# Unassembled Patio Door Installation Guide

4-Panel Door

50 Series



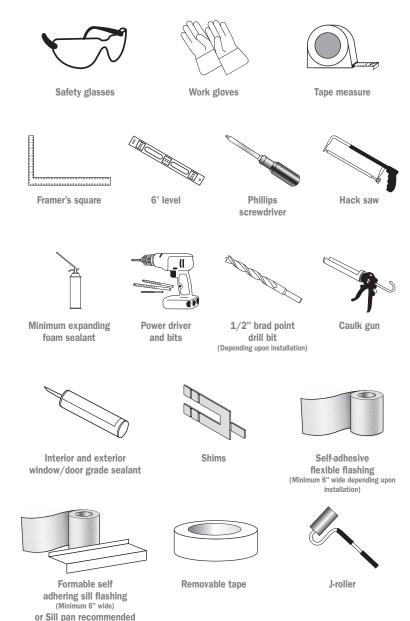
homedepot.plygemwindows.com

# **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.
- 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:

# A 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.

# **A**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.

# 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.

# 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.

# GAUTION

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.

# GAUTION

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.

# 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.

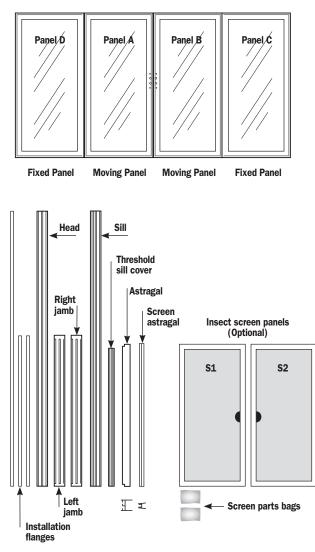
# CAUTION

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.



Unassembled 4-Panel Patio Door

# Hardware bags

Depending on individual installation requirements, some parts may not be used.



Yellow bag: (12) #8 x 2" flat head screws (2) installation flange corner gaskets



Blue bag: (20) #10 x 2" pan head screws



Clear bag:

Handle set: (2) interior handles

(2) exterior handles

(2) turn levers

(4) 2" pan head screws

Keeper installation kit:

(2) jamb keepers

- (4) 2-1/2" pan head screws
- (4) 1/2" truss head screws



### Red bag:

(2) head fixed panel locators

- (4) #8 x 2" pan head truss
- stainless steel (SS) screws (2) sill fixed panel locators
- (4)  $\#8 \times 5/8"$  pan head truss
- (4) #0 × 0/0 pair field truss
   stainless steel (SS) screws
   (6) fixed panel jamb stops
- (6) fixed panel jamb st (1) drill template

### Green bag:

(4) fixed panel clips

(8) #8 x 5/8" pan head truss stainless steel (SS) screws

### Gray bag:

(2) 3-1/2" panel stops

- (10) #8 x 3/4" pan head stainless steel (SS) screws
- (2) astragal seals (large)
- (2) astragal seals (small)
- (1) astragal keeper

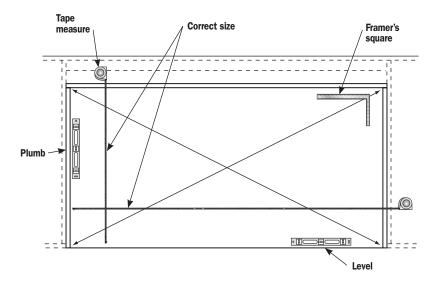
# Prepare rough opening.

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

Sill

# Step 3 Installation Flange

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

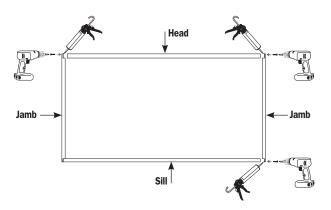
Make sure the tracks line up at all four corners before starting installation.

