# **Unassembled Patio Door Installation Guide**

2-Panel Door50 Series



#### **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.
- Installation must comply with all applicable building codes.
- Depending on options purchased, this door was manufactured for installation into either a new or existing 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:**



#### **Warnings and Cautions:**

#### **AWARNING**

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.

#### **AWARNING**

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

#### **A 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.

#### **A WARNING**

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

#### **A WARNING**

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

#### **A 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.

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#### **A 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.

#### **A 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

#### **Fasteners:**

#### **A 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.

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#### **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.

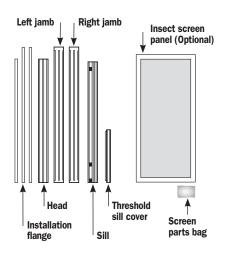
#### CAUTION

Abrasive cleaners will damage glass and vinyl surfaces.

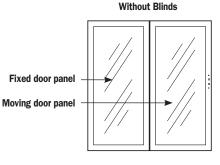
- Clean glass using liquid glass cleaner.
- Clean exterior frame, sash, and insect screens using mild detergent and water with a soft cloth or brush.
- For hard to clean areas use a nonabrasive cleaner, alcohol-andwater or ammonia-and-water.
- Do not apply any type of film to insulating glass. Thermal 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.

# 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.



# Fixed door panel Moving door panel 5" panel stop



#### **Hardware bags**



#### Yellow bag:

- (12) #8 x 2" flat head screws
- (2) installation flange corner gaskets



#### Blue bag:

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



#### Clear bag:

- Handle set:
- (1) interior handle (1) exterior handle
- (1) turn lever
- (2) 2" pan head screws

#### Keeper installation kit:

- (1) keeper
- (2) 2-1/2" pan head screws
- (2) 1/2" truss head screws



#### Red bag:

- (1) head fixed panel locator
- (2) #8 x 2" pan head truss SS screws
- (1) sill fixed panel locator
- (2) #8 x 5/8" pan head truss SS screws
- (3) fixed panel jamb stops
- (1) drill template



#### Green bag:

- (2) fixed panel clips
- (4) #8 x 5/8" pan head truss SS screws



#### Gray bag:

- (1) 3-1/2" panel stop
- (1) threshold filler
- (2) jamb punch covers

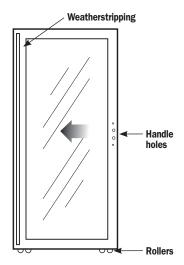
#### Verify orientation.

Determine if moving panel is in desired orientation.

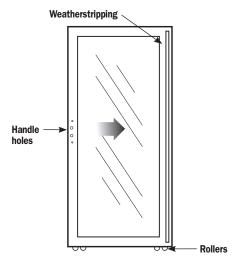
Locate the (4) holes on the moving panel used for placement of the handles. The rollers should be at the bottom of the panel. The weatherstripping opposite the handle holes should face toward you.

If the handle holes are on your right, then the moving panel will slide to the left as viewed from the outside. If the handle holes are on your left, then the moving panel will slide to the right.

If orientation is not as desired, it can be reversed if using a 6' 8" height door without optional blinds. Otherwise, please return door to point of purchase to obtain the desired orientation.



Door slides to the left as viewed from the outside.



Door slides to the right as viewed from the outside.

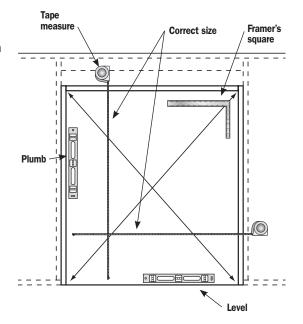
#### Prepare rough opening.

Inspect opening for correct size. Opening should be 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 1/8". If rough opening is **not** square, correct as necessary.



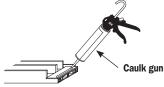
If using installation flange, continue with Step 4 Installation Flange. If installation flange will not be used, proceed to Step 16 No Installation Flange.

