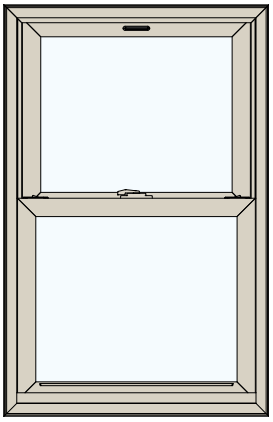
Installation Instructions

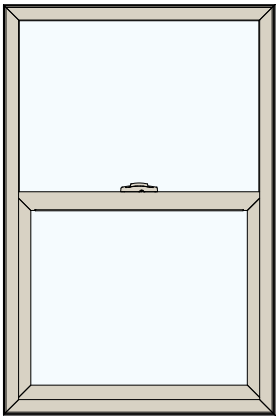
for Vinyl Windows without Nailing Fin (JII011)

Thank you for selecting JELD-WEN products. Attached are JELD-WEN's recommended installation instructions for vinyl windows without an integral nail fin (including finless, flush fin and flange). 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. 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.

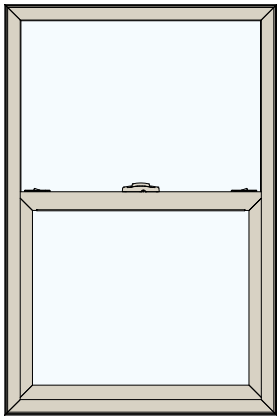
Double Hung



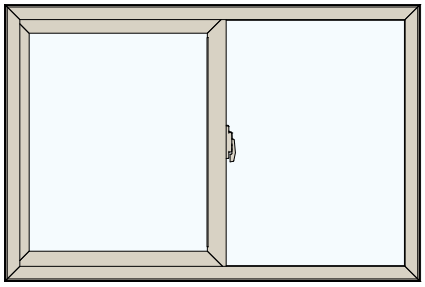
Single Hung (Side Load)



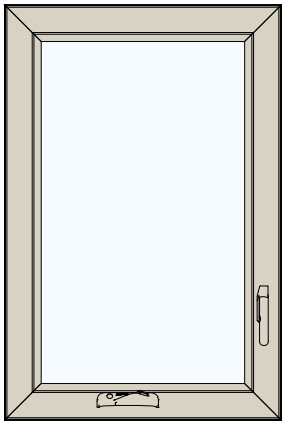
Single Hung (Tilt)



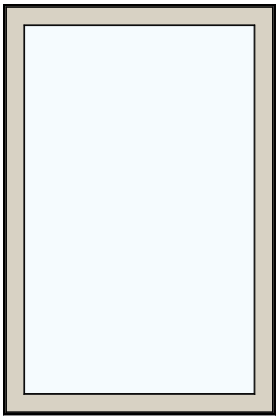
Horizontal Slider



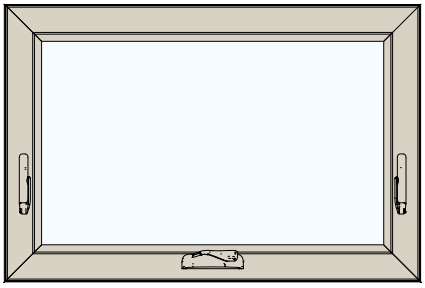
Casement



Picture



Awning



IMPORTANT INFORMATION | TABLE OF CONTENTS | GLOSSARY

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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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.

Finless Window
A window without a nailing fin commonly referred to as finless, replacement, block frame, box frame or pocket.

Flush Fin Window
A window without a nailing fin that has a face flange (trim only). Flush fin windows may also be known as flange, stucco flange or Florida flange windows.

Head Expander
A vinyl accessory used to cover the head of the window in some retrofit applications.

Installation Clip
A vinyl accessory that snaps into the accessory groove of some fixed windows used to secure the window to the rough opening.

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

Sill Adapter
A replacement frame component attached to the sill of a finless window being installed into an existing window frame with a sloped sill. The component cancels out the sloped sill of the existing double-hung, helping to support the front edge of the window sill.

Stop
The trim pieces on the frame that retains the sashes.

Weep Hole (weep channel)
The visible exit or entry part of a water drainage system used to direct and 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 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

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: 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 with the substrates in the application.

- #8 pan-head or washer head, corrosion resistant screw. Minimum embedment of 1 1/4" into the structural framing (or as required by local code).
- For securing the sill in masonry applications, 3/16" self-tapping concrete screws (gasket head optional or as required by local code). Minimum embedment of 1 1/4" into the structural framing (or as required by code). Apply sealant to the self-tapping concrete screw threads and head of the screw.
- 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 recommended) are needed to go through and anchor the bracket to the rough framing (two screws per bracket).
- Sealant: We recommend OSI® QUAD® Max Sealant or equivalent (for interior air seal). This sealant 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 (for interior air seal).
- 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).

