

Sliding Glass Door Series 2000/3000 Installation Instructions



Part YW41

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Minimizing Condensation

Note: Please reference EFCO's "Understanding Condensation" brochure which can be obtained through your EFCO representative.

Condensation will form on any surface when unfavorable conditions (interior temperature and relative humidity and exterior temperature) are present. When the formation of excessive condensation is a concern, it is highly recommended that a design professional is utilized to perform an analysis of the shop drawings to recommend the best possible installation methods. Please contact your EFCO representative for information on EFCO's Thermal Analysis Services.

Many current installation practices lead to an increase in the possibility of the formation of condensation.

Though not all inclusive, the list of examples below illustrates conditions under which condensation is likely to occur:

1. Bridging system thermal break with non-thermally broken metal flashing or lintels that are exposed to the exterior
2. System exposure to cold air cavities
3. Interior relative humidity levels not maintained at recommended levels, see EFCO's "Understanding Condensation" brochure
4. Inadequate separation between system and surrounding condition at perimeter
5. Product combinations during the shop drawing stage that result in bridging thermal breaks of one or all products involved

These recommendations are for general erection procedures only. For actual job conditions, see the details on the shop drawings. For perimeter anchor type and spacing, refer to the approved shop drawings or consult the project design professional.

SECTION I: Sliding Glass Door General Overview

Sliding Glass Doors are disassembled products and must be protected against damage. The following procedures and precautions are recommended:

A. General Notes

1. Protection and Storage

- a. Handle the material carefully.
- b. To avoid racking or damage to glazed panels and all Sliding Glass Door components and accessories, do not drop or drag from the truck.
- c. Stack the Sliding Glass Door panels with the directional arrows in the proper position to allow adequate separation so the door panels will not rub together.
- d. Store the Sliding Glass Door panels and accessories off the ground (i.e., pallets, planks, etc.).
- e. Protect against the elements and other construction trades by using a well ventilated covering.
- f. Remove material from packaging if it becomes wet. Then repack materials and move to dry location.
- g. Sliding Glass Doors are not to be used as ladders, scaffolds, or scaffold supports.

2. Check Materials

- a. Check all the material upon arrival for quantity and damage. Any visibly damaged material must be noted on the freight bill at the time of receipt. If a claim is required, the receiving party must process a claim with the freight carrier. If the delivery is by an EFCO truck, any damage or variance in the quantity of window units or boxes must be reported to the EFCO driver during the unloading process.

3. Cleaning Door Units

- a. Cement, plaster, terrazzo, alkaline, and acid based materials used to clean masonry are very harmful to finishes and should be removed with water and mild soap immediately; otherwise, permanent staining will occur. A spot test is recommended before any cleaning agent is used.
- b. For cleaning of anodized aluminum surfaces, refer to AAMA 609-93 Voluntary Guide Specification for Cleaning and Maintenance of Architectural Anodized Aluminum.
- c. For cleaning of painted aluminum surfaces, refer to AAMA 610.1-1979 Voluntary Guide Specification for Cleaning and Maintenance of Painted Aluminum Extrusions and Curtain Wall Panels.

Please note: The prolonged application of masking tape, duct tape, and similar products to painted aluminum surfaces will induce permanent bonding of the tape to the paint. This will cause adhesion failure between the paint and the aluminum surface when the tape is removed.

- d. If a protective coating is specified, remove it in areas that require field-applied sealant prior to installation.

B. Construction Notes

1. Reference Shop Drawings

- a. Check the shop drawings and installation instructions to become thoroughly familiar with the project. The shop drawings take precedence and include specific details for the project. The installation instructions are general in nature and cover most common conditions.

2. Check Openings

- a. Make certain that construction, which will receive the material, is in accordance with the contract documents. If not, notify the general contractor in writing and resolve differences before proceeding with your work.

3. Benchmark Layout

- a. All work should start from benchmarks and/or column center lines as established by the architectural drawings and the general contractor.

4. Plumb/Level/True

- a. All materials are to be installed plumb, level, true, and in proper alignment and relation to established lines and grades. Products are to be installed maintaining tolerances of 1/8" in 12'-0" of length.

5. Isolate Aluminum

- a. Isolate aluminum that directly contacts masonry or incompatible materials with a heavy coat of zinc chromate, plastic isolators, or bituminous paint.

6. Poured and Debridged and Thermal Strut Sections

- a. Do not drill, punch, penetrate, or alter the poured and debridged thermal break or extruded thermal strut in any manner.

7. Fastening

- a. Fastening means any method of securing one part to another or to adjacent materials. Due to varying opening conditions, window configurations, design pressures, and methods of anchorage (subframe, "F" anchors, etc.), perimeter fasteners are not specified in these instructions. For anchor fastening, refer to the shop drawings or consult the project design professional.
- b. Do not fasten drapery tracks, ceiling supports, or convector covers to Sliding Glass Doors. The Sliding Glass Door must be free to contract and expand.

8. Blocking

- a. All blocking and shims will be high strength plastic or non-corrosive materials, Not by EFCO. Blocking must be of sufficient size and shape to support the frame at all anchorage locations. The blocking must prevent the anchorage fasteners from bowing, racking, twisting, or distorting the window frames and accessories in any manner.

9. Sealant

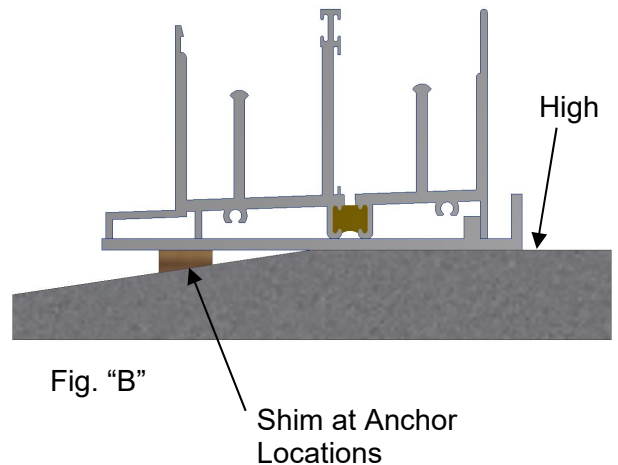
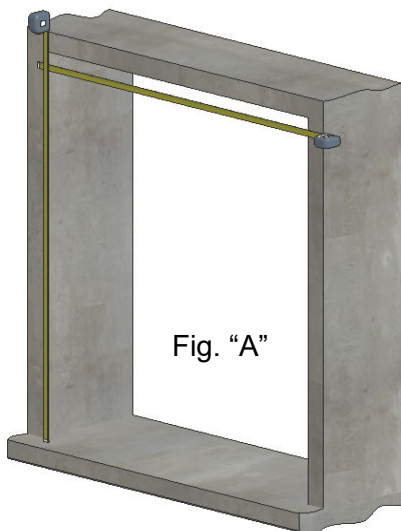
- a. Sealants must be compatible with all materials they contact, including other sealant surfaces. Any sealant details shown herein, unless specifically called out to by EFCO, are by others. It is not EFCO Corporation's position to select or recommend sealant or caulking types and will not assume liability or responsibility thereof. Consult the sealant supplier for recommendations relative to compatibility, adhesion, priming, tooling, shelf life, and joint design. It is the sole responsibility of the customer to perform all sealant adhesion and compatibility testing that is required by the sealant manufacturer of choice.

C. Building Codes

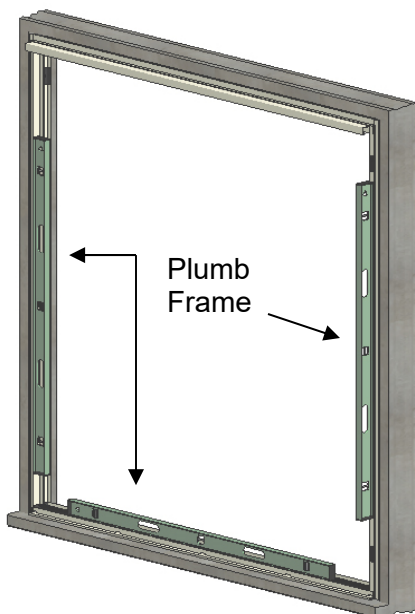
1. Glass and glazing codes governing the design and use of products vary widely. EFCO does not control the selection of product configurations, operating hardware, or glazing materials; therefore, we assume no responsibility in these areas. It is the responsibility of the owner, architect, and the installer to make these selections in strict conformity to all applicable codes.

