

# Modern Outswing Door

## Installation Instructions

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**ABSTRACT:** Please read these instructions in their entirety before beginning to install your Marvin Door product. These installation instructions demonstrate the installation of a Marvin door in new wood frame construction using an industry approved water management system. For installation using other construction methods, such as remodeling, replacement, and recessed openings refer to the latest version of ASTM E2112, "Standard Practice for Installation of Exterior Windows, Doors and Skylights," for installation suggestions. The same information for ASTM E2112 can be found on the ASTM website, [www.astm.org](http://www.astm.org).

Regional standard practices, environmental conditions, and codes may vary and supersede the procedures contained within. The responsibility for compliance is yours: the installer, inspector, and owner(s).

The English language version of this instruction is the official version and shall take precedence over any translation.

**USAGE DATES:** These instructions are relevant for doors manufactured 02/22/2021 to present.

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## Hazard Notations

### **WARNING!**

Do NOT lift or move without proper equipment. Read, understand, and follow all lift equipment manufacturers' instructions and safety information.

### **WARNING!**

Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to [www.P65Warnings.ca.gov/wood](http://www.P65Warnings.ca.gov/wood).

### **WARNING!**

This product can expose you to chemicals including titanium oxide, which is known to the state of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### **WARNING!**

This product can expose you to chemicals including methanol, which is known to the state of California to cause birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### **WARNING!**

Always practice safety! Wear the appropriate eye, ear, and hand protection, especially when working with power tools.

### **CAUTION!**

**Wear gloves and protective clothing** when handling the frame components. Some high-density fiberglass surfaces are not coated and can leave splinters in bare skin.

### **IMPORTANT**

Nailing fin is not designed to be a weatherproof flashing.

### **IMPORTANT**

Flashing material must not contain asphalt and must be compatible with flexible PVC (vinyl) such as that found in Marvin vinyl nailing fin.

*NOTE: Numbers listed in parentheses () are metric equivalents in millimeters rounded to the nearest whole number.*

# Protective Film

Some products feature a clear protective film adhered to the glass surfaces to protect them from construction debris, dust, dirt, stucco, etc. When construction is complete, simply peel the film off and dispose of it with other construction debris.

## IMPORTANT

Do not use a razor blade to remove the protective film. Do not use a pressure washer to clean debris from the film. The film should be removed within nine months of application.

Please refer to the [manufacturer's website](#) and [bulletin](#) for more information on the physical properties and usage of the protective film.

## IMPORTANT

**DO NOT** place suction cups over seams in the protective film.

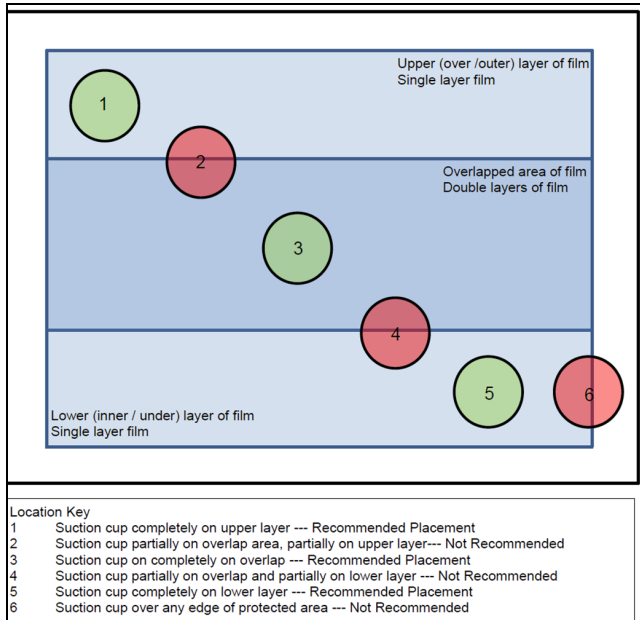


Figure 1 Do not put suction cups on seams or edges

## Installer and Builder Information

- Always provide a copy of these instructions for the current homeowner.
- Plan sizing of rough opening and clearance from exterior finishing systems to allow for normal materials shrinkage or shifting (e.g. wood structure with brick veneer; allow adequate clearance at the sill). Failure to do so can void the Marvin warranty coverage.
- Refer to the Technical Installation Specifications section for technical specifications regarding the

installation of this product. These installation requirements as well as the details in the section must be followed to achieve the advertised Performance Grade (PG) rating of this product.

- It is the responsibility of the builder, installer, and subcontractors to protect the interior and exterior of windows or doors from contact with harsh chemical washes, construction material contamination and moisture. Damage to glazing, hardware, weather strip and cladding/wood can occur. Protect with painters tape and/or protective sheathing as

required. Follow all guidelines regarding material use, preparation, personal safety and disposal.

- Contact your Marvin supplier if you have any questions regarding product and materials used in manufacturing or questions on replacement parts.
- Please refer to the PDF version of this instruction for further information regarding best practices installer and builder information, code, and other legal requirements. The PDF version is the official document of record.

## Tools and Supplies Needed

- Screws for attaching Sill Support (#8 x 1 1/2" minimum)
- Phillips screwdriver
- Flat screwdriver
- Power drill/driver
- 3mm and 6mm Allen wrenches
- 3/16" drill bit
- 1/8" x 6" drill bit (for drilling into RO)
- #2 Phillips bit
- T20 Torx drivers
- Rubber mallet
- Caulking gun
- Level (laser level helpful)
- Square
- Utility knife
- Tape measure
- Pencil/marker
- Safety glasses
- Gloves
- Suction cups for handling glass panels
- Utility knife
- Pry bar
- Shims
- Sill panning
- Weather resistive barrier
- Flashing
- Sealant (must be compatible with door frame and rough opening)
- Rags/paper towel
- Low expansion, low compression insulating foam

### IMPORTANT

See the [Technical Specifications on page 33](#) for specific details on some materials listed above.

## Installation and Hardware Accessories Box

- CSL 343 sealant and two tips
- DOWSIL™ 995 structural sealant
- Head jamb corner keys
- Fasteners including installation screws
- Trim set
- Construction handle
- Panel alignment bolts
- Stationary brackets
- Strikes (some are factory installed)
- Weep tube outlet
- Flat shims
- Nail fin gaskets

DOWSIL™ 995 is a registered trademark of the Dow Chemical Company ("Dow") or an affiliated company of Dow.

## Rough Opening Prep-Flashing Details

1. Before you begin the installation process make sure you have prepared your opening properly in weather-board fashion. The panning should extend up the sides of the rough opening at least 6" (152) and have an upturned leg on the interior of at least 1/2" (13) in height. Wrap the weather resistive barrier around to the interior and seal any seams. See [Figure 2](#) and [Figure 3](#).

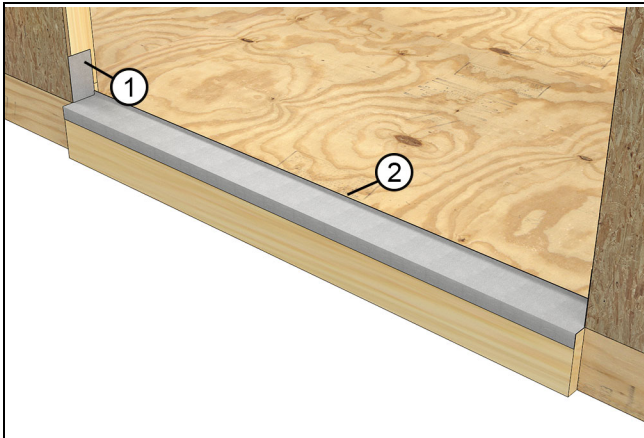


Figure 2

1	Panning extends up the sides by at least 6" (152)
2	Interior leg at least 1/2" (13)

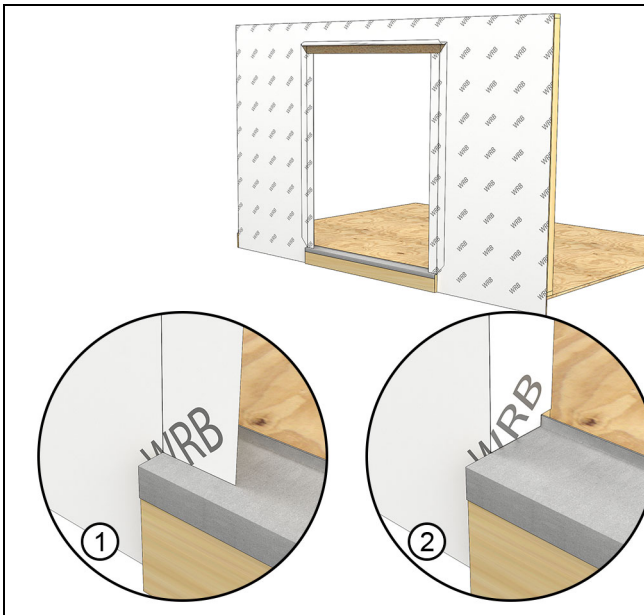


Figure 3

1	Install Panning then WRB
2	WRB wraps over top of panning sides

## Sill Support Installation

Using a smartphone or similar device, scan the QR code or click [here](#) to play a video of this procedure.



**NOTE:** Not used on frames with a saddle sill.

1. Determine the exterior plane of your door installation. You will fasten the sill support  $3\frac{5}{16}$ " from the nail fin plane (in some instances, the exterior sheathing plane). Snap a line or use a laser level for reference while installing the sill support. If you are installing in a recessed opening measure back from the exterior plane of the door by  $4\frac{13}{32}$ ". See Figure 4 and Figure 5.

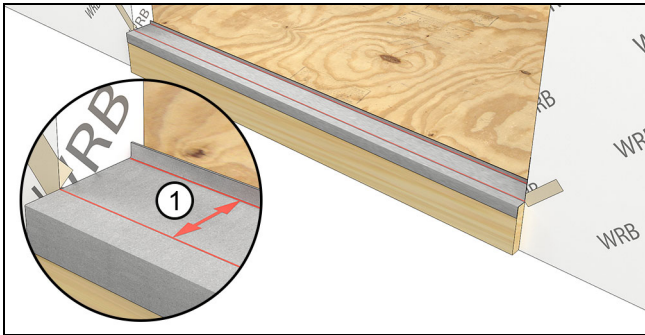


Figure 4

1	$3\frac{5}{16}$ "
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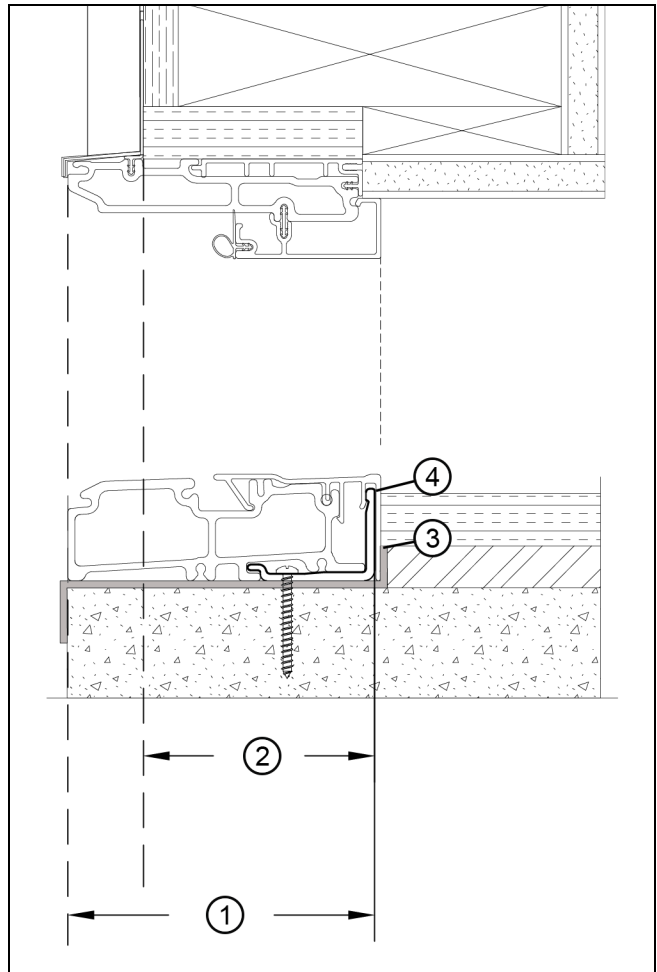


Figure 5

1	Frame exterior plane to sill support interior: $4\frac{13}{32}$ " (112)
2	Nailing fin plane to sill support interior: $3\frac{5}{16}$ " (84)
3	Panning
4	Sill Support

2. Center the sill support on the rough opening sill oriented with the upturned leg to the interior. Align the interior edge of the sill support on your mark/laser line. See Figure 6.