#### Step 4 Installation Flange

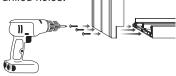
# Apply sealant and fasten jambs to sill and head. (Uses yellow hardware bag)

Make sure the tracks line up at all four corners before starting installation.

Apply sealant over foam gasket on jamb where it will contact the sill.



2 Fasten jamb to sill with (3) #8 x 2" flat head screws in each location using pre-drilled holes.

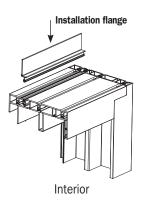


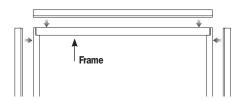
Repeat in other 3 corners.

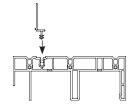
#### Step 5 Installation Flange

#### Apply installation flanges.

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





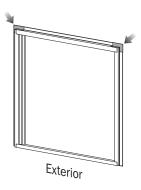


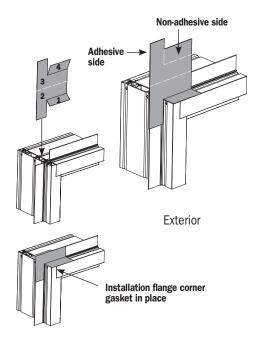
#### Step 6 Installation Flange

### Apply installation flange corner gaskets. (Uses yellow 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 upwards, then fold section 3 over installation flange and apply sections 3 and 4 simultaneously to the door frame.

Repeat process for other corner.

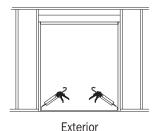




#### Step 7 **Installation Flange**

#### Apply sealant to opening.

Apply two 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.



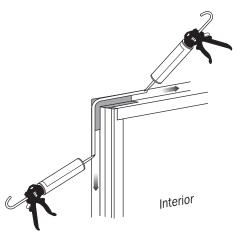
Exterior

Silver Line strongly recommends that you use a membrane or vinyl-based sill pan for a weathertight seal. Follow the sill pan manufacturer's installation instructions.

#### Step 8 **Installation Flange**

#### Apply sealant to door.

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



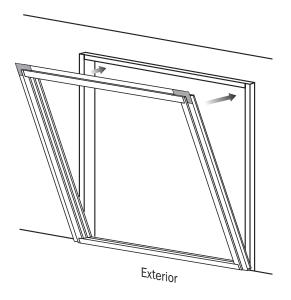
#### Step 9 Installation Flange

## Place door frame in opening.

Place door frame 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 screen track is on the exterior side.

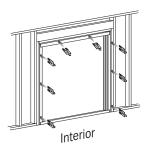
NOTE: Be sure the installation flange and sealant are tight against the exterior substrate before attaching the frame.

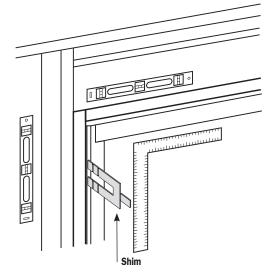


#### Step 10 Installation Flange

#### Shim door.

Shim so door is plumb, level and square. Shim at all prepunched holes inside frame.

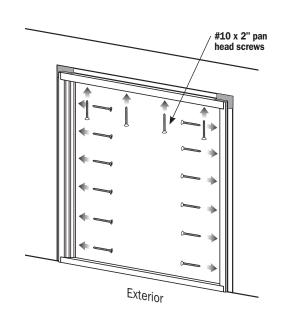




#### Step 11 Installation Flange

#### Fasten frame. (Uses blue hardware bag)

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



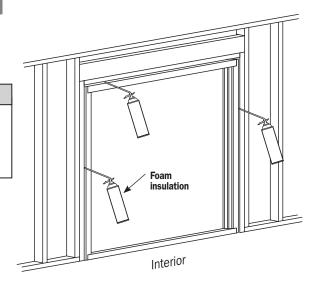
#### Step 12 Installation Flange

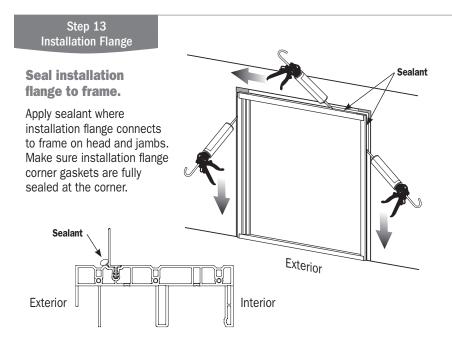
#### Insulate frame.

