



Patio Door

*Assembly and Installations
Patio Door for
S-7500*



DESIGNER - EXTRUDER

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Important

This document describes procedures, step by step, for all patio door manufacturing. All fabrication procedures that are different from those mentioned in this document may alter performances and/or the quality of finished product.

Required Screws



#4 x 3/8", pan head, screw
(For screen keeper in a three (3) panel door only).



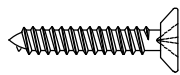
#6 x 5/8", pan head, screw
(For screen keeper and screen stopper in a four (4) panel door).



#10 x 5/8", flat head, screw
(For metal anchor and for secondary lock).



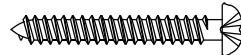
#8 x 7/8", pan head, screw
(For fixed panel).



#8 x 1", flat head shutter, screw
(For mullion and screen mullion in a three (3) panel door).



#8 x 1", pan head, screw
(For three (3) panel door mullion and for keeper for secondary lock).



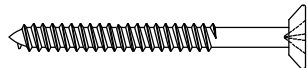
#8 x 1 1/4", pan head, black screw
(For head weatherseal and sash stopper).



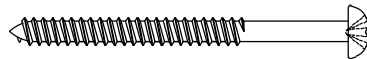
#8 x 1 1/4", pan head, screw
(For keeper).



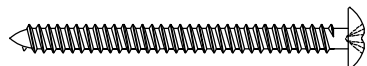
#8 x 1 3/4", pan head, screw
(For mullion in a four (4) panel door).



#8 x 1 3/4", flat head shutter, screw
(For sash stopper in a four (4) panel door).



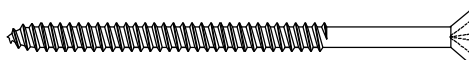
#8 x 2", pan head, screw
(For screen mullion in a four (4) panel door).



#8 x 2", truss head, screw
(For frame assembly).

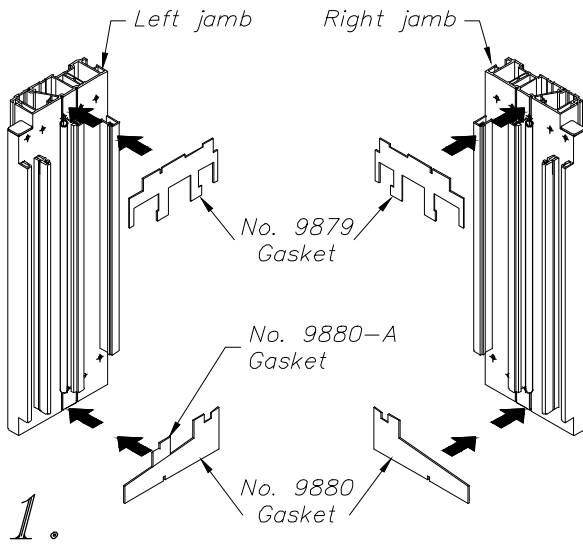


#10 x 2 1/2", flat head, screw
(For mortise lock).



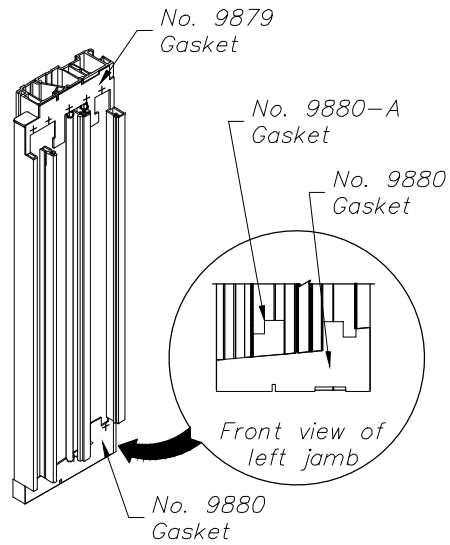
#8 x 2 3/4", flat head, screw
(For anchor block and three (3) panel door mullion).

Secondary Lock and Keeper Installation



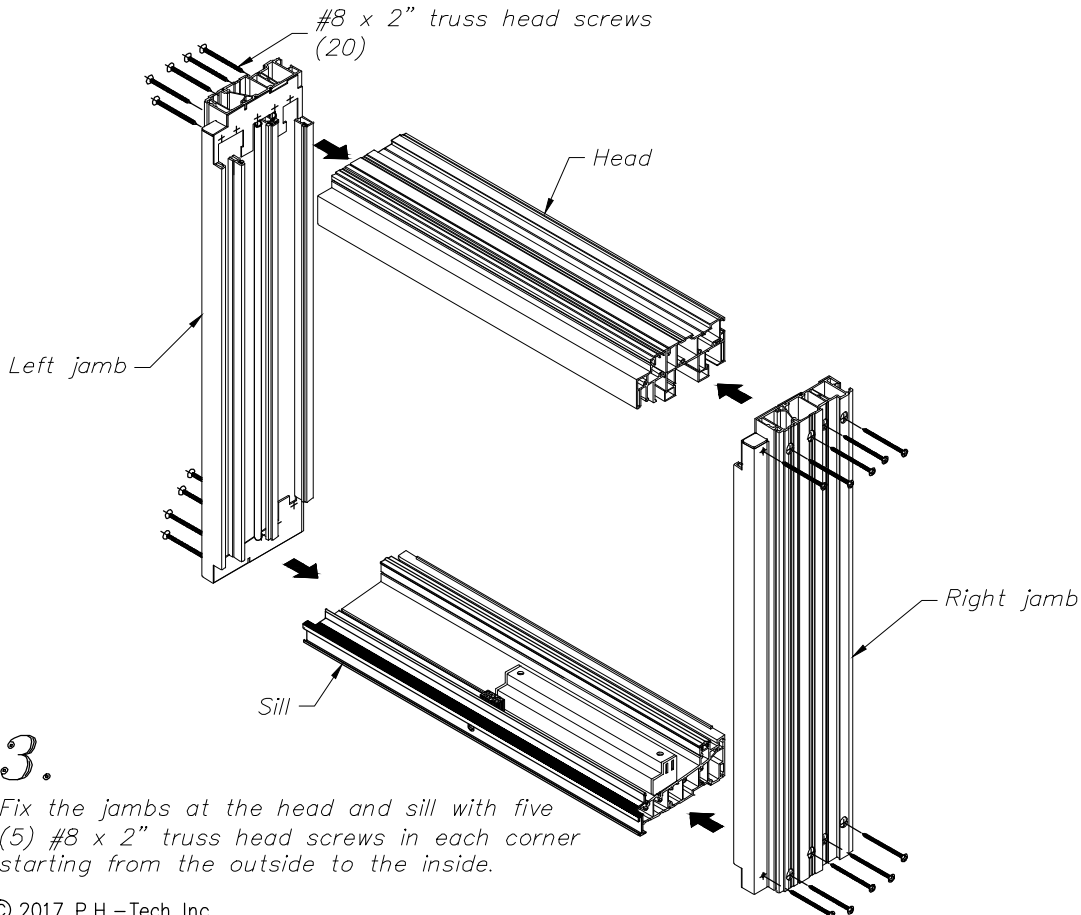
1.

Peel and stick corner gaskets No. 9879 to the head on each jamb. Peel and stick No. 9880 corner gaskets to the sill on each jamb, starting from the inside in order to be able to fold them back in front of the jamba. Peel and stick gasket No. 9880-A on left jamb for an FX door, or on right jamb for an XF door.



2.

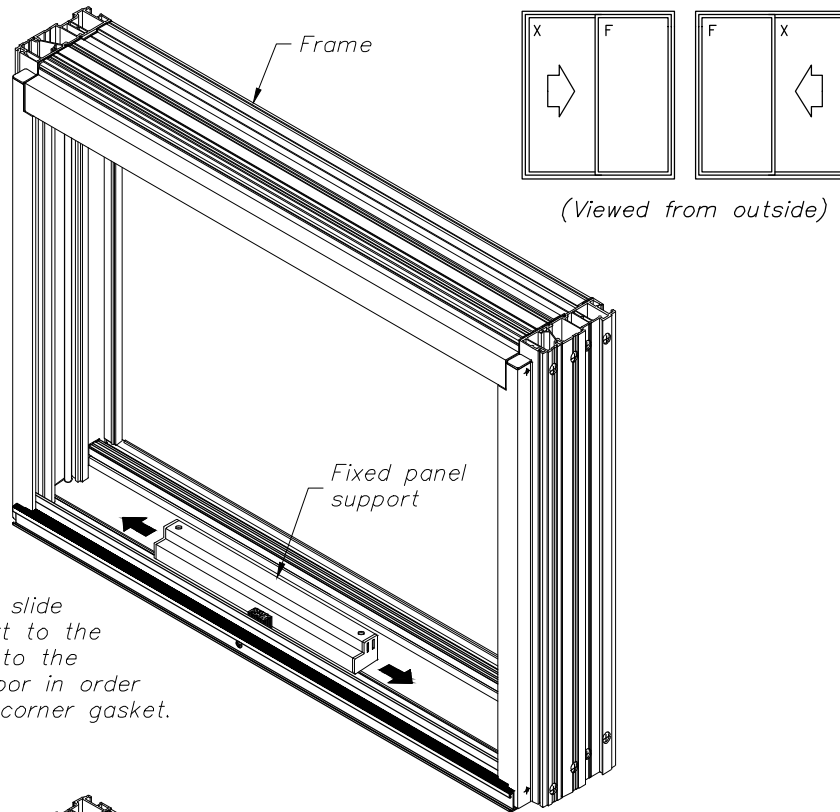
Make sure corner gaskets make a perfect joint with head and sill.



3.

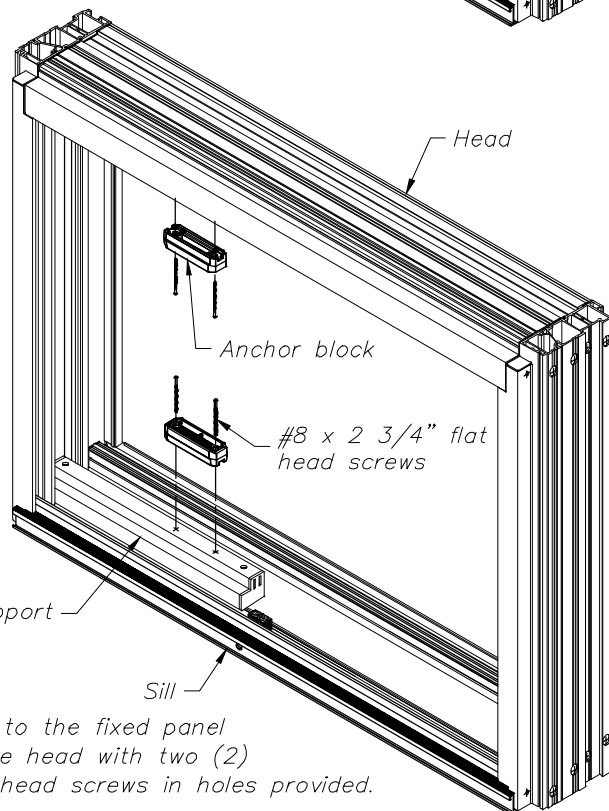
Fix the jamba at the head and sill with five (5) #8 x 2" truss head screws in each corner starting from the outside to the inside.

Final Frame Assembly



4.

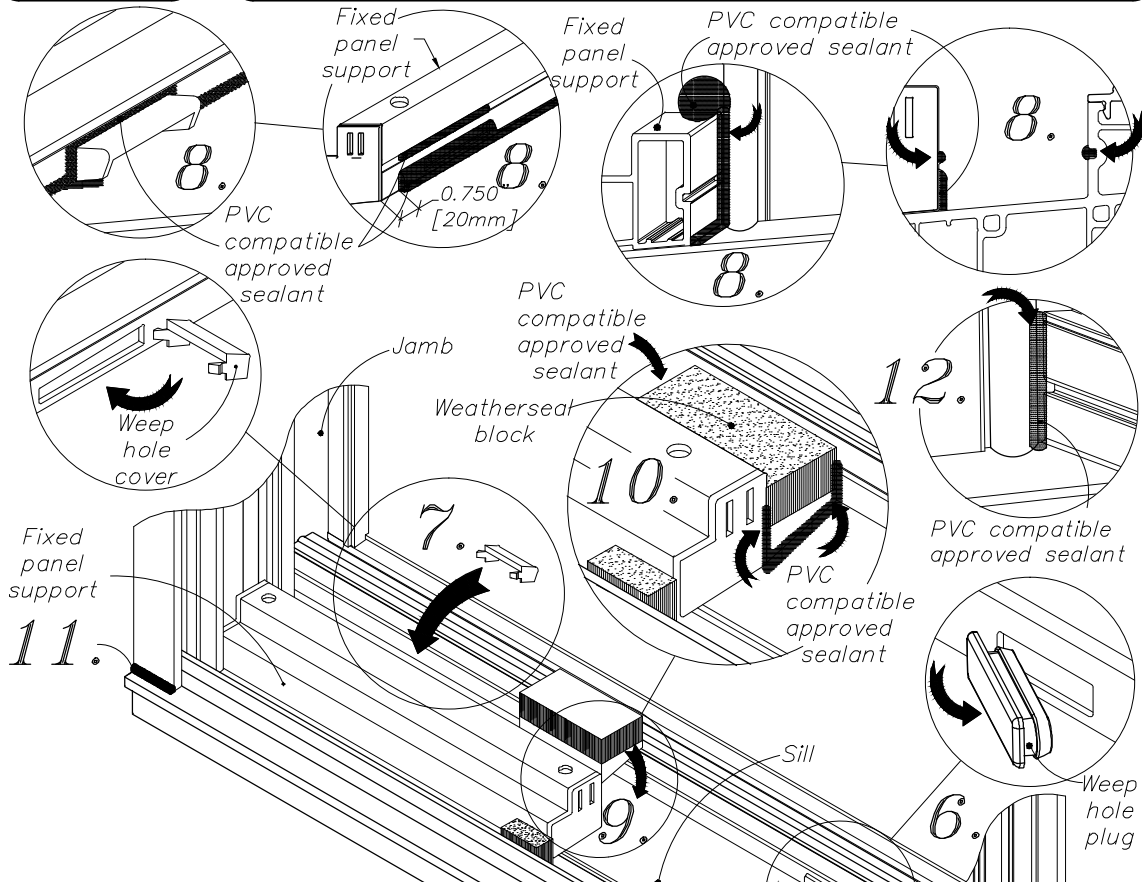
From the outside, slide fixed panel support to the left for an FX or to the right for an XF door in order to seal it on the corner gasket.



