

Assembled Patio Door Installation Guide

2-Panel Patio Door with Non-Welded Frame



americancraftsmanwindows.com

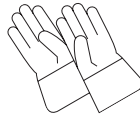
Project Requirements:

- Failure to follow these instructions may void product warranty.
- Read guide before starting installation. Read all warnings and cautions during installation.
- Due to ongoing product changes, updated test results and/or new industry best practices, this installation procedure may change over time. Visit the manufacturer's website for current installation instructions.
- Instructions are for typical wood frame wall construction.
- Check with your local building code official to identify and confirm compliance with local building code requirements.
- Depending on options purchased, this patio door was manufactured for installation into either a new or existing patio door opening.
- Wall and sill must be structurally sound and weather-resistant barrier must be adequate.
- Door must be installed to be plumb, level and square.
- Door should be approximately 1/2" less in both width and height than the opening.
- Contact local authorities or waste management companies for proper recycling and/or disposal of removed window or patio door.
- Visit the manufacturer's website for removal instructions, additional installation information and/or guides.

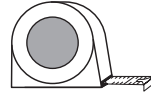
Tools & materials required:



Safety glasses



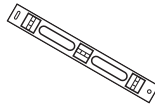
Work gloves



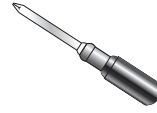
Tape measure



Framer's square



6' level



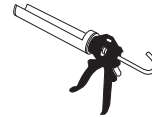
**Phillips hand
screwdriver**



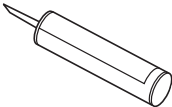
Low expanding foam



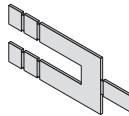
**Power driver
and bits**



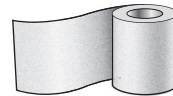
Caulk gun



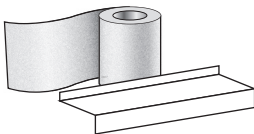
**Interior and exterior
window/door grade sealant**



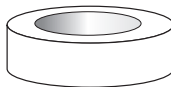
Shims



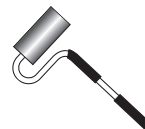
**Self-adhesive
flexible flashing**
(Minimum 6" wide depending upon
installation)



**Formable self
adhering sill flashing**
(Minimum 6" wide)
or Sill pan recommended



Removable tape



J-roller

Warnings and Cautions:

⚠ WARNING

Use caution when working at elevated heights and around unit openings. Follow manufacturers' instructions for ladders and/or scaffolding. Failure to do so may result in injury or death.

⚠ WARNING

Follow manufacturers' instructions for hand or power tools. Always wear safety glasses. Failure to do so may result in injury and/or product damage.

⚠ WARNING

Windows and doors can be heavy. Use safe lifting techniques and a reasonable number of people to move and install window and door products to avoid injury or product damage.

⚠ WARNING

Sill weep doors are small parts and, if swallowed, could pose a choking hazard to young children.

⚠ WARNING

Support door in opening while shiming. Failure to do so may result in injury and/or product/property damage.

⚠ WARNING

Before, during, and after installation, place all tools as well as any casing or door parts on a drop cloth or in a location that will not pose a hazard to installers, customers, or property.

⚠ WARNING

Unless specifically ordered, windows do not have safety glass, and if broken, could cause injury. Many laws and building codes require safety glass in locations adjacent to or near doors. Windows may be available with safety glass that may reduce the likelihood of injury if broken. Information on safety glass is available from your sales representative.

⚠ WARNING

Contains small parts. If swallowed could pose a choking hazard to young children. Remove and dispose of any loose or easily removed parts.

CAUTION

The use of movable insulating materials such as door coverings, shutters, and other shading devices may damage glass and/or vinyl.

CAUTION

Follow instructions of foam, sealant and flashing manufacturer regarding material application and compatibility with this product.

CAUTION

Do not overdrive screws or nails. Product damage may result.

CAUTION

Do not cover weep holes. Property damage may result.

Warnings and Cautions:

CAUTION

When insulating between unit frame and rough opening or between units when joining, **DO NOT** overpack batt insulation or overfill with foam. Bowed jambs will result affecting product performance and/or proper operation of unit.

CAUTION

Do not apply any type of film to glass. Thermal stress conditions resulting in glass damage could occur.

CAUTION

Do not overfill with low expanding foam or overpack with backer rod to avoid bowed jambs.

CAUTION

Do not drill into or through the sill of the door or product and/or property damage may occur.

CAUTION

Weep holes must face the exterior and must be located at the bottom of the door or product and/or property damage may occur.

CAUTION

Remove or cut ventilation holes in plastic shipping wrap if door is not installed immediately or product damage may occur.

CAUTION

Use masonry screw when fastening directly into masonry or through a buck into masonry.

CAUTION

Do not store doors flat or in the sun or product damage may occur.

NOTICE

Important safety information. Leave this information for the building occupant.

NOTICE

Buildings constructed prior to 1978 may contain lead paint which could be disturbed during replacement. For more information on proper management of lead paint, visit www.epa.gov/lead

NOTICE

Carefully remove fasteners that attach wood to door. Fastener holes are used for installation. Failure to do so could result in product damage.

Fasteners:

▲ WARNING

Metal fasteners and components may corrode when exposed to preservative-treated and/or fire-retardant treated lumber. Use approved fasteners and components to fasten unit. Failure to do so may cause a failure resulting in injury, property or product damage.

Florida Building Code Approved Fastener Chart

Application	Anchor Type	Anchor Size	Minimum Embedment	Minimum Clearance to Masonry Edge	Minimum Clearance to Adjacent Anchor
1X Buck or Masonry Frame	ITW	1/4"	1-1/4"	2-1/2"	3"
1X Buck or Masonry Frame	ELCO	1/4"	1-1/4"	1"	4"
2X Buck	Wood Screw	#8	1-1/4"	NA	NA

This fastener schedule is provided as an example of fastening requirements. Requirements may vary by product, building type, application and region. Contact your local building code official for requirements in your area.

Finishing, Cleaning and Maintenance Instructions:

CAUTION

Do not stain or paint weatherstrip, vinyl, glass or hardware. Product damage may occur.

- ▶ **Read and follow finishing product instructions and warnings on finish material.**

CAUTION

Acid solutions used for cleaning masonry or concrete will damage glass, fasteners, hardware, vinyl and metal flashing.

Protect unit and follow cleaning product instructions carefully. If acid contacts unit, wash all surfaces with water immediately.

CAUTION

Abrasive cleaners will damage glass and vinyl surfaces.

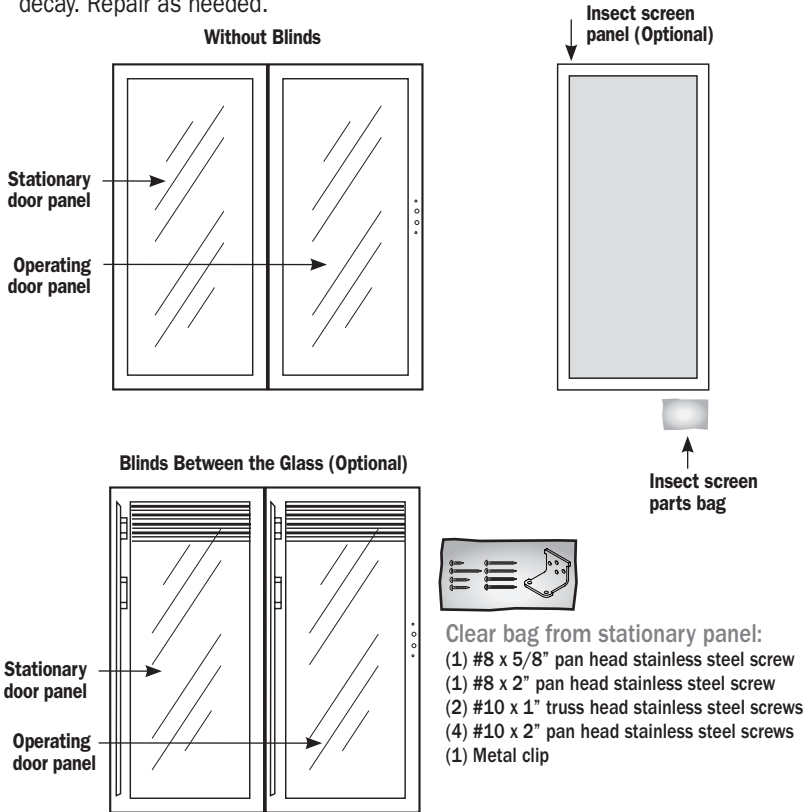
- ▶ **Clean glass using liquid glass cleaner.**
- ▶ *Clean exterior frame, sash/panels, and insect screens using mild detergent and water with a soft cloth or brush.*
- ▶ *For hard to clean areas use a nonabrasive cleaner, alcohol-and-water or ammonia-and-water.*
- ▶ *Do not apply any type of film to insulating glass. Thermal stress and glass damage can result. Shading devices (insulated coverings, shutters, etc.) may also cause thermal stress damage.*
- ▶ *For continued weather resistance of sealant joints, follow the sealant manufacturer's recommendations for periodic maintenance.*

