



Thank you for selecting JELD-WEN® products. Attached are JELD-WEN's recommended installation instructions for Steel, Fiberglass, Vinyl and Wood French and Patio Doors. Read these instructions thoroughly before beginning. They are designed to work in most existing applications however; existing conditions may require changes to these instructions. If changes are needed, they are made at the installer's risk. For installations other than indicated in these instructions, contact a building professional. Areas such as Florida and the Texas TDI region have different anchoring requirements based on product certification. For information on specific products, visit [www.floridabuilding.org](http://www.floridabuilding.org) or [www.tdi.texas.gov](http://www.tdi.texas.gov) and follow the anchoring schedule given in the drawings for the product instead of the anchoring schedule in this document.

Newer construction methods have led to an increase in air and water tightness in buildings. This frequently leads to negative air pressure inside the house, which can draw water through very small openings. Our installation method seals the door to the weather barrier (typically building wrap) and uses a sill pan to capture and drain incidental storm water from under the door.

### IMPORTANT INFORMATION AND GLOSSARY

Not all exterior door types may be installed into every wall condition in all areas. Consult your local building code official for applicable building codes and regulations. Local building code requirements supersede recommended installation instructions.

**Please Note!** Any French or patio door installation such that the sill is higher than 35 feet above ground level or into a wall condition not specifically addressed in these instructions must be designed by an architect or structural engineer. Failure to install square, level and plumb and on a flat surface (without twist or warp) could result in denial of warranty claims for operational or performance problems.

**Note to Installer:** Provide a copy of these instructions to the building owner. By installing this product, you acknowledge the terms and conditions of the limited warranty as part of the terms of the sale.

#### GLOSSARY

##### Active Panel

The primary panel or the one that opens and locks into the other panel.

##### Astragal

The vertical trim attached to one of the panels of a French door that bridges the gap between the panels when closed to provide weather and overswing protection.

##### Backer Rod (backing material)

A material (e.g. foam rod) placed into a joint primarily to control the depth of the sealant.

##### Brickmould

A form of exterior casing for windows and doors that serves as an aesthetic boundary between the siding and the frame.

##### Buck

A wood framework attached to the masonry inside a window or patio door rough opening.

##### Mull (mullion)

A wood or metal part used to structurally join two window or door units.

##### Mulled Unit

Two or more door units structurally joined together.

##### Pilot Hole

A drilled hole that is no larger than the body of the screw (minus the threads).

##### Shiplap

The layering method in which each layer overlaps the layer below it so that water runs down the outside.

##### Sill Pan

A flashing component installed in the sill of the rough opening underneath the door. Sill pans have upturned walls along the interior edge and at both ends, creating a three-sided box. This component serves as a collection device to drain incidental water to the exterior of the building and should be properly sealed to the opening. The best sill pan design has a positive slope to the exterior and offers continuous support to the door's sill.

##### Weep Hole (weep channel)

The visible exit or entry part of a water drainage system used to drain water out of a door.

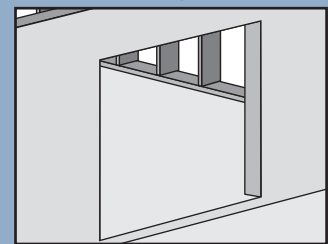
Please allow sufficient time to properly prepare the rough opening, install the patio door, and ensure its proper operation.

Estimated Install Time for New Construction	<input type="checkbox"/> First Time: 4.0 hr. <input type="checkbox"/> Experienced: 2.5 hr. <input type="checkbox"/> Professional: 1.5 hr.	
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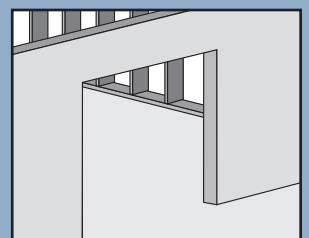
#### LANDINGS

These instructions cover two patio door sill conditions: the **step-down landing** and the **continuous slab landing**. The installation methods vary slightly between landing types.

##### Step-Down Landing



##### Continuous Slab Landing

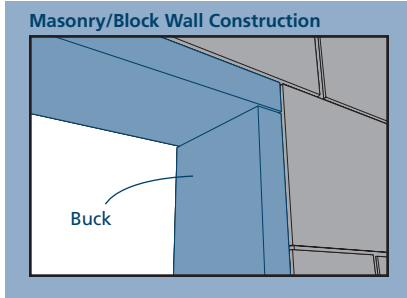


## ROUGH OPENINGS

This installation guide specifically addresses masonry/block wall, sheathed wall and open-stud construction.

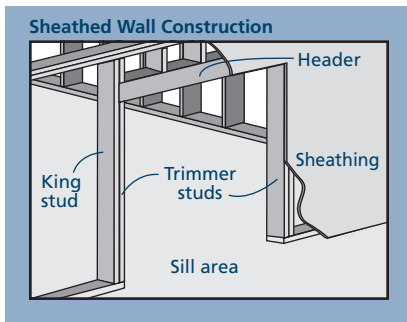
### MASONRY/BLOCK WALL CONSTRUCTION

This installation assumes that a building professional has already properly fastened and sealed a framework of studs (often called a buck) to the concrete/masonry wall.



### FULLY SHEATHED WALL CONSTRUCTION

The wall framing is covered by sheathing and the door will be mounted with the nailing fin/exterior trim flush against the sheathing. This installation assumes building wrap is properly installed prior to installation.