5.

Fix anchor blocks to the fixed panel support and to the head with two (2) #8 x 2 3/4" flat head screws in holes provided.

Sill Assembly



Assembly Sequence

6. From the outside of the sill, insert a weep hole plug in prepared opening (operating side).
7. From the inside, insert a weep hole cover into the hole in fixed panel support (closest to jamb). Making sure it sits on the sill track.
8. From the inside, caulk the top and sides of the weep hole cover and caulk all along the fixed panel support with a sealant that is approved and compatible with PVC. On the side of the fixed panel support where there is no weep hole cover, apply more caulking in order to seal the unused drain hole and space between the fixed panel support and the weatherseal block. Also caulk the grooves on each side of the weatherseal block as illustrated above. Apply a thin amount of sealant at the corner where the fixed panel support and bulb seal of jamb meet and finish on top of the fixed panel support with a ball of sealant.

9. Peel and stick the sill weatherseal block at 1/32" [1 mm] from the end of the fixed panel support or at 1/8" [3 mm] from the end of the black cap located at the end of the fixed panel support.

10. Caulk both ends of weatherseal block as illustrated above.

11. On the outside face of the sill, at the jamb, apply a sealant that is approved and compatible with PVC.

12. On the operating sash side, in the space between the bulb seal and the sill, apply a thin amount of sealant.

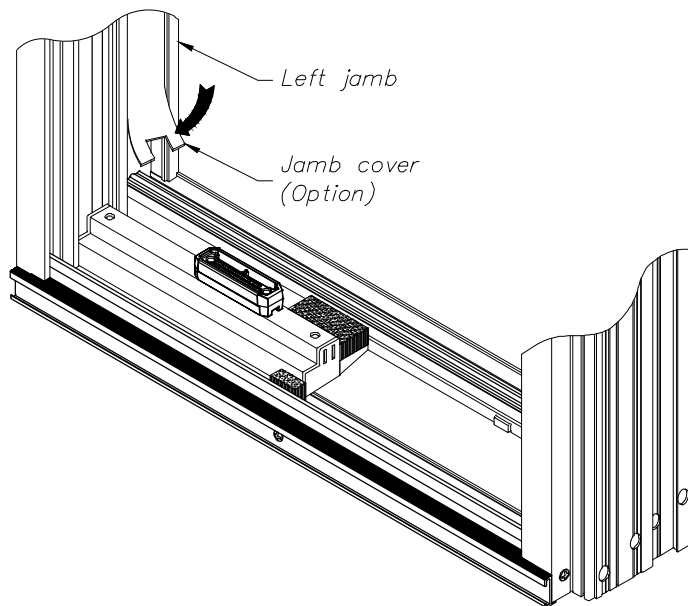
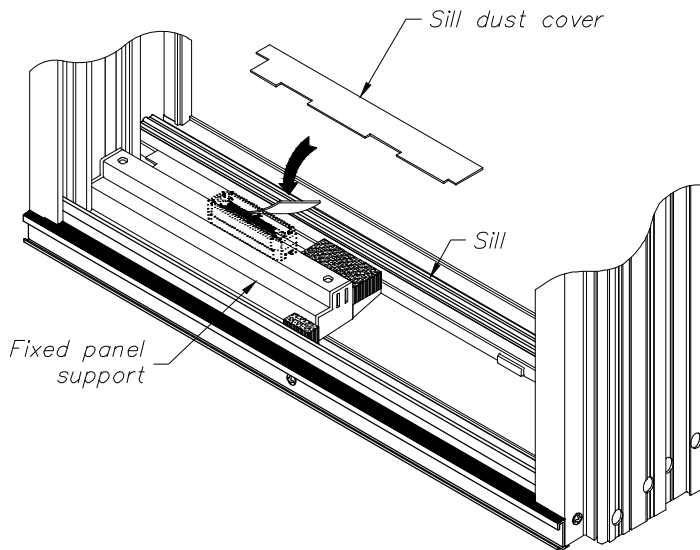
Dust and Jamb Cover Installation

13.

Insert sill dust cover between the fixed panel support and the sill.

Important: Make sure to install sill dust cover correctly as per drawing.

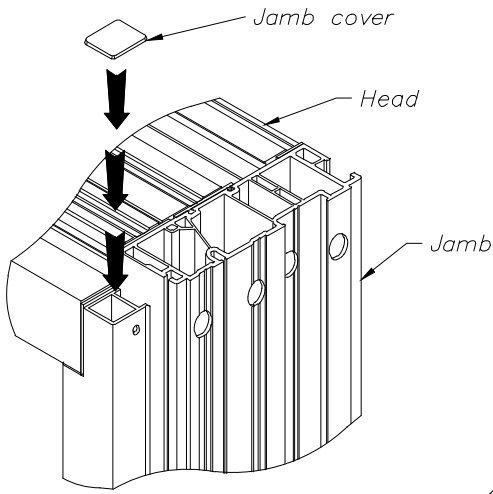
There should be a gap between the sill dust cover and the dust plug.



14.
(Optional)

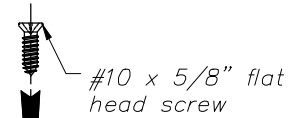
Install a jamb cover on both jambs.

Anchor Installation



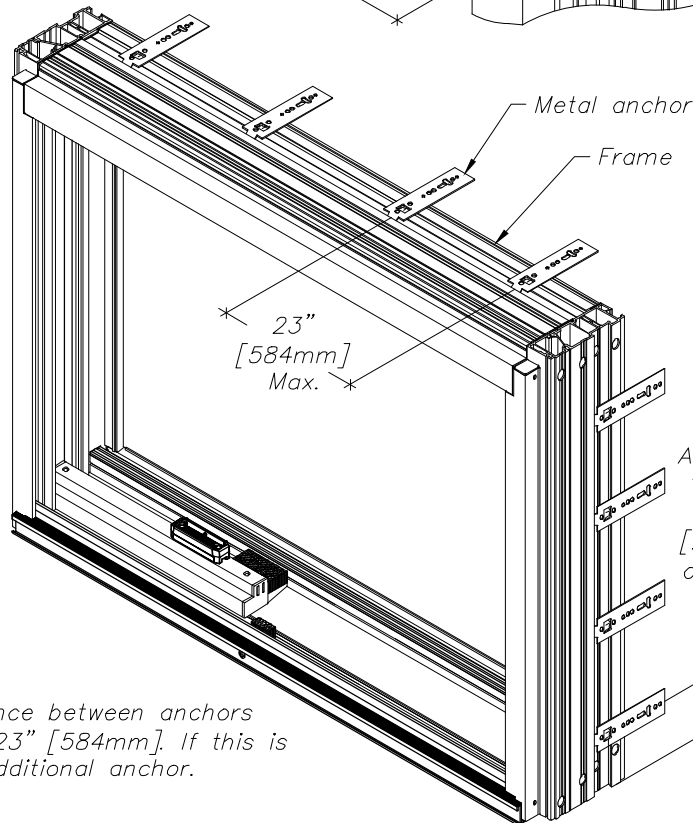
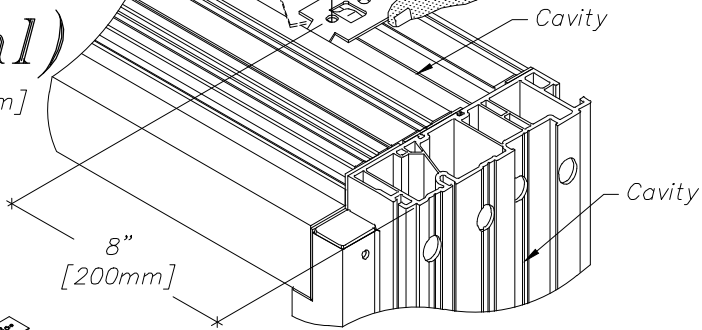
14.

Cement the jamb covers on top of each jamb using PVC cement.



15. (Optional)

Install metal anchors at 8" [200mm] from corners.



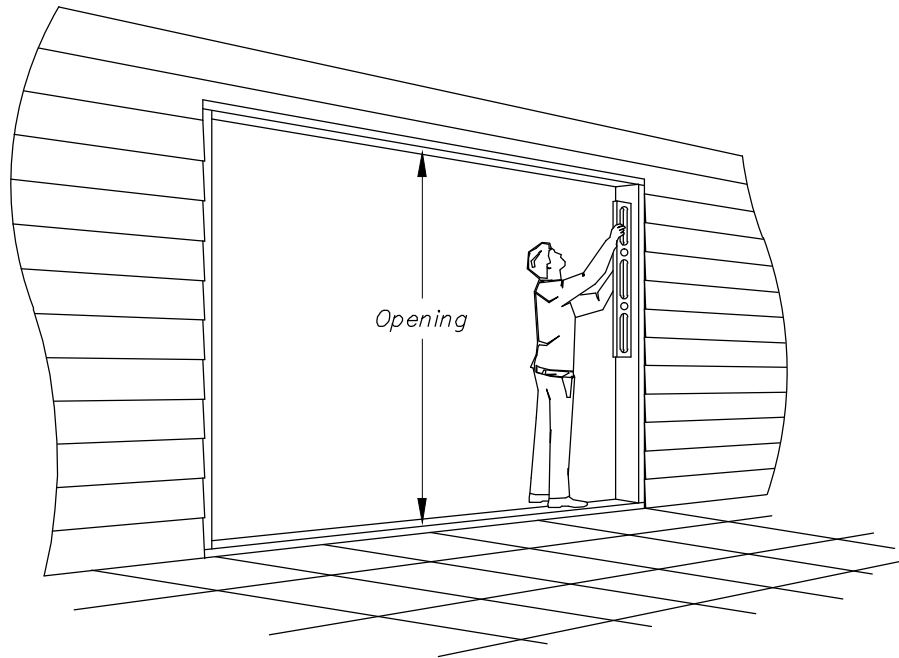
At the sill, when the product is painted 10" [254mm] insted of 8" [200mm]

16.

The maximum distance between anchors should not exceed 23" [584mm]. If this is the case, add an additional anchor.

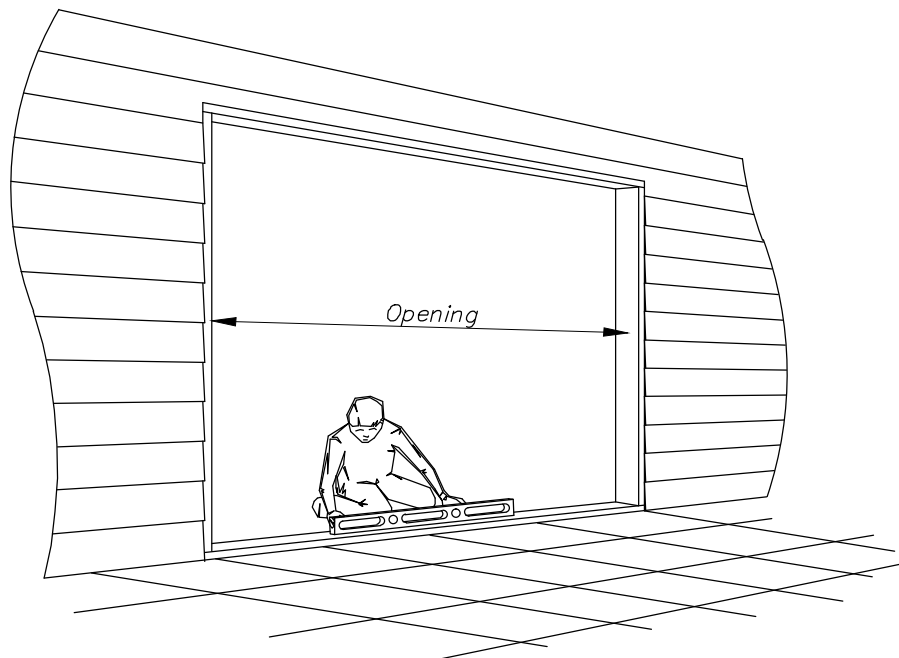
Preparing the Opening

Read instructions carefully before starting installation and make sure the new door will fit into the opening (allow 1/2" or 3/4" gap all around).