Insulate around door.

#### CAUTION

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



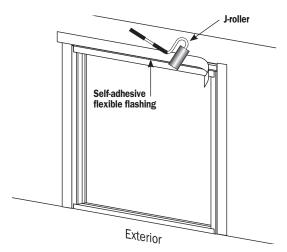


#### Step 14 Installation Flange

# 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 door. Then apply to the top, extending beyond the sides.

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

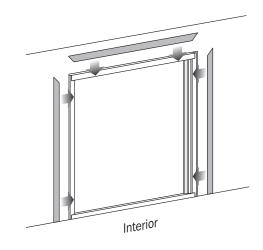


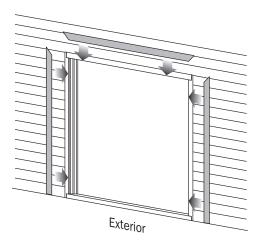
IMPORTANT – To create a weathertight seal, be sure that the flashing fully covers the entire length of the jambs and head of the door around the door opening. Pay special attention to the corners to be sure that there are no gaps in the flashing.

#### Step 15 Installation Flange

#### Apply trim.

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





If the desired orientation of moving and fixed panels is correct, proceed to Step 27. To change the orientation (6' 8" height door without blinds only), proceed to Step 23.

#### Step 16 No Installation Flange

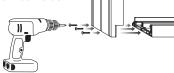
# Apply sealant and fasten jambs to sill and head. (Uses yellow hardware bag)

Make sure the tracks line up at all four corners before starting installation.

Apply sealant over foam gasket on jamb where it will contact the sill.



2 Fasten jamb to sill with (3) #8 x 2" flat head screws in each location using pre-drilled holes.

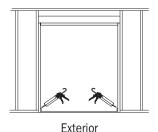


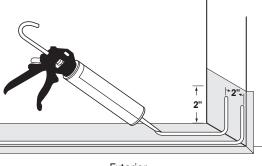
Repeat in other 3 corners.

#### Step 17 No Installation Flange

#### Apply sealant to opening.

Apply two 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.





Exterior

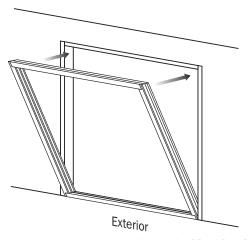
Silver Line <u>strongly</u> recommends that you use a membrane or vinyl-based sill pan for a weathertight seal. Follow the sill pan manufacturer's installation instructions.

#### Step 18 No Installation Flange

# Place door frame in opening.

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

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



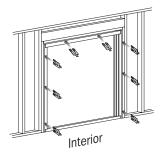
Unassembled 2-Panel Patio Door

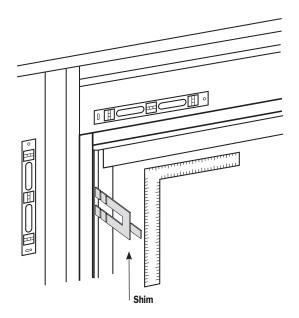
#### **Installation Guide**

#### Step 19 No Installation Flange

#### Shim door.

Shim so door is plumb, level and square. Shim at all pre-punched holes inside frame.

