



Thank you for selecting JELD-WEN products. Attached are JELD-WEN's recommended installation instructions for wood patio doors without exterior trim or nailing fin. 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 or 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 home, which can draw water through very small openings. Our installation method seals the patio door to the weather barrier (typically building wrap) and uses a sill pan to capture and drain incidental water from under the patio door.

IMPORTANT INFORMATION AND GLOSSARY

Not all patio 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 patio door installation where 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

Backer Rod (backing material)

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

Buck

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

Continuous Air Seal

Backer rod and sealant or low expansion foam applied to the interior gap between the product and the building in a continuous fashion used to block air flow between the interior and exterior of the building envelope.

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).

Self-Adhered Flashing (SAF)


An adhesive backed tape material, generally not requiring mechanical fasteners, used to waterproof the rough opening and/or used to seal a window to the building's weather barrier. SAF should be applied in a manner that directs the moisture out of the wall cavity to the exterior.

Shiplap

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

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

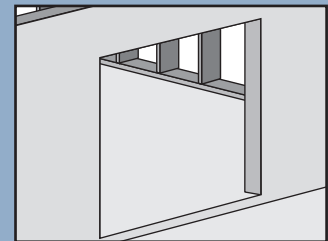
Estimated Install Time for New Construction	<input type="checkbox"/> First Time: 4.0 hr.
	<input type="checkbox"/> Experienced: 2.5 hr.
	<input type="checkbox"/> Professional: 1.5 hr.



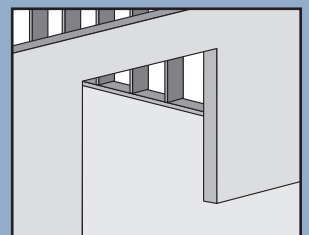
LANDINGS

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

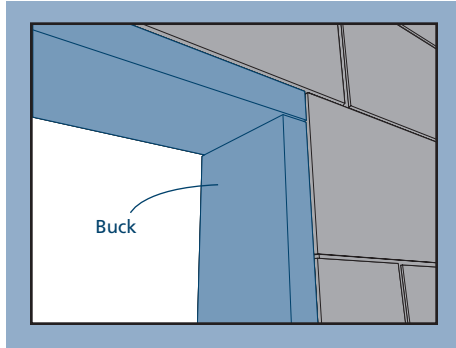


ROUGH OPENINGS

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

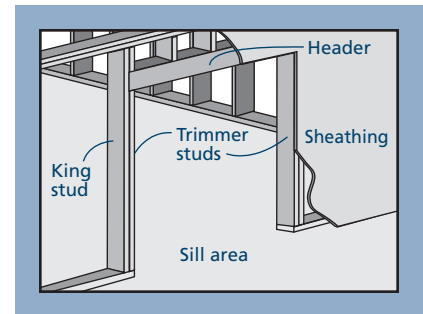
MASONRY/BLOCK WALL CONSTRUCTION

This installation assumes that a framework of 2x studs (often called a buck) has already been properly fastened and sealed to the concrete/masonry wall by a building professional.



FULLY SHEATHED WALL CONSTRUCTION

The wall framing is covered by sheathing and the door will be mounted inside of the rough opening. This installation assumes building wrap is properly installed prior to installation.



OPEN-STUD CONSTRUCTION

The wall framing is not covered by sheathing.

SAFETY AND HANDLING

SAFETY

- Read and fully understand ALL manufacturers' 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) 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 manufacturers' 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.

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. 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 manufacturers' 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.

- Finned products: 1-3/4" galvanized roofing nails; Exterior trim products: 3" galvanized casing nails. Fasteners must penetrate at least 1" into framing.

- 3/16" x 2-1/2" self-tapping concrete screws (for concrete subfloors).
- Non-compressible or non-water degradable shims.
- 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.
- 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.
- Backer rod 1/8" larger than the widest portion of the gap (used in conjunction with sealant bead).
- Polyurethane low expansion Window and Door foam: We recommend OSI® QUAD® Foam or equivalent.