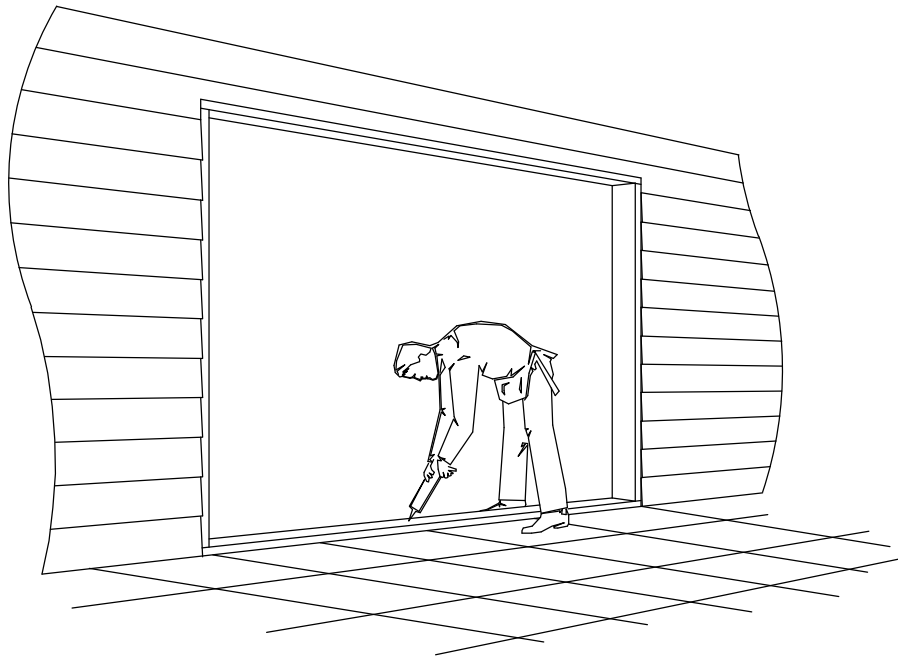


17.

The performance of this door will be affected if the opening is too small or too large. A levelled sill is critical. If necessary, use wooden shims (one at the center and one at each end) to ensure a levelled surface prior to installing the door.

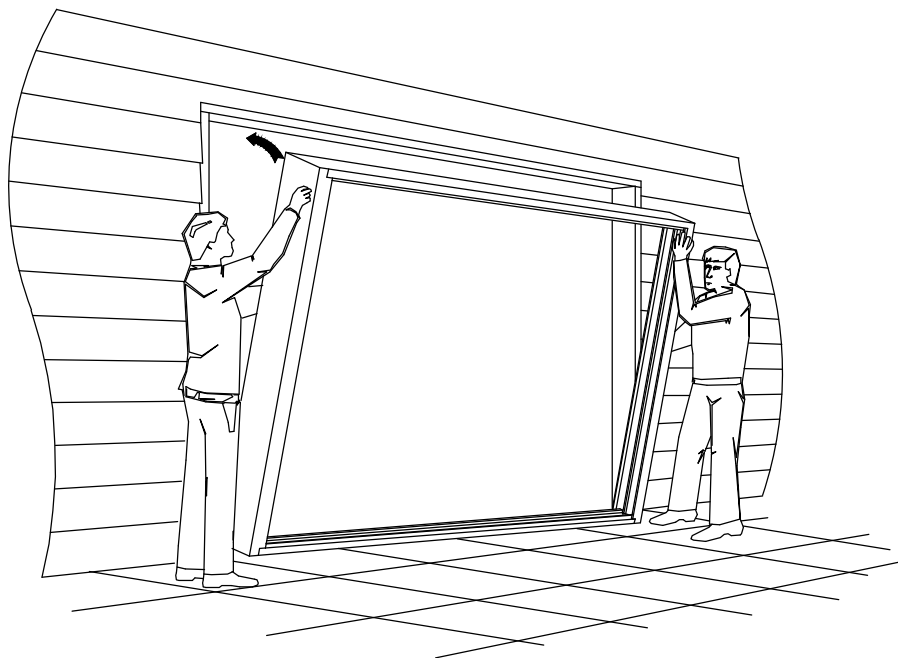


Frame Installation



18.

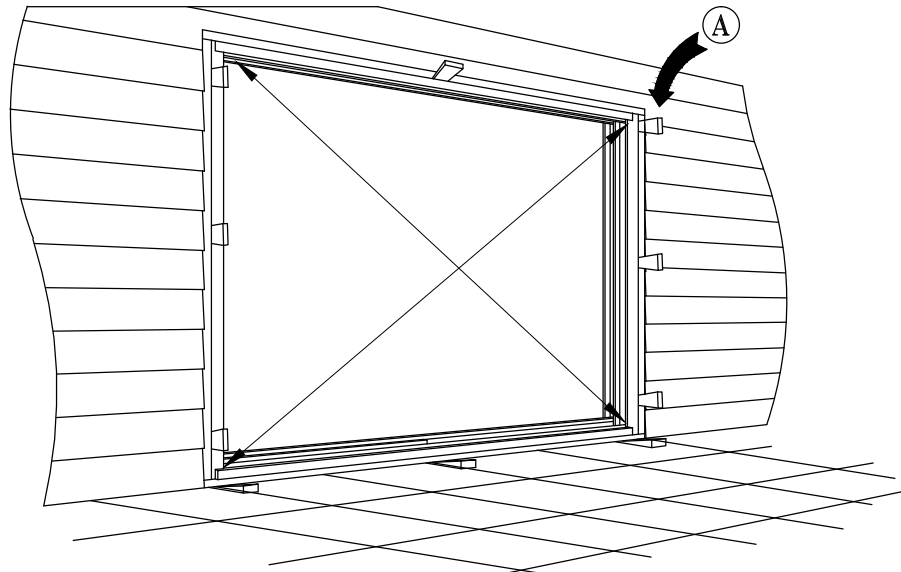
Install a bead of premium caulking compound along the entire length of the sill.



19.

Sit the door unit in the opening, sill first. Make sure caulking compound makes a perfect seal between the door sill and the floor.

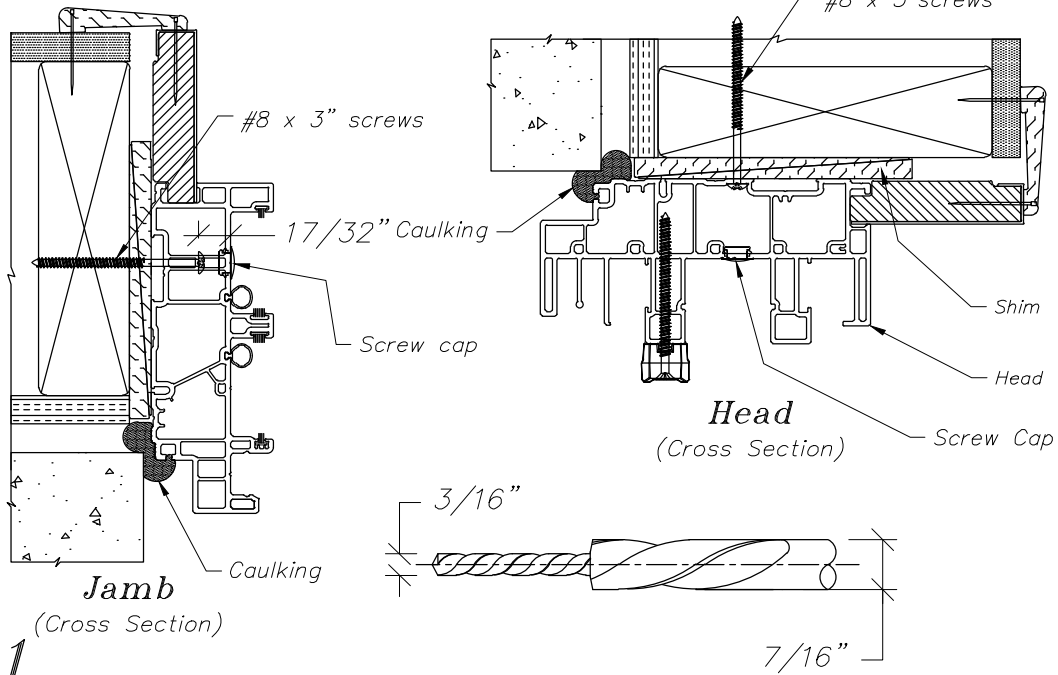
Frame Installation



20.

Shim the door as shown above. Once the door is centered in the opening, place a shim at the top of the fixed panel jamb (A) and secure with a screw through the metal anchor next to the shim. Measure the diagonals to ensure the door frame is square. Complete shimming of fixed panel jamb, then operating panel jamb and finally the head and sill.

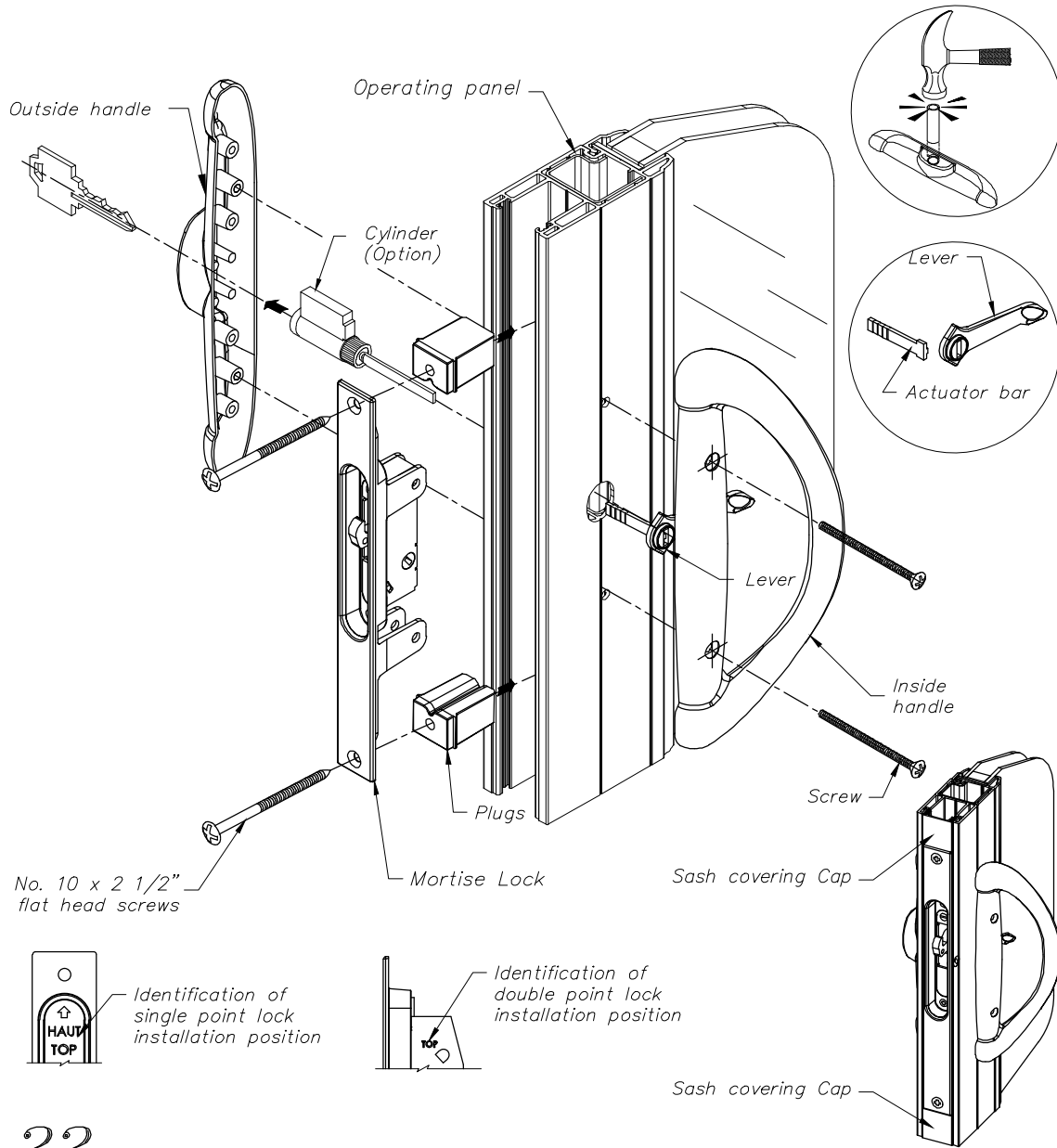
Note: Do not over-shim as it will cause the unit to bend and jeopardize performance of the door.



