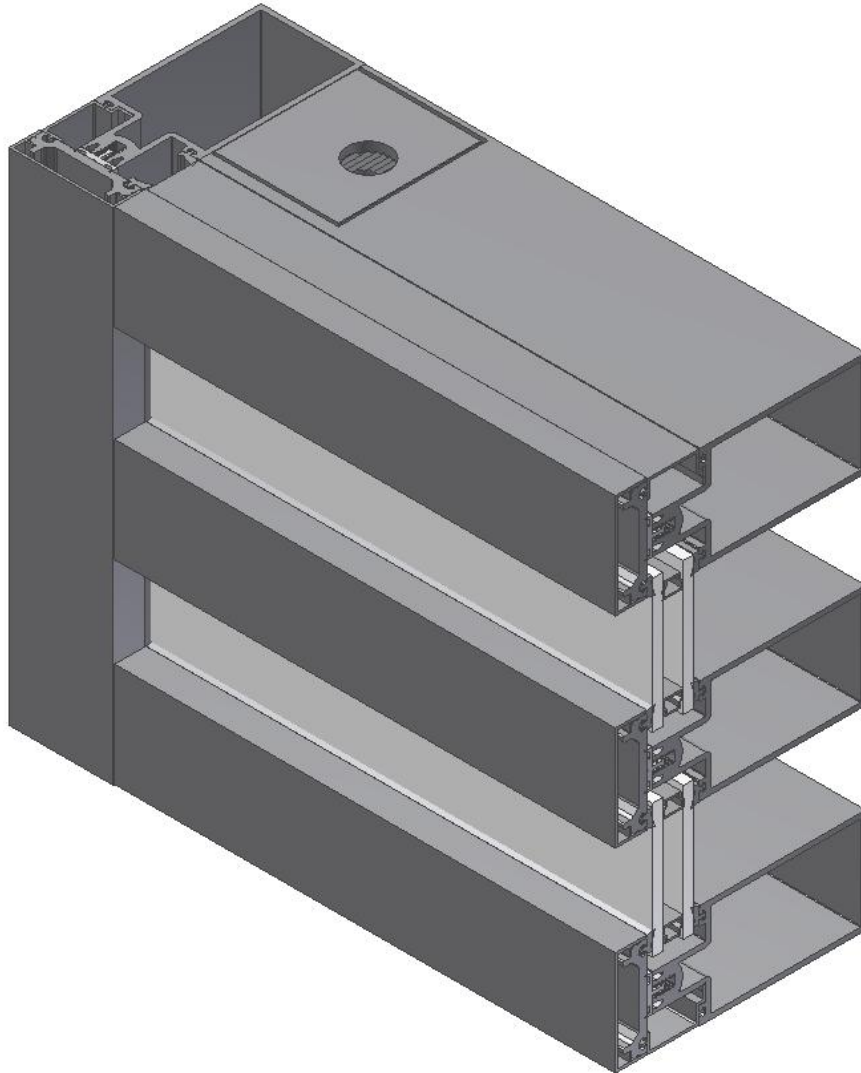


Installation Instructions

TUBELITE[®]
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL AND ENTRANCE SYSTEMS



400 Series Curtainwall with Fiberglass Pressure Plate

3056 WALKER RIDGE DR. NW, SUITE G WALKER, MI 49544
800-866-2227 dependable@tubeliteinc.com

TABLE OF CONTENTS

GENERAL CONSTRUCTION NOTES	3
FIBERGLASS INSTALLATION SHEET	4
PARTS LIST	5
FRAME FABRICATION	12
Step 1: Determine Frame Size	12
Determine Frame Width	12
Determine Frame Height	13
Step 2: Cut Mullions to Size	13
Step 3: Drill Holes in Vertical Framing Members For Shear Blocks	13
Step 4: Drill Slots in Horizontal	14
Step 5: Fasten Splice Sleeves in Lower Segments of Verticals (if needed)	15
Step 6: Cut Pressure Plates, Snap-on Face Covers and Snap-in Fillers to Length	16
Step 7: Mill Weep Slot in Horizontal Snap-on Cover	17
Step 8: Mill Sills and Heads to Clear Anchor Clips	18
Step 9: Horizontals in End Bay (roll-over horizontal)	19
Step 9: Horizontals in End Bay (tubular horizontal)	20
Step 10: Add Steel Reinforcement (if necessary)	21
CURTAINWALL INSTALLATION	22
Step 11: Fasten Shear Block (tubular horizontal)	22
Step 11: Fasten Shear Block (roll-over horizontal)	22
Step 12: Fasten Sill Anchor (tubular back members at perimeter)	23
Step 12: Fasten Sill Anchor (open back members at perimeter)	23
Step 12: Fasten Sill Anchor (F or T anchor at perimeter)	24
Step 13: Attach Locking Lug to Sill Anchor (no F or T anchor at perimeter)	25
Step 14: Attach Horizontal to Sill Anchor (tubular back members at perimeter)	25
Step 14: Attach Horizontal to Sill Anchor (open back members at perimeter)	26
Step 15: Attach Horizontal to Shear Block (F or T anchors)	27
Step 16: Attach Horizontal to Vertical	28
Step 17: Install Water Dams	29
Step 17: Install Water Dams (at perimeter)	30
Step 18: Install Gaskets	30
Step 19: Fit Horizontal Gasket to Vertical Gasket	31
Step 20: Install Glass and Setting Block	31
Step 21: Install Glazing Pocket Closure	32
Step 22: Install Vertical Snap-on Cover and Pressure Plate	33
Step 23: Install Horizontal Pressure Plate and Snap-on Cover	34
Step 24: Seal Perimeter of Installation	35

GENERAL CONSTRUCTION NOTES:

1. These instructions cover typical product application, fabrication, installation and standard conditions and are general in nature. They provide useful guidelines, but the final drawings may include additional details specific to this project. Any conflict or discrepancies must be clarified prior to execution.
2. Materials stored at the job site must be kept in a safe place protected from possible damage by other trades. Stack with adequate separation so materials will not rub together, and store off the ground. Cardboard or paper wrapped materials must be kept dry. Check arriving materials for quantity and keep record of where various materials are stored.
3. All field welding must be done in accordance with AISC guidelines. All aluminum and glass should be shielded from field welding to avoid damage from weld splatter. Results will be unsightly and may be structurally unsound. Advise general contractor and other trades accordingly.
4. Coordinate protection of installed work with general contractor and/or other trades.
5. Coordinate sequence of other trades which affect framing installation with the general contractor (e.g. fire proofing, back up walls, partitions, ceilings, mechanical ducts, HVAC, etc.).
6. General contractor should furnish and guarantee benchmarks, offset lines and opening dimensions. These items should be checked for accuracy before proceeding with erection. Make certain that all adjacent substrate construction is in accordance with the contract documents and/or approved shop drawings. If not, notify the general contractor in writing before proceeding with installation because this could constitute acceptance of adjacent substrate construction by others.
7. Isolate all aluminum to be placed directly in contact with masonry or other incompatible materials with a heavy coat of zinc chromate or bituminous paint.
8. Sealant selection is the responsibility of the erector, installer and/or glazing contractor and must be approved by the sealant manufacturer with regard to application and compatibility for its intended use. All sealants must be used in strict accordance with the manufacturer's instructions and applied only by trained personnel to surfaces that have been properly prepared.
9. Sealant must be compatible with all materials with which they have contact, including other sealant surfaces. Consult sealant manufacturer for recommendations relative to shelf life, compatibility, cleaning of substrate, priming, tooling adhesion, etc.
10. Drainage gutters and weep holes must be kept clean at all times. Tubelite will not accept responsibility for improper drainage as a result of clogged gutters and weep holes.
11. This product requires clearances at head, sill and jambs to allow for thermal expansion and contraction. Refer to final distribution drawings for joint sizes. Joints smaller than ¼" may be subject to failure. Consult your sealant supplier.
12. All materials are to be installed plumb, level and true with regard to established benchmarks and column center lines established by the general contractor and checked by the erector, installer and/or glazing contractor.
13. Cleaning of exposed aluminum surfaces should be done per AAMA recommendations.
14. Check tubeliteinc.com for any updates on installation instructions.

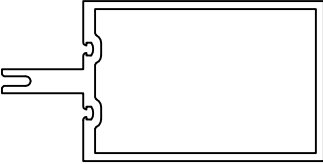
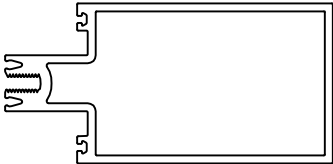
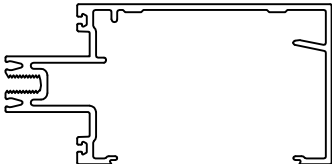
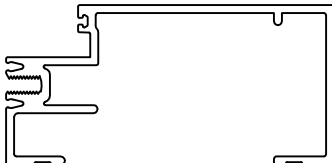
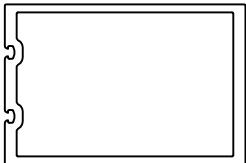

FIBERGLASS INSTALLATION SHEET

Tubelite's fiberglass pressure plate (PTB99) can be used in place of our standard aluminum pressure plate with 400 series curtainwall back members. It is important that you are fully aware of the following information:

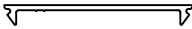


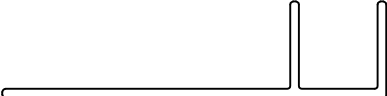
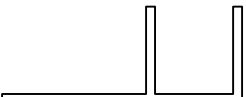


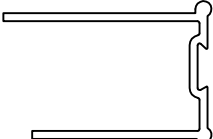
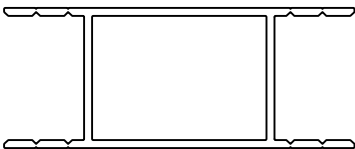
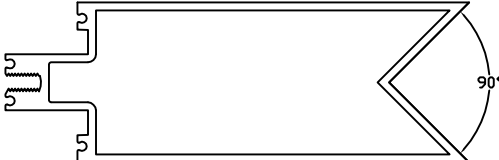
- There is only one standard profile (there are no other versions such as one with a return leg). The material is pultruded fiberglass, is off-white in color and comes only in 290" lengths with screw holes and weeps already machined (weeps are 3/8" diameter holes -- not slots). Spacing of the screw holes are closer together (4" on center) than our standard punched pressure plates and all screw holes must be used.
- Fiberglass pultrusions are highly abrasive and require diamond-tipped blades and bits for cutting and fabrication. Expect that tooling will wear quickly and need sharpening (or retooling may be necessary). The debris from fabrication requires special personal protective equipment to prevent health and safety issues. Gloves, masks, eye protection and long-sleeve shirts are recommended.
- There is only one cover offered (E3193). It is specifically designed to engage the fiberglass pressure plate. It is 3/4" deep. Filler profile E3192 can be used for applications into punched openings.

