



Assembly and Installation Manual

Kent



Vinyl Patio Door



KENT DOOR

DETAILED INSTALLATION INSTRUCTIONS

07/2019 rev.3

Door elevations are shown from the **OUTSIDE VIEW**.



XO DOOR

'X' denotes the active or operating panel(s).

'O' denotes the inactive or fixed panel(s).



OX DOOR

NOTE: If you have purchased a pre-assembled door, it may be necessary to remove the panels before moving the door around the construction site. Rough handling could damage joint assemblies which could result in reduced product performance.

ROUGH OPENING

The rough opening should be made 3/4" - 1" wider and 3/8" - 1/2" higher than the actual door frame size.

		Frame		Rough Opening	
<u>Size</u>	<u>Width</u>	<u>Height</u>	<u>Depth</u>	<u>Width</u>	<u>Height</u>
5068	59-1/2"	79-1/2"	5-7/8"	60-1/2"	80"
6068	71-1/2"	79-1/2"	5-7/8"	72-1/2"	80"
8068	95-1/2"	79-1/2"	5-7/8"	96-1/2"	80"

The base of the opening must be solid, level and of sufficient width and depth to support the entire door sill in a continuous and uniform manner.

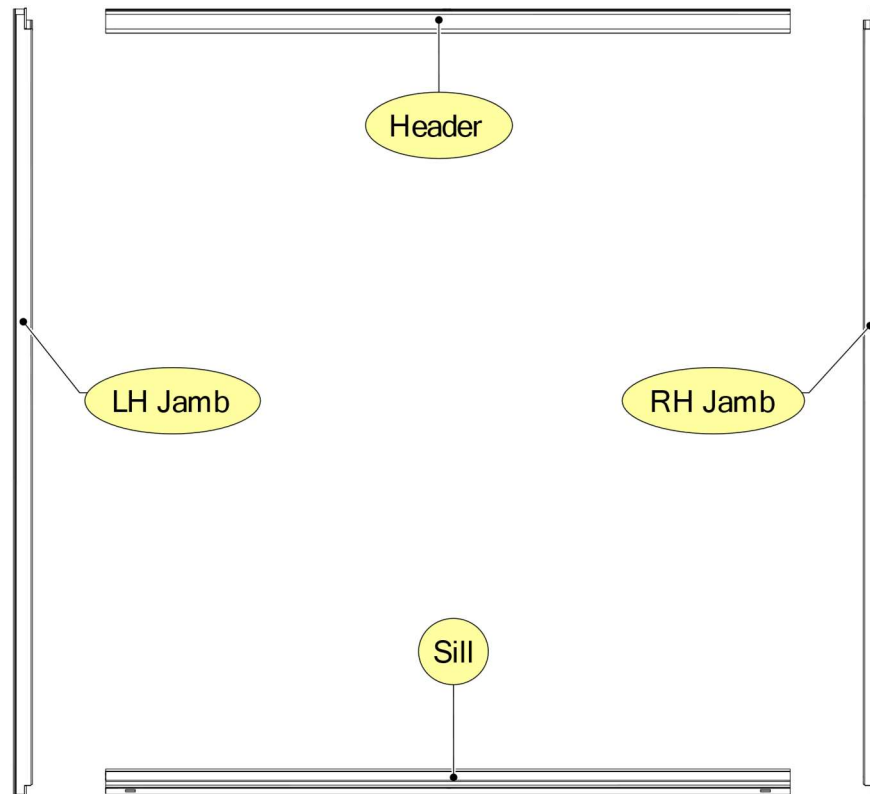
It is important that the opening be plumb and square, as the door will not perform to its potential if installed into an improperly prepared opening. Diagonal measurement should be $\pm 1/8"$.

List of Screws Provided:

Screw Type	Quantity	Location Used
#10x3" washer-head pan screw	16	Frame corners
#10x1 3/4" pan head screw	15-16	Fixed panel support, jamb adapter
#8x1 1/2" flat head screw	1	Fixed panel support end block
#8x1" flat head screw	5-7	Fixed panel
#8x1" pan head screw	1	Anti-lift block
#8x1 1/2" pan head screw	2	Rollers

MAIN FRAME ASSEMBLY (for Knocked Down (KD) doors)

If you have purchased an assembled door, go to "Frame Installation" step (following page).



The frame consists of 4 main members:

Header, Sill, Right Jamb, Left Jamb.

All main frame members are machined so that they may be assembled in only one way. Lay out the framing members as shown in diagram.

Ensure that the foam gaskets adhered at the top and bottom of the jambs are in good condition and **replace if they appear torn or defective.**

Use #10x3" screws provided to fasten the header and sill to the jambs through the factory drilled holes making sure the screws are drawn tight.

FRAME INSTALLATION

The main frame is always installed with the drainage to the outside. **Ensure that the drainage slots are located on exterior.**

The chart below is a basic anchoring guideline only intended for use by qualified and experienced installers with extensive knowledge in how to securely anchor a door to the building structure. It is a guideline for installations in houses or low-rise buildings in mild exposure areas. It is recommended that anchoring guidelines be reviewed by a structural engineer.

Anchoring Requirements: (Number of Fasteners)

Frame Component	Up to 86" width	86" - 192" width	Up to 82" height	82" - 96" height
Sill	NONE	Minimum ONE at meeting rail or astragal #8x2½" or similar substrate appropriate fastener	--	--
Header	ONE #8x2½"	THREE #8x2½"	--	--
Jamb	--	--	FIVE #8x2½"	SEVEN #8x2½"

The sill must be installed level and uniformly supported from end to end and from front to back. Use a level and use solid shims if necessary, to compensate for unevenness in the opening.

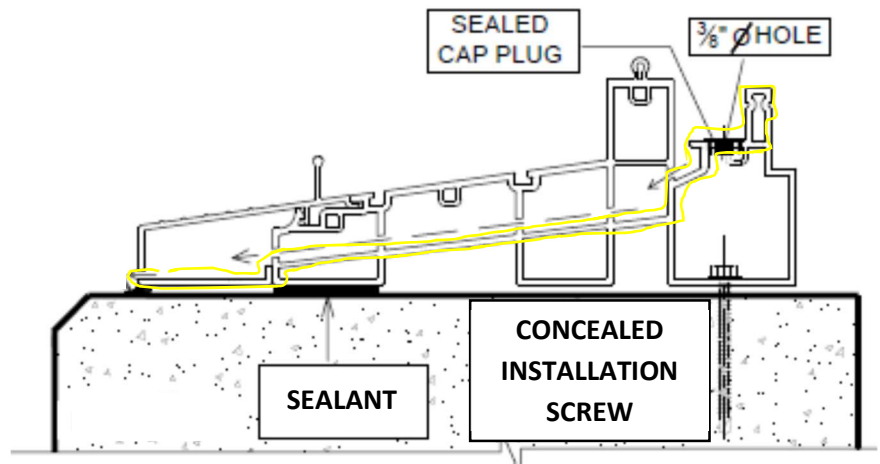
It is highly recommended that screws are not driven vertically down through the sill to prevent possible leaks. Two anchoring methods are shown below; Screw through sill procedure, and Aluminum angle procedure.

The optimal method is to install an angle or sill plate on the subfloor.

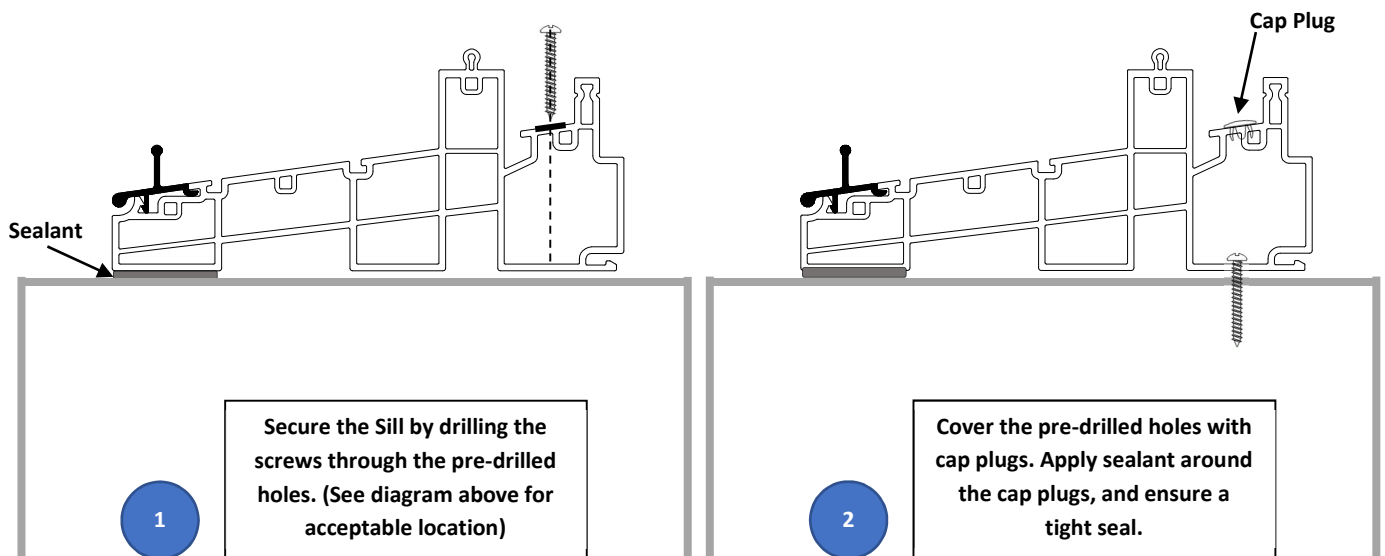
SCREW THROUGH SILL PROCEDURE:

In the event that the use of screws to fasten down the sill **CANNOT be avoided**; it is the **responsibility of the installer** to drill 3/8" diameter clearance holes for concealed screws.

These holes **must AVOID penetrating the drainage channels** inside the sill and may only be applied where shown in diagram.



The use of cap plugs is recommended for aesthetic reasons to fill the 3/8" diameter screw clearance holes and to conceal the installation screws. Cap plugs must be fully sealed and water tight. All screws must engage the surrounding structure **at a minimum of 1" depth**.



ALUMINUM ANGLE PROCEDURE:

Secure the aluminum angle to the substrate, using a screw suitable for the substrate. Be mindful of the placements of the voids in the sill profile. The screw should fit inside these voids to ensure the sill is installed flat. See the diagrams below for a visual explanation.

