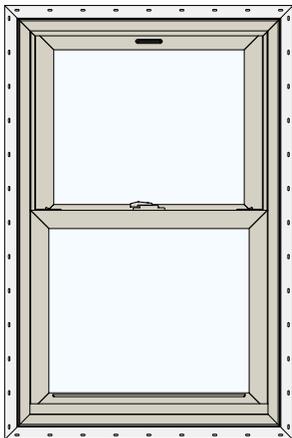


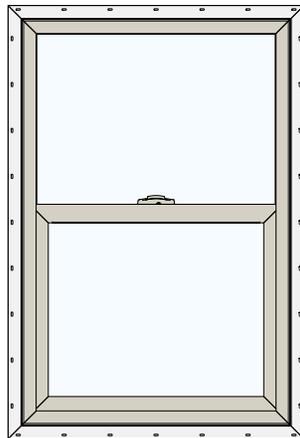


Thank you for selecting JELD-WEN products. Attached are JELD-WEN's recommended installation instructions for Vinyl windows with an integral nail fin. Not all window types may be installed into every wall condition in all areas. Consult your local building code official for applicable building codes and regulations. Local building code requirements supersede recommended installation instructions. JELD-WEN does not endorse the installation of our products into a barrier-type install system unless a sill pan is present, incorporated with through-wall flashing and can drain to the exterior (along with other "required" components). Failure to do so may result in the denial of any warranty claims. 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.

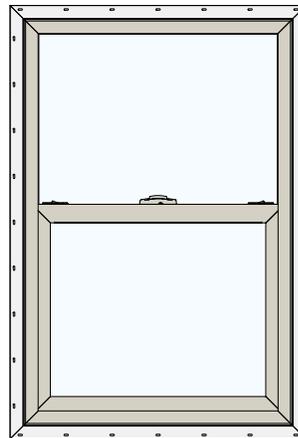
Double Hung



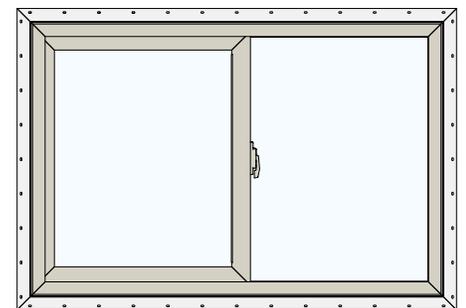
Single Hung (Side Load)



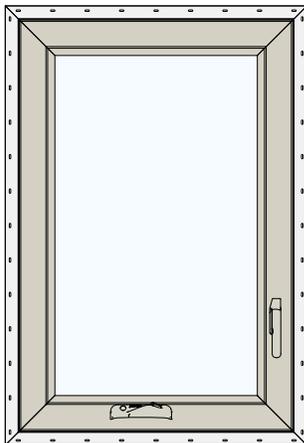
Single Hung (Tilt)



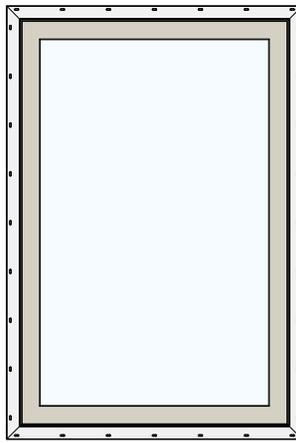
Horizontal Slider



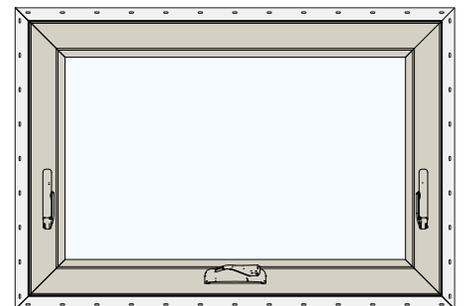
Casement



Picture



Awning



IMPORTANT INFORMATION | TABLE OF CONTENTS | GLOSSARY

JELD-WEN does not endorse the installation of our products into a barrier-type install system unless a sill pan is present, incorporated with through-wall flashing and can drain to the exterior (along with other “required” components). Failure to do so may result in the denial of any warranty claims

PLEASE NOTE: Installations where the sill is higher than 35 feet above ground level, or any product installation into a wall condition not specifically addressed in these instructions, must be designed by an architect or structural engineer. Failure to install windows into a square, level, and plumb openings 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 product warranty as part of the terms of the sale.