Additional Materials Needed if Installing into an Existing Window Frame:

- Composite or solid wood (cedar or redwood recommended) or exterior grade plywood for shimming.
- If installing into an existing aluminum window, dimensions should be 1/2" shorter than the length of the sill track and 1/4" taller than the depth of the track.
- If installing into an existing wood window, dimensions should be 1/4" thick, length of the existing frame sill minus 1" and the width of the new vinyl window side jamb minus 1/4".

Potential Needed Tools

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

1 INSPECT PRODUCT

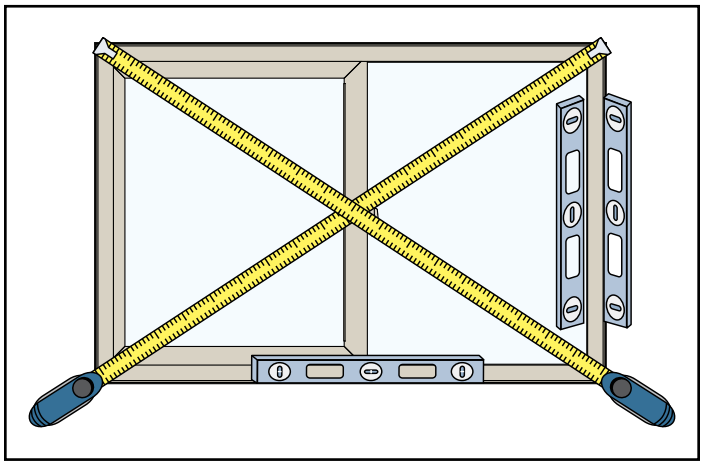
Remove Packaging

- 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 are complete.
- Do not remove the installation label until after the inspection of the job is complete.

Inspect Window

- Cosmetic damage.
- Product squareness (diagonal measurements not more than 1/4" different).
- Correct product (size, color, grid pattern, handing, glazing, energy-efficiency requirements, etc.).
- Cracked frame welds or other frame damage.
- 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.

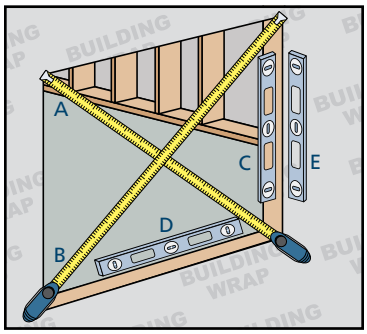
If any of the above conditions represent a concern, or if you expect environmental conditions to exceed the window's performance rating, do not install the window. Contact your dealer or distributor for recommendations.



2 INSPECT ROUGH OPENING (R.O.)

- Verify the width and height of the rough opening is 1/2"- 5/8" larger than the window width and height. Openings for mulled 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 from square is no more than 1/8".
- 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.

Verify Square, Level and Plumb



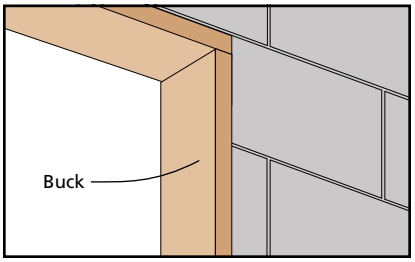
For Retrofit Installations

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 existing window frame. If installing into an opening other than what is identified, consult a building professional.

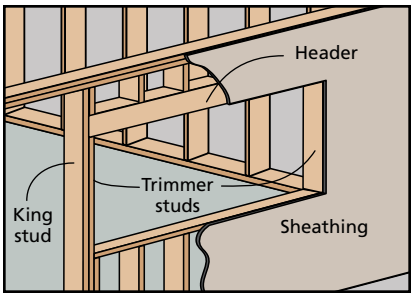
Masonry/Block Wall Construction

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.



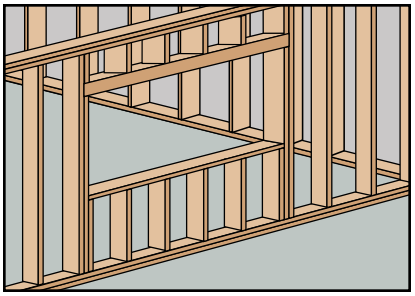
Fully Sheathed Wall Construction

Sheathing is applied to the exterior of the wall framing. The window will be mounted into the rough opening in a weatherproof manner.



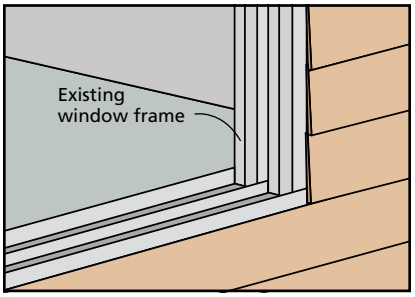
Open-Stud Construction

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.



