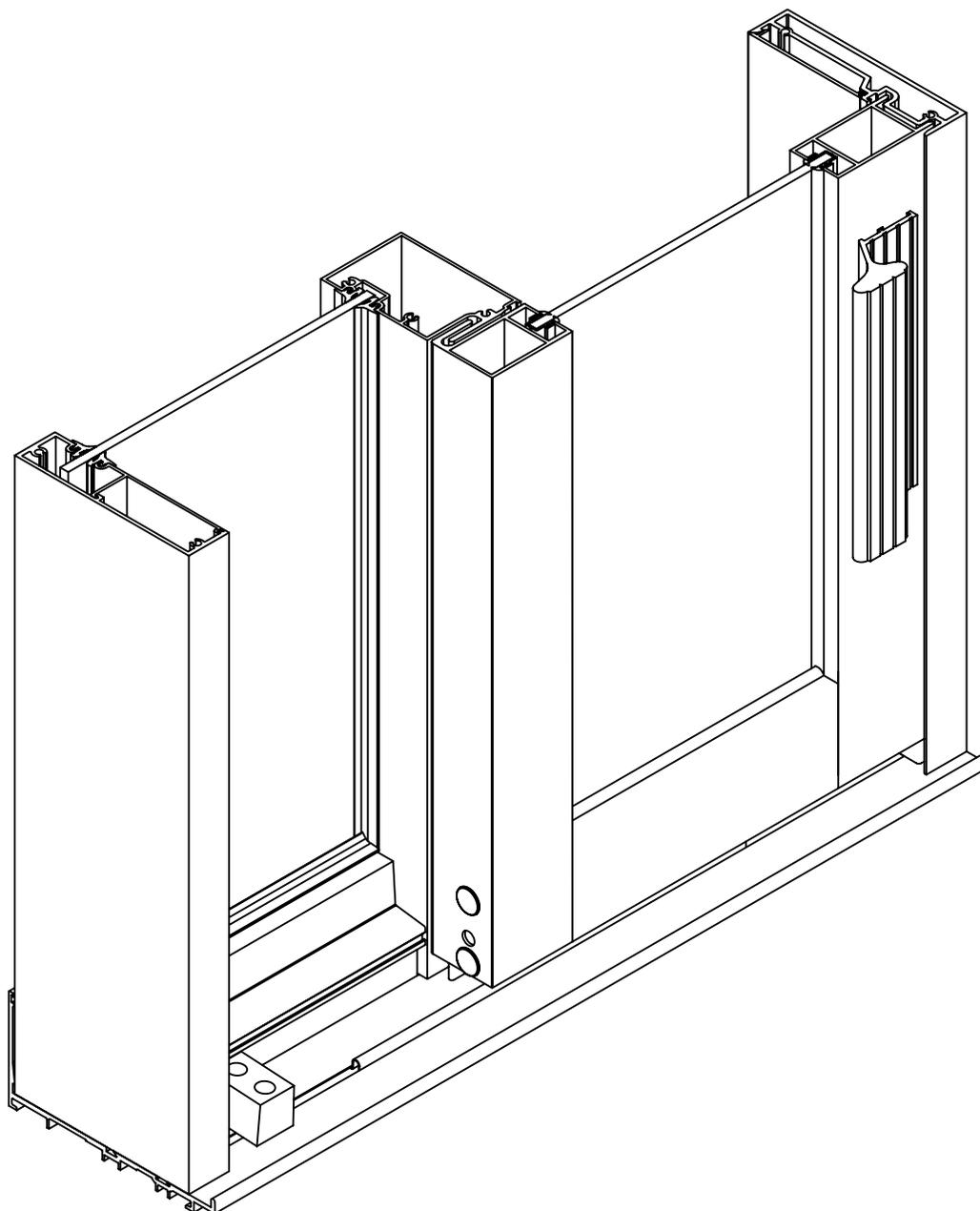


# HPS<sup>®</sup> SLIDING DOORS



# INSTALLATION INSTRUCTIONS



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# INSTALLATION INSTRUCTIONS CONTENTS

These instructions show the general installation sequence and procedure for typical installation. They supplement the shop details and notations on installation and glazing.

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II	5-8	PARTS IDENTIFICATION
III	9-10	GLASS SIZE FORMULAS
IV	11-13	FRAME ASSEMBLY
V	14-17	FRAME INSTALLATION
VI	18-21	GLAZING
VII	22-23	HARDWARE INSTALLATION
VIII	24-25	SLIDING PANEL INSTALLATION AND ADJUSTMENT
IX	26-33	SCREENS

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**HANDLING, STORING, AND PROTECTION OF ALUMINUM**

The material must be protected against damage. The following precautions are recommended to assure early acceptance of your products and workmanship.

- A. HANDLE CAREFULLY** - Don't drop from the truck. Stack with adequate separation so material will not rub together. Store off the ground. Protect against elements and other construction trades. Wear hand protection to prevent injury due to sharp edges of cut extrusions.
- B. KEEP MATERIAL AWAY FROM WATER, MUD AND SPRAY** - Prevent cement, plaster, or other materials from damaging the finish.
- C. PROTECT THE MATERIALS AFTER ERECTION** - Protect by wrapping with Kraft paper or by erecting Visqueen or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions and acid based materials used to clean masonry are very harmful to the finish and should be removed with water and mild soap IMMEDIATELY.

**GENERAL INSTALLATION NOTES**

The following practices are recommended for all installations:

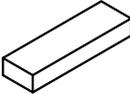
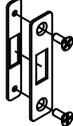
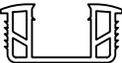
- A. CHECK SHOP DRAWINGS, INSTALLATION INSTRUCTIONS and GLAZING INSTRUCTIONS** to become thoroughly familiar with the project. The SHOP DRAWINGS take precedence and include specific details for the project. The INSTALLATION INSTRUCTIONS are of a general nature and cover most common conditions.
- B. All materials are to be INSTALLED PLUMB, LEVEL, AND TRUE.**
- C. All work should start from bench marks and/or column lines as established by the ARCHITECTURAL DRAWINGS and the GENERAL CONTRACTOR.** Check mullion spacing from both ends of masonry opening to prevent dimensional build-up of day light opening.
- D. Make certain that construction which will receive your materials is in accordance with the contract documents.** If not, notify the GENERAL CONTRACTOR IN WRITING and resolve differences before proceeding with your work.
- E. Isolate all aluminum to be placed directly in contact with uncured masonry or incompatible materials with a heavy coat of zinc chromate or bituminous paint.**
- F. Check all materials on arrival for quantity and be sure you have everything required to begin installation.**
- G. Sealants must be compatible with all materials with which they have contact, including other sealant surfaces.** Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, priming, tooling, adhesion, etc.
- H. FASTENING** - "Fastening" means any method of securing one part to another or to adjacent materials. These instructions specify only those fasteners used within the system. Due to varying perimeter conditions and job performance requirements, anchor fasteners are not specified in these instructions. For anchor fastening, refer to the Shop Drawings or consult the fastener supplier.
- I. CHECK OPENINGS** - Make certain that the opening which will receive your materials is in accordance with the contract documents. If not, notify the General Contractor in writing and resolve differences before proceeding with your work.
- J. BUILDING CODES** - Glass and glazing codes governing the design and use of products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility for these design considerations. It is the responsibility of the owner, specifier, architect, general contractor and the installer to make these selections in strict conformance with all applicable codes.
- K. EXPANSION JOINTS** - Expansion joints and perimeter seals shown in these instructions and in the shop drawings are shown at normal size. Actual dimensions may vary due to perimeter conditions and /or difference in metal temperature between the time of fabrication and time of installation. For example, a 12 foot unrestrained length of aluminum extrusion can expand or contract 3/32" over a 50° F temperature change. Any movement potential should be accounted for at the time of installation.

- L. FIELD TESTING** - It is recommended that a Water Hose Test be conducted once a sufficient portion of the framing is installed, glazed and caulked to ensure proper installation. The Water Hose Test shall be conducted in accordance with AAMA 501.2. In addition, larger projects should have periodic Water Hose Tests as additional precautionary measures.
- M. GASKET INVENTORY ROTATION** - These high quality rubber extrusions are coated with silicone lubricant. Silicone will dry over time leaving a white "chalky" residue. Please rotate your stock "FIRST IN - FIRST OUT". If the rubber becomes dry, you may use water ONE TIME to reconstitute the silicone, after that, use a soap water solution.

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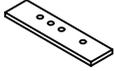
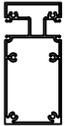
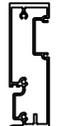
PART NO.	DESCRIPTION	ILLUSTRATION	PART NO.	DESCRIPTION	ILLUSTRATION
027-073	FIXED PANEL SETTING BLOCK 1" INFILL		028-954	BARREL NUT	
027-074	STANDARD PUSH ON GASKET		089-426	STRIKE PLATE ASSEMBLY	
027-076	LIGHT PUSH ON GASKET		127-097	OPERABLE PANEL SETTING BLOCK (1/4" & 1" INFILLS)	
027-077	HEAVY PUSH ON GASKET		128-107	TRACK FILLER & SCREEN TRACK FASTENER #12-24 x 3/4" PFHTCS STN. STL.	
027-084	SIDE BLOCK		128-271	BUMPER FASTENER #12 x 5/8" PPHTFS STAINLESS STEEL	
027-088	HEAD & SILL TRACK EXTERIOR PILE WEATHERING		128-386	FRAME AND PANEL FASTENER #12 x 2" HWHTFS STAINLESS STEEL	
027-110	PANEL OPENING WEATHERING		128-403	#12-24 x 9/16" PFHMS STAINLESS STEEL	
027-209	MARINE GLAZING GASKET FOR 3/8" INFILL *		128-497	PULL HANDLE #8-32 x 1-1/2" PPHMS STAINLESS STEEL	
027-210	MARINE GLAZING GASKET FOR 5/8" INFILL *		162-021	LOCK JAMB FILLER	
027-579	HEAD AND SILL TRACK INTERIOR WEATHERING		420-460	HOLE PLUG	
027-804	FIXED PANEL SETTING BLOCK 1/4" INFILL		590-402	CORNER REINFORCING PLATE FOR OXXO MEETING STILE	
027-937	MARINE GLAZING GASKET FOR 9/16" INFILL *		590-403	CORNER REINFORCING PLATE FOR OX, XO, OXO, OXXO INTERLOCK STILE	

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PART NO.	DESCRIPTION	ILLUSTRATION	PART NO.	DESCRIPTION	ILLUSTRATION
590-405	ANTI-BLOWOUT CLIP REINFORCING PLATE		591-018	MEETING LATCH STILE 1/4" INFILL	
590-411	TANDEM WHEEL ASSEMBLY		591-019	CONTINUOUS HANDLE FOR MEETING STILES	
590-412	INTERLOCK BUMPER		591-020	LOCK STILE 1/4" INFILL	
590-426	GLASS STOP FOR 1/4", 9/16", 1" INFILLS		591-023	SILL TRACK	
591-004	GLASS STOP FOR 1/4", 9/16", 1" INFILLS		591-024	FIXED MULLION 1/4" INFILL	
591-010	FIXED INTERLOCK 1/4" INFILL		591-025	FIXED MULLION 1" INFILL	
591-011	HEAVY WEIGHT FIXED INTERLOCK 1/4" INFILL		591-030	FIXED INTERLOCK 1" INFILL	
591-012	LOCK STILE MULLION 1/4" INFILL		591-031	HEAVY WEIGHT FIXED INTERLOCK 1" INFILL	
591-013	HEAD RAIL 1/4" INFILL		591-032	LOCK STILE MULLION 1" INFILL	
591-014	SILL RAIL 1/4" INFILL		591-033	HEAD RAIL 9/16" INFILL AND 1" INFILL	
591-015	INTERLOCK STILE 1/4" INFILL		591-034	SILL RAIL 9/16" INFILL AND 1" INFILL	
591-017	MEETING LOCK STILE 1/4" INFILL		591-035	INTERLOCK STILE 9/16" INFILL AND 1" INFILL	

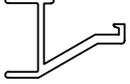
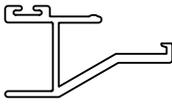
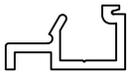
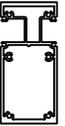
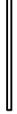
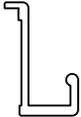
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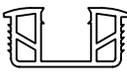
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PART NO.	DESCRIPTION	ILLUSTRATION	PART NO.	DESCRIPTION	ILLUSTRATION
591-037	MEETING LOCK STILE 9/16" INFILL AND 1" INFILL		591-066	FIXED LITE TRACK FILLER 1/4" INFILL	
591-038	MEETING LATCH STILE 9/16" INFILL AND 1" INFILL		591-067	FIXED LITE TRACK FILLER 9/16" INFILL	
591-039	LOCK STILE 9/16" INFILL AND 1" INFILL		591-068	FIXED LITE TRACK FILLER 1" INFILL	
591-046	SCREEN CLOSURE, JAMB		591-070	LOCK JAMB	
591-047	SCREEN CLOSURE, MULLION		591-071	FIXED JAMB	
591-048	EXTERIOR SCREEN ADAPTER		591-072	FIXED JAMB GLASS STOP (1/4" INFILL)	
591-049	INTERIOR SCREEN ADAPTER		591-073	FIXED JAMB GLASS STOP (9/16" INFILL)	
591-060	FIXED INTERLOCK 9/16" INFILL		591-074	FIXED JAMB GLASS STOP (1" INFILL)	
591-061	HEAVY WEIGHT FIXED INTERLOCK 9/16" INFILL		591-080	SILL TRACK FILLER	
591-062	LOCK STILE MULLION 9/16" INFILL		591-401	FIXED INTERLOCK STEEL REINFORCING	
591-063	FIXED MULLION 9/16" INFILL		591-402	LOCK STILE MULLION STEEL REINFORCING	
591-065	INTERIOR SCREEN HORIZONTAL TRACK		591-406	ANTI-BLOWOUT SILL CLIP	

PART NO.	DESCRIPTION	ILLUSTRATION	PART NO.	DESCRIPTION	ILLUSTRATION
591-409	ANTI-BLOWOUT HEAD CLIP		592-001	HEAD TRACK	
591-412	INTERIOR BLANK PULL		592-005	HEAD TRACK CAP	
591-415	INTERIOR EXTRUDED PULL WITH THUMBTURN		592-027	SILL TRACK CAP	
591-416	EXTERIOR EXTRUDED PULL WITH LOCK CYLINDER		904-252	PULL HANDLE FASTENER #10-24 x 1-1/2" PPHMS STN STL	
591-417	EXTERIOR BLANK EXTRUDED PULL		911-347	PANEL BUMPER	
591-422	EXTERIOR SCREEN, OX & OXO-L		911-581	STAINLESS STEEL LOCK	
591-423	EXTERIOR SCREEN, XO & OXO-R		912-256	EXTERIOR BLANK FLUSH PULL	
591-426	INTERIOR SCREEN, OX & OXO-L		925-327	MARINE GLAZING GASKET 1/4" INFILL *	
591-427	INTERIOR SCREEN, XO & OXO-R		925-328	MARINE GLAZING GASKET 1/2" INFILL *	
591-428	EXTERIOR SCREEN, OXOXO		925-393	STAINLESS STEEL TRACK	
591-429	INTERIOR SCREEN, OXOXO		925-464	MARINE GLAZING GASKET 5/16" INFILL *	
591-440	END DAM		925-577	MARINE GLAZING GASKET 1" INFILL *	

\* - Glass Thicknesses listed in these instructions are for nominal thickness. Actual glass thickness, especially for Laminated Glass, varies widely due to many factors. Verify the actual glass thickness with the glass manufacturer before ordering gasket to ensure the proper gasket is ordered.

