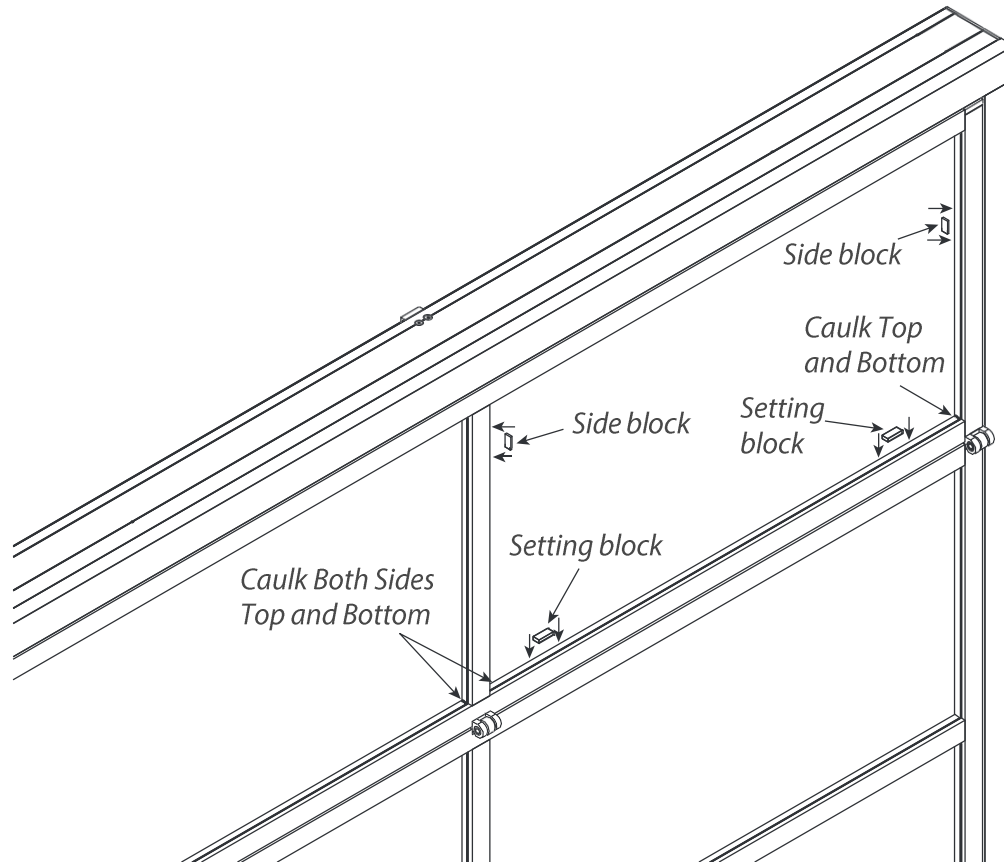


Using Dow Corning 795, seal the junction between the horizontal intermediate mullion and the vertical mullion segment.



Using Dow Corning 795, seal the junction between the continuous vertical outer frame members and the horizontal intermediate mullions.

- C. Install setting blocks in bottom of glazing pocket – one block in each corner for a total of 2 per pane.



- D. Drop in glass panes in the appropriate opening.
- E. Insert side blocks between glass panes and aluminum frame  $\frac{1}{4}$  of the way down from the top of the glass. Only one side block is required per side.
- F. Trim outside gaskets on the pressure plates if necessary.
- G. Install pressure plates.
1. Install pressure plates using screws  $\frac{1}{4}$ -14 x 1" LG hex washer head type AB starting with the perimeter pressure plates, then horizontals, saving intermediate verticals for last.
  2. Screws are to be located 4" OC. Install every other screw and snug the plates. Always locate a screw as close as possible to a horizontal joint. This will provide maximum pressure for the critical joint seals.
  3. Install horizontal pressure plates with weep holes towards the top of the horizontal.
  4. At each horizontal and vertical pressure plate, install two screws part way, then install the 3rd screw all the way. After that, tighten the first two screws. This eliminates lateral walking of the pressure plate position.
  5. Use a plate or beauty cap to make sure pressure plates are all on same plane where they meet.