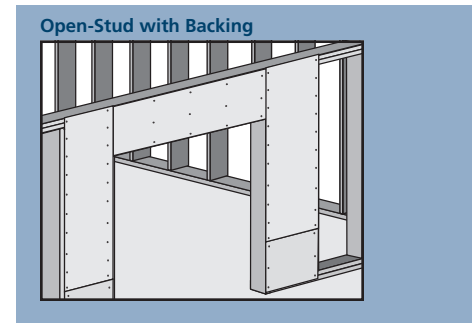


### OPEN-STUD CONSTRUCTION

The wall framing needs to be covered by backing support before the door can be installed. The door will be mounted with the nailing fin/exterior trim flush against the applied backing support.

This backing support should be a thin (max. 1/8" thick) sheet

material such as plywood or lauan. Completely surround the rough opening with the backing support as shown. Backing support must be applied before building wrap.



## SAFETY AND HANDLING

### SAFETY

- Read and fully understand ALL manufacturer's instructions before beginning. Failure to follow proper installation instructions may result in the denial of warranty claims for operational or performance problems.
- Do not work alone. Two or more people are required. Use safe lifting techniques.
- Use caution when handling glass. Broken or cracked glass can cause serious injury.
- Wear protective gear (e.g. safety glasses, gloves, ear protection, etc.).
- Operate hand/power tools safely and follow manufacturer's operating instructions.
- Use caution when working at elevated heights.
- If disturbing existing paint, take proper precautions if lead paint is suspected (commonly used before 1979). Your regional EPA ([www.epa.gov/lead](http://www.epa.gov/lead)) or Consumer Product Safety Commission offices provide information regarding regulations and lead protection.

- **WARNING:** Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer. Use a respirator or other safeguards to avoid inhaling wood dust.

### MATERIALS AND PATIO DOOR HANDLING

- Make sure the operating panel is secured prior to installation.
- Heed material manufacturer's handling and application instructions.
- Protect adhesive surfaces from dirt, moisture, direct sunlight and folding over onto themselves.
- Handle in vertical position; do not drag on floor.
- Do not put stress on joints, corners or frames.
- Store patio door in dry, well-ventilated area in vertical, leaning position to allow air circulation; do not stack horizontally.
- Protect from exposure to direct sunlight during storage.
- Install only into vertical walls and when conditions and sheathing are dry.
- Never use solvent-based sealants on vinyl products.

**IF INJURY OCCURS, IMMEDIATELY SEEK MEDICAL ATTENTION!**

**MATERIALS AND TOOLS**

**NEEDED MATERIALS**

**Note!** JELD-WEN exterior window and door products should be installed in accordance with JELD-WEN's recommended installation and flashing directions, which are shipped with the products or can be found on our website: [www.jeld-wen.com](http://www.jeld-wen.com). Note that alternative installation methods and flashing systems may be utilized at the installer's or owner's discretion and, in such situations the installation should be done in accordance with the flashing manufacturer's instructions. Follow all material manufacturer's instructions for proper use and compatibility. When using flashing, spray adhesive/primer, sealant and foam products, we recommend using the same manufacturer and verifying compatibility. It is the End User's responsibility to determine if dissimilar materials are compatible to the substrates in the application.

- #8 x 3" deck/drywall screws.
- Non-compressible or non-water degradable shims.
- Backer rod 1/8" larger than the widest portion of the gap (used in conjunction with sealant bead).
- Sealant: We recommend OSI® QUAD® Max Sealant or equivalent. This can be used in any application and can be painted or ordered in a color matched product, if desired.
- Polyurethane low expansion Window and Door foam: We recommend OSI® QUAD® Foam or equivalent).
- Plastic drain screen with crisscross or woven pattern (sold in 6" widths to protect rain gutters) for step-down landings.

- 4", 6", or 9" (as required by local code and window configuration) wide self-adhered flashing: We recommend OSI® Butyl Flash Tape or equivalent.
- 3/8" staples for step-down landings.
- Sill pan: It is best practice to use a pre-formed, rigid, positively sloped, pvc pan that provides continuous support. We recommend using SureSill™ Sloped Sill Pan™, manufactured by SureSill™, Ltd. An alternative would be a non-sloped pre-formed sill pan or one that can be fabricated on site from metal or vinyl sheet material with the proper tools.

**For installations into a Buck:**

- Liquid applied flashing (Protecto Wrap LWM 200 or equivalent).

**For installations into a stud-framed wall:**

- 4", 6", or 9" (as required by local code and window configuration) wide self-adhered flashing: We recommend OSI® Butyl Flash Tape or equivalent.
- Spray adhesive/primer for self-adhered flashing. Such as Loctite® 300 or equivalent. Follow manufacturer's instructions for application methods.

**Note!** Follow all material manufacturer's instructions for proper use and compatibility.

**NEEDED TOOLS**

- Cutting shears (sill pan)
- Tape measure
- Utility knife
- Level (4 ft. minimum recommended)
- J-roller
- Caulking gun
- Drill with bits
- Construction stapler
- Screwdriver

**1**

**REMOVE PACKAGING AND INSPECT PATIO DOOR**

**REMOVE PACKAGING**

Remove shipping materials such as corner covers, shipping blocks or pads.

**Note!** Be sure to remove the shipping clips from the door before beginning the installation.

**INSPECT PATIO DOOR**

- Cosmetic damage.
- Product squareness (diagonal measurements must be within 1/4" difference).