D. Condition Instruction and Preparation

1. The rough opening should be checked for the correct size as determined by tolerances listed in the architectural specifications and the shop drawings. (FIG. "A")
2. Establish the face of the Sliding Glass Door line at the head, sill, and jambs. This reference is to be arrived at by using the architectural plans, general contractor's reference lines, and shop drawings.
3. Determine the high point of the masonry sill using string line or transit and shim the balance of the opening to match. (Fig. "B")



Note: For proper Sliding Glass Door operation and drainage it must be installed **PLUMB** and **LEVEL**.

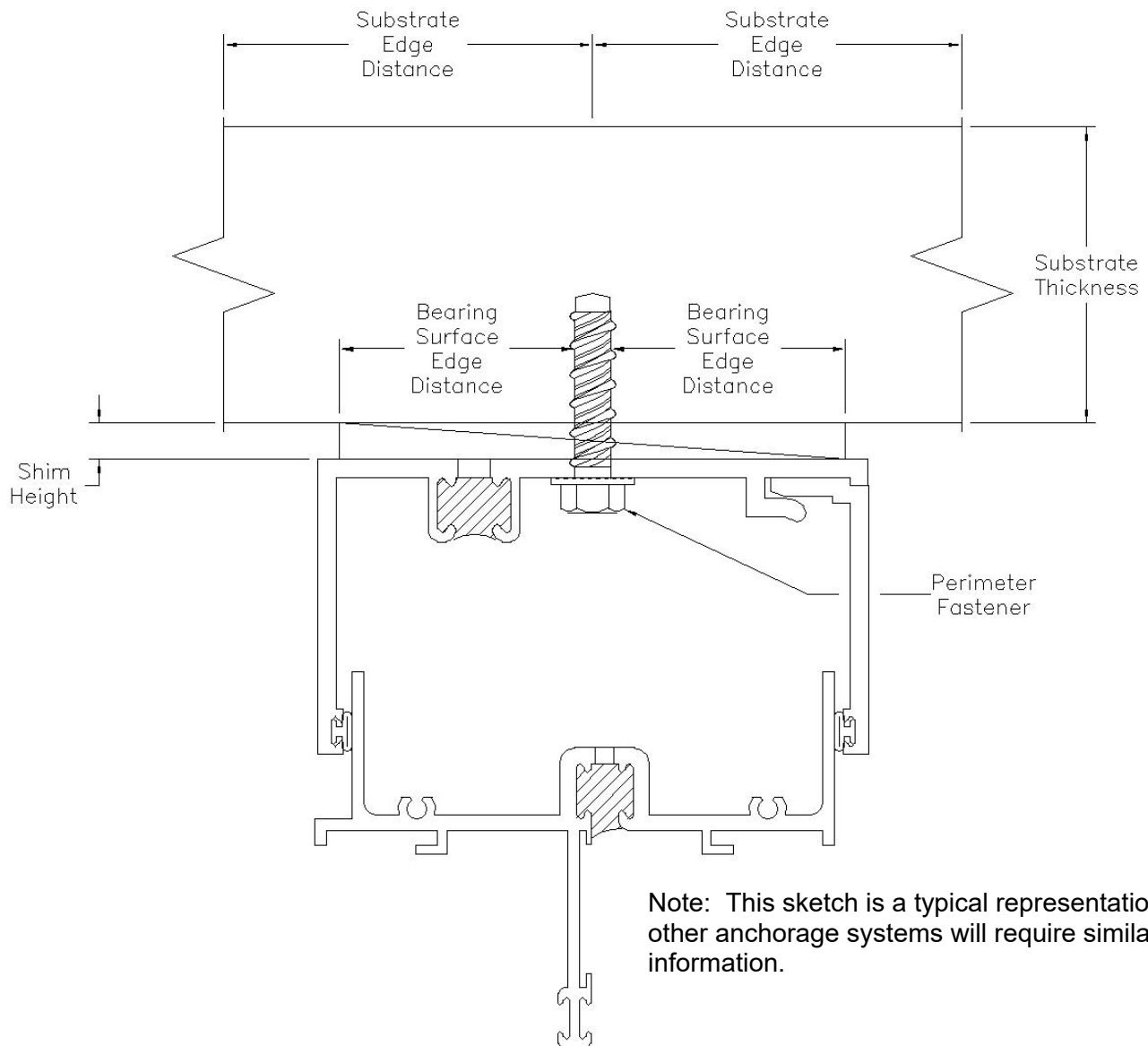


E. Perimeter Anchorage

1. From the approved shop drawings, determine the size, type, and quantity of perimeter fasteners required. EFCO will provide fasteners for EFCO material to EFCO material only. All perimeter fasteners are not by EFCO and should be purchased prior to arriving at the job site. (If subframe is used, please refer to the Subframe Installation sheets.)

Due to varying opening conditions, window configurations, design pressures, and methods of anchorage (subframe, "F" anchors, etc.), perimeter fasteners are not specified in these instructions. For perimeter anchor type and spacing, refer to the approved shop drawings or consult the project design professional. The design professional should analyze the anchorage system, and take into account the following information.

- a. Frame dimensions and configuration of the as installed door.
- b. Material properties of the door frame.
- c. Allowable tension, shear, and bending properties of the perimeter fastener.
- d. Design pressure.
- e. Details of the surrounding condition for the head, sill, and jambs.
- f. Relative building movements and expected thermal movement of the door system.



SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

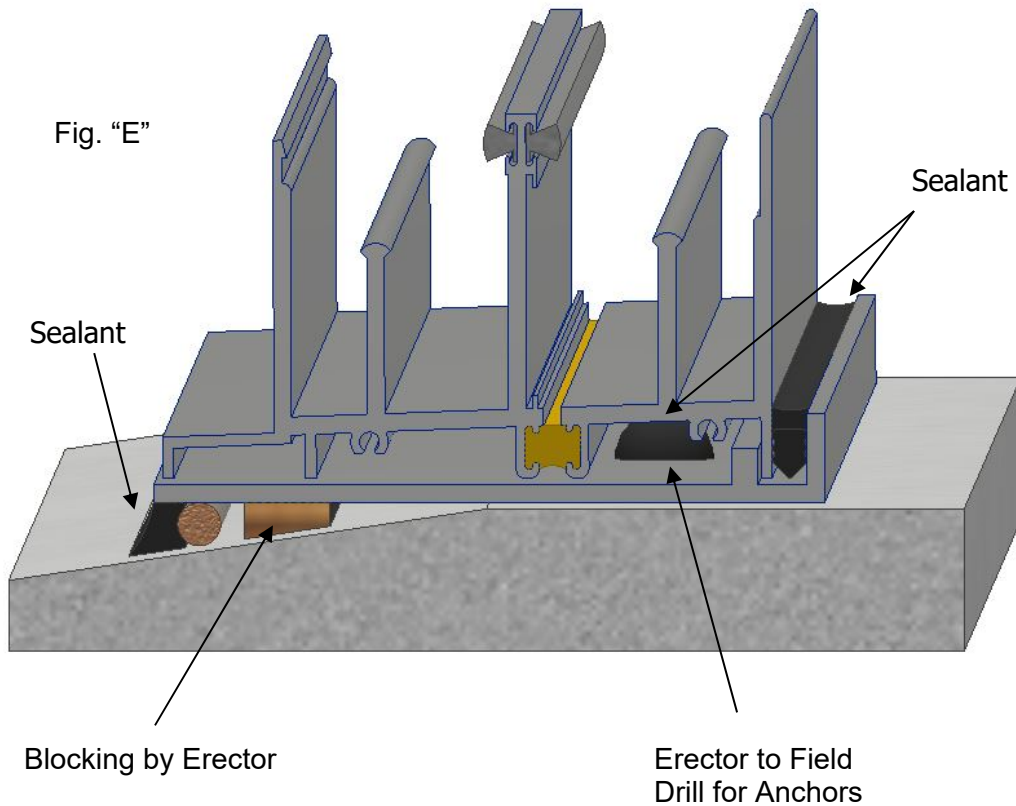
2. Perimeter anchors should never penetrate a tank or tubular shape at a window sill. Any penetration of the frame must be visible for sealing purposes.
3. Blocking must be of sufficient size and shape to support the frame at all anchorage locations. The blocking must prevent the anchorage fasteners from bowing, racking, twisting, or distorting the window frames and accessories in any manner. Excessive shim heights could increase the prying tension and/or bending forces on the perimeter fastener. Refer to the approved shop drawings and/or design professional for project specific applications.