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NOTICE

JELD-WEN advises against product installation in high interior water exposure environments such as showers, steam rooms and enclosed pool areas. These areas are beyond the tested/certified design intent of the window and any related warranty claims could be denied on that basis.

Glossary

Buck

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

Mull Joint

The joint where two or more window units are structurally joined together.

Mulled Unit

Two or more window units structurally joined together.

Self-Adhered Flashing

An adhesive-backed tape material used to waterproof the rough opening and/or used to seal a window to the building’s weather barrier.

Weep Hole (weep channel)

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

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 the 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 can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information, go to www.P65Warnings.ca.gov/wood.

Window Handling

- Make sure operable windows are locked prior to installation.
- Heed material manufacturers’ handling and application instructions.
- Handle in a vertical position; **DO NOT** carry flat or drag on the floor.
- **DO NOT** put stress on joints, corners or frames.
- Store window in a vertical, leaning position to allow air circulation; **DO NOT** stack horizontally.
- Ensure the storage area is dry, well-ventilated and **protected from exposure to direct sunlight.**
- Only install into vertical walls when conditions and sheathing are dry.

IF INJURY OCCURS, IMMEDIATELY SEEK MEDICAL ATTENTION!

MATERIALS AND TOOLS

JELD-WEN exterior window and door products should be installed in accordance with JELD-WEN's recommended installation instructions, which are printed on the product label or can be found on our website: www.jeld-wen.com. **NOTE:** 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 with the substrates in the application.

Needed Materials

- #8 pan-head/ washer-head (or larger diameter head), corrosion-resistant screw **OR** 1 3/4" galvanized roofing nails. Minimum embedment of 1 1/4" into the structural framing (or as required by local code).
- For Wind Zone 3 (WZ3) Products (Tilt Single Hung, Side Load Single Hung, Tilt Double Hung and Horizontal Slider Windows): #8 x 2 1/2" flat-head screws (**stainless steel required**) are needed to go through and anchor the bracket to the rough framing (two screws per bracket).

- Sill pan: A pan flashing system (as defined in **ASTM E2112**) is **required** at the sill prior to window/door product installation. A sill pan should have a positive slope, **must be** installed onto the sill of the R.O. in a weather-tight manner and tied into the drainage plane of the building envelope. For sill pans without a positive slope, place a 3/16"-1/4" tall plastic shim 2" from each corner and no more than 8" on-center in between (excludes Canada and potentially large door systems). If an aftermarket sill pan is preferred, then we suggest the Manufacturer's instructions be followed.
- Sealant: An exterior grade (**High-Performing, Low VOC**) sealant is recommended for installation practices. Check with sealant manufacturers for color-match options and paintability.
- Polyurethane Low-Expansion Window and Door Foam: A low-expansion, polyurethane window and door foam is recommended for installation practices. Avoid using moderate to high-expansion foam products as operational issues or damage may occur.
- Backer Rod: 1/8" larger than the widest portion of the gap (used in conjunction with sealant bead for interior air seal).
- Non-compressible or non-water degradable shims.
- Drip cap (if not supplied).

Potential Needed Tools

- Utility knife/shears
- J-roller
- Hammer
- Tape measure
- Caulking gun
- Level (4' minimum recommended)
- Drill with bits
- Pry bar

1

INSPECT PRODUCT

Remove Packaging

- Remove shipping materials such as corner covers, shipping blocks, shrink wrap or pads. If there is a protective film on the glass, **DO NOT** remove it until installation and construction is complete.
- **DO NOT** remove the installation label until after the inspection of the job is complete.

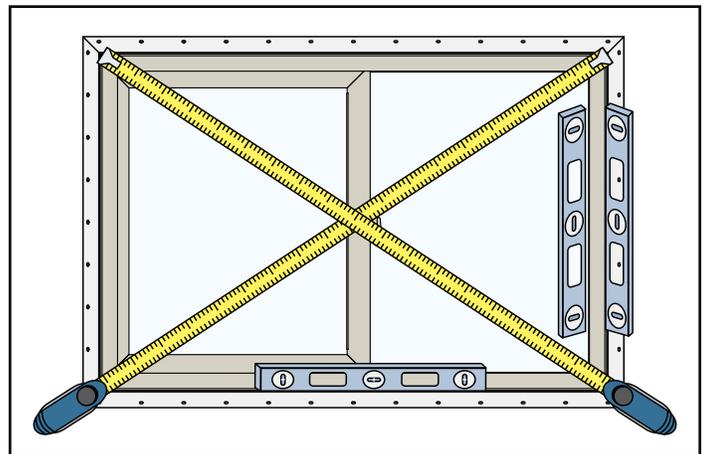
NOTICE

DO NOT open/close the sash until the window is installed and properly shimmed.