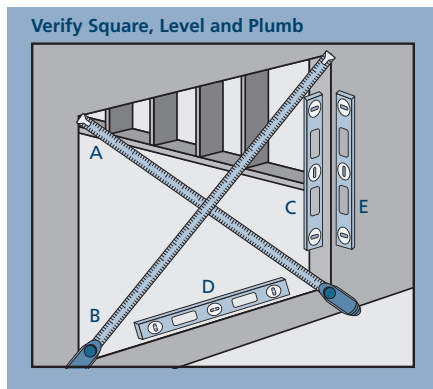
- Correct product (size, color, grid pattern, handing, glazing, energy-efficiency requirements, etc.).
- Splits, cracks, holes, missing sections or other damage to the nailing fin longer than 6" and/or within 1/2" of door frame.
- A drip cap that extends 1/8" past the end of the frame is recommended for all products; required for side-by-side mulled units.

If any of the above conditions represent a concern, or if you expect environmental conditions to exceed the patio door's performance rating, do not install the patio door. Contact your dealer or distributor for recommendations.

**2**

**INSPECT ROUGH OPENING**

- Verify the width and height of the door are each 1/2"-3/4" smaller than the rough opening width/height, respectively. Mulled units should be 3/4" smaller.
- Verify the rough opening is square. The (A) and (B) measurements should be the same. Maximum allowable deviation from square is 1/4".
- Verify the rough opening is plumb (C, E and D). The maximum allowable deviation is 1/8".



- The rough opening sill must not be crowned or sagged (D), but rather be level or sloped (positive slope) to the exterior.
- The exterior face of the rough opening must be in a single plane (E) with less than 1/8" twist from corner to corner.
- Minimum double studs should be used at all wood framed rough openings.
- The header must be supported by trimmer studs.

**FOR RETROFIT INSTALLATIONS**

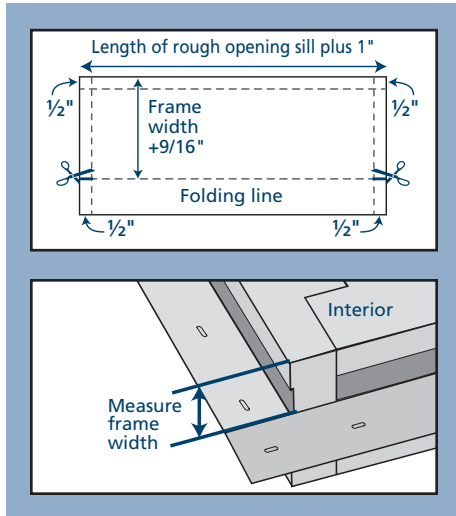
After removing the old patio door, remove sufficient cladding (siding, stucco, etc.) to expose enough intact building wrap to properly seal the patio door to the opening. If damaged, apply new building wrap in shiplit manner. Verify the rough opening framing is structurally sound. Contact your local waste management entities for proper disposal or recycling of products being removed.

**3**

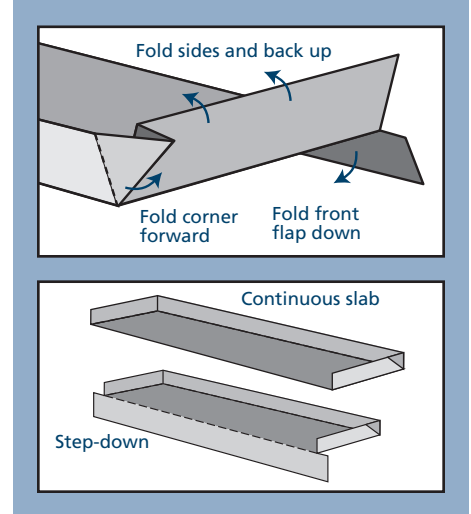
**PREPARE SILL PAN**

The sill can be prepared using one of two methods: We recommend SureSill™ Sloped Sill Pan™ available from SureSill at [www.suresill.com](http://www.suresill.com), building supply stores, and some manufacturing locations. As an alternative, a sill pan can be fabricated on site, by following the instructions below. If installing a SureSill™ sill pan, follow SureSill's instructions for installation and skip to section 6 "PREPARE STUD-FRAMED WALL".

1. Cut a piece of sheet material to the length shown.
2. Lightly crease folding lines 1/2" in from the two short sides and one long side.
3. Measure the width of the frame from the interior to the nailing fin/trim and add 9/16".
4. Take this distance from the back edge and lightly crease a folding line across the sheet material.



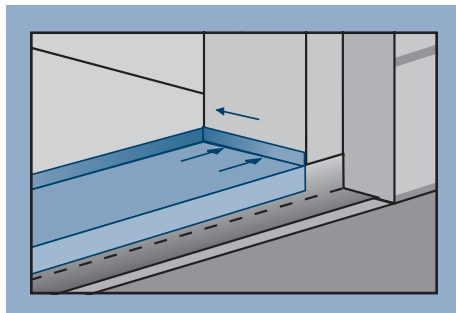
5. For step-down landings, cut 1/2" in at this line on both sides of the sheet material.
6. For continuous slab, cut across the folding line.
7. Fold the three back sides up to make a 3-sided box, and, for step-down landings, fold the front flap down.



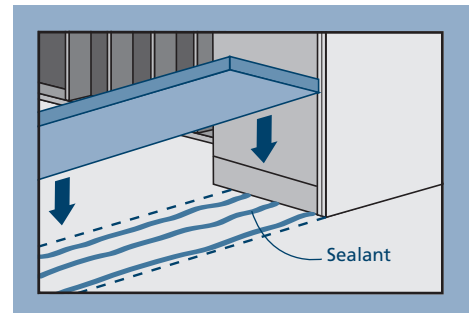
**4**

**INSTALL SILL PAN**

1. Set the sill pan in the rough opening, aligning the front edge (for continuous slab) or folded down edge (for step-down) with the exterior of the rough opening.