EXTRUSIONS

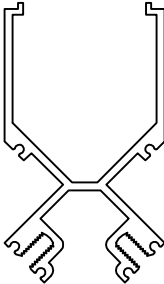
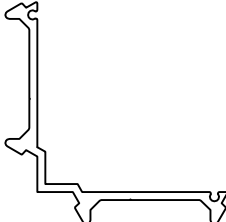
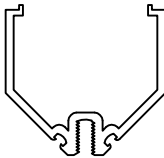
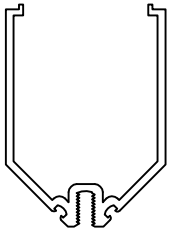
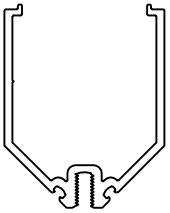

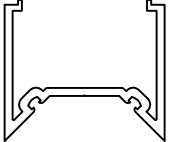
* Dimensions refer to back member depth, not system depth

Shape	Description	Part No.	Depth
	Silicone glazed horizontal	E4TB239 E5TB108 E55TB108 E6TB108 E7TB108	4" 5" 5 1/2" 6" 7"
	Back member	E4TB216 E2680 E4TB206 E4TB171 E4TB81 E4TB02 E4TB223 E45TB02 E5TB02 E5TB223 E55TB02 E55TB223 E6TB02 E7TB02 E8TB02 E4TB95	1 7/8" 2 5/8" 3 1/16" 3 1/4" 3 5/8" 4" 4" 4 1/2" 5" 5" 5 1/2" 5 1/2" 6" 7" 8" 3" x 4"
	Roll-over back member	E4TB173 E5TB173 E55TB03 E6TB173	4" 5" 5 1/2" 6"
	Open back perimeter	E4TB245 E5TB245 E55TB245 E6TB245	4" 5" 5 1/2" 6"
	Silicone glazed vertical	E4TB210 E4TB128 E5TB105 E55TB04 E6TB64 E7TB64 E8TB64	3 5/8" 4" 5" 5 1/2" 6" 7" 8"
	3/4" special face cover (use with PTB99 fiberglass pressure plate only)	E3193	


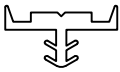


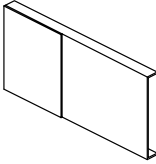
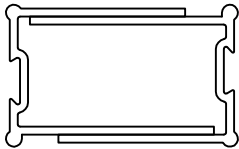
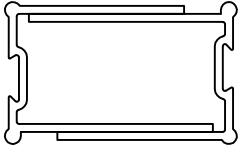
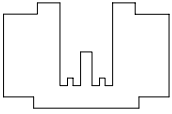


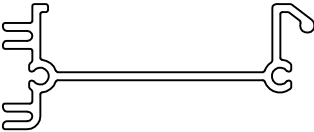
EXTRUSIONS

Shape	Description	Part No.
	Snap-in filler	E4TB175: For E4TB173 E5TB175: For E5TB173 E55TB06: For E55TB03 E6TB175: For E6TB173
	1/8" and 1/4" glass snap-in adapter	E4TB69
	1/2" and 3/8" glass snap-in adapter	E4TB80
	4" x 1" F anchor perimeter runner	E3162
	2 1/2" x 1" F anchor perimeter runner	E1094
	Reducer for glass silicone glazed verticals	E4TB129: 1/4" glass E4TB201: 1/2" glass
	Extrusion for back member nose splice	E0987
	Extrusion for back member splice	E1017
	Extrusion for PTB89 back member splice (modification may be required)	E4TB226
	6" corner	E6TB70


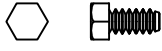





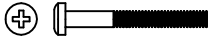
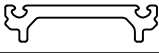



EXTRUSIONS

Shape	Description	Part No.
	90 degree OS corner adapter (use with E4TB81, E5TB223, E7TB02)	E5TB110
	90 degree OS corner pressure plate	E5TB111
	90 degree OS corner adapter (use with E4TB02, E4TB223)	E4TB172
	90 degree OS corner adapter (use with 5" back members)	E4TB200
	90 degree OS corner adapter, butt glazed (use with E4TB81, E5TB223, E7TB02)	E4TB200
	90 degree IS corner adapter, butt glazed (use with E4TB01)	E4TB176
	90 degree IS corner adapter, butt glazed (use with E4TB223, E5TB223, E6TB223)	E6TB68

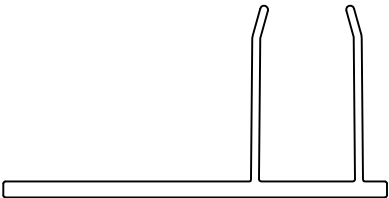
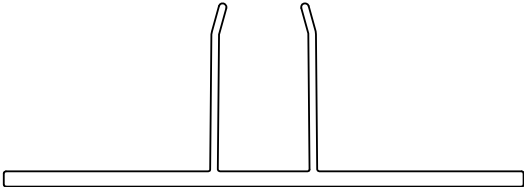
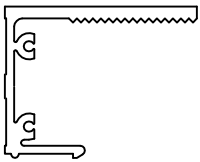
ACCESSORIES

Shape	Description	Part No.
	Setting block for 1" glass	P948
	Thermal barrier gasket	PTB94
	Fixed glazing gasket	PTB28: 1/8" PTB31: 3/16"
	Setting block for 1" glass	P946: EPDM P947: Silicone
	Face cover splice	P1628A: 5/8" P1628B: 3/4" P1628C: 1"
	Splice member	P1627A: 3 5/8" depth P1627B: 4" P1627C: 5" P1627D: 5 1/2" P1627E: 6" P1627G: 4 1/2" P1627M: 2 5/8" P1632A: 7" P1632B: 8"
	Splice member silicone glazed	P1627F: 4" depth P1627H: 5" P1627J: 5 1/2" P1627K: 6" P1632C: 7" P1632D: 8"
	Water dam	PTB30: 1" glazed PTB29: 1/4" glazed
	1" single pocket water dam	PTB93
	Temporary glazing clip	P1194
	Shear block for roll-over horizontal	PTB85: For E55TB03 PTB86: For E4TB173 PTB90: For E5TB173 PTB91: For E6TB173

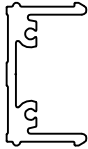
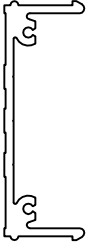
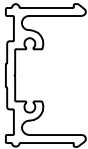
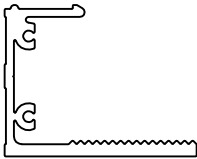
ACCESSORIES

Shape	Description	Part No.
	1/4-20 x 3/4" HWH type F modified self threading	S362
	#14-14 x 1/2" type B hex head	S139
	#10-24 x 3/4" type 23 Phillips pan head	S270
	#10-24 x 1/2" type F Phillips pan head	S128
	#14 x 1 1/2" hex washer head, type F	S359
	#10 x 1/2" type B Phillips truss head	S191
	1/4-20 x 2" Phillips flat head, machine screw	S091
	1/4-20 x 2 1/4" Phillips pan head, machine screw	S211
	Fiberglass pressure plate (use with E3193 face cover)	PTB99
	Locking lug for mullion anchor	P1265: .3125" hole diameter P1266: .375" P1267: .4375"
	Spacer for silicone glazed back members	PTB75
	Mullion end cap	P2027

ACCESSORIES

Shape	Description	Part No.	Back Member
	F anchor	PTB83A PTB83B PTB83C PTB83D PTB83E PTB83F PTB83G PTB83H PTB87A PTB87B PTB87C PTB87D PTB87E PTB87F PTB87G PTB83J PTB83K PTB83L PTB83M PTB83N PTB83P	For E2680 For E4TB206 For E4TB81 For E4TB02 For E45TB02 For E4TB108 For E5TB02 For E55TB02 For E4TB210 For E4TB128 For E5TB105 For E55TB104 For E6TB64 For E7TB64 For E8TB64 For E6TB02 For E7TB02 For E8TB02 For E4TB223 For E5TB223 For E55TB223
	T anchor	PTB84A PTB84B PTB84C PTB84D PTB84E PTB84F PTB84G PTB84H PTB84J PTB84K PTB84L PTB84M PTB84N PTB84P PTB88A PTB88B PTB88C PTB88D PTB88E PTB88F PTB88G	For E2680 For E4TB206 For E4TB81 For E4TB02 For E45TB02 For E4TB108 For E5TB02 For E55TB02 For E6TB02 For E7TB02 For E8TB02 For E4TB223 For E5TB223 For E55TB223 For E4TB210 For E4TB128 For E5TB105 For E55TB104 For E6TB64 For E7TB64 For E8TB64
	Head anchor	P2056 P2056A P2056B P2056C P2057 P2058 P2059 P2060 P2061	For E4TB02 For E45TB02 For E4TB81 For E2680 For E5TB02 For E6TB02 For E7TB02 For E8TB02 For E55TB223

ACCESSORIES

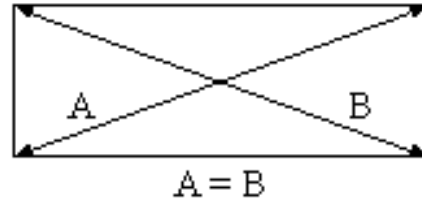
Shape	Description	Part No.	Back Member
	Intermediate shear block	PTB57 PTB58 PTB59 PTB60 PTB61 PTB62A PTB62B PTB62C PTB62D PTB62E	For E4TB81 For E4TB02 For E5TB02 For E55TB02 For E6TB02 For E7TB02 For E2680 For E8TB02 For E45TB02 For E4TB206
	Intermediate shear block	P1771 P1771A P1771B P1771C P1771D PTB92A PTB92B PTB92C	For E4TB179 For E5TB121 For E7TB121 For E6TB121 For E55TB121 For E4TB143 For E4TB95 For E5TB107
	Shear block	PTB96A PTB96C PTB96D	For E4TB239 For E5TB108 For E55TB108
	Sill anchor	PTB46 PTB47 PTB48 PTB49 PTB50 PTB51A PTB51B PTB51C PTB51D PTB78A PTB78B PTB78C PTB78D	For E4TB81 For E4TB02 For E5TB02 For E55TB02 For E6TB02 For E7TB02 For E8TB02 For E2680 For E4TB206 For E4TB245 For E5TB245 For E55TB245 For E6TB245

FRAME FABRICATION

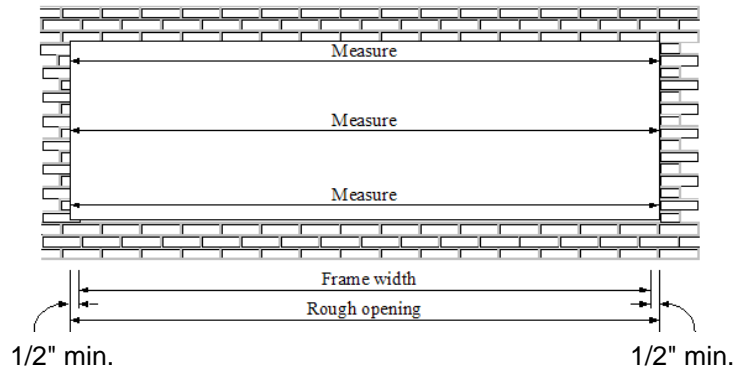
Step 1: Determine Frame Size

Determine Width

- Check that the opening is square and plumb at both ends. Units must be installed in a true rectangle.

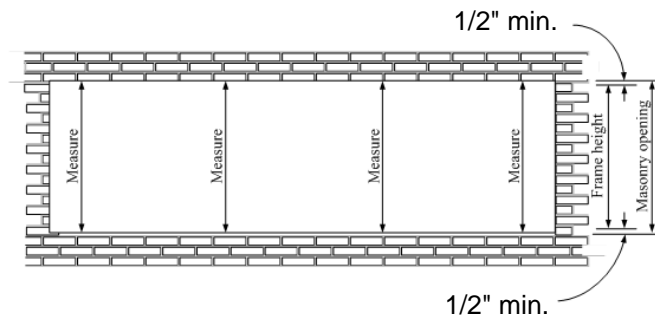


- Measure the width of the opening at the top, middle and bottom.
- Select the smallest dimension measured. To determine the frame width to be used, subtract a minimum of 1" from the smallest measured width, to allow a minimum of 1/2" at each jamb for shimming and caulking.
- Allow a larger clearance if necessary to accommodate building tolerances, an out-of-square opening, anticipated thermal expansion within the unit and/or as required by shop drawings.



Determine Height

- Measure the height of the opening in several places along the entire length of the opening.
- To determine the frame height to be used, select the smallest dimension measured and subtract 1" to allow a minimum of 1/2" at sill and head for shimming and caulking.
- Allow a larger clearance if necessary to accommodate building tolerances, an out-of-square opening, anticipated thermal expansion within the unit and/or as required by shop drawings.



Step 2: Cut Mullions to Size

- Verticals should be frame height found in Step #1 (rough opening height minus clearances).
- Vertical framing members run through.
- Cut horizontal framing members to the daylight opening (the distance between verticals) minus 1/32".

Step 3: Drill Holes in Vertical Framing Members For Shear Blocks

- In shear block assembly, the installer secures frame clips to the vertical members with screws, slides the horizontal members over the frame clips and secures the horizontal members to the frame clips with screws.
- Drill .201" diameter holes in the vertical framing members using P2091 drill fixture, as shown below.

Step 4: Drill Slots in Horizontal

• Drill 0.201" x 0.281" slots in the side of the horizontal back member as shown in Figure 1 for a concealed fastener condition. Use drill fixture P2091 to locate holes. Only the top slot is needed in an open-back perimeter member.