**NOTE:** The sill support will be shorter than your actual sill width.



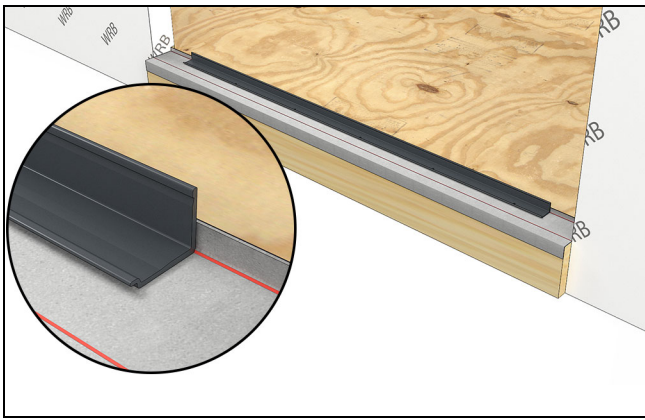


Figure 6

3. Level the sill support and shim if necessary. Use the thin plastic shims provided. Place the shims beneath the sill support installation holes. Its also important that you put shims on the ends to support the frame corner keys. See Figure 7 and Figure 8.

*NOTE: Shims should be positioned so it supports the exterior edge of the door sill.*

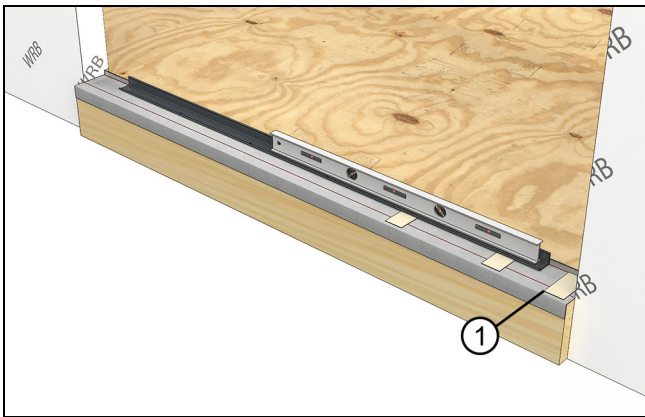


Figure 7

1	Note shim to support exterior edge of sill.
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Figure 8

4. Depending on your construction, use the appropriate fastener to fasten the sill support to the sill. Follow

manufacturers instructions for proper application. See Figure 9.

## IMPORTANT

Fasteners must penetrate at least 1" into the sill substrate. Recommended fastener size is a minimum #8 and maximum 1/4" diameter. Seal fasteners where they penetrate the panning

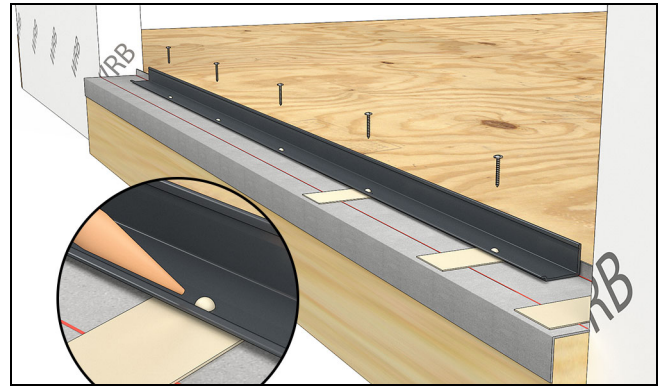


Figure 9

5. Temporarily install the sill frame member centered in the rough opening. Tap the sill into the sill support with a rubber mallet. See Figure 10

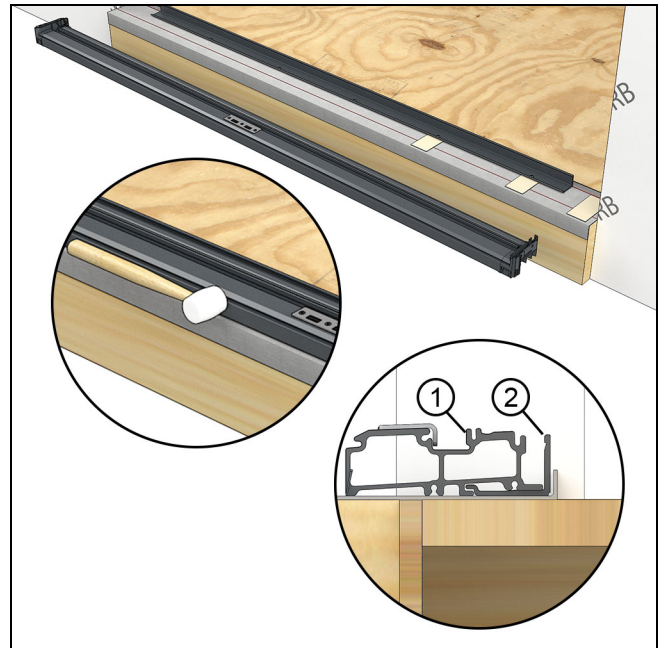


Figure 10

1	Sill
2	Sill Support

6. Mark the exterior of the sill. Be sure to accurately mark the ends of the sill. You will use these lines as

reference to apply sealant prior to installing the frame.  
See [Figure 11](#).

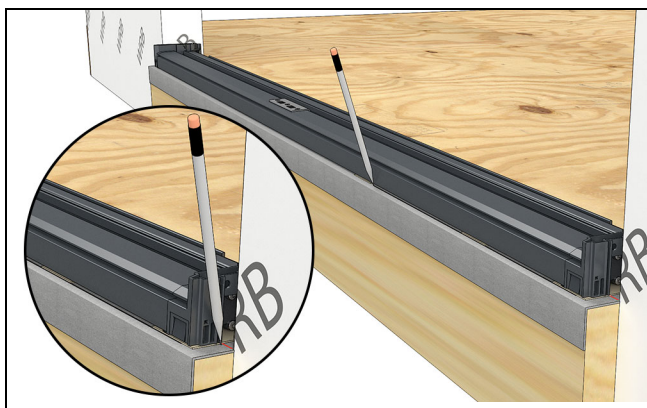


Figure 11

1	Be sure to mark the ends of the sill
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7. Remove the sill from the sill support. Tap on the sill with a rubber mallet to release it from the sill support.  
See [Figure 12](#).



Figure 12

## Frame Assembly

Using a smartphone or similar device, scan the QR code or click [here](#) to play a video of this procedure.



### IMPORTANT

On X operating configurations with a tube steel mull on the locking jamb or horizontal jamb, fasteners are pre-installed at the shootbolt strike location.

1. Start the frame assembly with the exterior side up (hinges up) on a clean flat surface.
2. Insert the head jamb/jamb corner keys into the ends of the head jamb frame. [See Figure 13.](#)

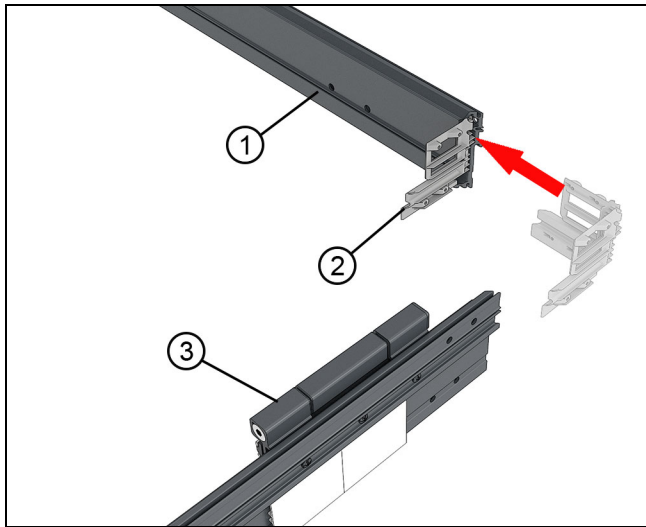


Figure 13 Insert head jamb corner key

1	Frame head jamb
2	Head jamb to jamb corner key
3	Jamb

3. Slide the jamb frame members onto the head jamb corner key. [See Figure 14.](#)

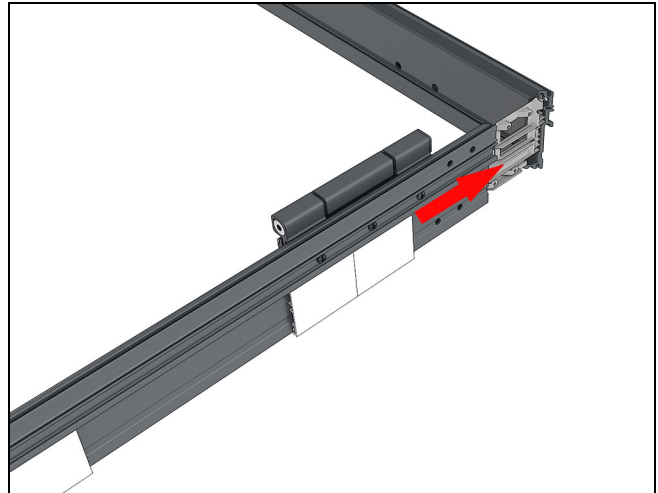


Figure 14

4. Align the head jamb to jamb and make adjustments until both miters are tight. Fasten with four #8 x 3/8" flat head screws to the exterior side and four #8 x 3/8" flat head screws to the interior side. [See Figure 15.](#)