MATERIALS AND TOOLS - CONTINUED

- 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.
- For step-down landings only: Plastic drain screen with crisscross or woven pattern (sold in 6" widths to protect rain gutters) and 3/8" staples. The drain screen provides a path for air to dry any incidental moisture in the rough opening.
- Drip cap material, if not supplied, required only for side-by-side mulled units that extends the length of the frame plus 1/8" overhang on each end.

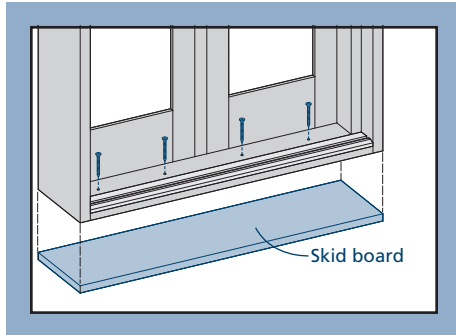
NEEDED TOOLS

- Hacksaw (SureSill™ sill pan) or Cutting shears (fabricated sill pan)
- Tape measure
- Utility knife
- Level (4' minimum recommended)
- J-roller
- Caulking gun
- Hammer/Drill
- Construction stapler
- Flat head screwdriver

1 REMOVE PACKAGING AND INSPECT PATIO DOOR

REMOVE PACKAGING

Remove shipping materials such as corner covers, shipping blocks or pads. Remove the skid board attached to the bottom of the door and save screws for securing the sill. Remove any staples exposed on the frame, but leave any glass protective films on.



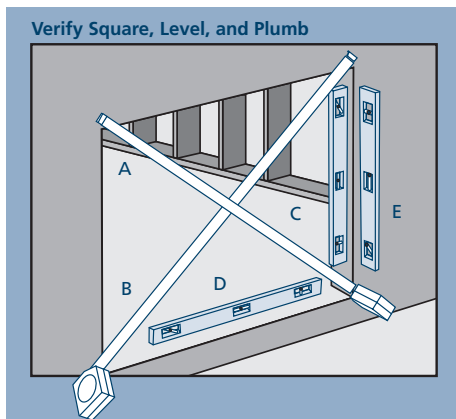
INSPECT PATIO DOOR

- Cosmetic damage
- Correct product (size, color, grid pattern, handing, glazing, energy-efficiency requirements, etc.).
- Drip cap that extends the length of the frame plus 1/16" overhang on each end is required.

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 patio door are each 1/2" - 3/4" smaller than the rough opening width/height. 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 1/8" for doors less than 20 square feet and 1/4" for doors over 20 square feet.



- Verify the rough opening is plumb and level (C), (D) and (E). The maximum allowable deviation is 1/8".
- The rough opening sill must not be crowned or sagged (D), but rather 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

Remove the entire old patio door. Removing the exterior wall surface is not necessary if the opening has been evaluated to be structurally sound and water tight. Repair any problems before continuing. Contact your local waste management entities for proper disposal or recycling of products being removed.

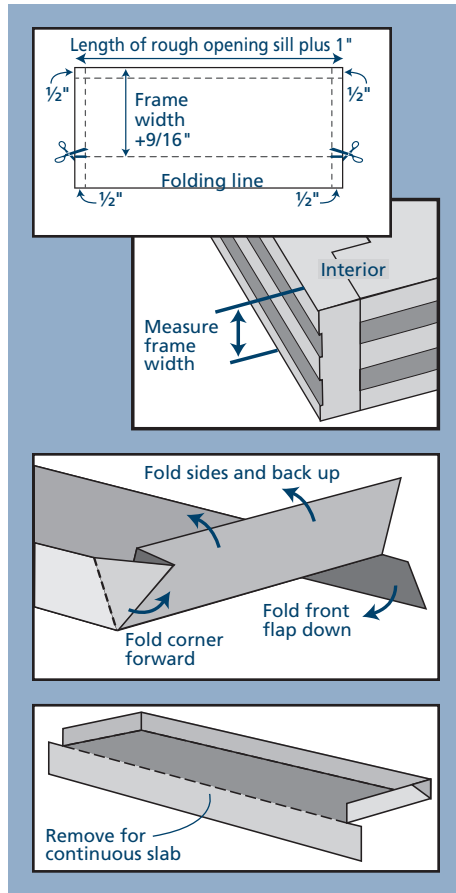
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INSTALL SILL PAN

The sill can be prepared using one of two methods: **We recommend SureSill™ Sloped Sill Pan™** available from SureSill at www.suresill.com, 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 4 "PREPARE STUD-FRAMED WALL".