Installation Guide

Step 1

Inspect new patio door and verify opening.

Inspect for proper size and condition and verify that all parts are included. Inspect existing wall and rough opening for structural decay. Repair as needed.



Hardware bags



Clear bag:
(2) installation flange corner gaskets
(2) 2-1/2" pan head screws



Blue bag:
(16) #10 x 2" Phillips pan head screws

Step 2

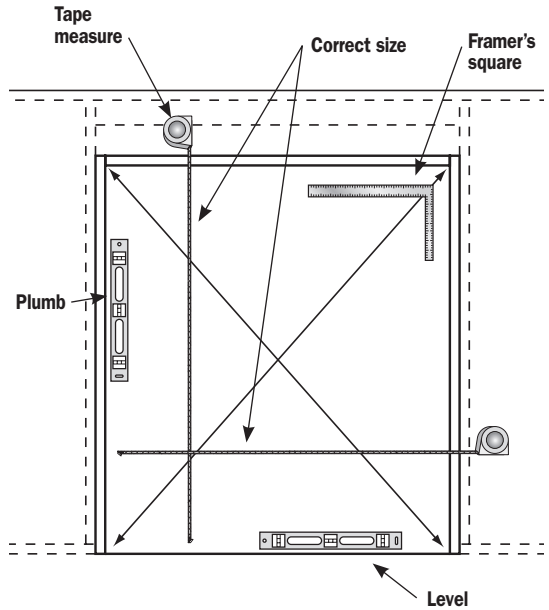
Prepare rough opening.

Inspect opening for correct size. Opening should be $\frac{1}{2}$ " larger than door size in width and height.

Check sill plate for level. Sill **must** be level. If sill is not level, correct before continuing.

Check rough opening for plumb and level. If rough opening is **not** plumb or level, correct as necessary.

Check opening for square by measuring diagonally, upper left to lower right and upper right to lower left corner. Measurements must be within $\frac{1}{8}$ ". If rough opening is **not** square, correct as necessary.



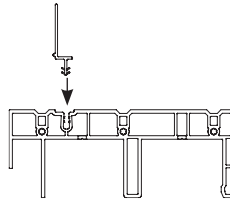
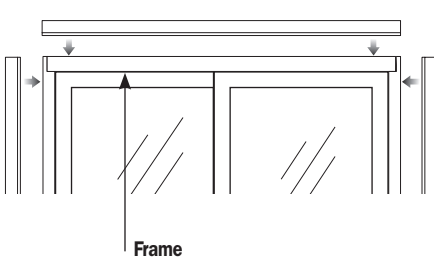
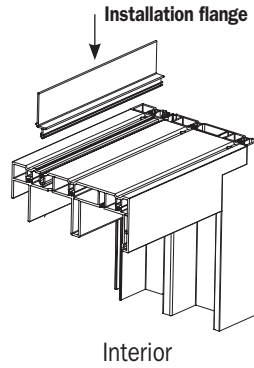
If using installation flange, continue with Step 3 Installation Flange.
If installation flange will not be used, proceed to Step 15 No Installation Flange.

Installation Guide

Step 3 Installation Flange

Apply installation flanges.

Place attachable installation flanges into the accessory grooves on both side jambs and on the head jamb. Make sure flange is positioned toward the exterior of the building.

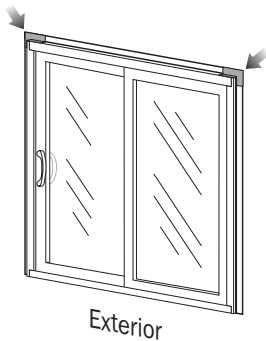
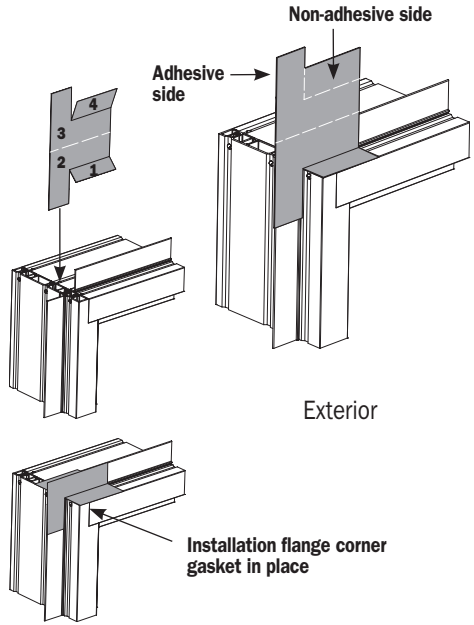


Step 4
Installation Flange

Apply installation flange corner gaskets.
(Use clear hardware bag)

Remove adhesive backing from one installation flange corner gasket. Position the installation flange corner gasket onto the installation flange. Fold section 1 upwards, then align corner gasket with front and side edges of the door frame and apply sections 1 and 2 simultaneously. Fold section 4 downwards, then fold section 3 over installation flange and apply sections 3 and 4 simultaneously to the door frame.

Repeat process for other corner.



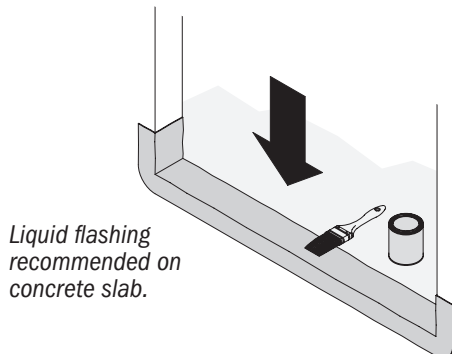
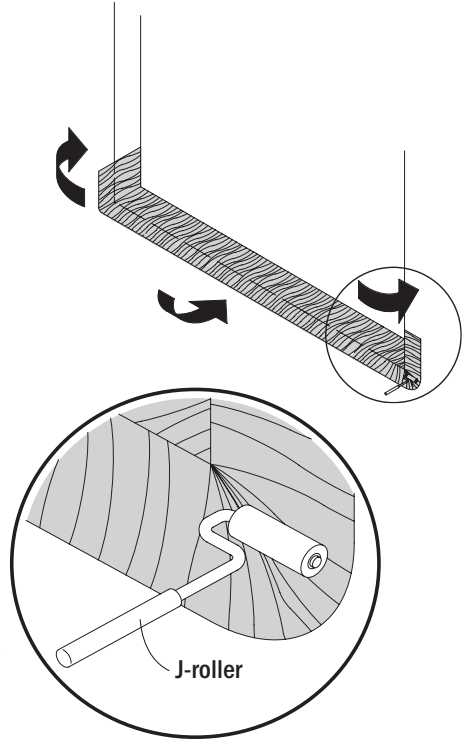
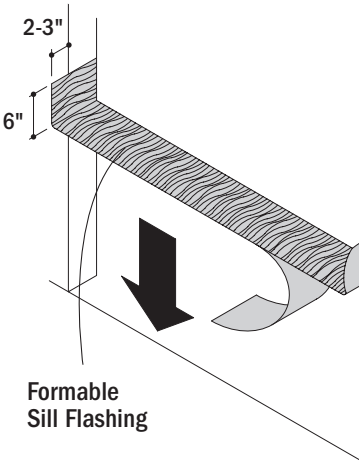
Exterior

Step 5 Installation Flange

Apply formable sill flashing.