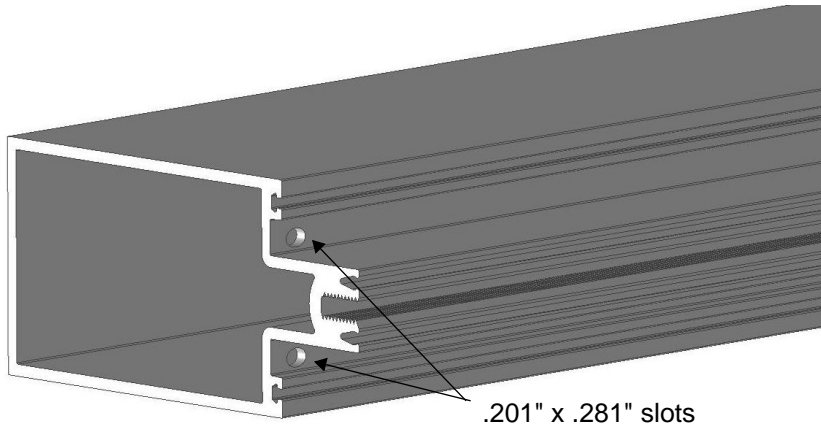
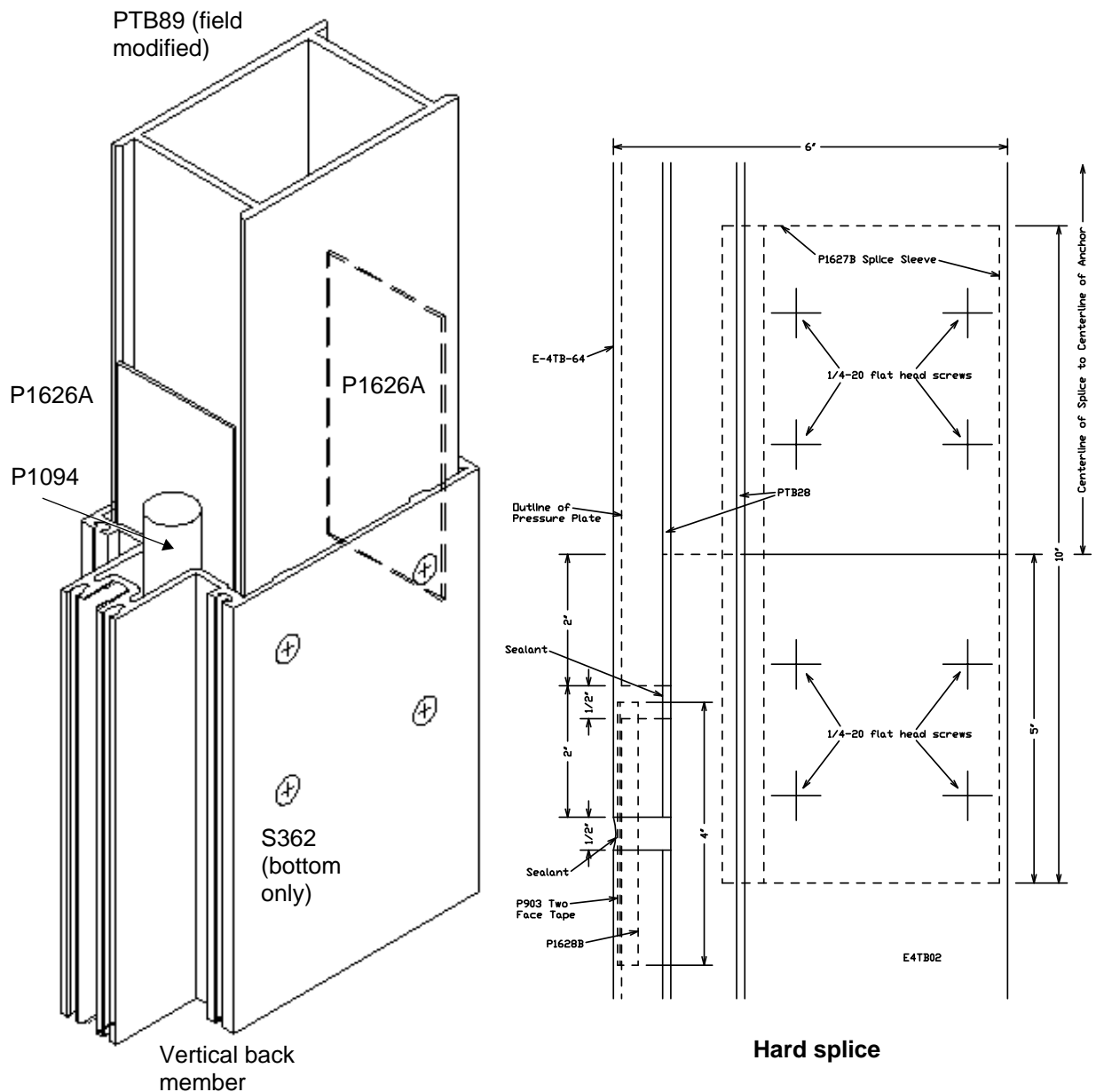


Figure 1: Slot a pair of holes into the side of the horizontal back member.

Step 5: Fasten Splice Sleeves in Lower Segments of Verticals (if needed)

- Consult the approved shop drawings to see what size of screws to use when fastening the splice sleeves to the lower segments of the verticals.
- Drill and countersink four holes on both sides of the verticals (eight holes per vertical), in the locations shown on the approved shop drawings. The diameter of the holes should be appropriate for the screws being used.
- Slide a splice sleeve into the end of the vertical mullion where the holes were just drilled as shown below. The splice sleeve is 10" long. Half its length should be inside the mullion, and half should project out the end of the mullion.



Step 6: Cut Pressure Plates, Snap-on Face Covers and Snap-in Fillers to Length

- For vertical pressure plates and face covers not needing to be spliced, cut them to the same length as the corresponding vertical's (rough opening height minus 1/2") clearance at both top and bottom.
- If necessary to splice vertical pressure plates and face covers, allow a 3/8" gap for the splice joints. The splice in a vertical pressure plate should be 2" below the splice in the mullion, and the splice in a vertical snap-on cover should be 2" below the splice in the pressure plate as shown in Figure 3.
- Cut horizontal pressure plates to a minimum of the daylight opening minus 3/16" clearance at each end, or 3/8" less than the distance between verticals, and a maximum of DLO minus 1/16" clearance at each end.
- Cut horizontal face covers, and snap-in fillers for roll-over horizontals, to the same length as the corresponding horizontals (daylight opening).

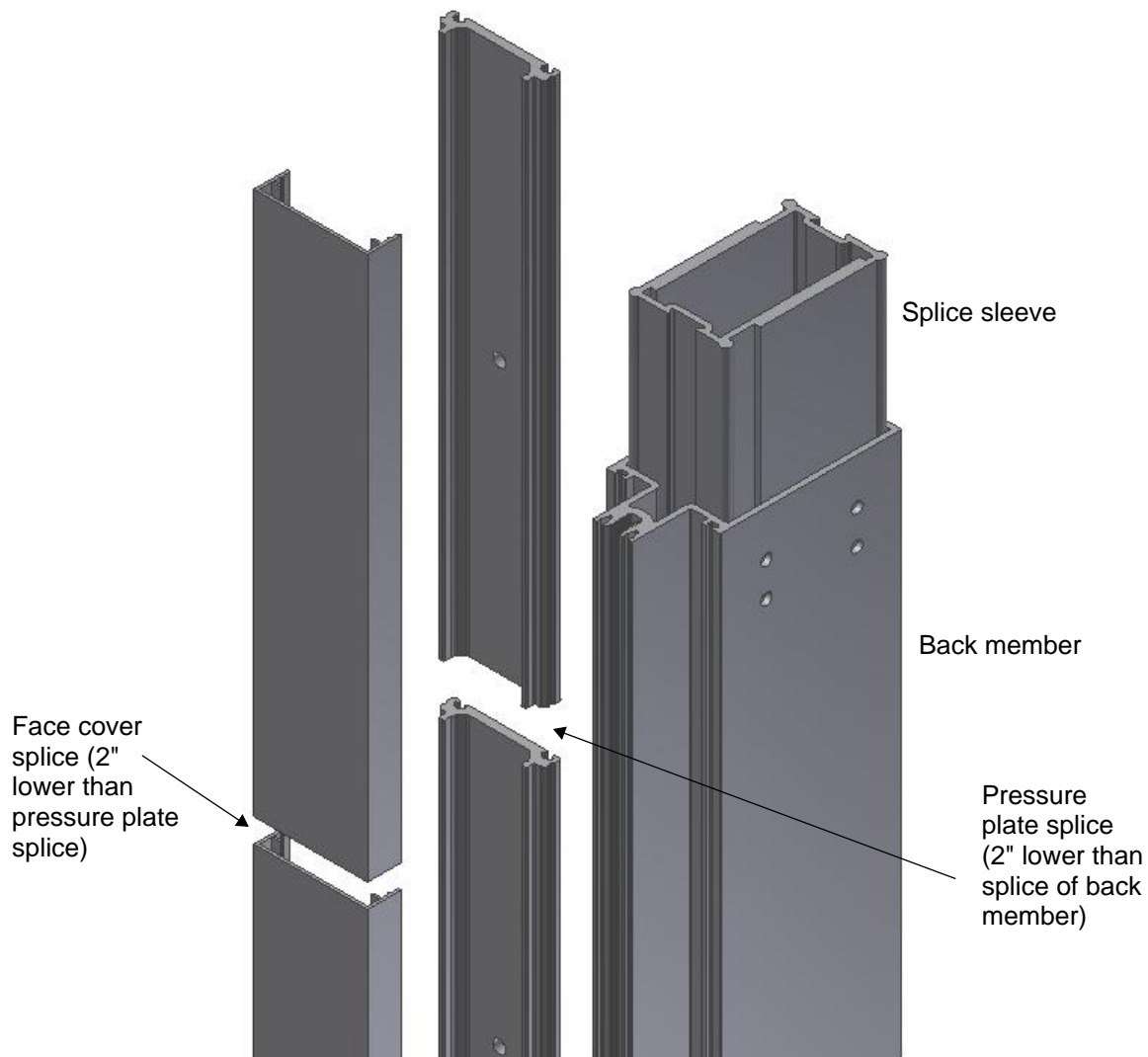


Figure 3: Splice face covers and pressure plates as necessary.

Step 7: Mill Weep Slot in Horizontal Snap-on Cover

- Mill a 1/4" by 1/2" weep slot along the bottom of the horizontal snap-on cover a maximum of 1" from the back of the cover, as shown in Figure 5.

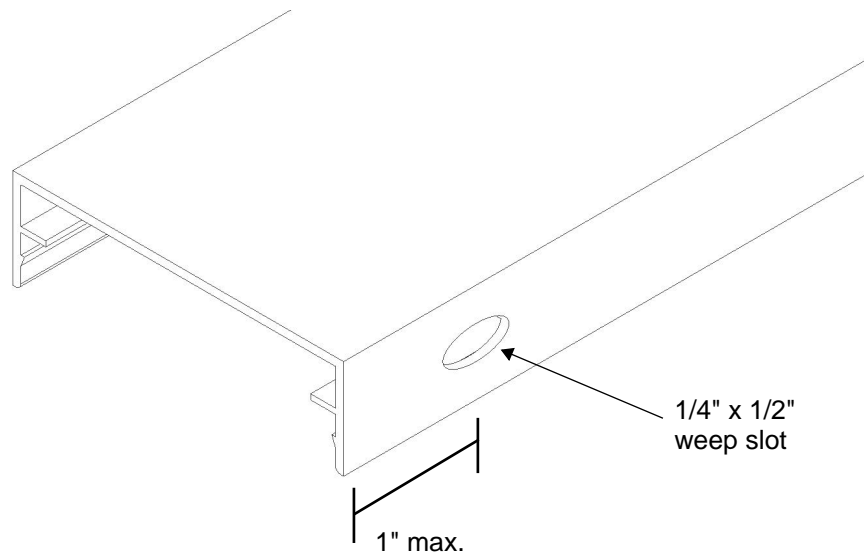


Figure 5: Mill a weep slot along the bottom of the horizontal snap-on cover.

Step 8: Mill Sills and Heads to Clear Anchor Clips

- Mill sills and heads to clear anchor clips. This step is necessary for installations that use tubular back members for heads and sills, not for open-back perimeter members.
- Where anchor clips would interfere with sills and heads, notches must be cut in the bottom of the sills and tops of the heads to provide clearance.
- The notch must not damage the vertical walls of the tube, but should remove the top or bottom of the tube leaving 1/8" on each side, to a depth of 3 1/16" from the end of the sill or head as shown in Figure 6.