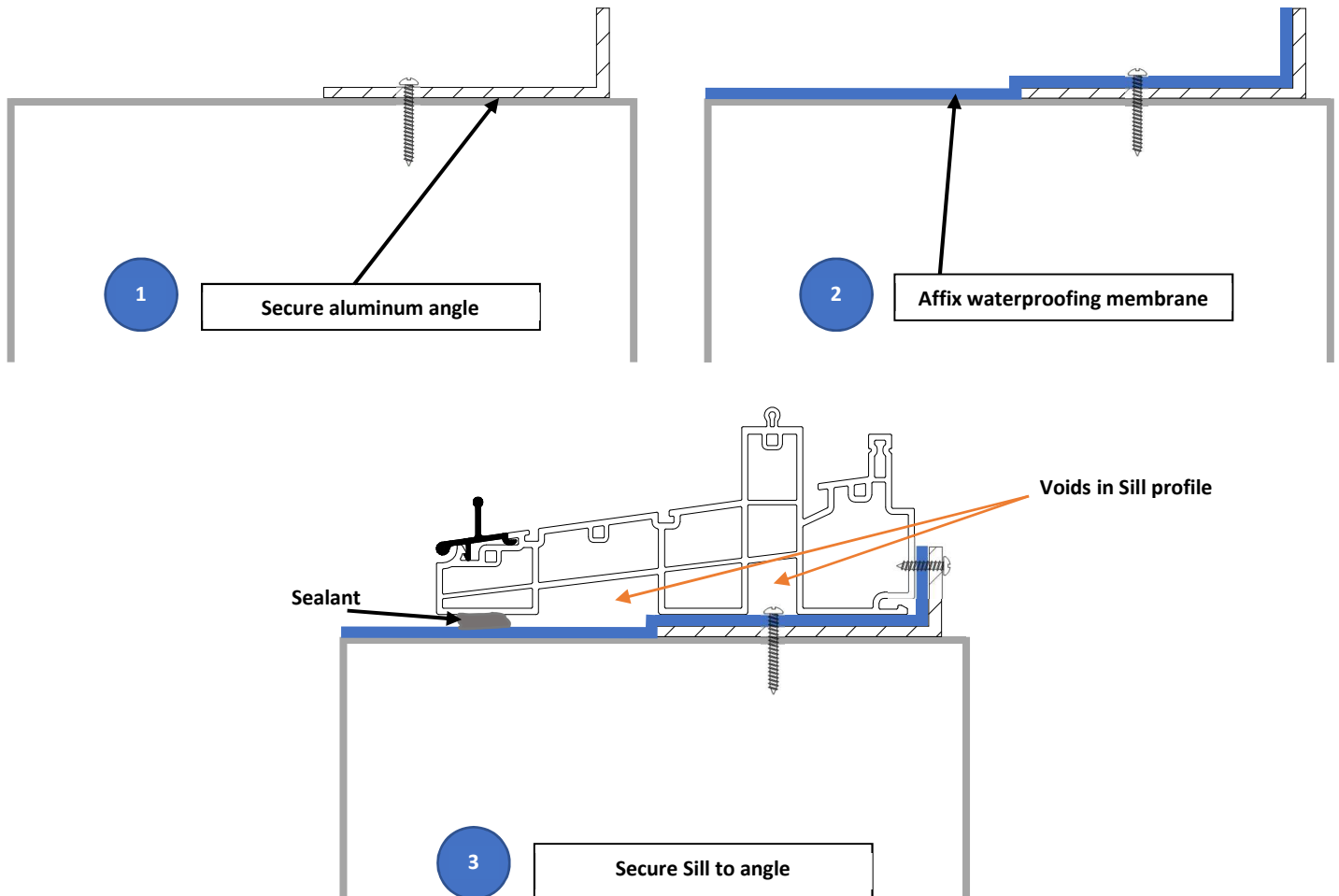
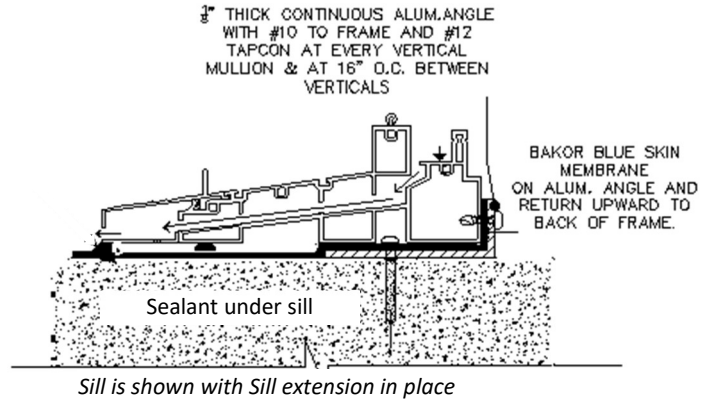
Apply a waterproof membrane (such as Blueskin®, Grace Ice and Water Shield®, etc.) along the sill plate to the outside of the sill. If the sill extends beyond angle or sill plate, install shims to level the sill.

Apply a heavy bead of good quality urethane, butyl, or appropriate silicone caulking, along the full width of the sill opening.

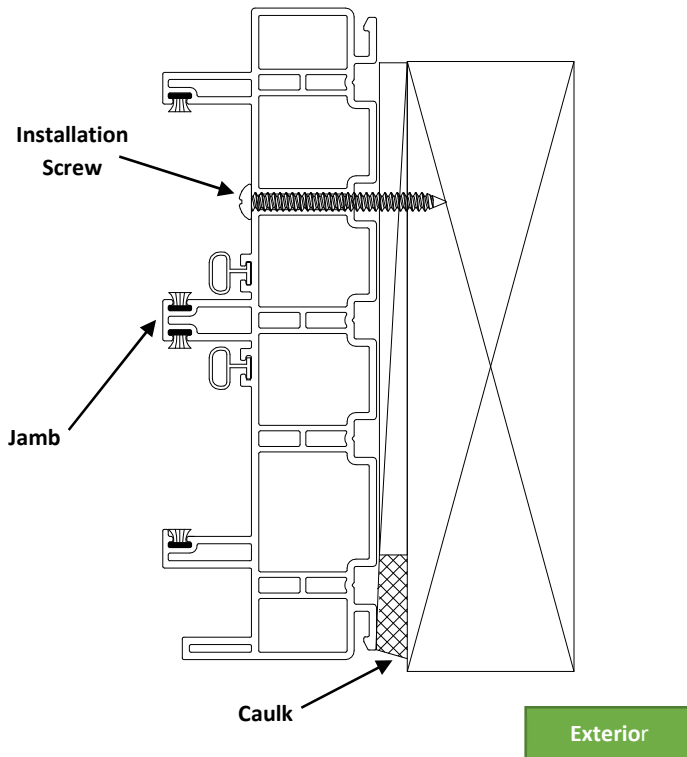
Inset $\frac{1}{2}$ " from the line the sill will be installed to (excluding sill extension if provided).

Ensure that the front of the sill will embed into the sealant.

Insert the main frame into the opening and center the door frame leaving equal clearance at both jambs.



The jambs must be fastened within 6" of each corner and at a minimum of 18" on center.

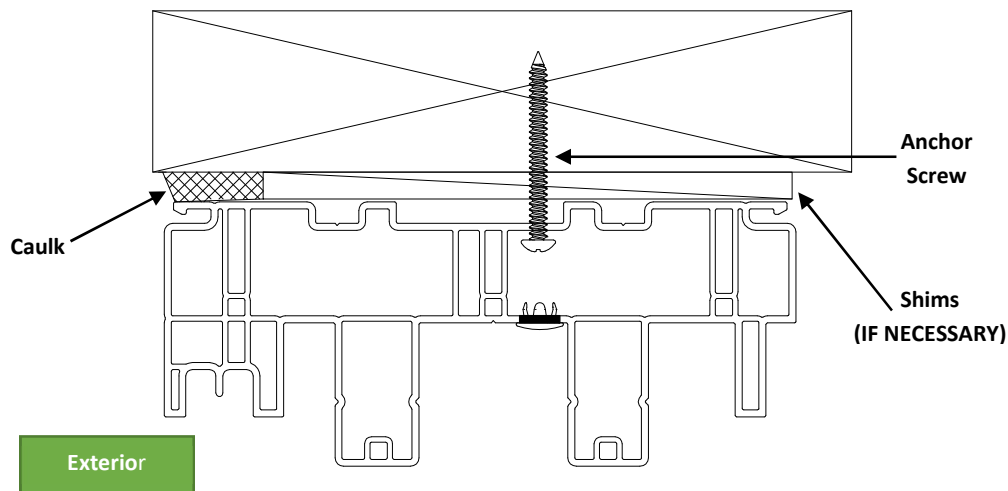


Set shims behind frame installation holes.

Using a level and measuring diagonally, **check that the frame is straight, plumb and square**, and adjust the shims if necessary. Securely fasten all screws, with the exception of the mid span screw on the operating panel side.

Buckingham Eco doors may require extra attention with shims at center of jambs and header.

The header must be anchored at each meeting or parting rail.

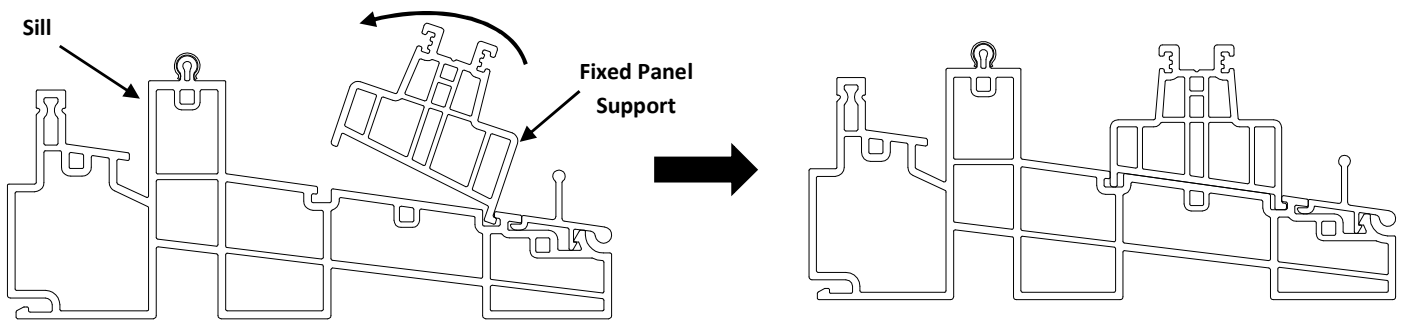


NOTE: For installations in high rise buildings or high wind areas, the quantity, size, type, and engagement of the fasteners and the supporting shims must be engineered and is the responsibility of the installation contractor.