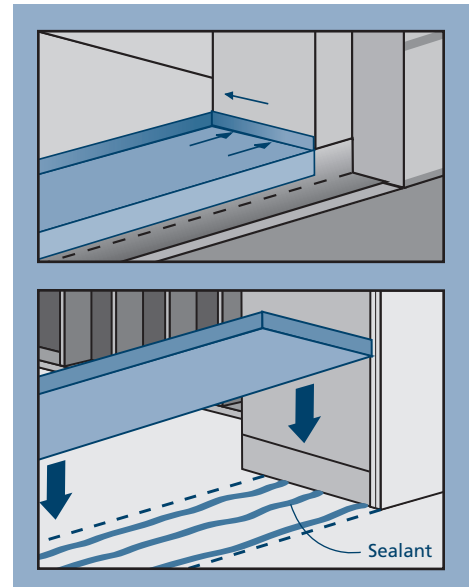
JOBSITE FABRICATED SILL PAN

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 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.



INSTALL SILL PAN

1. If installing a metal sill pan on concrete, cut a piece of self-adhered flashing the length of the sill pan and adhere it to the entire bottom surface where the pan will sit on the concrete.
2. 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.
3. Mark a line across the front and back of the sill pan.
4. Apply three 3/8" beads of sealant between the lines.
5. Place the sill pan in the rough opening. Firmly press the sill pan into the sealant with a J-roller.



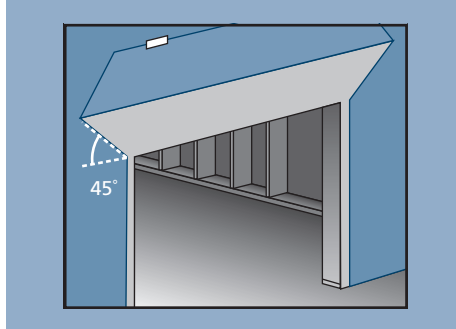
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PREPARE STUD-FRAMED WALL

PREPARE BUILDING WRAP

Note! Check with the building wrap manufacturer to verify the following steps will not void their product warranty.

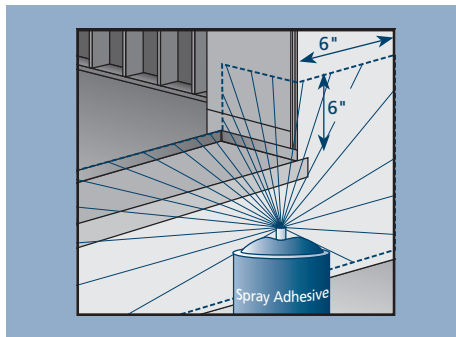
1. Trim building wrap flush with the rough opening.
2. At the head, cut building wrap at 45° and tape up as shown.
3. Trim the sides of the building wrap sufficiently to allow the nailing fin to be mounted against the sheathing.