Inspect Window

- Cosmetic and/or shipping damage.
- Product squareness (diagonal measurements not more than 1/4" different).
- Correct product (size, color, grid pattern, handing, glazing, energy-efficiency requirements, etc.).
- Manufacturing abnormalities (e.g., warp, bow, squareness).
- Cracked frame welds or other frame damage.
- Splits, cracks, holes, missing sections or other damage to the nailing fin longer than 6" and/or within 1/2" of the window frame.
- For side-by-side mulled units, a drip cap that extends the length of the frame plus 1/8" overhang on each end is required.

If any of the above conditions represent a concern, or if you expect environmental conditions to exceed the window's performance rating, **DO NOT** install the window. Contact your dealer or distributor for recommendations.



2 INSPECT ROUGH OPENING (R.O.)

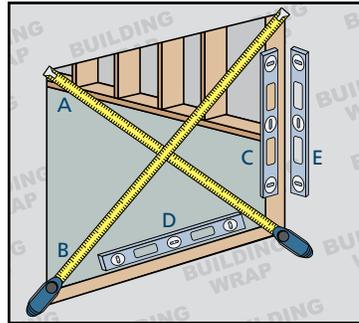
CAUTION

The use of a sill pan and other barriers will decrease the rough opening height clearance. Adjust the opening dimensions accordingly.

Rough Opening Requirements

- Verify the width and height of the rough opening is 1/2" larger than the window width and height. Openings for mullied units should be 3/4" larger than the window width and height.
- Verify the rough opening is square. The (A) and (B) measurements should be the same. Suggested deviation from square is no more than 1/4".
- Verify the rough opening is level and plumb (C, D and E). Suggested deviation is no more than 1/4".
- The rough opening sill should not be crowned or sagged (D), but rather level or sloped (positive slope) to the exterior.
- The exterior face of the rough opening should be in a single plane (E) with less than 1/8" twist from corner to corner.
- Minimum double studs (king and jack/trimmer) should be used to support the header at all rough openings.

Verify Square, Level and Plumb



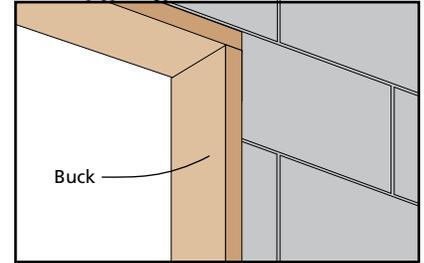
For Retrofit Installations

Verify the rough opening framing is structurally sound. Contact your local waste management entities for proper disposal or recycling of products being removed.

This installation guide only addresses masonry/block wall, sheathed wall, open-stud construction and exterior foam insulation. For exterior foam insulation construction, please reference the latest version of FMA/AAMA/WDMA 500 for additional install and framing details. If installing into an opening other than what is identified, consult a building professional.

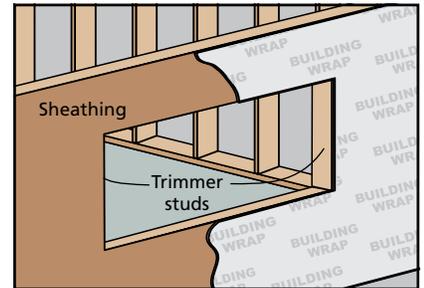
Masonry/Block Wall Construction

This installation assumes that a framework of studs (often called a buck) has already been properly fastened in a weatherproof manner to the concrete/masonry wall. The window will be mounted into the buck in a weatherproof manner.



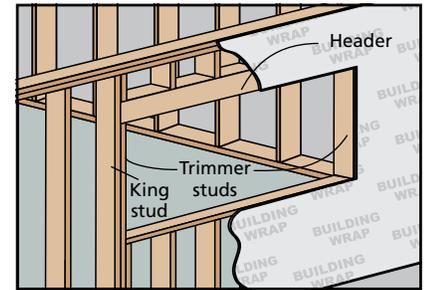
Fully Sheathed Wall Construction

Sheathing is applied to the exterior of the wall framing. The window will be mounted flush against the sheathing or building wrap in a weatherproof manner.