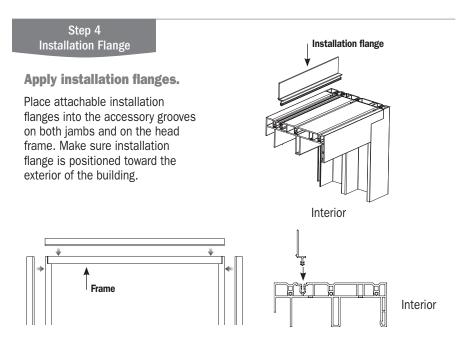
# Apply sealant over foam gasket on jamb where it will contact the sill. Jamb Foam gasket

#8 x 2" flat head screws

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

3 Repeat in other three corners.



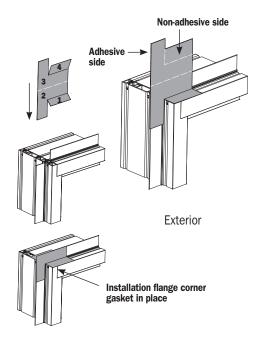


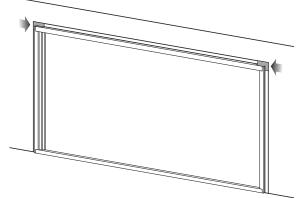
# Step 5 Installation Flange

# 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.



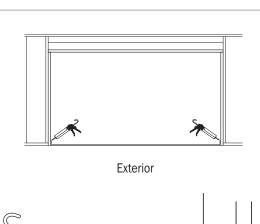


Step 6 Installation Flange

# 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.

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



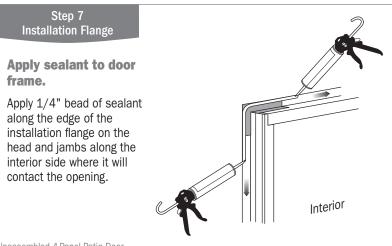
Exterior

2'

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.



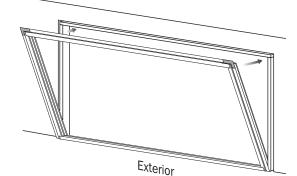
# Step 8 Installation Flange

# 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 insect screen track is on the exterior side.

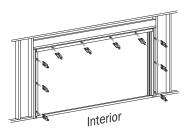
NOTE: Be sure the installation flange and sealant are tight against the exterior substrate before attaching the frame.

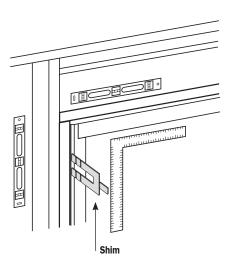


### Step 9 Installation Flange

# Shim door frame.

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

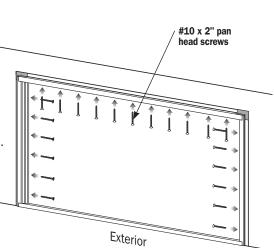




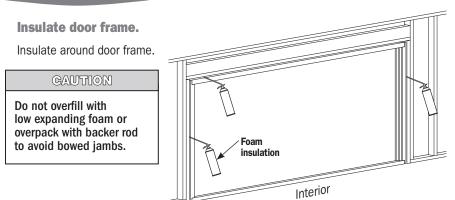
### Step 10 Installation Flange

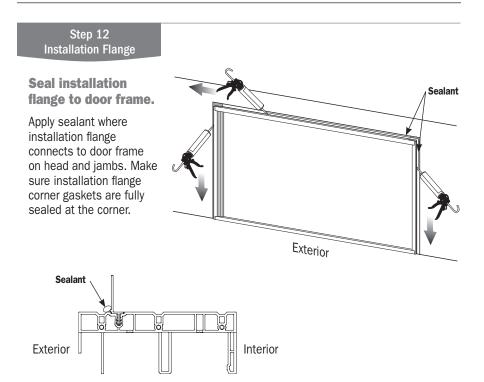
Fasten door frame. (Uses blue hardware bag)

Attach door frame to opening using (20) #10 x 2" pan head screws in all pre-drilled holes in interior track of head and jambs.



# Step 11 Installation Flange





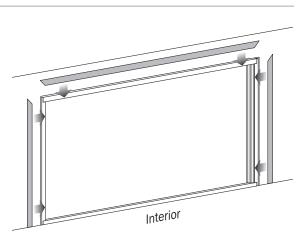
Step 13 Installation Flange **Apply self-adhesive** J-roller flexible flashing to cover the installation flange. Apply to the sides first and Self-adhesive make sure it extends beyond flexible flashing the top of the door frame. Then apply to the top, extending beyond the sides. NOTE: Use J-roller to make sure the self-adhesive flexible flashing bonds properly. Exterior

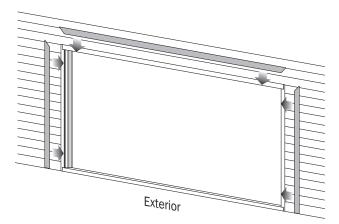
IMPORTANT – To create a weathertight seal, be sure that the flashing fully covers the entire length of the jambs and head of the door frame around the door opening. Pay special attention to the corners to be sure that there are no gaps in the flashing.