**GLASS HEIGHT FORMULAS:** (FOR ALL CONFIGURATIONS)

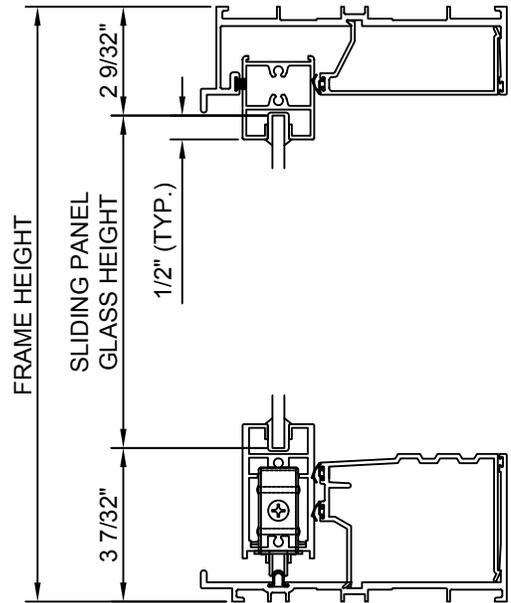
**NOTES:**

1. GLASS SIZE FORMULAS ARE BASED ON EQUAL DAYLIGHT OPENING WIDTHS.
2. THE SLIDING PANEL GLASS SIZE IS DIFFERENT THAN THE FIXED GLASS SIZE.

**SLIDING PANEL**

(FOR ALL CONFIGURATIONS)

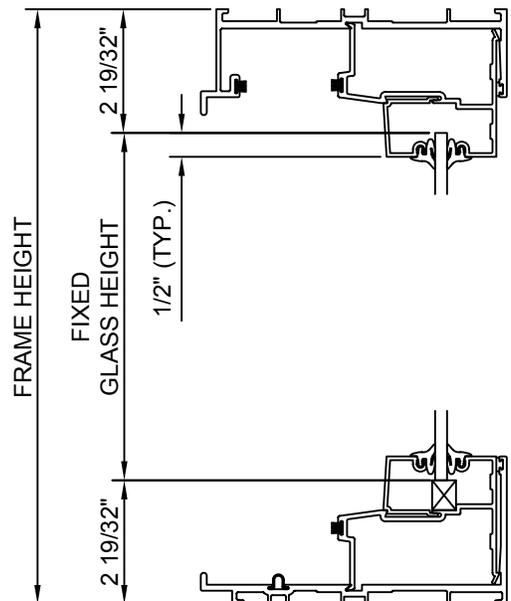
$$\text{GLASS HEIGHT} = \text{FRAME HEIGHT} \text{ MINUS } 5 \frac{1}{2}''$$



**FIXED GLASS**

(FOR ALL CONFIGURATIONS)

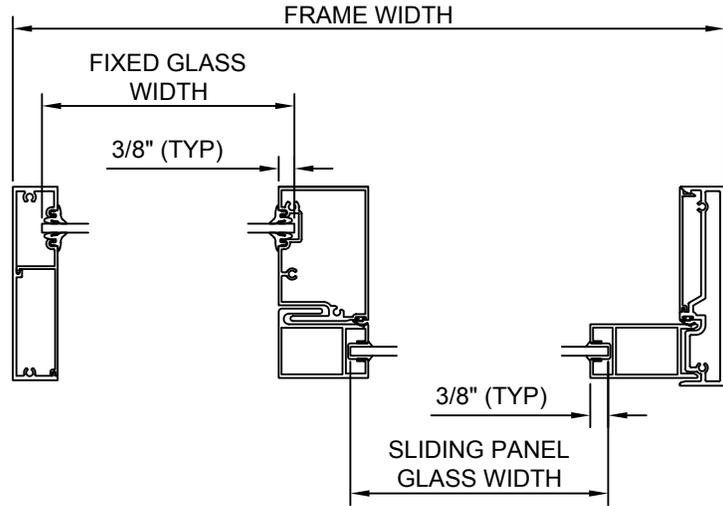
$$\text{GLASS HEIGHT} = \text{FRAME HEIGHT} \text{ MINUS } 5 \frac{3}{16}''$$



**OX AND XO**

$$\text{SLIDING PANEL GLASS WIDTH} = \left( \frac{\text{FRAME WIDTH MINUS } 7 \frac{1}{2}''}{2} \right) + 1$$

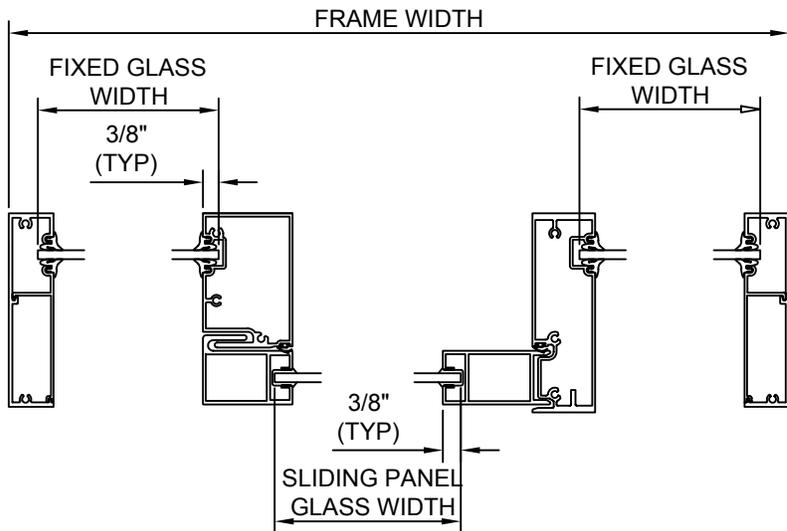
$$\text{FIXED GLASS WIDTH} = \left( \frac{\text{FRAME WIDTH MINUS } 7 \frac{1}{2}''}{2} \right) + \frac{7}{8}$$



**OXO**

$$\text{SLIDING PANEL GLASS WIDTH} = \left( \frac{\text{FRAME WIDTH MINUS } 9 \frac{1}{4}''}{3} \right) + 1$$

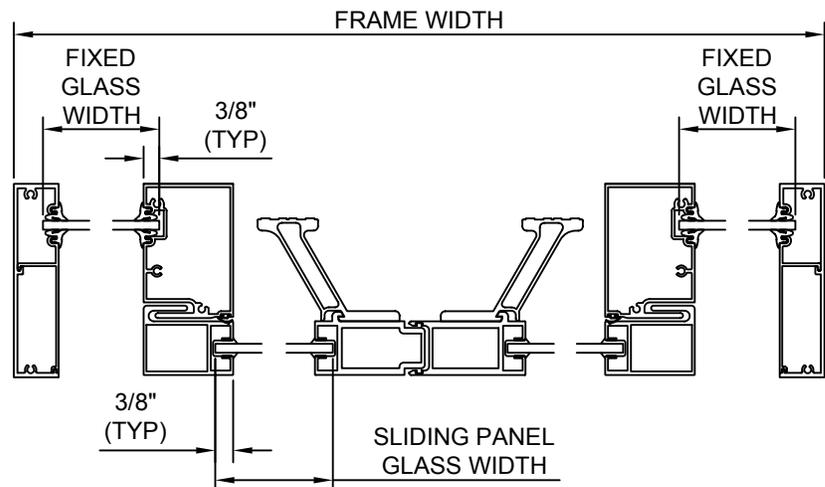
$$\text{FIXED GLASS WIDTH} = \left( \frac{\text{FRAME WIDTH MINUS } 9 \frac{1}{4}''}{3} \right) + \frac{7}{8}$$



**OX XO**

$$\text{SLIDING PANEL GLASS WIDTH} = \left( \frac{\text{FRAME WIDTH MINUS } 13 \frac{3}{8}''}{4} \right) + 1$$

$$\text{FIXED GLASS WIDTH} = \left( \frac{\text{FRAME WIDTH MINUS } 13 \frac{3}{8}''}{4} \right) + \frac{7}{8}$$



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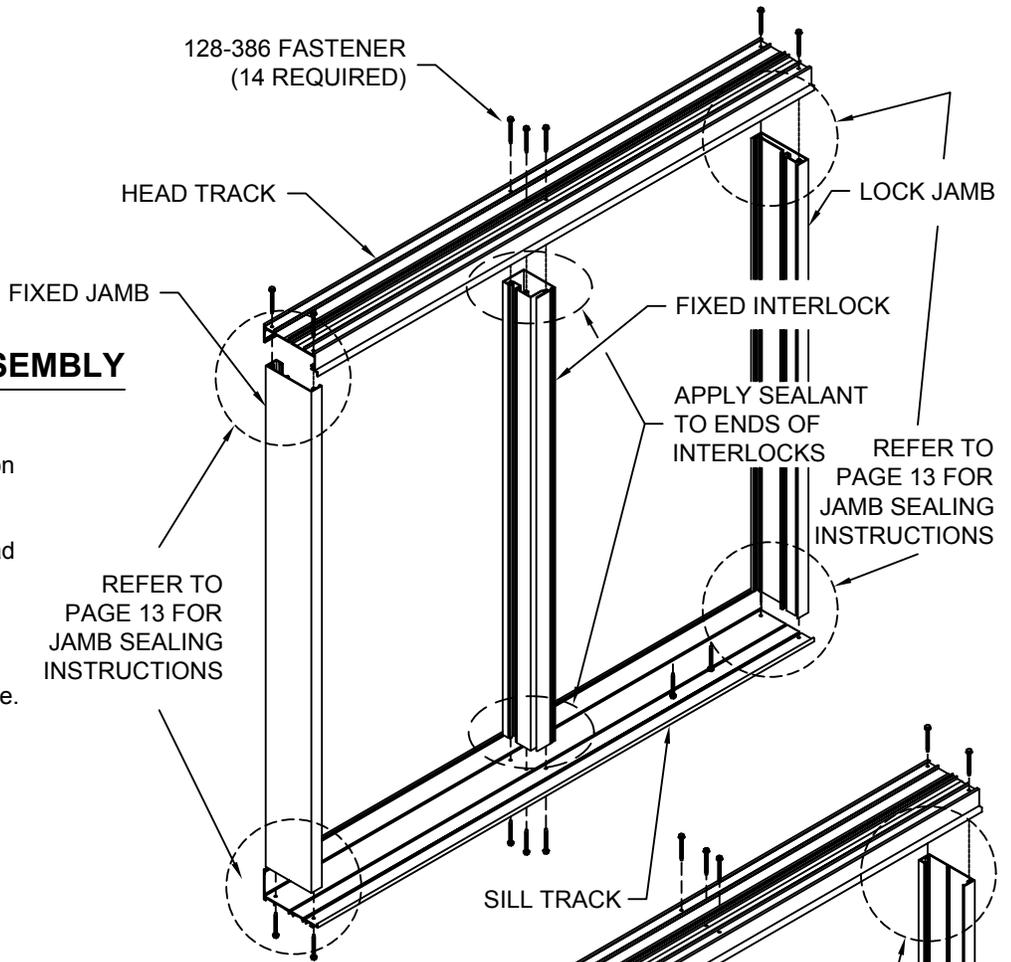
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**NOTE:**

**1/4" INFILL EXTRUSIONS AND PARTS ARE USED FOR ALL ILLUSTRATIONS IN THESE INSTRUCTIONS.**

**OX AND XO FRAME ASSEMBLY**

1. Identify and layout all frame parts as shown in the parts identification section.
2. OX AND XO frames require a head track, sill track, fixed jamb, lock jamb and fixed interlock.
3. Fourteen 128-386 fasteners are required for assembly of the frame.