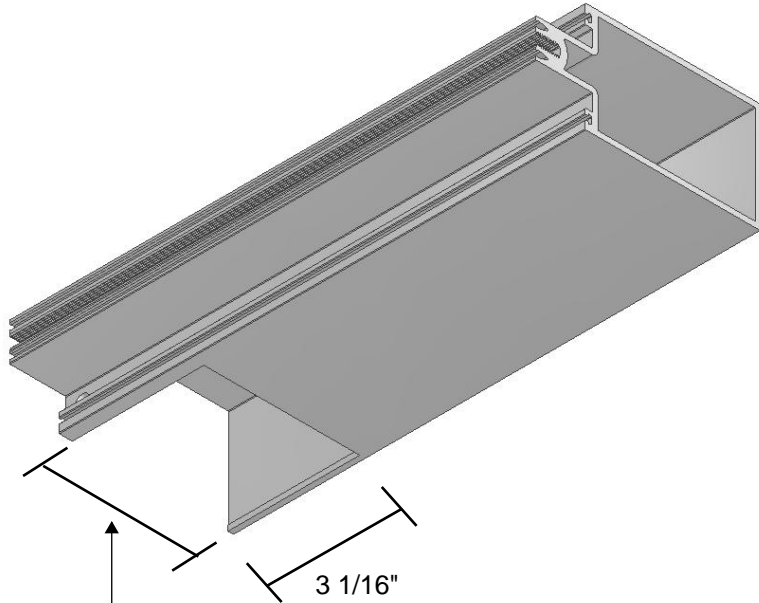
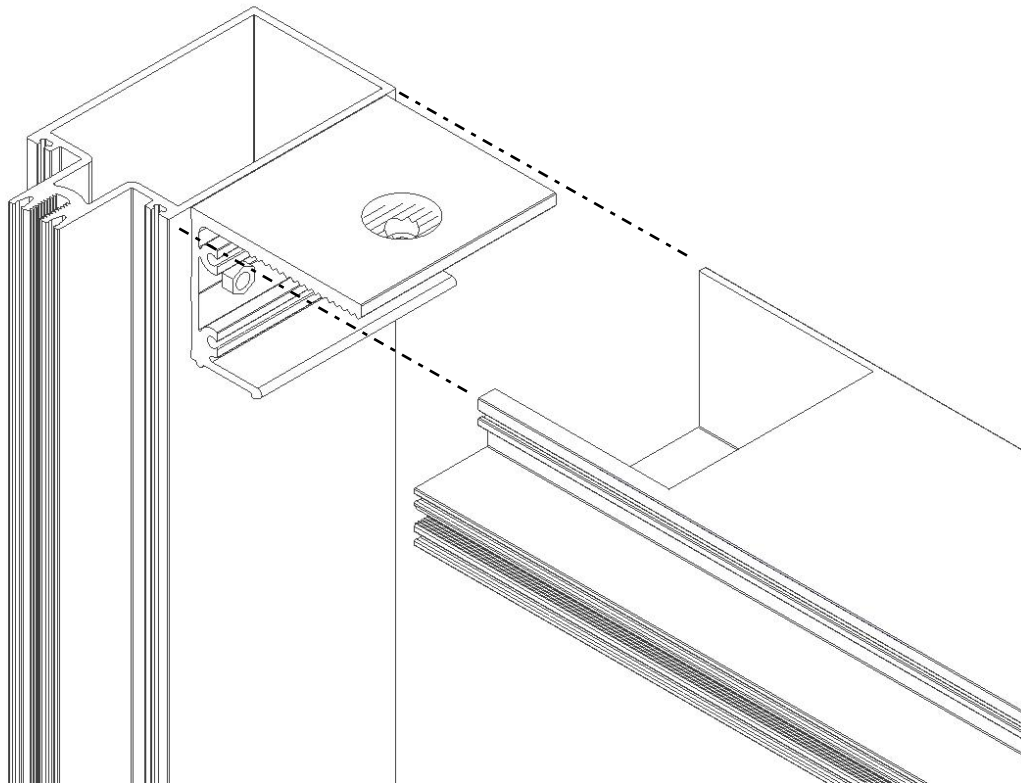


Figure 6: Mill the head and sill horizontals to fit in the anchor clips.

Width as required by head/sill anchor, leaving 1/8" on each side



Step 9:
Horizontals in
End Bay
(roll-over
horizontal)

- For the horizontals in the end bay, the masonry may prevent movement of the jamb to get the shear blocks into the horizontals. A few options are available.
- A roll-over horizontal may be used as shown in Figure 7, as no milling needs to be done to get the shear block into the horizontal.

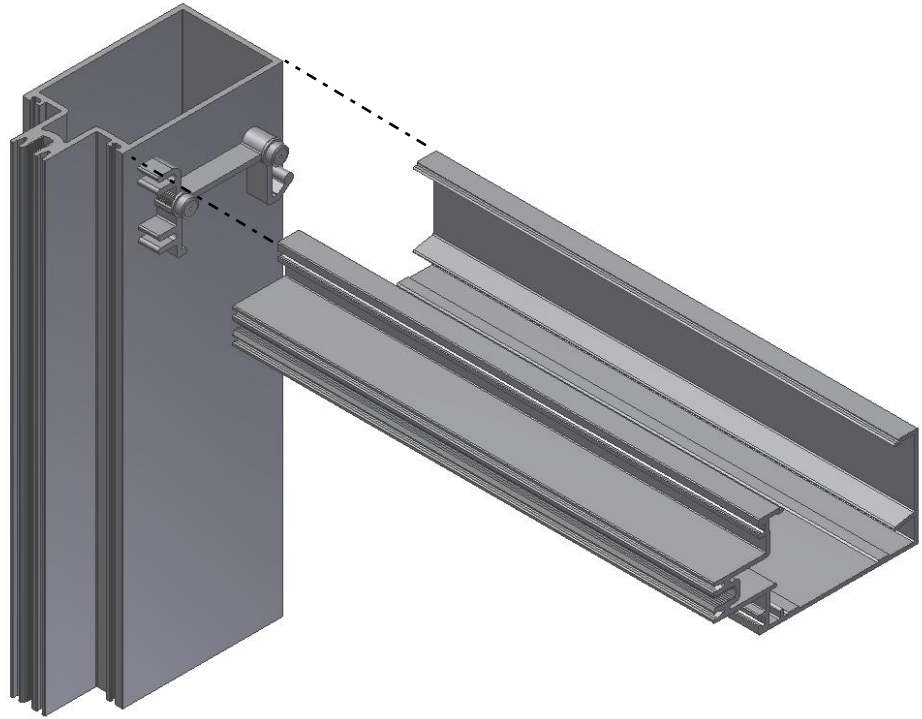


Figure 7: Install a roll-over horizontal in the end bay.

Step 9: Horizontals in End Bay (tubular horizontal)

- The tubular horizontals for the end bay may need to be milled to be installed, as the masonry prevents movement of the jamb to get the frame clips into the horizontals. Mill the sill, head and intermediate horizontals in the final bay as shown in Figure 8.
- The vertical mullions may also be spread apart, if possible.

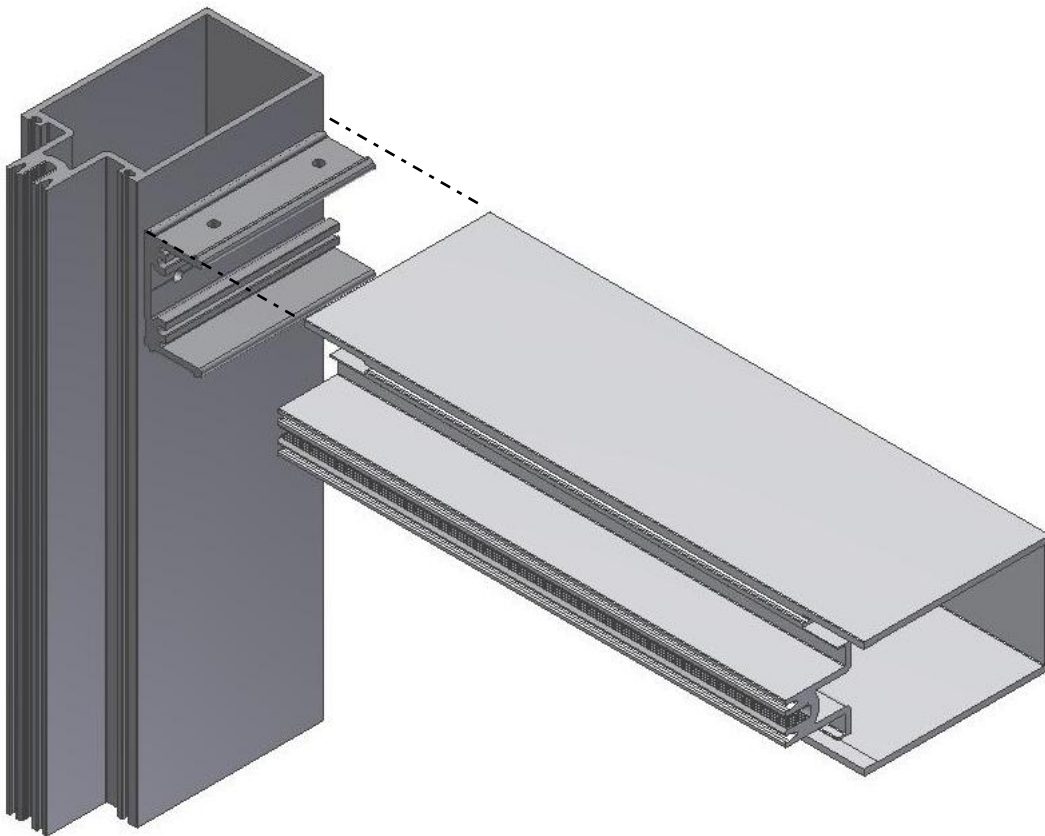
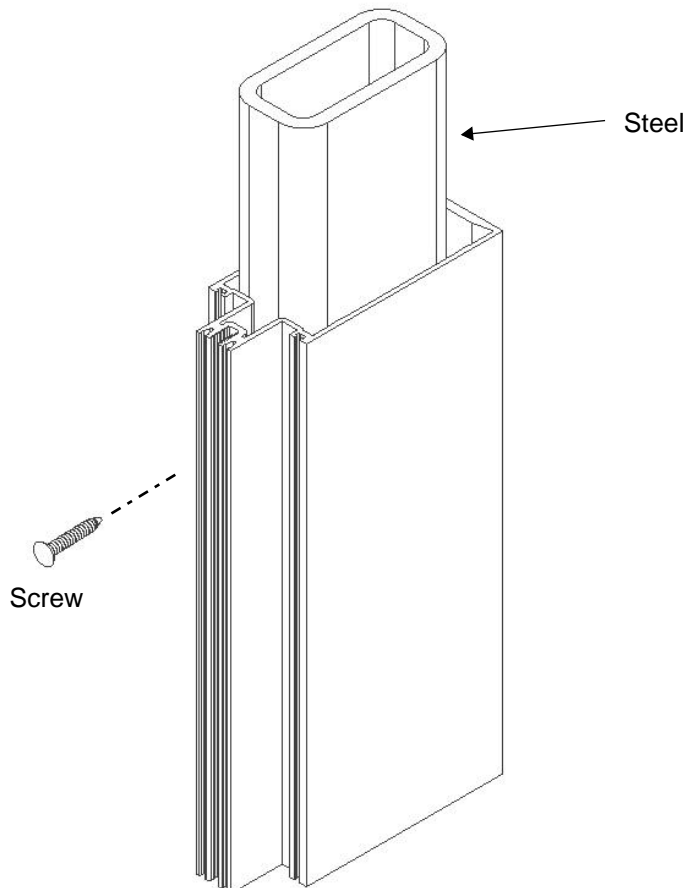
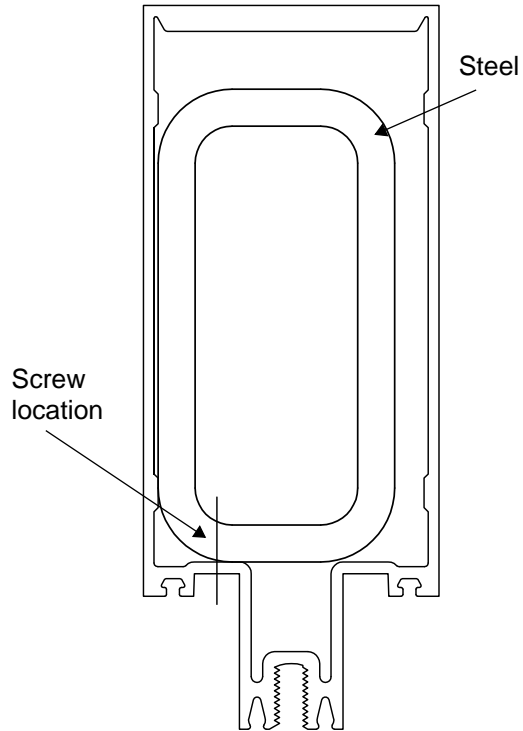


Figure 8: Mill the intermediate horizontal in the end bay so it can slide over the frame clips.

Step 10: Add Steel Reinforcement (if necessary)

- Refer to approved shop drawings to determine whether the application requires steel reinforcing.
- If reinforcing is required, cut steel to 6" less than the frame height.
- Slide the steel into the vertical mullion from one end, recessing it 3" in from the end of the vertical.
- Drill pilot holes through the steel and the vertical mullion at the center of each horizontal, and anchor the steel to the vertical using screws of an appropriate size (may not be supplied by Tubelite). Consult Tubelite Engineering for anchor spacing and slotting of connection holes.