# Step 14 Installation Flange

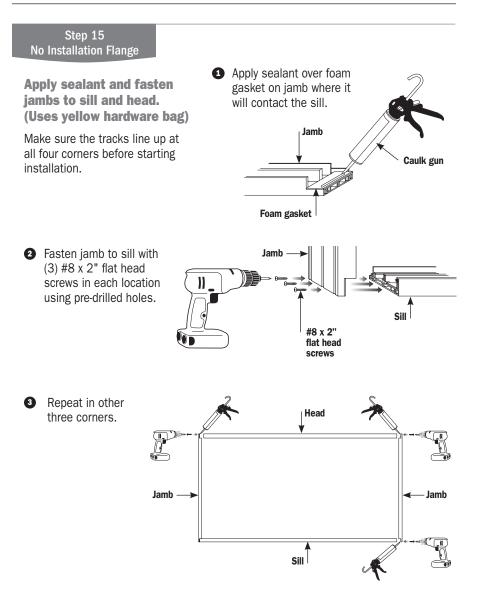
# Apply trim.

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





# Proceed to Step 22.

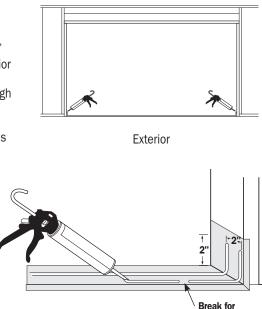


# Step 16 No Installation Flange

# 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.

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



Exterior



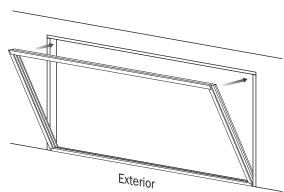
It is <u>strongly</u> recommended that you use a membrane or vinyl-based sill pan for a weathertight seal. Follow the sill pan manufacturer's installation instructions.

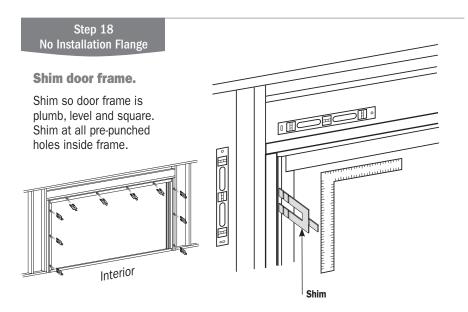
# Step 17 No Installation Flange

# Place 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 insect screen track is on exterior side.

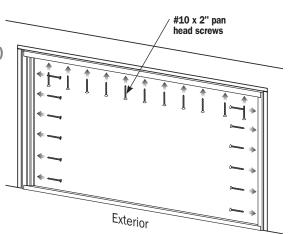




Step 19 No Installation Flange

# Fasten door frame. (Uses blue hardware bag)

Attach door frame to opening using (20) #10 x 2" pan head screws in all pre-drilled holes in interior track of head and jambs.



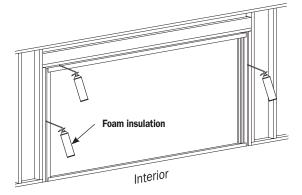
# Step 20 No Installation Flange

Insulate door frame.

Insulate around door frame.

# CAUTION

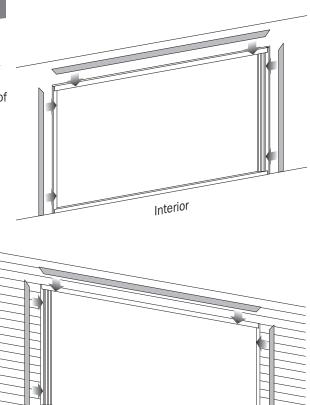
Do not overfill with low expanding foam or overpack with backer rod to avoid bowed jambs.



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.



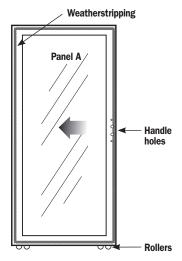
Exterior

# Verify moving panel orientation.

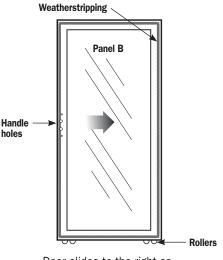
Identify the orientation of both moving panels.