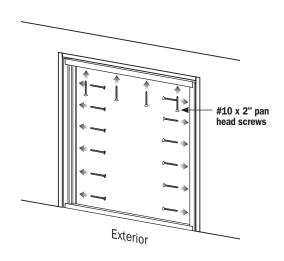




#### Step 20 No Installation Flange

#### Fasten frame. (Uses blue hardware bag)

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



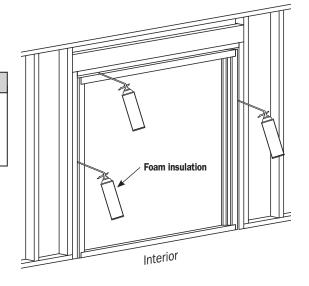
#### Step 21 No Installation Flange

#### Insulate frame.

Insulate around door.

#### CAUTION

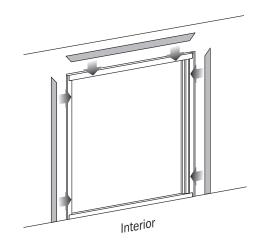
Do not overfill with low expanding foam or overpack with backer rod to avoid bowed jambs.

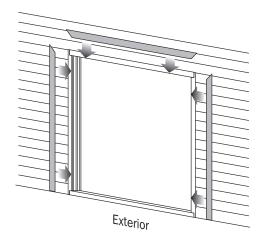


Step 22 No Installation Flange

#### Apply trim.

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





If the desired orientation of moving and fixed panels is correct, proceed to Step 27. To change the orientation (6' 8" height door without blinds only), proceed to Step 23.

#### **To Change Orientation of Moving Panel - Optional**

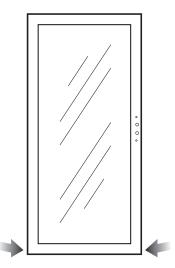
(Move to the Left or to the Right - 6' 8" height doors without blinds only)

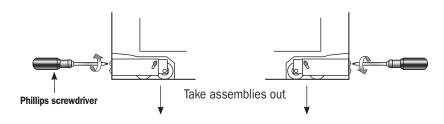
#### Step 23

## Remove roller assemblies.

Remove roller assemblies from bottom of moving door panel by removing the upper screws.

Remove screw and roller wheel assemblies from both sides of door panel.



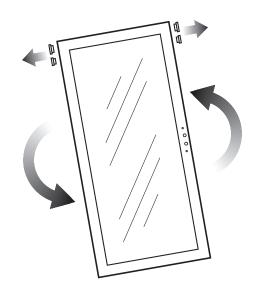


## Remove screw covers and rotate.

Remove 2 pairs of screw covers from the top of the moving panel and rotate the moving panel.

#### **A** WARNING

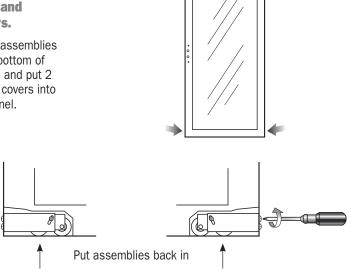
Screw covers are small parts and, if swallowed, could pose a hazard to young children.



#### Step 25

# Replace roller assemblies and screw covers.

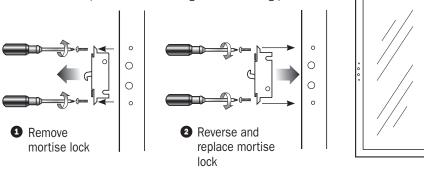
Replace roller assemblies back into the bottom of the door panel and put 2 pairs of screw covers into top of door panel.



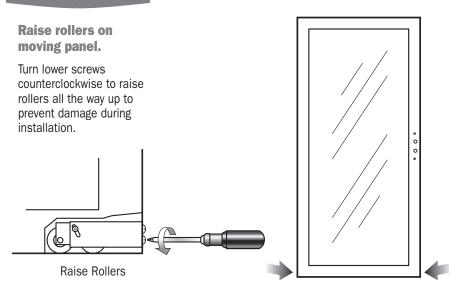
#### Reverse lock.

Remove screws from the mortise lock while holding onto hook of lock and then remove the lock. Reverse the mortise lock so the hook is facing up. Re-attach lock.

NOTE: Be certain to hold onto the hook while removing the mortise lock to prevent it from falling into the moving panel.