SECTION II: Basic Sliding Glass Door Installation

A. Installation Without Subframe

1. Assemble the Sliding Glass Door frame per the assembly instructions for the appropriate Sliding Glass Door series.

EFCO Sliding Glass Doors, without a tank at the sill, may be anchored without the use of a starter sill. This is because sealant can be applied over the head of the anchor. (A tank-designed sill will not allow this option.) The sliding door sill may be anchored in the exterior track or the interior track. Locating the anchor in the exterior or interior track would need the consideration of minimum edge distance, the substrate to which the sills are being anchored, or anything that would govern the best location for the anchor. (Fig. E)



SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

2. Seal sliding door head to the building substrate. The seal joint along the head is to marry in with the seal joint down the jamb as shown. (Fig. E & F)

Fig. "E"

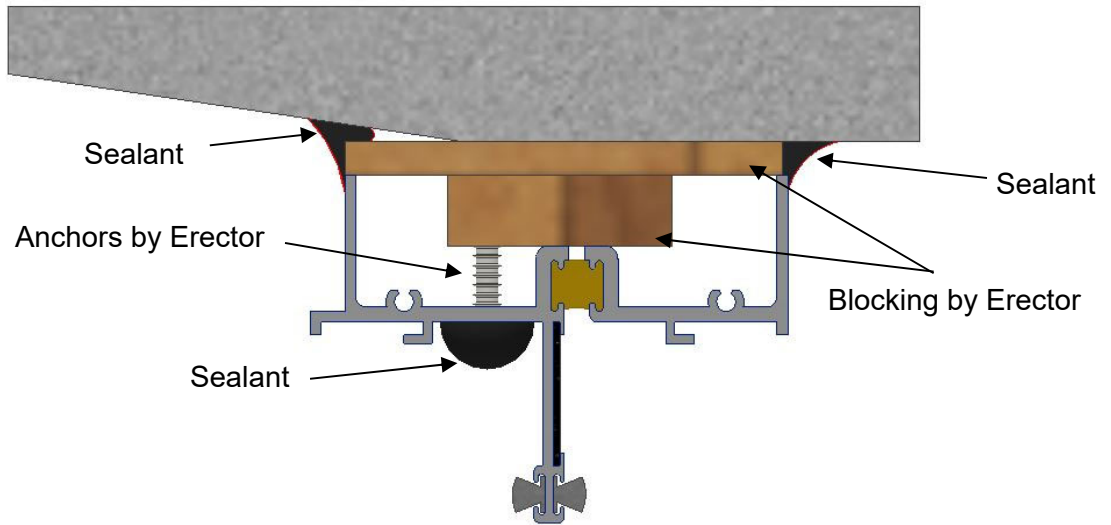
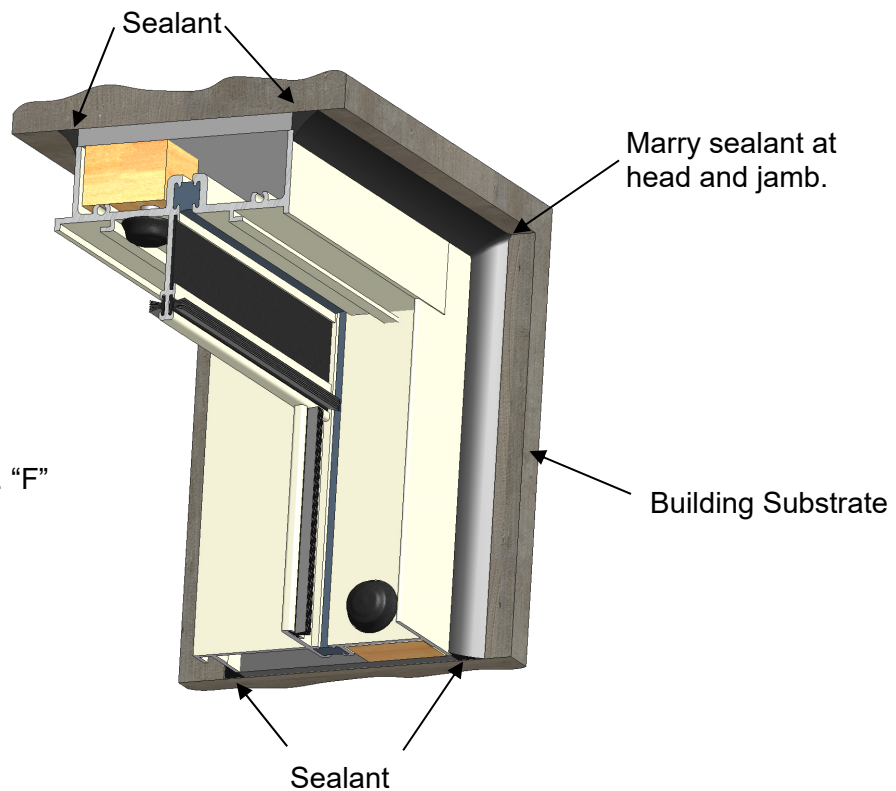


Fig. "F"



SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

3. Seal sliding door jambs to the building substrate. The seal joint along the jamb is to marry in with the seal joint across the head.
4. Stuff access holes, fixed jamb side, with backer rod and seal over the access holes.

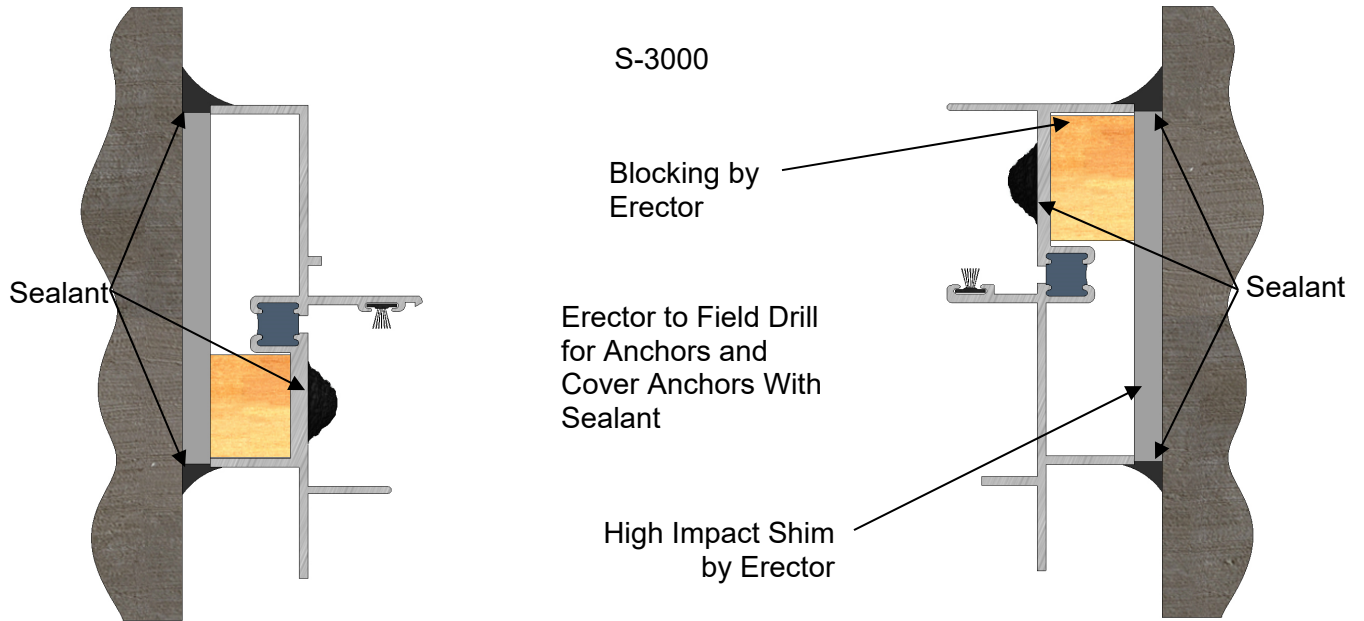


Fig. "G"

B. Installation With Subframe

All subframe material shipped long for field cut to fit and field drilling.

1. Measure the opening for the horizontal opening dimension.
2. Apply the end dams and install the starter sill with erector-supplied fasteners, and apply sealant to the head of the fasteners. Also seal the end dam to the starter sill and the end dam to the building substrate. (Fig H)

ERECTOR NOTE: When drilling and locating the fasteners, care must be taken to ensure that the head of the fasteners does not interfere with the door sill.

.062" aluminum angle with chromate or anodized finish. End dam to be placed under the subsill before anchoring the subsill.

