Assembled Patio Door Installation Guide

Non-Impact & Impact-Resistant 2-Panel Door with Welded Frame

70 Series

American Craftsman™ by Ply Gem

homedepot.plygemwindows.com

Project Requirements:

- Read guide before starting installation. Read all warnings and cautions during installation.
- Failure to follow these instructions may void product warranty.
- Due to ongoing product changes, updated test results and/or new industry best practices, this installation procedure may change over time. Visit the homedepot.plygemwindows.com for current installation instructions.
- Instructions are for typical wood frame wall construction.
- Installation must comply with all applicable building codes.
- These minimum installation guidelines may not be compatible with your application due to building design, construction materials or methods used and/or building site conditions. Consult a contractor or architect for recommendations.
- Wall and sill must be structurally sound and weather-resistant barrier must be adequate.
- Door must be installed plumb, level and square.
- Door should be approximately 1/2" less in width and 1/4" less in height than the opening.
- Joined combination units must be individually supported to the rough opening.
- Anchoring fasteners must attach to framing members.
- Contact local authorities or waste management companies for proper recycling and/or disposal of a removed patio door.

⚠ WARNING

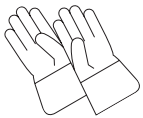
Most patio doors are shipped on their side, with both the stationary and operating panels at the (bottom) to minimize handling issues by maintaining a low center of gravity. Shipping materials may need to be removed and the rollers on the active panel should be fully extended to better accommodate panel movement prior to rotating the entire door unit into its upright position. If the roller adjustment isn't made prior to this step, damages may occur to the sill roller track not covered under warranty.

NOTICE

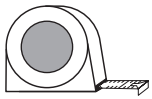
Buildings constructed prior to 1978 could contain lead paint which could be disturbed during door replacement. For more information on proper management of lead paint, go to: www.epa.gov/lead

Suggested Tools and Materials You May Need:

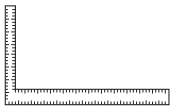
Safety glasses



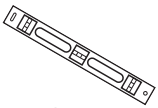
Work gloves



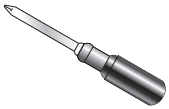
Tape measure



Framer's square

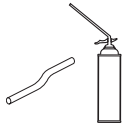


6' level

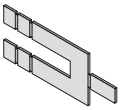


Phillips screwdriver

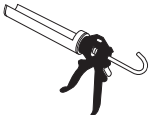
Power driver and bits



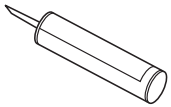
Low expanding foam or backer rod with sealant and/or batt insulation



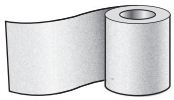
Shims (waterproof)



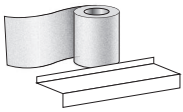
Caulk gun



Interior and exterior window/door grade sealant



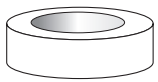
Approved flashing membrane designed for window and door installation
(Minimum 4" wide depending upon installation)



Approved Formable Sill Flashing Membrane or equivalent designed for window and door installation
(Minimum 4" wide)
or Sill pan recommended

Liquid Sill Flashing Recommended
(for slab concrete)

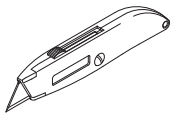
Hammer and 2" galvanized roofing nails
(or approved fasteners)



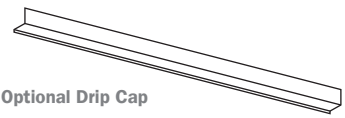
Removable tape

J-roller

Putty knife



Utility knife



Optional Drip Cap

Assembled Patio Door

⚠ WARNING

Use caution when working at elevated heights and around door openings. Failure to do so could result in injury or death.

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

Doors can be heavy. Use safe lifting techniques and a reasonable number of people with enough strength to properly lift, carry, and install your door products. Heavier doors will require mechanical assistance. Failure to do so could result in injury, product or property damage.

Support door in opening at all times until securely fastened. Failure to do so could result in door falling out causing injury, property or product damage.

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.

CAUTION

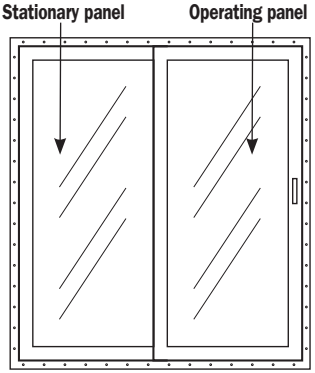
Do not store doors flat or in the sun or product damage may occur. Stack like sizes together and no more than 6 units deep out of direct sunlight.

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

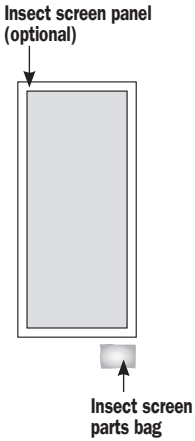
Step 1

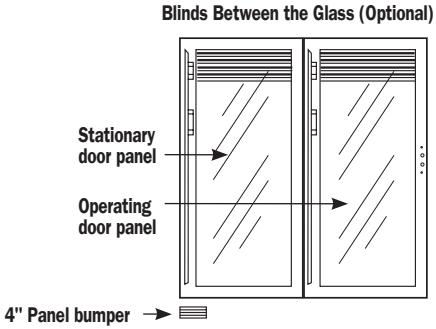
Inspect new door and verify opening.

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.



Interior





See Appendix B for instructions to operate, and maintenance on (optional) blinds between the glass.

Hardware Included:

One hardware bag containing:

Quantity	Item
2	Small Weep Hole Covers
2	Large Weep Hole Covers
4	#10 x 2–1/2" Pan Head Screws for Keeper

(No weep hole covers for blinds between the glass)

⚠ WARNING

Doors have small parts (e.g. hole plugs, operator spline caps, fasteners, etc.). Small parts if swallowed could pose a choking hazard to young children. Dispose of unused, loose, or easily removed small parts. Failure to do so could result in injury.