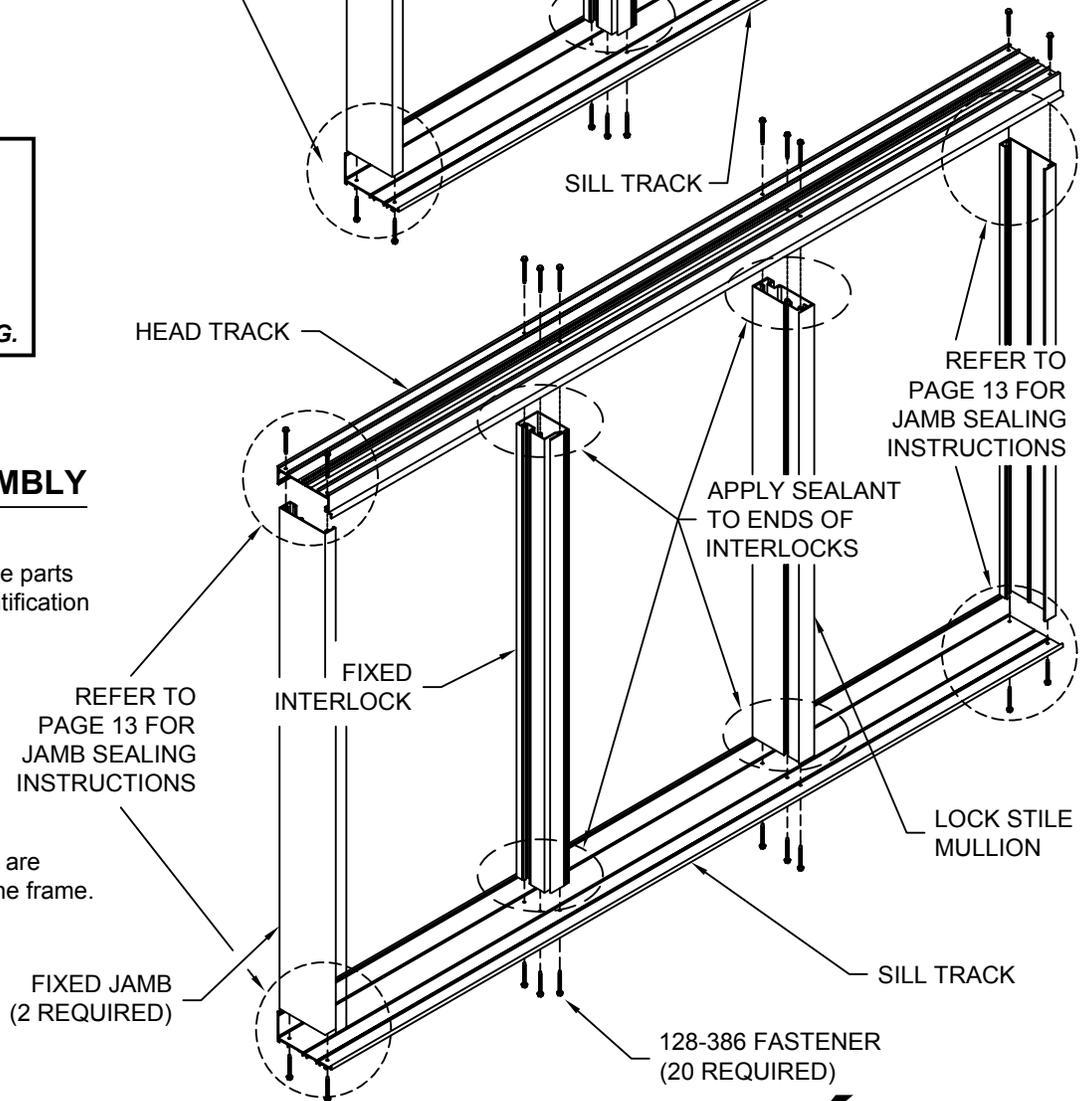


**NOTE:**

**THE FIXED INTERLOCK SHOULD BE ORIENTED SO THAT THE 27-110 WEATHERING IS ADJACENT TO THE SLIDING PANEL OPENING.**

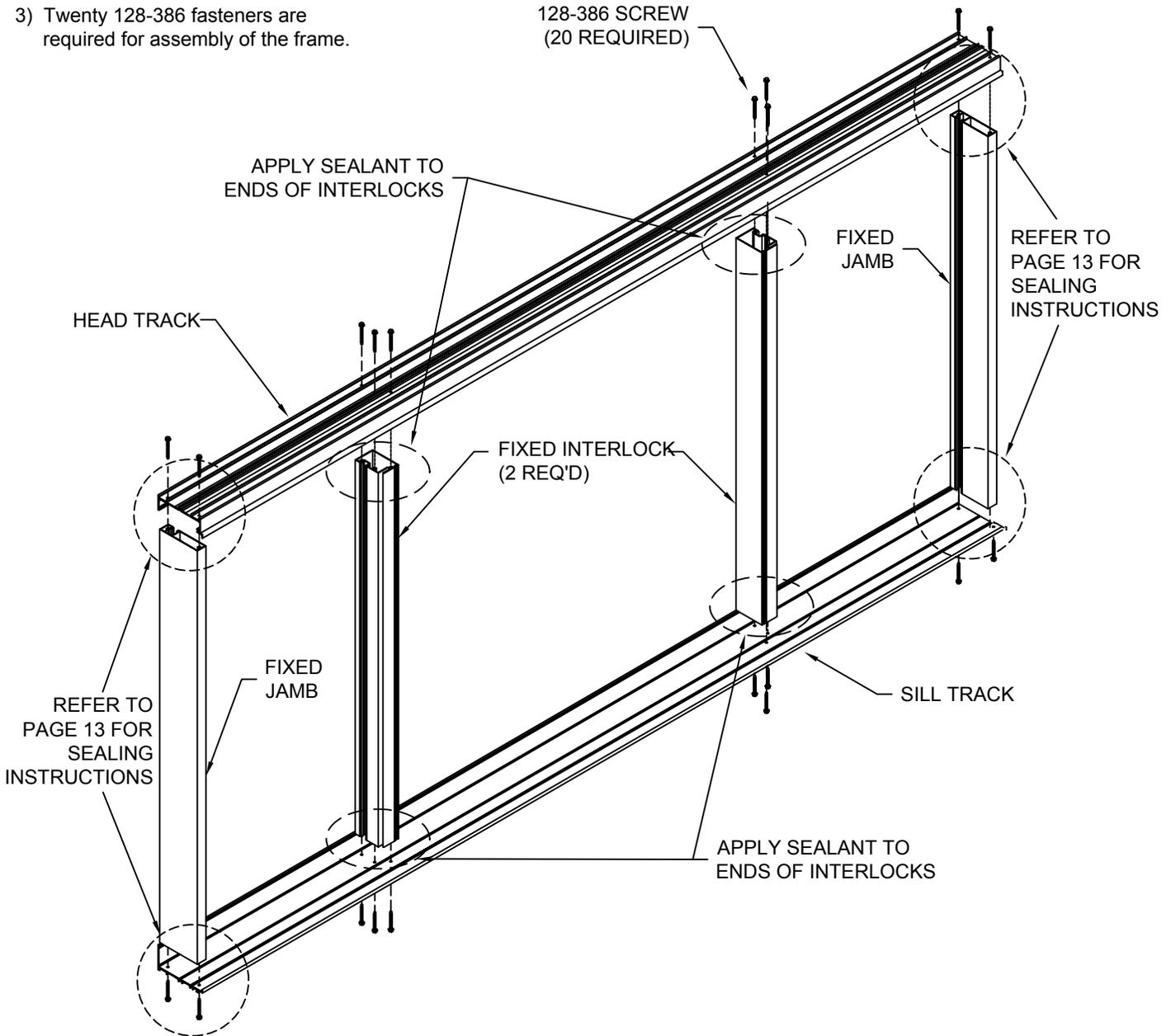
**OXO FRAME ASSEMBLY**

1. Identify and layout all frame parts as shown in the parts identification section.
2. OXO frames require a head track, sill track, (2) fixed jambs, fixed interlock and lock stile mullion.
3. Twenty 128-386 fasteners are required for assembly of the frame.



**OXXO FRAME ASSEMBLY**

- 1) Identify and layout all frame parts as shown in the parts identification section.
- 2) OXXO frames require a head track, sill track, (2) fixed jambs and (2) fixed interlocks.
- 3) Twenty 128-386 fasteners are required for assembly of the frame.



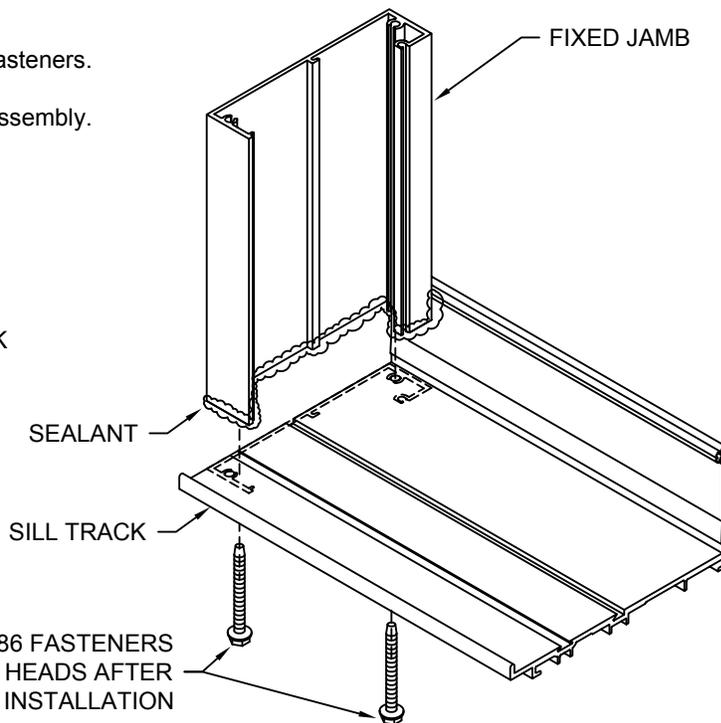
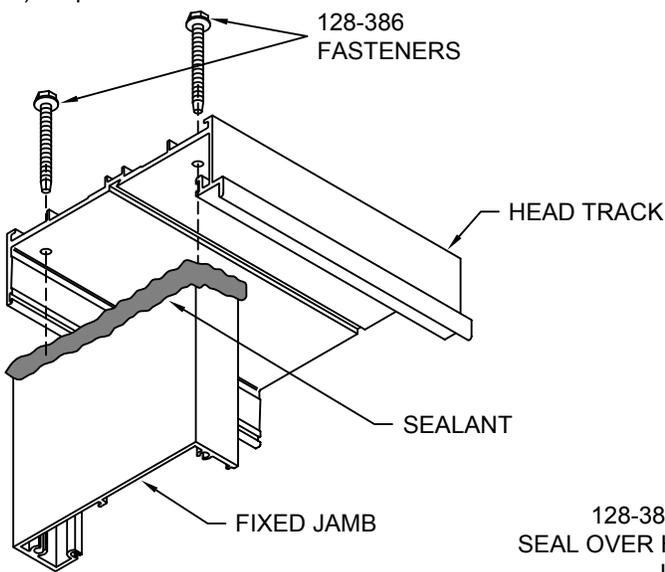
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**JAMB ASSEMBLY**

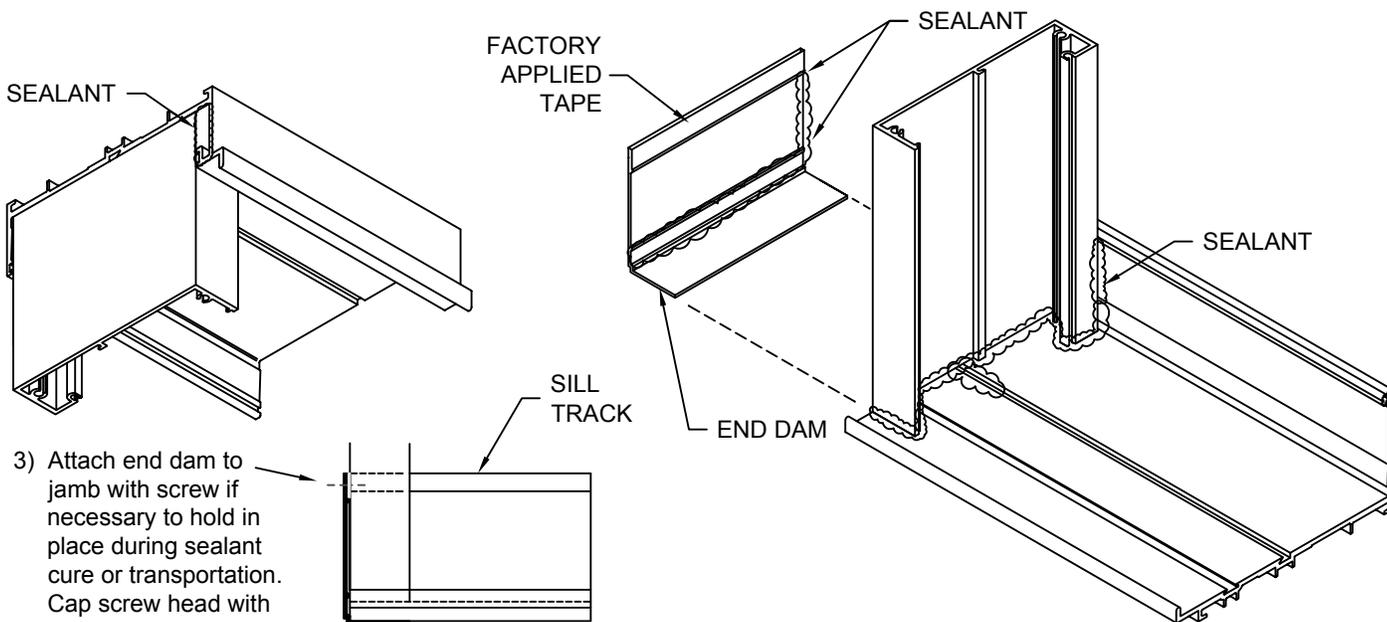
- 1) Layout all frame members on the floor in the correct relationship to each other.
- 2) Apply sealant to both ends of the fixed jamb, lock jamb, fixed interlock(s), lock stile mullion and fixed mullion(s) prior to assembly. Seal the groove in the sill track 1-1/4" in from each end prior to attaching the jambs.
- 3) Attach all vertical members to the head and sill tracks with 128-386 fasteners as shown.
- 4) Tool all sealant to ensure a proper seal.
- 5) Seal all fastener holes in the tracks prior to inserting the fasteners.
- 6) Cap all fastener heads at the sill track with sealant after assembly.

**NOTE:**  
**IF WAX WAS USED TO INSTALL THE FASTENERS, IT SHOULD BE REMOVED PRIOR TO APPLYING SEALANT TO THE FASTENER HEADS.**



**END DAM ASSEMBLY**

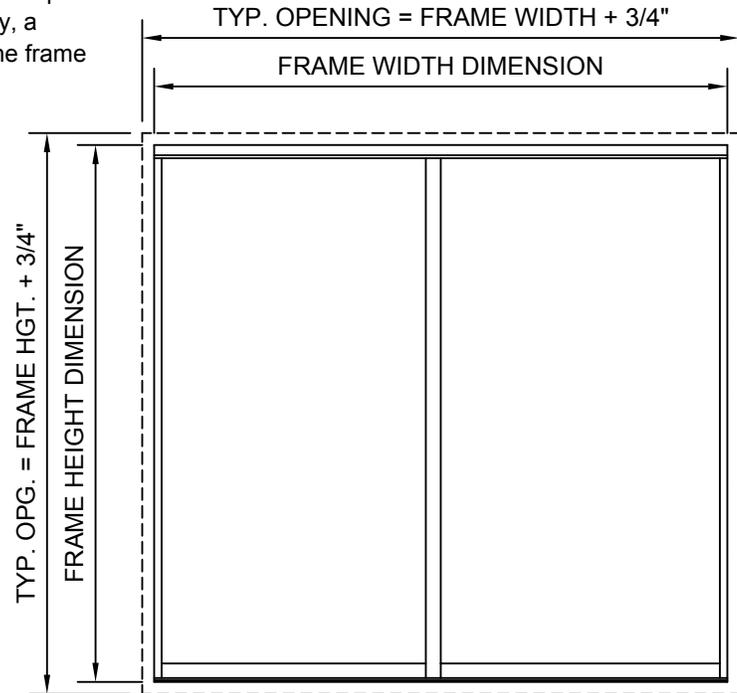
- 1) Apply sealant to end dams as shown and then apply an end dam to each end of the assembled frame at the sill.
- 2) Apply an additional fillet bead of sealant along the joints between the jambs and head/sill tracks.



- 3) Attach end dam to jamb with screw if necessary to hold in place during sealant cure or transportation. Cap screw head with sealant.

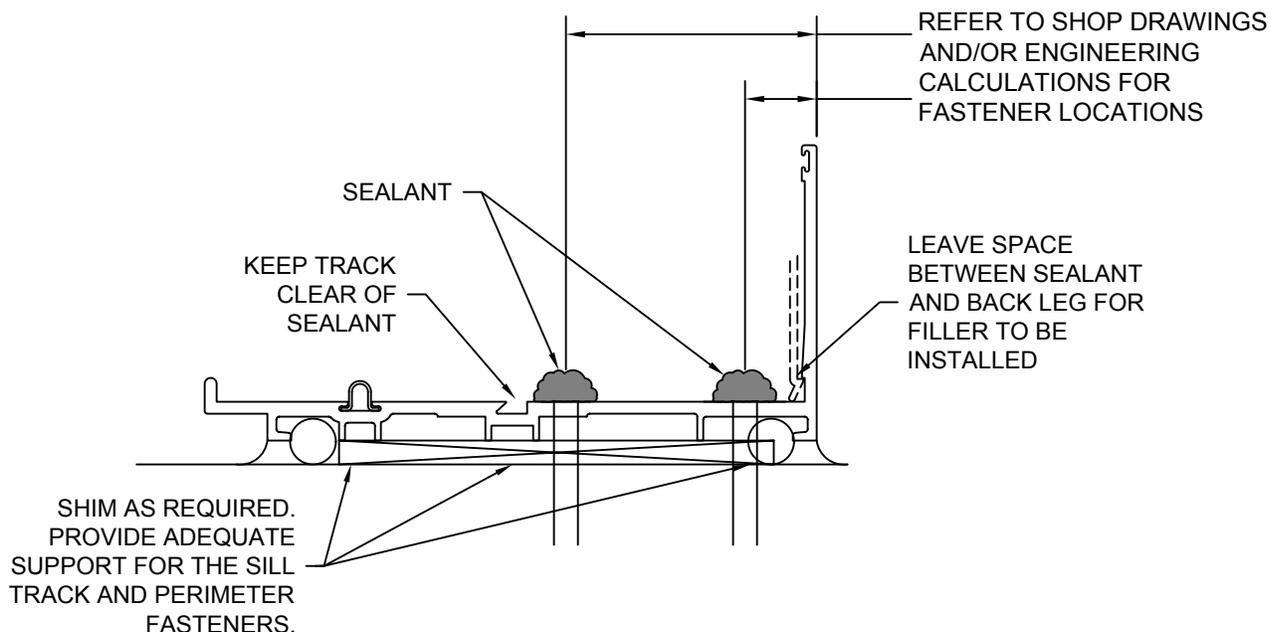
**STEP 1:**

Check the prepared opening. Make sure that the opening dimensions are correct for the unit being installed and that the opening is square and plumb before proceeding with the installation. Typically, a minimum of 3/8" clearance is required around all sides of the frame for shims and perimeter caulk joints.

**STEP 2:**

Place the assembled frame into the prepared opening.

**LEVEL AND SHIM THE SILL TRACK**, providing adequate support beneath the track to support doors during operation. Anchor the sill track to the substrate in accordance with approved shop drawings and/or engineering calculations. Cap the heads of all perimeter fasteners at the sill track with sealant as shown. Seal the entire interior and exterior perimeters with sealant.