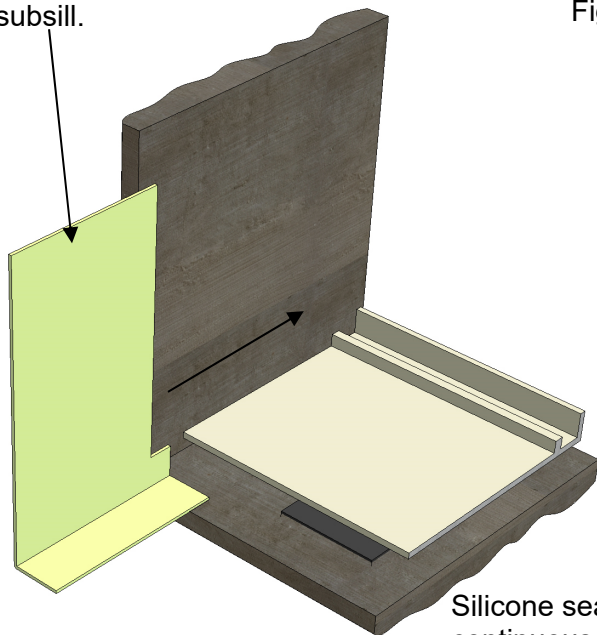
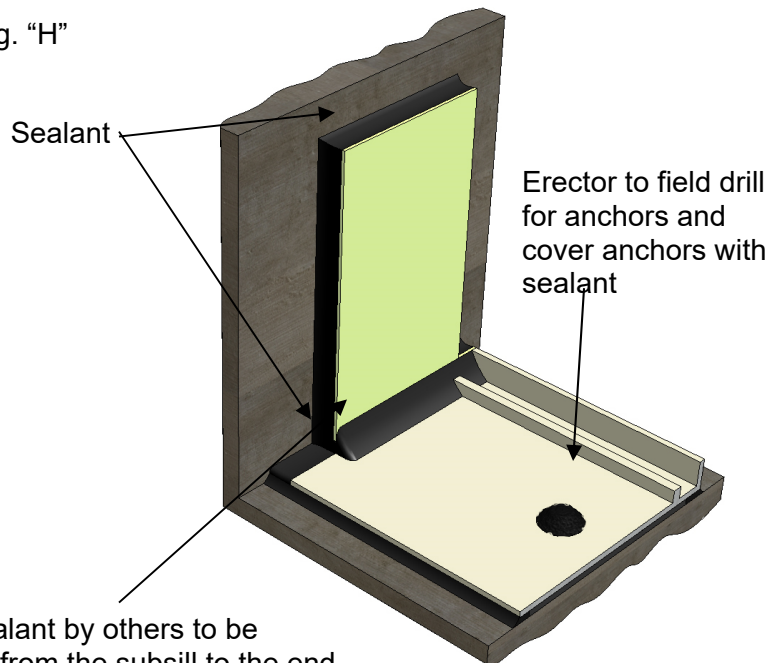


Fig. "H"



Silicone sealant by others to be continuous from the subsill to the end dam. Silicone should have a minimum contact on each surface of 1/2".

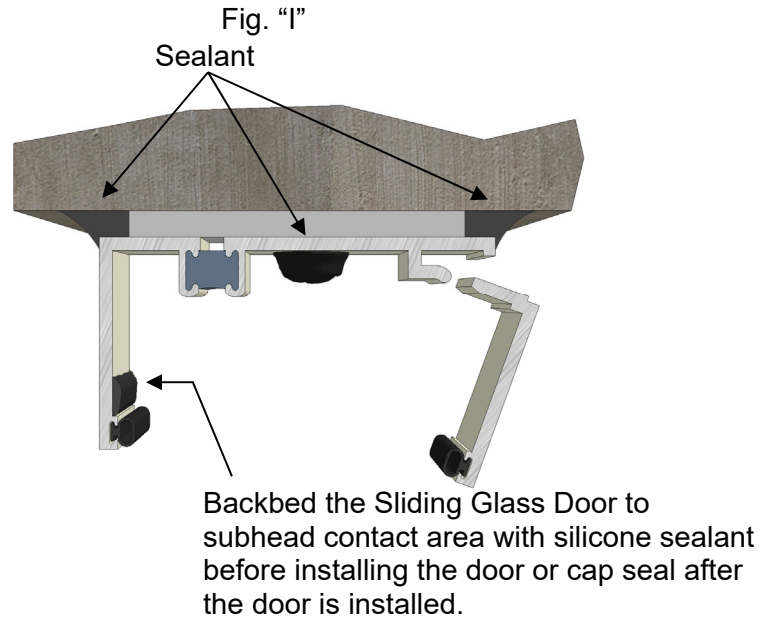
Erector Note:

This sealant could interfere with end of jambs.

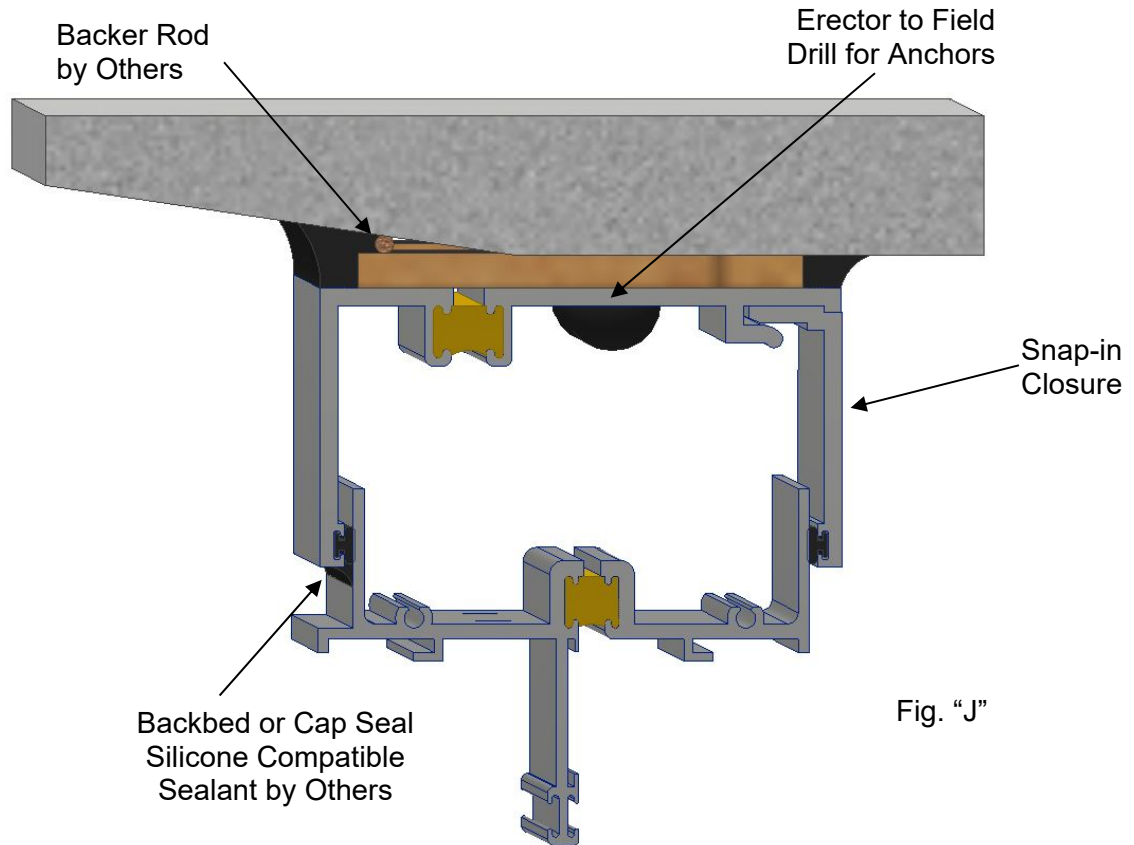
Seal end dam to the subsill and end dam to the building substrate as shown.

SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

3. Subheads to be field cut to length and installed.



4. Load the field assembled door frame into the anchored subframe. Snap-in the interior subhead closure for all two-piece subhead applications. (Fig. J)



SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

5. Drive-in the continuous silicone wedge between the doorframe and the interior subsill leg and cover wedge with silicone. (Fig. K)