Assembled Patio Door

Step 2

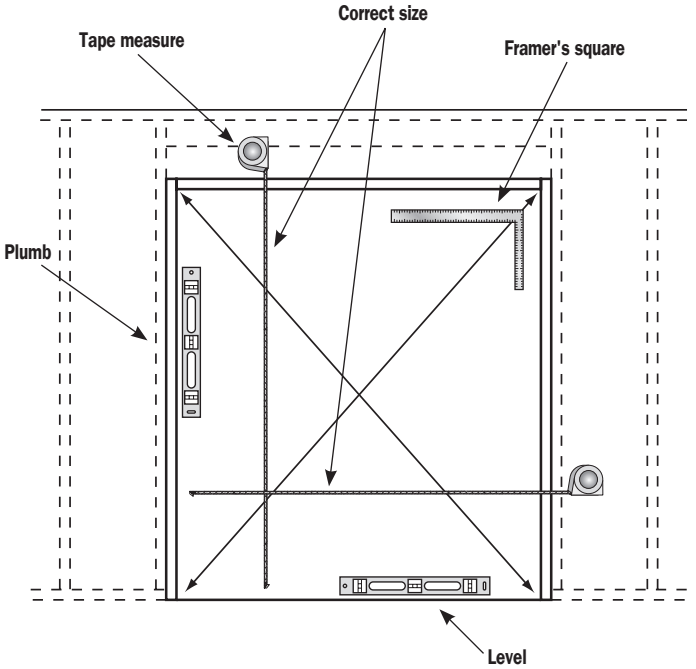
Prepare rough opening.

Inspect opening for correct size. Opening should be 1/2" larger than door size in width and 1/4" larger 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 1/8". If rough opening is not square, correct as necessary.



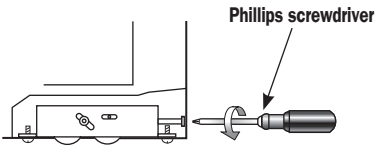
If desired handing of operating panel is correct, proceed to Step 10. If other handing is desired (6'8" or 6'10" height doors only), continue to Step 3.

To Change Handing of Operating Panel (Optional)
Move to the Left or to the Right
(Doors WITHOUT blinds between the glass only)

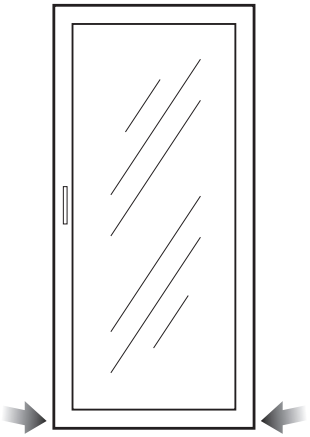
Step 3

Retract rollers on operating panel.

Turn screws on both sides of the operating panel rollers counterclockwise to retract rollers all the way up to prevent damage during removal.



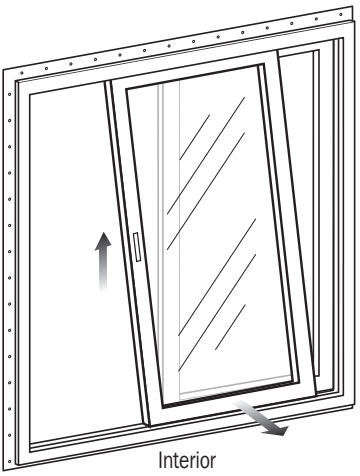
Retract Rollers


Interior

Step 4

Remove operating panel.

Lift operating panel up and tilt the bottom of the operating panel out to remove from the interior. Set carefully aside.

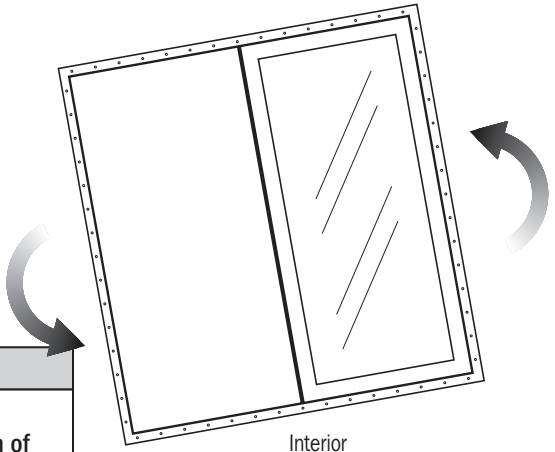

Interior

Assembled Patio Door

Step 5

Rotate entire patio door frame.

With operating panel set to the side, rotate the entire door frame (including stationary panel) to desired handing.



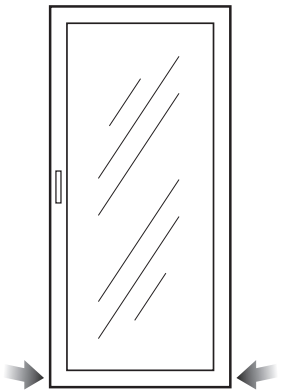
CAUTION

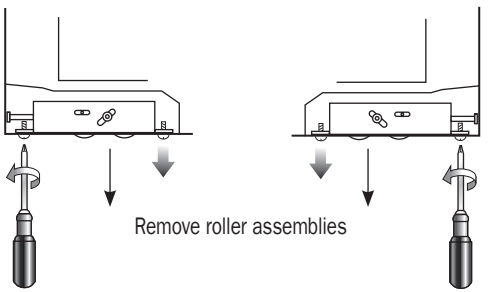
Weep holes must face the exterior and must be located at the bottom of the door or product and/or property damage may occur.

Step 6

Remove roller assemblies.

Remove both roller assemblies from bottom of the operating panel by removing two screws from the bottom of each roller assembly.

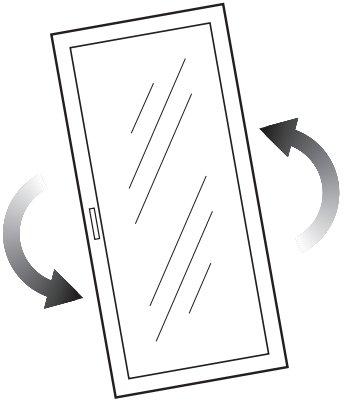




Assembled Patio Door

Step 7

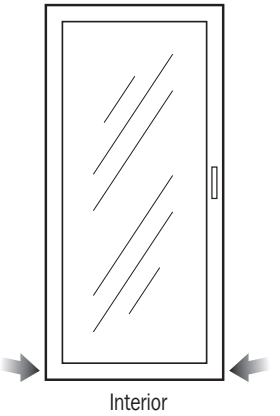
Rotate operating panel.