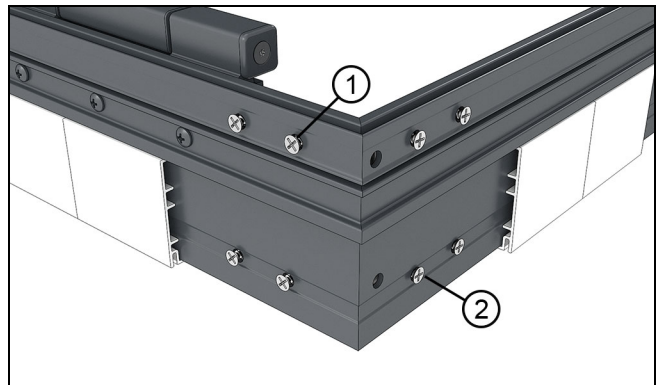


Figure 15

1	Four #8 X 3/8" flat head screws on the exterior
2	Four #8 x 3/8" flat head screws on the interior

5. For performance and low profile sills, slide the sill with attached corner keys onto the jambs. Attach with #8 x 1 3/4" pan head screws. [See Figure 16.](#)

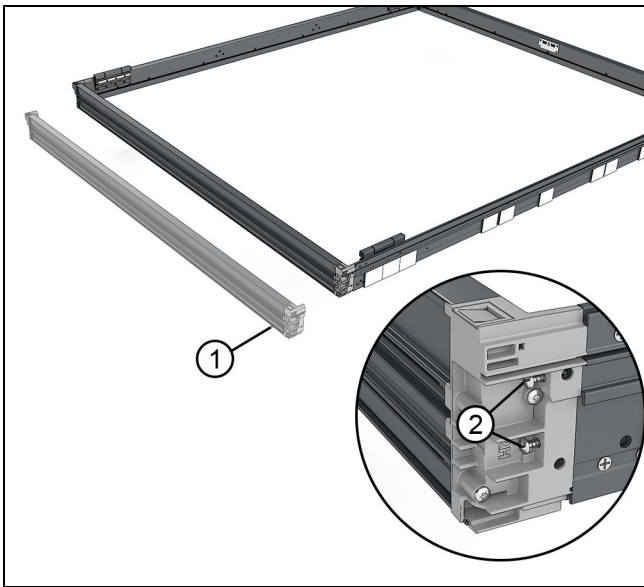


Figure 16

1	Performance/Low profile sill
2	#8 x 1 3/4" pan head screws

6. On X units, install the gasket and head jamb strike with the #8 x 1/2" flat head screw into the head jamb. See Figure 17 and Figure 18.



Figure 17

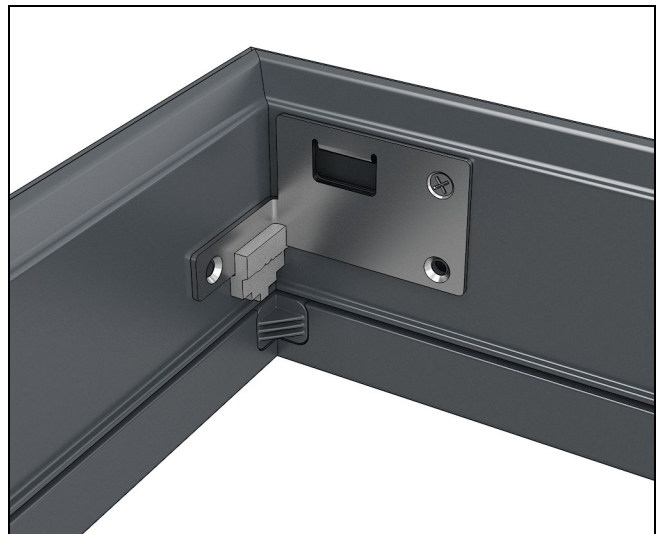


Figure 18

## IMPORTANT

On X operating configurations with a tube steel mull on the locking jamb and/or horizontal jamb, fasteners are pre-installed at the strike location. You will reuse this fastener(s) when attaching the head jamb strike. See Figure 19.



Figure 19

1	Head jamb mull shown
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7. At the head jamb, inject the provided structural sealant into the exterior hole until sealant comes out of the interior hole. See Figure 20.

*NOTE: Two tips are sent with each door. Use the provided cut tip for this application. Use the second tip for the sill injection after the sill cover is installed. This requires a smaller tip size.*

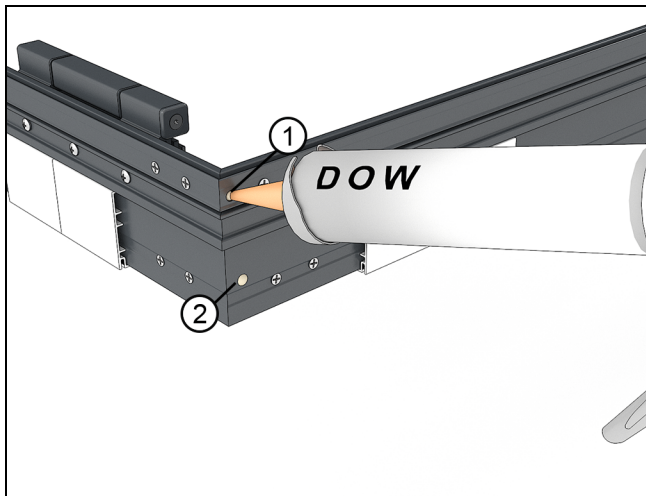


Figure 20 Inject Dow 995 structural sealant in head jamb corner.

1	Injection hole at exterior
2	Interior squeeze out hole

8. At the sill corner key, inject sealant in the hole next to the nail fin kerf until sealant comes out near the weep as shown in [Figure 21](#).

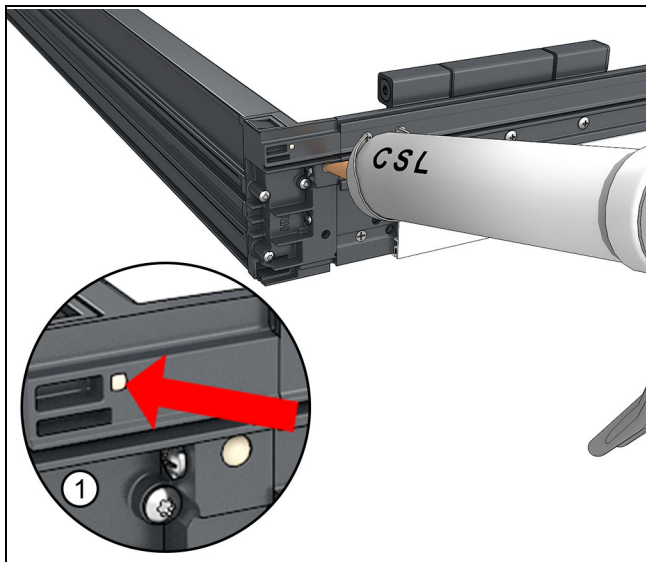


Figure 21 CSL 343 Sealant

1	Inject hole near nail fin kerf
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9. At the sill corner key, inject the provided sealant into the larger interior hole in the sill corner key until sealant comes out of the interior notch in the sill corner key. [See Figure 22](#).

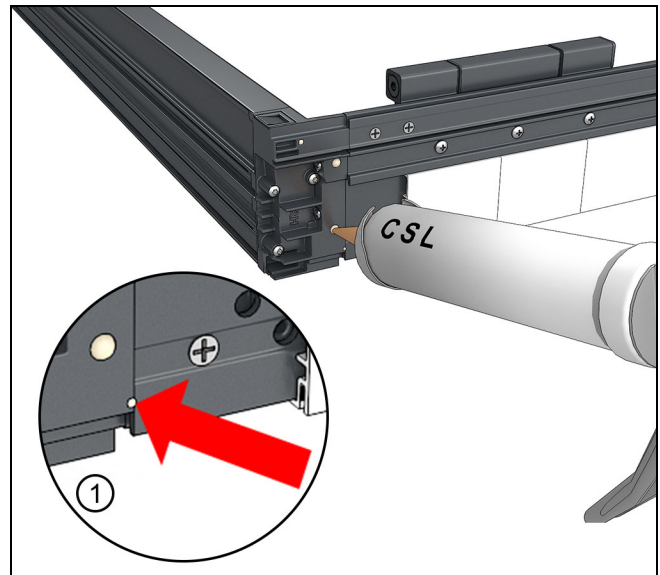


Figure 22 CSL 343 Sealant

1	Apply sealant until silicone comes out of this hole
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10. Inject sealant in the lower interior frame hole until sealant comes out of the adjacent hole. [See Figure 23](#).

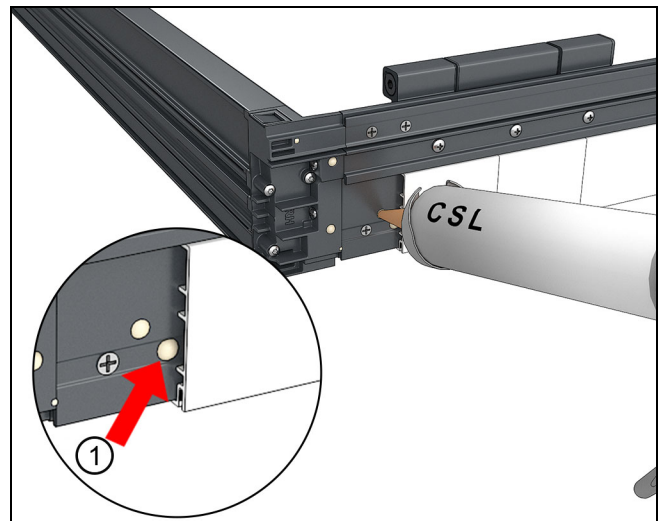


Figure 23 CSL 343 Sealant

1	Squeeze out hole
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11. Pre-drill through the shim blocks with a 3/16" (5) drill bit. Drill through all jamb screw installation holes, panel alignment bolt holes, hinge holes, and all strike holes that have a shim block behind it. **If there is no shim block behind the hardware, DO NOT drill through the installation hole.** [See Figure 24](#).

### Tip

When drilling through the hinges you will drill through the hinge support and the shim block.