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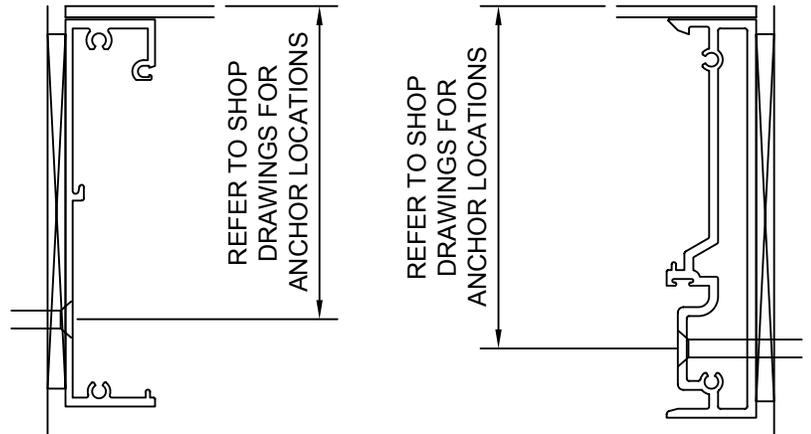
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**STEP 3:**

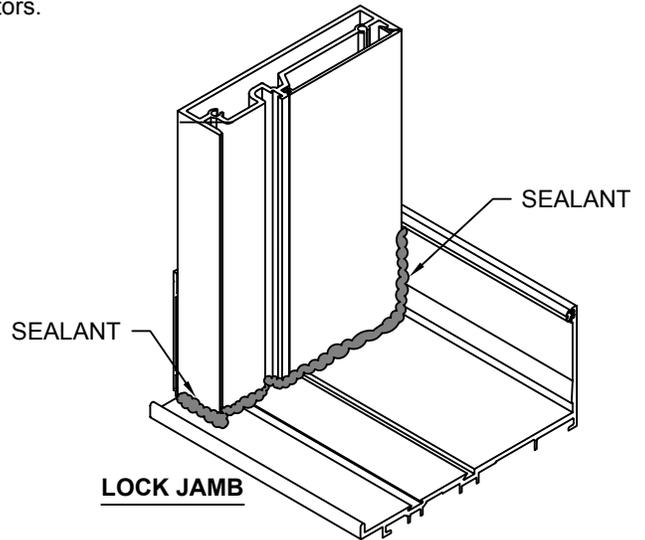
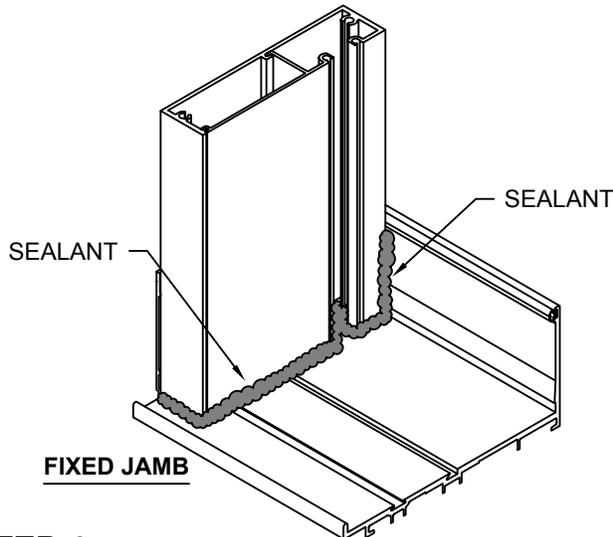
- 1) Plumb and shim the jambs and head track as necessary.
- 2) Anchor the jambs and head track to the substrate in accordance with approved shop drawings and/or engineering calculations.

**NOTE:**  
**FLAT HEAD PERIMETER FASTENERS ARE REQUIRED AT THE JAMBS.**



**STEP 3A:**

Install jamb fillers. Seal joint between jamb fillers and head / sill receptors.

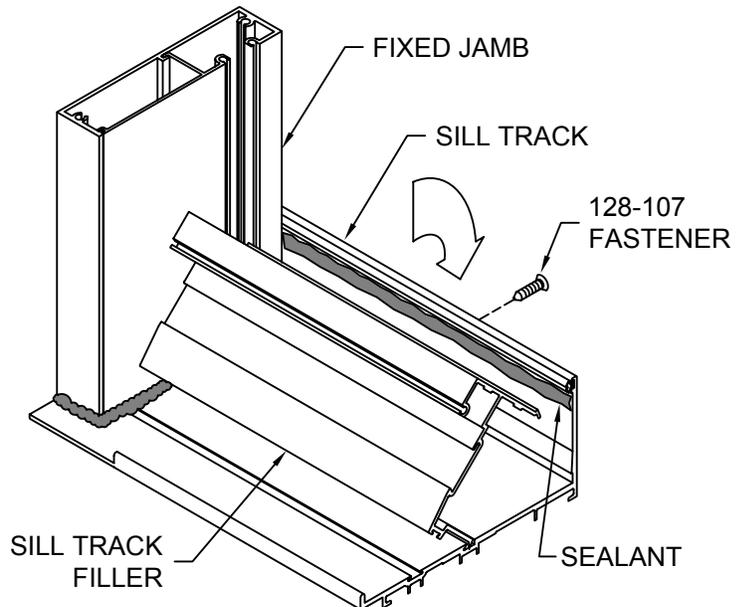


**STEP 4:**

- 1) After the frame has been anchored in the opening, install the 591-066 track fillers in the head and sill tracks.
- 2) Apply sealant to the back legs of the tracks immediately prior to installation of the fillers.
- 3) Engage the leading edge of the fillers in the groove in the tracks and then rotate them until they snap into place on the inside.

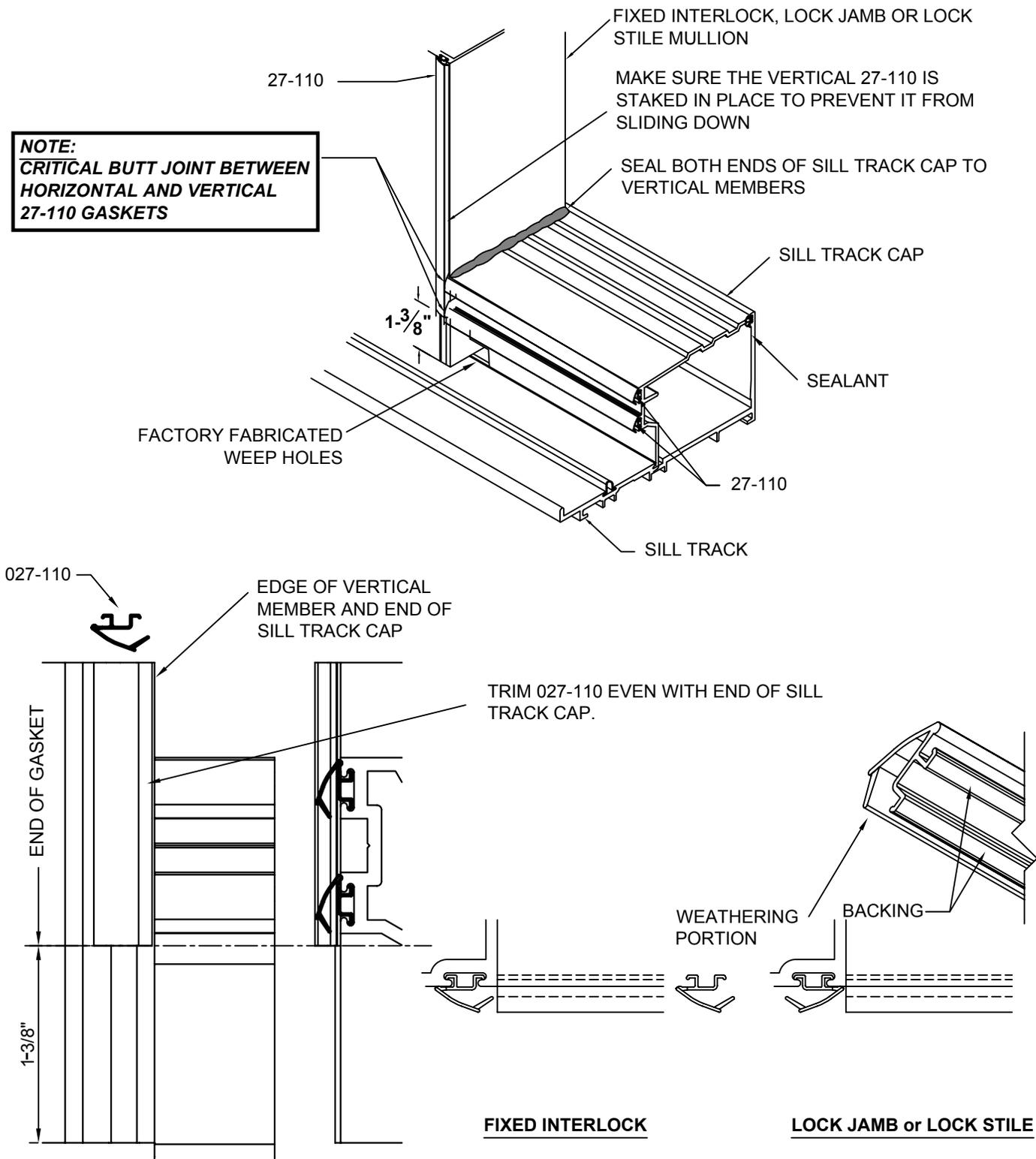
**CAUTION SHOULD BE EXERCISED TO PREVENT TEARING OF THE GASKET DURING INSTALLATION.**

- 4) For HC80 / HC100 / HC120 units, match drill the track fillers, fixed interlock(s) and lock stile mullion with a #14 bit through the holes provided in the head and sill tracks. Seal the fastener holes prior to inserting the fasteners. Securely attach the head and sill tracks to the track fillers and vertical members.



**STEP 5:**

Repeat the installation procedure in STEP 4 for the head and sill track caps in the sliding panel area. Trim the 27-110 gaskets (shipped long) in the sill track cap so that they butt into the vertical 27-110 gasket at the adjacent vertical member. Make sure that the butt joints in the 27-110 gasket are flush and that there are no gaps in them. Seal each end of the sill track cap to the adjacent vertical member as shown. This is required in the sliding panel area only.

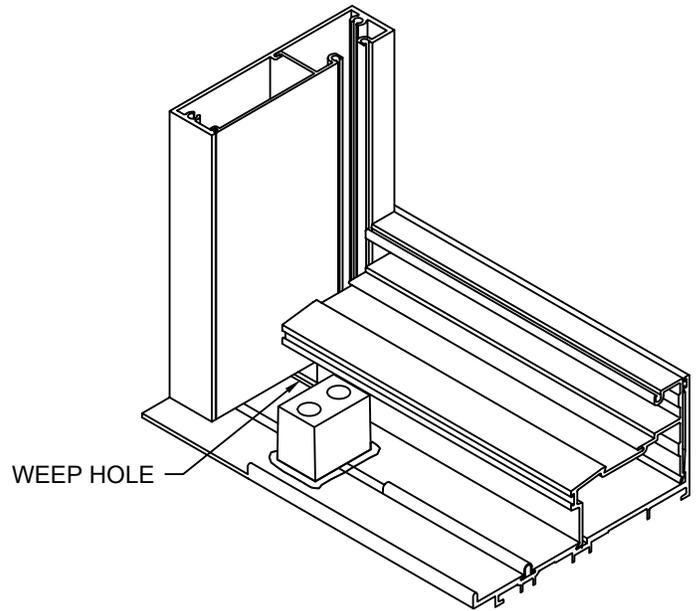
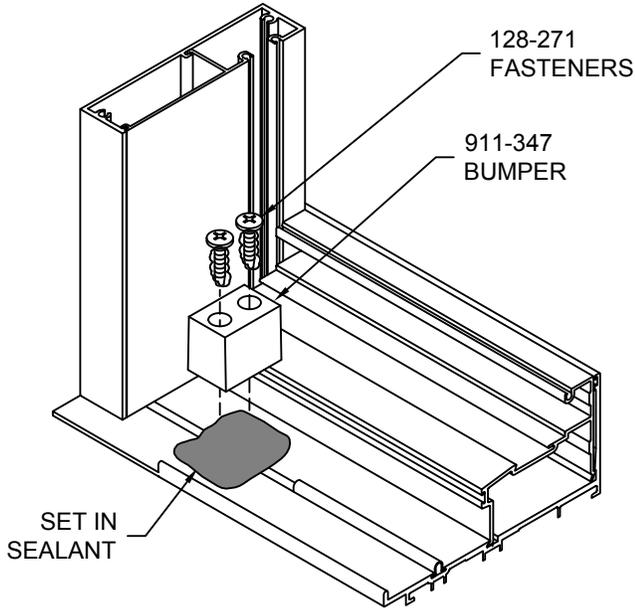


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**STEP 6:**

- 1) Attach 911-347 bumpers to the head and sill tracks in the factory fabricated holes with two 128-271 fasteners.
- 2) Apply sealant to threads of fasteners and the bumper in a bed of sealant.
- 3) Make sure the weep hole is clear of sealant and debris.



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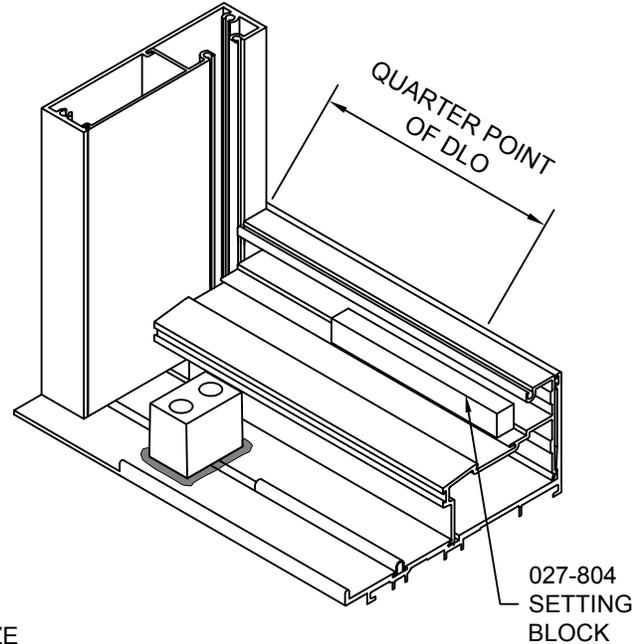
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## FIXED LITE GLAZING

**STEP 1:**

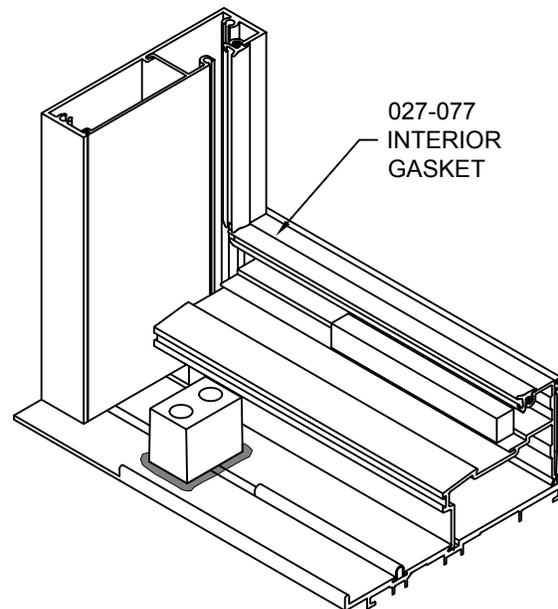
- 1) 1/4" infill requires two 027-804 setting blocks. 9/16" and 1" infills require two 027-073 setting blocks.
- 2) Apply a small amount of sealant to the bottom of the setting blocks to prevent shifting during glazing.
- 3) Locate the setting blocks at 1/4 points of the DLO.

**GLASS SIZE CALCULATIONS**

REFER TO SHEET # 10 FOR GLASS SIZE FORMULAS.

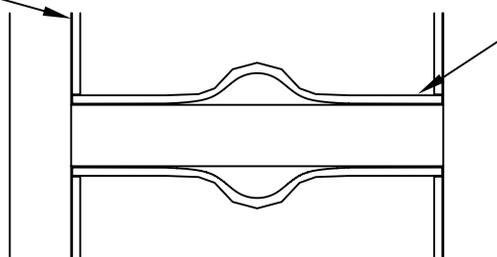
**STEP 2:**

- 1) Cut the 027-077 interior gaskets to an approximate length of D.L.O. + 1/4" per foot of D.L.O.
- 2) Install gaskets on the side of frame opposite glass stops first. Insert gaskets into the horizontal members first starting at the ends and work toward the center. Install vertical gaskets in the same manner, after horizontal gaskets are in place.



VERTICAL GASKETS RUN BETWEEN HORIZONTAL GASKETS.

START AT ENDS AND WORK TOWARD THE CENTER.