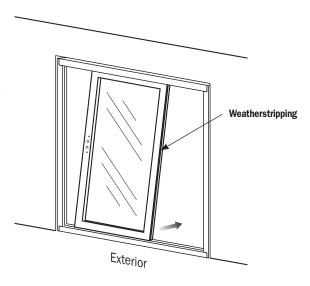
#### Step 27



## Install moving panel from the exterior.

Place top of moving panel into interior track, then gently set bottom of panel in place in the interior track. Make sure the roller assemblies are fully retracted.

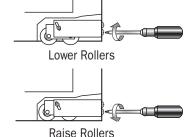
NOTE: Be sure the weatherstripping opposite the handle holes faces the exterior.

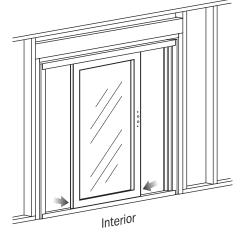


#### Step 29

# Adjust moving panel rollers.

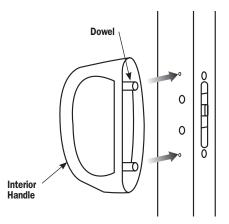
Lift door panel slightly to minimize weight on rollers. Turn lower screws to adjust rollers so that door panel is plumb and level with frame and door slides smoothly.





#### Verify handle fit.

Compare the interior handle with the top and bottom pre-drilled holes in the moving panel to check if the dowels in the back of the handle will fit into the provided holes.



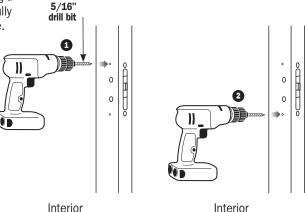
If interior handle dowels fit into the pre-drilled holes and the handle sits flush against the moving panel, proceed to Step 32. If the dowels do not fit into the pre-drilled holes, proceed to Step 31.

#### Step 31

#### **Enlarge handle holes.**

• Enlarge top handle hole on the moving panel from the interior using a 5/16" drill bit. Carefully drill a 1/4" deep hole.

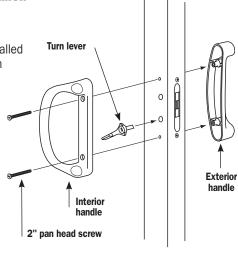
2 Repeat for bottom handle hole.



# Install handles on moving panel. (Uses clear hardware bag)

NOTE: Any optional handle set ordered separately should be installed now following provided installation instructions.

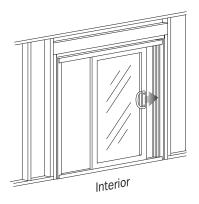
- Place turn lever into bottom, larger hole on interior of moving panel.
- Place larger interior handle and smaller exterior handle onto door with grips toward glass.
- 3 Fasten with (2) 2" pan head screws.

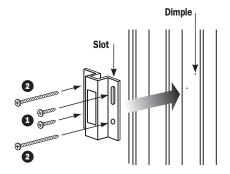


Interior

#### Install keeper on jamb. (Uses clear hardware bag)

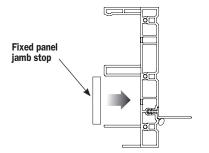
- Locate the 2 dimples in the jamb opposite the handle. Install the (2) 1/2" truss head screws through the slots on the keeper into the 2 dimples on the jamb and tighten them "finger tight" to allow for adjustments. Close and lock moving panel to make sure door locks correctly. If the door does not lock correctly, open door and slide keeper up or down to allow lock hook to properly nest in keeper.
- Once door locks correctly, secure the keeper in place using (2) 2-1/2" pan head screws through the holes in the keeper.

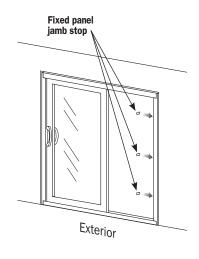




# Install fixed panel jamb stops. (Uses red hardware bag)

Affix (3) fixed panel jamb stops to jamb. Remove paper backing and apply appropriate pressure for placement. Apply evenly spaced from head to sill in middle track.