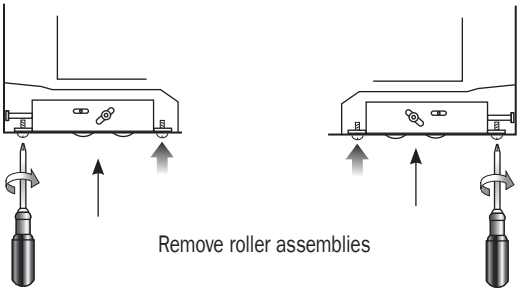


Step 8

Replace roller assemblies.

Attach both roller assemblies into the "new" bottom of the operating panel.





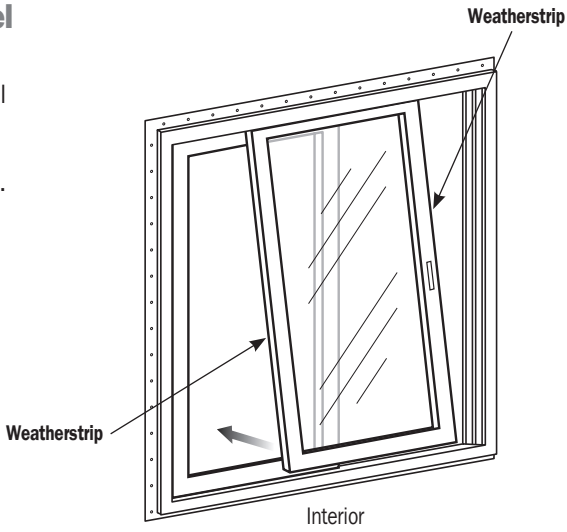
Assembled Patio Door

Step 9

Install operating panel from the interior.

Place top of operating panel into interior track, then gently set bottom of panel in place in the interior track.

NOTE: Make sure the weatherstrip opposite the handle faces the exterior.



IMPORTANT - If installing door on a concrete slab, proceed to Appendix A, Step A1. Otherwise proceed to Step 10.

(For Florida Impact Product, please see floridabuilding.org documentation for FL 14998.)

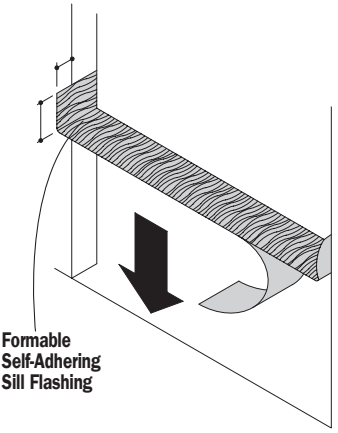
Step 10

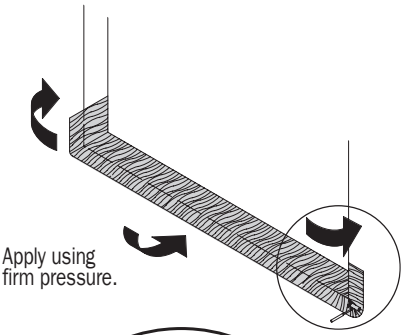
Apply sill flashing product per the product manufacturers specifications and instructions.

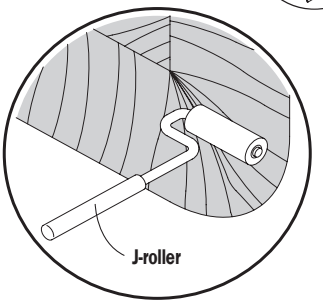
Apply formable self-adhering sill flashing. Use liquid flashing for slab concrete.

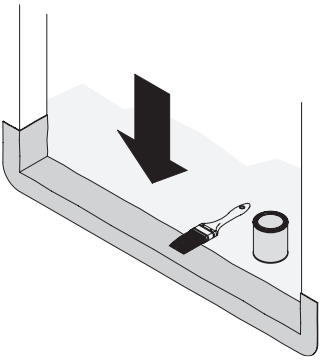
CAUTION

Apply sill flashing product per the product manufacturers specifications and instructions. Failure to do so could result in product or property damage.









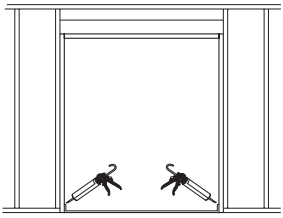
Liquid flashing recommended on concrete slab.

Assembled Patio Door

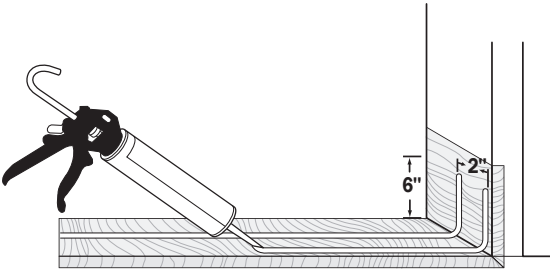
Step 11

Apply sealant to opening.

Apply two (2) 1/4" beads of exterior window/door grade sealant to sill and 6" 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.



Exterior



Exterior

Follow the sill pan manufacturer's installation instructions.

CAUTION

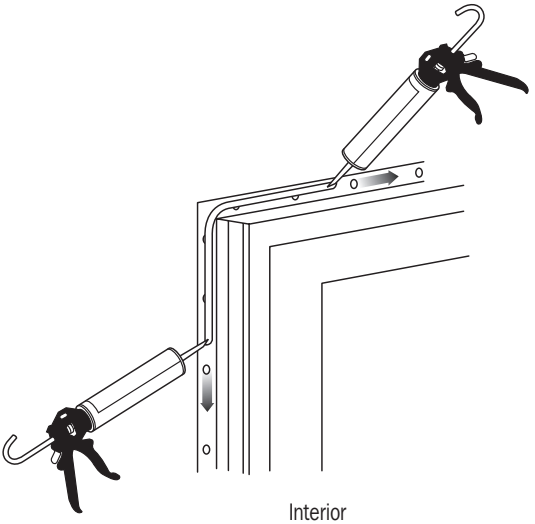
Follow instructions of foam, sealant, and flashing manufacturer regarding safety, material application, compatibility, and periodic maintenance for continued weather resistance of their product. Failure to do so could result in injury, product or property damage.