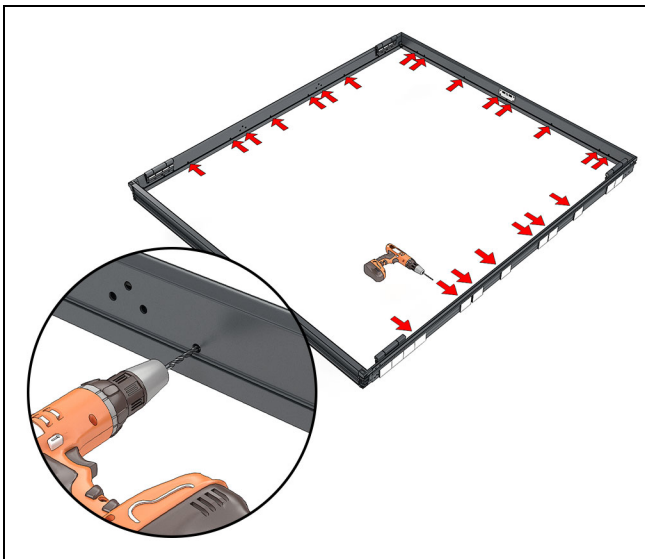


Figure 24

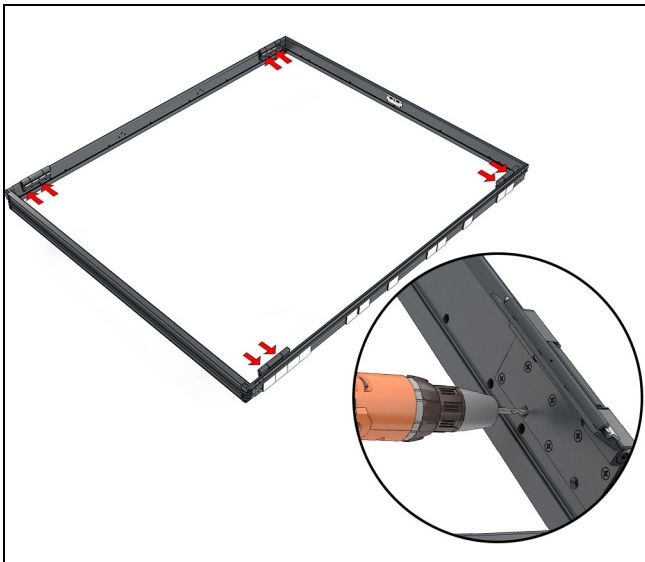


Figure 25

**12. Saddle Sills:** Attach the saddle sill to the jambs with three #8 x 1 3/4" pan head screws per corner. [See Figure 26.](#)

*NOTE: Injection at the sill is not necessary on saddle sills.*

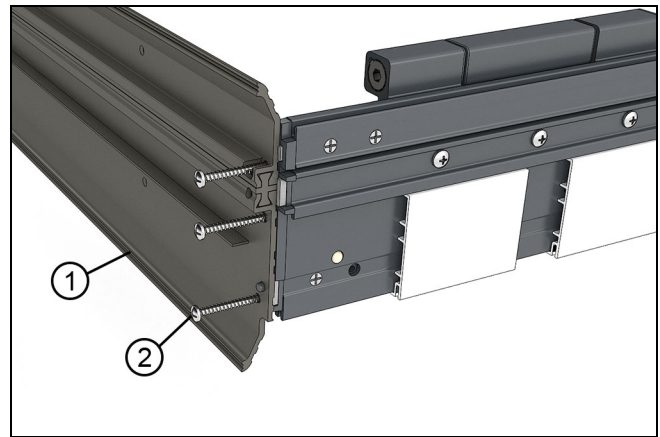


Figure 26

1	Saddle sill
2	#8 x 1 3/4"

## Saddle Sill Frame Installation

1. Temporarily set the frame in place and if necessary shim the sill to level. See [Figure 27](#) and [Figure 28](#).



Figure 27



Figure 28

2. Mark a line on the interior edge of the sill. See [Figure 29](#)



Figure 29

3. Tip the sill out and apply a bead of sealant on the exterior side of the line you just drew. Then tip the frame back into place. See [Figure 30](#) and [Figure 31](#).

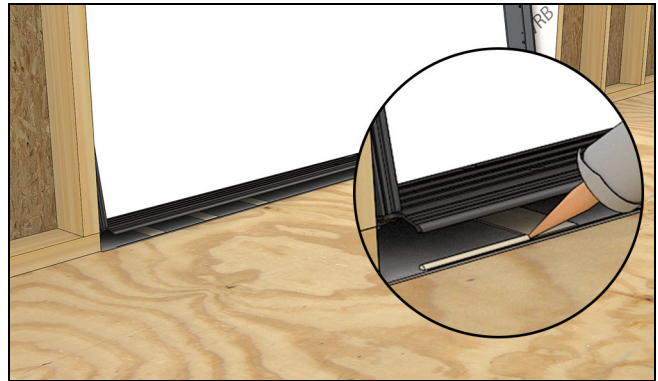


Figure 30

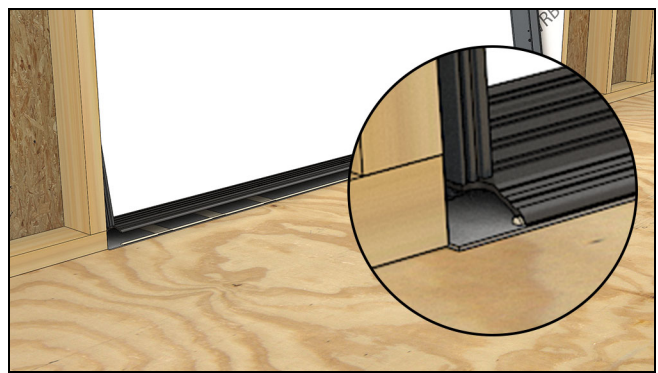


Figure 31

4. Inject sealant in the sill installation holes and fasten with the provided screws. See [Figure 32](#).

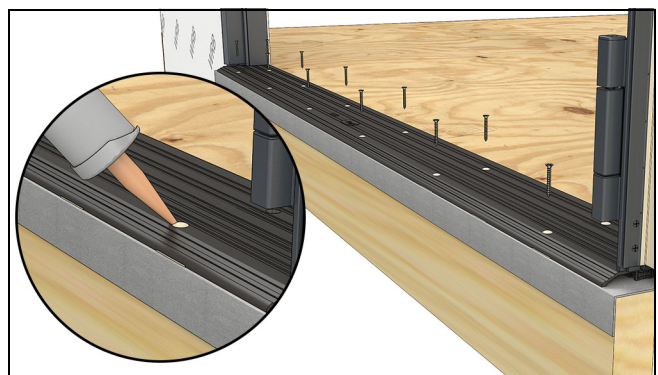


Figure 32

## Frame Installation

Using a smartphone or similar device, scan the QR code or click [here](#) to play a video of this procedure.



1. **Performance/Low Profile Sills:** Apply a bead of sealant to the interior side of the line you marked earlier. See [Figure 33](#).

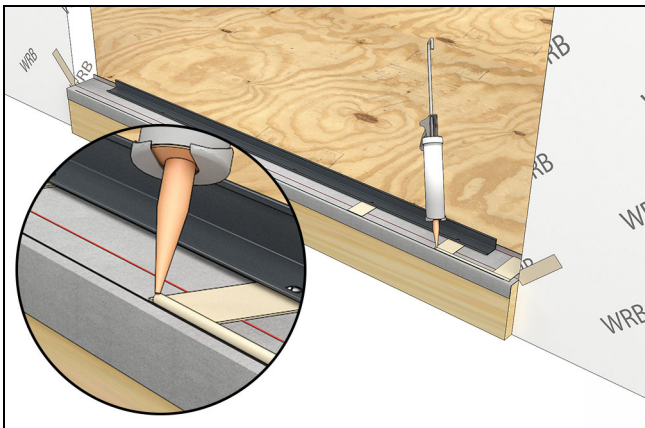


Figure 33 Performance/Low profile sill

*NOTE: If you are installing a frame with a saddle sill, refer to [Saddle Sill Frame Installation](#) on page 15.*

2. Tip the frame into place. See [Figure 34](#).

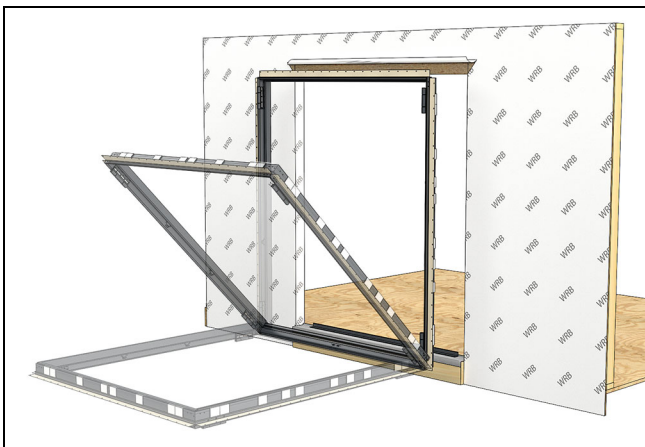


Figure 34

3. Center the frame in the opening taking care to not disturb the sill sealant. Set the sill on top of the sill support. Use a rubber mallet to seat the sill onto the sill support. See [Figure 35](#) and [Figure 36](#).

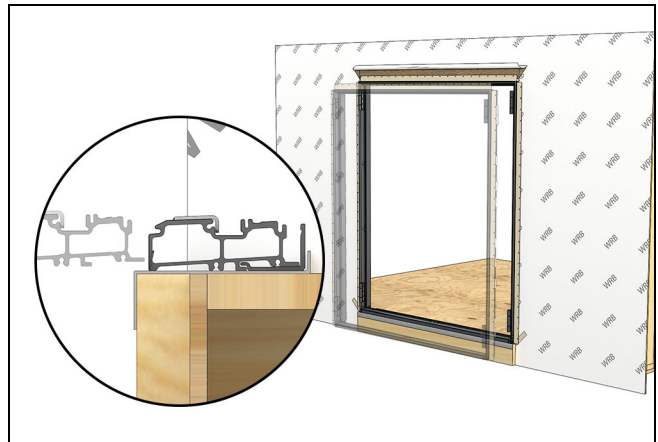


Figure 35



Figure 36

4. Shim near the bottom jambs to maintain the frame centered in the opening. See [Figure 37](#).



Figure 37

5. When driving screws into the rough opening, pre-drill first with a long 1/8" (3) drill bit. See [Figure 38](#).

*NOTE: Repeat this step throughout the instruction whenever fastening into the rough opening.*



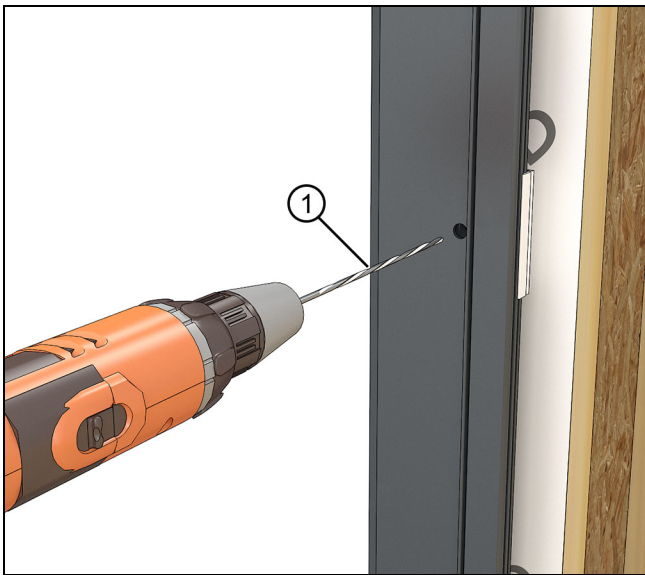


Figure 38

1	Long drill bit, 1/8" diameter
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6. Plumb one side jamb (side to side and interior to exterior). Tack the top corner by driving an installation screw through one of the pre-drilled holes in the jamb. Shim to maintain a plumb jamb. See Figure 39 and Figure 40.