CURTAINWALL INSTALLATION

Step 11: Fasten Shear Block (tubular horizontal)

- Fasten the shear block, using S139 screws, to the vertical using the previously drilled holes as shown in Figure 9.

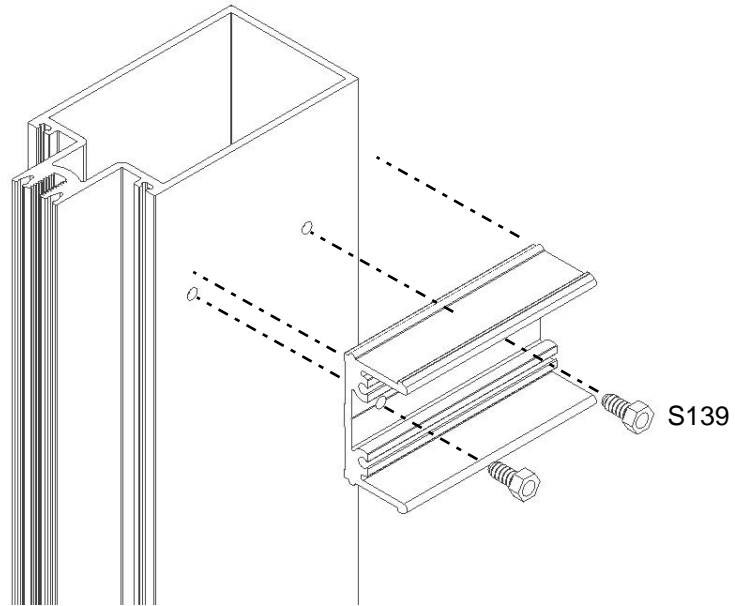


Figure 9: Fasten the shear block to the back member.

Step 11: Fasten Shear Block (roll over horizontal)

- Fasten the roll-over horizontal shear block, using S359 screws, to the vertical using the previously drilled holes. See Figure 10.

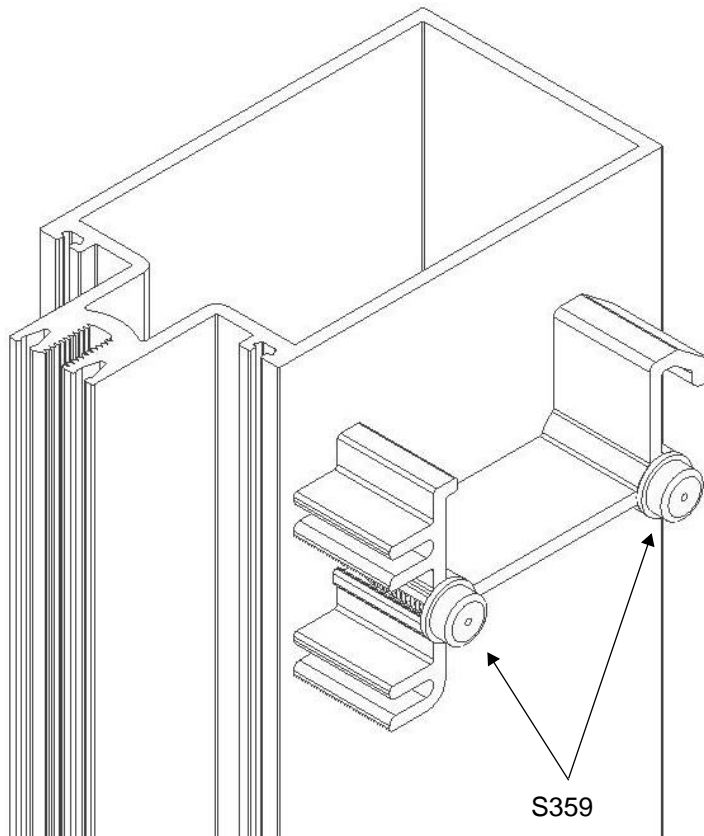


Figure 10: Fasten the shear block to the back member.

Step 12: Fasten Sill Anchor (tubular back members at perimeter)

- Fasten the sill anchor to the vertical using #14 x 1/2" self-tapping hex head screws (S139) and the previously drilled holes as shown in Figure 11.
- Head anchor is similar.

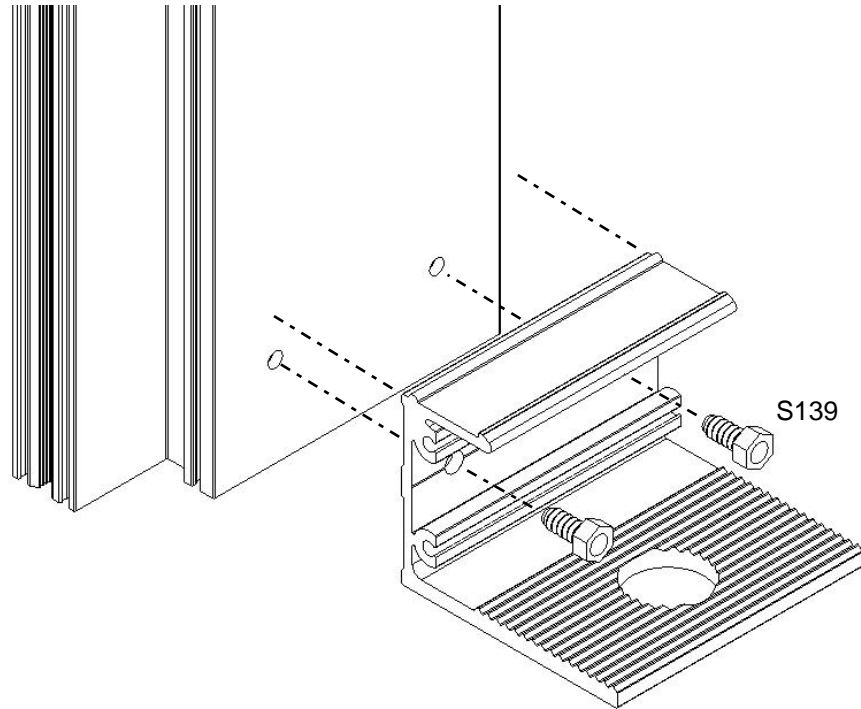


Figure 11: Fasten the sill anchor to the vertical back member.

Step 12: Fasten Sill Anchor (open back members at perimeter)

- Fasten the sill anchor to the vertical using S139 screws and the previously drilled holes, as shown in Figure 12.
- Head anchor is similar.

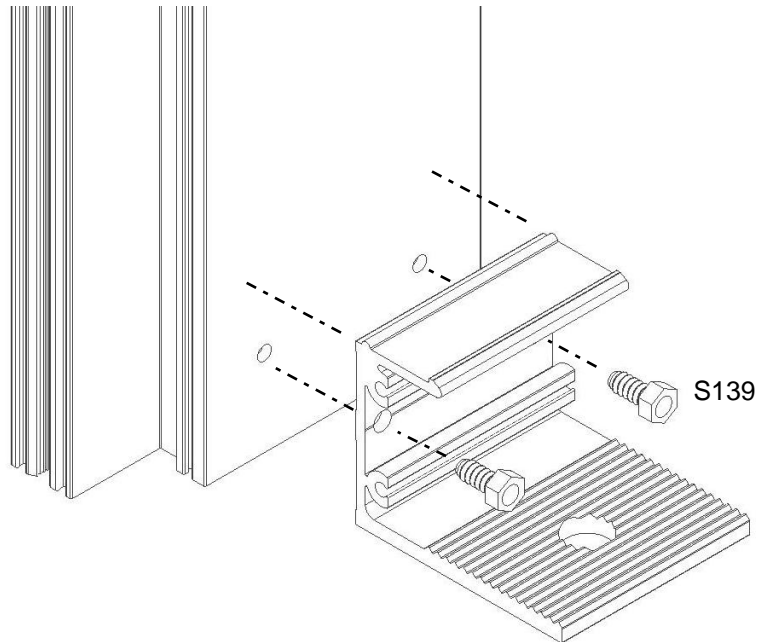


Figure 12: Fasten the sill anchor to the vertical back member.

Step 12: Fasten Shear Block (F or T anchor at perimeter)

- F or T anchors can be used at the head and sill with tubular verticals and open back horizontals.
- Place the F or T anchor in the vertical mullion as shown in Figure 13. Anchor to the masonry (anchor bolt not by Tubelite).
- Attach a shear block to the head or sill using S139 screws. Seal perimeter of shear block.

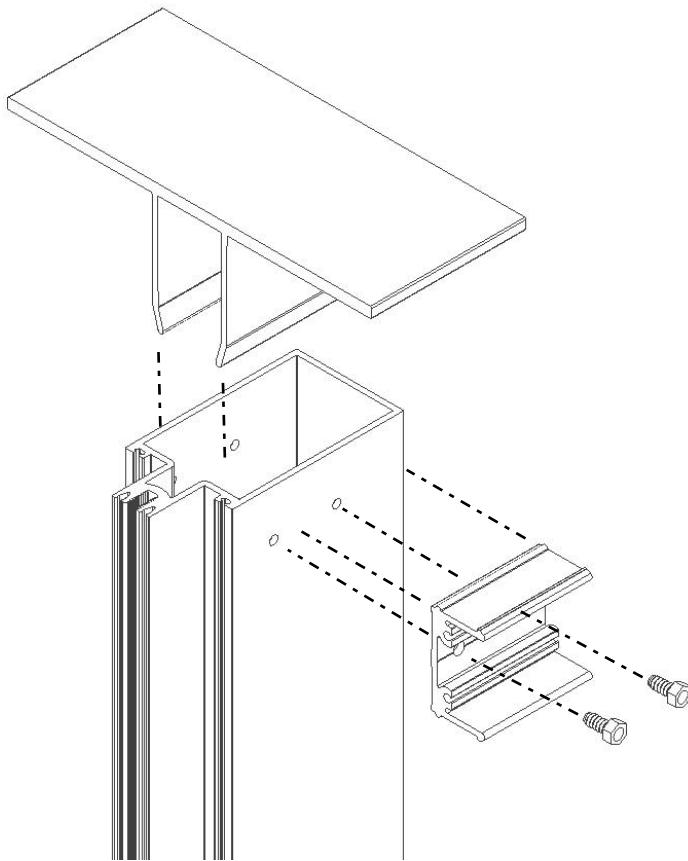
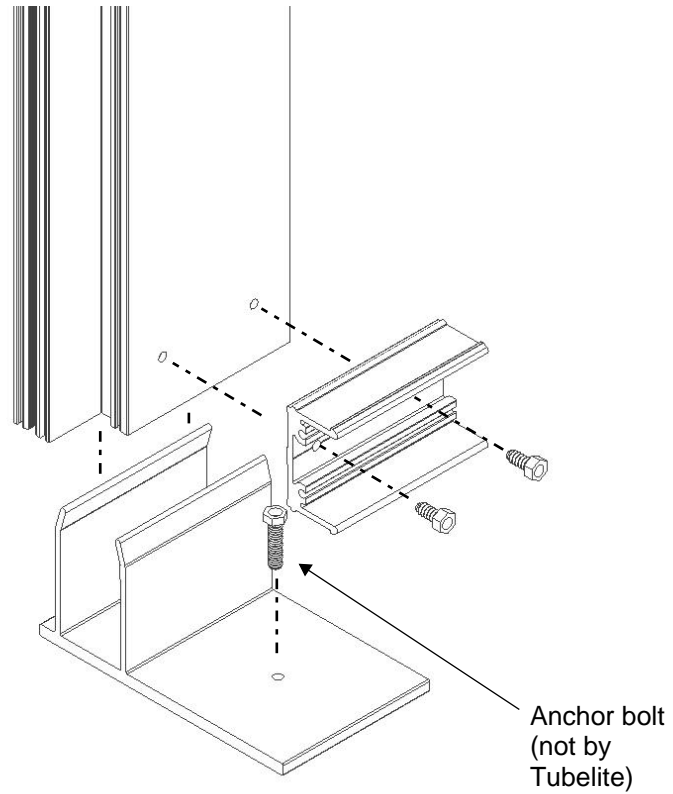


Figure 13: Attach the F or T anchor to the vertical.

Step 13: Attach Locking Lug to Sill Anchor (no F or T anchor at perimeter)

- Attach the locking lug to the sill anchor using a washer and anchor bolt (not by Tubelite) as shown in Figure 14.
- Head anchor is similar.