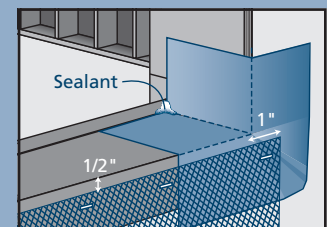
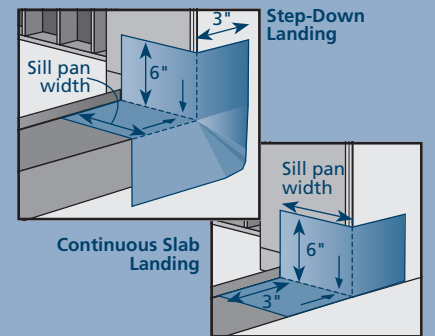
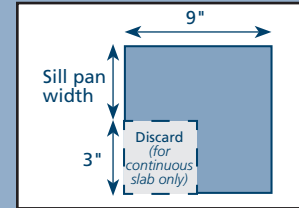
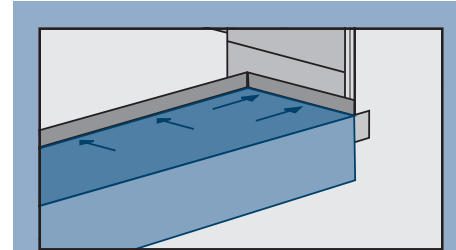
INSTALL JOBSITE FABRICATED SILL PAN

Note! The rest of the steps in this section only apply to a job site fabricated sill pan. If installing a sill pan that you have purchased, follow manufacturer's instructions for installation and skip to section 7, "INSTALL PATIO DOOR."

1. If installing a metal sill pan on concrete, cut a piece of self-adhered flashing the length of the sill pan and adhere it to the entire bottom surface where the pan will sit on the concrete.
2. If fasteners are required through the sill, apply spray adhesive/primer to the sill pan and surrounding area. Follow spray adhesive manufacturers' instructions for application methods.



3. Cut a piece of self-adhered flashing the length of the sill and apply over the entire sill pan. For step down landings, fold flashing down as shown. For continuous slabs, trim flush with rough opening.
4. Cut two pieces of self-adhered flashing 9" 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.
5. Smooth gaps or bubbles beneath self-adhered flashing with a J-roller (remove and replace if necessary).
6. Seal back corners of sill pan with sealant.
7. For step-down landings only, cut plastic drain screen to length of sill + 2", center, and staple 1/2" below sill edge.



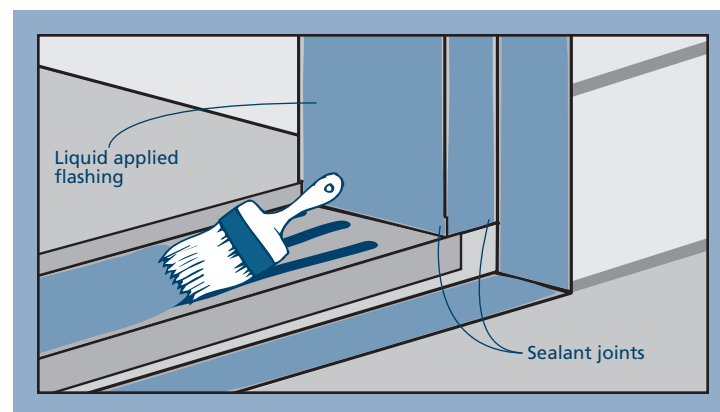
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PREPARE BUCK

Note! This section applies to installations into a buck only. For installations into a stud-framed wall, begin with section 4, "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 (apply over sill pan if installing a job site fabricated sill pan) with liquid applied flashing per manufacture's instructions as shown.

END of Buck Instructions, SKIP to section 7, "INSTALL PATIO DOOR."

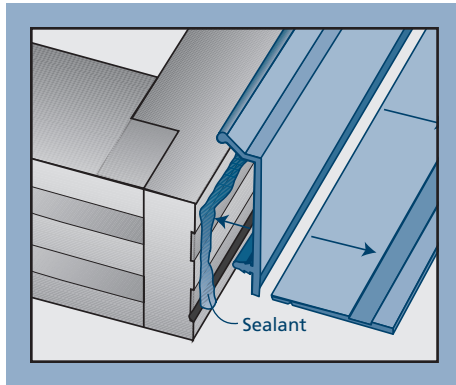


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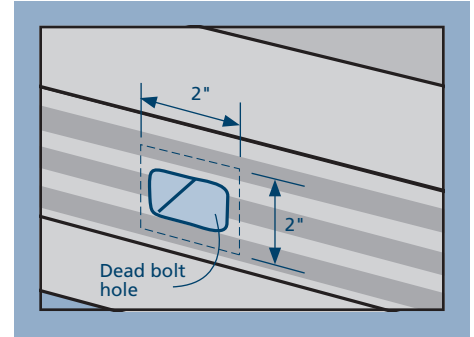
PREPARE PATIO DOOR

APPLY DRIP CAP

1. With the exterior face up, apply a 1/4" bead of silicone across the header as shown.
2. Center the drip cap on the header and mechanically fasten with appropriately sized nails or screws. Be sure the fastener does not completely penetrate the frame header.