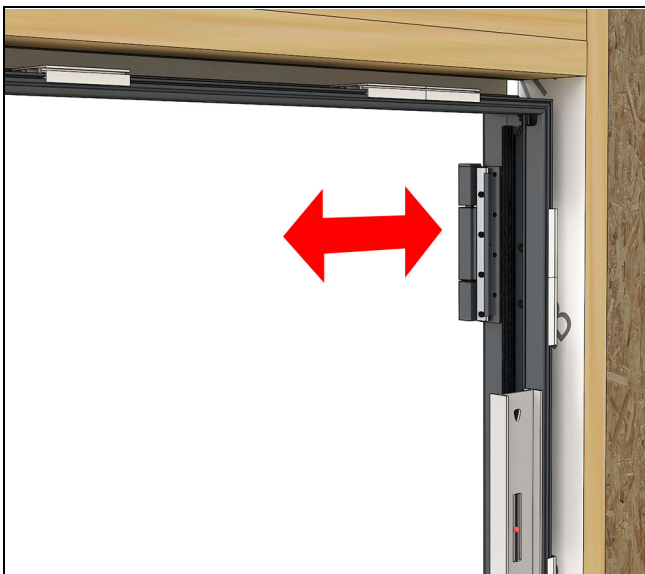


Figure 39 Plumb side to side

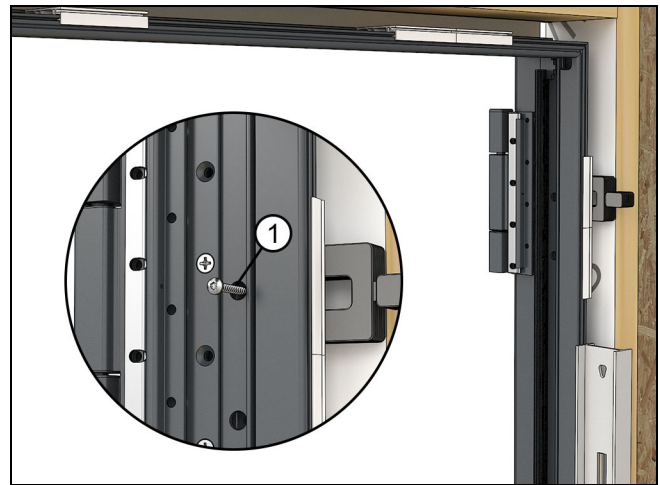


Figure 40 Plumb interior to exterior, shim and fasten

1	Installation screw
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7. Plumb and pin the bottom corner. See Figure 41.



Figure 41

1	Installation screw
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8. Plumb and pin the opposite top corner. See Figure 42.

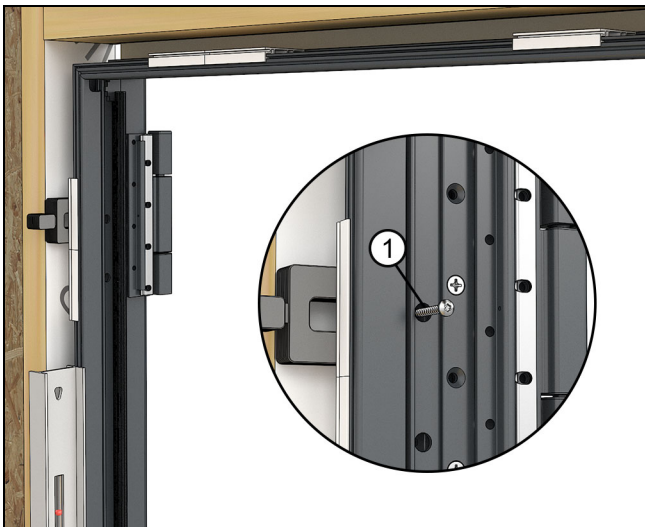


Figure 42

9. Plumb and pin the other bottom corner. See [Figure 43](#).



Figure 43

10. Measure diagonals to obtain a square frame. Adjust screws and shims accordingly. Diagonals should be within 1/16". See [Figure 44](#).



Figure 44

11. Install the interior sill cover. The cover fits over the vertical leg of the sill support and snaps onto the door sill. Use a rubber mallet to seat the cover on the sill. See [Figure 45](#).

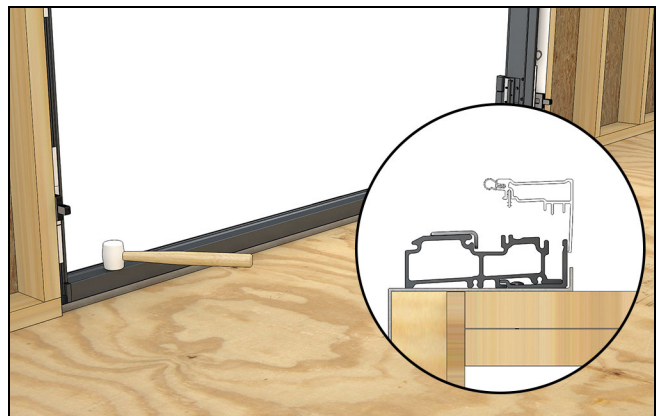


Figure 45

## IMPORTANT

The sill cover should fit within the sill panning and NOT over or to the interior of the sill panning up-turned leg.

12. Inject the sill. Put the uncut tip on your sealant gun. Inject the bottom corners of the frame until you see sealant exit the smaller adjacent hole. See [Figure 46](#).

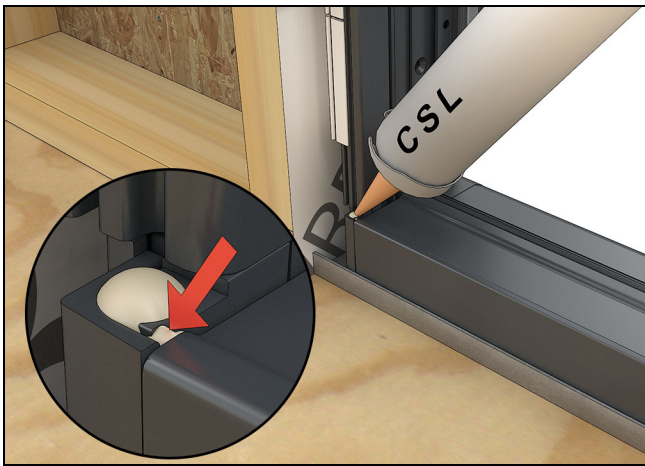


Figure 46 CSL 343 Sealant

1	Squeeze out port
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13. On X units, fasten the head jamb strike with the #8 x 3" screws into the head jamb and jamb strike plates. [Figure 47](#).

*NOTE: Strikes will use 3" flat head screws packaged with the hardware.*



Figure 47

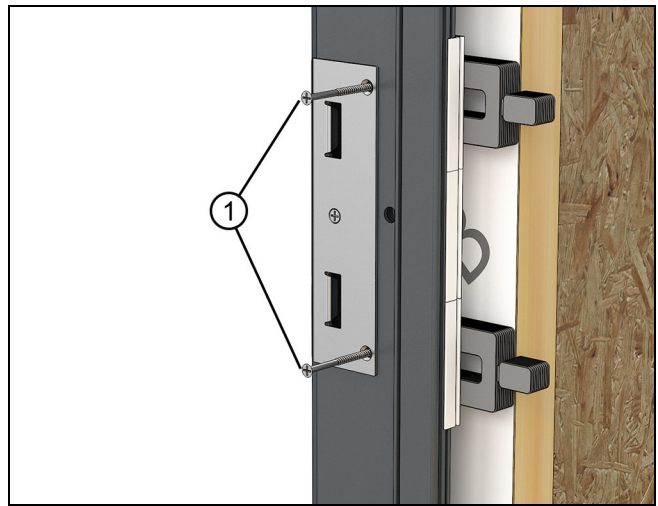


Figure 48

1	#8 x 3" Phillips head screws
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14. On hinged doors, put two installation screws through each hinge. Make sure to maintain a straight jamb (not bowed). Shim behind the hinge. [See Figure 49](#).

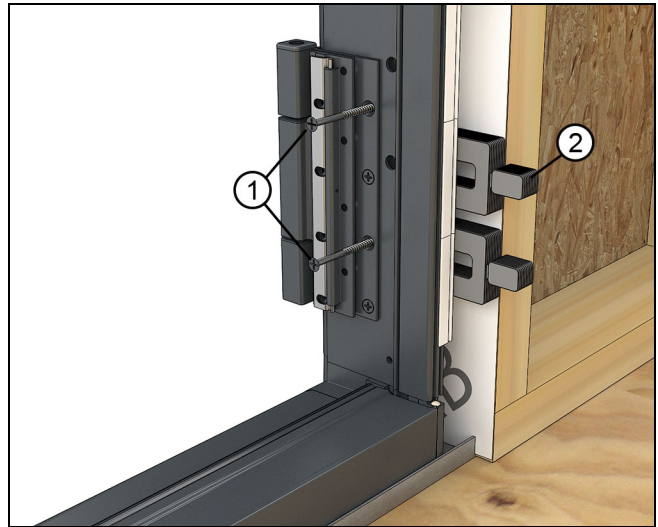


Figure 49

1	Hinge Screws into RO
2	Shims (horseshoe type)

15. Install the panel alignment bolts between the hinges on the frame. Shim the frame at the bolt locations and fasten with #8 x 3" screws. [Figure 50](#).

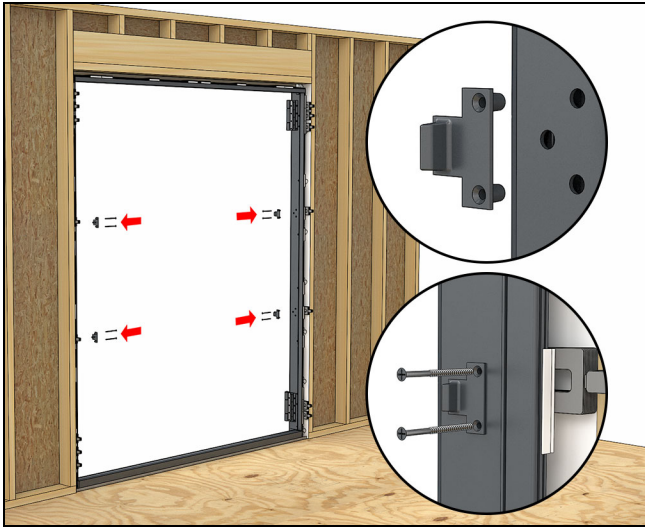


Figure 50

16. Fasten remaining installation screws and shims in the jamb and head jamb. [See Figure 51](#).

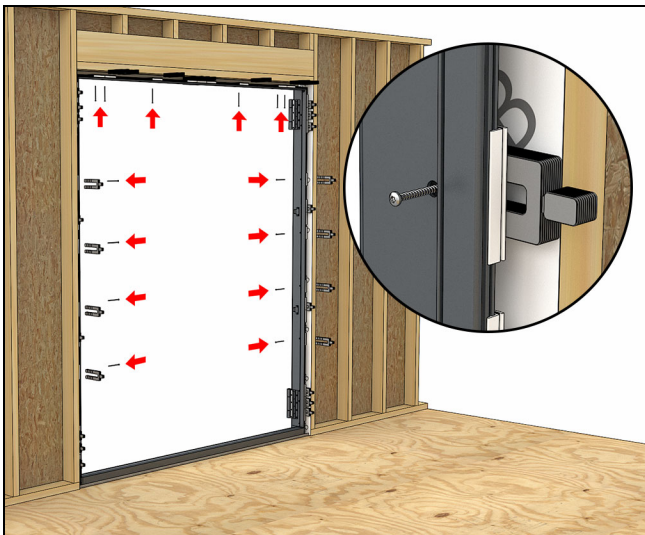


Figure 51

17. On XX configurations fasten the head jamb strike with two #8 x 3" Phillips head screws. Be sure to shim and pre-drill.