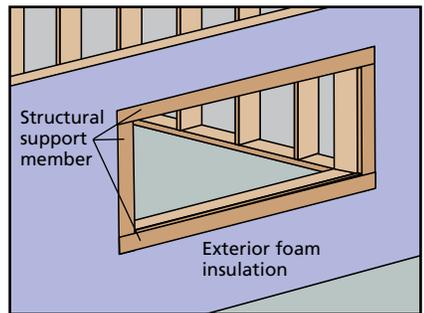
Open-Stud Construction

Sheathing is absent and building wrap is applied atop of the wall framing. The window will be mounted into the rough opening in a weatherproof manner.



Exterior Foam Insulation Construction

Exterior Foam insulation is applied to the exterior of the wall framing. The window will be mounted to a structural support member on the same plane as the exterior foam insulation in a weatherproof manner (reference the latest version of FMA/AAMA/WDMA 500 for additional install and framing details).

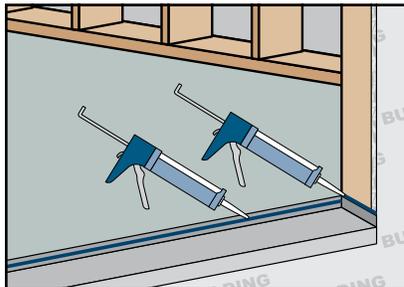
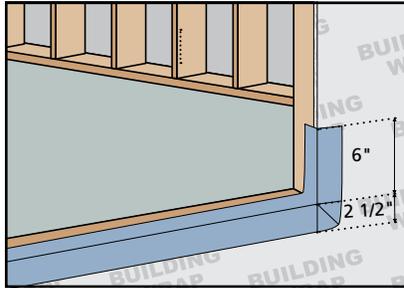


3

INSTALL SILL PAN FLASHING SYSTEM

Prepare Sill

1. A pan flashing system (as defined in **ASTM E2112**) is **required** at the sill prior to window/door product installation. Always allow water to drain out of the pan and onto the building wrap, drainage plane or to the exterior.
2. Apply a continuous bead of sealant to the interior of the upturned leg and end dams of the sill pan (if using a rigid sill pan).

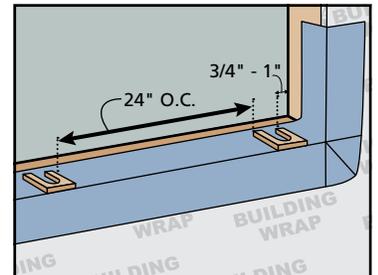


Shim the Sill

See **Product Installation Tolerance Table** for tolerances.

1. Unless installing into a sill pan with a positive sloped draining system, shims should be aligned as defined by the label on the window or as stated below:

- Shims (1/4" maximum) should be placed near the exterior edge of the sill pan.
- Place one shim 3/4" to 1" from each side of the rough opening (if the rough opening is sized correctly, this should be approximately 1/2" from the corner of the window).
- Shims should be no more than 24" on-center.
- For mullied units, ensure there is a shim located 1/2" on each side of the mull joint (see comments below).
- There should always be a drainage path to the exterior out of the sill pan.
- Shims can be held in place with sealant.
- Increased shim height may be needed or may interfere with bar/grill alignment of adjacent windows/doors.



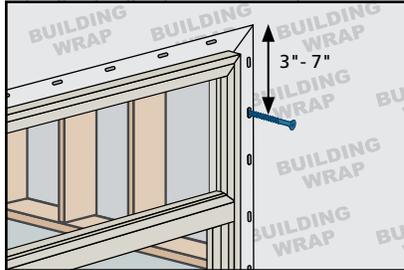
NOTE: For large (36" or wider), heavy or mullied units, shim at 8" on-center and no more than 2" from each corner to maintain proper sill alignment. This shimming schedule also pertains to regions where the ambient air temperature reaches or exceeds 95°F (35°C).