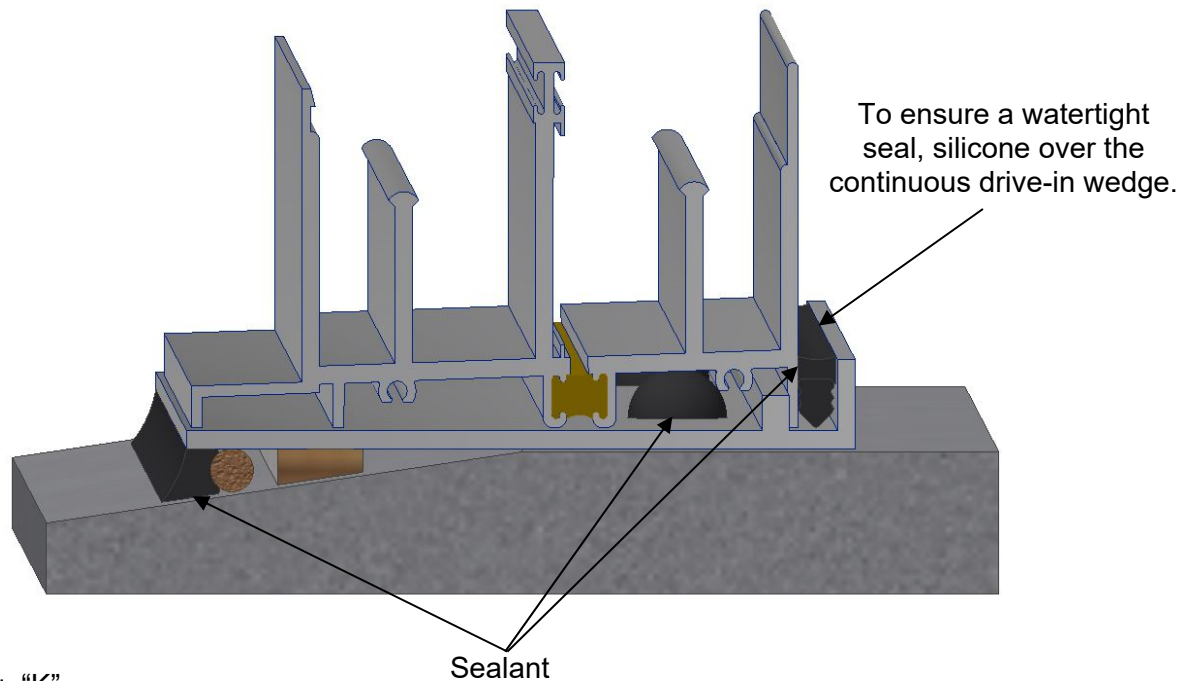


Fig. "K"

Note:

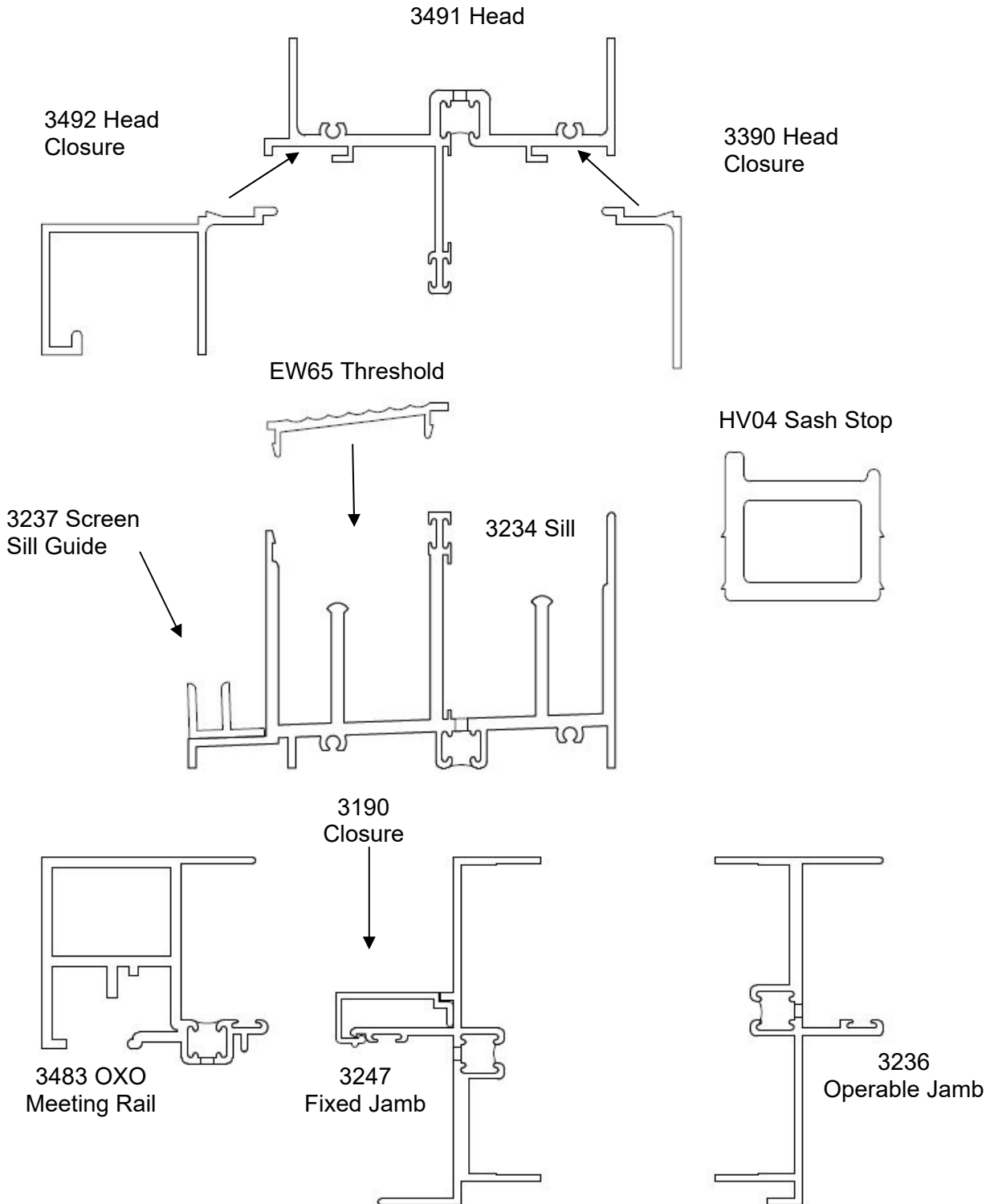
All sealant, interior and exterior, to marry one with another.

C. General Sliding Panel Inspection

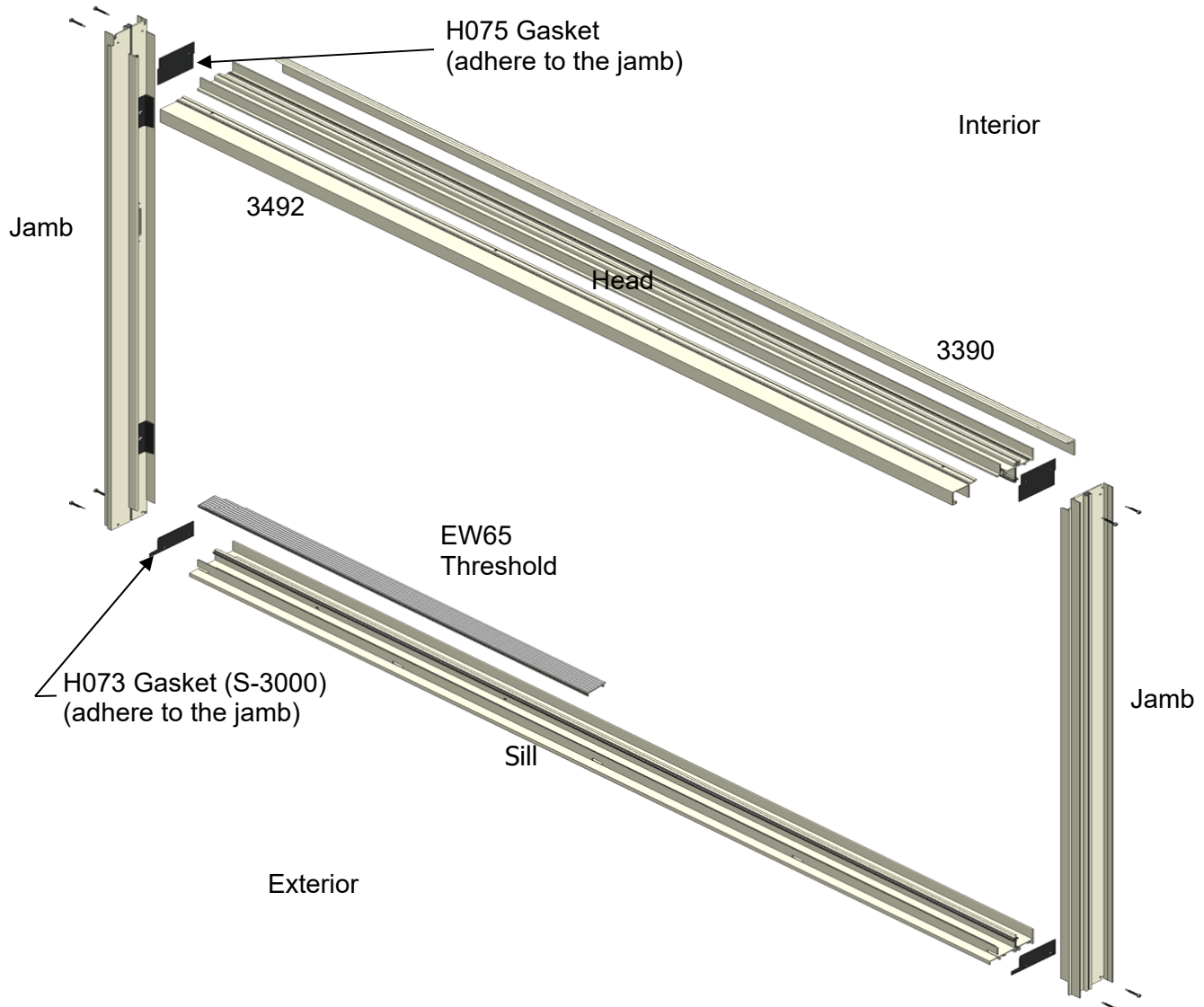
1. Upon completion of the Sliding Glass Door installation, all operating panels must be checked for proper alignment and operation. If the sliding panels are removed, care must be taken to ensure that sliding panels are reinstalled into the same frames they were removed from. It may be necessary to adjust the rollers and locking hardware to ensure proper sealing and locking. All hardware must be cleaned as necessary to provide smooth operation.