3. Inswing/outswing doors will need a strip of self-adhered flashing applied over the dead bolt hole on the exterior side of the frame as shown.

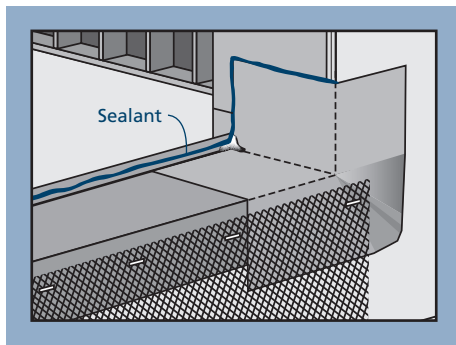


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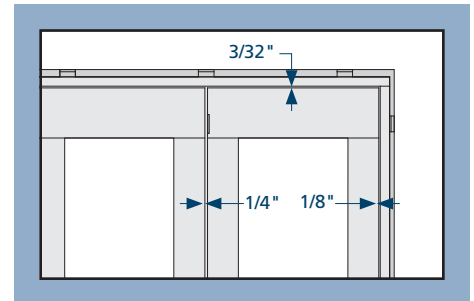
INSTALL PATIO DOOR

Warning! To avoid injury, use at least two people to install. Adequately support the door until fully installed.

1. Apply a 3/8" continuous bead of sealant across the sill pan back dam and over the flashing joints as shown.
2. Tilt patio door into the rough opening. Make sure the back of the door makes solid contact with the sealant. Tool the sealant until smooth. Add more sealant if necessary to create a continuous seal.



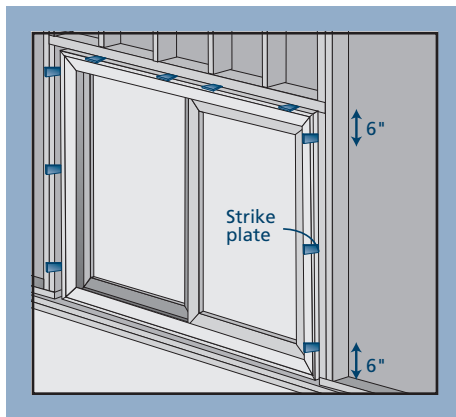
4. Inspect the patio door for square, level, and plumb. Test for proper operation (remove and reinstall if necessary).
5. For center hinge patio doors only, check for proper reveal (clearance) between the frame and panels at the side jambs and head as shown.



SHIM THE JAMBS

Note! Each location must be shimmed with two opposing shims. Secure all shims with sealant.

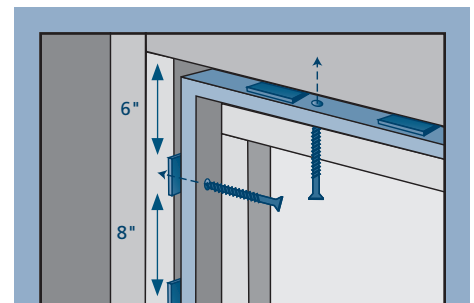
1. From the interior, shim the hinged side jamb at every hinge (swinging doors). Shim the latch jamb 6" from the corners and at the strike plate.
2. Shim all other jambs 6" from the corners and at center.
3. Shim the head jamb 6" from the corners of each panel and at the strike plate if present. Position shims so that strike plate screws will penetrate shims.