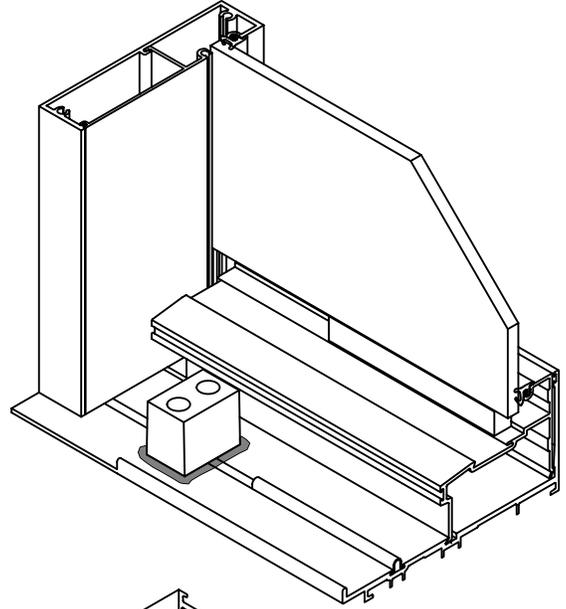
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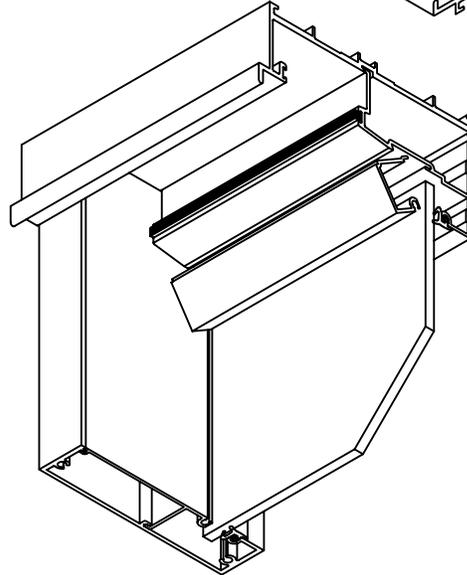
## FIXED LITE GLAZING (CONTINUED)

**STEP 3:**

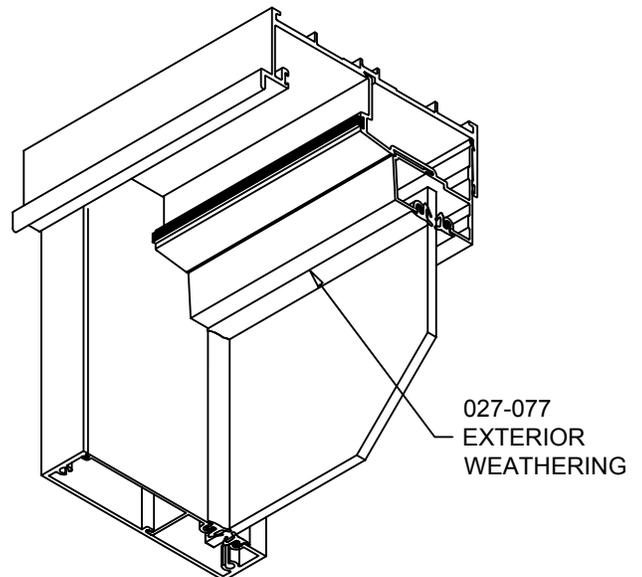
- 1) Insert the glass into the fixed jamb or fixed mullion first and then insert it into the fixed interlock or lock stile mullion.
- 2) Center the glass in the daylight opening with 7/16" glass bite on each side.
- 3) Set the glass onto the setting blocks.
- 4) Once the glass is set into the frame, install the 27-084 "W" blocks at the C/L of the fixed jamb or fixed mullion.

**STEP 4:**

- 1) Set the 591-004 glass stop into place at the head and sill.
- 2) Engage the leading edge of the glass stop into the reglet in the track filler.
- 3) Rotate the glass stop until it is seated in the filler.
- 4) Pull the glass stop toward the exterior of the filler engaging it in the interlock.

**STEP 5:**

- 1) Cut the 027-077 exterior gasket to an approximate length of DLO + 1/2" and install it into the reglet of the glass stop.
- 2) Install the horizontal gaskets first then the vertical gaskets into the exterior reglets.

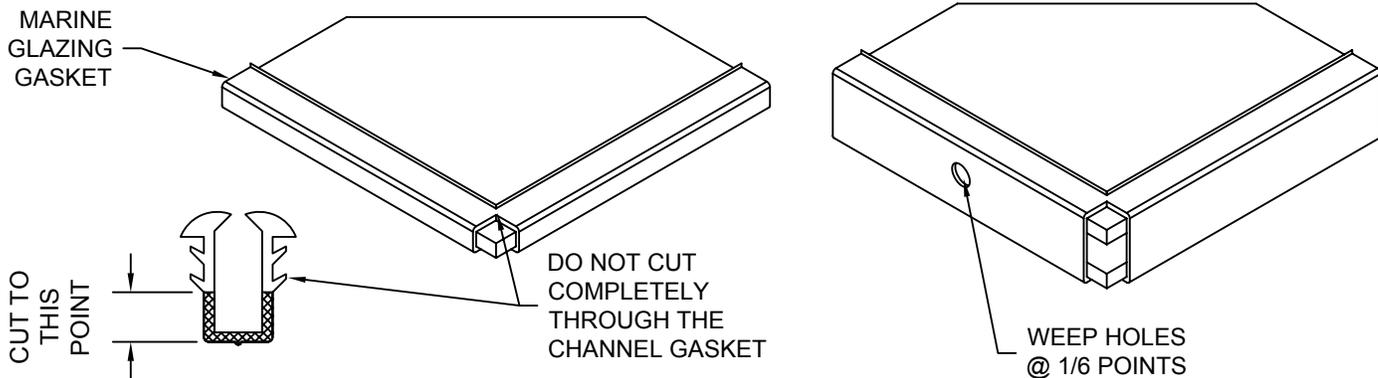


027-077  
EXTERIOR  
WEATHERING

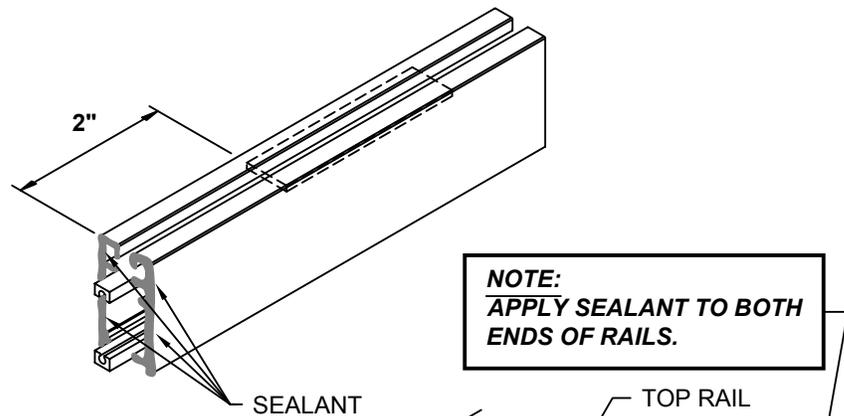
## SLIDING PANEL GLAZING AND ASSEMBLY

**STEP 1:**

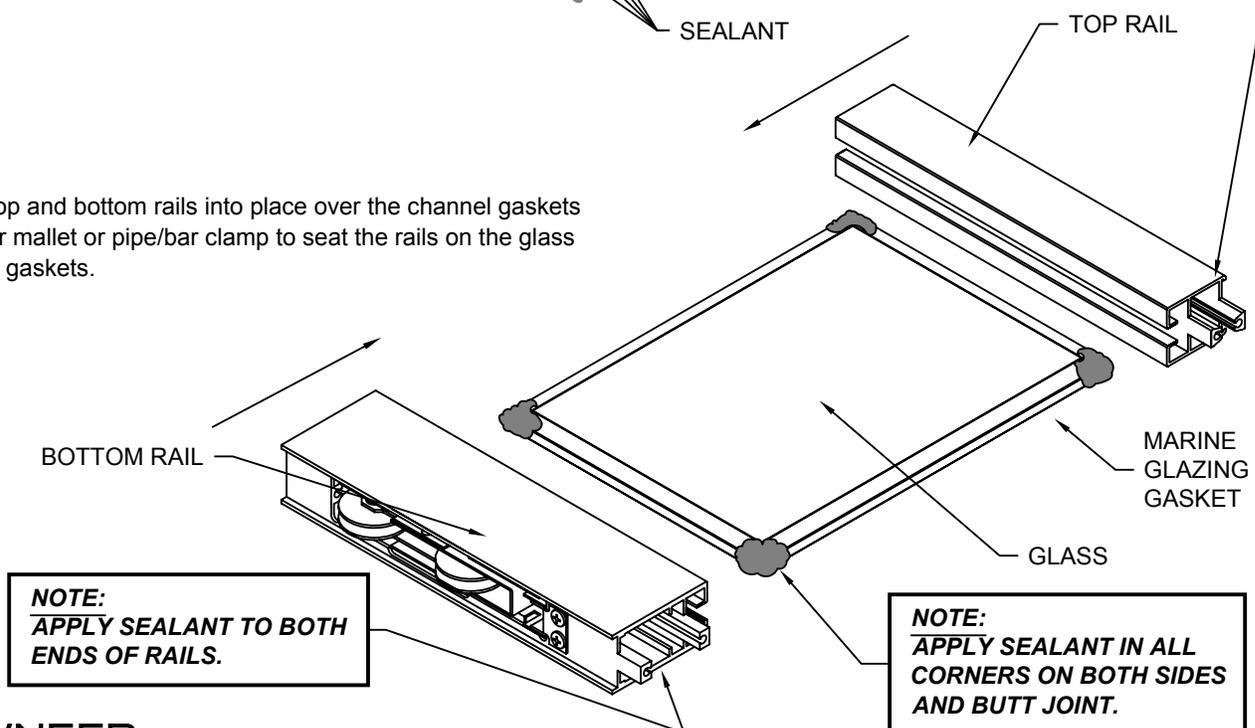
Starting at the top center of the glass, clamp one end of the glazing channel to the glass to temporarily hold it in place. Make sure that the end of the glazing channel is square cut. Wrap the glazing channel around the glass, cutting the corners as shown below. Stretch the glazing channel 2" on the sides and 1" on the bottom prior to cutting each corner. Square cut the glazing channel to the appropriate length to create a butt joint at the top of the glass. Remove the clamp and tape the two ends of the glazing channel together to prevent them from separating during panel assembly. ***If insulating or laminated glass is used provide weep holes in the channel gasket as shown at 1/6 points of the bottom rail.***

**STEP 2:**

Install two setting blocks in the bottom rail of the sliding panel at 2" from each end of the rail. Apply a small amount of sealant to the bottom of the setting blocks to prevent movement during panel assembly. Apply sealant to the entire surface of each end of the top and bottom rails.

**STEP 3:**

Center the top and bottom rails into place over the channel gaskets. Use a rubber mallet or pipe/bar clamp to seat the rails on the glass and channel gaskets.



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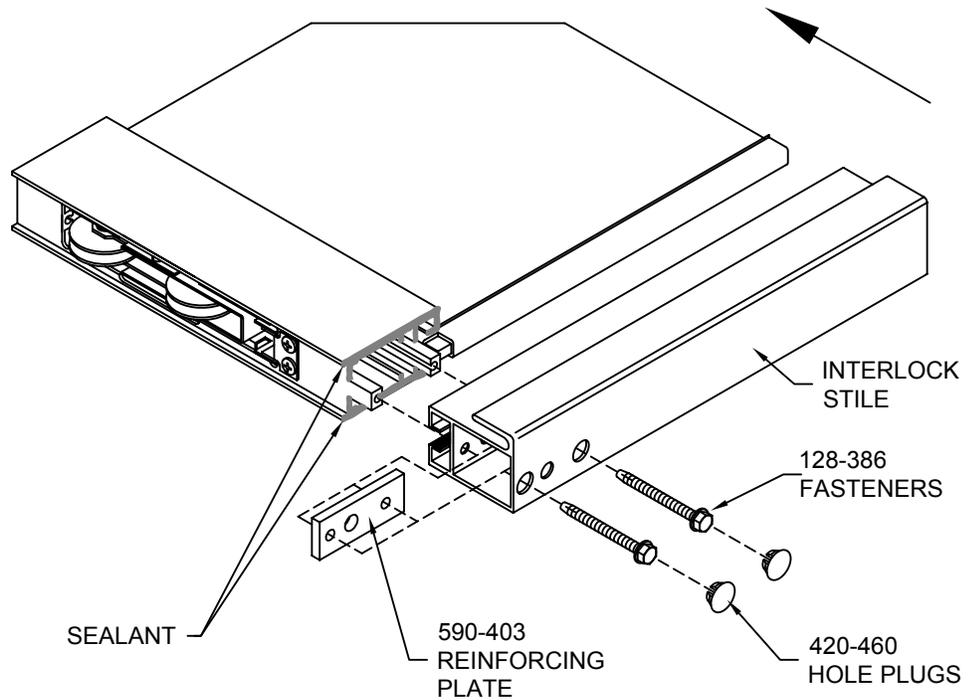
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SLIDING PANEL GLAZING AND ASSEMBLY (CONTINUED)

**STEP 4:**

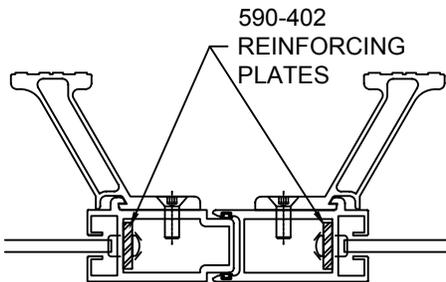
Once the top and bottom rails are in place, position the interlock and lock/latch stile over the channel gasket. Align the ends of the vertical members with the top and bottom rails. Use a rubber mallet or pipe/bar clamp to seat the verticals on the glass and channel gasket.

**NOTE:**  
**THE JOINT BETWEEN THE VERTICAL MEMBERS AND THE TOP AND BOTTOM RAILS MUST BE FLUSH TO PREVENT DAMAGE TO THE 27-110 GASKET DURING OPERATION OF DOOR.**

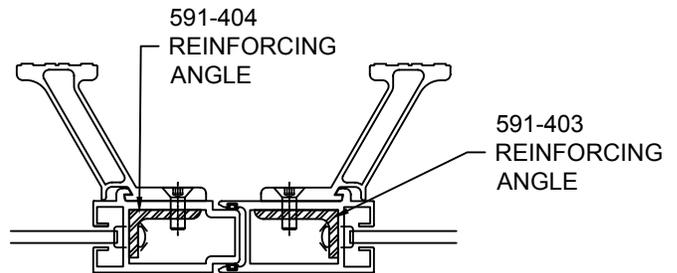


**STEP 4 (continued):**

Use 128-386 fasteners and 590-403 reinforcing plates to attach the vertical stiles to the top and bottom rails for OX, XO, and OXO sliding panels. Use 590-403 reinforcing plates at the interlock stiles of OXXO panels. Use 590-402 reinforcing plates at the meeting stiles for panels with wind load requirements less than 60 psf. For panels with wind load requirements above 60 psf, reinforcing angles 591-403/404 are typically installed at the bottom of the meeting stiles in the factory. Use 590-402 at the top of the meeting stiles in these instances.