Apply formable sill flashing.

CAUTION
Apply formable flashing. Make sure there are no wrinkles or voids. Failure to do so could result in product or property damage.

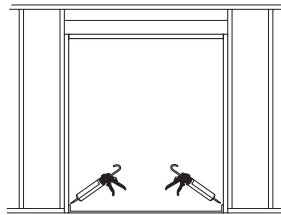


Step 6
Installation Flange

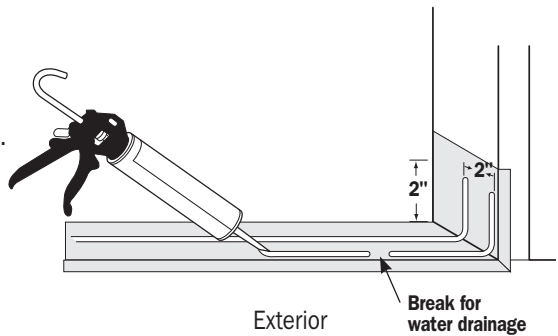
Apply sealant to opening.

Apply two (2) 1/4" beads of exterior window/door grade sealant to sill and 2" up each side of rough opening. The exterior sealant bead should be at the exterior edge of the opening. The beads of sealant should be 2" apart.

NOTE: Leave two (2) small breaks in exterior sealant bead only to allow for water drainage.



Exterior



Exterior

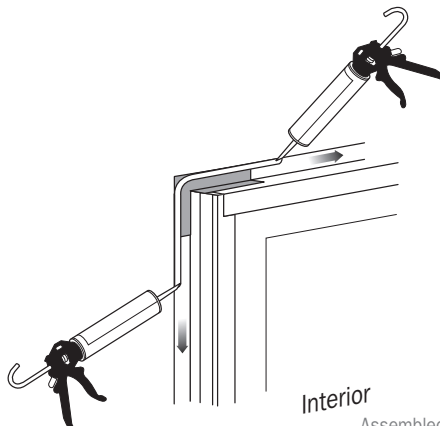
Break for water drainage

It is strongly recommended that you use a membrane or vinyl-based sill pan for a weathertight seal. Follow the sill pan manufacturer's installation instructions.

Step 7
Installation Flange

Apply sealant to door frame.

Apply 1/4" bead of sealant along the edge of the installation flange on the head and side jambs along the interior side where it will contact the opening.



Interior

Assembled 2-Panel Patio Door

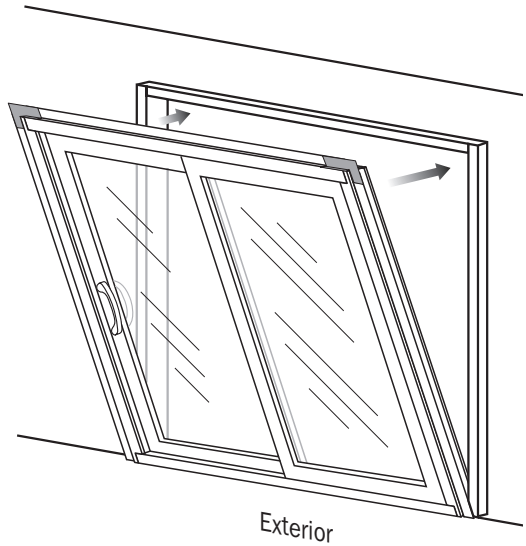
Step 8 Installation Flange

Place patio door in opening.

Place patio door into the opening from the exterior. Place sill of frame into place, then tip head into place.

NOTE: The installation flange is closer to the EXTERIOR side of the frame. The narrow insect screen track is on the exterior side.

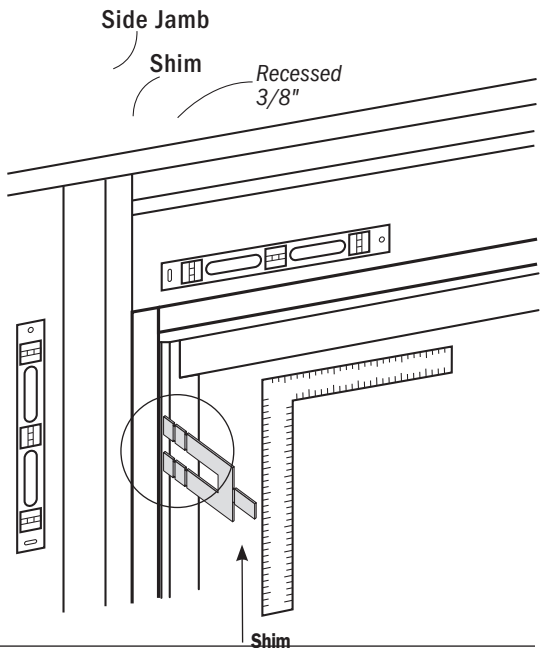
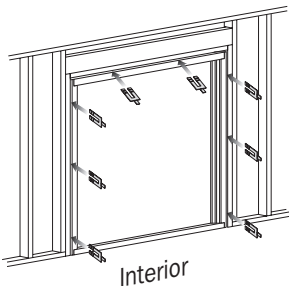
NOTE: Be sure the installation flange and sealant are tight against the exterior substrate before attaching the frame.



Step 9 Installation Flange

Shim door frame.

Shim so door frame is plumb, level and square. Shim at all pre-punched holes inside frame. Trim shims as needed. Shims must be recessed 3/8".



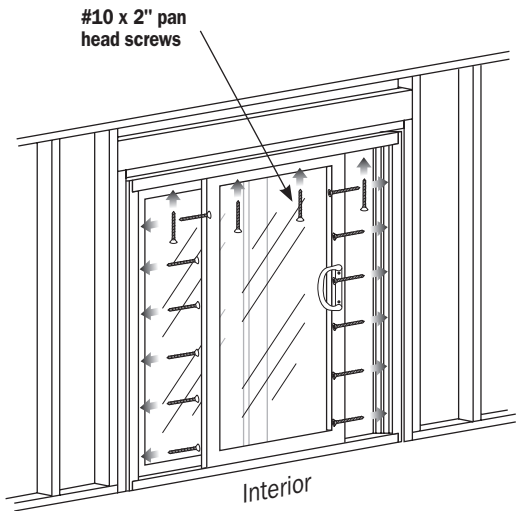
Assembled 2-Panel Patio Door

Step 10
Installation Flange

Fasten frame.
(Use blue hardware bag)

Attach frame to opening using sixteen (16) #10 x 2" pan head screws in all pre-drilled holes in interior track of head and side jambs.

Unlock and open the operating door panel as needed to access all pre-drilled holes.



If installing High-Velocity Hurricane Zone (HVHZ) approved patio door, proceed to Step 28. Otherwise, proceed to Step 11 - Installation Flange.

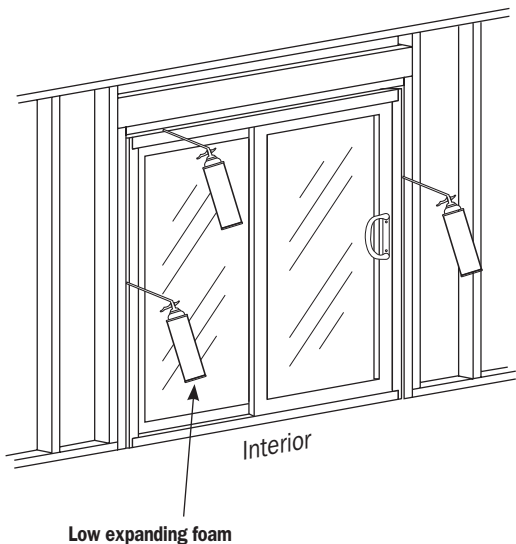
Step 11
Installation Flange

Insulate frame.