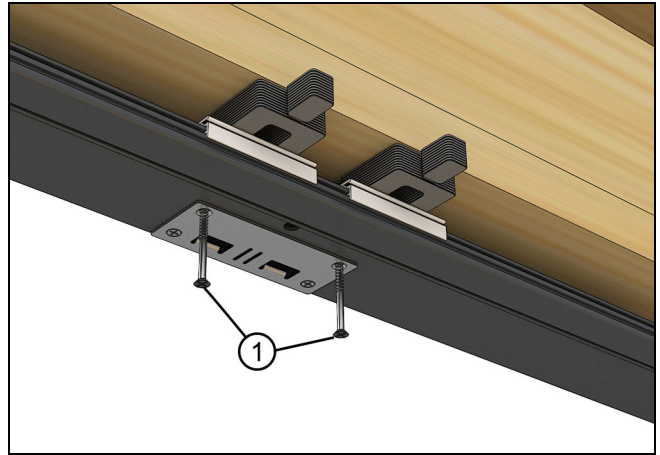


Figure 52

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## Stationary Panel Assembly

1. On stationary panels, install the stationary brackets onto the panel. Fasten with the #8 x 1 3/4" screws provided. See [Figure 53](#).

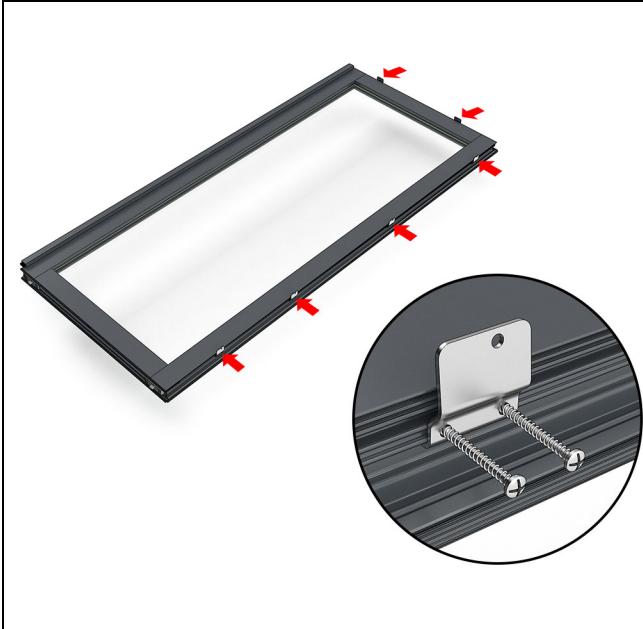


Figure 53

2. When using a **saddle sill** attach the pile weatherstrip on the bottom of the panel (s). See [Figure 54](#)

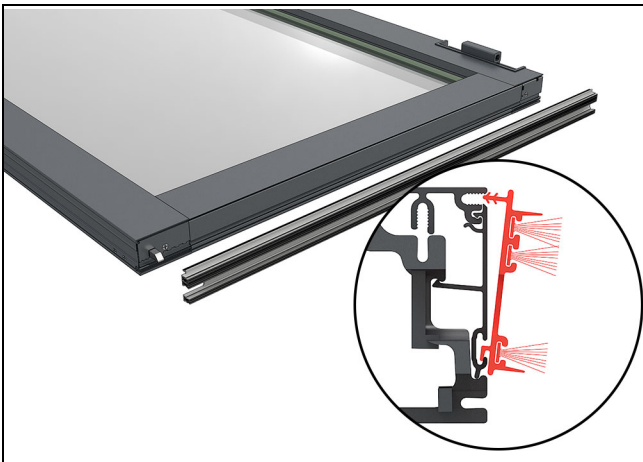


Figure 54

*NOTE: The astragal cover is shipped loose. Install the cover after the panel has been installed. See [Astragal Cover Installation on page 29](#).*

## Stationary Panel Installation

Using a smartphone or similar device, scan the QR code or click [here](#) to play a video of this procedure.



1. Install the stationary panel. Set the panel on the sill, and align the sill bolts with the holes in the sill. Tip the panel into place. See Figure 55.

### IMPORTANT

Take care to avoid damage to the frame from the sill bolts on the bottom of the panel.

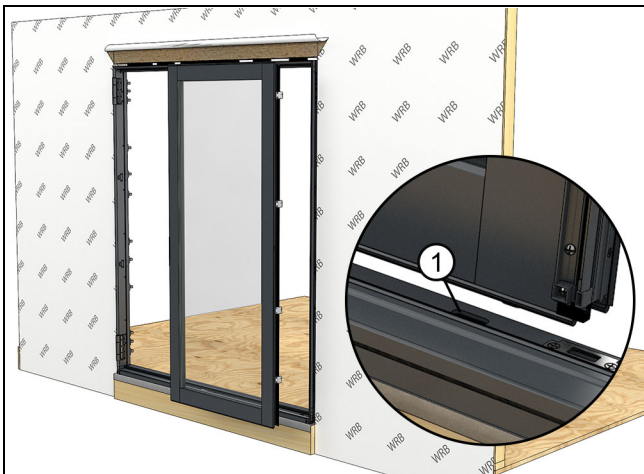


Figure 55 Inset shown from the interior.

1	Line up bolts on the panel with the holes in the sill (inset)
---	---

2. On OX/XO configurations, install the meeting stile stationary bracket. Insert the bracket into the holes in the head jamb strike, fasten with #8 x 1/2" flat head screws provided into the stationary meeting stile pre-drilled holes. See Figure 56.



Figure 56

1	Head jamb strike plate
2	Meeting stile bracket
3	#8 x 1/2" flat head screws

3. Adjust and line up the stationary brackets with the corresponding holes in the jamb. Run installation screws through the brackets and into the rough opening. Be sure to shim behind every screw location being careful not to bow the jamb. See Figure 57 and Figure 58.

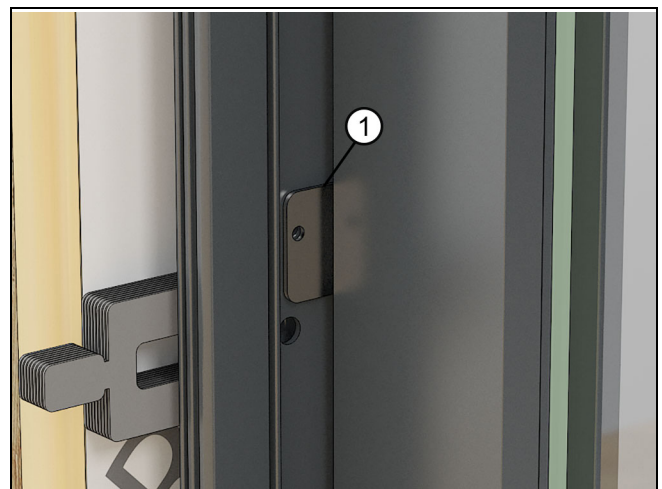


Figure 57

1	Stationary bracket lined up with hole in jamb.
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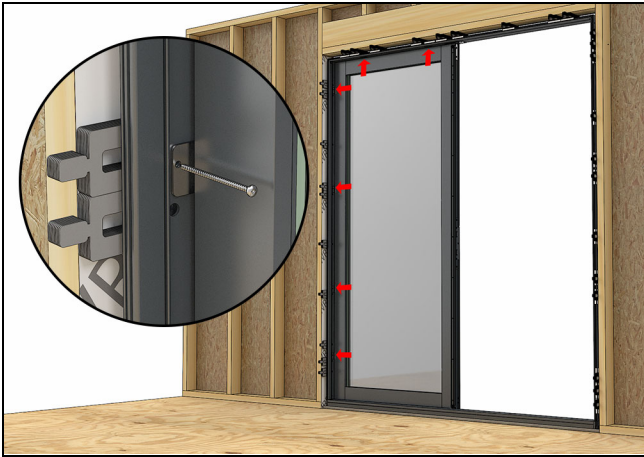


Figure 58

## Operator Panel Installation

Using a smartphone or similar device, scan the QR code or click [here](#) to play a video of this procedure.



1. Position the operator panel near the frame, align the panel with the hinges on the frame. The panel should be set more than 90 degrees to the frame. [See Figure 59.](#)



Figure 59

2. Hand tighten #10 x 1 1/2" machine screws to fasten the hinges (2) to the panel. Fasten at least 4 of the 8 screws (two to the exterior and two to the interior). [See Figure 60.](#)

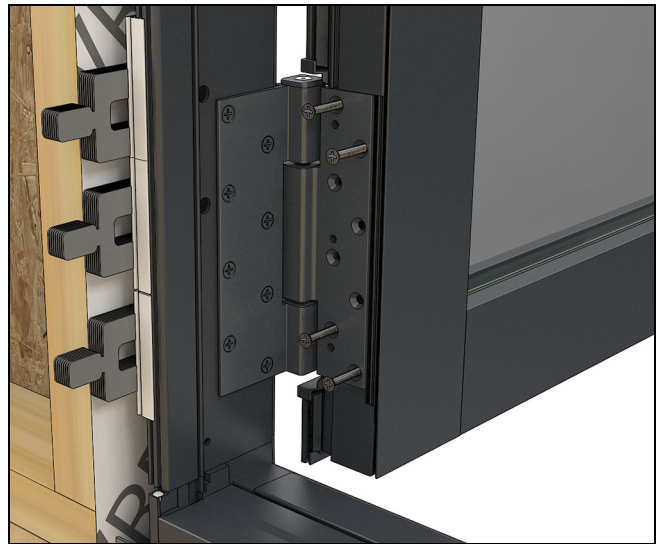


Figure 60

3. On XX doors, install the other panel in the same manner. [See Figure 61.](#)



**Figure 61**

- 4.** Close the panel(s) and check both the horizontal and vertical reveals. You might need to adjust the hinges or adjust your jamb fasteners and shims to obtain an even reveal at the top and bottom.
- 5.** OX/XO close and lock the operator panel. Make hinge adjustments as necessary to ensure proper operation.
- 6.** If no adjustments are necessary to the hinges fasten the remaining screws on both hinges to the panel.



# Hinge Adjustment

## Vertical Hinge Adjustment

1. Adjust your hinges vertically until you have consistent reveals along the top and bottom of the panels. See [Figure 62](#).

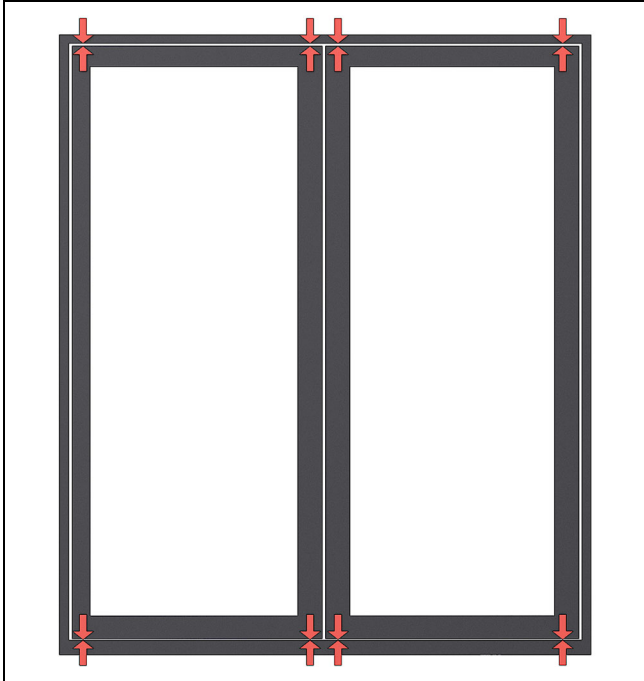


Figure 62

2. Starting with the panel in the closed position, use the 3mm wrench to loosen the top screw 3-4 revolutions on both top and bottom hinges. See [Figure 63](#) and [Figure 64](#).