2. Mark a line across the front and back of the sill pan.
3. Apply three 3/8" beads of sealant between the lines.
4. Place the sill pan in the rough opening. Firmly press the sill pan into the sealant with a J-roller.

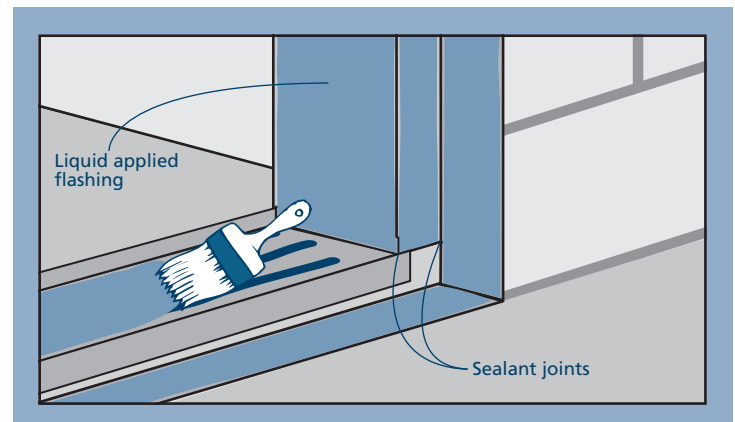


**5**

**PREPARE BUCK**

**Note!** This section applies to installations into a buck only. For installations into a stud-framed wall, begin with section 6, "PREPARE STUD-FRAMED WALL."

1. Seal any joint larger than 1/16" in the buck and between the buck and the concrete/masonry with sealant.
  2. Cover the buck and the surrounding concrete/masonry at the head and jambs and sill with liquid applied flashing as shown.
  3. Apply diamond lath to all flashed surfaces to be covered by stucco.
- END of Buck Instructions, SKIP to section 7, "INSTALL DOOR."**



**6 PREPARE STUD-FRAMED WALL**

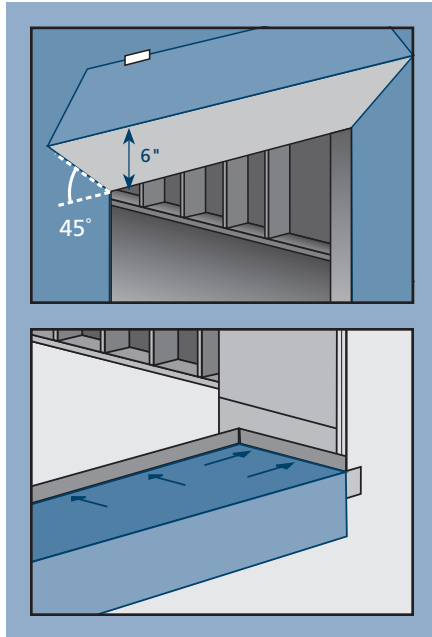
**FOR RETROFIT INSTALLATIONS**

Remove the old door. Remove sufficient siding to expose at least 9" of intact building wrap. If damaged, apply new building wrap in a shiplap manner. Verify header and trimmer studs are structurally sound. Continue with instructions.

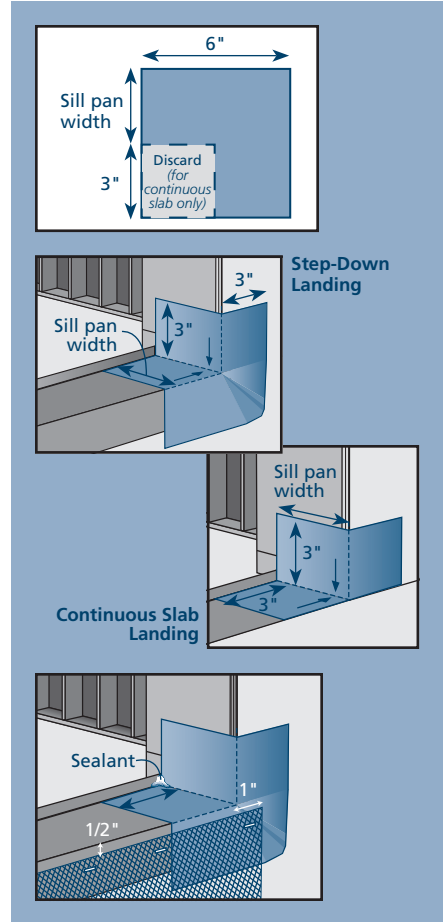
**PREPARE BUILDING WRAP**

Verify these steps do not void the building wrap manufacturer's warranty.

1. Trim building wrap flush with the edges of the rough opening.
2. At the head, slit building wrap 6" at 45°. Tape up as shown.
3. Trim the sides sufficiently to allow the nailing fin to be mounted against the sheathing.
4. Apply spray adhesive/primer to the sill pan and surrounding area. Follow manufacturer's instructions for application methods.
5. Cut a piece of self-adhered flashing the length of the sill and apply over the sill pan as shown. The bottom of the sill pan should be completely covered by the self-adhered flashing. For step-down landings, fold flashing down as shown. For continuous slabs, trim flush with rough opening.