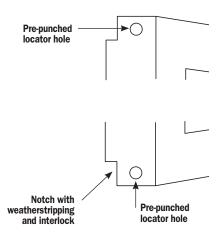




#### Step 35

# Verify pre-punched locator holes on fixed panel.

Check for pre-punched locator holes on the end of long side of the fixed panel near the notches. There should be (1) pre-punched locator hole at the top of the fixed panel and (1) pre-punched locator hole at the bottom of the fixed panel.



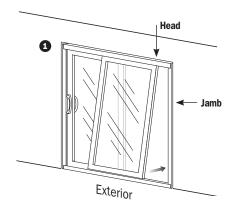
If pre-punched locator holes are present, proceed to Step 36. If prepunched locator holes are not present, proceed to Appendix A, Step A1.

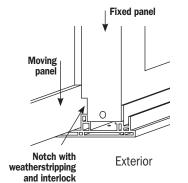
## Install fixed panel from the exterior.

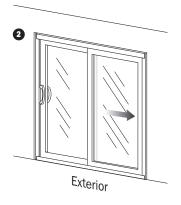
Place top of fixed panel into middle track, then put bottom into position on track.

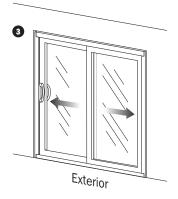
> NOTE: Be sure that the notches with weatherstripping and interlock face the interior.

- 2 Move fixed panel into jamb securely.
- Close moving panel and lock handle. Slide fixed panel as far as possible into the frame away from the moving panel.





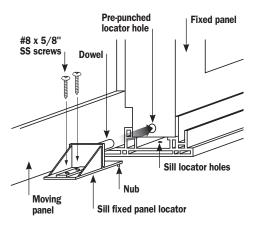




# Install sill fixed panel locator. (Uses red hardware bag)

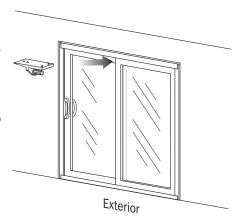
- Place the sill fixed panel locator in the middle track of the sill.
- Slide the bottom of the sill fixed panel locator under the fixed panel and the dowel into the pre-punched locator hole in the panel until you feel the locator nubs on the bottom drop into place into the sill locator holes.
- 3 Using (2) #8 x 5/8" pan head truss SS screws attach sill fixed panel locator to sill.

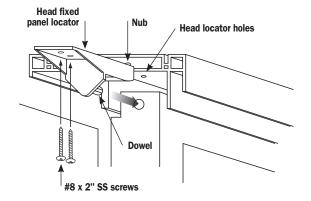




# Install head fixed panel locator. (Uses red hardware bag)

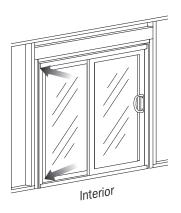
- Place the head fixed panel locator in the middle track of the head. The nubs on the top of the head fixed panel locator will face up.
- Move the dowel of the locator into the pre-punched hole in the panel until you feel the locator nubs fit into the head locator holes.
- Using (2) #8 x 2" pan head truss SS screws attach head fixed panel locator to head.

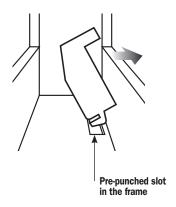


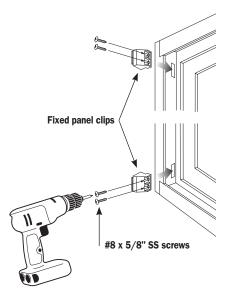


## Install fixed panel clips. (Uses green hardware bag)

- 1 Install (2) fixed panel clips, (1) at the bottom and (1) at the top of the fixed panel on interior. Insert the groove on the bottom of the fixed panel clip into the prepunched slot on the jamb and pivot the fixed panel clip to snap into place against the frame. Repeat for the other clip.
- 2 Drive (2) #8 x 5/8" pan head truss SS screws through each clip into each door panel on top and bottom.