Step 12

Apply sealant to nailing flange.

Apply a minimum 3/8" bead of sealant on the nailing flange covering the holes along the interior side where it will contact the opening.

NOTE: If recommended sill pan is used, do not apply sealant on the nailing flange on the sill of the door frame.



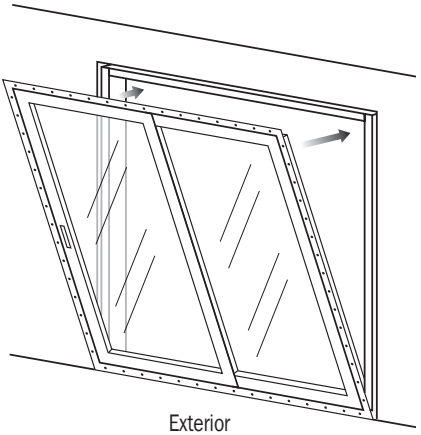
Step 13

Place door in opening.

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

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

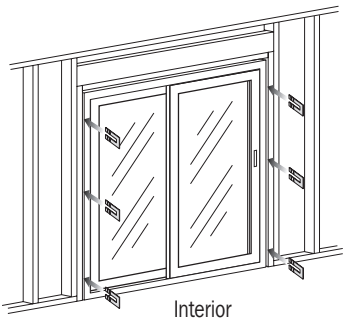
NOTE: Be sure the nailing flange and sealant are tight against the exterior substrate before attaching the frame.

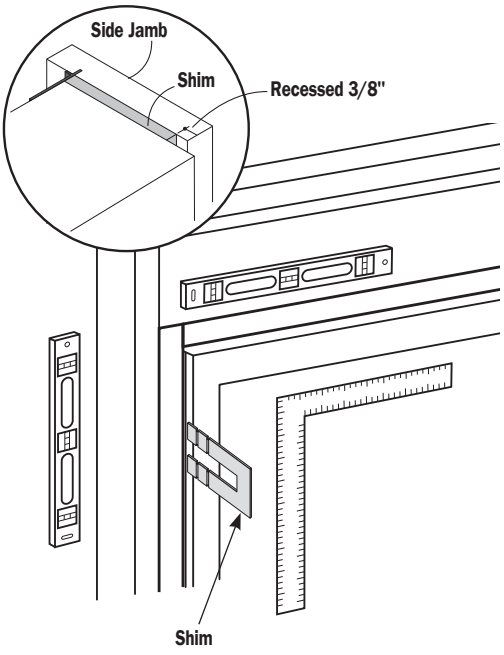


Step 14

Shim door frame.

Shim so door frame is plumb, level and square. Diagonal measurements must be within 1/8". Shim at all pre-punched holes inside frame. Trim shims as needed. Shims must be recessed 3/8".





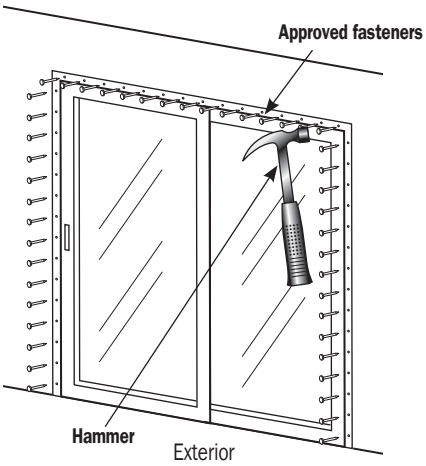
Step 15

Fasten into place.

Begin by fastening only the top right corner. Check for square and shim as necessary. Then continue fastening through the pre-punched holes, making sure fasteners have at least 1-1/4" penetration into wood framing.

CAUTION

Unless specified by manufacturer, do not drill into or through the sill of the door, product and/or property damage may occur.



IMPORTANT - If installing door on a concrete slab, proceed to Appendix A, Steps A2 and A3. Otherwise proceed to Step 16.

Step 16

Apply self-adhering flashing and drip cap.

❶ Apply self-adhering flashing to the side first and make sure it extends beyond the top of the door.

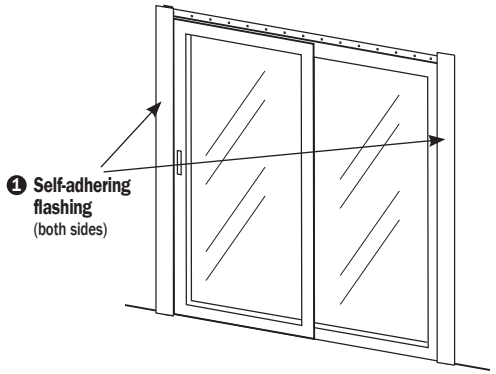
❷ Apply 1/4" sealant bead to top of unit where installation flange meets the frame.

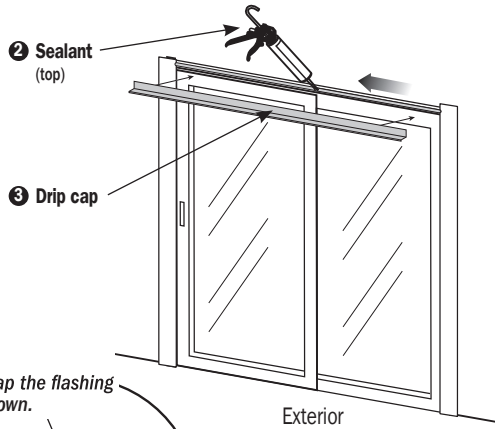
❸ Place optional drip cap (full width) in sealant as shown.

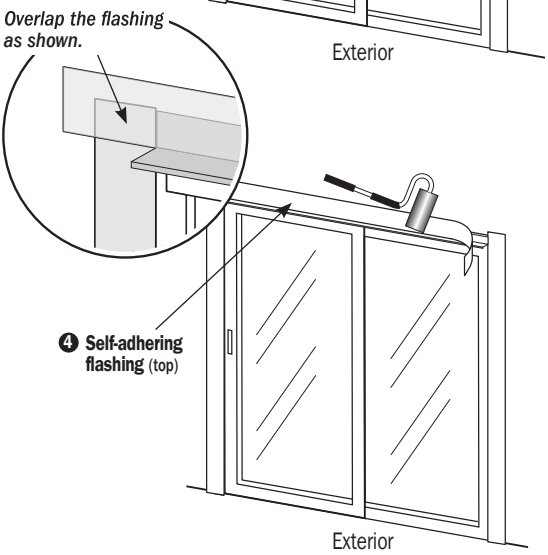
❹ Apply self-adhering flashing to the top over the drip cap leg, overlapping and extending beyond the side flashing as shown.