6. Cut two pieces of self-adhered flashing 6" wide by the sill pan width + 3" long.
  - a. For continuous slab landings only, cut out the inside corner.
  - b. Adhere the pieces of flashing to the inside corners. Stretch flashing as needed to cover corners and lay flat.
7. Smooth gaps or bubbles beneath self-adhered flashing with a J-roller (remove and replace if necessary).
8. Seal back corners of sill pan with sealant.
9. For step-down landings only, cut plastic drain screen to length of sill + 2" and staple 1/2" below sill edge. The drain screen provides a path for air to dry any incidental moisture in the rough opening.

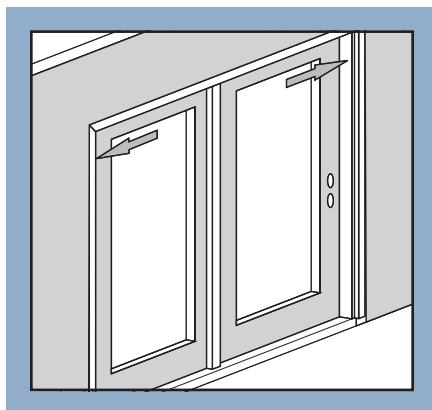


**END OF Stud-Framed Wall Instructions continue with section 7 "INSTALL DOOR."**

**7 INSTALL PATIO DOOR**

**Warning!** To avoid injury, use at least two people to install. Adequately support the door until completely fastened.

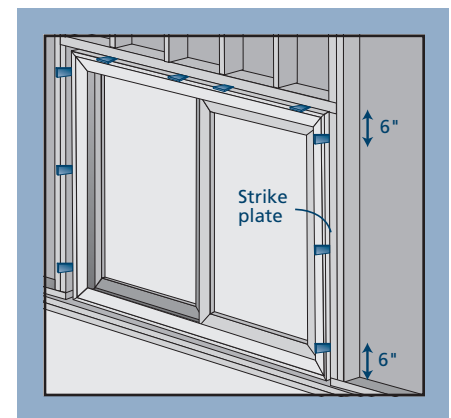
1. Apply a 3/8" bead of sealant where the back of the trim meets the frame. Tool into a fillet shape. Run another bead of sealant along the back of the fin/trim where it will contact the structure.
2. Tilt the door into the rough opening, making sure the inside of the door sill is fully seated into the sealant on the sill pan back dam.
3. Secure the door in the rough opening by pre-drilling holes and then driving #8 x 3" drywall/deck screws into the thick part of the jamb where shown. Do not fully seat screws.



**SHIM PATIO DOOR**

**Note!** Secure all shims with sealant.

From the interior, shim the head and side jambs 6" from the corners and at 8" intervals. Install shims at the strike plate and at each hinge location so the screws (installed later) will each penetrate a shim. If installing a door with a hinge jamb in the middle, shim underneath the mull for support. Shim so the door is square, level and plumb. Verify there is a 1/8" margin between the frame and the door panels.



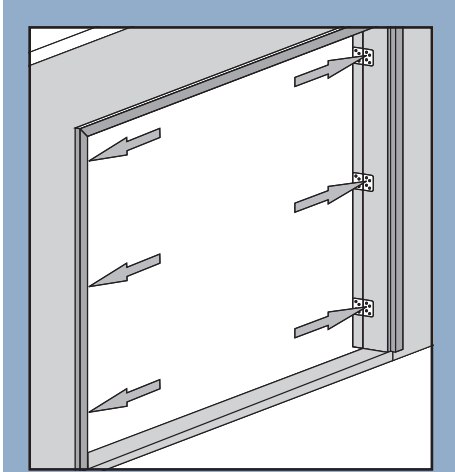
**7** INSTALL PATIO DOOR - CONTINUED

**SECURE THE DOOR**

**Note!** Vinyl door instructions later in this section. All others begin here. Double door units are shown, however, the fastening instructions also apply to triple, quad and sidelight French and patio door units.

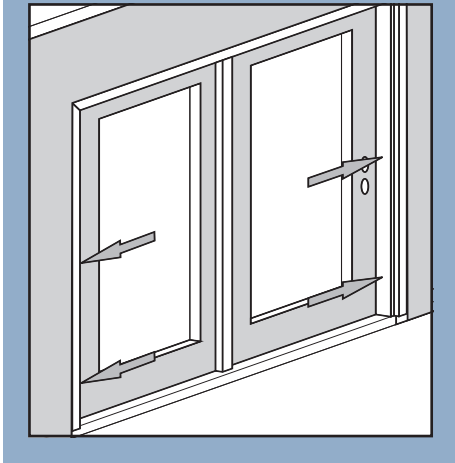
**For French Doors:**

Remove a screw from each hinge next to the weatherstrip and replace with one of the provided #8 x 3" screws, seating all screws fully.



**For Patio Doors:**

Pre-drill and install four more #8 x 3" screws through the thick part of the jamb where shown in a similar manner to those installed previously. Seat all screws fully.