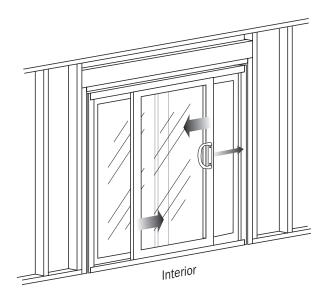






## Check movement and adjust.

Slide and lock and unlock the door several times and check operation of handle and lock. Adjust rollers and keeper as necessary as indicated in Steps 29 and 33.

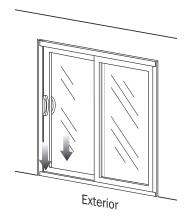


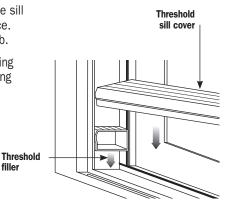
## Install threshold filler and sill cover. (Uses grey hardware bag)

Install the threshold filler into the middle sill track from the exterior. Snap it into place. Make sure it is pushed against the jamb.

Install the threshold sill cover by snapping into place on the middle sill track starting next to the threshold filler and working toward the fixed panel.

filler

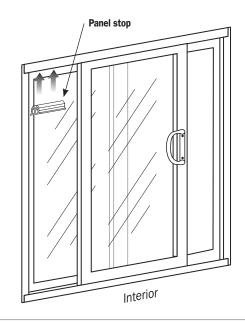




## Install panel stop. (Uses gray hardware bag)

Snap panel stop into place in interior track of head next to jamb to prevent handle from contacting fixed panel during operation.

NOTE: If installing optional panels with blinds then use the 5" long stop provided with the panels with blinds instead of the 3-1/2" long stop provided in the gray hardware bag.

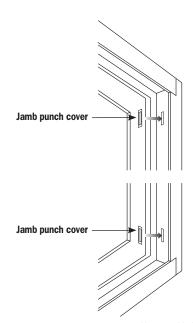


#### Step 43

## Install jamb punch covers. (Uses gray hardware bag)

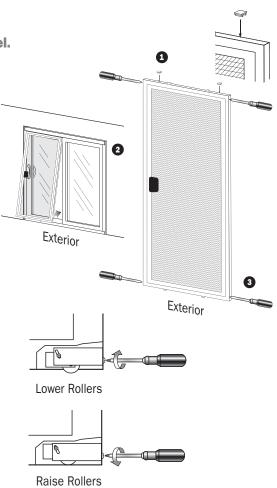
Install (2) jamb punch covers to appropriate jamb by pressing into place in (2) pre-punched holes in interior track.





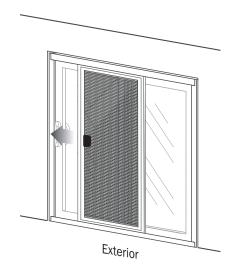
## Install insect screen panel.

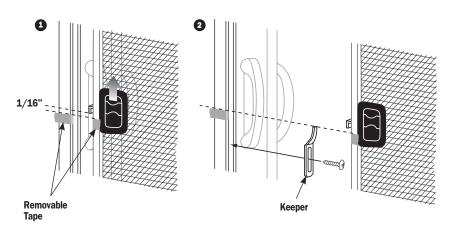
- Push the top (2) guides into place on the top of the insect screen panel approximately 2" from each side.
- 2 Tilt the screen, put the top into the head track, then put the bottom into the sill track.
- Adjust wheels so insect screen stays on track and operates smoothly.



## Install insect screen keeper into jamb track.

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





If using optional blinds, proceed to Appendix B, Step B1.

## Appendix A

#### Step A1

## Separate drilling templates. (Uses red hardware bag)

Locate drilling template. If template is missing, cut out the template in Appendix A Step A4. If needed, print out at full size and cut out.

Fold on perforated lines to separate the drilling templates. For a 2-panel patio door you will need (1) top edge template and (1) bottom edge template.