INSTALLING THE FIXED PANEL SUPPORT

1

Place fixed panel support leg in sill groove and rotate it to clip on sill.

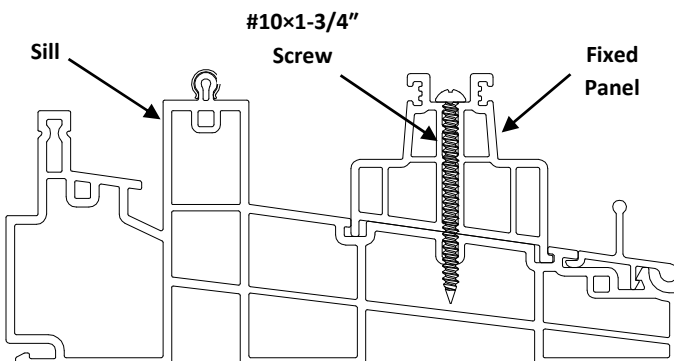
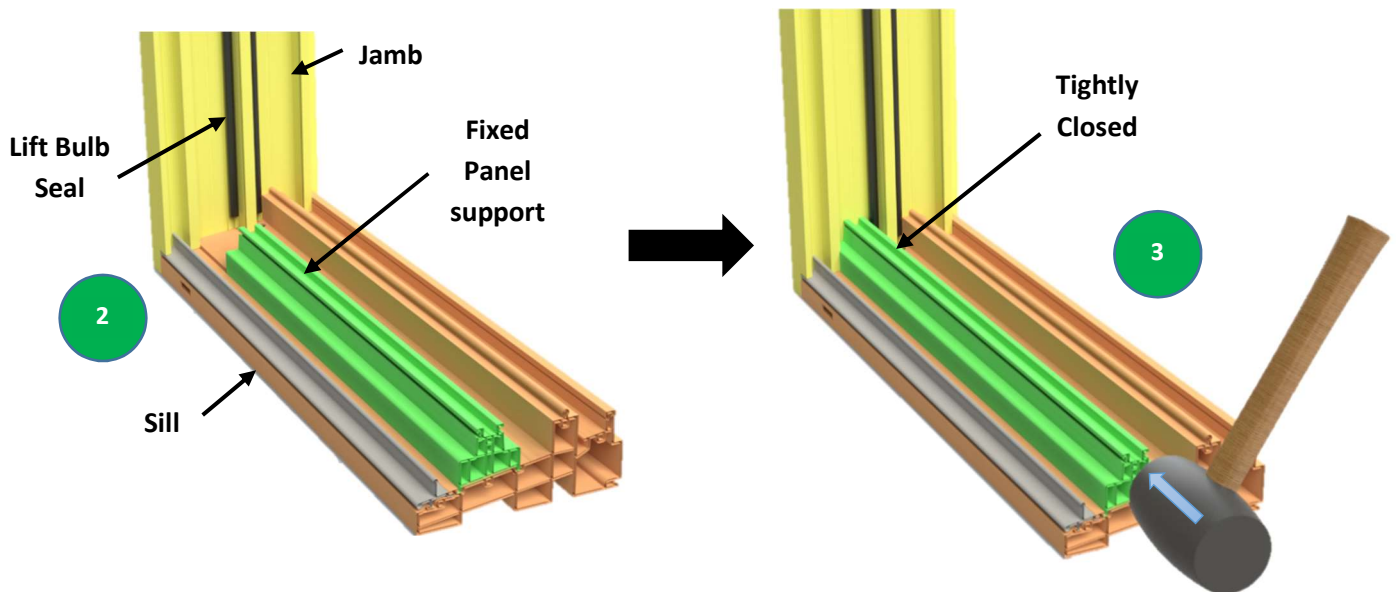


2

Lift the bulb seal in non-operating side jamb.

3

Slide fixed panel support tight against jamb. Use a rubber mallet if necessary.



Use #10x1- $\frac{3}{4}$ " Screws at every 12" to secure fixed panel support to sill.

INSTALLING THE FIXED PANEL SUPPORT END CAP

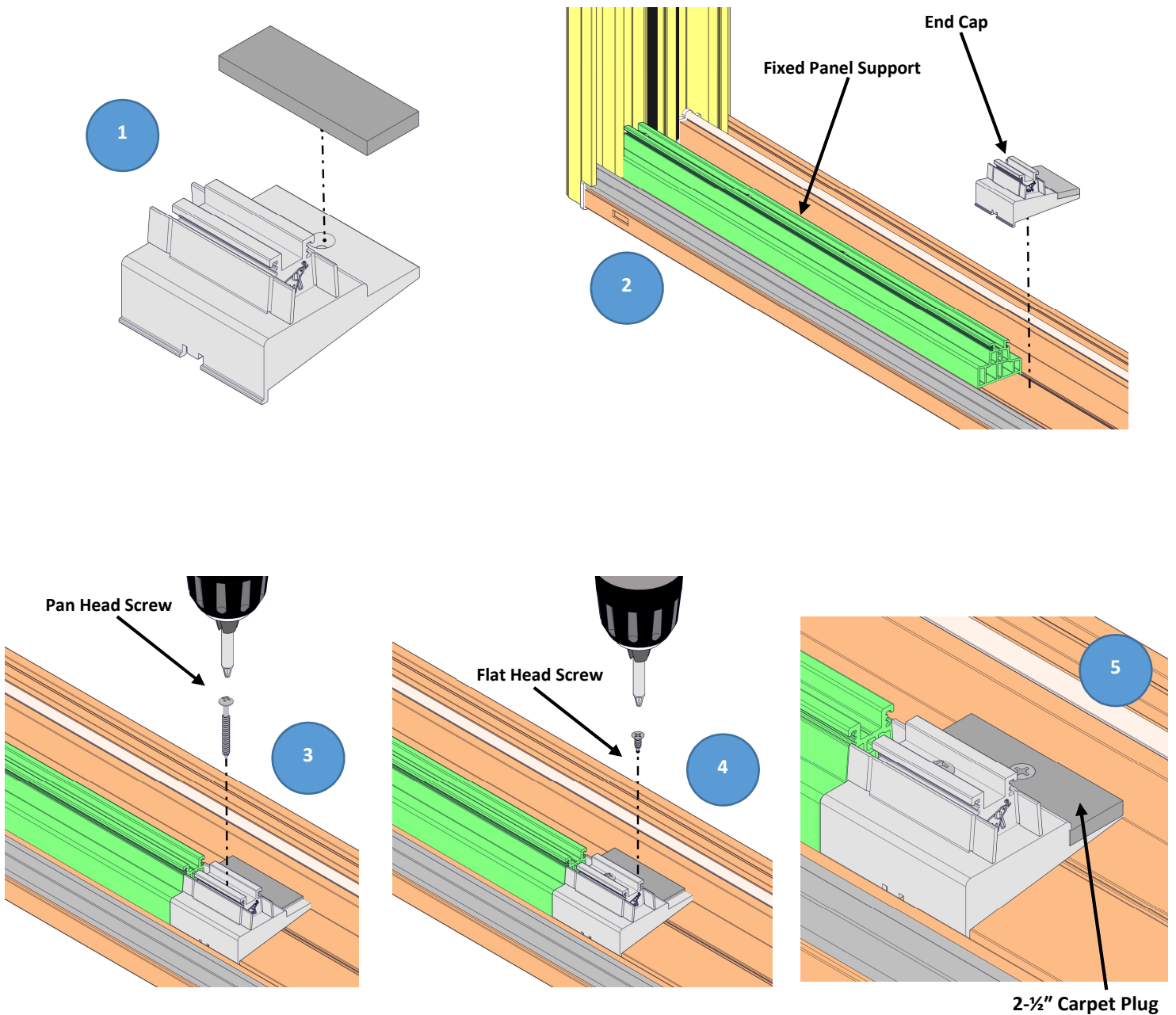
Peel backing on carpet plug to expose adhesive side.

Attach the 2-½" long carpet plug on top of the end cap as shown below.

Place the "Fixed Panel End Cap" against the open end of the fixed panel support.

Install the #10x1-¾" screw into the top surface of the end cap as shown in the third step.

Install the #8x½" screw into the carpet plug, and through the hole in the end cap to secure it.

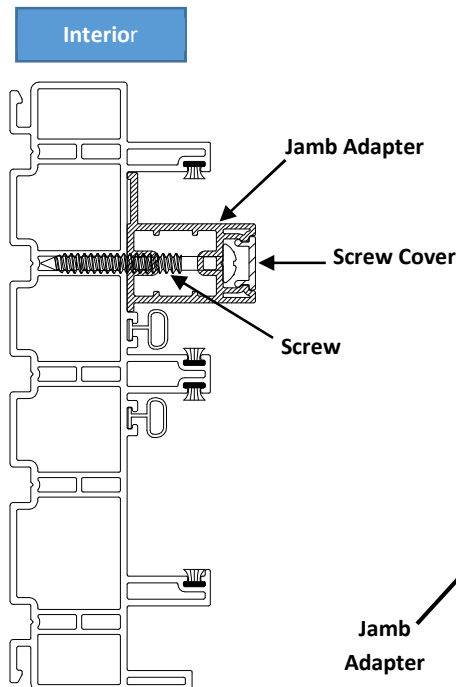
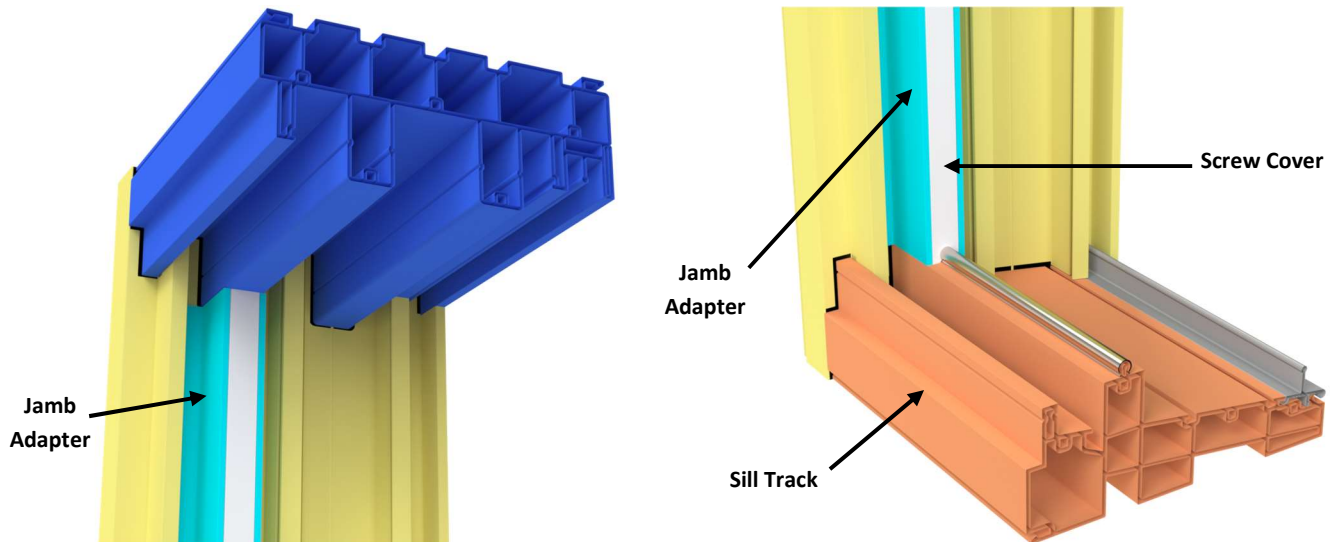


INSTALLING JAMB ADAPTER

Place the jamb adapter in the operating side pocket of the jamb with the slot mounted on the sill track.