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

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





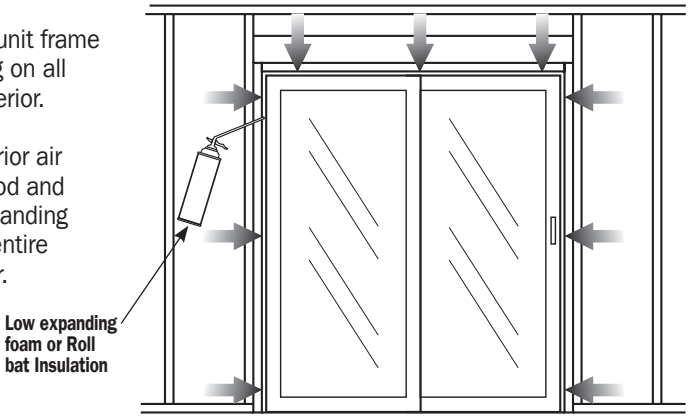


Step 17

Insulate door.

Insulate between unit frame and rough opening on all sides from the interior.

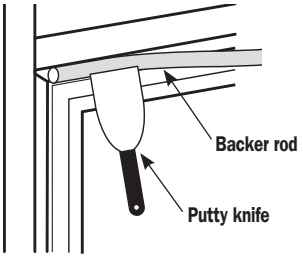
Complete the interior air seal with backer rod and sealant or low expanding foam around the entire interior of the door.



Interior

CAUTION

Follow instructions of foam, sealant, and flashing manufacturer regarding safety, material application, compatibility, and periodic maintenance for continued weather resistance of their product. Failure to do so could result in injury, product or property damage.



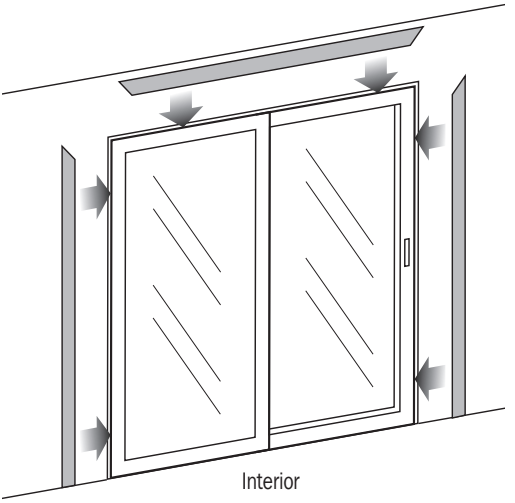
CAUTION

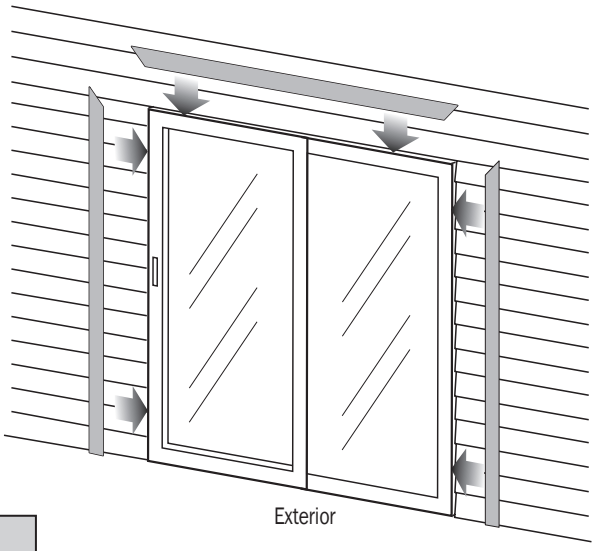
ONLY USE low expanding foam specifically designed for doors when insulating between unit frame and rough opening or between units when joining.
DO NOT overfill with minimum expanding foam sealant or overpack with backer rod. Bowed jambs will result affecting product performance and/or proper operation of unit.

Step 18

Apply trim.

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





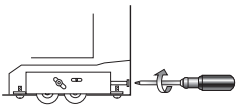
CAUTION

Do not cover weep holes. Property damage may result.

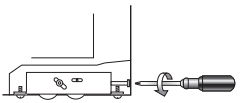
Step 19

Adjust operating panel.

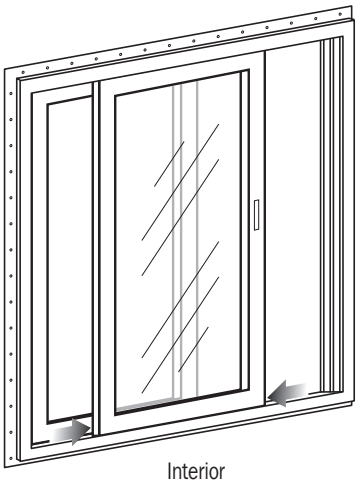
Lift door panel slightly to minimize weight on rollers. Turn screws on sides to adjust rollers so that door panel is plumb with frame and door slides smoothly.



Raise Panel



Lower Panel



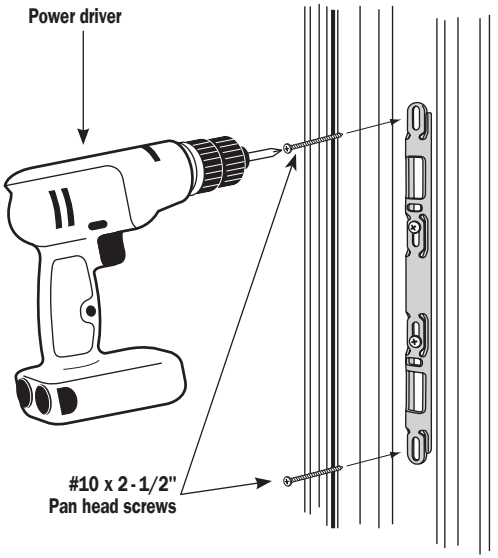
Interior

Step 20

Secure keeper to frame.