Locate the four holes on the moving panel used for placement of the handles. The rollers should be at the bottom of the panel. The weatherstripping should face toward you.

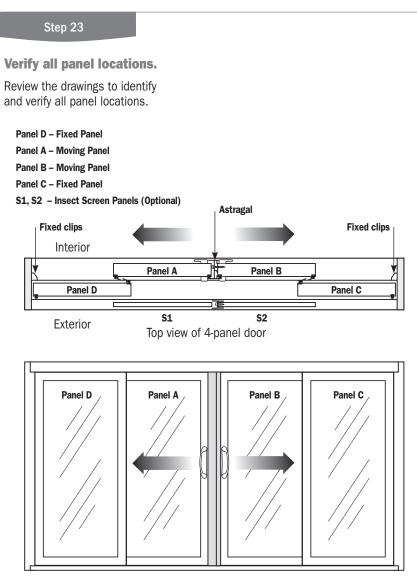
If the handle holes are on your right, then the moving panel will slide to the left as viewed from the outside. This is moving panel A. If the handle holes are on your left, then the moving panel will slide to the right. This is moving panel B. If orientation is not as desired, it can be reversed.



Door slides to the left as viewed from the outside.

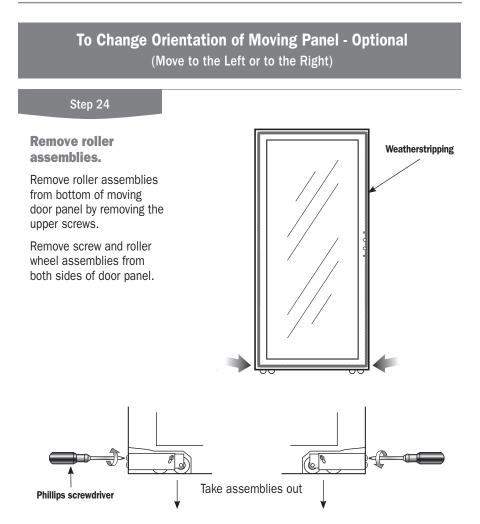


Door slides to the right as viewed from the outside.



Viewed from Exterior

If the desired orientation of both moving panels is correct, proceed to Step 28. To change orientation of a moving panel, proceed to Step 24.



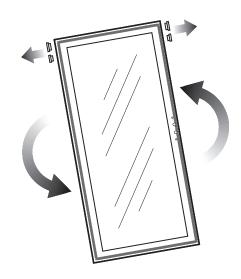
# Step 25

Remove screw covers and rotate.

Remove two 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.

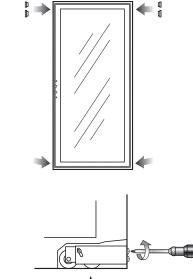


# Step 26

Replace roller assemblies and screw covers.

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

Ø

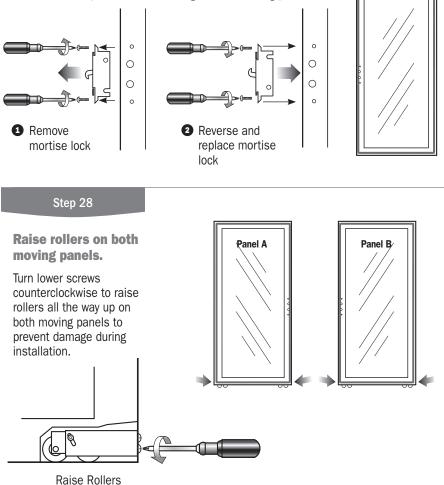


Put assemblies back in

# **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.

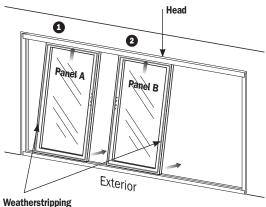


### Install moving panels.

Place top of moving panel A into interior track at head, then set bottom of panel A into position in the interior track. Make sure the roller assemblies are full retracted.

NOTE: Be sure the weatherstripping faces the exterior.

Repeat for moving panel B. The handle holes of panel A and panel B should be facing each other.