21.

Using a special step drill, drill the installation holes next to the shim. Screw with #8 x 3" screw and cover with plastic screw cap. Measure the diagonals to ensure the door frame is square. Complete shimming of fixed panel jamb, then operating panel jamb and finally the head. In order to prevent any water infiltration, screwing through the sill is not recommended. Caulk and finish the exterior of door to ensure water tightness between rough opening and door frame. Finish interior of door.

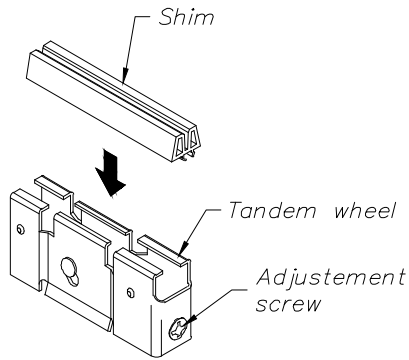
Handle and Mortise Lock Installation



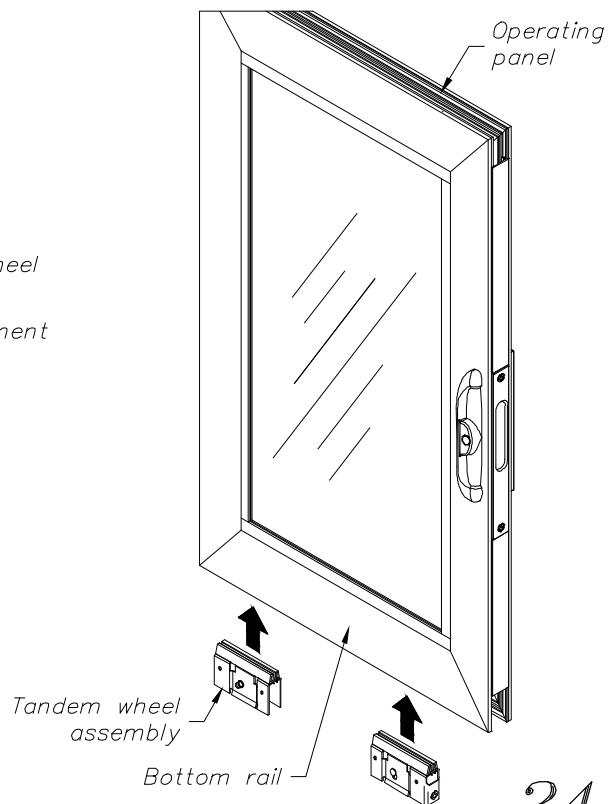
22.

Insert plugs into front cavity of operating panel. On the mortise lock, find the identification HAUT/TOP for single point lock and TOP for double point lock. (This indicates the installation position of the lock). Always install lock with identification towards the top to ensure a proper operation of the lock. Insert lock into front cavity of operating panel and fasten with two (2) No. 10 x 2-1/2" flat head screws. From the inside, adjust the inside handle making sure the actuator bar is well inserted into the slot of the lock. (If the optional cylinder is used, remove the actuator bar from the lever). If the optional cylinder is used, punch out the ring of the exterior handle. If necessary remove the excess in the hole with a file and insert the cylinder, as illustrated, into the cavity of the outside handle. Position outside handle in place and secure from the inside with two (2) screws. Install sash covering caps on sash, above and below the lock, as illustrated.

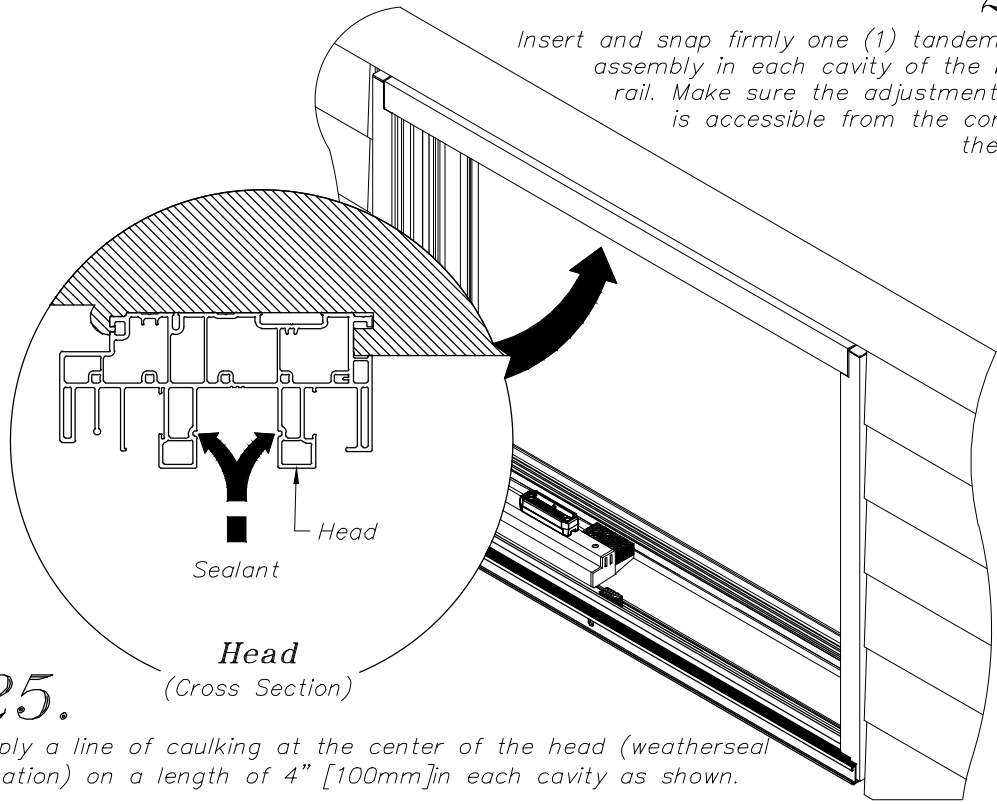
Tandem Wheel Installation



23.
Insert the shim on top of the tandem wheel housing.

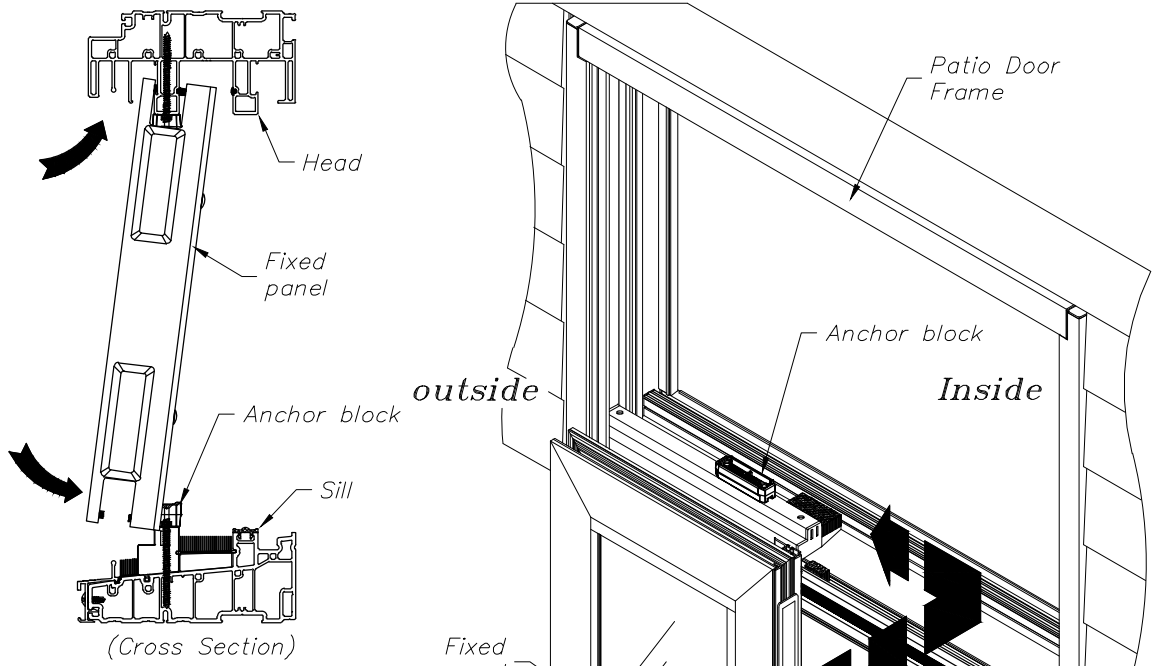


24.
Insert and snap firmly one (1) tandem wheel assembly in each cavity of the bottom rail. Make sure the adjustment screw is accessible from the corner of the panel.



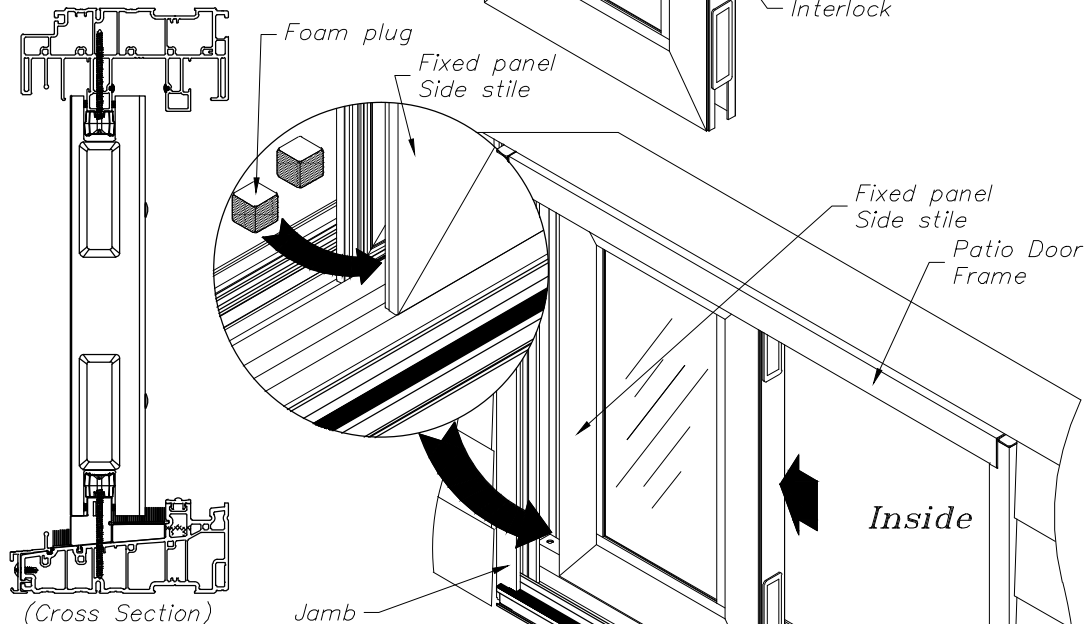
25.
Apply a line of caulking at the center of the head (weatherseal location) on a length of 4" [100mm] in each cavity as shown.

Fixed Panel Installation



26.

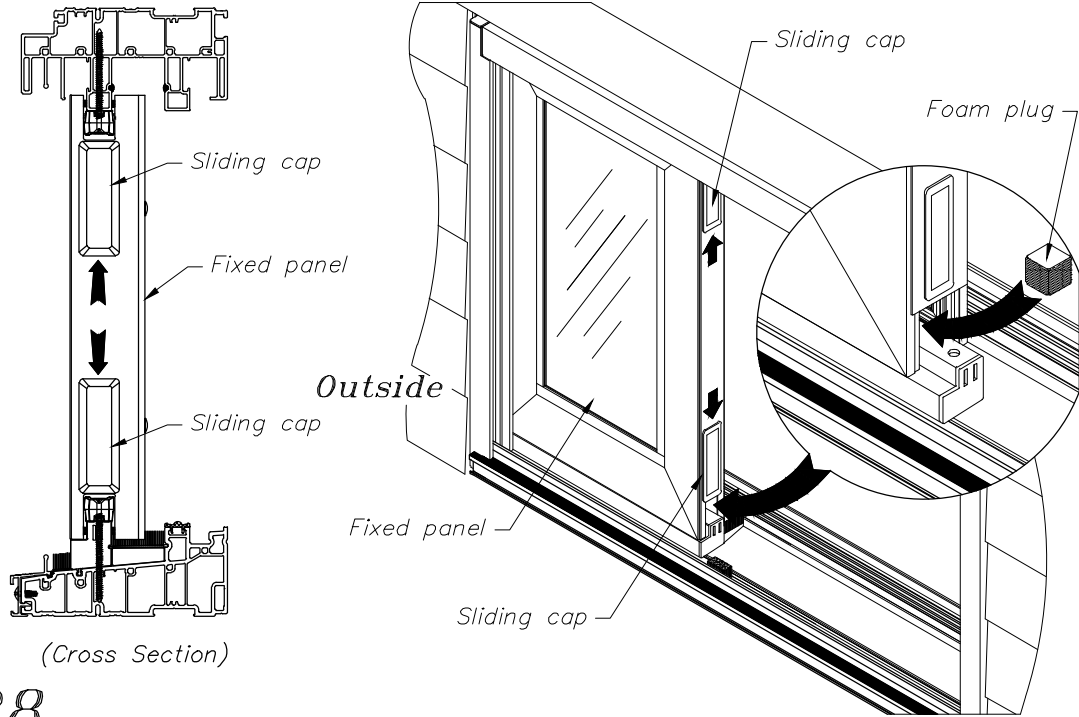
Insert fixed panel into the outside track of the head, bypassing the anchor block and making sure the interlock weatherstrip is facing inward.