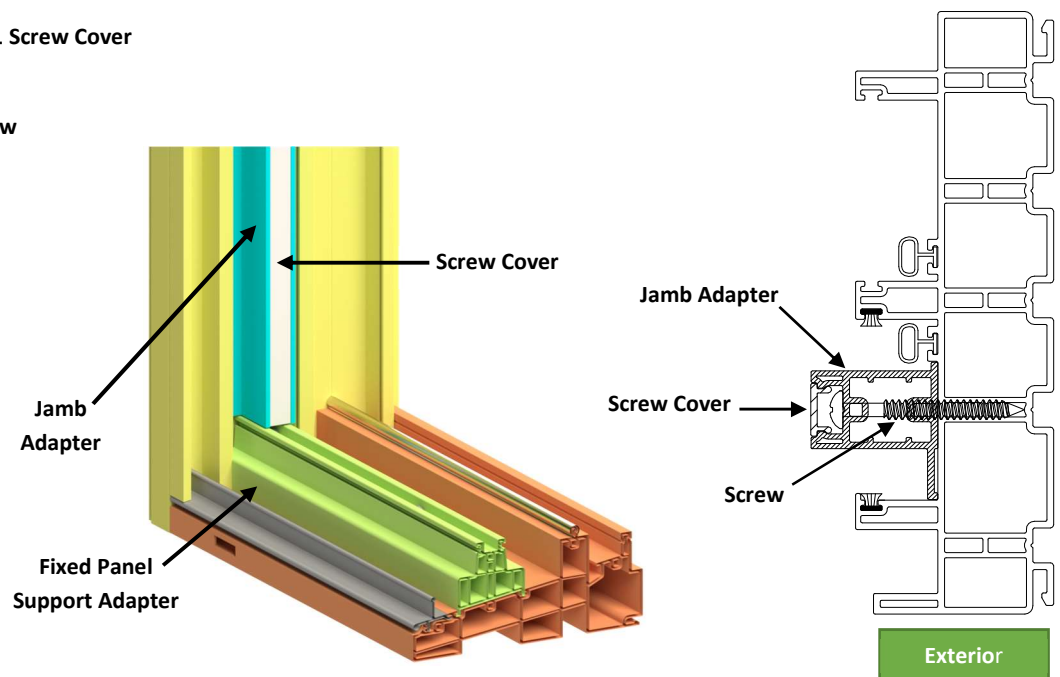
Use the #10x1- $\frac{3}{4}$ " screws to secure the jamb adapter to the jamb starting from 6" from the bottom and every 12" subsequently.

Install the two provided screw covers on the front face of the jamb adapter. Make sure that the bottom screw cover is touching the sill, and the top screw cover is touching the header leg as shown. There will be a gap in-between the screw covers, which is where the keeper assembly will be installed in a later step.

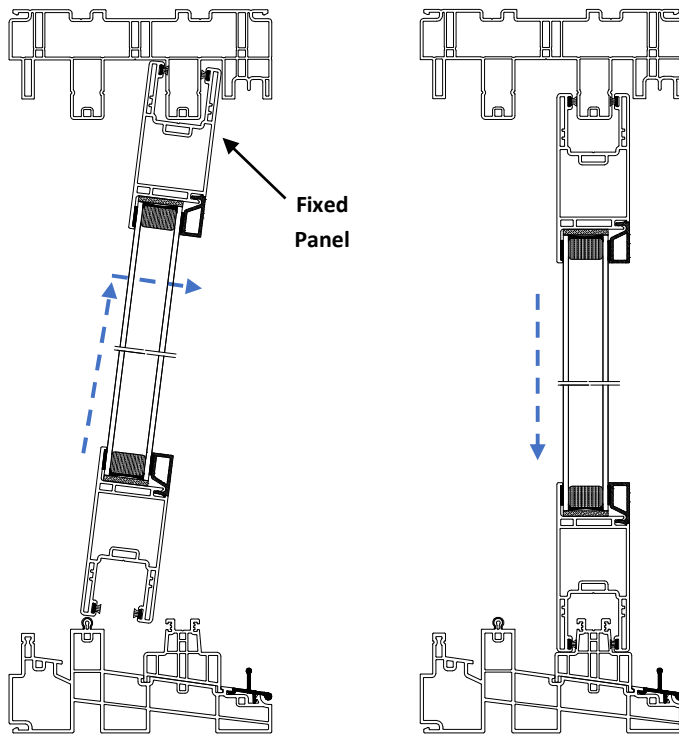


Repeat the previous steps for the jamb adapter on the fixed panel side.

Ensure the jamb adapter is sitting on top of the fixed panel support as shown in the diagram below. On the fixed panel side, the screw cover is one long piece.



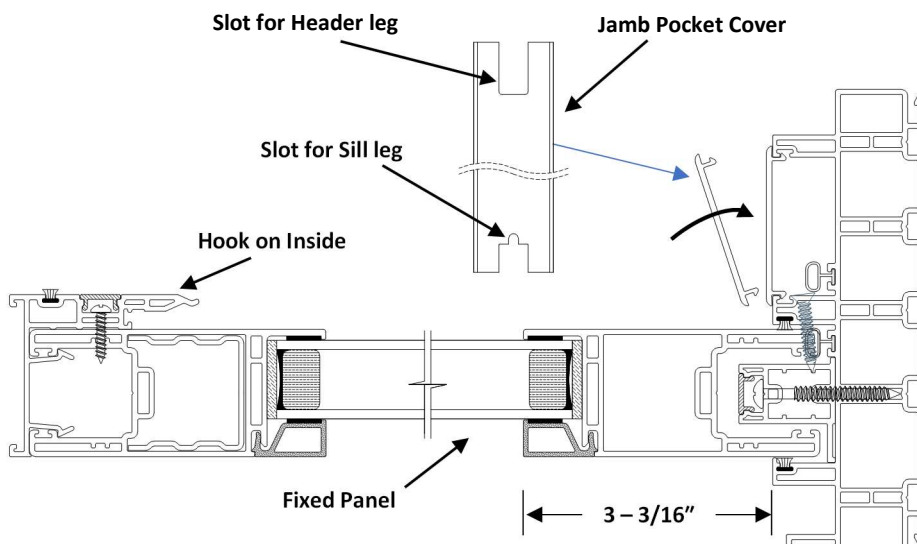
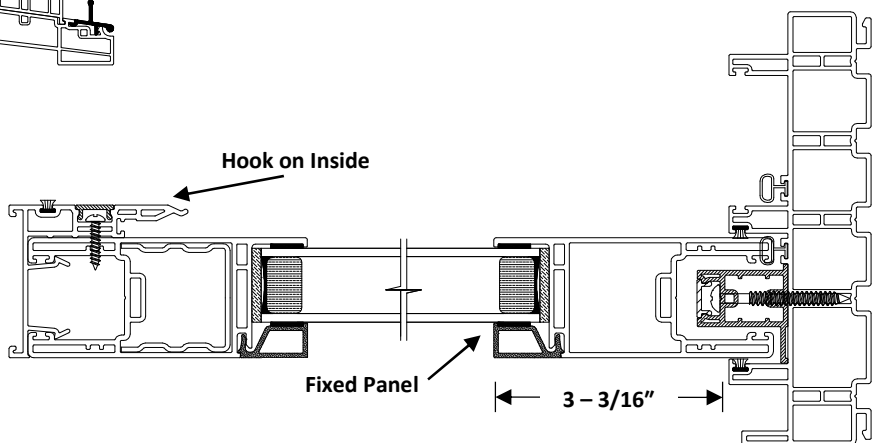
INSTALLING THE FIXED PANEL



Lift the fixed panel into the center track of the frame header.

Carefully lower onto the fixed panel support on the sill.

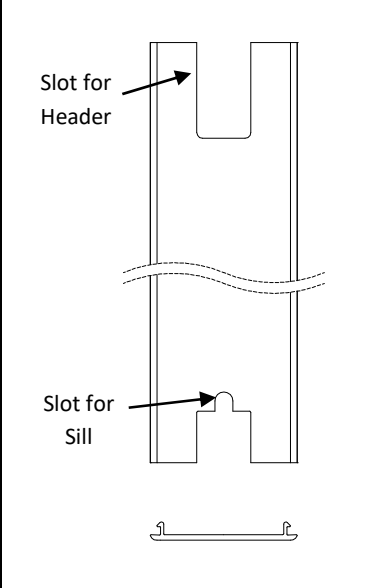
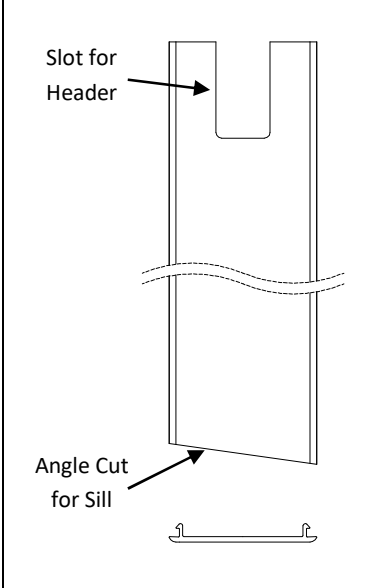
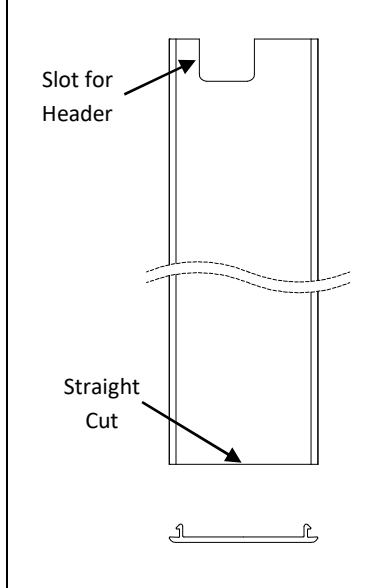
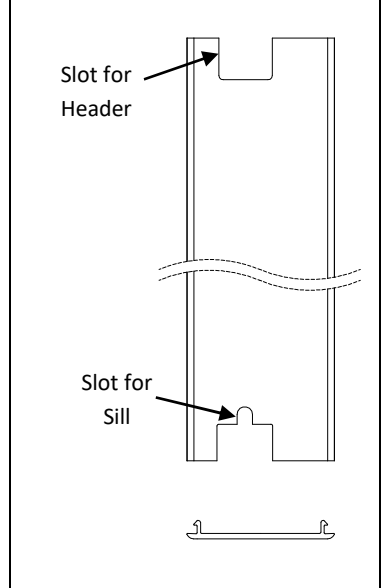
Push the fixed panel securely and completely into the jamb as shown in diagram. The meeting rail with interlocking hook and the pile weatherstripping should now be in the middle of the door facing inside.