4 TEMPORARILY FASTEN AND SHIM PRODUCT

⚠ WARNING

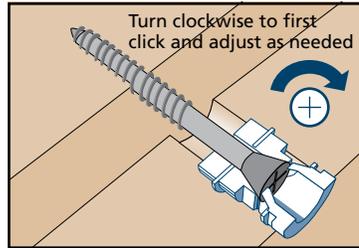
To avoid injury, use at least 2-people to install. Adequately support the window until completely fastened.

1. Run a continuous 3/8" bead of sealant around the interior side of the nail fin, on both side jambs and head. A **discontinuous** bead of sealant should be applied at the **bottom nail fin** to allow for drainage.
2. Place the window onto the shims and tilt into the rough opening. The shims must fully and evenly support the sill of the window. Adjust the shims as needed.
3. From the exterior, temporarily fasten the window through the nailing fin between 3" - 7" from one upper corner (Reference the **Fastener Spacing Table** for a complete fastening schedule).



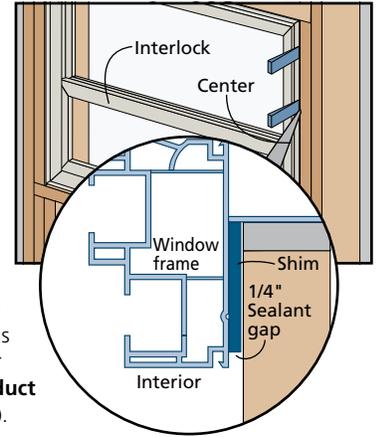
NOTE: On some double-hung operating units, jamb adjuster hardware is mounted in the middle installation holes to allow for some jamb adjustment. Install jamb adjuster screws until captured (first 'click'), the screw may then be screwed in or out to adjust the jamb as needed.

Jamb Adjuster



4. Shim at each interlock of hung windows or in the center for other style windows.

5. Shim within 4" - 6" of each corner on the side and head jambs. Add additional shims to the side and head jambs as necessary to ensure the window position within the opening is plumb, level, and square. **Larger windows will need additional shims.** Shims can be secured with sealant or adhesive (Reference the **Product Installation Tolerance Table**).



Product Installation Tolerance Table	
Products must be installed in a manner that Does Not exceed the tolerance below.	
Plumb	+/- 1/8"
Level	+/- 1/8"
Twist	+/- 1/8"
Square	+/- 1/8" product sized up to 20 sq. ft. +/- 1/4" product sized over 20 sq. ft.

6. Inspect window for level, square and twist. Test for proper operation (remove and reinstall if necessary). **NOTE:** Shims should be cut back 1/4" - 1/2" from the interior of the main window frame.

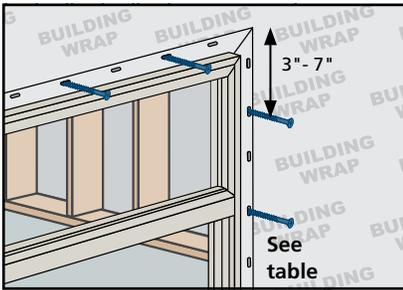
5 FASTEN PRODUCT (SIZE AND SPACING)

Common Window Fastening

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.

NOTICE

Embedment must be a minimum of 1 1/4" into the structural framing. Fastener (screw/nail) heads must be flush. Do not dent nailing fin. Use the table to find the correct product and fasten it as directed.

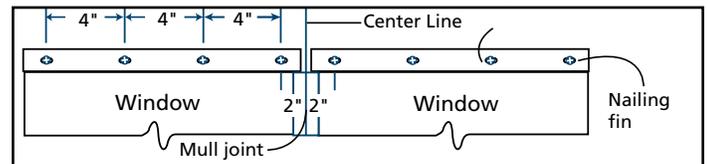


Fastener Spacing Table

Products are fastened according to performance grade. Performance Grade (PG) is located on the purchase paperwork or NAMI certification label fixed somewhere on the frame, generally on the head jamb. If this label is missing, use PG50 and above fastener pattern.