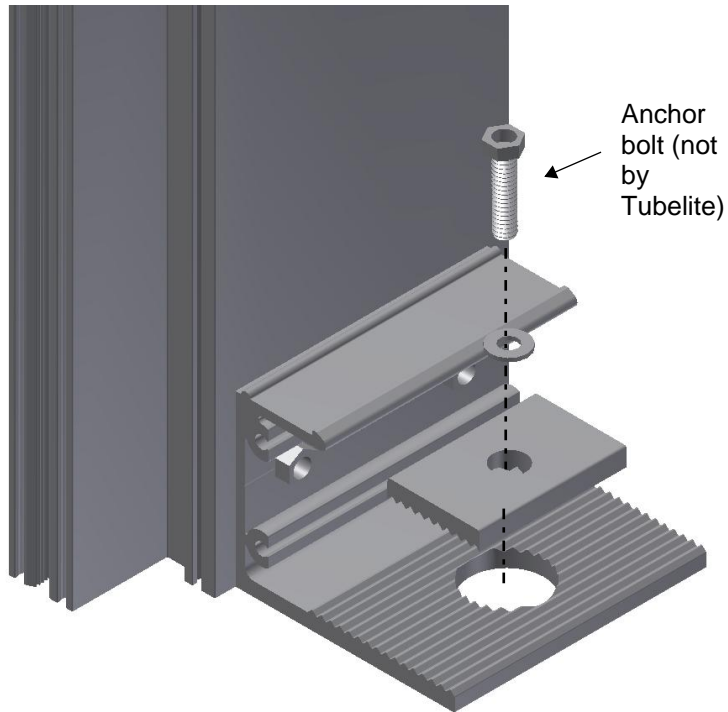


Figure 14: Attach the locking lug to the sill anchor.

Step 14: Attach Horizontal to Sill Anchor (tubular back members at perimeter)

- Seal perimeter of sill anchor.
- Seal the ends of the horizontal that are going to attach to the vertical.
- Attach the horizontal to the sill anchor using S270 screws as shown in Figure 15.
- Seal the screw heads.
- Insert a 3/4" diameter ethafoam rod (P1094) into the void in the horizontal and vertical tongues.
- Hold it approximately 1/8" from the end of the mullion. This is to form back-up for the sealant applied later.

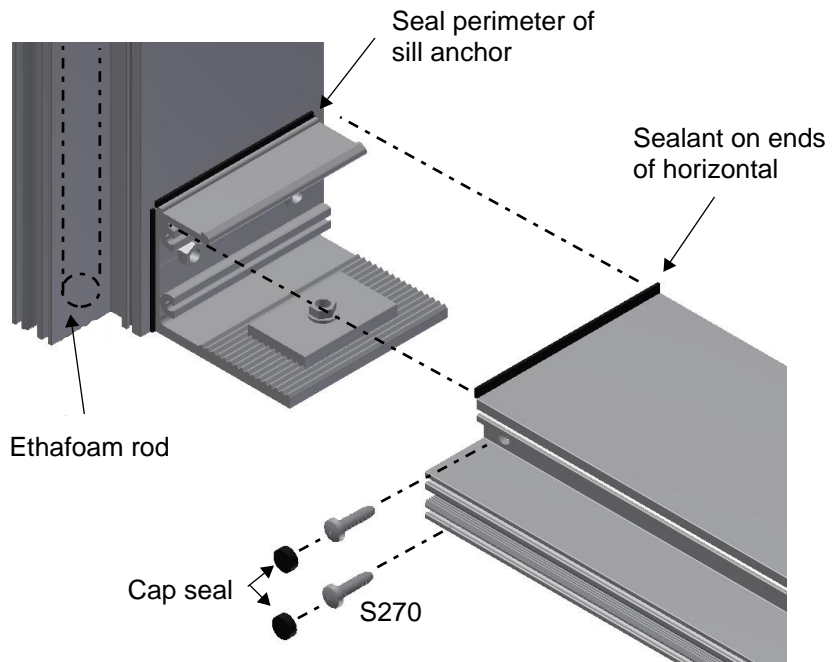


Figure 15: Attach the horizontal to the sill anchor.

**Step 14: Attach
Horizontal to Sill
Anchor (open
back members
at perimeter)**

- Seal perimeter of sill anchor.
- Seal the ends of the horizontal that is going to attach to the vertical.
- Attach the horizontal to the sill anchor using S270 screws as shown in Figure 16.
- Seal the screw heads.
- Insert a 3/4" diameter ethafoam rod (P1094) as shown previously in Figure 15.

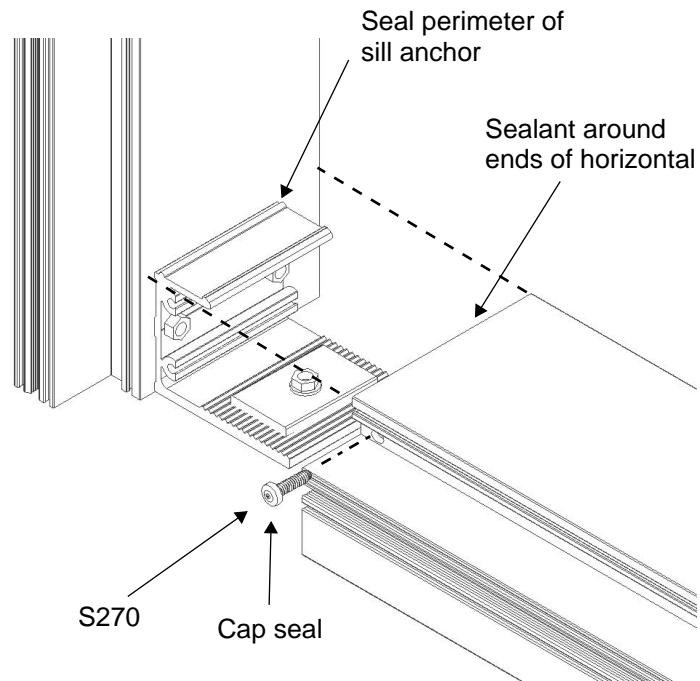


Figure 16: Attach the horizontal to the sill anchor.

**Step 15: Attach
 Horizontal to
 Shear Block (F
 or T anchors)**

- Seal perimeter of shear block.
- Seal the ends of the horizontal that is going to attach to the vertical.
- Attach the horizontal to the shear block using an S270 screw as shown in Figure 17.
- Seal the screw head.
- Insert a 3/4" diameter ethafoam rod (P1094) as shown previously in Figure 15.

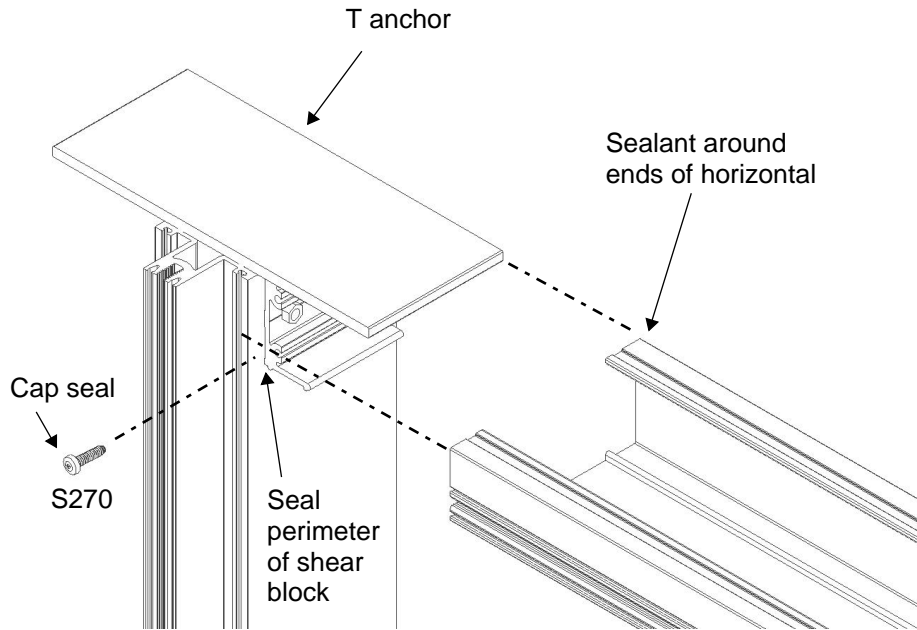
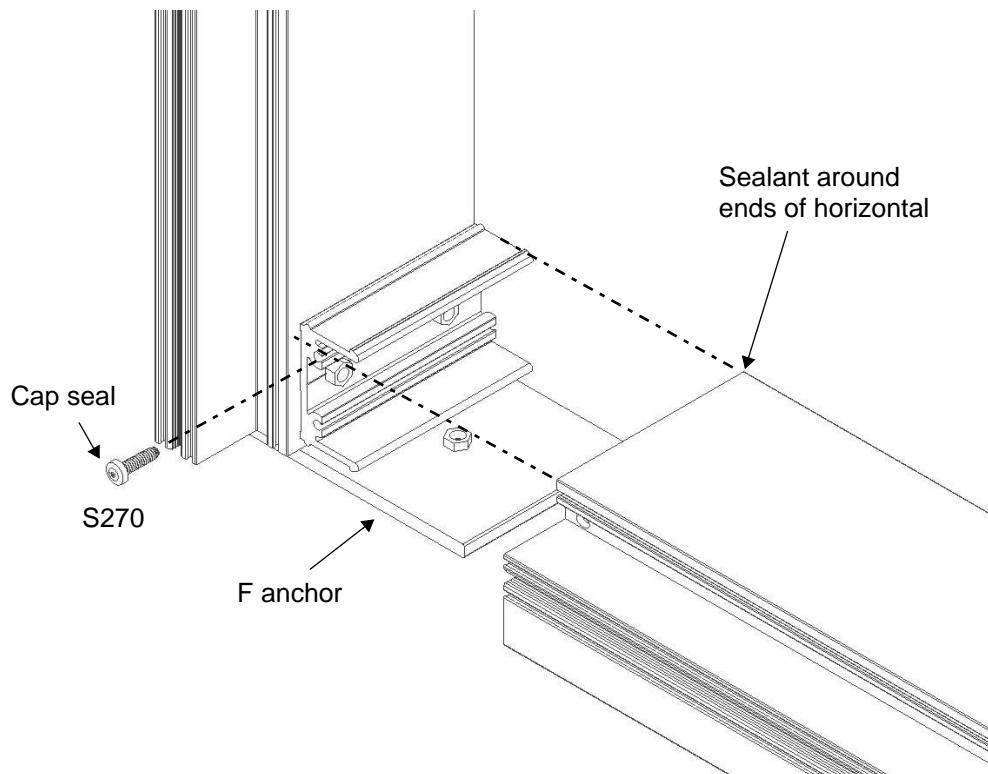


Figure 17: Attach the horizontal to the shear block.



Step 16: Attach Horizontal to Vertical

- Seal perimeter of shear block.
- Seal the ends of the horizontal that will attach to the vertical mullion.
- Attach the horizontal member to the vertical member as shown in Figure 18.
- Seal the heads of the screws.
- Tool and clean off excess sealant at the joint.

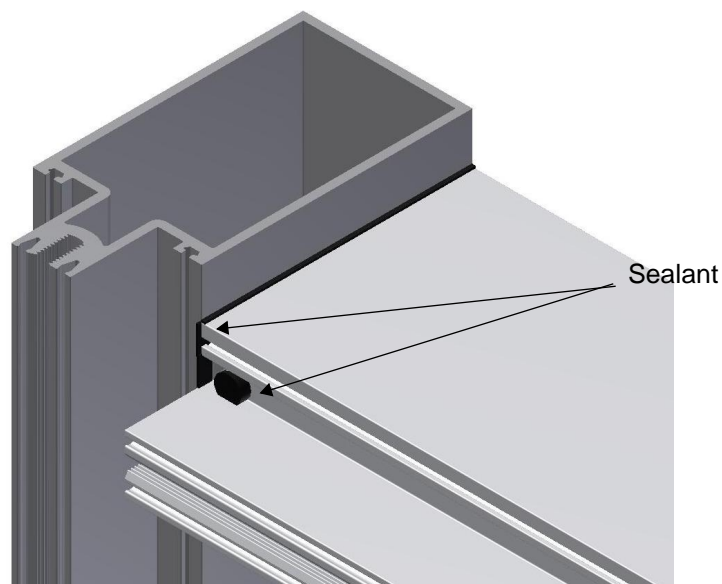
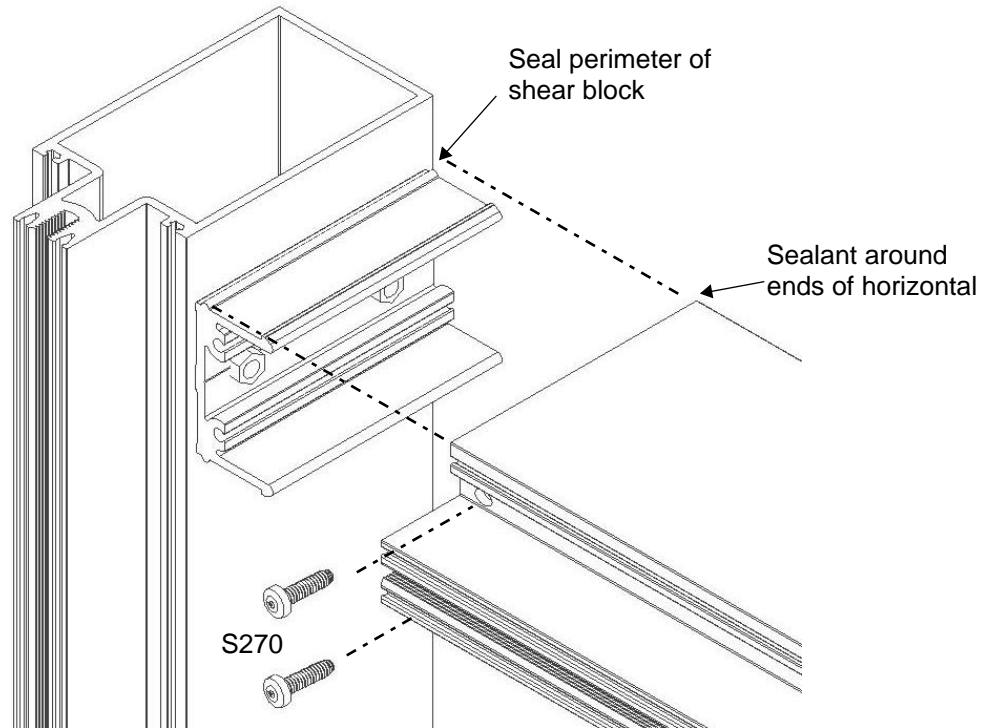


Figure 18: Attach the horizontal member to the vertical member.