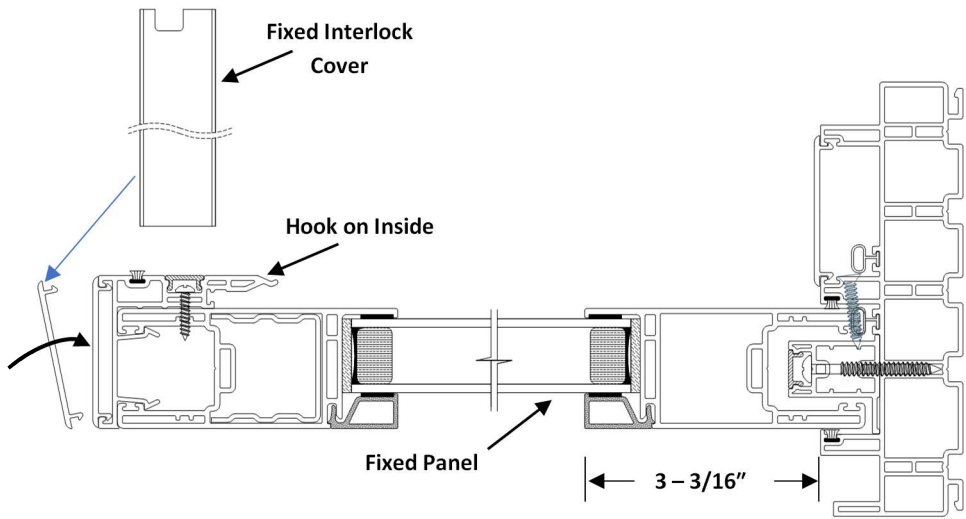
Apply temporary blocking to securely hold the panel snug in the jamb and fasten the fixed panel to the jamb by using five #8x1" flathead screws through weather-stripping channel into the jamb leg as shown in diagram. Ensure that no more than 3-3/16" of the panel is showing beyond the plane of the jamb. Snap fit the jamb pocket cover to close off the interior jamb pocket and hide the screws.

IDENTIFYING JAMB POCKET COVERS AND INTERLOCK COVERS:

NOTE: Please see the table below to identify the jamb pocket covers and interlock covers, as they have similar shapes.

JAMB POCKET COVER ON FIXED SIDE JAMB	JAMB POCKET COVER ON OPERATING SIDE JAMB	FIXED INTERLOCK COVER	OPERATING INTERLOCK COVER
			

Install fixed interlock cover as shown in diagram.



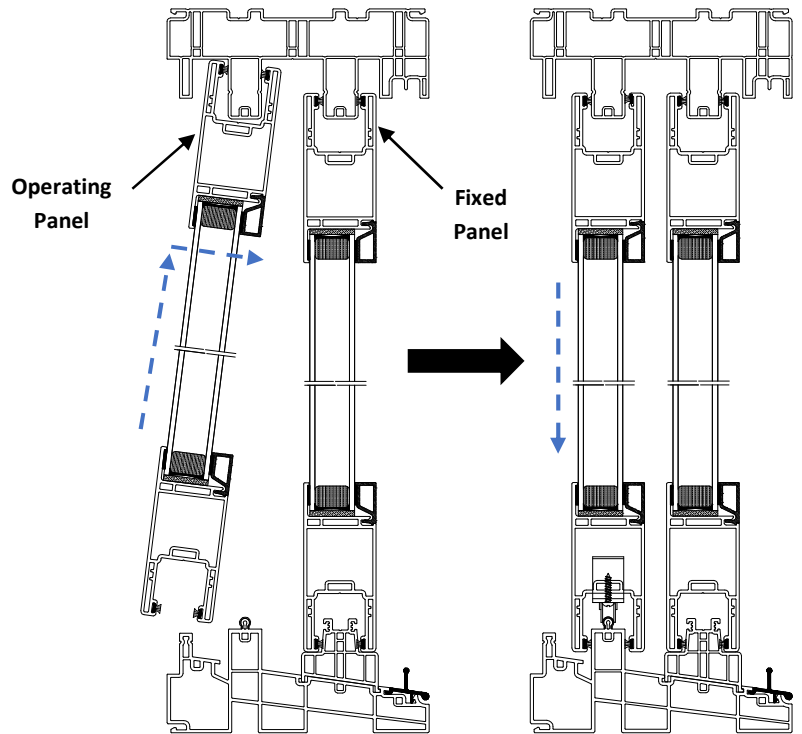
INSTALLING THE OPERATING PANEL

Firstly, depending on the handing of the door, install the rollers into the bottom of the operating panel into the pre-drilled holes. Use the #8x $\frac{1}{2}$ " screws provided. Ensure that the adjustment screw header on the roller assembly is facing outwards towards the end of the panel.

Lift the active panel into the inside track of the frame header and carefully lower the panel onto the roller track of the sill frame as shown in diagram.

Using a hand-held screw driver, adjust the rollers up or down so that the exterior bottom of the panel is riding $\frac{1}{2}$ " above the sill. See diagram below.

Turn the screw clockwise to raise the panel or counter clockwise to lower the panel as shown in the diagram above.

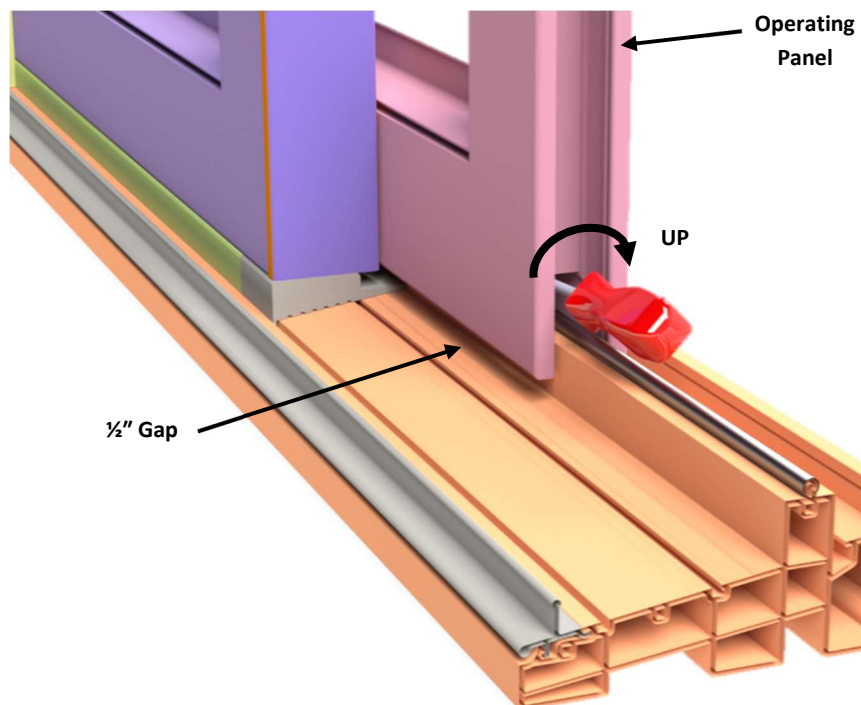


NOTE: It is recommended to lift the panel slightly when adjusting the wheels for ease of turning and to prevent thread stripping the adjustment mechanism.

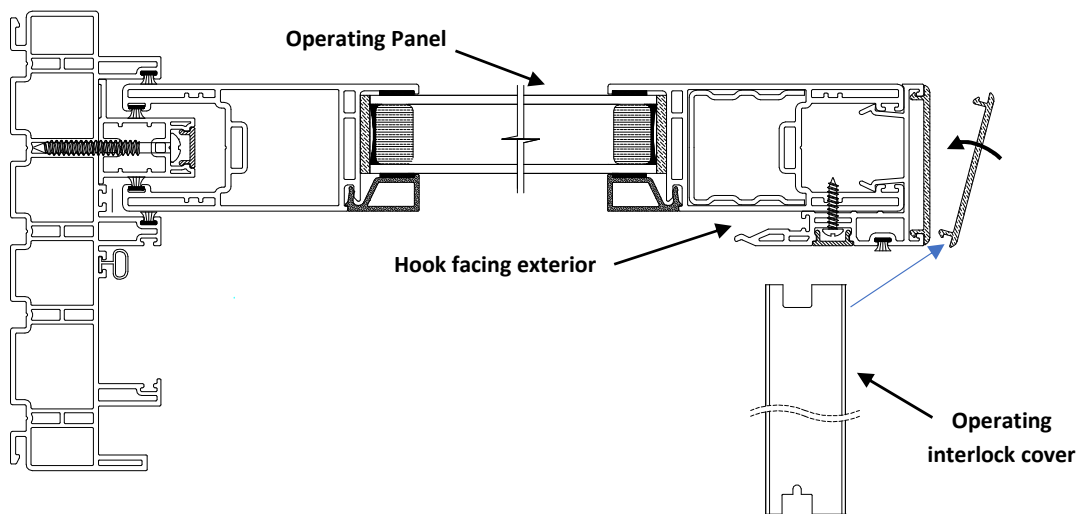
Slide the panel in the closing direction to within $\frac{1}{4}$ " of the jamb.

The gap between the panel and the jamb should be uniform from top to bottom. If not, adjust the panel up or down at one corner until the panel aligns to the jamb.

If the jamb is bowed, remove the installation screws, adjust the shims, and re-fasten.