**MEETING STILE WITH 590-402 REINFORCING PLATES**



**MEETING STILE WITH 590-403/404 REINFORCING ANGLES**

**STEP 5:**

Check the square and flatness of the panel. If the panel is more than 1/16" out of square, loosen the panel assembly screws and shift the vertical stiles until panel is square within 1/16". Once the panel is adjusted, install the 420-460 hole plugs over the screw access holes where required. **Do not plug the caster adjustment holes.**

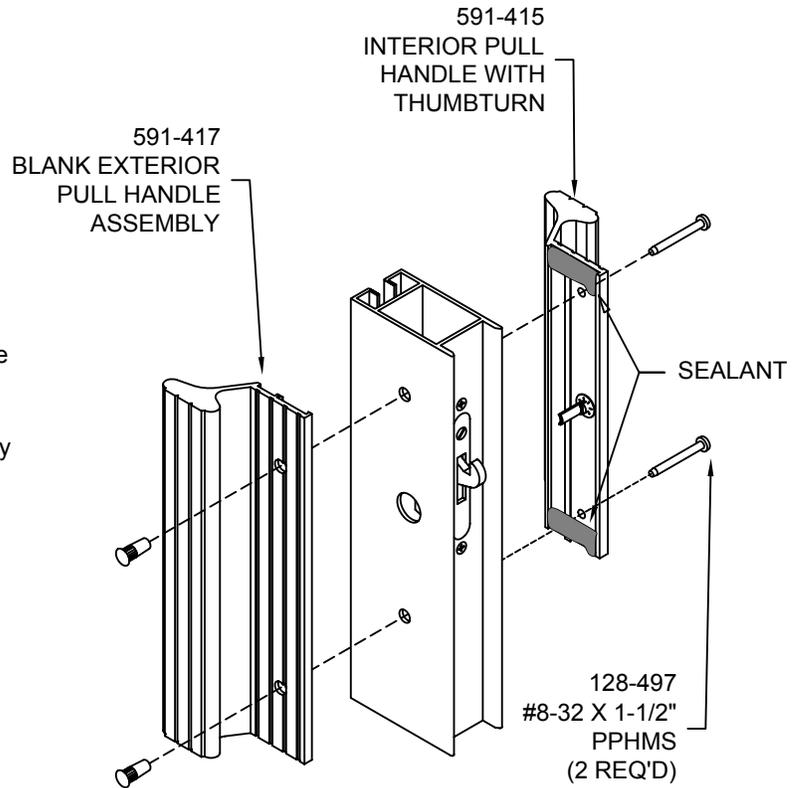
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### EXTRUDED PULLS WITHOUT EXTERIOR CYLINDER

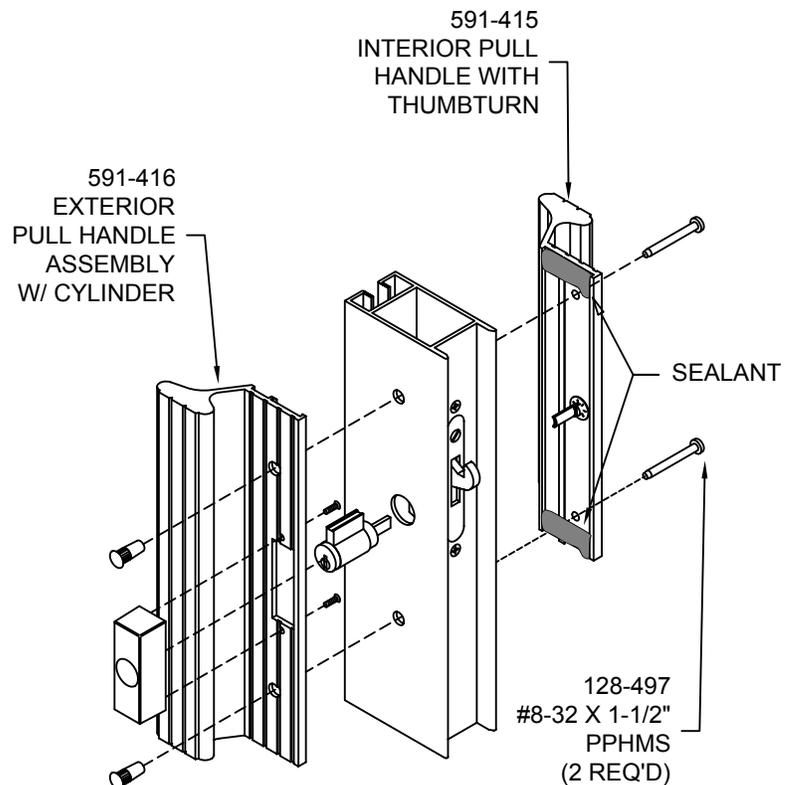
Place the glazed sliding panel onto either a workbench or sawhorses with the exterior side facing down. Gather the parts together for the handle assembly. Insert the knurled barrel nuts into the exterior pull. A rubber mallet may be required to fully seat the barrel nuts into place.

**NOTE: PROTECT THE EXPOSED FINISH OF THE BARREL NUTS DURING THIS PROCESS**



### EXTRUDED PULLS WITH EXTERIOR CYLINDER

If a cylinder is required, attach the cylinder housing to the extruded pull with the fasteners provided. To determine the handing of the pull, orient the cylinder towards the top of the door. Check the proper position of the key slot by inserting the key. The key slot must be in this position when the pull is installed.

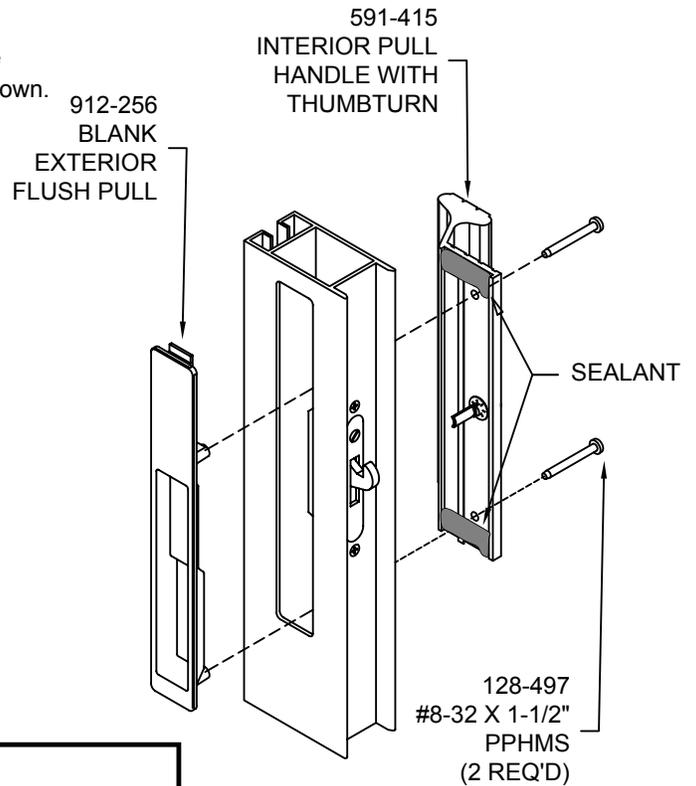
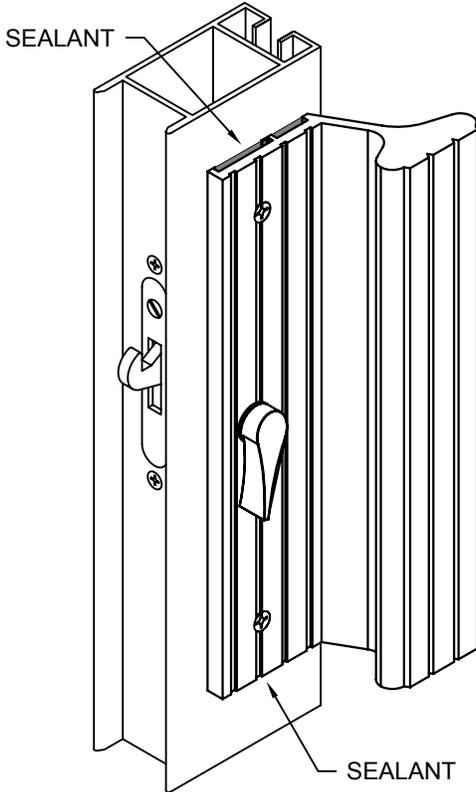


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**FLUSH PULL INSTALLATION**

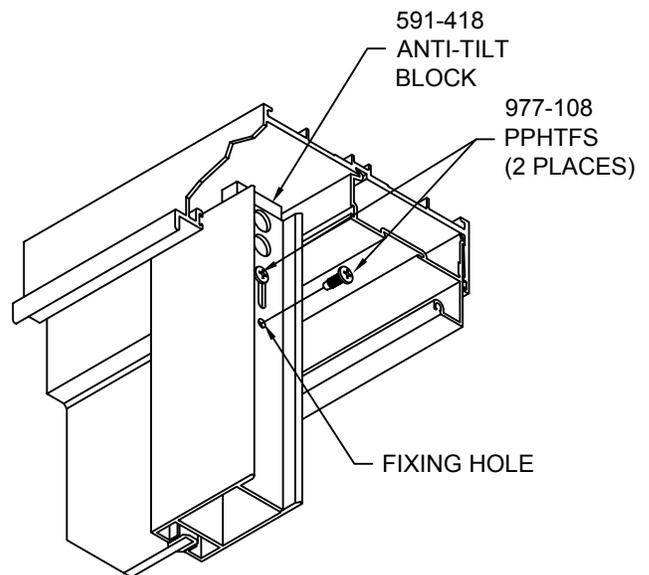
Place the glazed sliding panel onto either workbench or sawhorse with the exterior side facing down. Attach handle assembly as shown. Seal the exposed cavities at the top and bottom of the interior extruded pull handle to reduce air infiltration around the pull.



**NOTE:**  
**FLUSH PULLS ARE**  
**TYPICALLY USED WITH**  
**EXTERIOR SCREENS.**

**ANTI-TILT BLOCK ADJUSTMENT**

Narrow sliding panels require anti-tilt blocks for proper operation. In order to adjust the blocks, open the sliding panel to gain access to the block attachment screws. Loosen the top screw and position the block within 1/8" of the head track. Re-tighten the top screw. Drill a hole in the block through the fixing hole with a #23 bit (0.154 dia.). Install a 977-108 #10-1/2" screw through the fixing hole into the block.



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**SLIDING DOOR PANEL INSTALLATION**

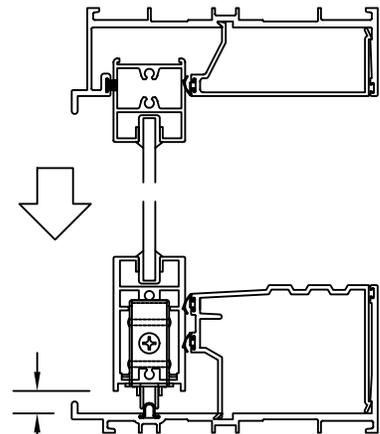
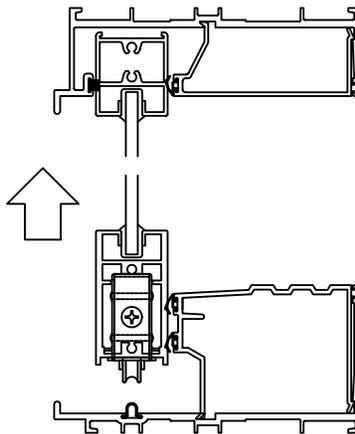
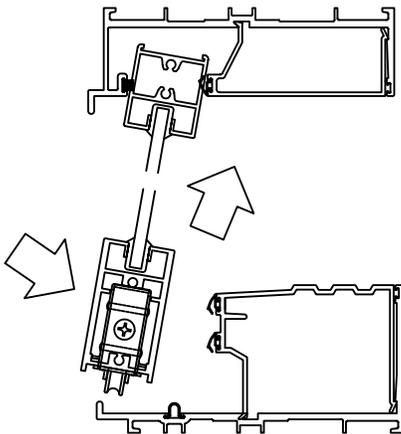
Upon completion of the sliding door installation, all sliding panels should be checked for proper alignment and operation. It may be necessary to adjust the door casters and lock strikes to ensure proper operation. All hardware must be cleaned and lubricated as necessary to provide smooth operation. Remove any protective paper from installed door upon completion of the installation.

**STEP 1:**

- 1) Install the sliding panel from the exterior as shown below.

**Exercise caution while positioning the panel into the frame head.**  
**Do not tear or displace the weathering in the head track cap.**

- 2) Push the casters up into the housing and hold them in place while positioning the sliding panel over the stainless steel track.
- 3) Lower the panel so that the casters straddle the track.



MINIMUM 1/2"  
AFTER CASTER  
ADJUSTMENT

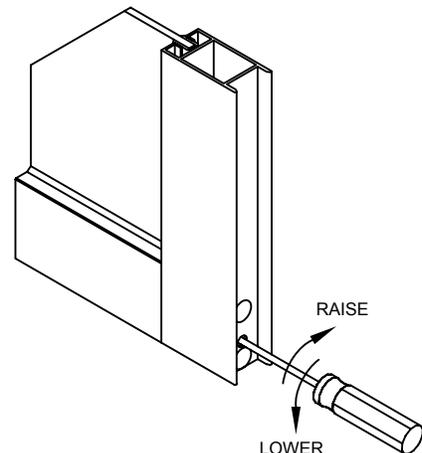
**STEP 2:**

- 1) Make sure the casters seat on the track.

**Damage to the sill track may occur if the panels are not positioned properly.**

- 2) On OX, XO, and OXO units, adjust the casters to align the sliding interlocks with the fixed interlocks.
- 3) On OXXO units, adjust the casters to maintain a consistent gap between the meeting stiles.
- 4) Adjusting the casters:
  - a) Lift up on the sliding panel to take the weight off the casters.
  - b) Use a long phillips head screw driver to turn the adjusting screw through the holes in the bottom of the vertical member.
  - c) Turn the adjustment screw clockwise to raise the panel and counterclockwise to lower it.

**NOTE:**  
**FOR MAXIMUM WATER INFILTRATION RESISTANCE, ADJUST THE SLIDING PANELS TO THEIR HIGHEST POSSIBLE POSITION - MINIMUM 1/2" CLEARANCE BETWEEN THE DOOR AND SILL TRACK.**

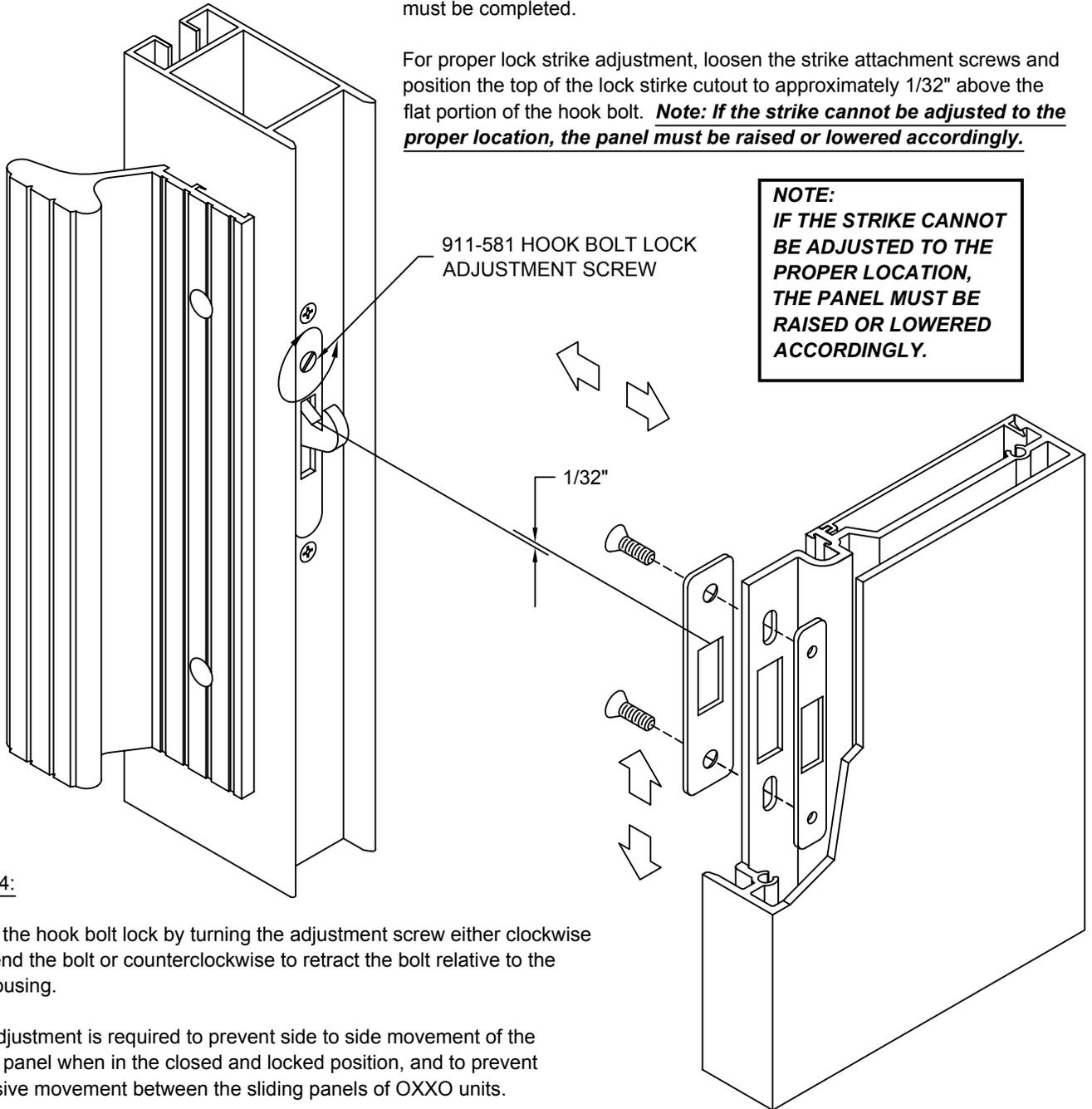


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**STEP 3:**

Prior to adjusting the lock strike, the panel alignment and caster adjustment must be completed.