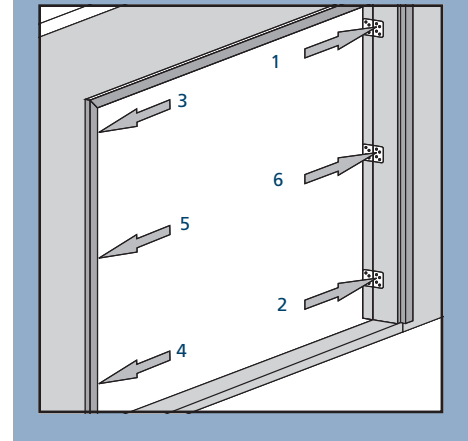
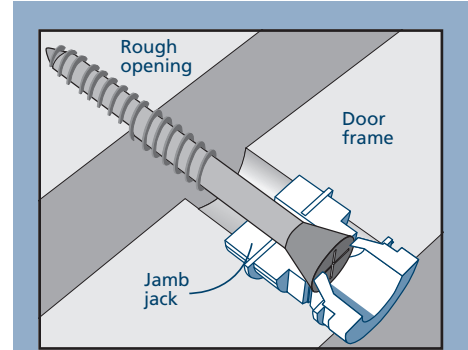


**VINYL FRENCH AND PATIO DOORS:**

**Note!** Use the six screws that come in the hardware pack to install the door. The hardware pack also contains six screw caps and a #25 torx bit to install the screws.

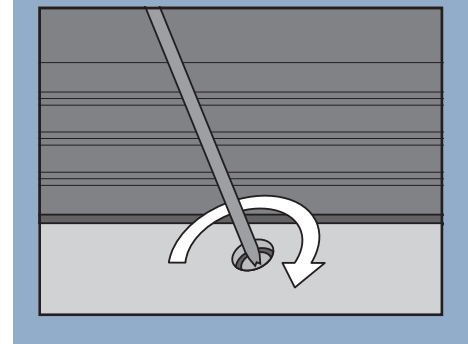
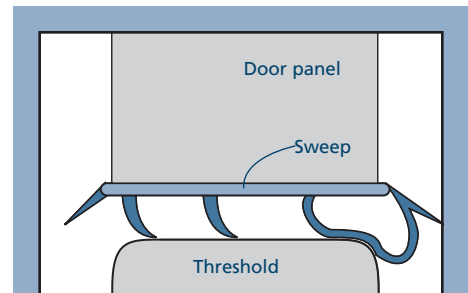
1. Verify the door is level, square and plumb. Check for even margins around all panels and the frame and that the lockset holes (if applicable) align properly. If not, adjust shims. Once the screws are captured in the jamb jacks, they cannot be removed and reinstalled.

2. Use the jamb jack screws and TORX bit (provided) to initially secure the frame to the opening at locations 1 & 2. Turn jamb jack screws #1 and #2 until they click twice. Do the same for #3.
3. Check the inside of jamb on the #1 side for plumb and adjust by turning jamb jack screws clockwise to move toward the jamb, or counter clockwise to move away from the jamb. Check unit for plumb, square and level.
4. Turn #4 jamb jack screw until it clicks twice. Adjust jamb jack screws on the #4 side to plumb jamb. Again, check unit for level, plumb and square.
5. Tighten jamb jack screws #5 and #6 being careful not to bow the side jambs.
6. Check unit for plumb, square and level and adjust as necessary.



**ADJUST SILL CAP (IF NECESSARY)**

Verify the sweep properly contacts the threshold with 1/8" overlap as shown. Door units are manufactured so that, if installed level and square, the sweep will contact the threshold properly, making adjustments to the sill cap unnecessary. However, if adjustments are needed, use a flat head screwdriver to remove screw covers and turn screw clockwise to adjust the sill cap up. Sills are shipped with sill cap adjusted all the way down.