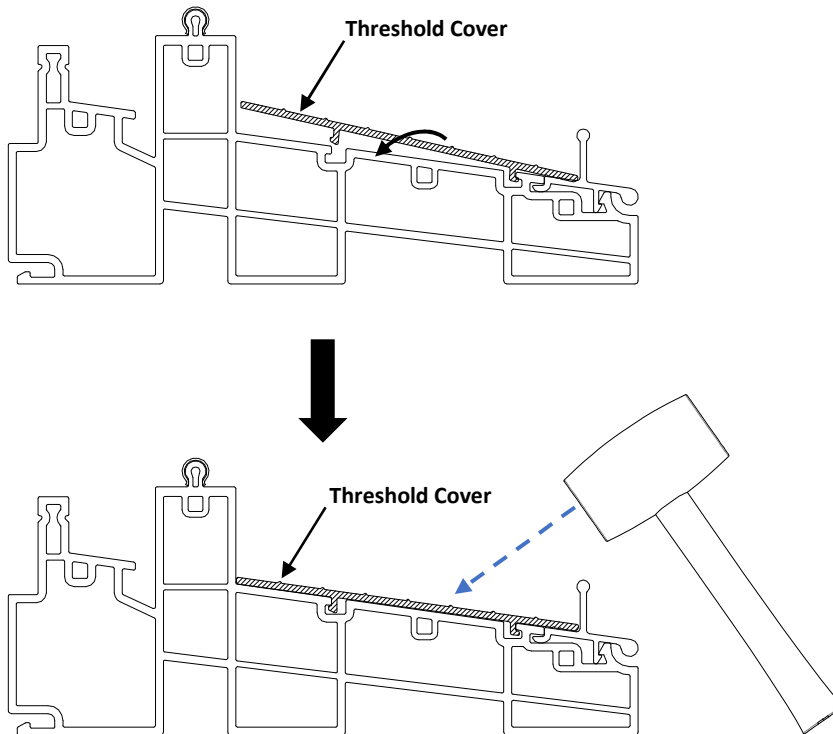


Once the panel wheels have been adjusted, install the operating Interlock cover as shown in the diagram below.

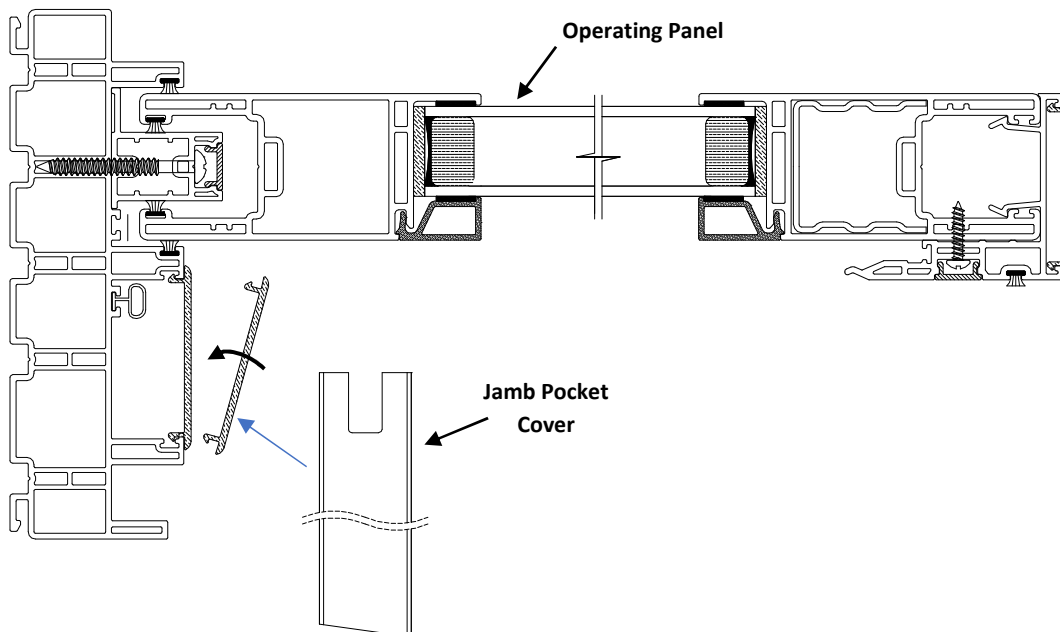


INSTALLING THRESHOLD COVER

Install aluminum threshold cover between fixed panel and operating side jamb. If needed, use a mallet to snap fit aluminum threshold on sill.

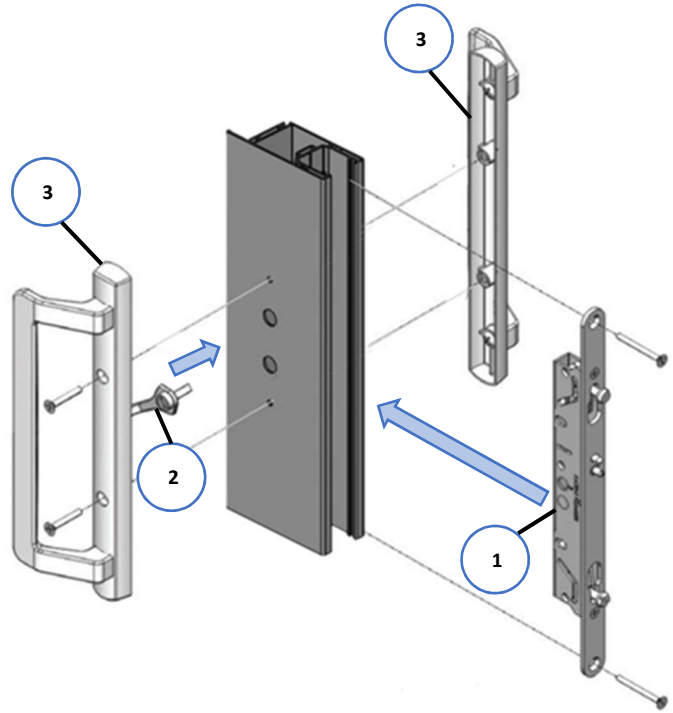


Once threshold cover is installed, snap fit jamb pocket cover to close exterior jamb pocket.



HARDWARE AND KEEPER INSTALLATION

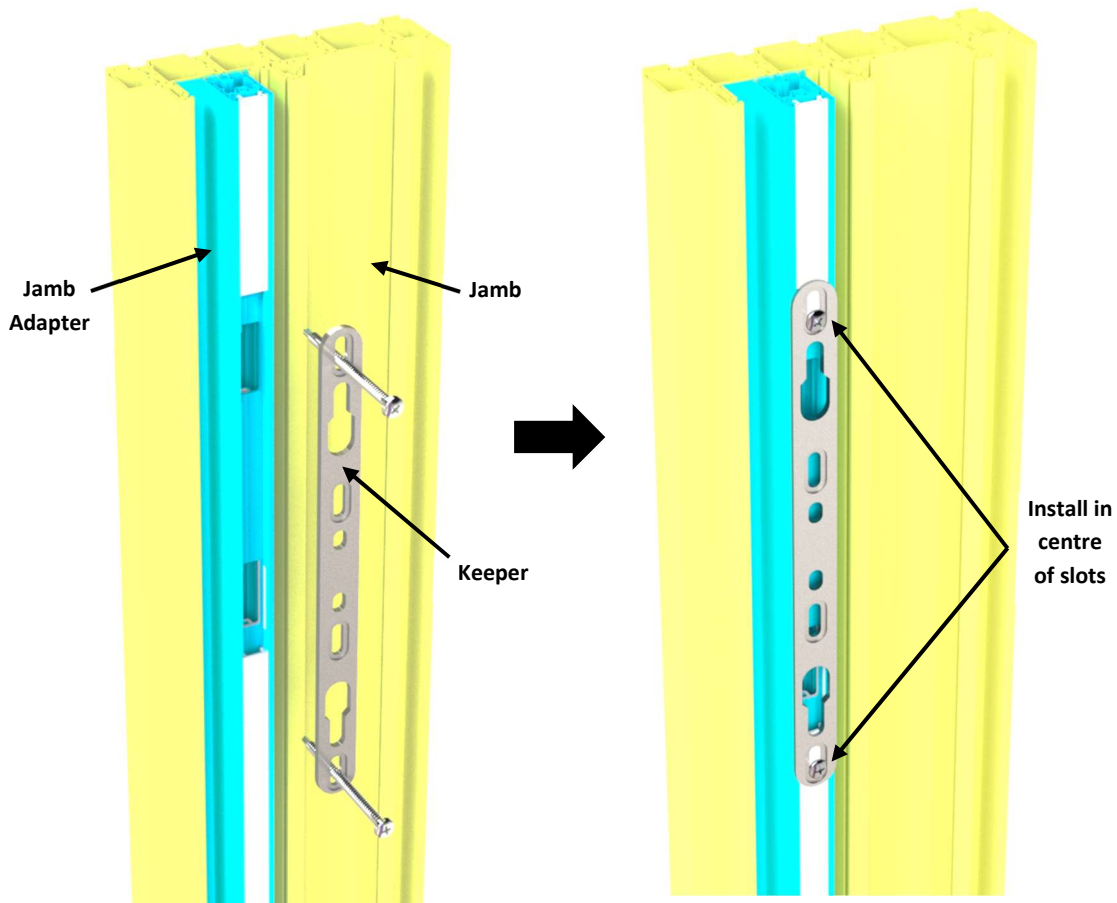
- 1 Install the lock mechanism into the pre-drilled slot in the side of the operating panel with the adjustment screw to the top and the striker hook facing upwards.
- 2 Insert the thumb lever into the slot on the inside of the lock mechanism as shown in diagram.
- 3 Install the interior and exterior pull handles with the screws provided from the inside. Ensure the exterior pull is installed as shown in diagram.