We suggest pre-drilling before inserting two #10 x 2-1/2" pan head screws on both ends of the keeper as indicated to secure the keeper by penetrating through door frame into framing member.

Remove the two 1" pre-installed screws from the center locations and replace with the provided 2-1/2" screws.



Assembled Patio Door

Step 21

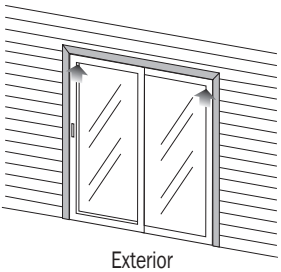
Install panel bumper. (Bumper located in side jamb next to head jamb)

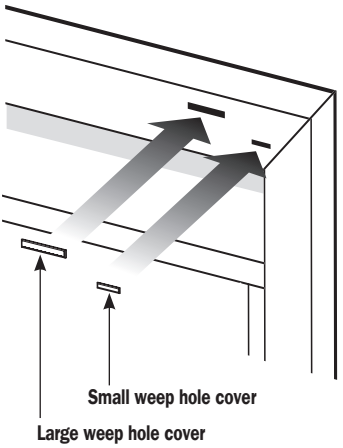
Snap panel bumper into place in interior track of head jamb next to side jamb to prevent handle from contacting stationary panel during operation.

Step 22

Install weep hole covers.

Install one small weep hole cover and one large weep hole cover by pressing into place in the pre-punched weep hole cover slots on the head of the exterior of the patio door frame. Repeat for other side.





⚠ WARNING

Doors have small parts (e.g. hole plugs, operator spline caps, fasteners, etc.). Small parts if swallowed could pose a choking hazard to young children. Dispose of unused, loose, or easily removed small parts. Failure to do so could result in injury.

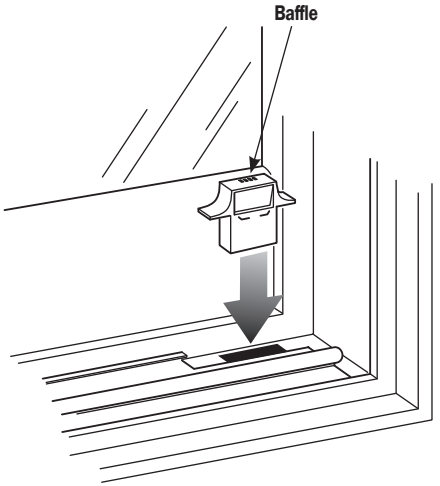
Assembled Patio Door

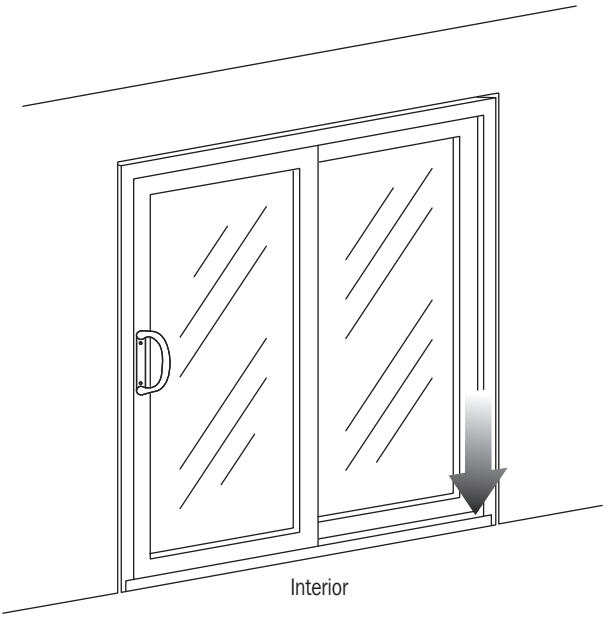
Step 23

Install baffle.

Locate the interior of the sill on the side with the fixed panel and install baffle into the pre-punched weep slot by pressing firmly until the baffle clicks into place.

Note: The baffle flap needs to face the interior prior to installation.





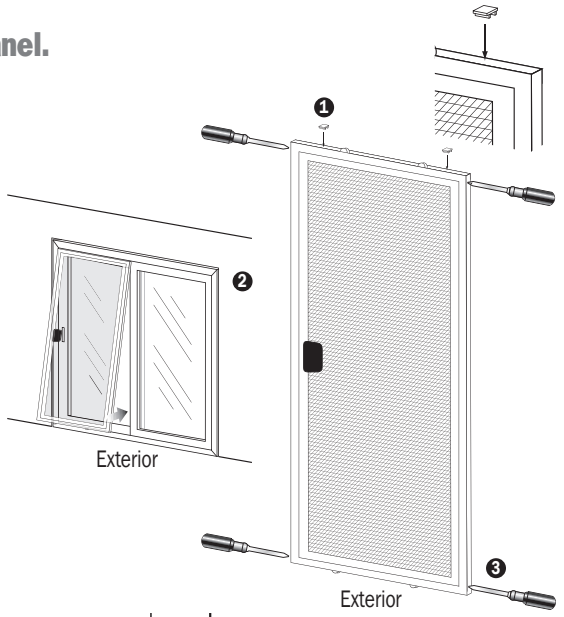
Step 24

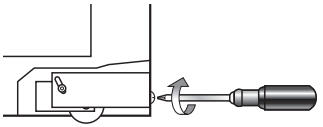
Install insect screen panel.

❶ Push the two top guides into place on the top of the insect screen panel approximately 2" from each side.

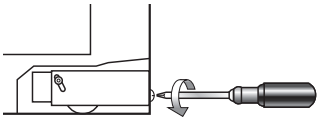
❷ Tilt the insect screen, put the top into the head track, then put the bottom into the sill track.

❸ Adjust insect screen rollers so insect screen stays on track and operates smoothly.