*NOTE: Each hinge has about 1/8" adjustment*

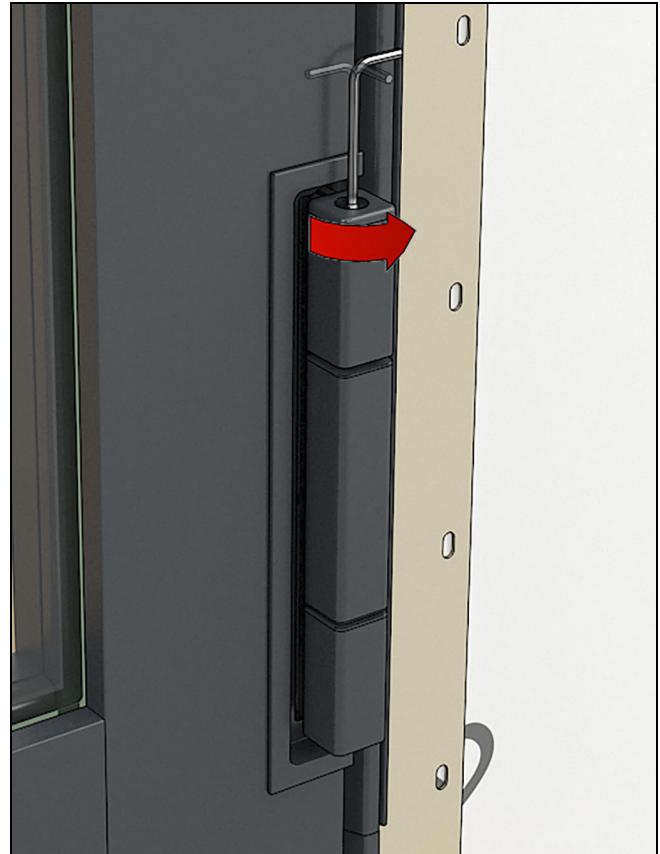


Figure 63 Bottom hinge

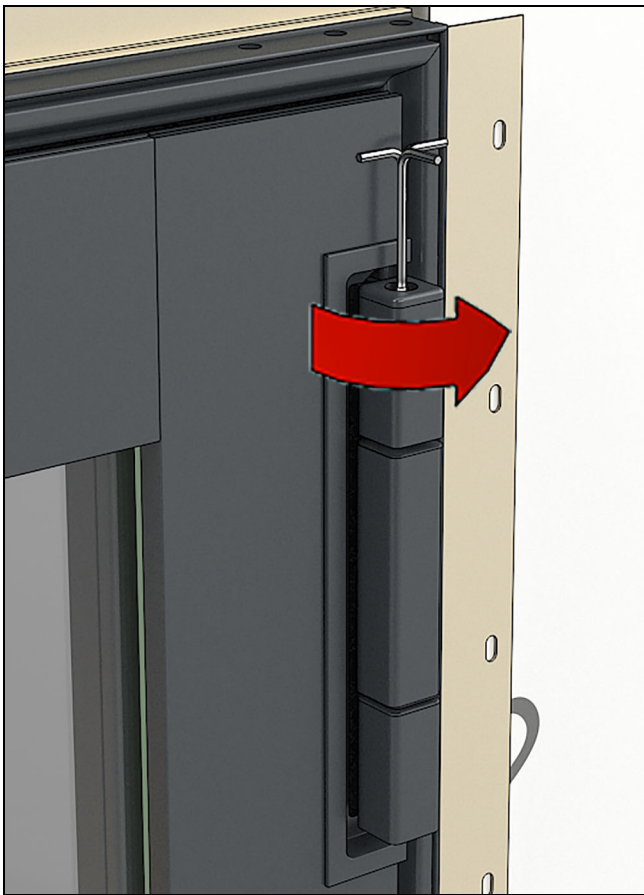


Figure 64 Top hinge

3. On the bottom of each hinge use the 6mm hex wrench to adjust the hinge height. Turning the set screw clockwise will raise the hinge. See [Figure 65](#).

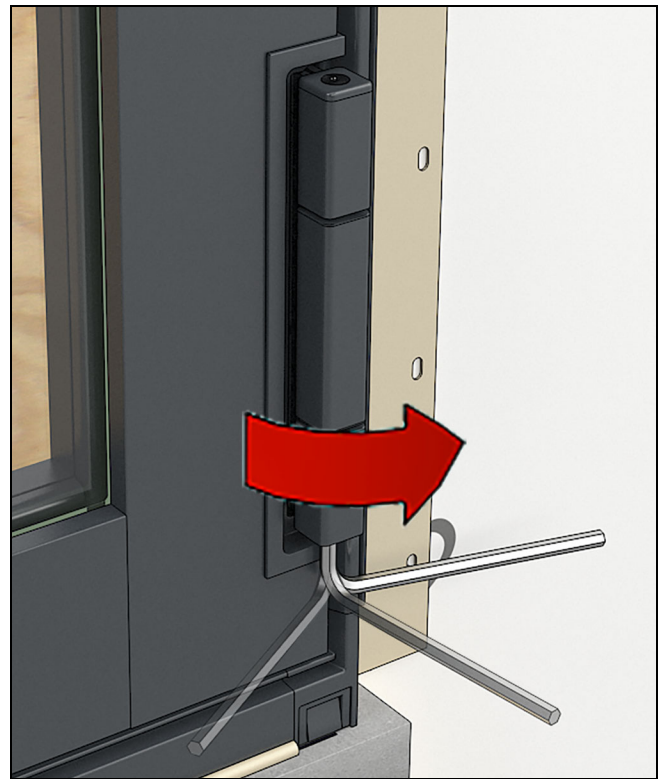


Figure 65

## IMPORTANT

Make the same adjustments at both hinges. Be sure both hinges are carrying the weight of the panel approximately the same.

4. When you have finished adjusting the hinge, tighten the top screws until snug. **Do not over-tighten the screw!**

## Horizontal Hinge Adjustment

1. Adjust your hinges horizontally until you have consistent reveals along the sides and at meeting stiles. See [Figure 66](#).

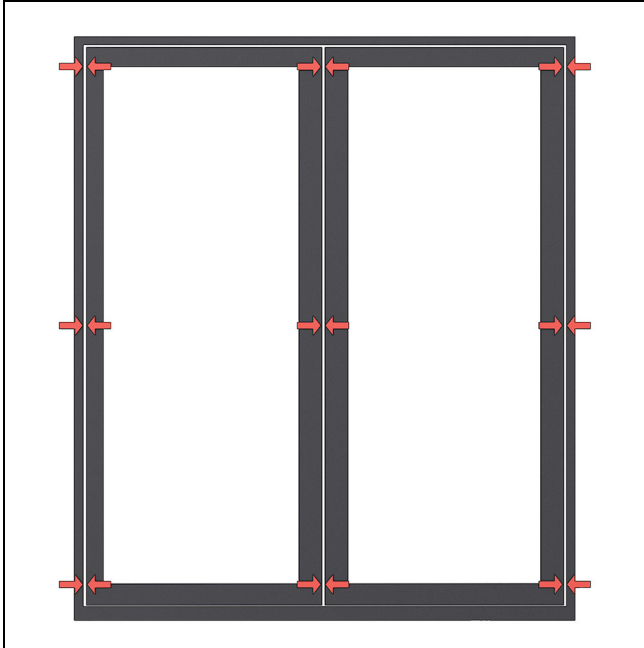


Figure 66

### IMPORTANT

Do not use a power drill for adjusting hinges. Use only a hand screwdriver with a #2 Phillips bit and a 3mm hex wrench

2. Open the panel about 90 degrees and support the weight with a 2x4 or other blocking.
3. Use a hand screwdriver with a #2 Phillips bit to loosen the panel leaf screws. Turn the screws approximately 3 turns. See [Figure 67](#).



Figure 67

4. To make the necessary horizontal adjustments, use the 3mm hex wrench to turn the 3 set screws. Turn the screws clockwise to move the hinge away from the jamb. Adjust all three set screws to approximately the same depth. See [Figure 68](#).

### IMPORTANT

The maximum adjustment is about 5 revolutions (from the screw being flush with the surface of the hinge leaf).

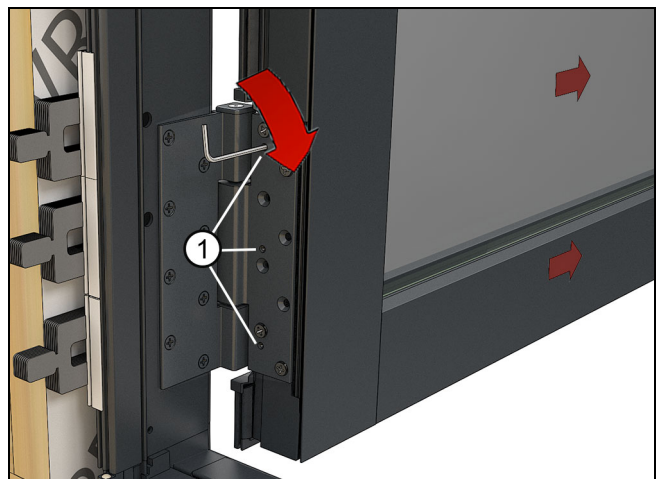


Figure 68

- |   |   |
|---|---|
| 1 | Turn set screws to the same depth clockwise to move the hinge away from the jamb. |
|---|---|

5. When you are done with your adjustments, tighten the panel leaf screws on the top and bottom hinges.

## IMPORTANT

Do not use a power drill to fasten the panel leaf screws. Use hand tools only.

### Interior Cover Installation

1. Install the head jamb cover. Hook the edge of the cover on the groove on the interior, rotate and press the barb into the frame kerf. Seat the cover with a rubber mallet. See [Figure 69](#) and [Figure 70](#).

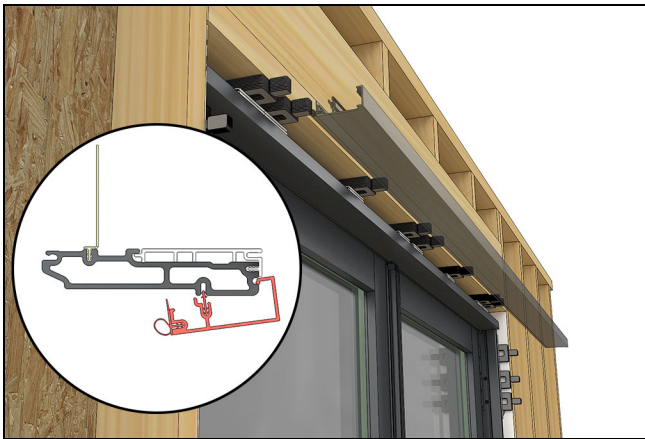


Figure 69



Figure 70

2. Install the jamb covers in the same manner as the head jamb covers and seat with a rubber mallet. See [Figure 71](#) and [Figure 72](#).