Fastener (screw/nail) Spacing Table	
PG20	Fasten window through the nailing fin holes 3" - 7" from the corners and 12" (max.) apart all the way around the window.
PG35 - PG50 (See exceptions below for Hung and Fixed windows)	Fasten window through the nailing fin holes 3" - 7" from the corners and 8" (max.) apart all the way around the window.
Fixed Windows - PG50 or above	Fasten window through each nailing fin hole (every 4") on the jambs and 8" (max.) apart along the head and sill.
Hung Windows - PG50 or above	Fasten window through the nailing fin holes 3" - 7" from the corners. Then, install fasteners 12" (max.) on-center on the jambs, with fasteners every 4" on both sides of the Interlock. Install fasteners 8" (max.) apart along the head and sill.
Continuous Head and Sill (with mull post) - PG35	From the center line of the mull post, place a fastener at 2" and another at 4". Repeat on both sides and at each end of the mull post.
Continuous Head and Sill (with mull post) - PG50	From the center line of the mull post, place a fastener at 2", 4" and another at 6". Repeat on both sides and at each end of the mull post.
Mull Joints	From the center line of the mull post, place a fastener at 2", 4", 8" and another at 12". Repeat on both sides and at each end of the mull post.

Mull Example

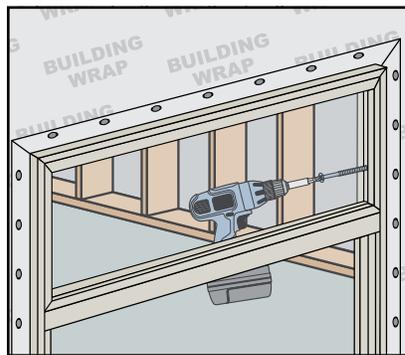
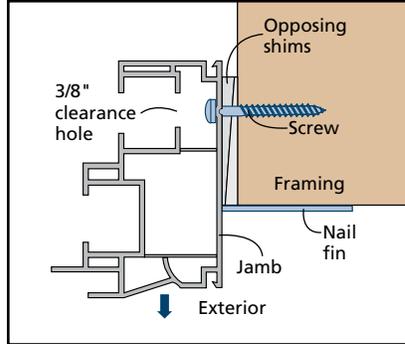


5 FASTEN PRODUCT (SIZE AND SPACING) (CONTINUED)

Special Fastening Requirements For PG50 OR ABOVE Tilt Hung Windows Only

1. From the interior, just above the interlock (where the two sash meet), align with shims and drill a 3/8" clearance hole through **ONLY** the first wall of the interior jamb (as shown). This will allow the screw head to pass through.
2. Drive one #8 screw through the jamb and shim. Ensure to achieve a minimum of 1 1/4" embedment into the structural framing. Repeat for the opposite side.

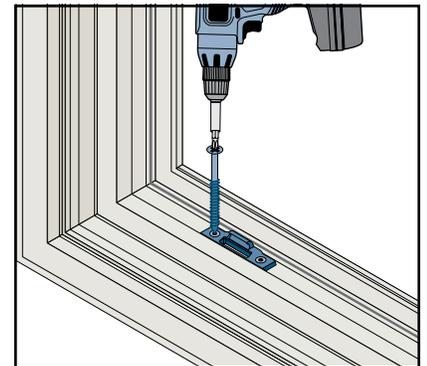
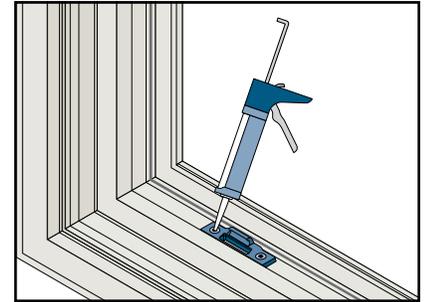
Double-Hung Jamb Cutaway from Top



Special Fastening Requirements For WZ3-IMPACT Tilt Single Hung, Tilt Double Hung and Horizontal Slider Windows Only