27.

Insert two (2) foam plugs at the base of the vertical side stile and slide the fixed panel fully against the jamb. Check for squareness.

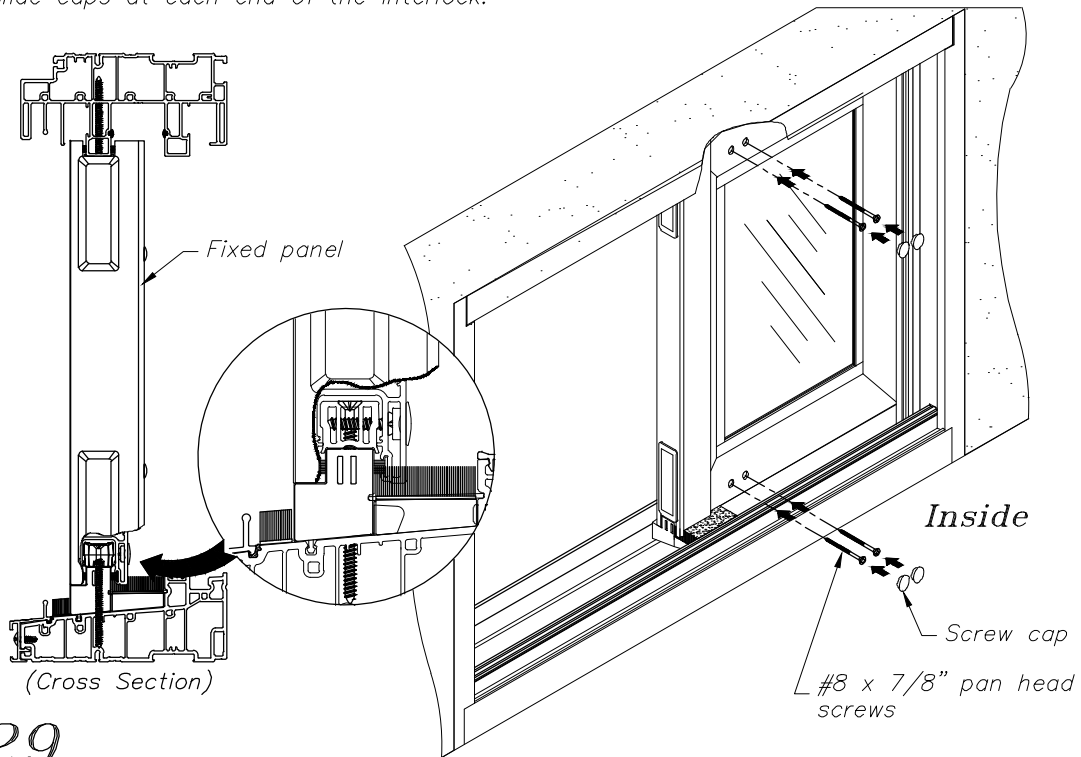
Fixed Panel Installation



(Cross Section)

28.

Insert the other foam plug at the base of the interlock of the fixed panel. Slide caps at each end of the interlock.

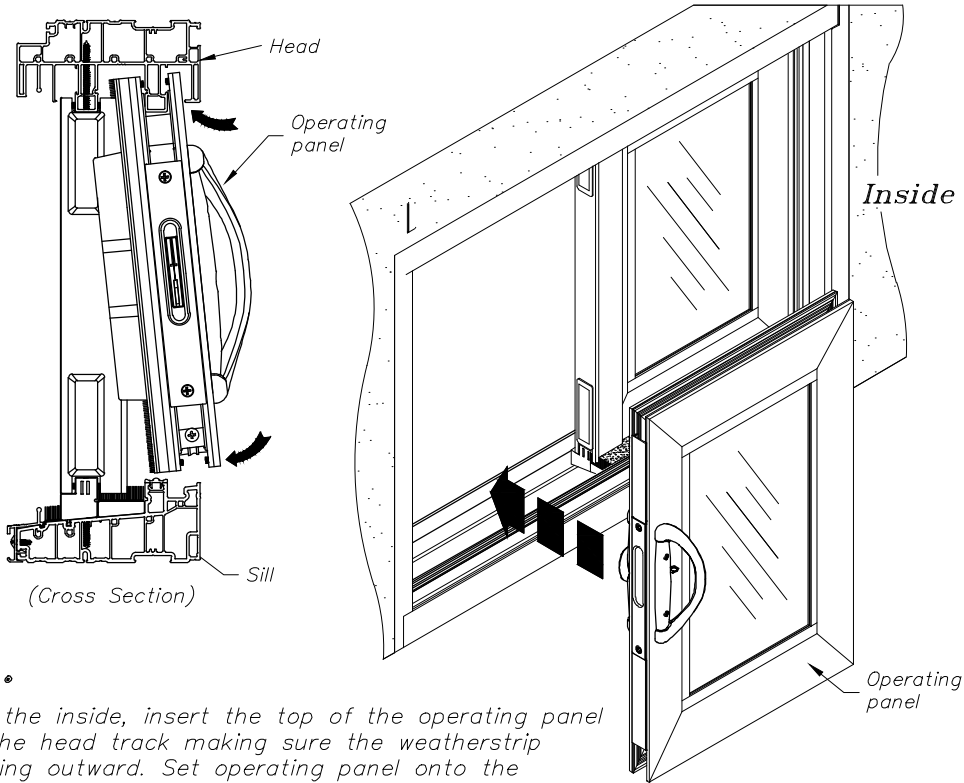


(Cross Section)

29.

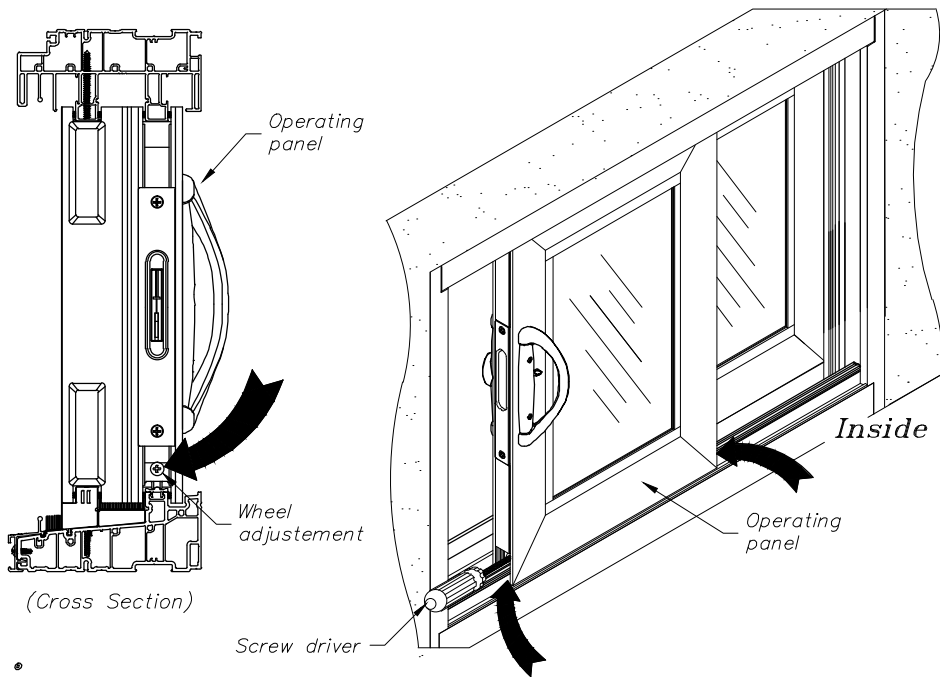
Install four (4) #8 x 7/8" pan head screws into the holes provided at the top and bottom of the horizontal panel rails. Cover each hole with the screw cap.

Operating Panel Installation



30.

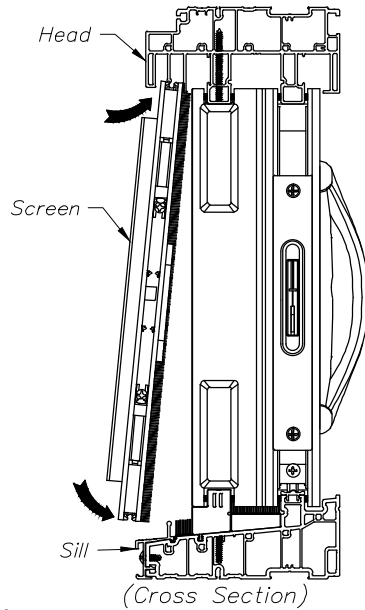
From the inside, insert the top of the operating panel into the head track making sure the weatherstrip is facing outward. Set operating panel onto the operating panel rail of the sill.



31.

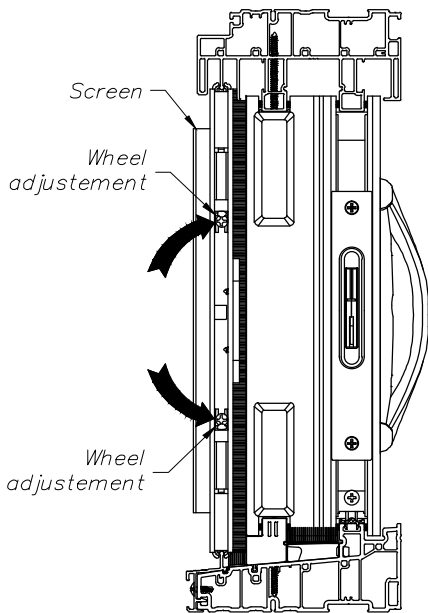
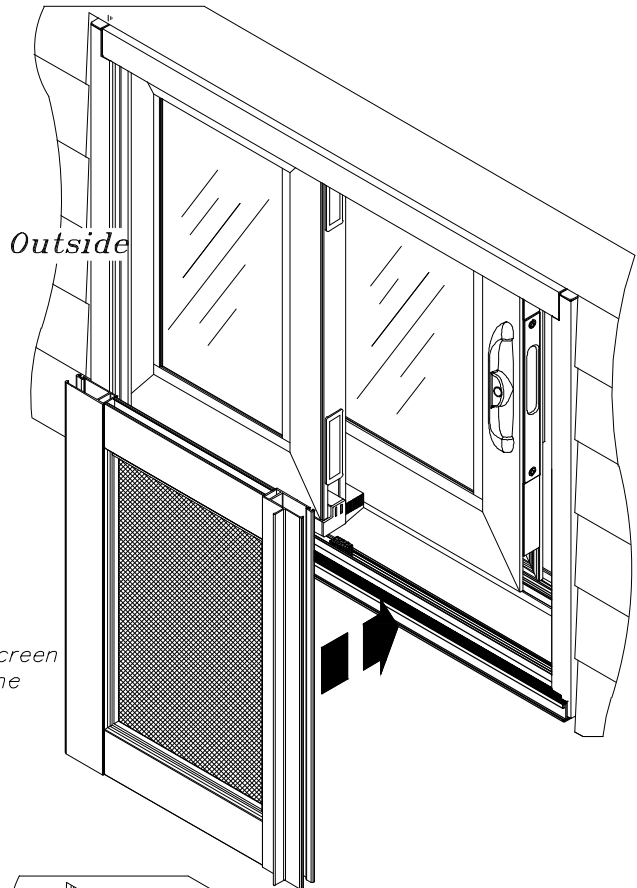
If necessary, adjust height and squareness of the operating panel with the adjustment screws from the wheels. (Clockwise to raise / Counter-clockwise to lower).

Screen Installation



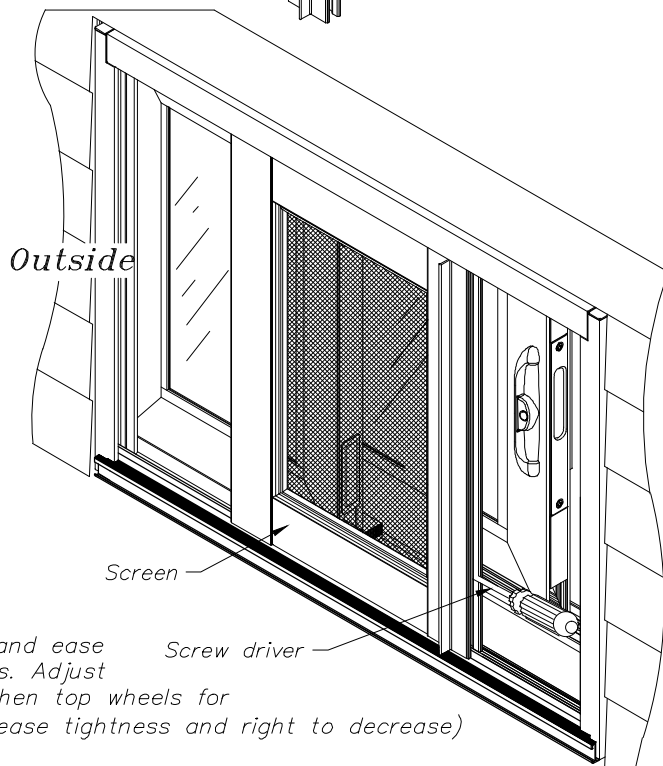
32.