These recommendations are for general erection procedures only. For actual job conditions, see the details on the shop drawings. For perimeter anchor type and spacing, refer to the approved shop drawings or consult the project design professional.

SECTION III: Assembly Instructions



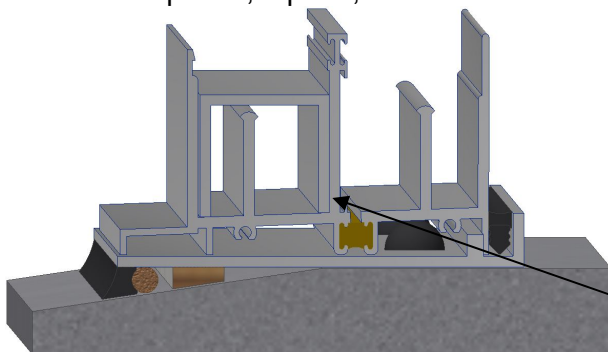
SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS



Locate 3236 and 3247 jambs. Adhere H075 head gaskets and H073 (S-3000) sill gaskets to the jambs. Gaskets have pressure sensitive adhesive on one side of the gasket. Match up the holes in the gasket with the holes in the jambs and adhere to the jamb.

Locate 3491 head and 3234 (S-3000) sill. Fasten the head and the sill to the jambs with SLQ6 screws (#8 x 1" PH-SMS 410 MG).

For proper door operation, position the doorframe in the opening by using shims as needed to ensure that the frame is plumb, square, and level without warp, twist, or bow.

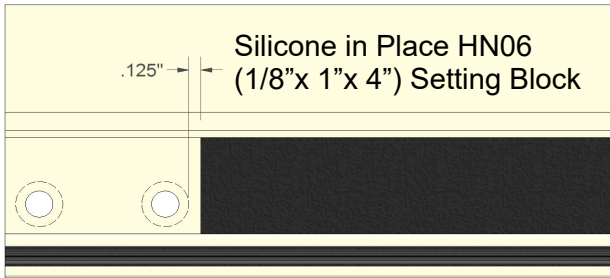


Lay the setting channels (FD28 S-3000) in the outside sill track at approximate quarter points of the fixed panel.

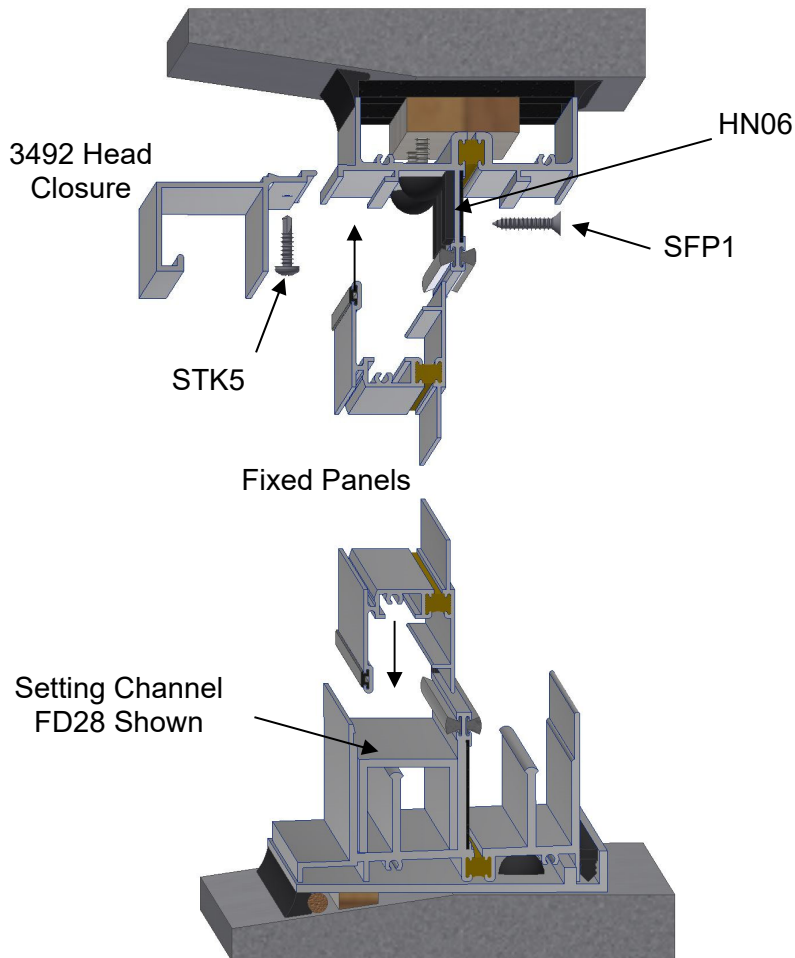
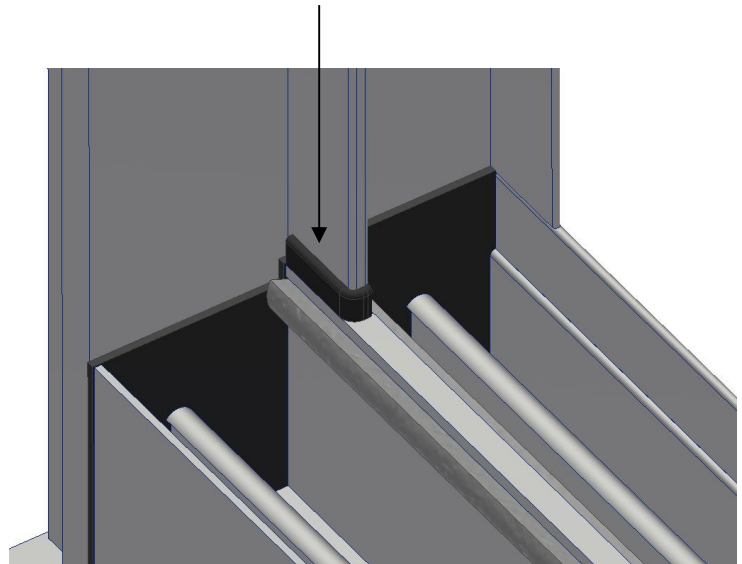
Setting Channel
FD28 Shown

SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

Before installation of the fixed panel, run a bead of silicone, at this intersection, on both jambs. Do this at the head and the sill.

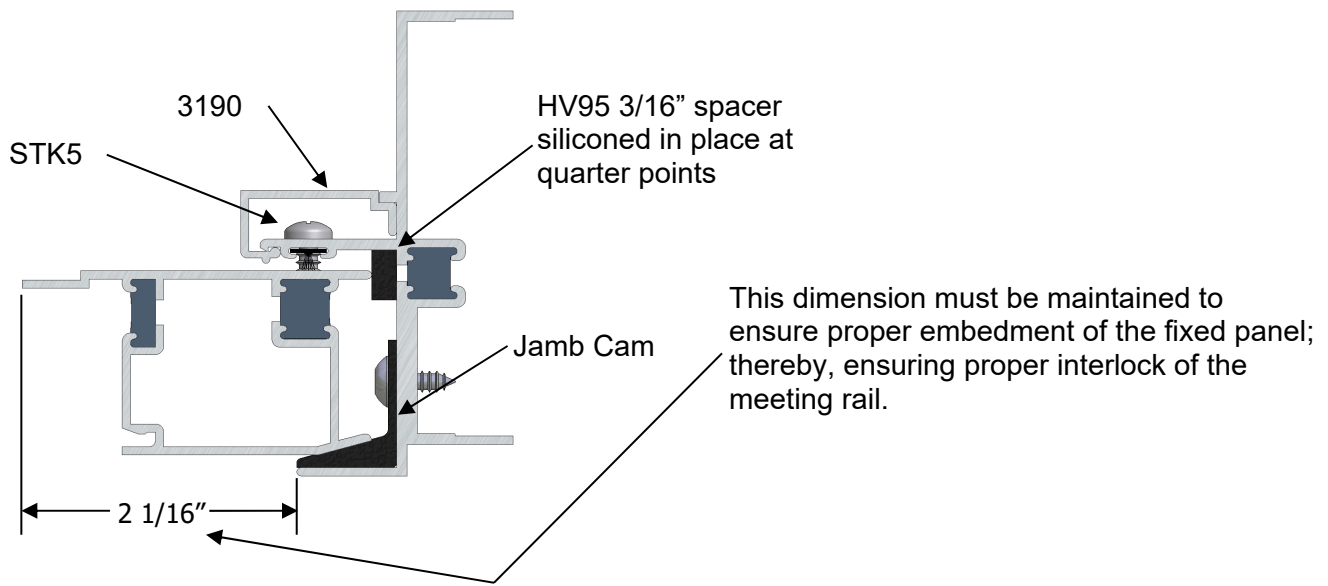


Before fixed panel is installed, verify that HN06 blocks are in place. This allows the interlocks not to interfere with one another after final assembly.