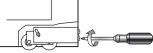


Weatherstripping facing the exterior

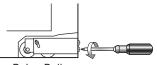
# Step 30

# Adjust moving panel rollers.

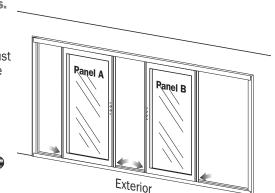
One at a time, lift moving panels slightly to minimize weight on rollers. Turn lower screws to adjust rollers so that moving panels are plumb and level with door frame and panels slide smoothly.



Lower Rollers



Raise Rollers



# Step 31 Verify handle fit. Uses clear hardware bag) Compare the interior handle with the top and bottom pre-drilled holes in both moving panels to check if the dowels in the back of the handle will fit into the provided holes. Interior Handle

If interior handle dowels fit into the pre-drilled holes and the handles sit flush against the moving panel, proceed to Step 33. If the dowels do not fit into the pre-drilled holes, proceed to Step 32.

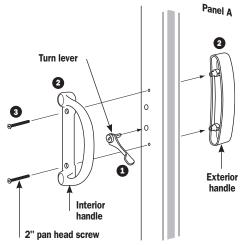
# Step 32

Enlarge handle holes on both moving panels.

5/16" drill bit Enlarge top handle hole on both moving 0 panels from the ji interior using a 5/16" 11 drill bit. Carefully drill 0 0 1/4" deep holes. 2 0 0 Repeat for bottom handle holes on both moving panels. Interior Interior

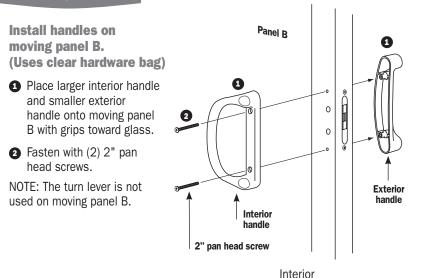
# Install handles on moving panel A. (Uses clear hardware bag)

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



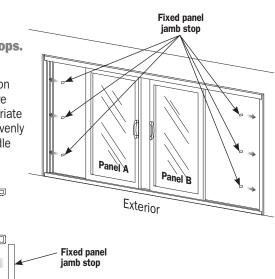
Interior

Step 34



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

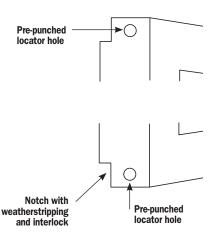
Apply (6) panel jamb stops, (3) on each side of door frame. Remove paper backing and apply appropriate pressure for placement. Apply evenly spaced from head to sill in middle track.



### Step 36

Verify pre-punched locator holes on both fixed panels.

Check for pre-punched locator holes on the end of long side of both fixed panels near the notches. There should be one pre-punched locator hole at the top of each fixed panel and one pre-punched locator hole at the bottom of each fixed panel.



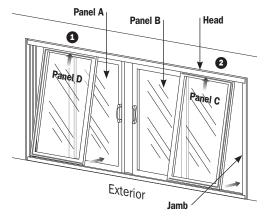
If pre-punched locator holes are present, proceed to Step 37. If prepunched locator holes are not present, proceed to Appendix A, Step A1.

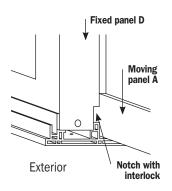
Install fixed panels from the exterior.

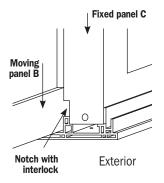
• Place top of fixed panel D into middle track at head, then put bottom into position in the middle track.

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

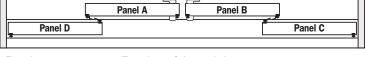
2 Repeat for fixed panel C.







Interior

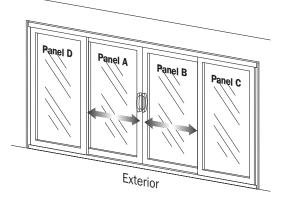


Exterior

Top view of 4-panel door

### Check movement and adjust.

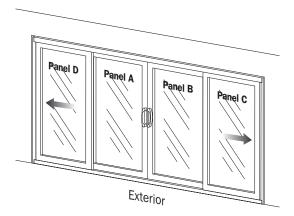
Slide both moving panels back and forth several times and make sure both panels are moving smoothly and align with both fixed panels. Adjust moving panel rollers if needed as shown in Step 30.