For proper lock strike adjustment, loosen the strike attachment screws and position the top of the lock strike cutout to approximately 1/32" above the flat portion of the hook bolt. **Note: If the strike cannot be adjusted to the proper location, the panel must be raised or lowered accordingly.**

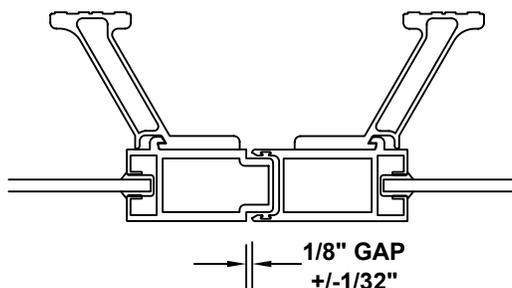


**NOTE:**  
IF THE STRIKE CANNOT BE ADJUSTED TO THE PROPER LOCATION, THE PANEL MUST BE RAISED OR LOWERED ACCORDINGLY.

**STEP 4:**

Adjust the hook bolt lock by turning the adjustment screw either clockwise to extend the bolt or counterclockwise to retract the bolt relative to the lock housing.

This adjustment is required to prevent side to side movement of the sliding panel when in the closed and locked position, and to prevent excessive movement between the sliding panels of OXXO units.



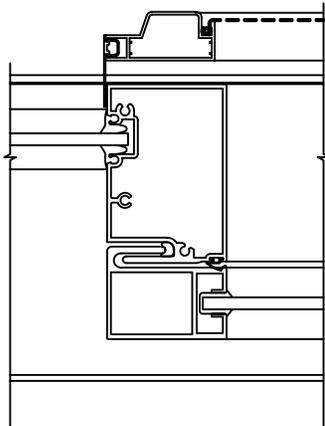
**NOTE:**  
MAXIMUM 1/32" MOVEMENT BETWEEN OXXO PANELS AFTER LOCK ADJUSTMENT

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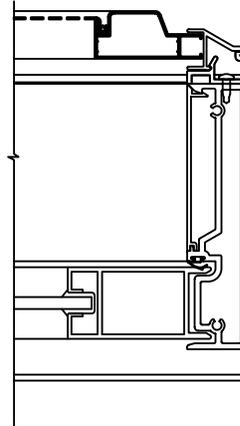
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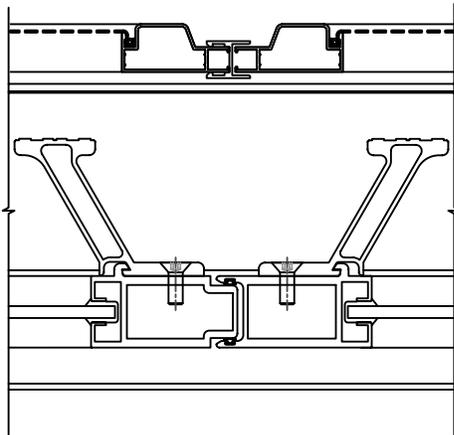
INTERIOR SCREEN TRACK DETAILS



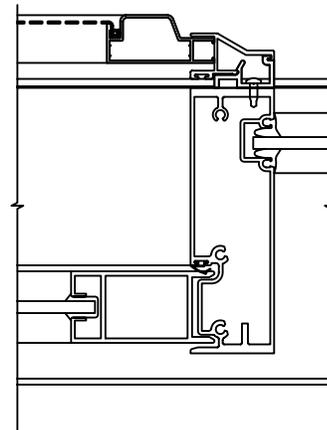
INTERIOR SCREEN AT INTERLOCK



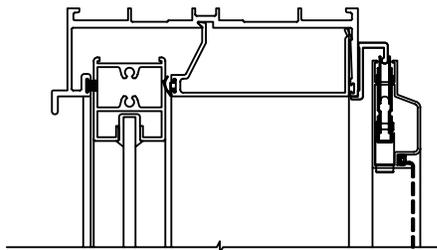
INTERIOR SCREEN WITH APPLIED TRIM AT JAMB



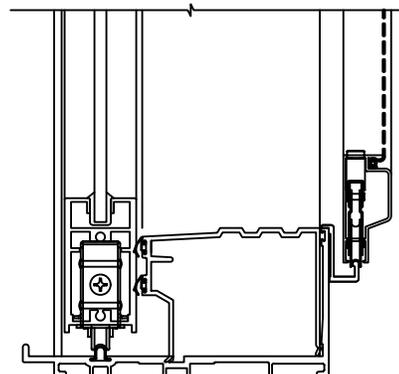
INTERIOR SCREEN AT MEETING STILES



INTERIOR SCREEN WITH APPLIED TRIM AT MULLION



INTERIOR SCREEN AT HEAD



INTERIOR SCREEN AT SILL

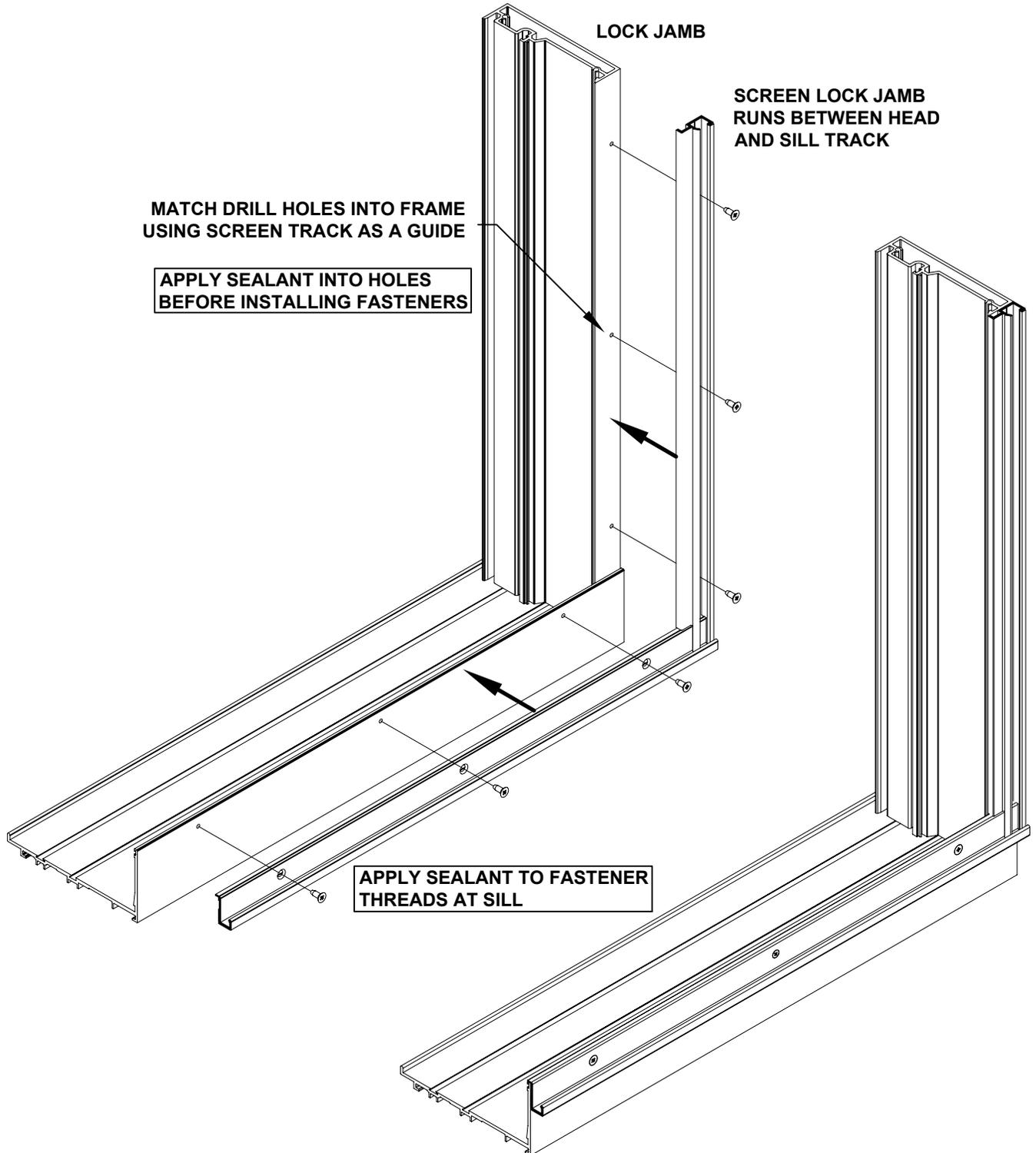
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**STEP 1: INSTALLING INTERIOR SCREEN TRACK**

- a) Hold screen track on interior side of the frame as shown below and match drill holes into frame using screen track and screen adapter as a guide. Apply sealant into match drilled holes.
- b) Apply sealant to fastener threads at sill before installing. Attach head and sill screen track at match drilled holes in head and sill members. Head and sill screen tracks run full length of frame, screen lock jamb runs between.
- c) Attach screen lock jamb at match drilled holes in lock jamb/lock stile mullion.
- d) Attach lock jamb cover by rotating onto screen lock jamb and snap in place (See page 28).

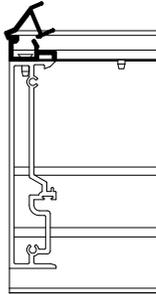
**Note: Cover is coped to extend past head and sill screen track.**



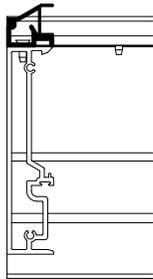
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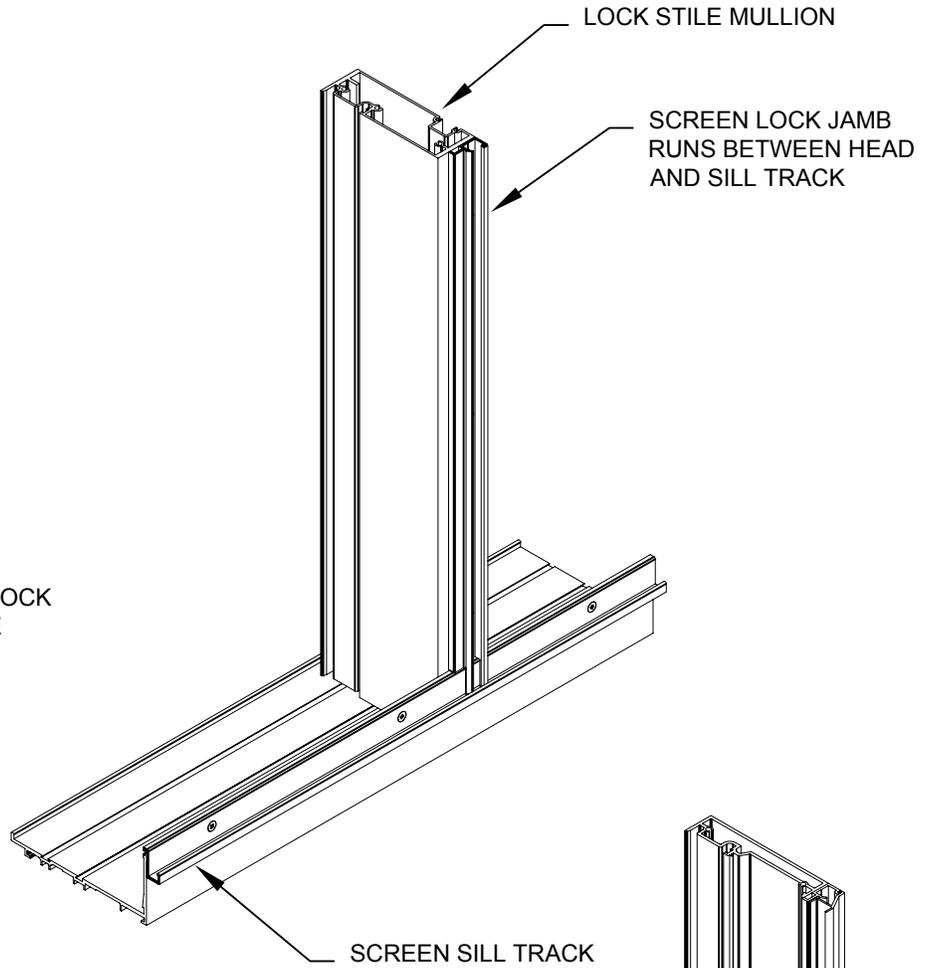
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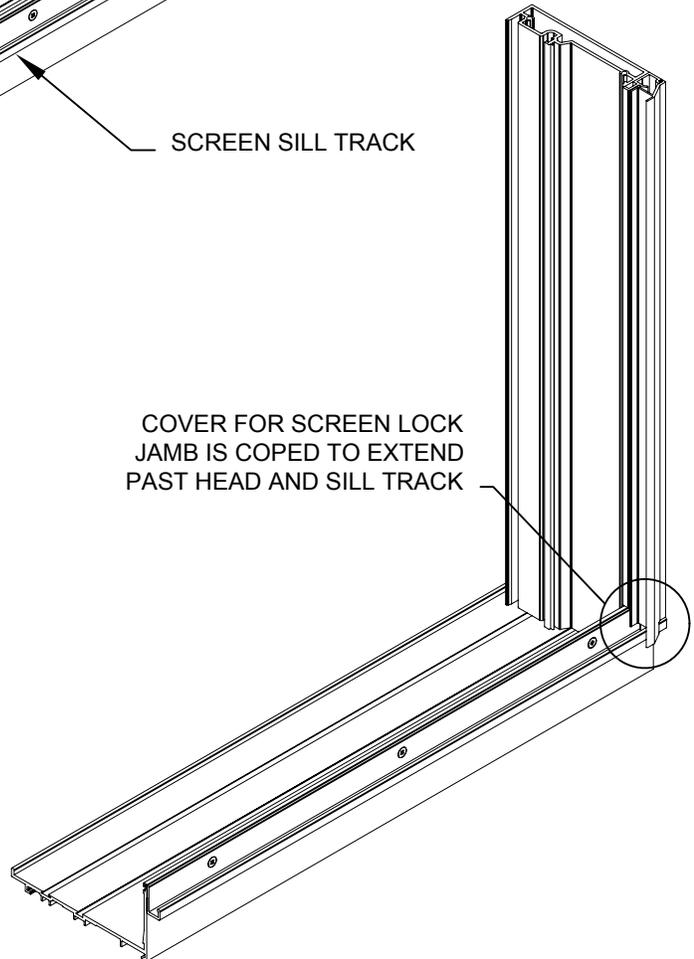
ROTATE COVER ONTO SCREEN LOCK JAMB AND SNAP INTO PLACE



LOCK JAMB COVER IN PLACE



COVER FOR SCREEN LOCK JAMB IS COPED TO EXTEND PAST HEAD AND SILL TRACK

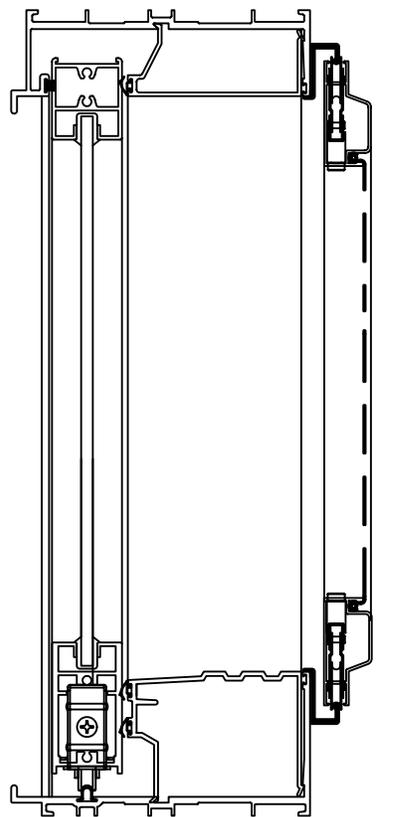
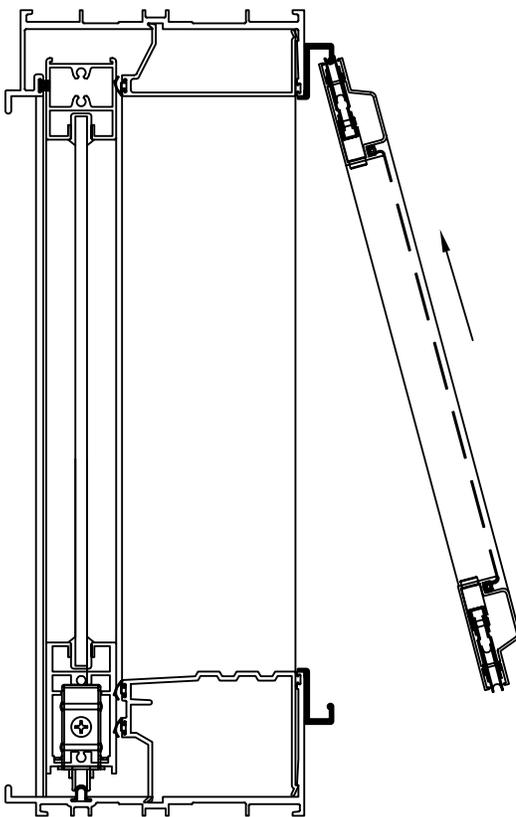


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**STEP 1: INSTALLING SCREEN**

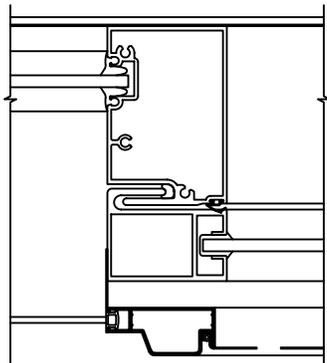
- a) From interior position top rollers on head screen track. Push screen into head and swing bottom of screen into position placing bottom rollers on sill screen track.
- b) Adjust bottom rollers to align screen with interlock stile and adjust top rollers to provide for smooth sliding operation.
- c) Locate and attach strike/keeper with latch.
- d) Check bug flap for proper contact and alignment.