Insulate around patio door.

CAUTION

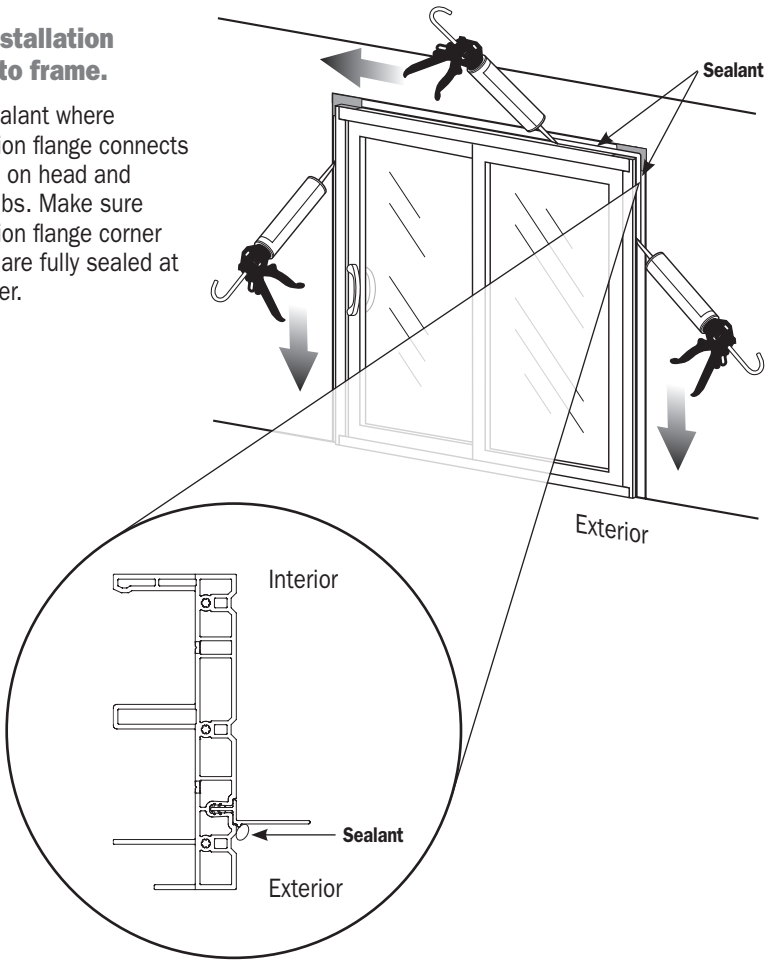
Do not overfill with low expanding foam or overpack with backer rod to avoid bowed jambs.



Step 12 Installation Flange

Seal installation flange to frame.

Apply sealant where installation flange connects to frame on head and side jambs. Make sure installation flange corner gaskets are fully sealed at the corner.

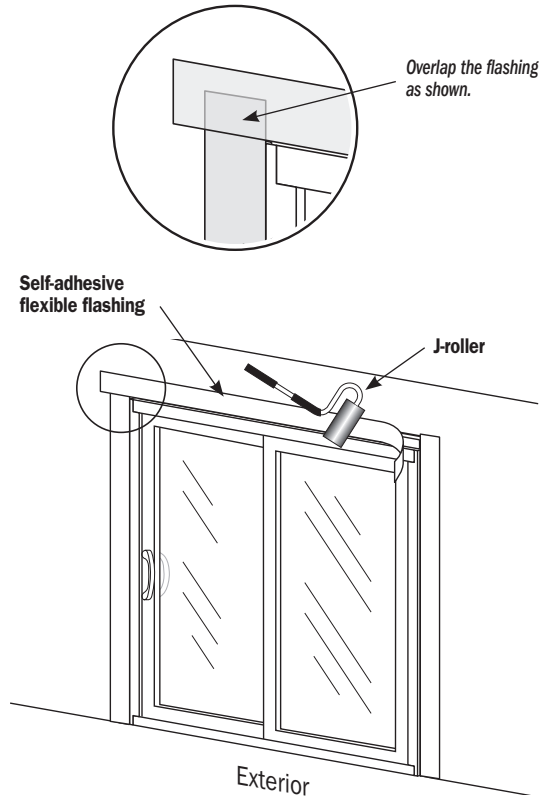


Step 13
Installation Flange

Apply self-adhesive flexible flashing to cover the installation flange.

Apply to the sides first and make sure it extends beyond the top of the patio door. Then apply to the top, extending beyond the sides.

NOTE: Use J-roller to make sure the self-adhesive flexible flashing bonds properly.



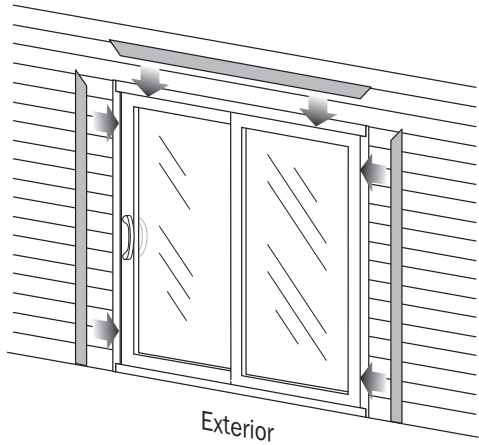
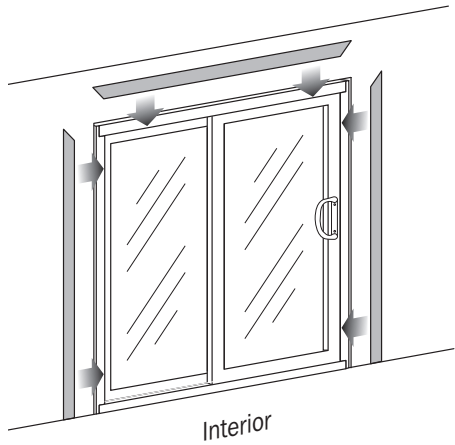
IMPORTANT – To create a weathertight seal, be sure that the flashing fully covers the entire length of the side jambs and head jamb of the door around the patio door opening. Pay special attention to the corners to be sure that there are no gaps in the flashing.

Installation Guide

Step 14 Installation Flange

Apply trim.

Apply interior and exterior trim as desired. Apply sealant to the perimeter of interior and exterior for a weathertight seal.



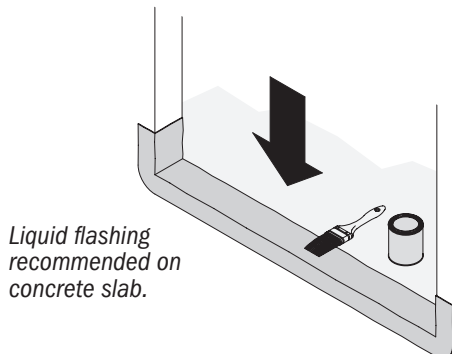
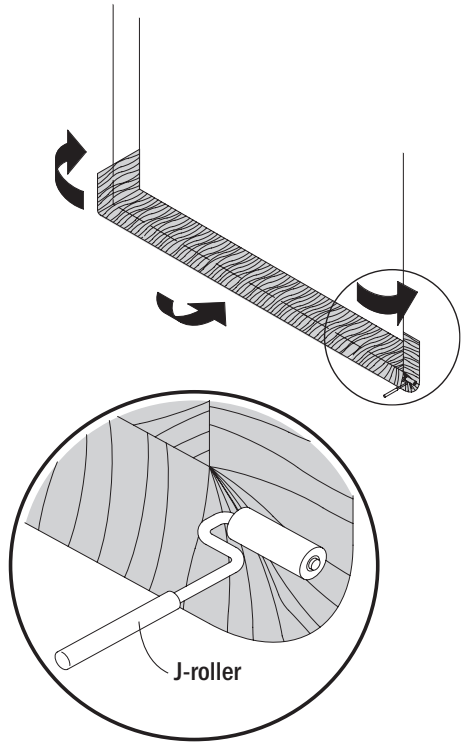
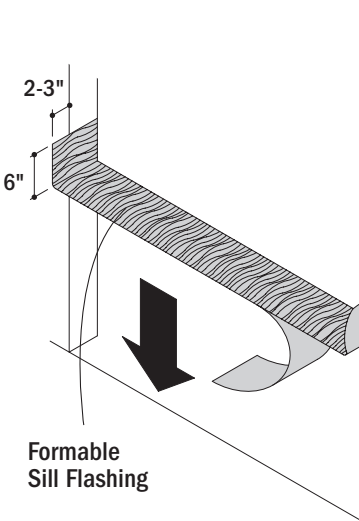
Proceed to Step 22.