### Step 39

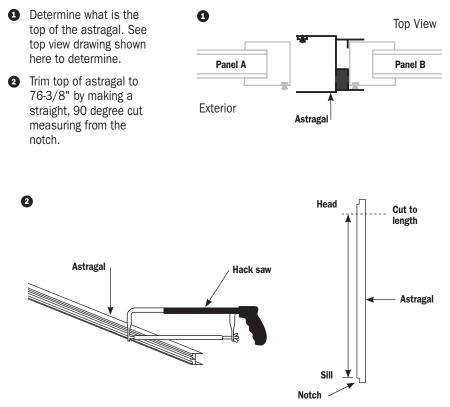
# **Position fixed panels.**

Slide both fixed panels all the way to each side so they are set back into the door frame as far as they will go.



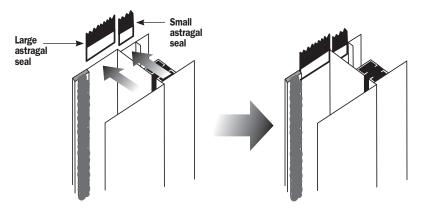
# Step 40

# Trim astragal.

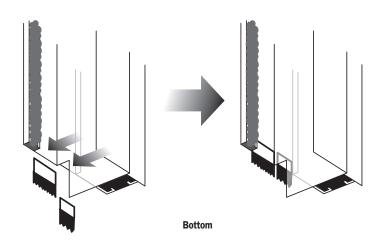


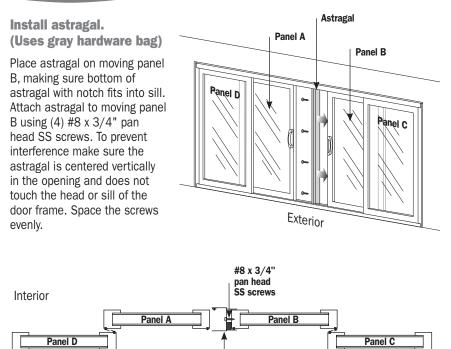
## Install astragal seals. (Uses gray hardware bag)

Apply (1) large and (1) small astragal seal to top of astragal and (1) large and (1) small astragal seal to bottom of astragal. Remove paper backing and apply using firm pressure to the interior sides of the astragal as shown.



Тор





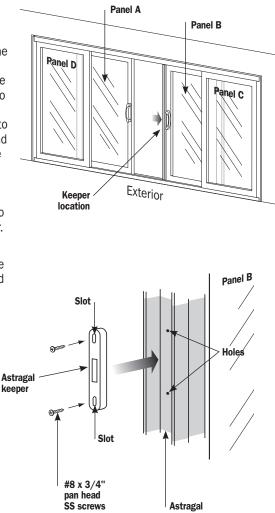
Astragal

Exterior

## Install astragal keeper. (Uses gray hardware bag)

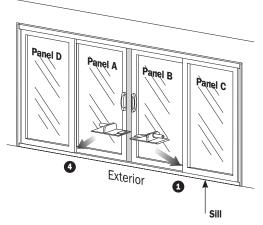
Locate the two holes in the astragal that are aligned with the handles. Install (2) #8 x 3/4" pan head SS screws through the slots on the astragal keeper into the two holes on the astragal and tighten them "finger tight" to allow for adjustments. Close and lock moving panel to make sure door locks correctly. If the door does not lock correctly, open door and slide astragal keeper up or down to allow lock hook to properly nest in astragal keeper.

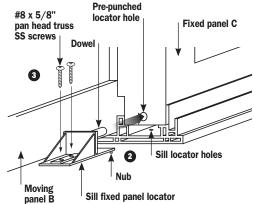
Once door locks correctly, fully tighten the screws to secure the astragal keeper in place top and bottom.



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

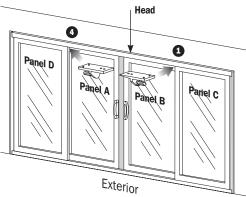
- Place one sill fixed panel locator in the middle track of the sill with the dowel facing fixed panel C. The nubs on the bottom of the sill fixed panel locator will face down.
- Slide the bottom of the sill fixed panel locator under fixed panel C and the dowel into the pre-punched locator hole in the panel until you feel the locator nubs on the bottom drop into place into the sill locator holes.
- Using (2) #8 x 5/8" pan head truss SS screws attach sill fixed panel locator to sill.
- Repeat with second sill fixed panel locator against fixed panel D.