Raise Insect Screen Panel



Lower Insect Screen Panel

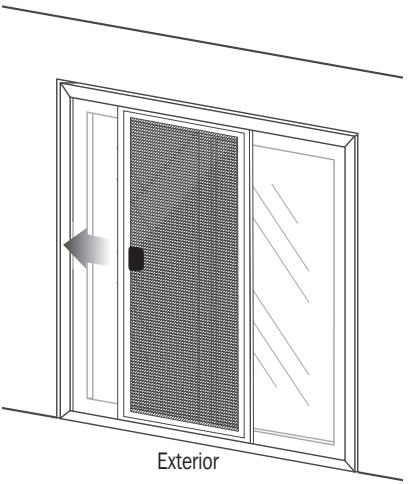
Step 25

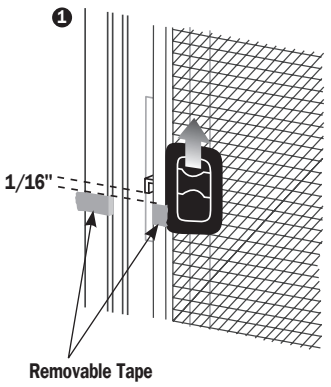
Install insect screen keeper into jamb track.

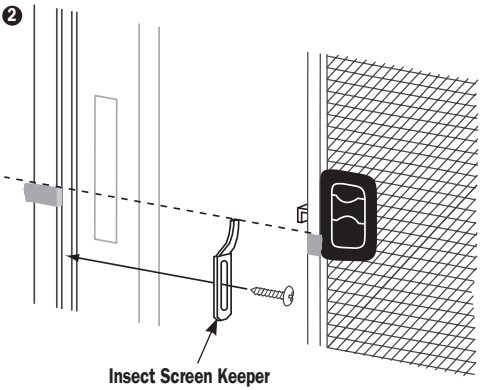
❶ Push insect screen panel handle all the way up. Mark 1/16" below bottom of insect screen latch with removable tape and transfer the mark to the door frame with removable tape.

❷ Position top of insect screen keeper with mark on door frame. Insect screen keeper should be installed with the hook pointing up. Attach insect screen keeper using included screw.

❸ Adjust insect screen keeper as necessary for easy latching and releasing.







Appendix A

Instructions for Slab Concrete Installation

Step A1

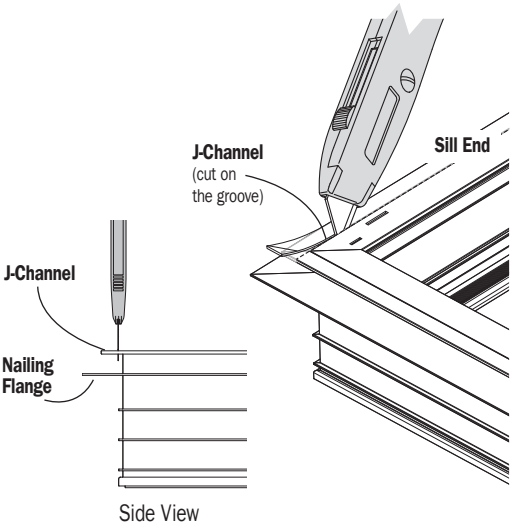
Remove J - Channel and Nailing Flange on the Sill.

❶ Place frame, exterior side up, on a clean work surface.

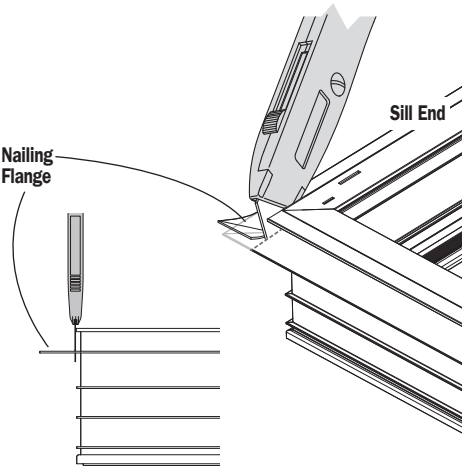
❷ Using the groove on the sill as a guide, remove the J - Channel using a utility knife.

❸ Make sure the knife is straight with the bottom of the sill as shown. Cut and remove nailing flange.

❹ Return to steps in guide for flashing and sealing the opening (**Step 10**).



Side View



Side View

Instructions for Slab Concrete Installation (continued)

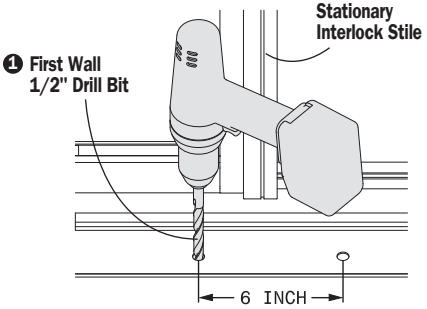
Step A2

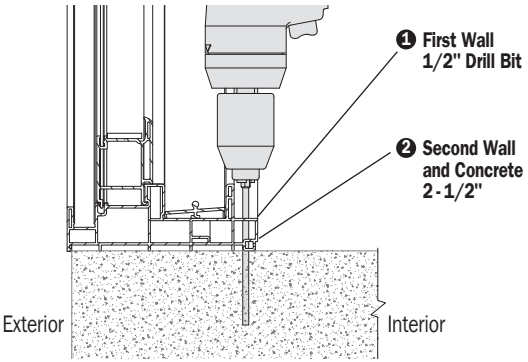
Drill screw holes at sill.

❶ Using the stationary interlock stile as midpoint of the sill, drill two 1/2" holes on the interior of the frame as shown, through the first wall only.

❷ Using concrete drill bit, drill through second wall and concrete as shown.

(see fastener chart)





Step A3

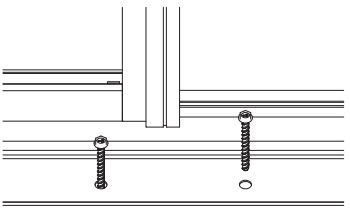
Fasten through drill holes.

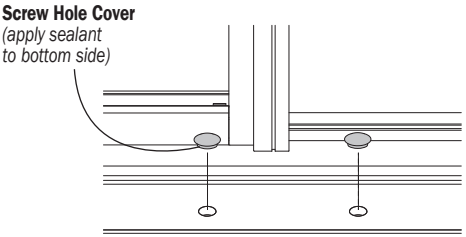
❶ Drive two concrete screws through previously drilled holes.

(see fastener chart)

❷ Apply sealant to the bottom side of the screw hole covers and insert into screw holes as shown.

❸ Return to steps in guide for flashing and sealing door in the opening (**Step 16**).