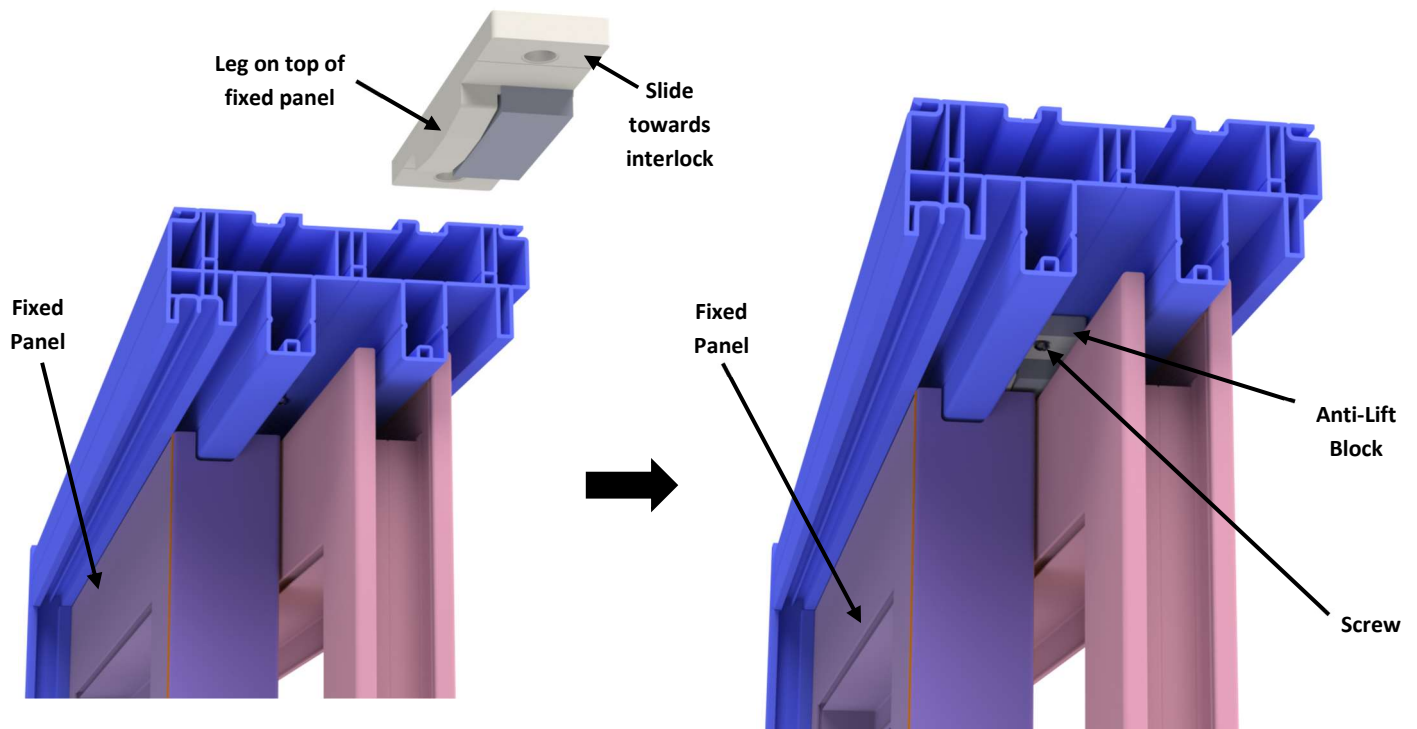
Attach the keeper to the Jamb adapter and into the surrounding structure with **two 3" screws** as shown in the diagram.

It is critical to use long screws, as it ensures proper fastening to the surrounding structure.

NOTE: Install the screws through the center of the slots in the keeper to allow for future vertical adjustments if necessary.



ANTI LIFT BLOCK/ MEETING RAIL HEAD PLUG INSTALLATION



After all panels are installed in the frame and with the operating panel in the open position, insert the anti-lift block with the "carpet plug" facing down into the header between the two tracks and slide it horizontally until it is above the fixed panel meeting rail.

Insert shims between the header and the surrounding structure above the meeting rail ensuring that the header frame is true and not bowed.

Close the operating panel and using the #8x1" screw provided, fasten the block on the interior side of the header frame, through the hole in the anti-lift block.

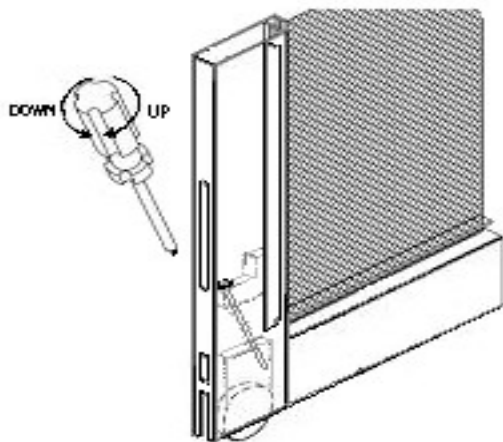
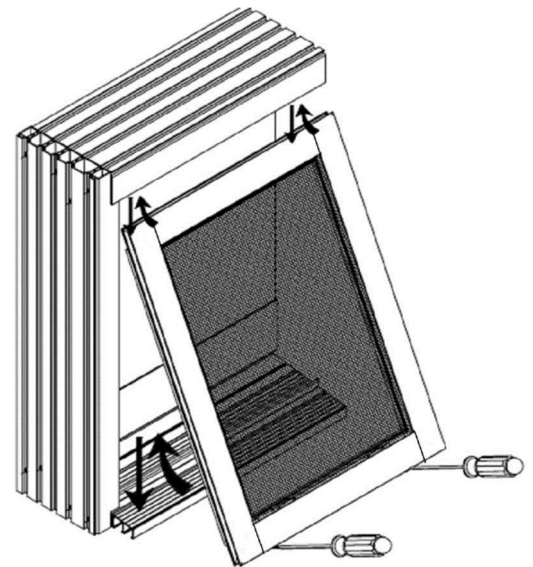
Ensure that the anti-lift block is "seated" on the fixed panel.

If installed correctly, it should not be possible to lift the panels out of the door, and the "carpet plug" will close the space between the fixed and operating panels.

SCREEN INSTALLATION

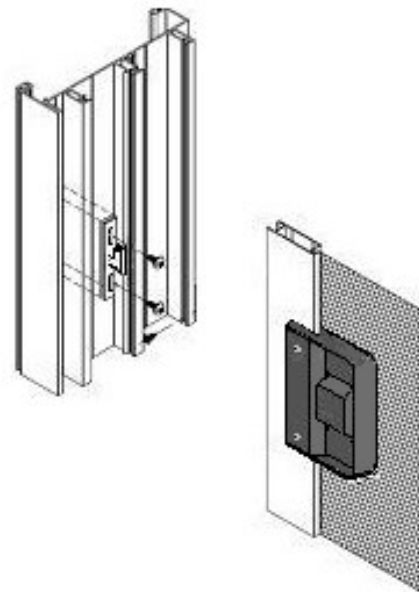
Insert the screen in the outside track of the frame header, swing the bottom of the screen towards the sill, then depress the bottom rollers with a flat header screw driver or spatula and snap the rollers over the sill screen track as shown in diagram.

Slide the screen in the closing direction to within $\frac{1}{4}$ " of the jamb. Visually, the joint between the screen and the jamb should be uniform from top to bottom.



Using a screwdriver, adjust the rollers on the bottom of the screen upwards or downwards to align the screen as shown in diagram. Adjust the top rollers just enough to snug the screen in the top track and allow easy

With the striker latch in the open position, slide the screen close to the jamb (or astragal mullion on OXO doors), mark the location of the top of the striker in the jamb, and position the keeper within the jamb so that the striker will cleanly engage the keeper. Attach the keeper to the jamb using the self-drilling screws provided. Ensure the latch securely holds the screens locked and adjust the keeper up or down as necessary.



CAULKING

Use a good quality building sealant that is compatible with the vinyl surfaces of the sliding door and the surrounding structure. It is important that all surfaces to be caulked are free of dirt, dust, and other contaminants and are well cleaned with an isopropyl alcohol solution followed by a clean dry wipe. Depending on the sealants being used, a primer may also be necessary. Check the application with your sealant supplier.

The use of backer rod is recommended to prevent the caulking from shrinking into the joint.

CAUTION: If expanding foam insulation is being used to fill the void between the door frame and surrounding structure, the use of good quality LOW EXPANDING FOAM material is recommended. It must be applied, only by an experienced applicator. The use of high expanding foam can bow and deform framing members resulting in poor performance and difficult operation of the door.

CLEANING

Remove all debris and vacuum all dirt and filings from the sill. **Debris on the sill or in the drainage channels will prevent the door from performing properly.**

Using a mild soap and water solution, clean all vinyl and glass surfaces. Do not use solvents or harsh cleaners as they may damage the surface finishes.

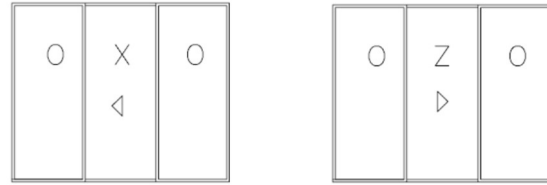
IMPORTANT PRECAUTIONS

Remove any plastic film or preserves from the frame and/or glass. Prolonged exposure to the sun will degrade the low-tack plastic adhesive, and will make it very difficult to remove.

3 PANEL OXO AND OZO

SUPPLEMENTAL INSTRUCTIONS

FRAME INSTALLATION – HEAD ANCHORING – OXO and OXZO DOORS

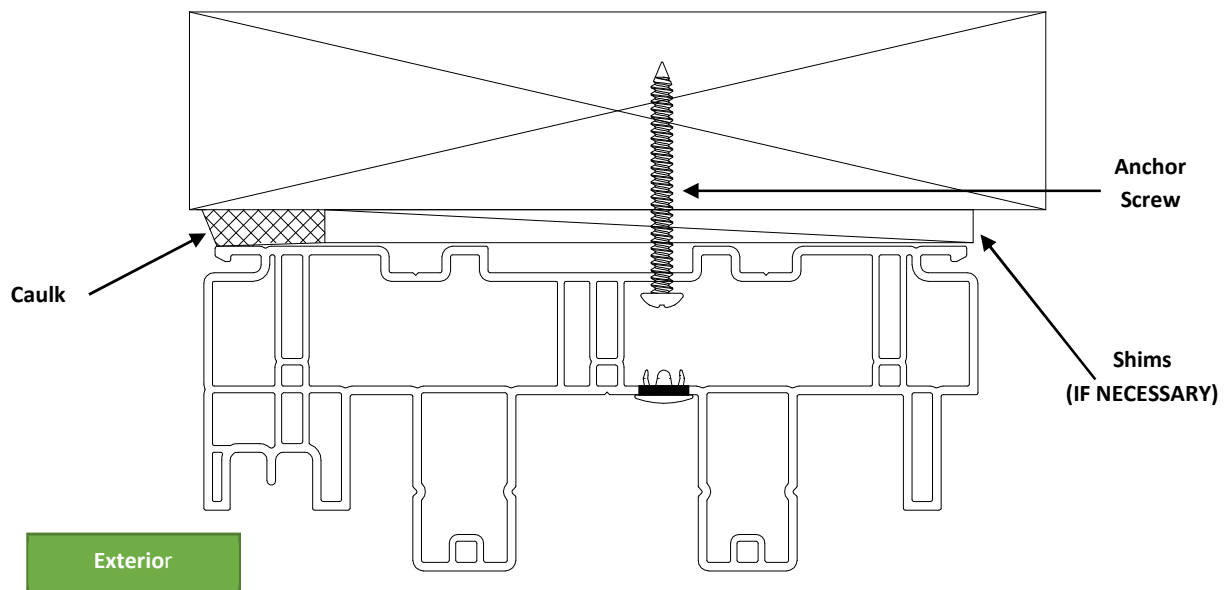


At a minimum, the header must be anchored at each meeting or parting rail. Anchoring of heads at the meeting rails will be done after panel installation during the application of the anti-lift bracket. See two panel installation instructions.