Step 15
No Installation Flange

Apply formable sill flashing.

Apply formable sill flashing.

CAUTION
Apply formable flashing. Make sure there are no wrinkles or voids. Failure to do so could result in product or property damage.



Assembled 2-Panel Patio Door

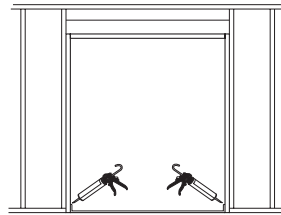
Installation Guide

Step 16 No Installation Flange

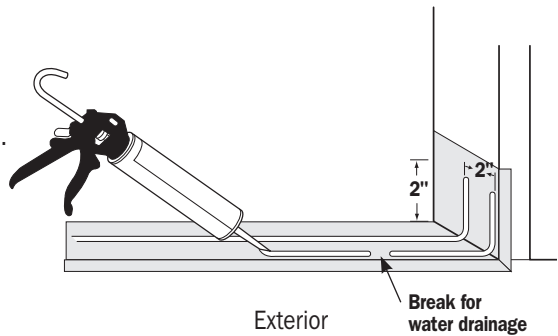
Apply sealant to opening.

Apply two (2) 1/4" beads of exterior window/door grade sealant to sill and 2" up each side of rough opening. The exterior sealant bead should be at the exterior edge of the opening. The beads of sealant should be 2" apart.

NOTE: Leave two (2) small breaks in exterior sealant bead only to allow for water drainage.



Exterior



Exterior

Break for
water drainage

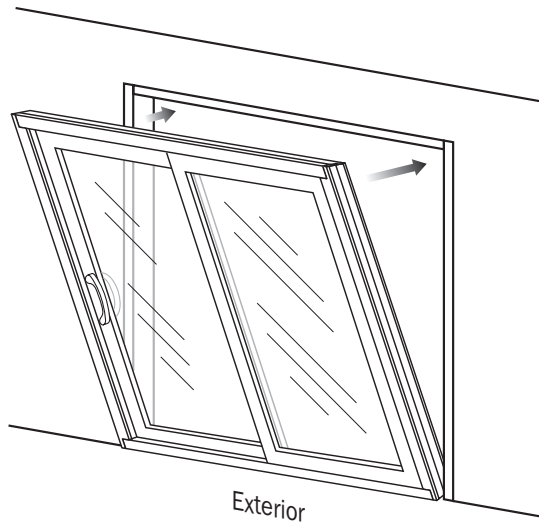
It is strongly recommended that you use a membrane or vinyl-based sill pan for a weathertight seal. Follow the sill pan manufacturer's installation instructions.

Step 17
No Installation Flange

Place patio door in opening.

Place patio door into the opening from the exterior. Place sill of patio door into place, then tip head into place.

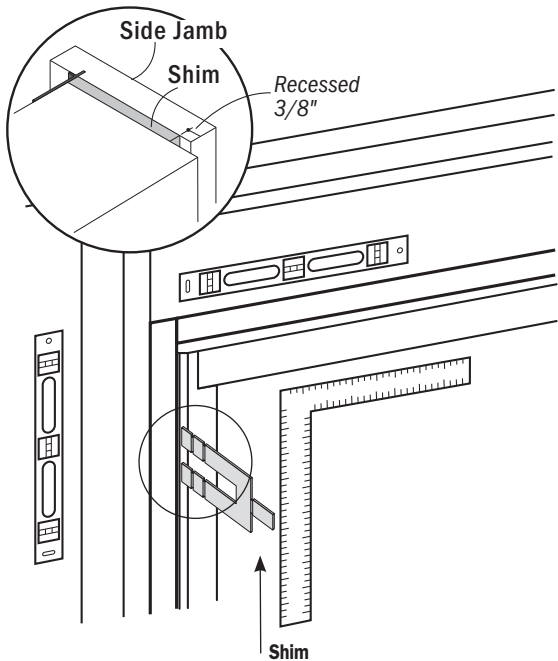
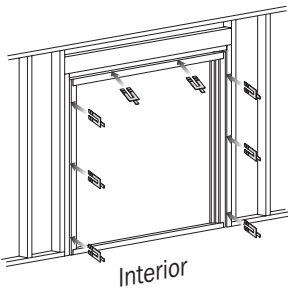
NOTE: Be certain narrow insect screen track is on exterior side.



Step 18 No Installation Flange

Shim door frame.

Shim so door frame is plumb, level and square. Shim at all pre-punched holes inside frame. Trim shims as needed. Shims must be recessed 3/8".

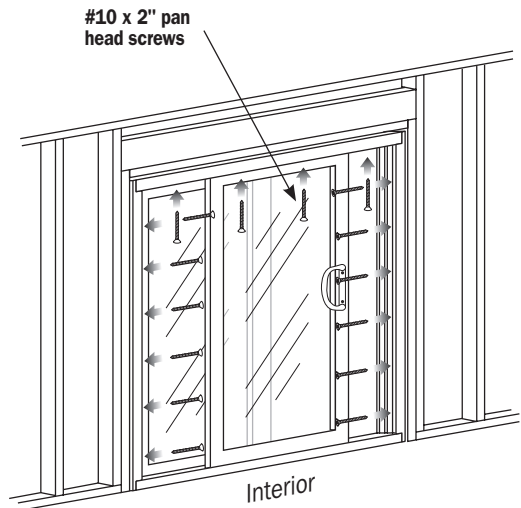


Step 19 No Installation Flange

Fasten frame. (Use blue hardware bag)

Attach frame to opening using sixteen (16) #10 x 2" pan head screws in all pre-drilled holes in head and side jambs.

Unlock and open the operating door panel as needed to access all pre-drilled holes.



If installing High-Velocity Hurricane Zone (HVHZ) approved patio door, proceed to Step 28. Otherwise, proceed to Step 20 - No Installation Flange.

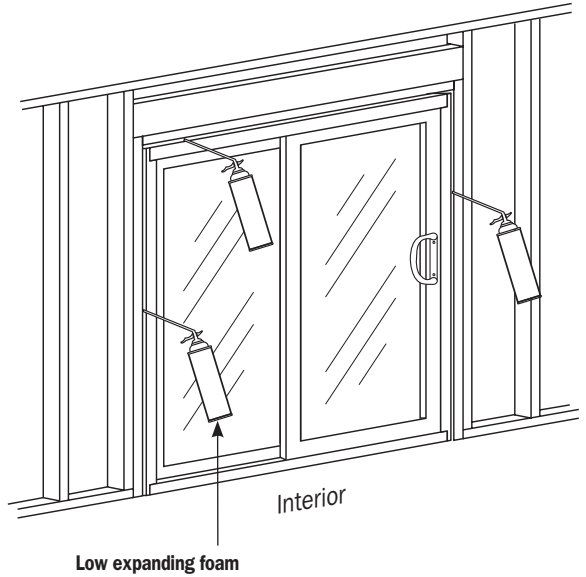
Step 20
No Installation Flange

Insulate frame.