Appendix B

Instructions to Operate Optional Blinds Between the Glass

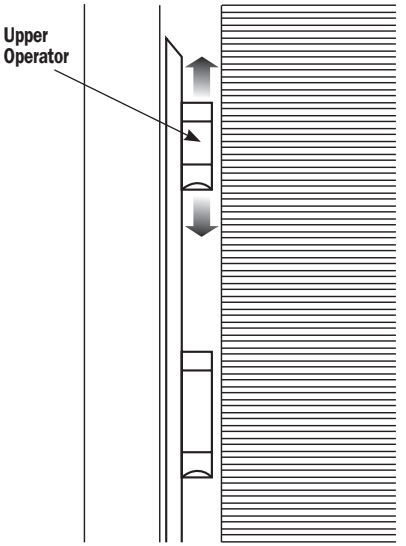
Step B1

Tilt the blinds.

To tilt the blinds, slide the upper operator 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.



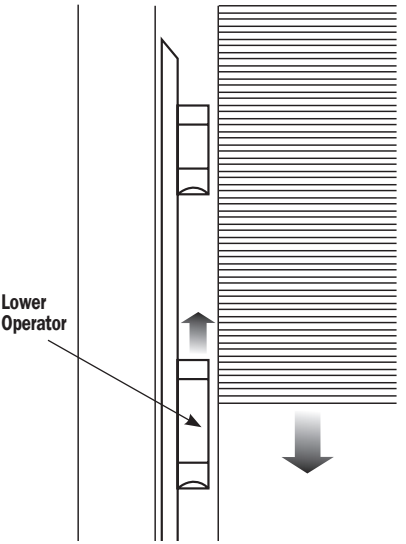
Step B2

Lower the blinds.

To lower the blinds, slide the lower operator up.

NOTE

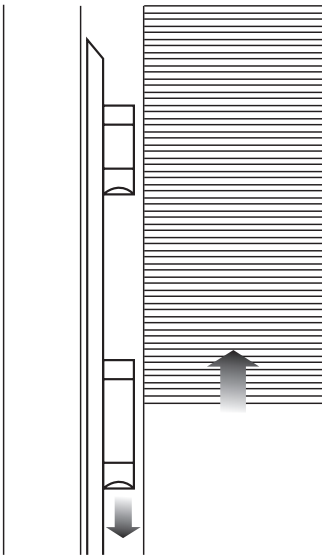
For peak performance, tilt the blinds to the open position before raising and lowering.



Step B3

Raise the blinds.

To raise the blinds, slide the lower operator down.

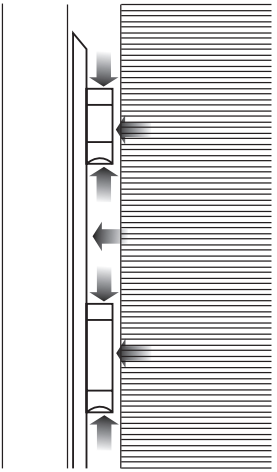


Optional Blinds Between the Glass Maintenance

Step B4

Keep surface clean.

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

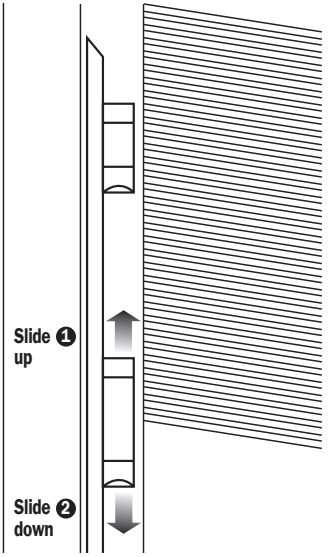


Step B5

Level blinds.

❶ If the blinds are not level, slide the lower operator down to fully open the blinds.

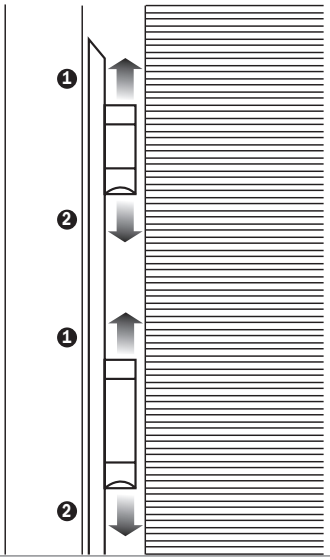
❷ Slide the lower operator up to lower and level the blinds. Repeat if necessary until the blinds are level.



Step B6

Re-engage operator magnets.

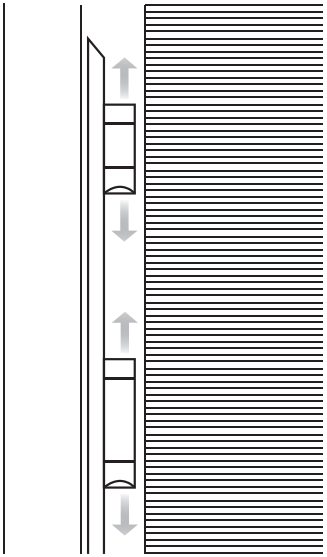
If the operator magnets become disengaged, the blinds will not operate properly. To re-engage the magnets, slide the operator that needs adjusting down as far as possible and then slide it up as far as possible. The operator will click into place when the magnets re-engage.



Step B6

Do not use excessive force or abrupt operation.

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



Finishing, Cleaning and Maintenance Instructions:

Read and follow finishing product instructions and warnings on finish material.

IMPORTANT

- 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.

NOTICE

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

CAUTION

DO NOT use or apply solvents, abrasives, harsh chemicals or cleaners to glass, sash, panels, frame, or door components. Doing so will result in product damage.

Acid solutions used for cleaning masonry or concrete will damage glass, fasteners, hardware, and metal flashing. Protect door and follow cleaning product manufacturer's instructions. If acid contacts door, wash all surfaces immediately with clean water.

DO NOT stain or paint weatherstrip, vinyl, glass, or hardware. Doing so could result in product damage.

DO NOT apply any type of film to insulating glass. Doing so could cause thermal stress conditions and result in glass damage. Shading devices (e.g. insulated coverings, shutters, etc.) could also cause thermal stress and condensation causing deterioration of doors.

Notes:

homedepot.plygemwindows.com

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