For wood buck frame, drill 3/8" diameter clearance holes through the bottom surface of the header and 1/4" into the wood to allow passage and countersinking of the screw header and 3/16" diameter clearance holes through the remainder of the wood frame to allow passage of the screw shaft.

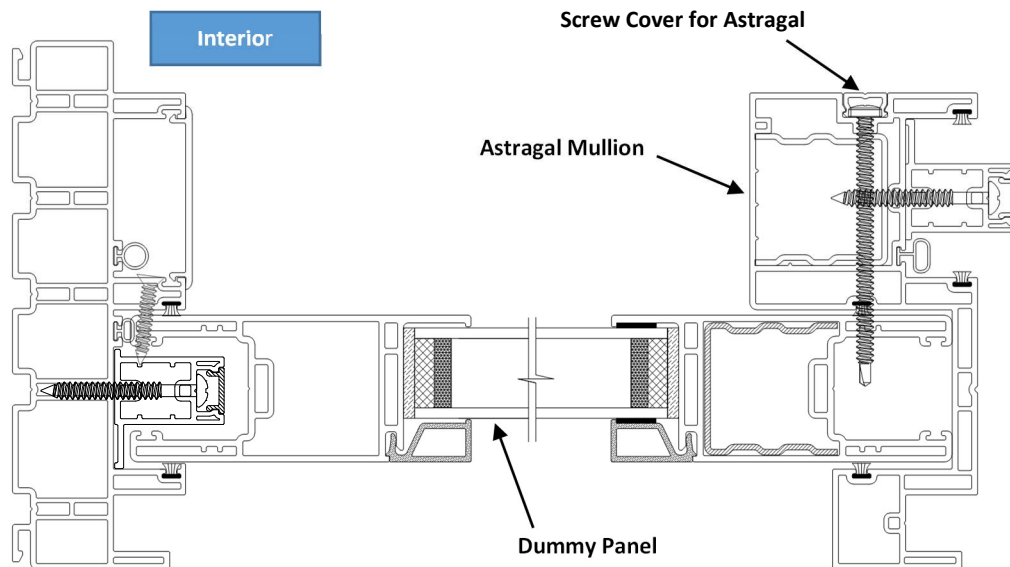
For the vinyl frame and Buckingham Eco (Rice Hull frame), drill 3/8" diameter clearance holes through the bottom surface of the header to allow passage of the screw header and 3/16" diameter clearance holes through the secondary surface to allow passage of the screw shaft as shown in diagram.

Use solid shims and ensure that the header is not bowed or twisted by the installation screws. Check for straightness and squareness before proceeding further. After installing the screws, apply urethane sealant around the hole and install the cap plug. Wipe clean any excess sealant.



INSTALLING THE FIXED PANELS – 3 PANEL DOORS

OXO/OZO doors require the use of an astragal mullion that is attached to the third (dummy) panel in order to provide a locking position for the operating panel. The dummy panel has no lock cutouts or interlocking rail.



For regular fixed panel and fixed panel support, follow the same procedure as with 2 panel doors.

The fixed panel support for dummy panel is 2" longer than for regular fixed panel and no end cap is needed on this side.

Lift the dummy panel into the center track of the frame header and carefully lower onto the fixed panel support on sill. Push the dummy panel securely into the jamb and install like a regular fixed panel.

Attach the OXO/OZO mullion astragal to the rail of the dummy panel using #10x3" screws through pre-drilled holes. Insert the continuous screw cover onto the inside face of the mullion.

Install Jamb adapter to the mullion astragal in same way as installed to jamb for 2 panel doors.

(NOTE: The mullion astragal is machined to be applied in only one way and is not reversible. OXO mullion is a mirror image of OZO mullion).

INSTALLING THE OPERATING PANEL – 3 PANEL DOORS

For OXO/OZO doors, adjust the operating panel and wheels in the same manner as for a two-panel door aligning the operating panel to the mullion astragal.

HARDWARE AND KEEPER INSTALLATION

For OXO/OZO doors, install the locking mechanism and handles the same as a two panel

4 PANEL OXXO

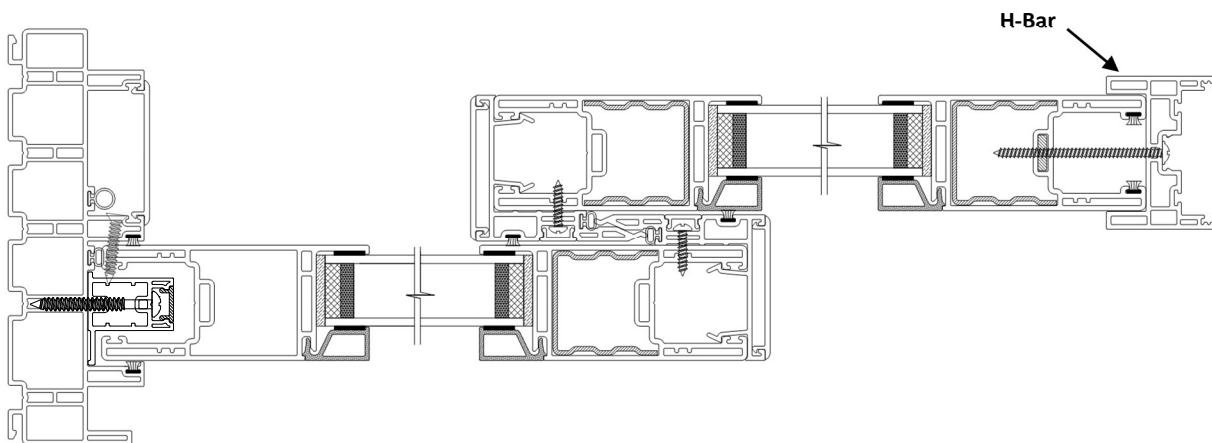
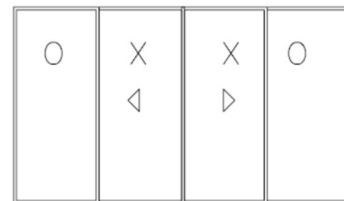
SUPPLEMENTAL INSTRUCTIONS

INSTALLING THE FIXED PANEL ADAPTOR AND END CAP – 4 PANEL DOORS

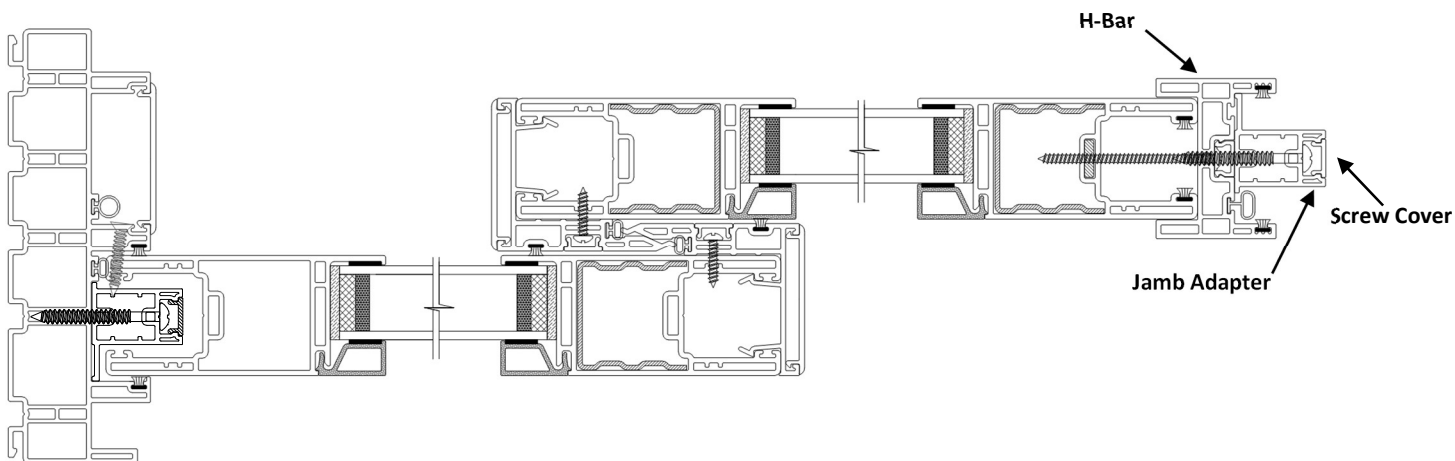
For 4 panel doors, repeat the two-panel procedure on both sides of the door.

INSTALLING THE OPERATING PANEL OXXO

For OXXO doors, install and adjust the panels in a similar manner as two panel doors aligning the two operating panels to each other. Apply a continuous bead of caulking into the bi-parting astragal H-Bar and push it on to the vertical rail without the cutout for the operating hardware using the #10x3" screws provided as shown in diagram.



Install jamb adapter on H-Bar in the same way as installed in 2 panel doors.



HARDWARE AND KEEPER INSTALLATION

For OXXO doors, install the locking mechanism and handles the same as a two-panel door and use the 1" screws provided to attach the keeper to the H-Bar.

SCREEN INSTALLATION – OXXO DOORS

Load the screens into the frame as per the 2 panel door instructions.

Slide the screens in the closing direction to within $\frac{1}{4}$ " of each other. Visually, the joint between the two screens should be uniform from top to bottom.

Using a screwdriver adjust the rollers on the bottom of the screens upwards or downwards to align the screens as shown in diagram.

Adjust the top rollers just enough to snug the screen in the top track and allow easy rolling.

With the striker latch in the open position, slide the screens close to each other, mark the location of the top of the striker in the screen H-Bar, and position the keeper within the H-Bar so that the striker will cleanly engage the keeper.

Attach the keeper to the H-Bar using the self-drilling screws provided.

Ensure the latch securely holds the screens locked and adjust the keeper up or down as necessary.