SECURE PATIO DOOR

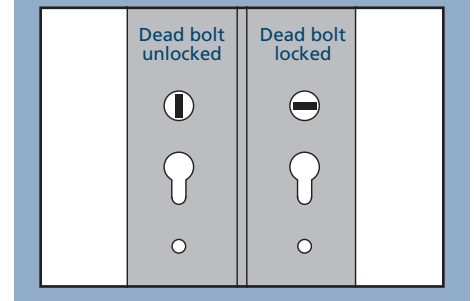
Note! Apply sealant to screw threads before installing. Countersink for wood putty or plug covers if desired. On the Custom Wood Inswing door the screws will have to be driven through the exterior door jamb on the stationary side.

1. Fasten patio door using #10 x 3" screws through the shims in the jambs and next to the shims in the head: 6" from the corners and 8" apart all the way around the patio door.
2. Secure each strike plate through the shims with #10 x 3" screws.



STEPS 3 and 4 are for swinging doors only.

3. Unlock the deadbolt with a small flathead screwdriver and open doors.
4. Remove the spacer button from the bottom of the panels, or pine blocks from under aluminum sill.



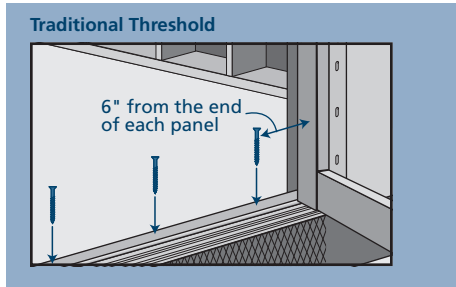
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INSTALL PATIO DOOR - CONTINUED

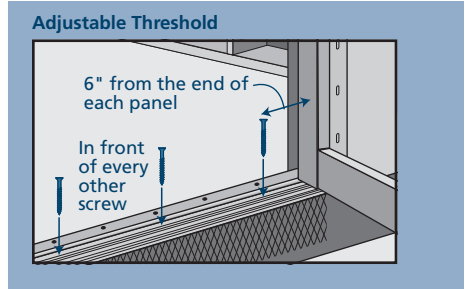
STRUCTURALLY SECURE SILL (SWINGING DOORS ONLY)

Note! Apply sealant to the threads of all screws, and, after installation, cover the tops of all screws with sealant. Use previously removed screws (if present) for wood subfloors or use 3/16" x 2-1/2" self-tapping concrete screws for concrete.

1. For traditional thresholds, secure the threshold 6" from each end of each panel. For adjustable thresholds, also place screws through the aluminum sill in front of every other adjustable threshold screw.



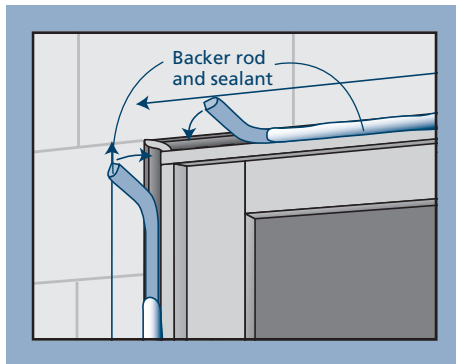
2. For outswing patio doors, replace the screws on the sill keeper with the #8 x 2-1/4" pan head screws provided.
3. Fill any holes in the sill with sealant.



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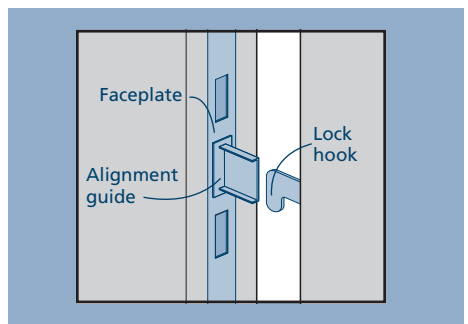
COMPLETE INSTALLATION

1. On the exterior, apply backer rod and sealant between the frame head/ side jambs and the rough opening.
2. Release the building wrap from above the header (previously taped up) and overlap the drip cap. Seal the ends with self-adhered flashing or building wrap tape.
3. Ensure sealant on back dam of the sill pan fully seals to the inside face of the sill. Apply more sealant as necessary.
4. Install lockset hardware per supplied instructions.
5. Some French double door units may require installing lock bolts at the top and bottom of the inactive panel. Locate the center point of each lock bolt, drill 3/8" bolt holes and install keeper plates.