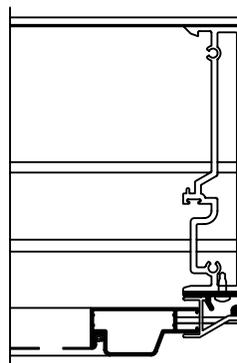
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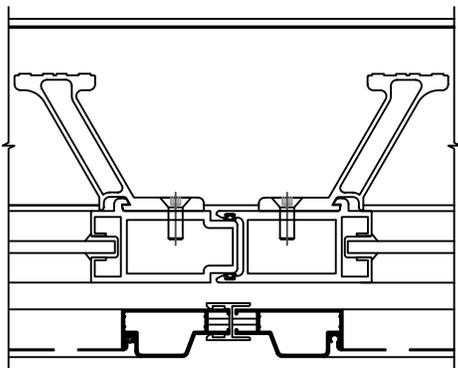
EXTERIOR SCREEN TRACK DETAILS



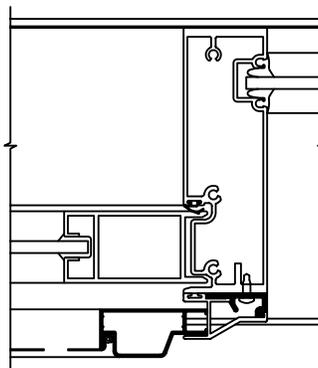
EXTERIOR SCREEN AT INTERLOCK



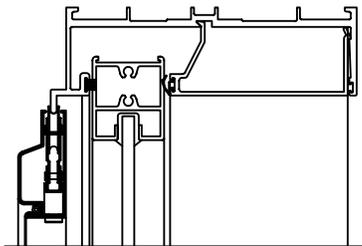
EXTERIOR SCREEN WITH APPLIED TRIM AT JAMB



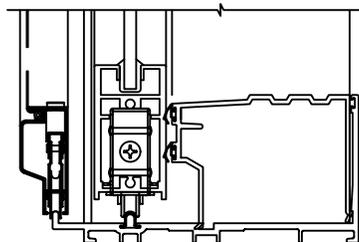
EXTERIOR SCREEN AT MEETING STILES



EXTERIOR SCREEN WITH APPLIED TRIM AT MULLION



EXTERIOR SCREEN AT HEAD



EXTERIOR SCREEN AT SILL

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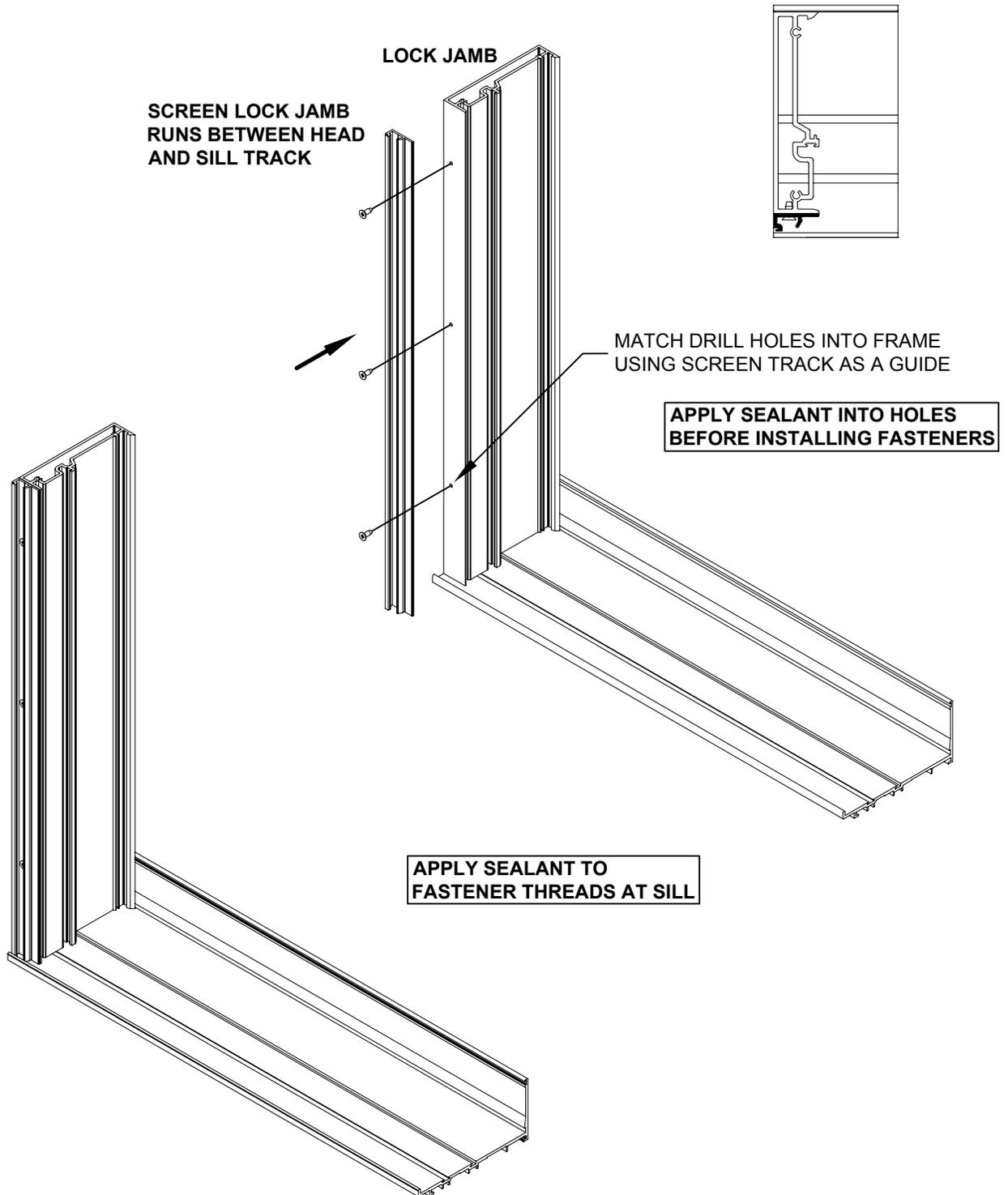
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**STEP 1: INSTALLING EXTERIOR SCREEN TRACK**

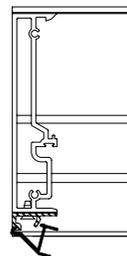
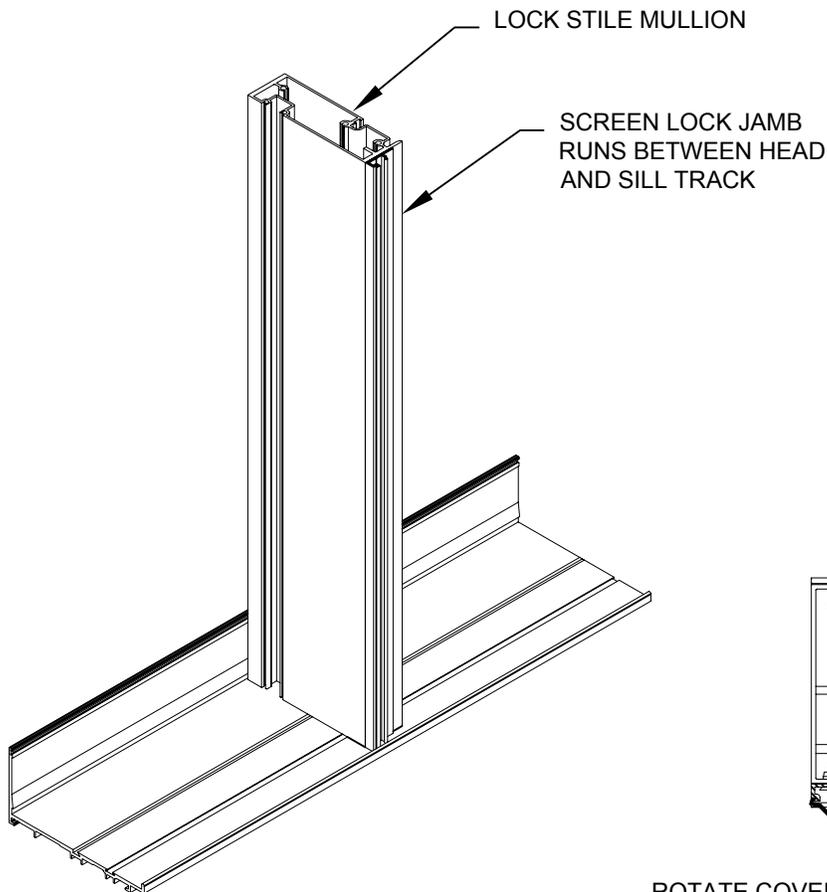
- a) Hold screen track on exterior side of the frame flush with the edge of the frame and match drill holes into frame using screen track and screen adapter as a guide. Apply sealant into match drilled holes.
- b) Apply sealant to fastener threads at sill before installing. Attach head and sill screen track at match drilled holes in head and sill members. Head and sill screen tracks run full length of frame, screen lock jamb runs between.
- c) Attach screen lock jamb at match drilled holes in lock jamb/lock stile mullion.
- d) Attach lock jamb cover by rotating onto screen lock jamb and snap in place (See page 32).

**Note: Cover is coped to extend past head and sill screen track.**

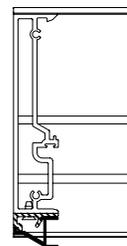
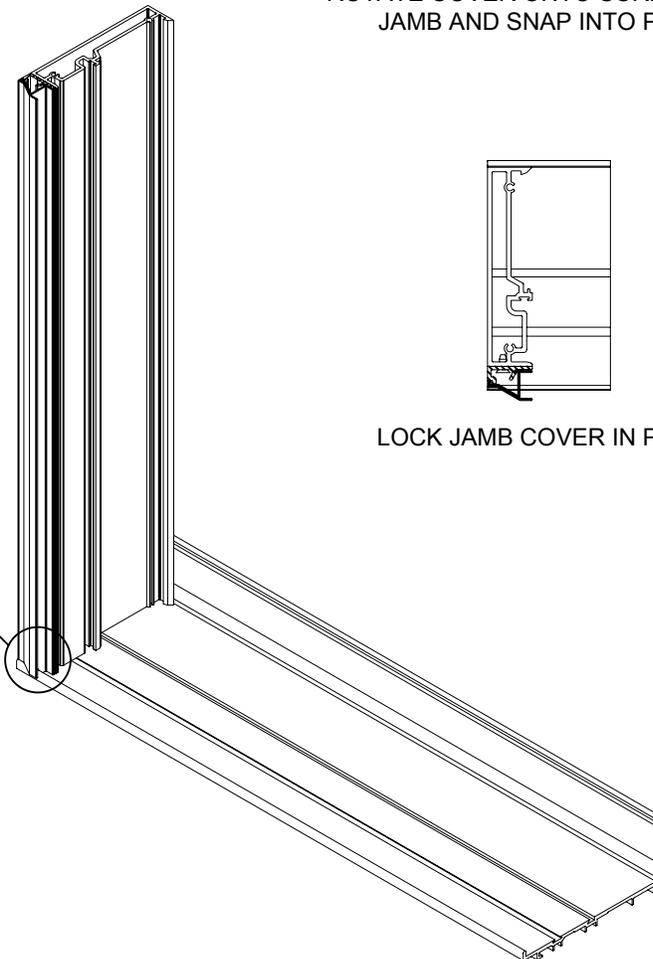


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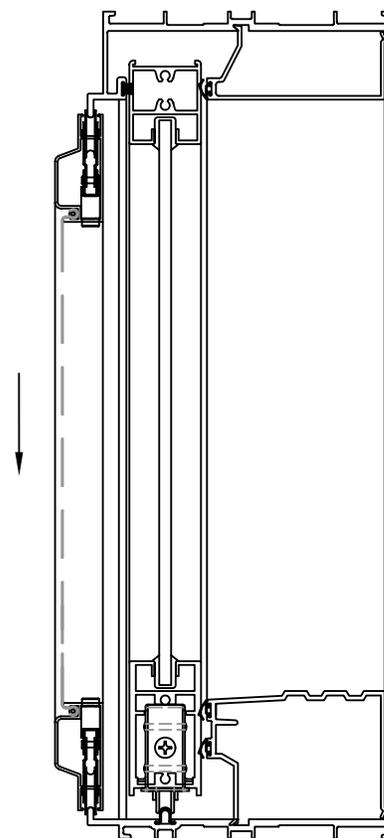
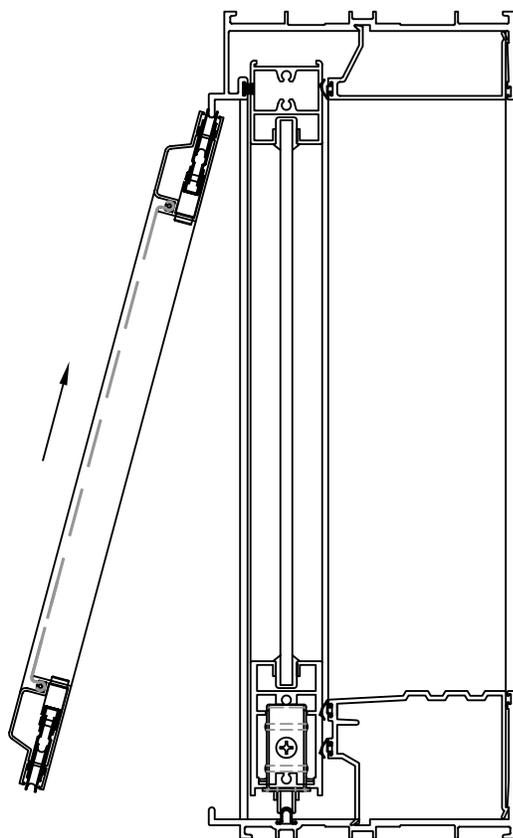
ROTATE COVER ONTO SCREEN LOCK JAMB AND SNAP INTO PLACE



LOCK JAMB COVER IN PLACE

**STEP 1: INSTALLING SCREEN**

- a) From exterior, position top rollers on head screen track. Push screen into head and swing bottom of screen into position placing bottom rollers on sill screen track.
- b) Adjust bottom rollers to align screen with interlock stile and adjust top rollers to provide for smooth sliding operation.
- c) Locate and attach strike/keeper with latch.
- d) Check bug flap for proper contact and alignment.



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# NOTES

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# NOTES

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