Step 17: Install Water Dams

- Seal the end of the horizontal member across the vertical member to the opposite horizontal with butyl.
- Seal end of the opposite horizontal as well before installing the water dams. This sealant should be applied liberally.
- Push a pair of water dams (PTB93) into the void between the horizontal rails as shown in Figure 20.
- This is a pressure fit, and the top of the dam must be level with the top of the glass support lip.
- A single PTB30 water dam may also be used.

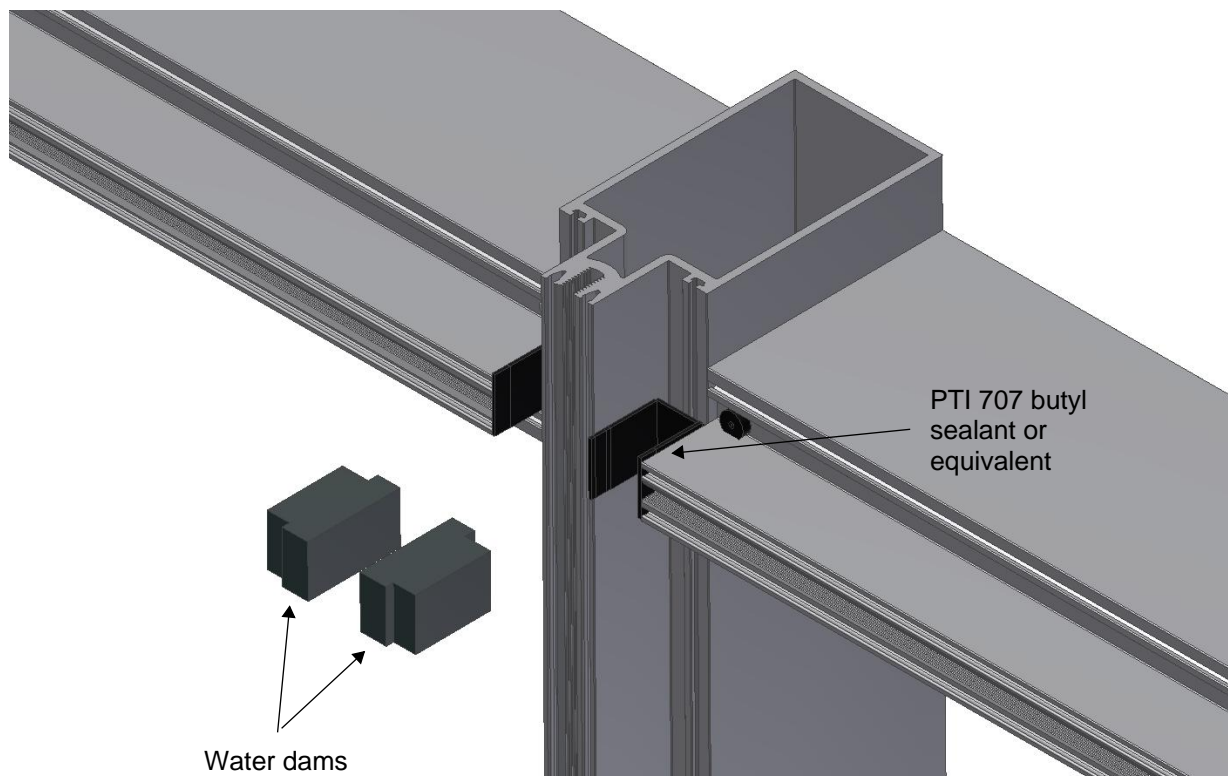


Figure 20: Push the water dams (PTB93) into the void between the horizontal rails.

Step 17:
Install Water Dams (at perimeter)

- Stack a pair of water dams (PTB93) between the horizontal and vertical mullions as shown in Figure 21.
- Seal water dams to vertical and horizontal with butyl sealant.

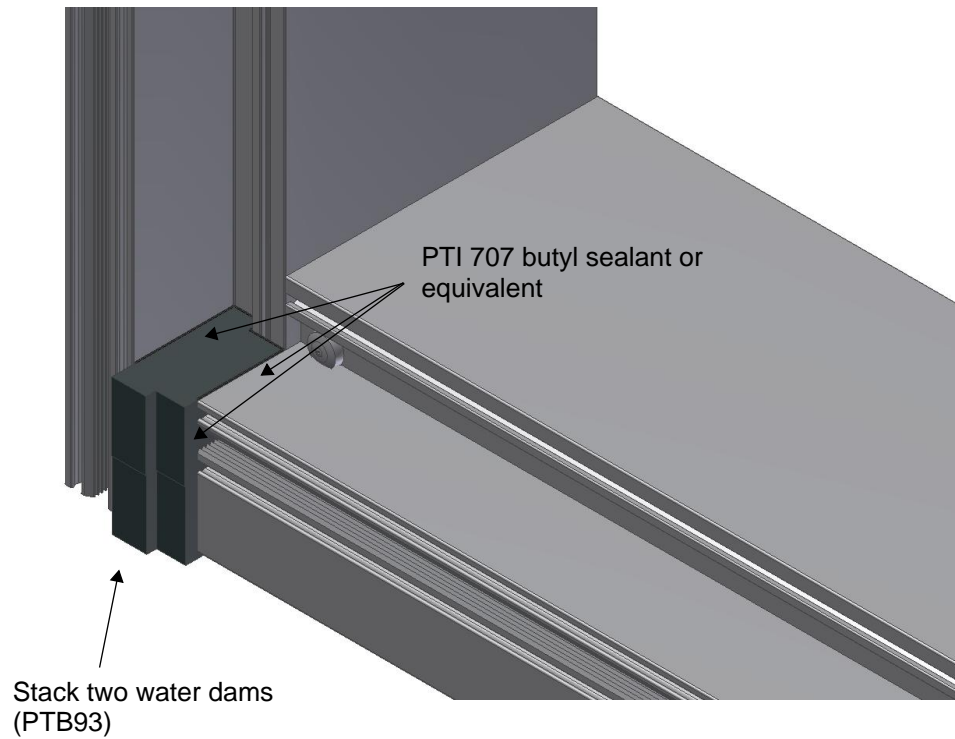


Figure 21: Install water dams and apply sealant.

Step 18: Install Gaskets

- Affix PTB28 gaskets and PTB94 isolators to vertical and horizontal members as shown in Figure 22.
- All gaskets are to be cut long by 1/16" per foot of length.

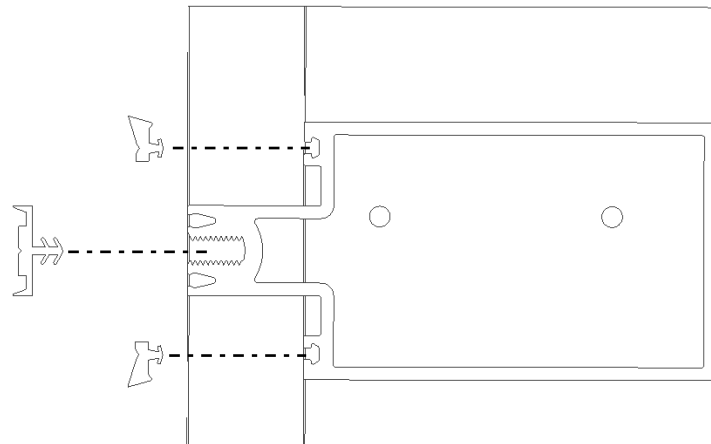
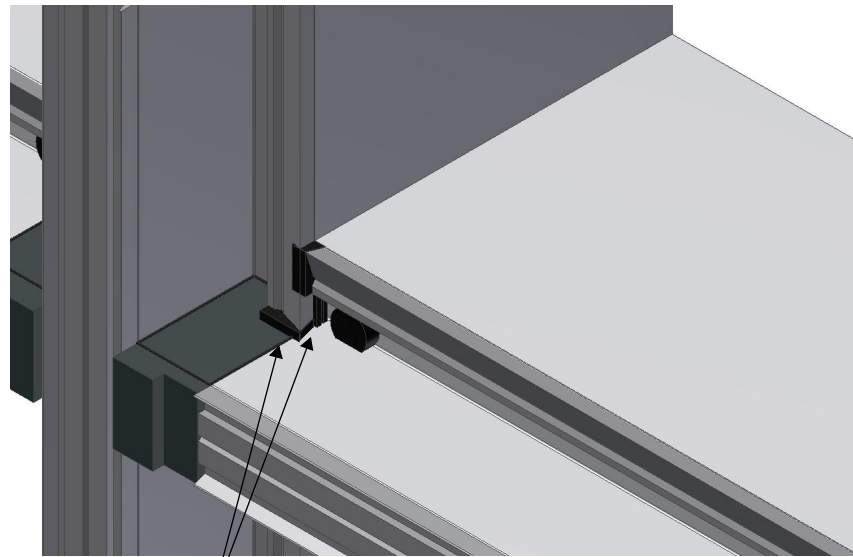


Figure 22: Attach the gaskets and isolators to the horizontal, shown, and vertical back members.

Step 19: Fit Horizontal Gasket to Vertical Gasket

- Fit the horizontal gasket into the vertical gasket.
- To ensure a "crowded" fit, seal the intersection with the sealant as shown in Figure 23. This is a critical seal and should be done right before the glass is set.
- Push the vertical gasket into the sealant at the water dam.
- Tool all excess sealant into voids.



PTI 707 butyl sealant or equivalent

Figure 23: Seal the intersection of the horizontal and vertical gaskets right before the glass is set.

Step 20: Install Glass and Setting Block

- Glass size is calculated as daylight opening + 1" horizontally and vertically.
- Install glass using 4" long standard setting blocks (P946 for 1" glass) at quarter-points or as indicated on approved shop drawings, as shown in Figure 24.
- Make sure sealant is not bridging or blocking the water flow area between the edges of glass and the framing system.
- Hold the glass in place using temporary glazing clips (P1194), available by request.

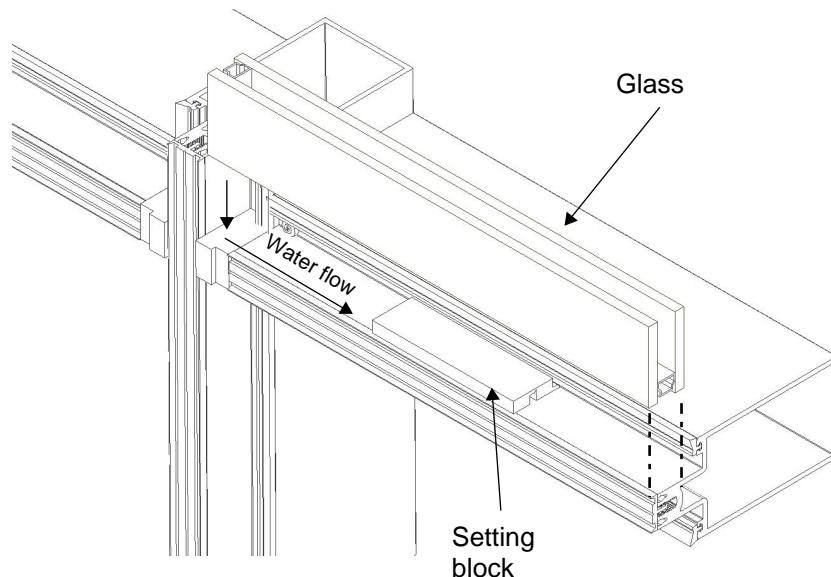


Figure 24: Install glass using setting blocks, which are typically installed at quarter-points.