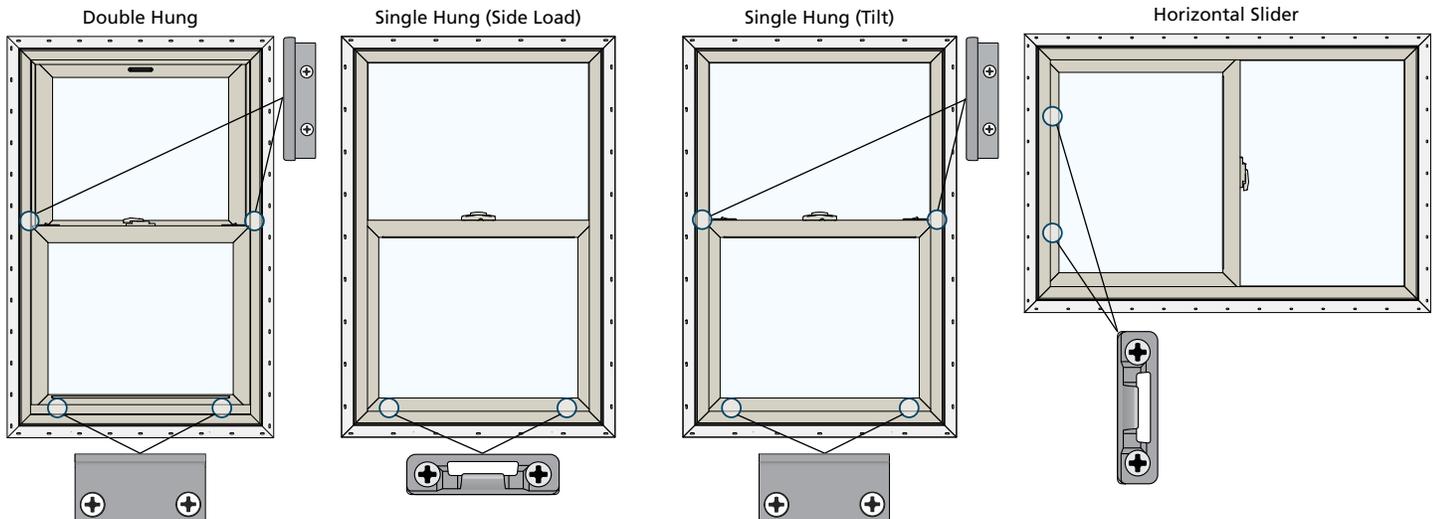
Additional brackets are applied to the Wind Zone 3 (WZ3) products listed below. The factory screws must be backed out of the bracket and replaced with a #8 x 2 1/2" (minimum) **stainless steel (required)** screw.

1. Double-check that the windows are installed level, square and without twist.
2. Operate the window to verify bracket location is correct and has no clearance issues. If a clearance issue is identified adjust brackets as necessary for proper operation.
3. Remove one screw from the bracket attached to the frame. Apply enough sealant to the bracket hole to cover the existing screw hole and so there will be adequate squeeze out around the head of the screw to be applied next.
4. Place a shim between the window frame and rough opening, in-line with the bracket. Align the shim, so the screw goes through the bracket and holds the shim in place.
5. Apply sealant to the treads of a #8 x 2 1/2" (minimum) **stainless steel (required)** screw and apply it to the bracket hole. Tighten until snug and squeeze out is observed around the screw head. Wipe off any excess sealant and repeat for the other screw.
6. Repeat for any remaining bracket holes and any remaining brackets.



CAUTION

Fasteners through the sill will breach the sill pan flashing. Following the sealant application steps outlined below is imperative.



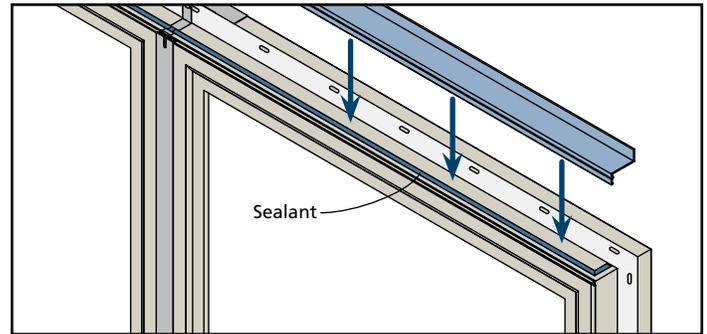
6

INSTALL DRIP CAP

NOTE: A drip cap is *required* for all vertically mulled units and *recommended* for all products.

1. Apply a continuous bead of sealant to the top of the window frame. See drawing.
2. Position the drip cap on top of the window frame and seat into position with the aid of a wooden block and hammer or non-marring mallet.

NOTE: Barb maybe trimmed back 1/4" on each end to better assist in seating the drip cap into the accessory groove.