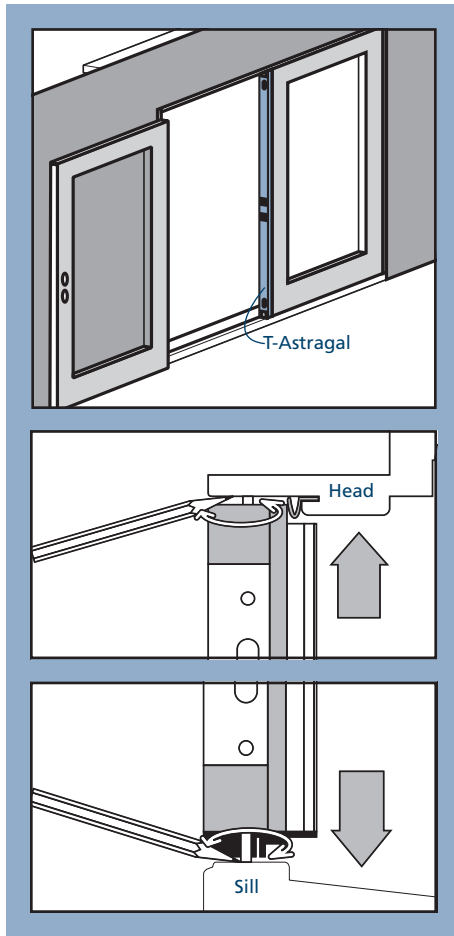
**7**

**INSTALL PATIO DOOR - CONTINUED**

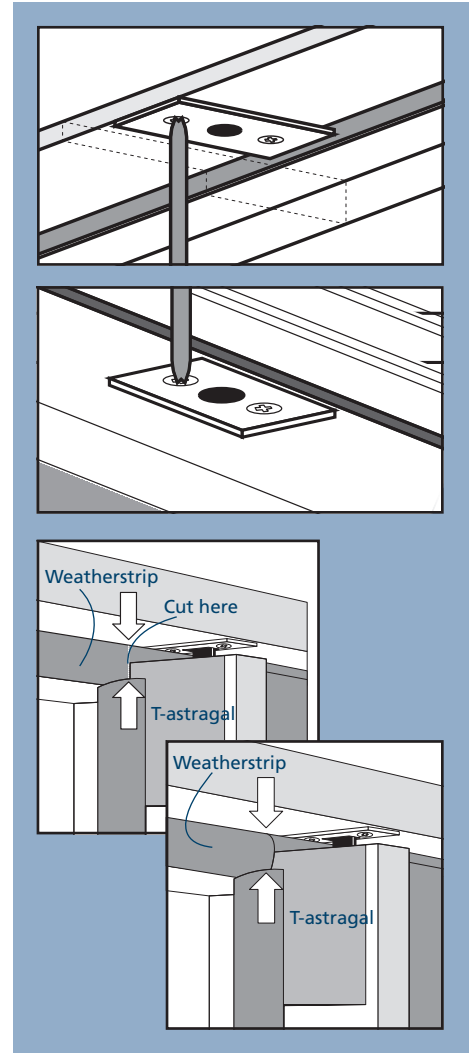
**T-ASTRAGAL FLUSH BOLT STRIKE PLATES (FRENCH DOORS ONLY)**

To install the T-Astragal flush bolt strike plates, follow the instructions that came with the product. If they are missing, complete the next four steps, otherwise, skip to section 8, "INSTALL SCREEN SYSTEM."

1. Locate the T-Astragal attached to the edge of the inactive door panel that secures the panel when the door is closed. There are flush bolts at the top and bottom of the T-Astragal.
2. With the inactive door closed, mark where the flush bolts touch the head jamb and sill cap.



3. Drill 3/8" holes (1" deep) at these spots and apply the strike plates (provided) to the sill cap and head jamb as shown.



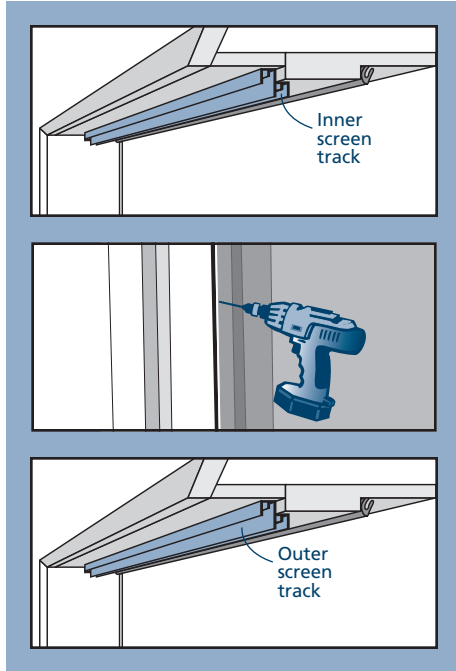
4. With the inactive door closed, mark the head jamb weatherstrip with a sharp utility knife at the edge of the T-Astragal where it touches the weatherstrip. Open the inactive door and cut through the weatherstrip so that when the door is closed the weatherstrip clears the T-Astragal.

**8** INSTALL SCREEN SYSTEM

**Note!** Some doors are shipped with a screen track pre-installed. For those doors, follow these instructions to install the screen system. If the screen track was not previously installed, follow the instructions provided with the screen to install the screen track and the screen system.

**For French Doors:**

1. Position smaller inactive screen on the inner track at the top and bottom.
2. Secure inactive screen to the side jamb with 2 of the provided #8 x 3" screws through the pre-drilled screen edge holes.
3. Position larger active screen on the outer track at the top and bottom.
4. Using a #2 Phillips screwdriver, adjust outer screen rollers at top and bottom until screen slides properly. Turning the screws counter clockwise retracts the rollers into the frame.
5. Adjust the wheels at both the top and bottom in order to center the screen between the head and the sill.



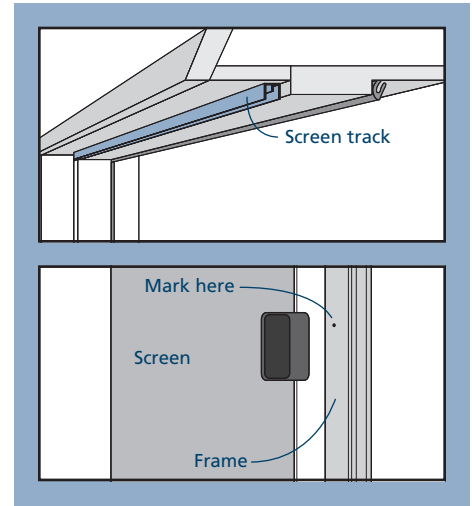
**Note!** Excessive tension may cause binding. Adjust so the top and bottom are parallel with the head and sill.

**For Patio Doors:**

1. Position screen on the screen track at the top and bottom.

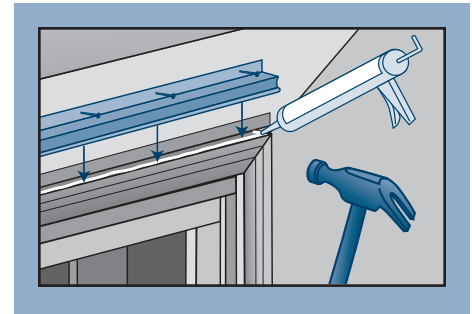
**For Both Doors:**

1. Trim bug flap on screens to desired length. Adjust the upper and lower adjustment screws to ensure smooth screen operation.
2. Mark where active screen securing hardware should be mounted and apply strike plate. Door frame must be pre-drilled to accept screws.