Insulate around patio door.

CAUTION

Do not overfill with low expanding foam or overpack with backer rod to avoid bowed jambs.

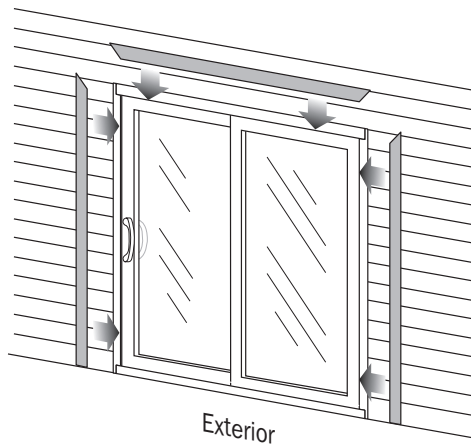
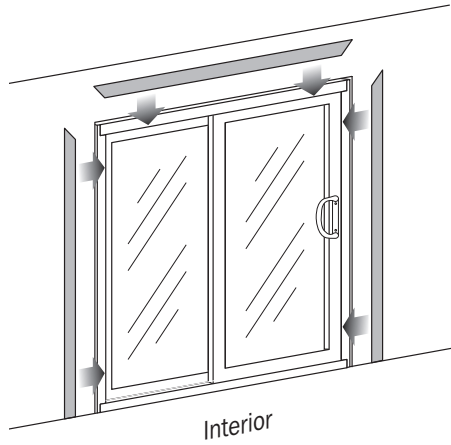


Installation Guide

Step 21 No Installation Flange

Apply trim.

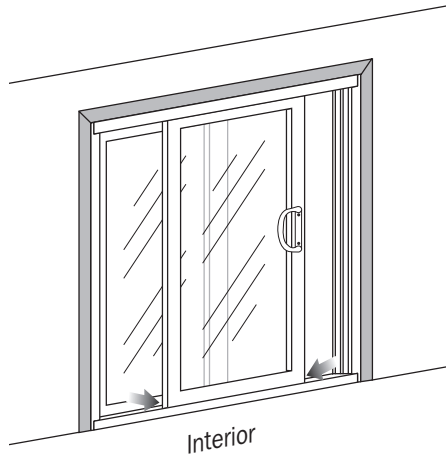
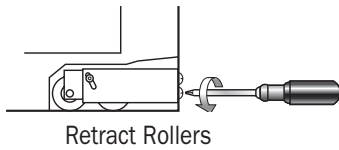
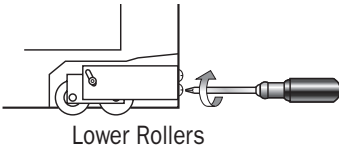
Apply interior and exterior trim as desired. Apply sealant to the perimeter of interior and exterior for a weathertight seal.



Step 22

Adjust operating panel rollers.

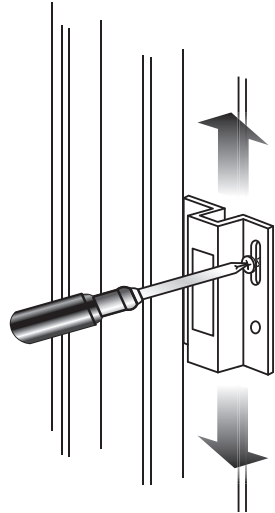
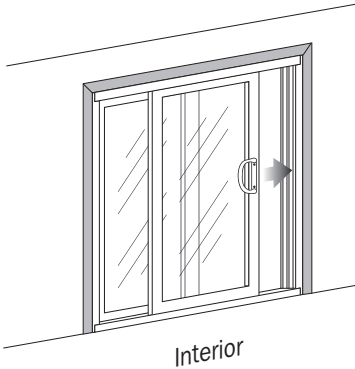
Lift door panel slightly to minimize weight on rollers. Turn lower screws to adjust rollers so that door panel is plumb and level with frame and door slides smoothly.



Step 23

Adjust keeper.

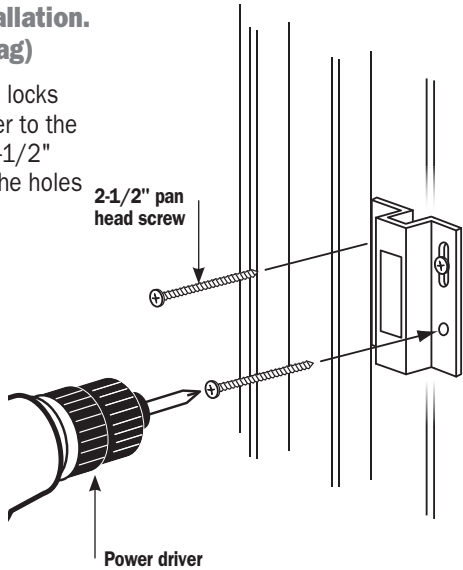
Close and lock operating panel to make sure patio door locks correctly. If the patio door does not lock correctly, open patio door, loosen screws in keeper and slide keeper up or down to allow lock hook to properly nest in keeper. Tighten screws.



Step 24

**Complete keeper installation.
(Use clear hardware bag)**

Once patio door slides and locks smoothly, secure the keeper to the door frame using two (2) 2-1/2" pan head screws through the holes in the keeper.



Step 25

Install panel bumper. (Bumper located in side jamb next to head jamb)

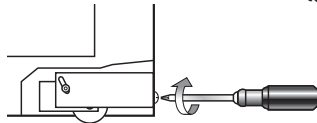
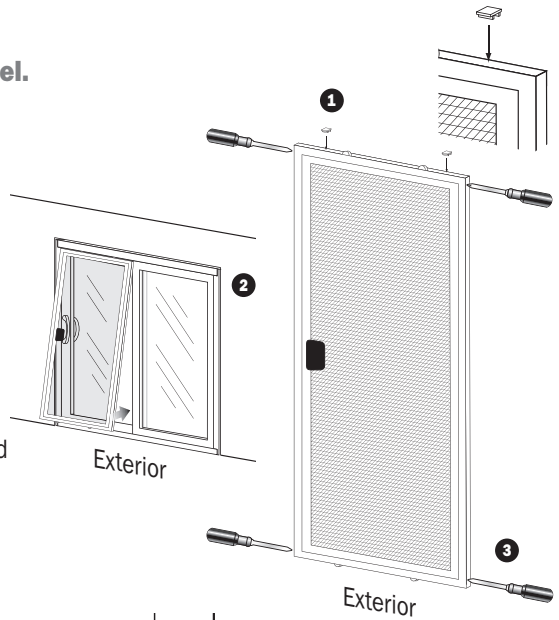
Snap panel bumper into place in interior track of head jamb next to side jamb to prevent handle from contacting stationary panel during operation.



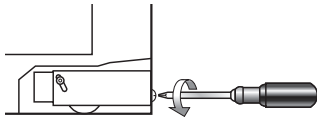
Step 26

Install insect screen panel.

- 1 Push the top (2) guides into place on the top of the insect screen panel approximately 2" from each side.
- 2 Tilt the insect screen, put the top into the head jamb track, then put the bottom into the sill track.
- 3 Adjust wheels so insect screen stays on track and operates smoothly.