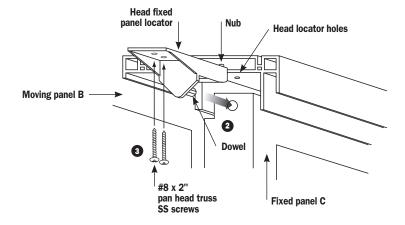




### Install head fixed panel locators. (Uses red hardware bag)

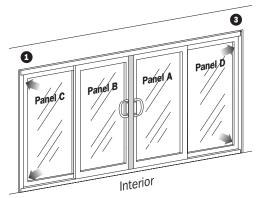
- Place one head fixed panel locator in the middle track of the head with the dowel facing fixed panel C. The nubs on the top of the head fixed panel locator will face up.
- Slide the head fixed panel locator above fixed panel C and the dowel of the locator into the pre-punched hole in the panel until 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.
- Repeat with head sill fixed panel locator against fixed panel D.

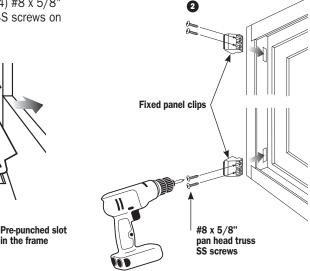




## Install fixed panel clips. (Uses green hardware bag)

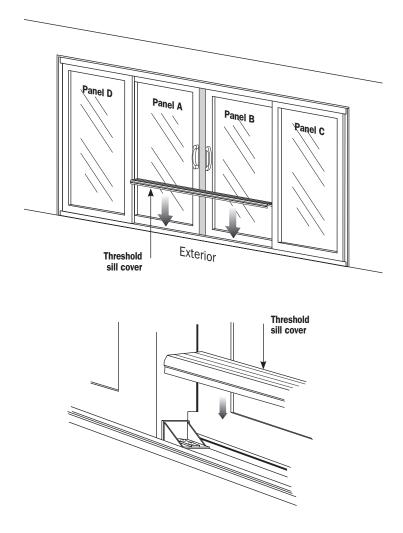
- Install (2) fixed panel clips, (1) at the bottom and (1) at the top of fixed panel C on interior. Insert the groove on the bottom of the fixed panel clip into the pre-punched slot on the jamb and pivot the fixed panel clip to snap into place against the door frame. Repeat for the other clip.
- 2 Drive (2) #8 x 5/8" pan head truss SS screws through each clip into door panel on top and bottom.
- 3 Repeat with remaining (2) fixed panel clips and (4) #8 x 5/8" pan head truss SS screws on fixed panel D.

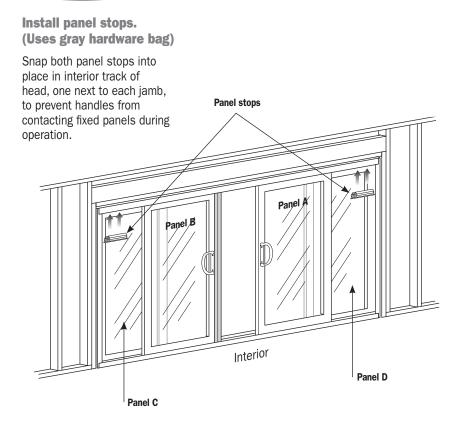




## Install threshold sill cover.

Install the threshold sill cover by snapping into place on the middle sill track starting on one side.

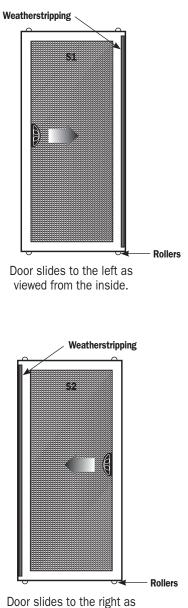




# Verify insect screen panel orientation.

Locate the weatherstripping and the moving handles on both insect screen panels. If the weatherstripping is facing you on the right and the moving handle is on the left, this is insect screen panel S1.

If the weatherstripping is facing you on the left and the moving handle is on the right, this is insect screen panel S2.

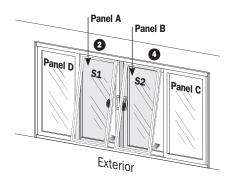


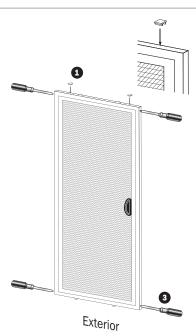
Door slides to the right as viewed from the inside.