From outside, insert the top of the screen in the head track making sure that the insect stopper felt is facing inward. Insert the bottom of the screen onto the rail of the outside sill cladding.

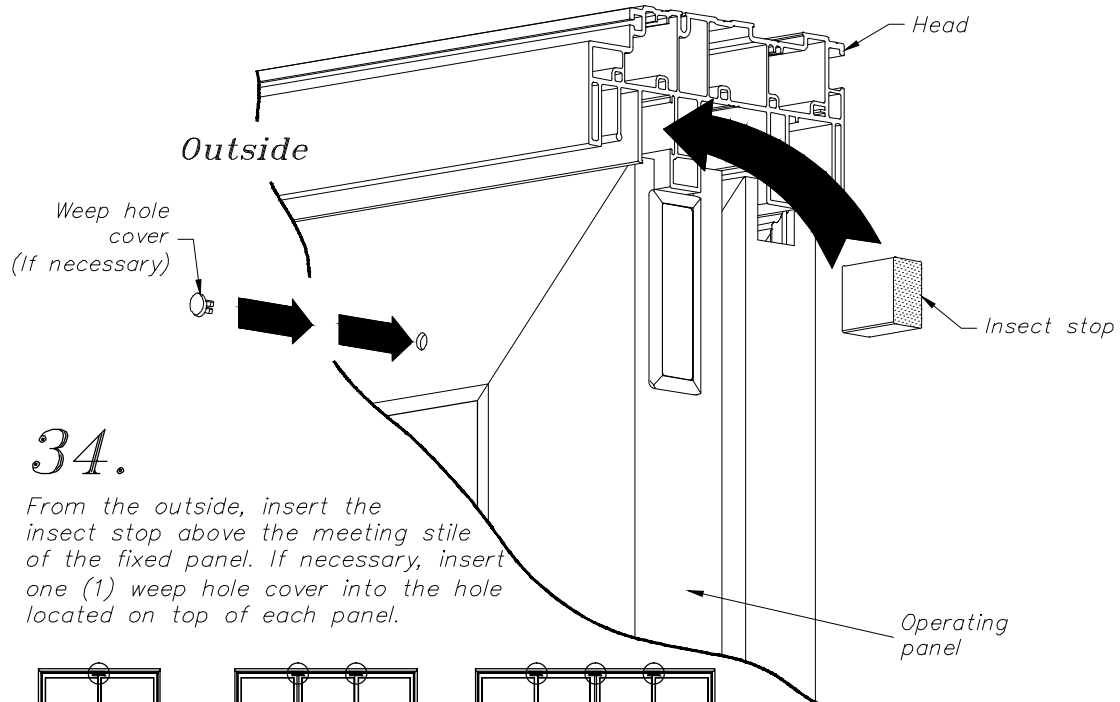


33.

If necessary, adjust for squareness and ease the operation with adjustment screws. Adjust bottom wheels for squareness and then top wheels for ease of operation. (Turn left to increase tightness and right to decrease)

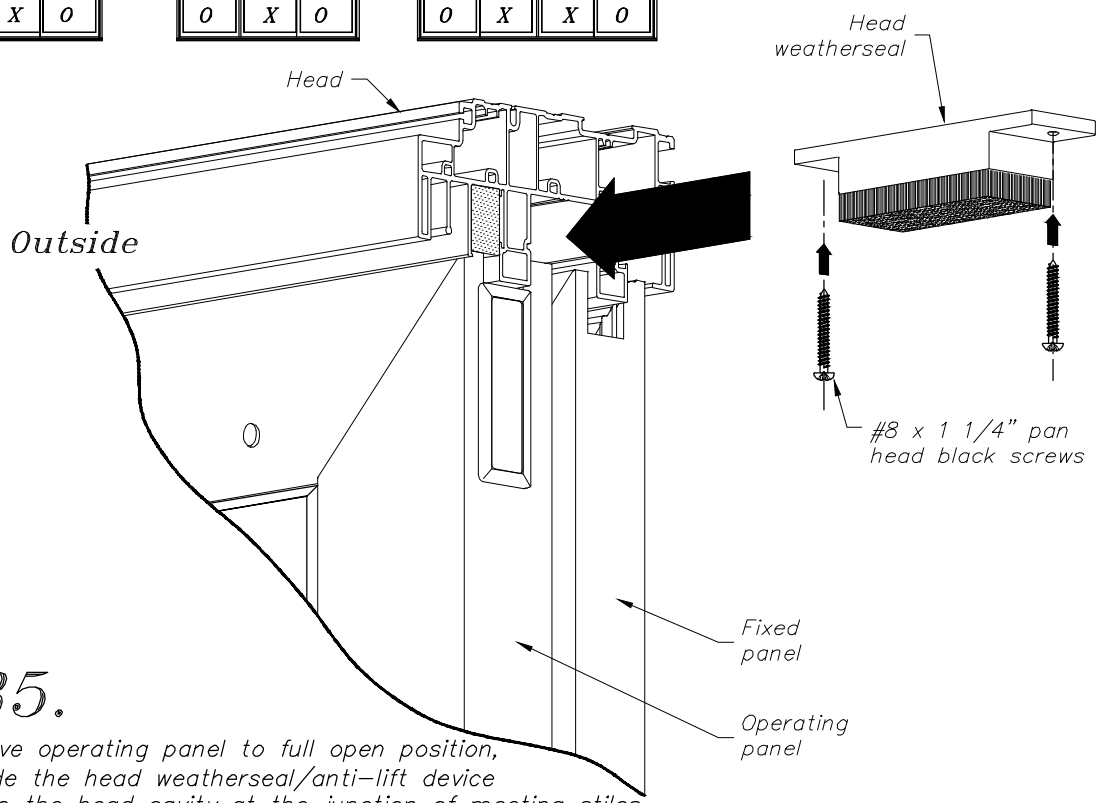
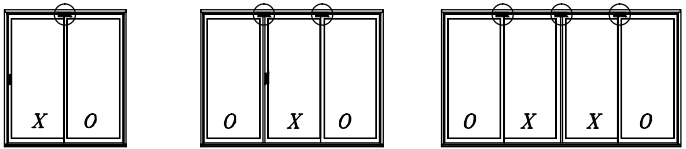


Head Weatherseal and Insect Stop Installation



34.

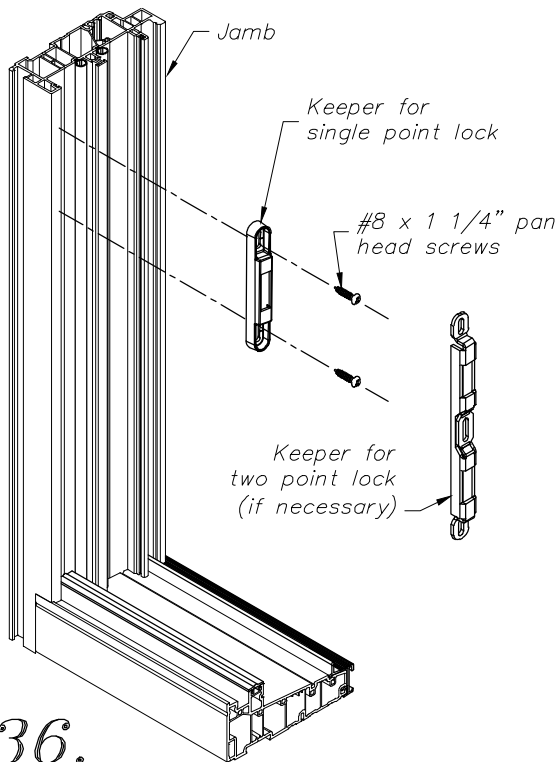
From the outside, insert the insect stop above the meeting stile of the fixed panel. If necessary, insert one (1) weep hole cover into the hole located on top of each panel.



35.

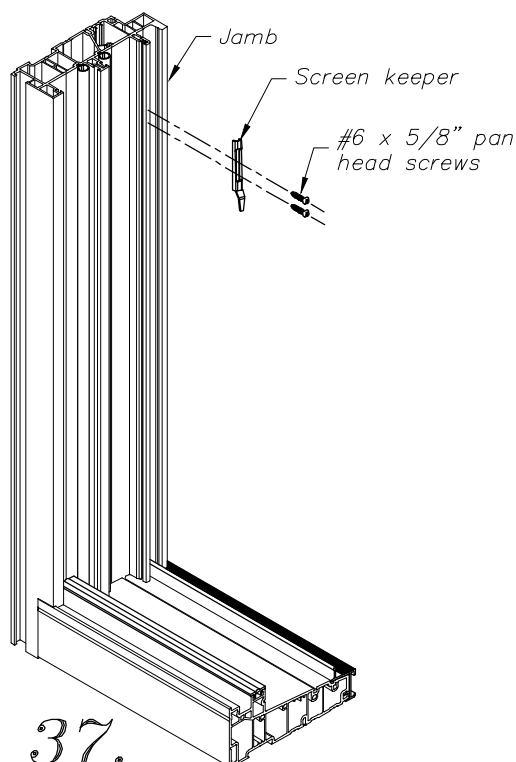
Move operating panel to full open position, slide the head weatherseal/anti-lift device into the head cavity at the junction of meeting stiles. Fasten head weatherseal with two (2) screws #8 x 1 1/4" pan head black screws.

Keeper and Sash Stopper Installation



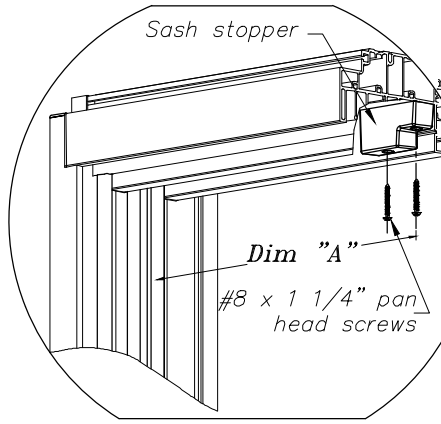
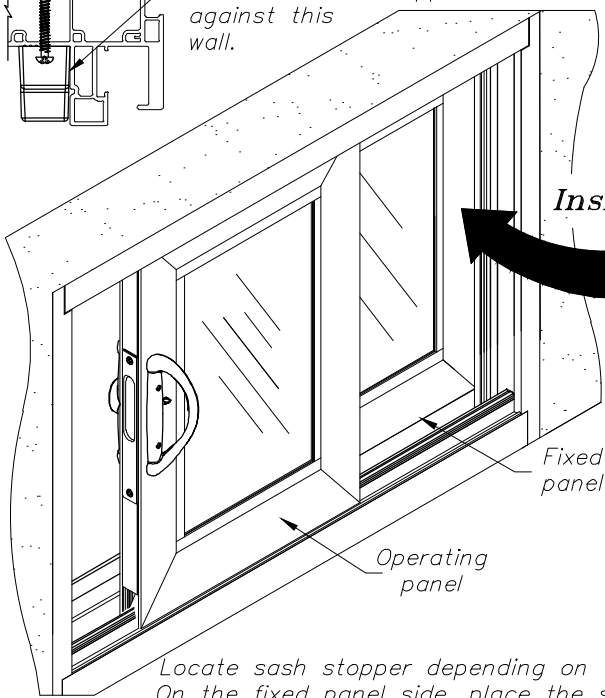
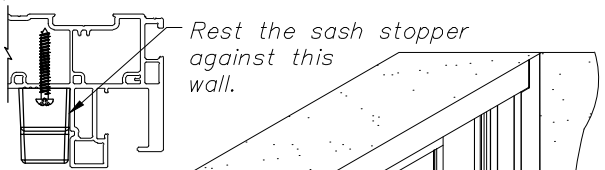
36.

Locate keeper and fix with #8 x 1 1/4" pan head black screws.



37.

Locate screen keeper and fix with two (2) #6 x 5/8" pan head screws.