Step 21: Install Glazing Pocket Closure

- At the perimeter, install a glazing pocket closure adjacent to the structure as shown in Figure 25.

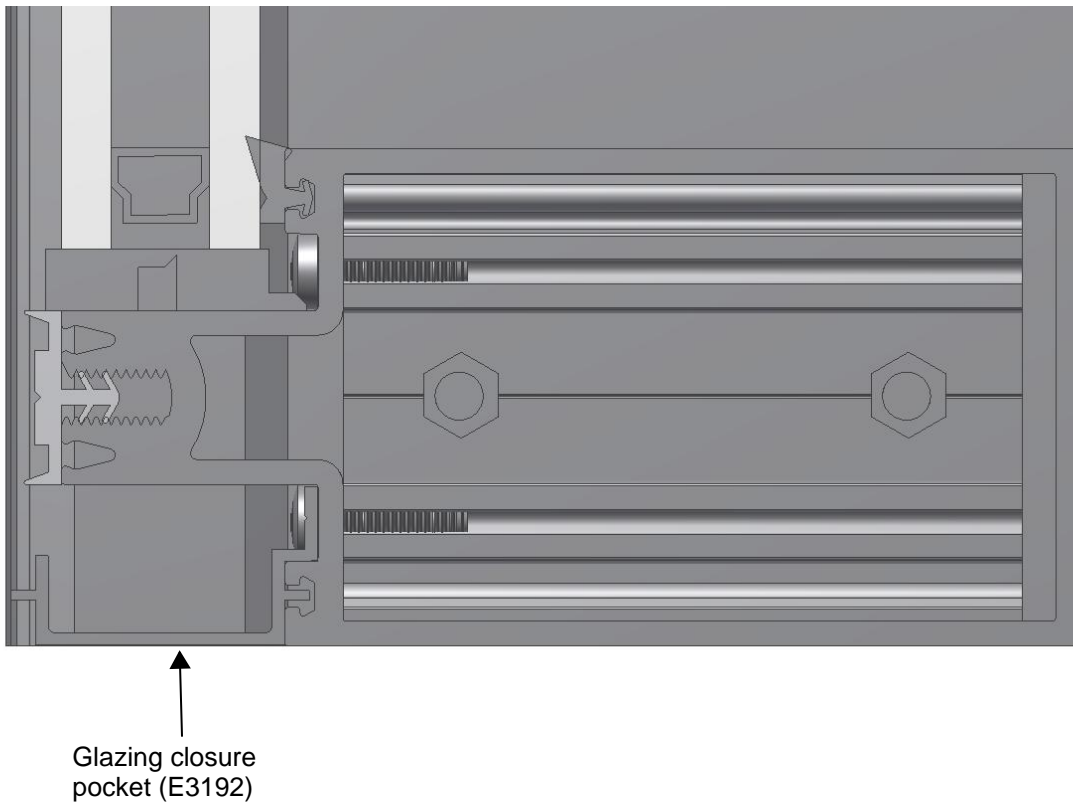


Figure 25: Install the vertical snap-on cover and pressure plate.

Step 22: Install Vertical Snap-on Cover and Pressure Plate

- At the jambs, ensure weep holes are on the glass side for the pressure plates.
- After installing the glass, install the vertical snap-on cover and the vertical pressure plates using an S362 screw as shown in Figure 26.
- Torque of 30-40 in.-lbs. should be used to screw on the pressure plate.
- The vertical snap-on cover must be installed before the horizontal pressure plate.

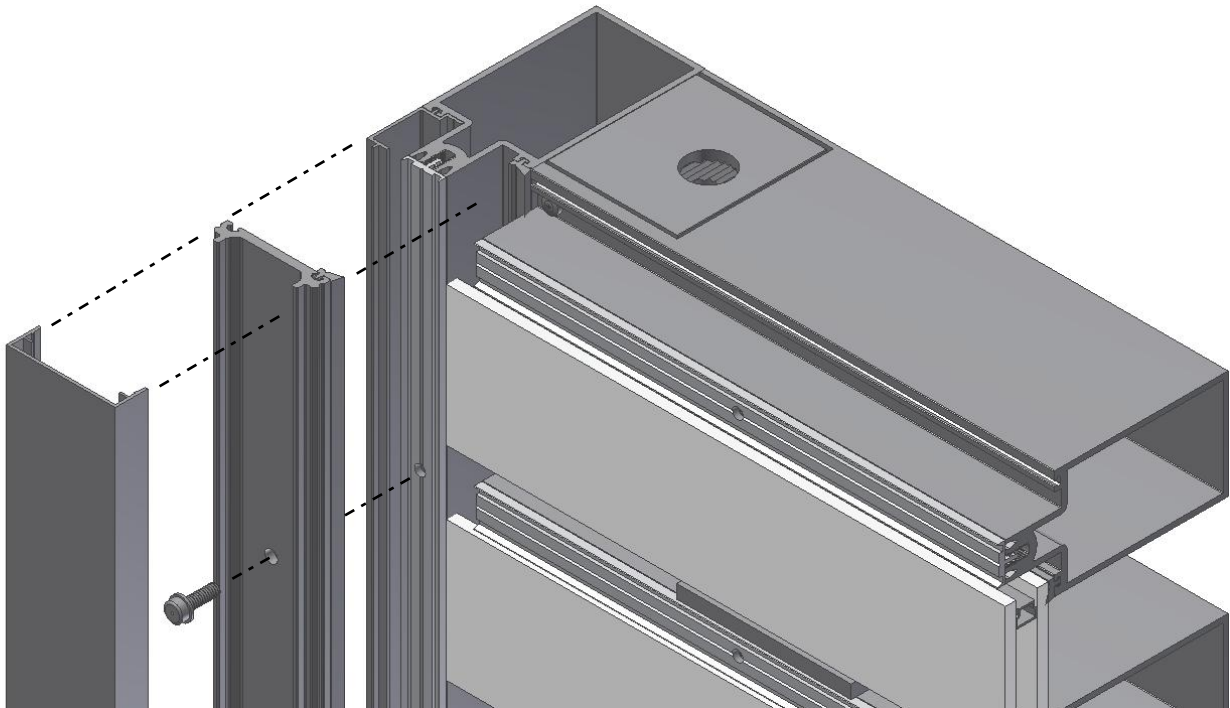
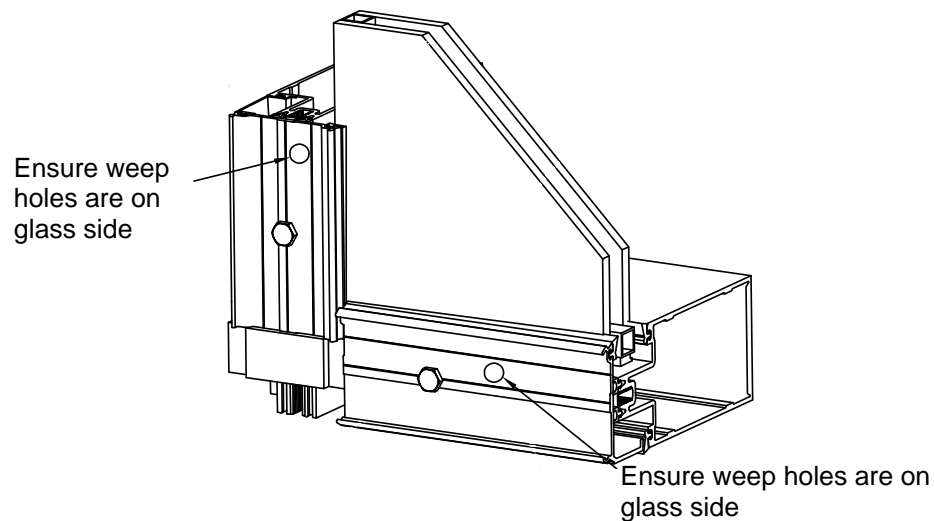


Figure 26: Install the vertical snap-on cover and pressure plate.



Step 23: Install Horizontal Pressure Plate and Snap-on Cover

- Install the horizontal pressure plate using an S362 screw as shown in Figure 27.
- Torque of 30-40 in.-lbs. should be used to screw on the pressure plate.
- Be sure to seal the horizontal gasket to the vertical gasket utilizing sealant. Also seal and tool the horizontal pressure plate to the vertical snap-on cover.
- Seal all screw heads in the horizontal pressure plate.

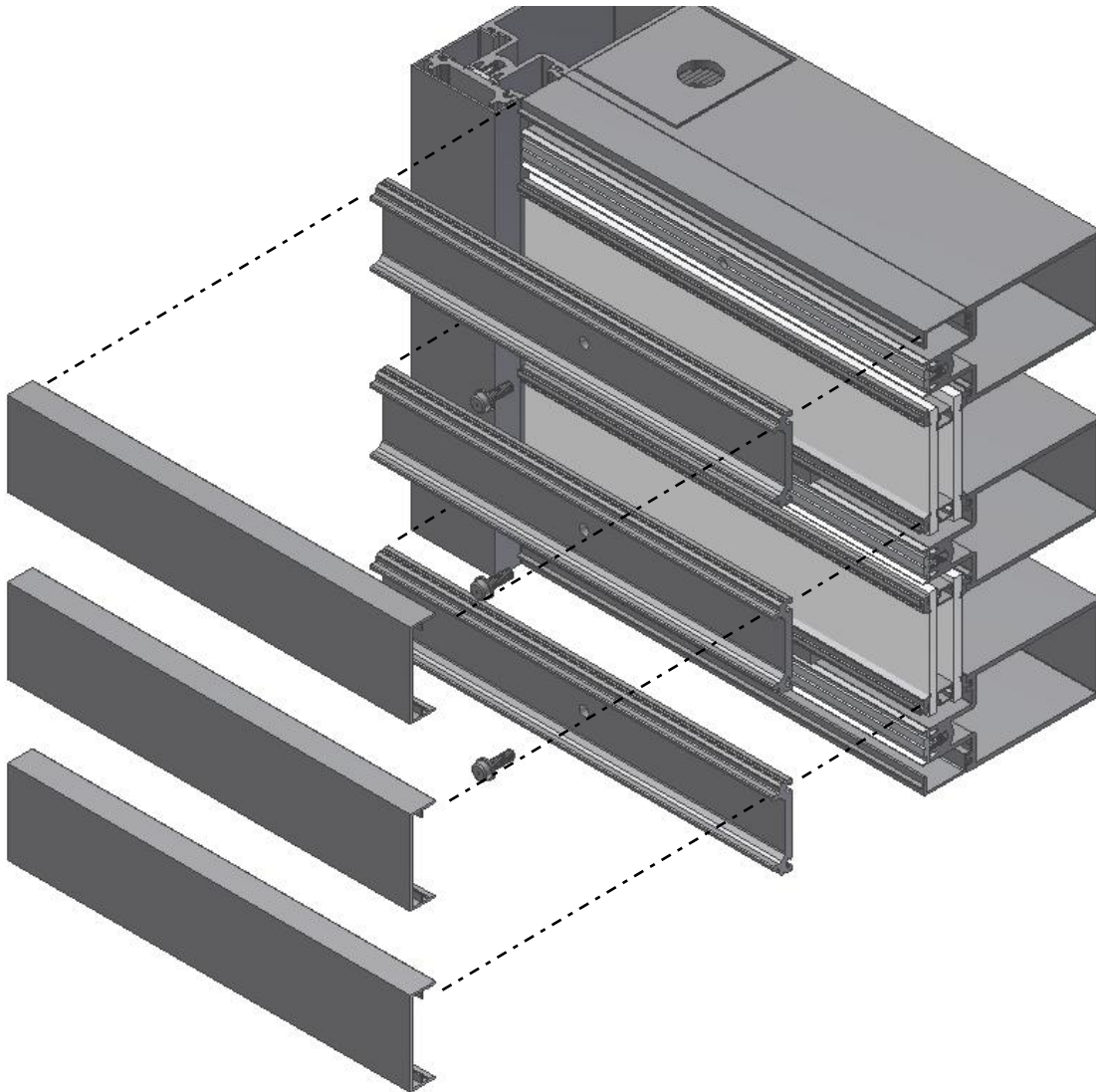


Figure 27: Install the horizontal pressure plate.

Step 24: Seal Perimeter of Installation

- Insert backer rod into the gap between the frame and the building substrate on top, sides and bottom of the installation.
- Apply sealant around perimeter of frame.
- Tool the sealant smooth.