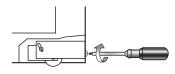


- Push the top (2) guides into place on the top of insect screen panel S1 approximately 2" from each side.
- Tilt the insect screen, put the top into the head track, then put the bottom into the sill track.
- Adjust wheels so insect screen stays on track and operates smoothly.
- Repeat for insect screen panel S2. The handles will meet in the middle.

NOTE: Before continuing, make sure both insect screen panels are operating smoothly.

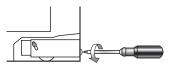






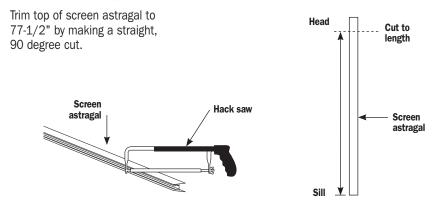
Lower Rollers

3



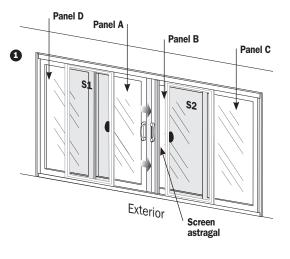
**Raise Rollers** 

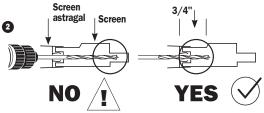
## Trim screen astragal.

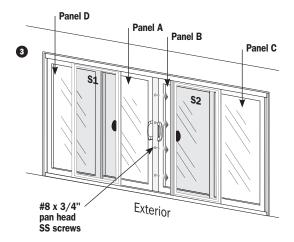


#### Install screen astragal. (Uses gray hardware bag)

- Press screen astragal onto insect screen panel S2 next to moving panel B. To prevent interference make sure the screen astragal is centered vertically in the opening and does not touch the head or sill of the door frame.
- Drill four equally spaced pilot holes no more than 3/4" deep through the screen astragal and into insect screen panel S2.
   Do NOT drill more than 3/4" deep.
- Attach screen astragal to insect screen panel S2 using (4) #8 x 3/4" pan head SS screws. Do NOT overdrive screws into screen.

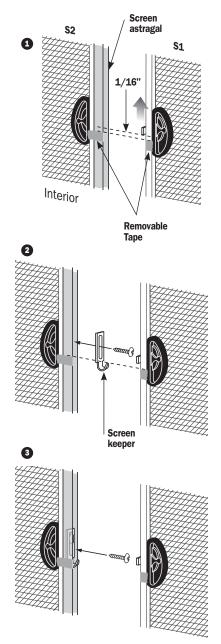






Install insect screen keeper. (Uses screen parts hardware bag)

- Push insect screen handle of insect screen panel S1 next to moving panel A all the way up. Mark 1/16" below bottom of screen latch with removable tape and transfer the mark to the screen astragal with removable tape.
- Position top of keeper hook with mark on screen astragal. Screen keeper should be installed with the hook up. Attach screen keeper using (1) included screw. You may need to pre-drill. Do NOT drill more than 3/4" deep. Adjust screen keeper as necessary for easy latching and releasing.
- Fasten screen keeper with second screw. You may need to pre-drill. Remove removable tape.



# 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 4-panel patio door you will need (2) top edge templates and (2) bottom edge templates.



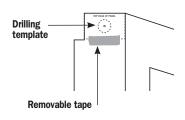
#### Step A2

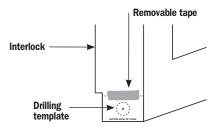
# Position templates on fixed panel near interlock.

Position the top edge template on the top of fixed panel C. 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 of fixed panel C as indicated.

Repeat with templates on the top and bottom of fixed panel D.





## Step A3

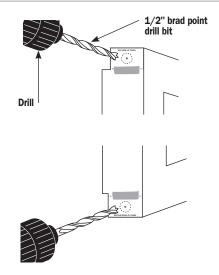
### Drill holes.

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

Repeat for bottom hole on fixed panel C.

Repeat on top and bottom of fixed panel D.

Remove templates and discard.

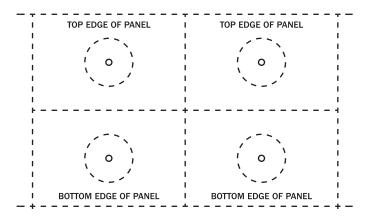


# Proceed to Step 37.

Step A4

## **Drilling template.**

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



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