Install the fixed panel into the doorframe on the operable jamb side of the door. Locate 3492 head closure and install into the head. Through existing holes in the head closure, fasten STK5 tek screws (#10-16 x 3/4" PH 410 tek). Move the fixed panel into the fixed jamb and finish installing the STK5 tek screws in the head.

SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS



Located at the interior side of the head, where the meeting rail of the fixed panel tucks into the head, there will be two holes. After obtaining the 2 1/16" dimension at the jamb, match drill through the two holes with a 5/32" drill bit. Fasten SFP1 screws (#10-16 x 1" FH-SMS 18-8) through the two holes. (Fig P)

Through existing holes in the jamb, attach STK5 screws (#10-16 x 3/4" FH-SMS 410 tek). After the STK5 screws are attached in the jamb, slide die #3190 cover over the fasteners.

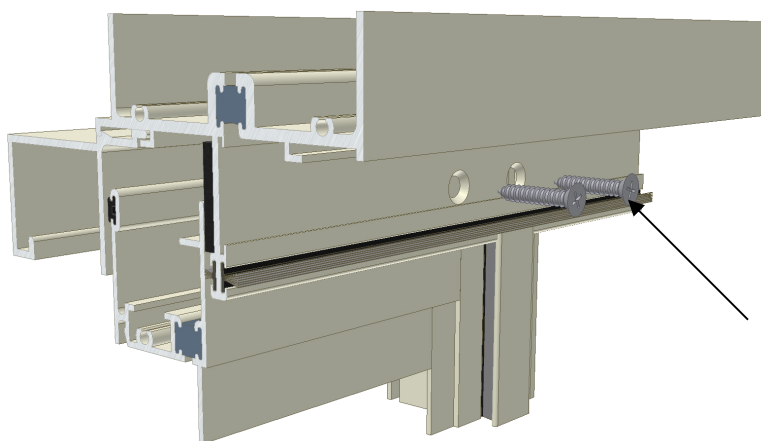
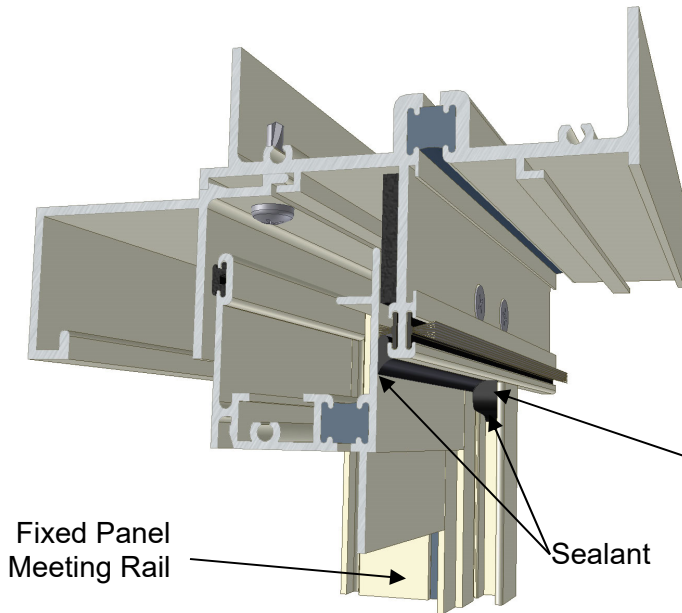


Fig. "P"

Fasten SFP1 screws after match drilling from pre-existing countersunk holes.

SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

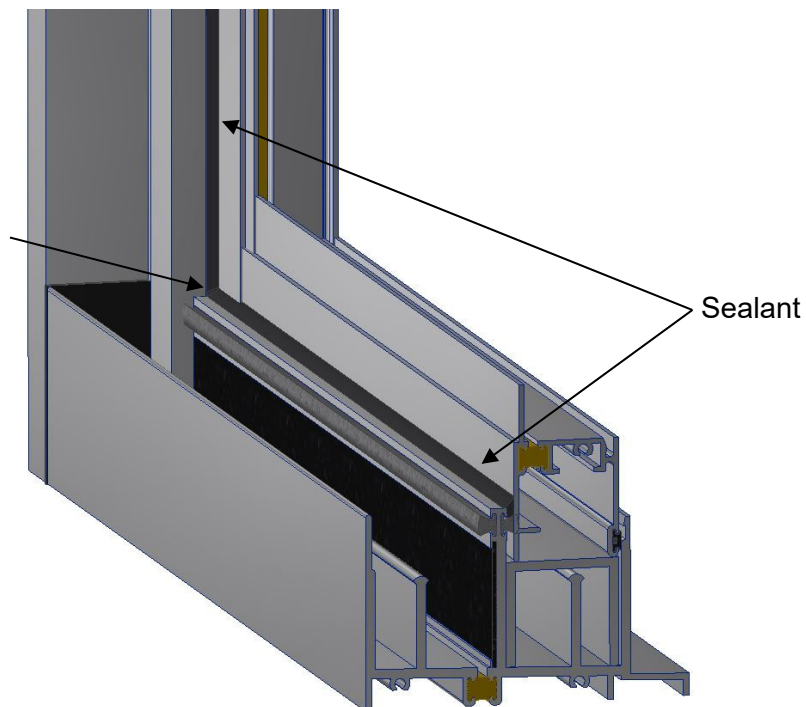


Important: The seal joint shown is the weathering seal that prevents air and water from entering around the fixed panel.

Apply a continuous silicone seal at the fixed panel to door frame along the parting stop at the head, jamb, and sill. The silicone seal must continue behind the meeting rail interlock to seal the meeting rail to the head and sill forming a continuous seal.

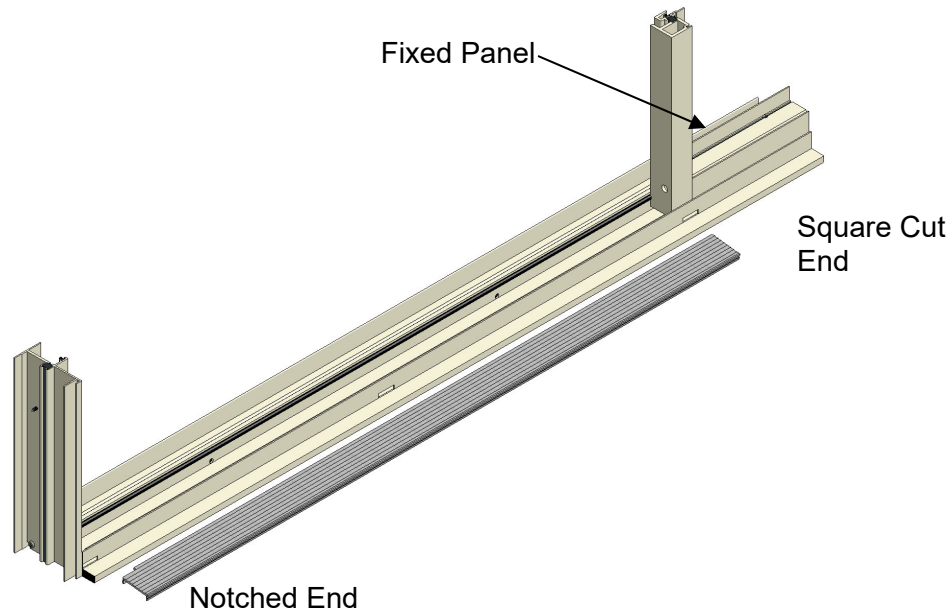
Note: To properly seal the fixed panel, the seal behind the meeting rail interlock must be done before the operable panel is loaded into the frame. If the fixed panel seal is to be applied at a later time, a partial seal behind the interlock pocket must be made before loading the operable panel. This partial seal should be the width of the meeting rail sightline. The sealant applicator can then marry the perimeter fixed panel sealant with the sealant already applied in the interlock pocket after loading the operable panel.