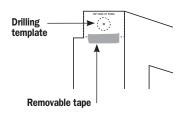


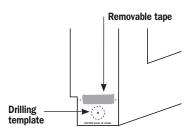
## Step A2

## Position templates on fixed panel.

Position the top edge template on the top of the fixed panel. Align the words along the top as indicated. Adhere the template with removable tape.

Repeat with bottom edge drilling template, aligning the words along the bottom as indicated.





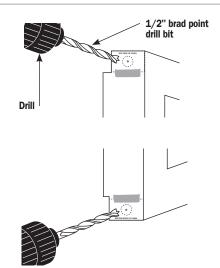
## Step A3

#### **Drill holes.**

Drill hole in the center of the marked circle on the template at the top using a 1/2" brad point drill bit. Do not drill more than 1/2" deep.

Repeat for bottom hole.

Remove templates and discard.

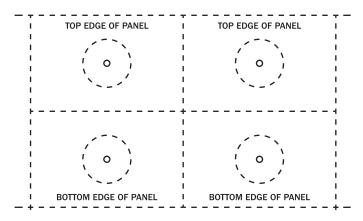


## Proceed to Step 36.

#### Step A4

## **Drilling Template.**

If template is missing from red hardware bag, print at full size if needed and cut out the template below.



## **Appendix B**

## Instructions to Operate Optional Blinds-Between-the-Glass

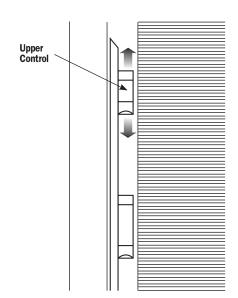
## Step B1

#### 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.



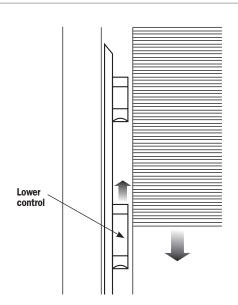
## Step B2

#### Lower the blinds.

To lower the blinds, slide the lower control up.

## **NOTE**

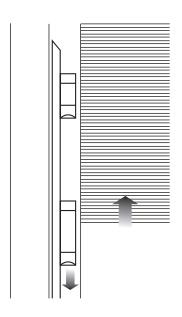
For peak performance, tilt the blinds to the open position before raising and lowering.



## Step B3

#### Raise the blinds.

To raise the blinds, slide the lower control down.

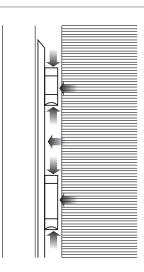


## Optional Blinds-Between-the-Glass Maintenance

## Step B4

#### Keep surface clean.

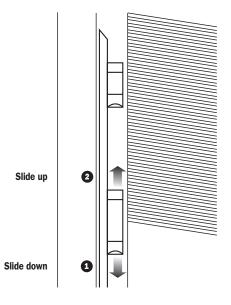
For ease of operation, make sure the surface around the controls remains clean. Dirt can impact the smooth movement of the controls, requiring more force to adjust the blinds.



#### Step B5

#### Level blinds.

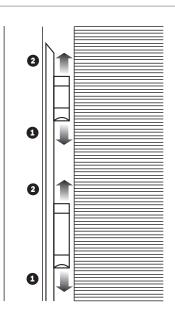
- If the blinds are not level, slide the lower control down to fully open the blinds.
- Then slide the lower control up to lower and level the blinds. Repeat if necessary until the blinds are level.



## Step B6

## Re-engage operator magnets.

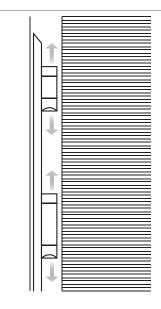
If the operator magnets become disengaged, the blinds will not operate properly. To re-engage the magnets, slide the control that needs adjusting down as far as possible and then slide it up as far as possible. The controls will click into place when the magnets re-engage.



## Step B7

# 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
Unassembled 2-Panel Patio Door

ACIN070-0415 4-15