Lower Rollers



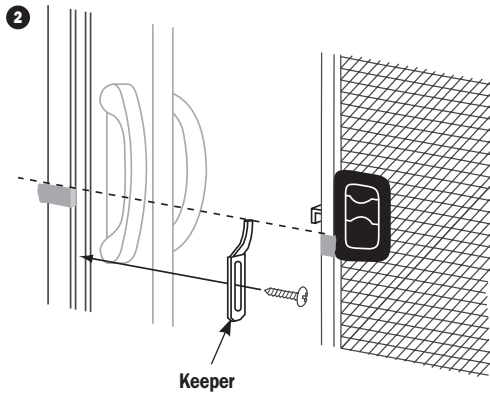
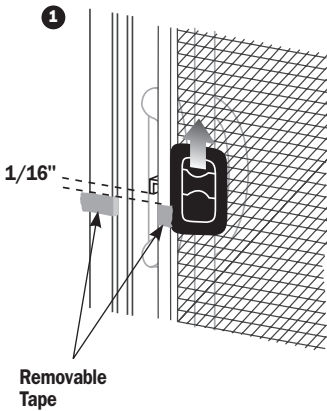
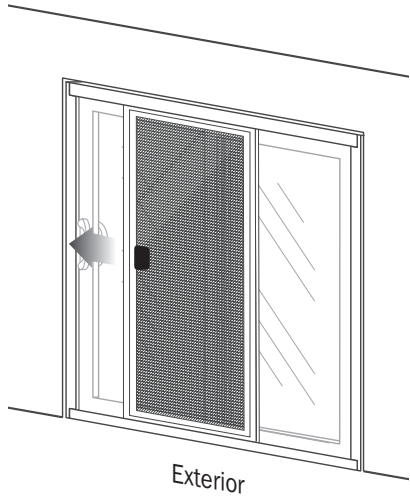
Retract Rollers

Installation Guide

Step 27

Install insect screen keeper into side jamb track.

- 1 Push insect screen panel handle all the way up. Mark $1/16''$ below bottom of insect screen latch with removable tape and transfer the mark to the door frame with removable tape.
- 2 Position top of insect screen keeper with mark on door frame. Insect screen keeper should be installed with the flange up. Attach insect screen keeper using included screw.
- 3 Adjust insect screen keeper as necessary for easy latching and releasing. Remove Tape.



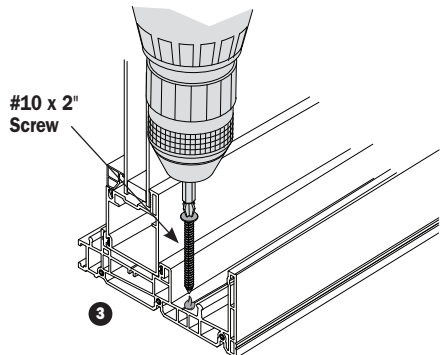
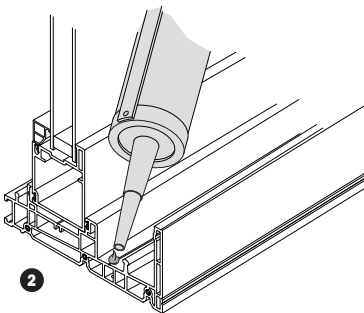
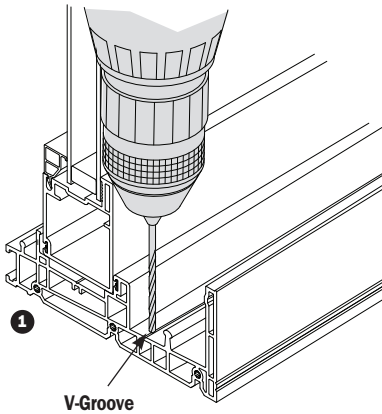
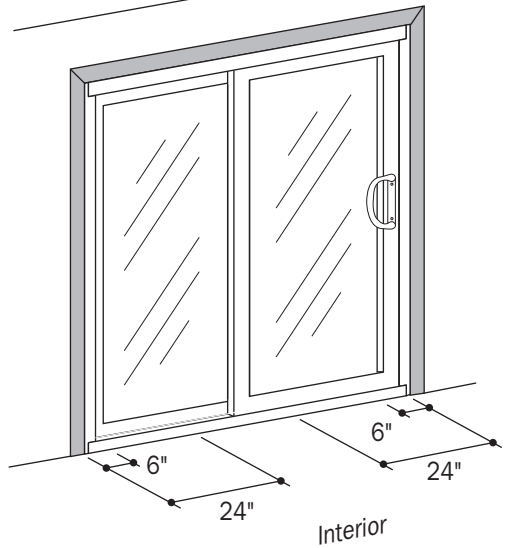
For Non High-Velocity Hurricane Zone (HVHZ) approved patio door, installation is complete

If using optional blinds between the glass, proceed to Appendix A, Step A1.

Step 28

Drill screw holes and fasten at sill.

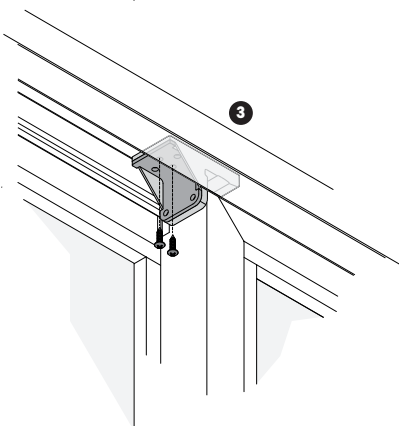
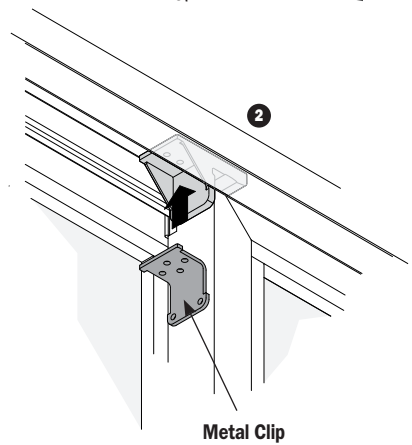
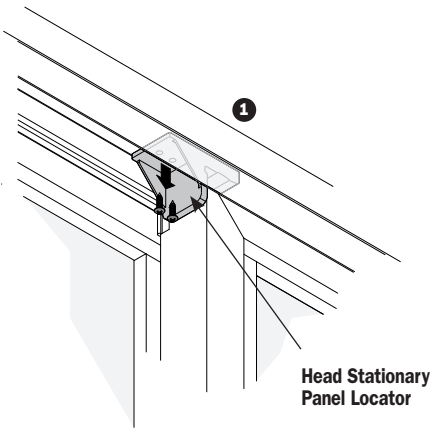
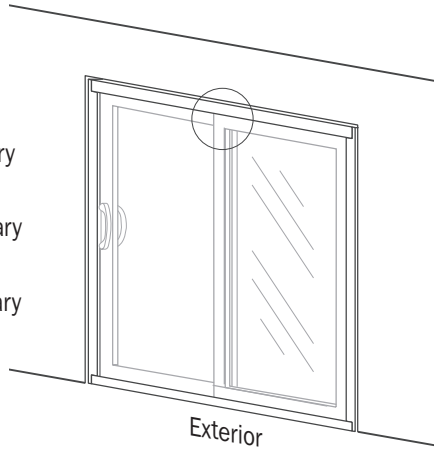
- 1 Drill four screw holes through sill, 6" and 24" from each corner, using 1/8" drill bit. Align screw holes with V-groove in sill track as shown.
- 2 Fill each hole with sealant.
- 3 Fasten sill using four (4) #10 x 2" stainless steel screws.



Step 29

Install metal clip on head stationary panel locator.