Marry the continuous silicone seals of the fixed panel bottom rail along the sill and the fixed panel side rail along the jamb, where they intersect.



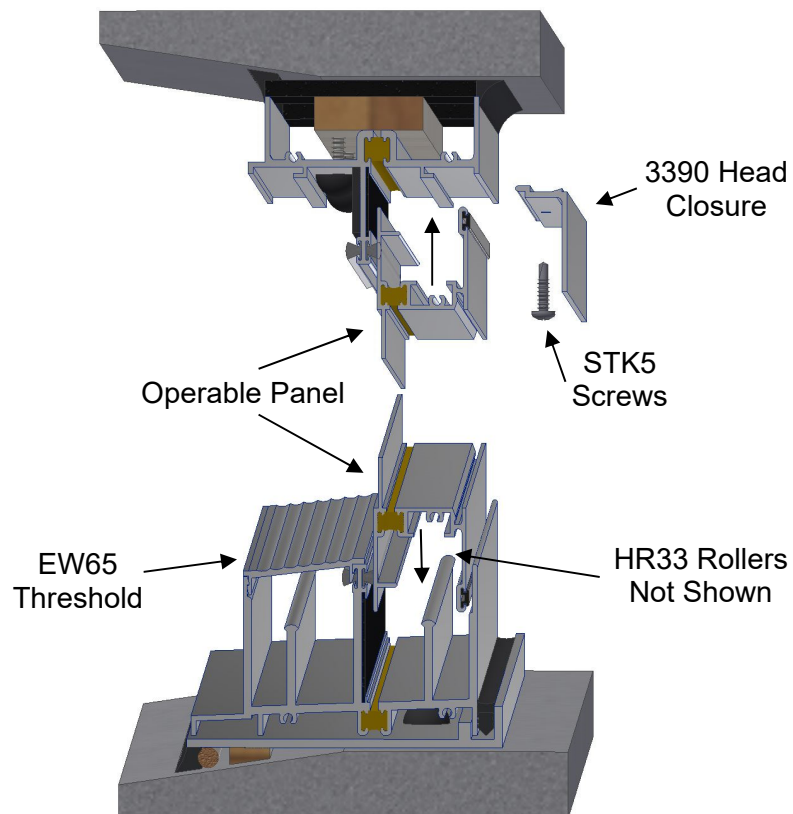
SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

Installing the Threshold: The threshold is shipped long with a notch in both ends for field fit. One of the notched ends is to fit into the jamb recess, and the other end is to be square cut and fitted against the fixed panel meeting rail. Snap the threshold into the exterior track of the sill between the jamb and the fixed meeting rail. Be sure the long lip on the threshold is towards the interior.



Locate and install the operable panel onto the sill track. Position the operable panel to one side of the door. (See next page for OXO locking side meeting rail installation.) Locate 3390 head closure and install up into the head. Through existing holes in the head closure, fasten STK5 tek screws (#10-16 x 3/4" FH-SMS 410 tek). Move the operable panel to the other side of the door and finish installing STK5 screws.

Press HV04 rubber stop into the interior track at the head. One end will butt against doorjamb.



SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

Hardware Adjustment:

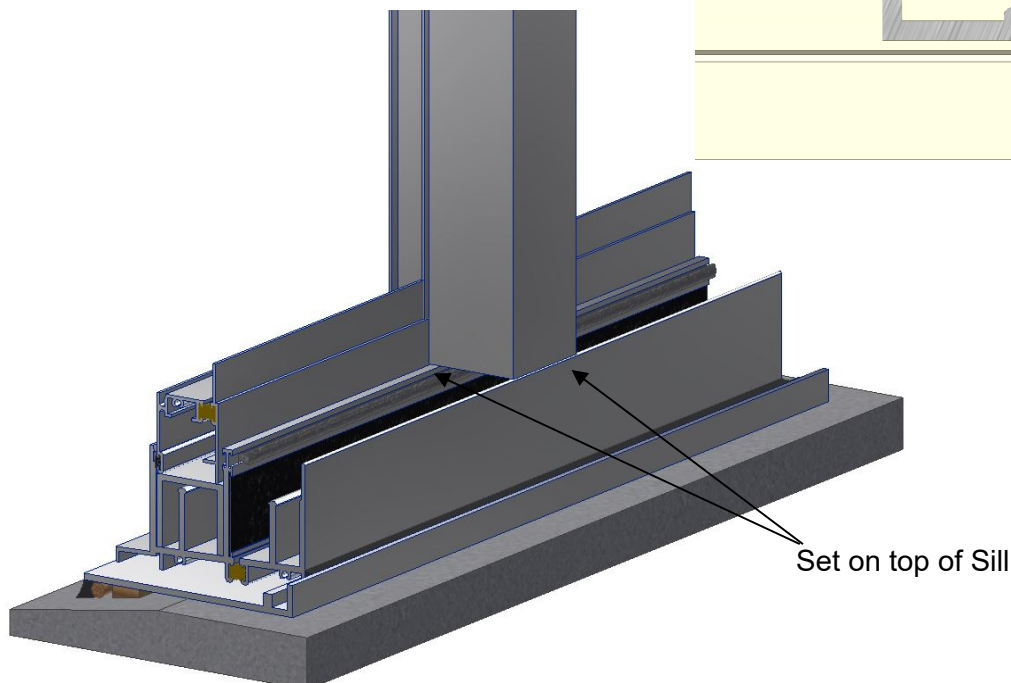
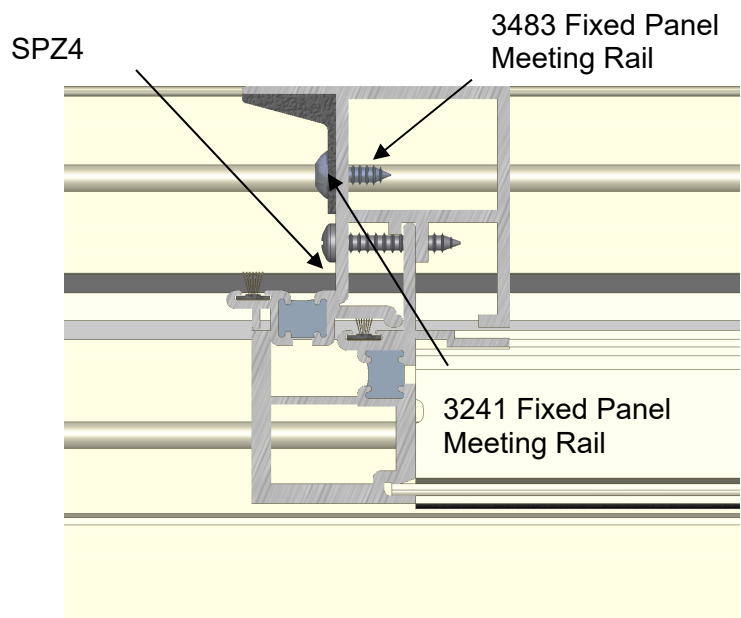
Adjust the rollers for a plumb and equal sight line with the fixed lite panel.

Adjust the lock throw to the most extended position by turning the adjusting screw clockwise.

OXO Locking Side Fixed Panel Meeting Rail Installation: (Does not pertain to OX, XO, or OXXO doors): Locate OXO fixed panel meeting rail. Install fixed panel meeting rail by setting the meeting rail on the operable panel side of the sill. Match drill through existing holes on the meeting rail to the fixed panel meeting rail. Fasten with SPZ4 screws (#8-15 x 1" PH-SMS 18-8).

Locate 3390 head closure. The length of the closure is shipped long for field fit. Cut the length required for one side after the meeting rail has been attached. Measure and cut the other side, installing both lengths into the head. Through existing holes in the head closure, fasten STK5 screws (#10-16 x 3/4" FH-SMS 410 tek). Move the operable panel to the other side of the door and finish installing STK5 screws.

Install threshold in the exterior track of the sill between the two fixed meeting rails. Place notched end of the threshold toward the locking fixed meeting rail. The other end should be square cut for a tight fit.



SLIDING GLASS DOOR INSTALLATION INSTRUCTIONS

Screen Installation: Locate the screen. Guide the screen rollers through the notches located in the head. With the screen slightly tilted outward, roll to the operable panel side of the door. Locate 3237 screen sill guide and position guide as shown. Fasten with STC7 screws (#6-18 x 3/8" FH-SMS 18-8) after match drilling through existing holes in the sill guide with a 7/64" drill bit. Attach FF05 screen stops, into the existing holes, located at the screen head rail and the screen sill rail.