**NOTE:** The end with the dust block will be toward the sill.

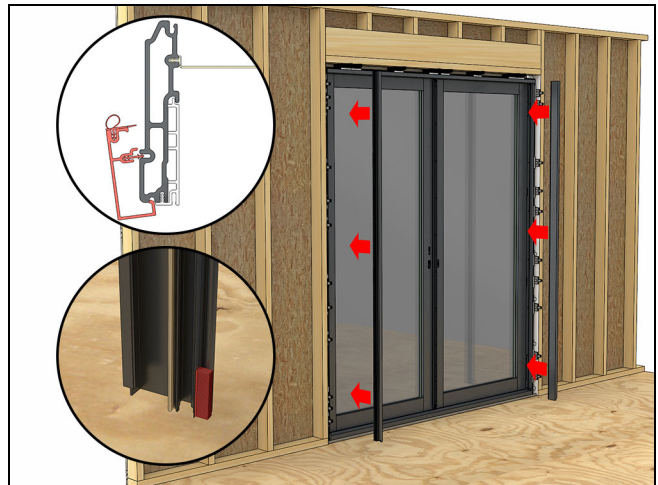


Figure 71



Figure 72

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## ***Astragal Cover Installation***

1. On all panels requiring an astragal, press the astragal cover into the astragal base. Make sure the end of the astragal cover is flush with the end cap on both top and bottom (not covering the dust block). See [Figure 73](#).



**Figure 73**

## Lock Status Sensor- How to Access the Transmitter Housing

Using a smartphone or similar device, scan the QR code or click [here](#) to play a video of this procedure.



1. Transmitter Housing is in the hinge stile above the bottom hinge. Remove the vinyl cover to access the transmitter housing. See [Figure 74](#) and [Figure 75](#).

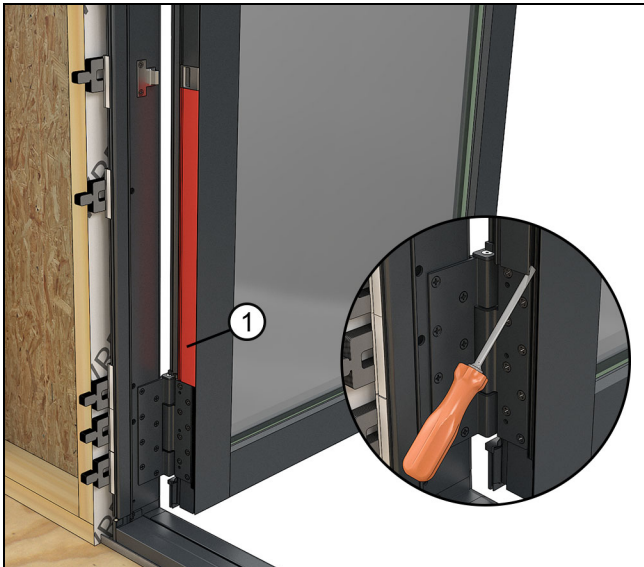


Figure 74

1	LSS Cover
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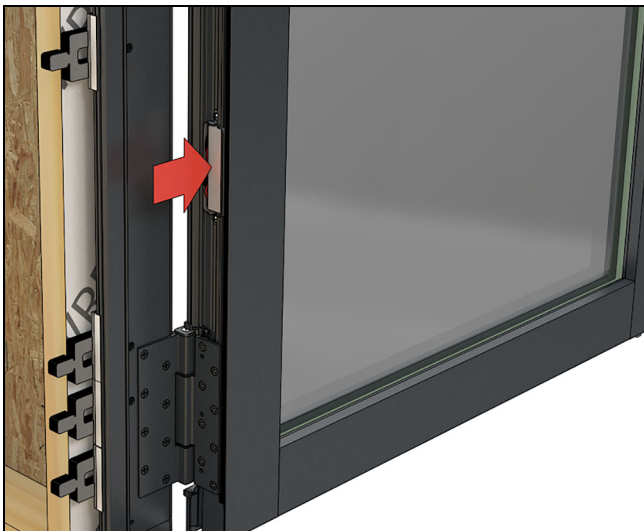


Figure 75

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## Final Steps

1. Apply a bead of sealant at the exterior face of the sill.  
Do not seal in front of the sill weeps. [See Figure 76](#)

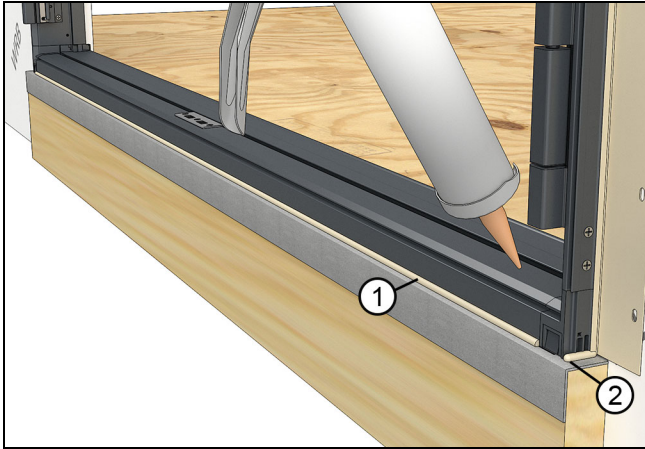


Figure 76

2. Handle Installation: Refer to the instructions included with the hardware to install your handle.

## Latch Reversal

*NOTE: You can reverse the latch orientation while it is installed in the panel.*

1. To reverse the latch handing, insert a 2mm hex key in the small hole next to the latch. Start with the wrench angled slightly toward the latch and insert the wrench into the lock to release the latch bolt.

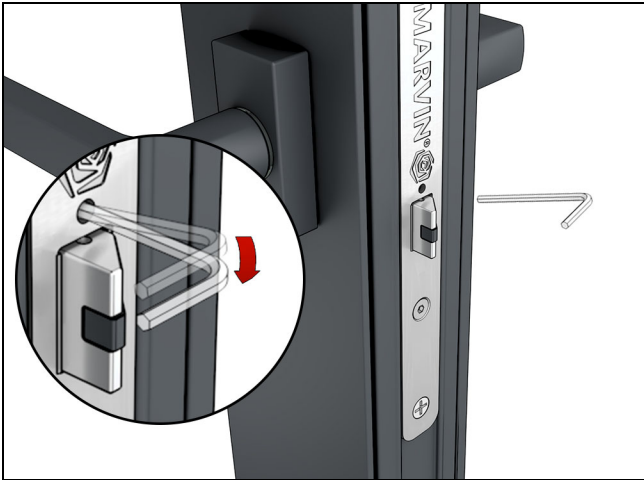


Figure 77

2. Pull the latch bolt out, remove the wrench, reverse the handing and insert back into the lock.

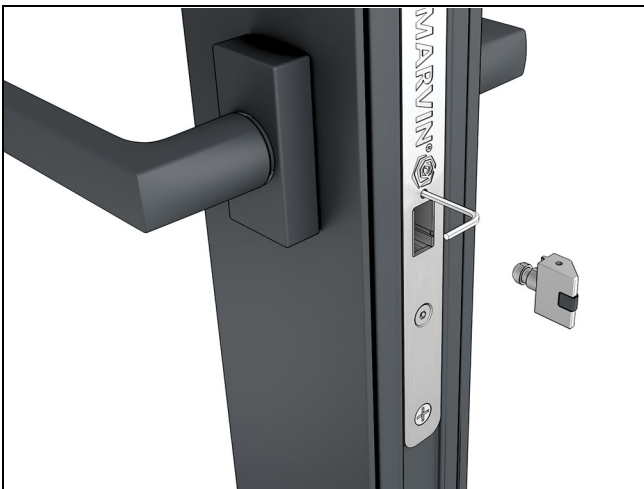


Figure 78

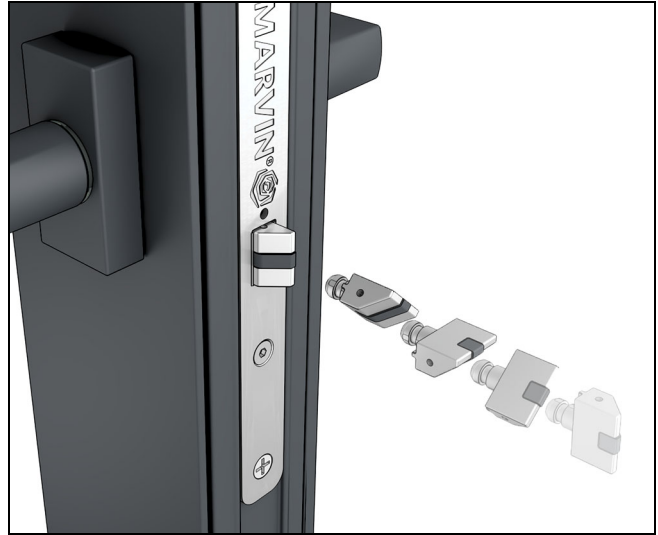


Figure 79



# Technical Specifications

The following details are specified for proper installation of the unit to meet the advertised performance grade (PG) rating.

- Rough Opening Width: 1/4"-1 1/2" (6-38) wider than unit frame outside measurement.
- Rough Opening Height: 1/4"-1 1/2" (6-38) taller than unit frame outside measurement.
- Masonry Opening Width: 1/4"-1/2" (6-13) wider than unit frame outside measurement.
- Masonry Opening Height: 1/8"-1/4" (3-6) taller than unit frame outside measurement.

## ATTENTION

**Architectural Detail Manual Specifications:**  
Rough Opening: Width up to 1 1/2"(38); Height up to 3/4" (19)

Masonry Opening: Width 1/4"

- The panning must drain water to the exterior of the cladding OR the exterior surface of a concealed weather resistive barrier.

## ! CAUTION!

Be aware that the use of sill pans and other barriers will decrease the rough opening height clearance. Adjust opening dimensions accordingly.

- The panning system used in these instructions is one component in a structure's overall water management system. It should be used in conjunction with an appropriate drainage plane compatible with the exterior wall cladding.
- Flashing materials must comply with ASTM E2112, and be compatible with all materials used in installation including panning systems, air barriers and building papers, sheathing, and the window unit.
- Properly flash and/or seal all windows at the exterior perimeter.

## IMPORTANT

Flashing material must not contain asphalt and must be compatible with flexible PVC (vinyl) if nailing fin is used as a backing material.

## IMPORTANT

Sealants used for installation must be Grade NS Class 25 per ASTM C920 and compatible with the building exterior, window or door exterior surface, and flashing/water management materials.

- Optional foams used for installation must be low expansion only. Foam and foam application must comply with ASTM E2112.
- Shims are required at every fastener location.
- Do not use chemically treated products for shim material.
- Fasteners penetrating chemically treated lumber must be a minimum of 0.90 oz/ft<sup>2</sup> zinc hot dipped galvanized or stainless steel type 304 or 316.
- The frame must not come into direct contact with chemically treated wood products.