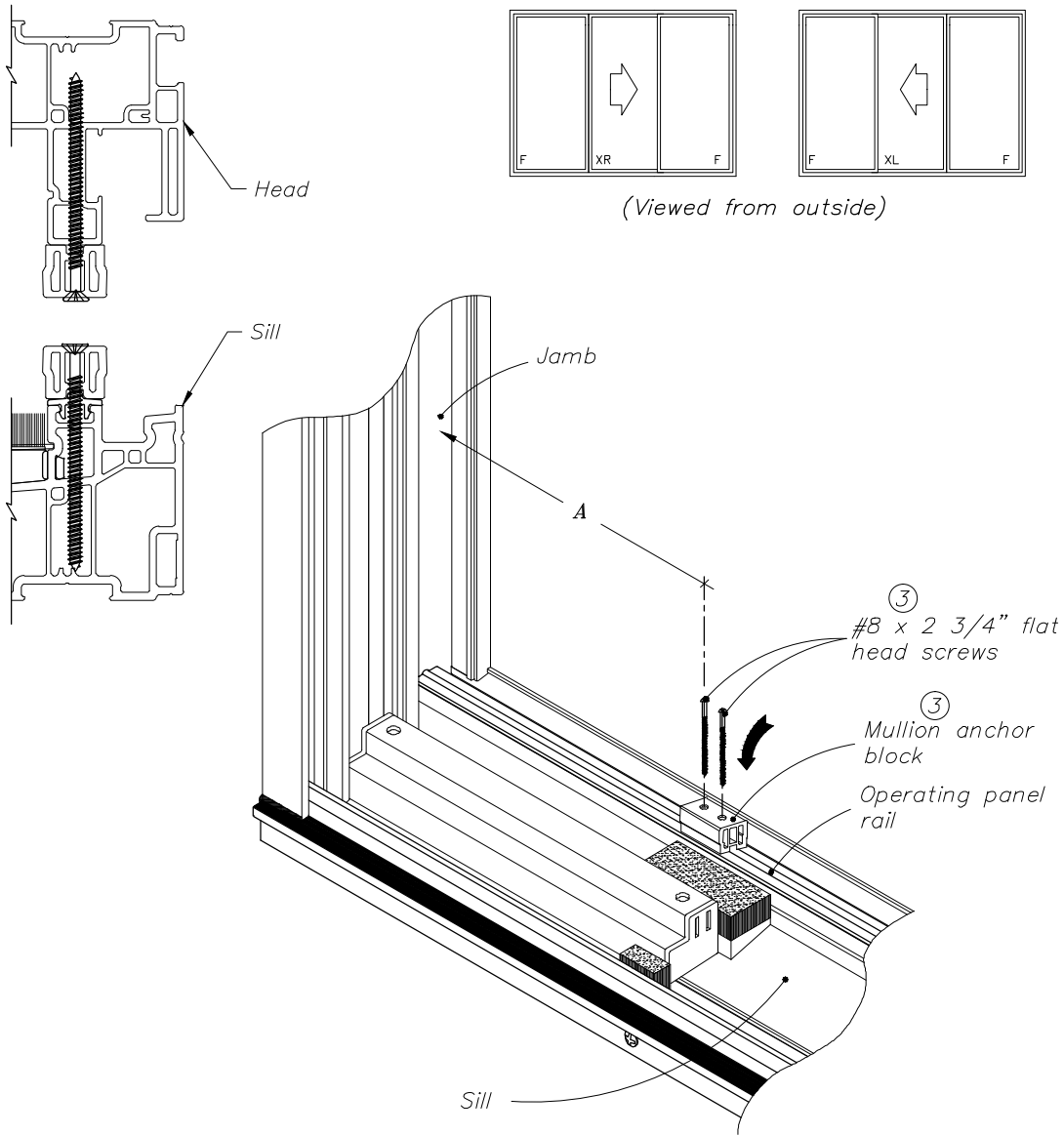


	Dim "A"
With exterior straight handle	2 3/4" [70 mm]
With exterior "C" handle (white or black)	4 1/4" [108 mm]
With exterior brass, black nickel and brushed chrome handle.	3 7/8" [98 mm]

38.

Locate sash stopper depending on type of handle chosen. (See table above) On the fixed panel side, place the sash stopper at the indicated place. Rest the sash stopper against the vertical wall in order to prevent an interference with the fixed panel. Fasten the sash stopper with (2) #8 x 1 1/4" pan head black screws.

Mullion Anchor Block Installation for Three (3) Panel Doors

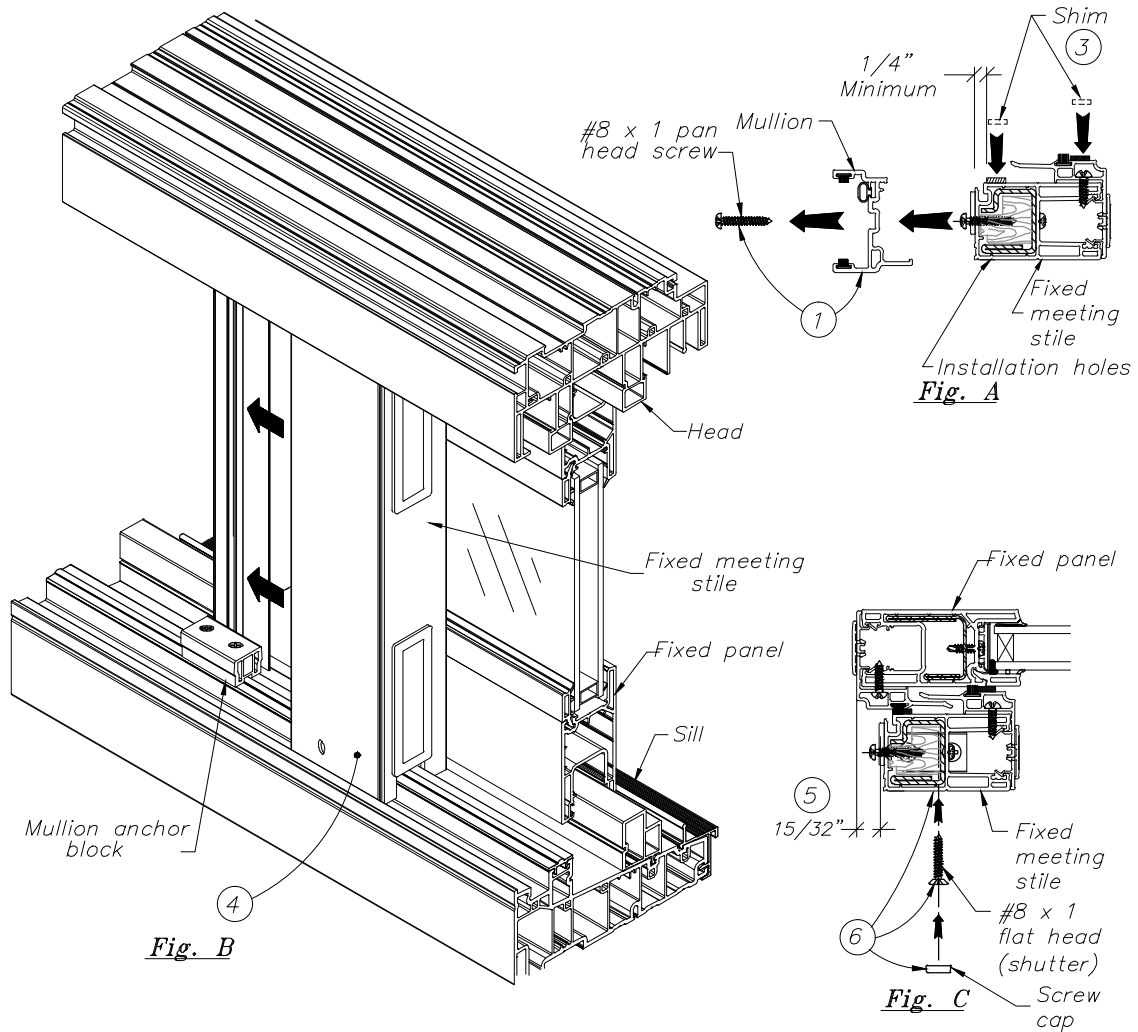


Door	Width	A	Formula
2700	106.243" [2698.6mm]	33.625" [854mm]	(Frame width / 3) - 1.789" [45.4mm]

39.

Assembly Sequence

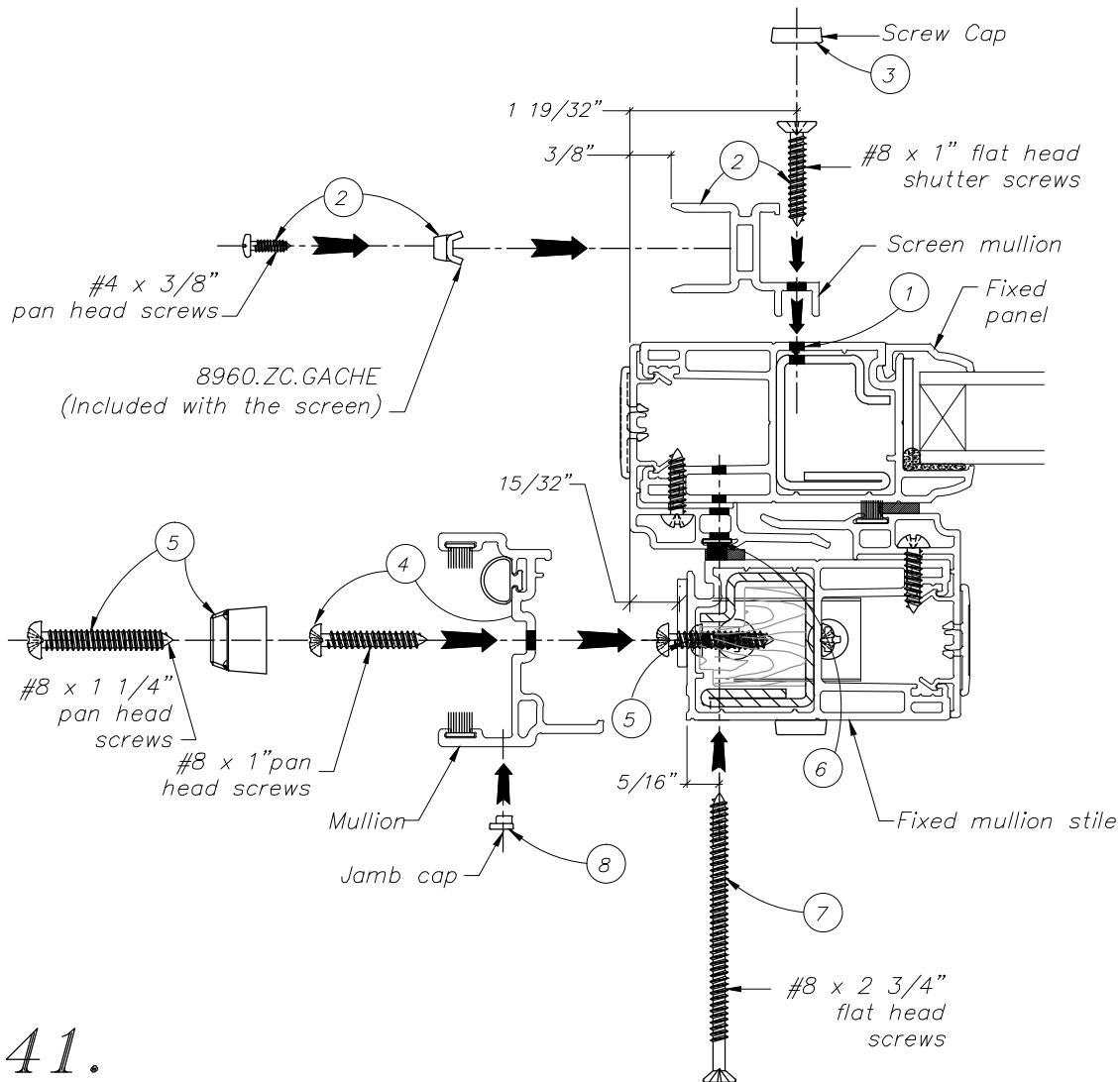
- 1- On the head track, locate mullion anchor block from the bottom of the left jamb track as shown (FXLF), or right jamb track (FXRF). (Use Dimension A).
- 2- On the sill, locate and drill two (2) 0.140" [3.6mm] diameter pilot holes through the operating panel rail.
- 3- Fix mullion anchor blocks to the head and sill, using two (2) #8 x 2 3/4" flat head screws.



40.