7

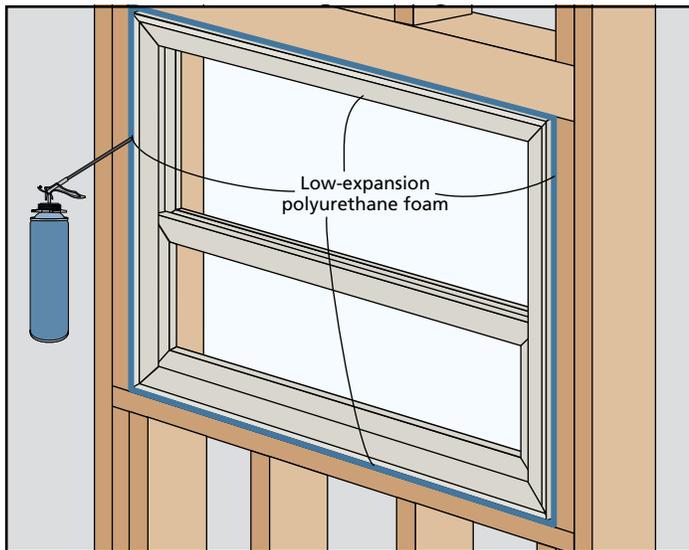
CREATE "INTERIOR" AIR SEAL

Continuous "Interior" Air Seal

NOTE: Shims may need to be cut back, so the interior air seal is "**continuous**" between the window frame and the rough opening.

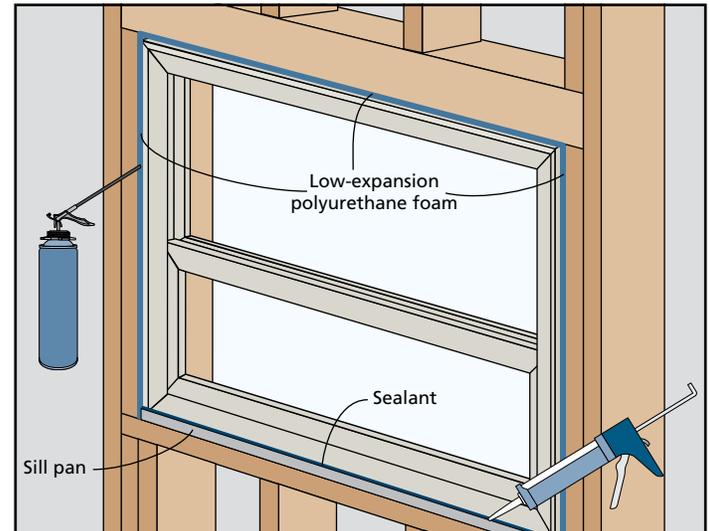
Create a **required** continuous air seal on the interior by integrating the rough opening and the window frame with low-expansion polyurethane foam or backer rod and sealant. **NOTE:** If foam is used, a 1/2" – 1" depth is prescribed. Backer rod can be used to control the depth.

Self-Adhered Flashing Sill Pan



If using a rigid sill pan, apply a bead of sealant to the upturned leg of the sill pan and the window frame.

Rigid Sill Pan

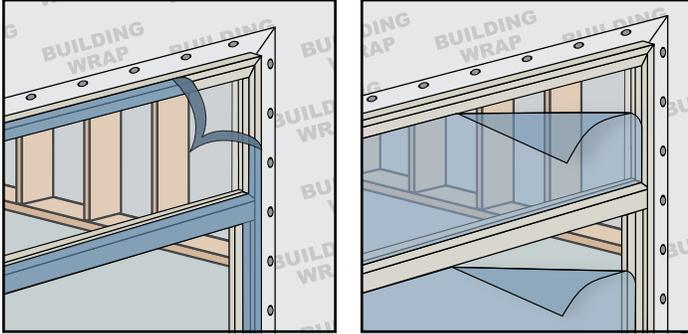


8

REMOVE PROTECTIVE FILM

NOTICE

If applicable, remove any protective film immediately from all surfaces of the frame/sash and within six months from any glass.



After Installation

- Ensure weep holes/channels are clear of debris for proper water drainage. Do not seal weep holes/channels.
- Leave an expansion/contraction gap of approximately 3/8" between the window frame and final exterior wall surface (siding, stucco, etc.).
- Protect recently installed units from damage from plaster, paint, etc.

⚠ WARNING

DO NOT operate the casement sash in the extended position for long periods of time or leave unattended in the fully open position, as potential damage may occur from environmental factors (i.e., unexpected strong wind gusts).

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

Thank you for choosing

JELD-WEN