ADJUST LOCK

1. Loosen the lock hook screws in the side jamb so it can be moved up or down.
2. Insert the alignment guide into one of the openings in the faceplate.
3. Carefully close the panel and raise or lower the lock hook until it aligns with the slots in the faceplate. Tighten the screws.
4. To lock the door, rotate the thumb turn 90°.



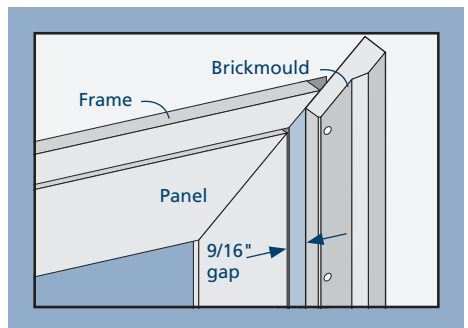
ADJUST SLIDING DOOR PANEL ROLLERS

Note! Adjust the panel high enough to avoid drag. Keep door panel parallel to the jamb by almost closing the door and looking for an even reveal/gap.

Remove both door roller adjustment plugs on the interior bottom of the operating panel. Using a flat head screwdriver, turn the screw counterclockwise to raise the panel or clockwise to lower it.

INSTALL EXTERIOR TRIM

For wood exterior doors not assembled with brickmold casing, attach the pre-cut brickmold 9/16" from the interior frame edge to the sides and head with 2 1/2" casing nails. Seal brickmold to frame with silicone sealant and tool into a fillet joint.



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COMPLETE INSTALLATION - CONTINUED

COMPLETE INSTALLATION

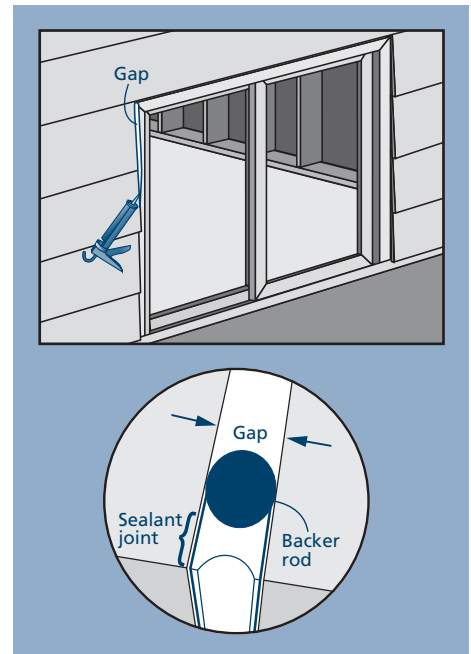
- On the exterior of step down landings, install support trim underneath the sill where it extends past the landing. Position trim snugly against the bottom of the sill toe.
- Adjust patio door for best operation.

CONTINUOUS AIR SEAL

Create a continuous air seal on the interior between the rough opening and the door frame with backer rod and sealant or low expansion foam. Allow the foam to fully cure and cut flush with a sharp knife. Make sure the foam cuts cleanly and doesn't tear.

AFTER INSTALLATION

- Install exterior wall (cladding) surface per manufactures' guidelines.
- Seal any gaps or openings at end of horizontal mull joints with sealant.
- Leave an expansion/contraction gap of approximately 3/8" between door frame and final exterior wall surface (siding, stucco, etc.). For a finished look and additional protection, seal this gap on the sides with backer rod and sealant. If sealant is applied above the drip cap ensure the sealant bead is discontinuous to allow for drainage.
- Protect recently installed units from damage from plaster, paint, etc. by covering the unit with plastic.
- Remove protective film (if applicable) on glass within one year and immediately from cladding.
- Finish all exposed wood surfaces immediately following installation.



Please visit jeld-wen.com for warranty and care and maintenance information.

Thank you for choosing