1. Torque all screws to 95-100 inch-lbs. during cold weather. Torque screws to 50 in-lbs. until all 4 sides have been clamped, then torque screws to 95-100 in-lbs.
- H. Install snap caps on pressure plates. Make sure the covers are fully snapped the entire length of the caps.
- I. Install motor housing.
- J. Install Interior jamb snap covers and head cap. (Figure 12.1)

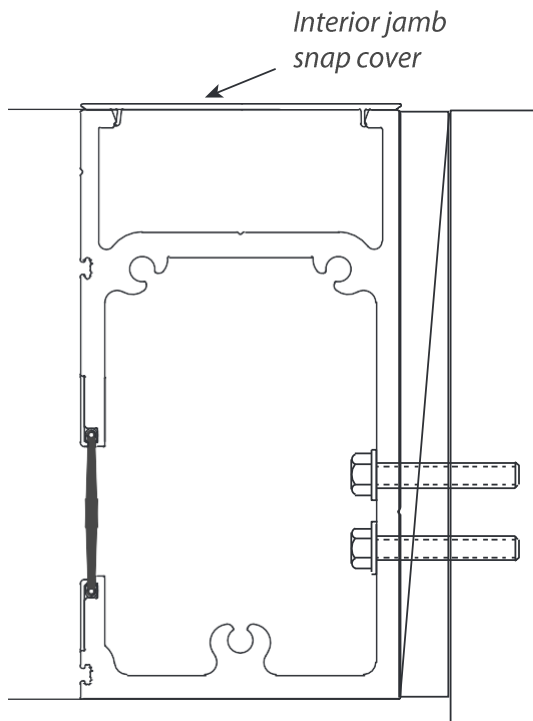


Figure 12.1

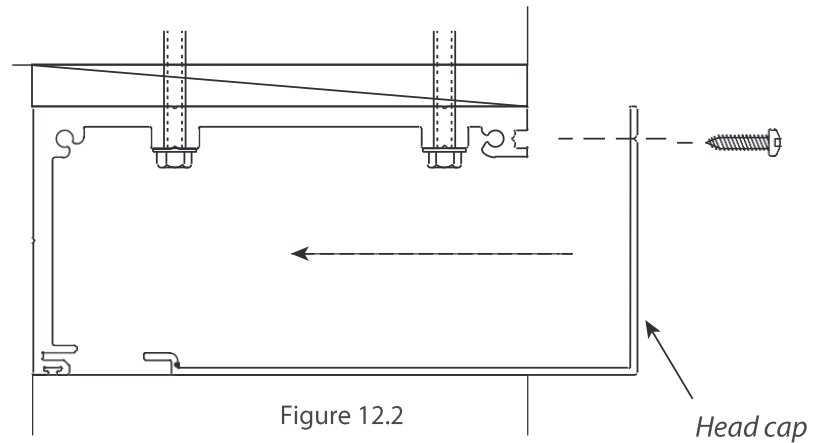


Figure 12.2

### Part 6: Adjust Sill Gasket Carrier

- A. Make sure the door is completely closed, then measure the height of the sill gasket carrier to the floor right, left and center. (Figure 12.2)
- B. Loosen the screws on the inside face of the sill gasket carrier and move up or down to have an average gap of  $1 \frac{15}{16}$ ". Retighten the screws and measure again.
- C. Check to make sure the lower panel sill gasket is slightly compressed, sealing the gap at the floor.

### Part 7: Adjust Optional Photo Eye

- A. Open the door and check the adjustment of the optional photo eye. It should be pointed directly at the reflective tape on the opposite fixed jamb. An indicator light on the photo eye will be illuminated if the photo eye is properly aligned with the reflective tape.
- B. Block the photo eye, and the door should not operate.

### Part 8: Wiring Diagram