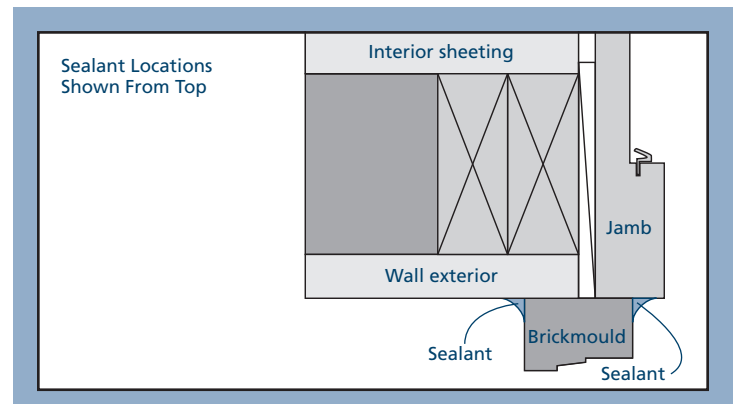
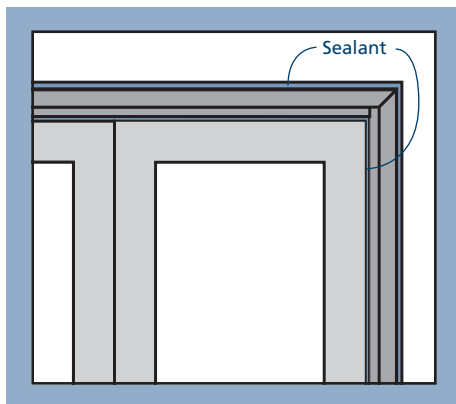
**INSTALL DRIP CAP**

1. Install drip cap above the brickmould header trim.
2. Cut a piece of drip cap the length of the header trim + 1/8" to allow for 1/16" overlap on each end of the trim.
3. Apply 1/4" bead of sealant to header trim as shown.
4. Nail drip cap in place as shown.
5. Apply sealant underneath the drip cap where it meets both ends of the trim.



**9** COMPLETE INSTALLATION

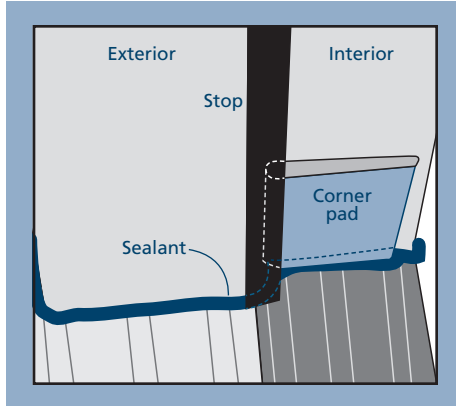
1. Apply sealant along both sides and top of the door unit where the exterior trim rests against the outside of the house and where the brickmould meets the jambs.



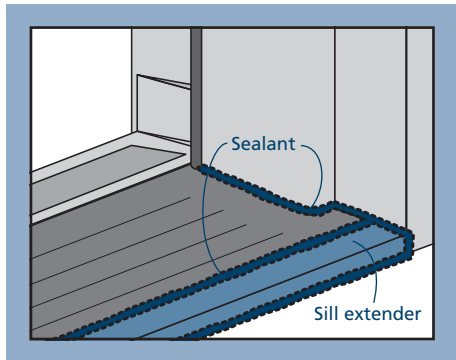


**9 COMPLETE INSTALLATION - CONTINUED**

2. The foam wedges included with French and Patio doors are used to complete the weatherstrip seal at each bottom corner of the operating door panel(s). Doors will be provided with one of two types of wedges. One has an upturned L-shaped leg (shown) and the other is a simple wedge. For both types, gently pull the weatherstrip flap away from the frame and position the wedge behind the weatherstrip and against the sill so that the thin edge faces the edge of the door as it swings closed. Remove the backing paper and stick the wedge to the frame. Apply a bead of sealant at the intersection of the jambs, brickmoulds, thresholds and floor as shown.



3. Apply sealant at the bottom where the sill meets the frame on both sides. If a sill extender is used, apply a bead of sealant between the sill and the extender. Apply sealant around any mulls at the intersection of the mull and door sill.



4. Apply sealant around the outside of the door unit between the siding and brickmould and between the brickmould and the jamb. Also apply sealant between the jamb sides and the threshold. Run a bead of sealant, leaving 1" gaps every 2', along the front side of the threshold where it meets the slab/rough opening.

5. Create a continuous air seal on the interior between the rough opening and the frame with low expansion foam.

**COMPLETE INSTALLATION**

1. Ensure sealant on back dam of the sill pan fully seals to the inside face of the sill. Apply more sealant as necessary.
2. Install lockset hardware per supplied instructions.
3. On the exterior of step-down landings, install support trim underneath the sill where it extends past the landing. Position trim snugly against the bottom of the sill toe.
4. Fill any nail/screw holes in wood and sand smooth.
5. Finish all six sides of the door panel(s) as well as the frame.

**AFTER INSTALLATION**

- Install exterior wall surface within seven days of installation.
- Maintain gap of 1/4"-3/8" between door frame and final exterior wall surface (siding, stucco, etc.)
- Seal this gap on the sides with backer rod and sealant. For step-down landings, also seal under the door sill with a discontinuous joint. Do not apply sealant on top of the drip cap.
- Remove protective film (if applicable) on glass within one year.
- Protect recently installed units from damage from plaster, paint, etc. by covering the unit with plastic.
- Install any interior trim as desired.

Please visit [jeld-wen.com](http://jeld-wen.com) for warranty and care and maintenance information.

Thank you for choosing