Assembly Sequence

- 1- Remove #8 x 1 pan head screws from fixed meeting stile and remove the mullion. (See Fig. A)
- 2- Machine both ends of mullion if required.
- 3- Stick shims under each of the four (4) installation holes on fixed meeting stile and three (3) along the weatherstrip, as indicated. (See Fig. A)
- 4- Slide fixed meeting stile on mullion anchor blocks. (See Fig. B)
- 5- Install fixed meeting stile in order to keep a distance of 15/32" as shown. (See Fig. C)
- 6- Fasten fixed meeting stile with two (2) #8 x 1 flat head shutter screws. Cover each screw with screw cap. (See Fig. C)

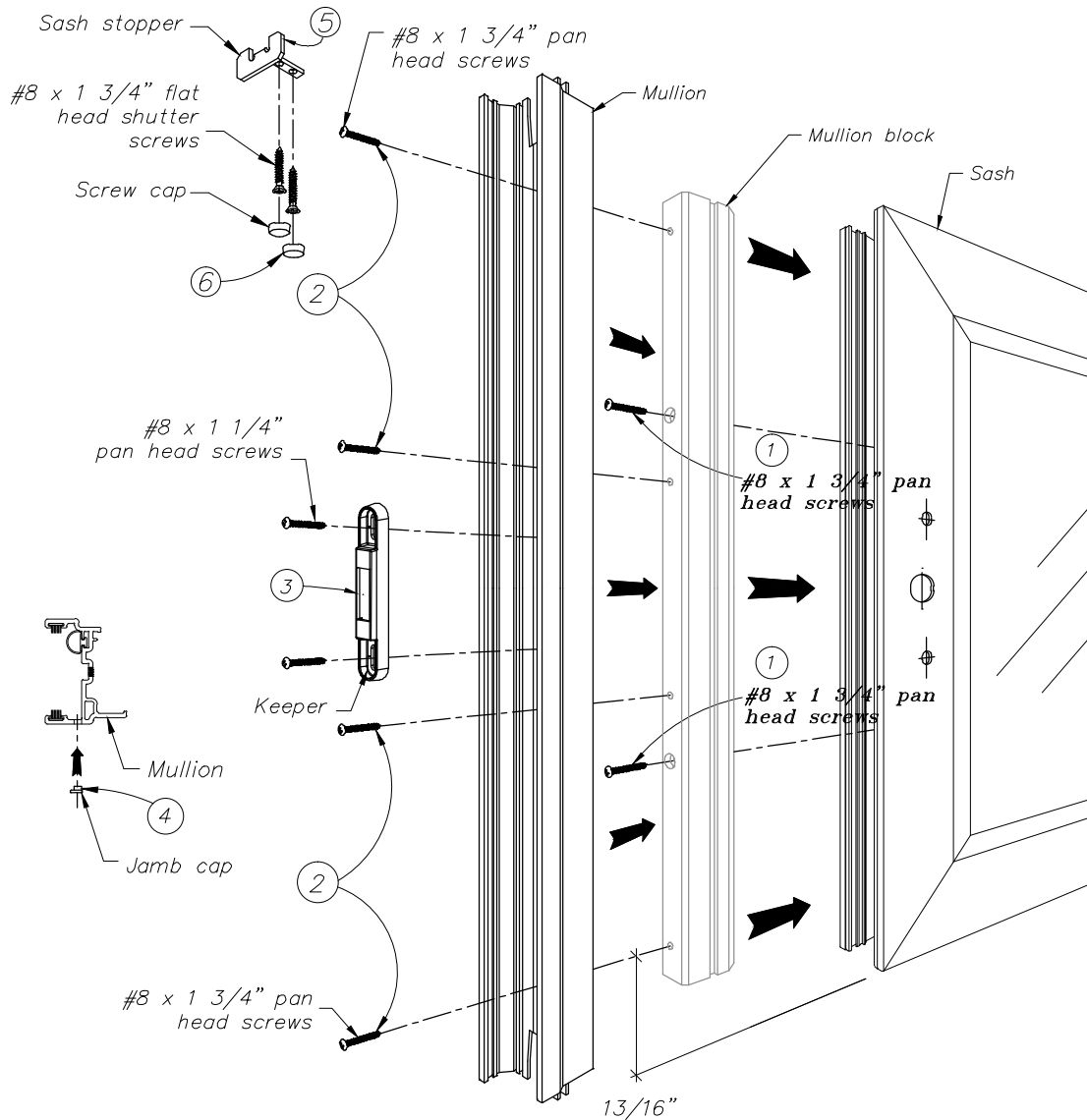


41.

Assembly Sequence

- 1- Using the screen mullion as a jig, drill four (4) holes with a No. 29 ($\phi 0.136$ " [3.5mm]) drill. (Respect the location indicated by the dimension).
- 2- Fasten screen mullion to fixed meeting stile using four (4) #8 x 1" flat head shutter screws and fasten the keeper to screen mullion with two (2) #4 x 3/8" pan head screws.
Important : When installing a screen keeper for a (3) sash door, never use the screws included with the keeper, since these are too long. Use screws #4 x 3/8" pan head screws (3/8" long) which are included with your (3) sash door hardware bag.
- 3- Cover each screw with a screw cap.
- 4- Fasten mullion to fixed meeting stile using four (4) #8 x 1" pan head screws.
- 5- Drill two (2) holes with a No. 29 ($\phi 0.136$ " [3.5mm]) drill and fasten the keeper with #8 x 1 1/4" pan head screws.
- 6- Using the fixed meeting stile as a jig, drill four (4) holes with a No. 29 ($\phi 0.136$ " [3.5mm]) drill into the fixed panel. (Respect the location indicated by the dimension).
- 7- Fasten fixed meeting stile with four (4) #8 x 2 3/4" flat head screws.
- 8- If you use a mortise lock, from the inside, stick a No. 8926 jamb cap in the opening for the keeper on mullion. (CAUTION: Too much PVC cement could damage PVC profiles).

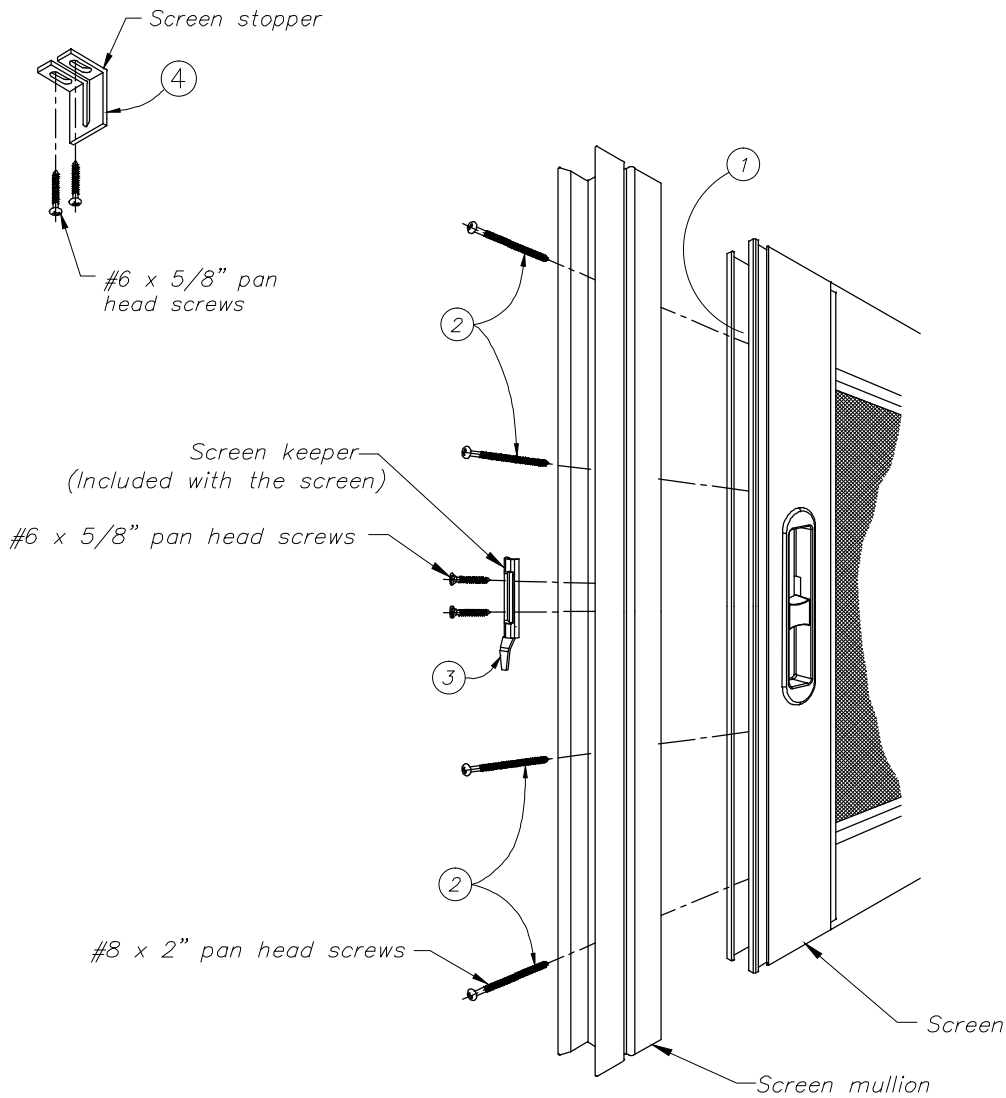
Mullion Assembly for Four (4) Panel Doors



42.

Assembly Sequence

- 1- Insert mullion block into the side stile cavity as shown. Fasten mullion block with two (2) #8 x 1 3/4" pan head screws in holes provided.
- 2- Install the mullion on the side stile using four (4) No. 9615.ZC.VIS08 screws. Make sure the longest leg is on the inside.
Note: It is important that the mullion be pre-machined.
- 3- Fix the keeper to the mullion with two (2) No. 8 x 1 1/4" pan head screws.
- 4- If you use a mortise lock, from the inside, stick a jamb cap in the opening for the keeper on mullion. (CAUTION: Too much cement could damage PVC profiles).
- 5- Install the sash stopper at the center of the head track using two (2) #8 x 1 3/4" flat head shutter screws
- 6- Cover each screw with a screw cap.

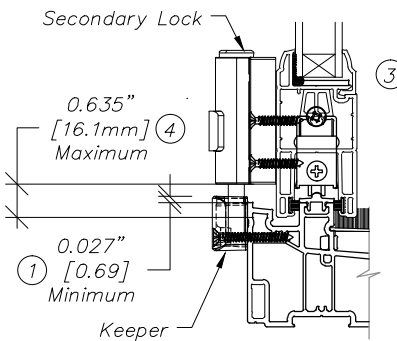
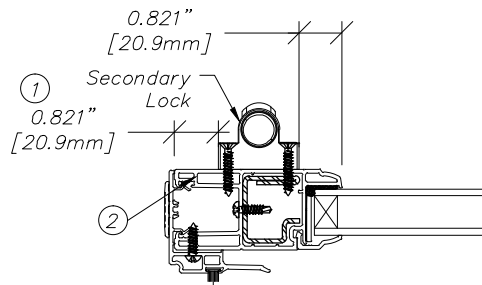
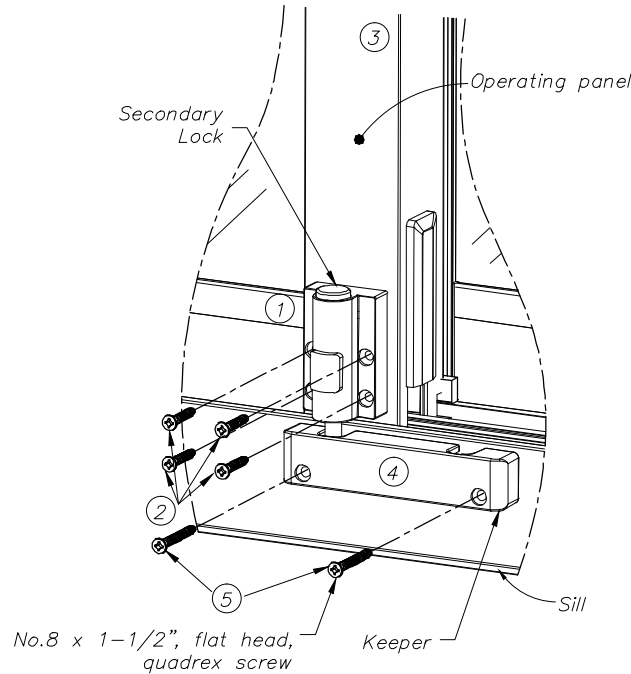


43.

Assembly Sequence

- 1- Using the screen mullion as a jig, drill four (4) holes with a drill No. 29 (0.136" [3.5mm])
- 2- Fix screen mullion using four (4) #8 x 2" pan head screws.
- 3- Fix screen keeper to screen mullion using two (2) #6 x 5/8" pan head screws.
- 4- Fix the screen stopper at the center of the head track using two (2) #6 x 5/8" pan head screws.

Secondary Lock and Keeper Installation



44.

Steps for Proper Assembly

- 1- Locate No. secondary lock on operating panel in the middle of meeting rail, making sure the height is as indicated on drawing.
- 2- Install No. secondary lock to operating panel meeting rail, using four (4) screws No.8 x 1", flat head.
Important : you must pre-drill two (2) 0.125" [3mm] diameter holes in the steel reinforcement before screwing the secondary lock. (mechanical sash only)
- 3- Make sure the operating panel is in a closed and locked position.
- 4- Lock secondary lock and position keeper on sill No. 7000 according to latch in the middle of first keeper hole and using a jig to make sure the height is as indicated on drawing.
- 5- Install No. keeper to No. 7000 sill, using two (2) screws No.8 x 1 1/2", flat head.
Note: Installation instructions are only given as a reference.
The use at a secondary lock is not a P.H. Tech recommendation in regards, to security.

**Welded Sash
with Outside
Glazing Bead**