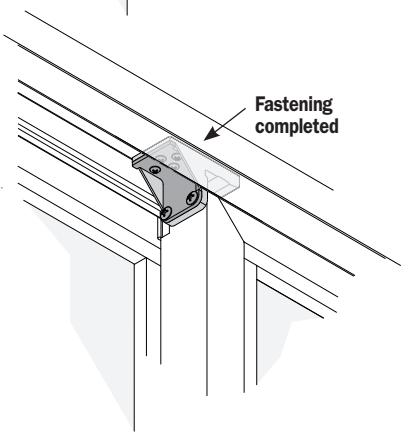
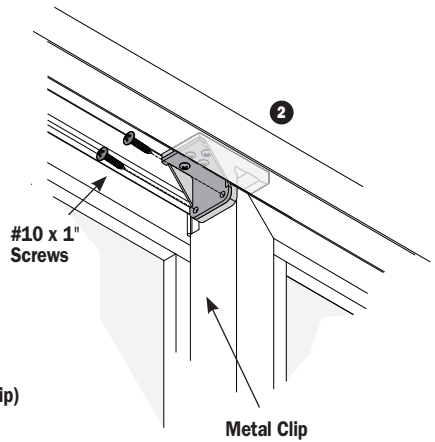
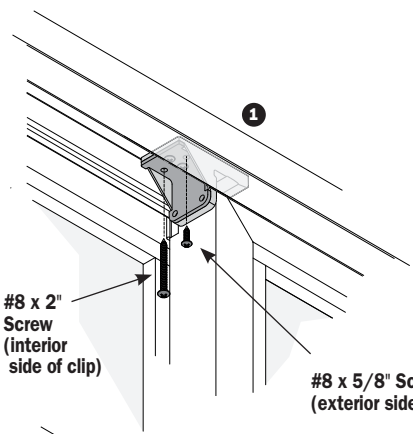
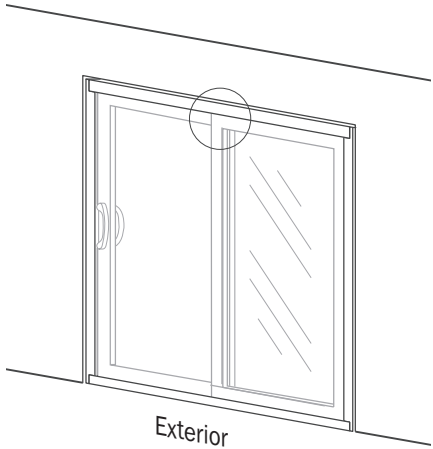
- 1 Remove screws from head stationary panel locator. Save for reuse.
- 2 Position metal clip on head stationary panel locator.
- 3 Fasten metal clip and head stationary panel locator to head jamb using saved screws.



Step 30

Install additional screws in metal clip and stationary panel locator.

- 1 Install one (1) #8 x 2" stainless steel screw through hole on interior side of metal clip and one (1) #8 x 5/8" stainless steel screw through hole on exterior side of metal clip.
- 2 Install two (2) #10 x 1" stainless steel truss head screws through side holes of metal clip.



If using installation flange, proceed to Step 11 - Installation Flange. If no installation flange will be used, proceed to Step 20 - No Installation Flange.

Appendix A

Instructions to Operate Optional Blinds Between the Glass

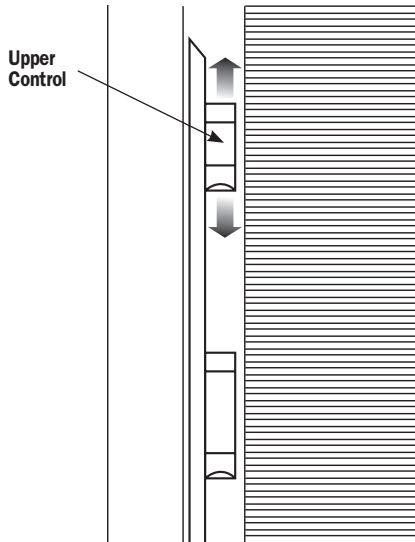
Step A1

Tilt the blinds.

To tilt the blinds, slide the upper control up and down.

NOTE

For optimal operation of blinds, wait to adjust blinds for 24 hours after installation to allow the pressure between the panes of glass to equalize.



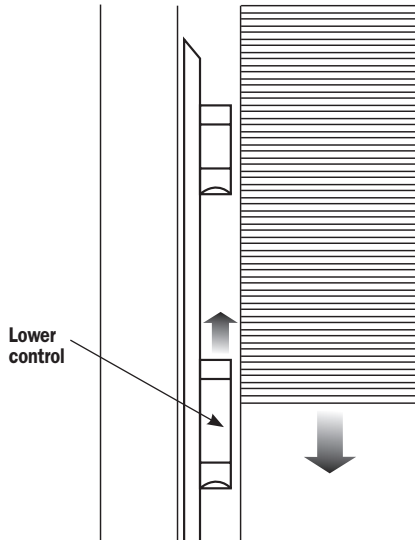
Step A2

Lower the blinds.

To lower the blinds, slide the lower control up.

NOTE

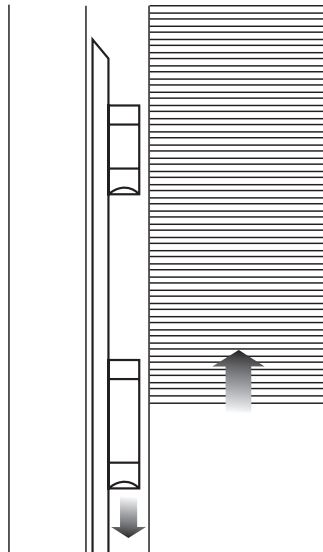
For peak performance, tilt the blinds to the open position before raising and lowering.



Step A3

Raise the blinds.

To raise the blinds, slide the lower control down.

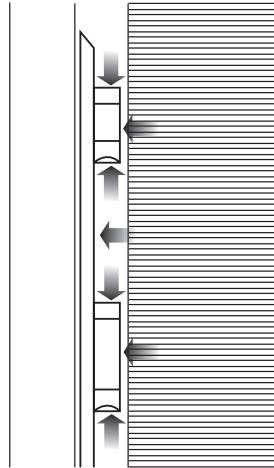


Optional Blinds Between the Glass Maintenance

Step A4

Keep surface clean.

For ease of operation, make sure the surface around the controls remains clean. Dirt can impact the smooth movement of the controls, requiring more force to adjust the blinds.



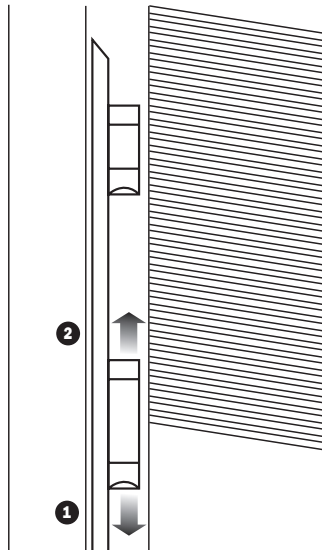
Step A5

Level blinds.

- 1 If the blinds are not level, slide the lower control down to fully open the blinds.
- 2 Then slide the lower control up to lower and level the blinds. Repeat if necessary until the blinds are level.

Slide up

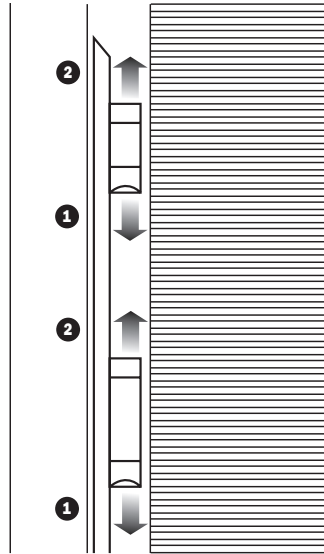
Slide down



Step A6

Re-engage operator magnets.

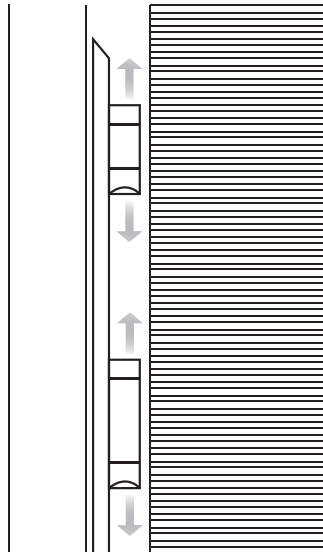
If the operator magnets become disengaged, the blinds will not operate properly. To re-engage the magnets, slide the control that needs adjusting down as far as possible and then slide it up as far as possible. The controls will click into place when the magnets re-engage.



Step A7

Do not use excessive force or abrupt operation.

Excessive force or abrupt operation can damage the blinds. Smooth and easy sliding of the controls is recommended.



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Installation Guide
Assembled 2-Panel Patio Door