Existing Window Frame Installation

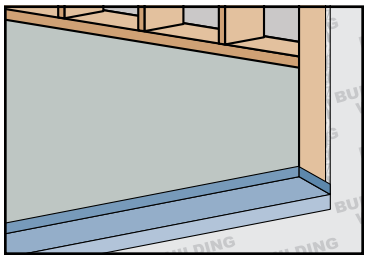
The existing window frame is left in place and the window will be installed into the frame in a weatherproof manner.

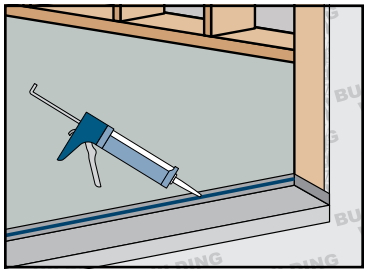


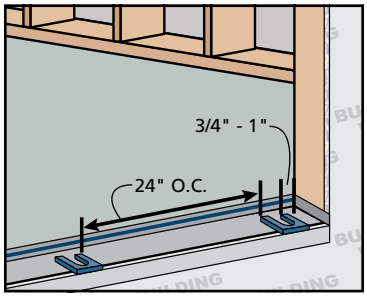
3 INSTALL SILL PAN

Prepare/Shim the Sill

1. Install a sill pan in a weatherproof manner on the rough sill (refer to **ASTM 2112** for types of sill pans). 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 of the sill pan (if using a rigid sill pan).
3. Place shims on the rough sill as needed to level the window and prevent sagging or bowing. Shims should be aligned in the following fashion:
   - Near the exterior edge of the sill.
   - 1 shim placed 3/4" to 1" in from each side wall of the rough opening.
   - No more than 24 inches on center between additional shims.
   - For mulled units ensure there is a shim located 1/2" either side of the mull joint.





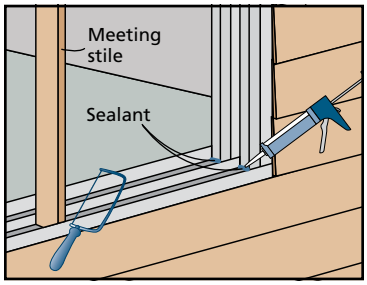


- Shims may be temporary held in place with sealant.
- Steps may not pertain to existing aluminum frames or sloped sill.

NOTE: For large, heavy or mulled 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).

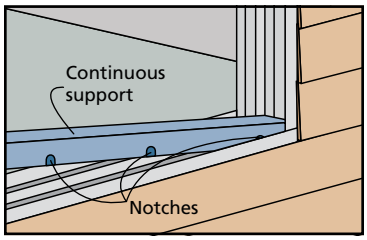
Prepare Existing Window Frame:

1. Remove the sashes and/or glass in the existing window.
2. Remove all hardware and window components not a part of the frame (meeting stile, jamb liners, locking mechanisms or other hardware etc.).



If Installing into an Aluminum Window Frame:

1. Seal all four corners of the window frame as shown.
2. Notch grooves across the bottom of the continuous support (see materials list) to allow for water drainage through the weep holes. Set the continuous support into the exterior sill track, creating a level surface at the sill.



4 TEMPORARILY FASTEN AND SHIM PRODUCT

WARNING! To avoid injury, use at least two people to install. Adequately support the window until completely fastened.

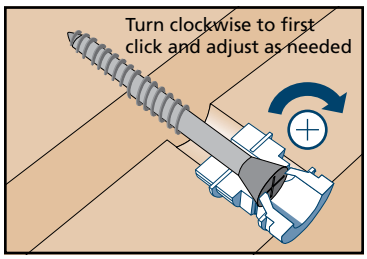
Installation Clips: If installation clips are to be used, reference **Section 5** for proper clip application prior to setting the window.

Existing Window Frame: If installing into an existing window frame with a sloped sill, reference **Section 5** for proper stop-in application prior to setting the window.

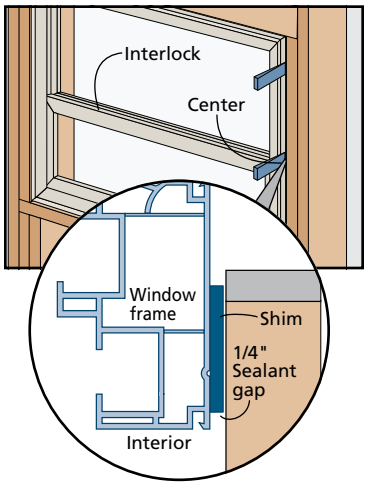
Through Frame Fastening: If installing by placing fasteners through the main window frame begin by shimming the product in place using the steps below.

- Place shims 4"- 6" from each corner on the side and head jambs. Evaluate the window position with the opening for plumb, level, square and twist.
- Place the shims at the interlock of hung windows or in the center for all other windows. **NOTE:** Some hung windows have a "jamb jack" along each side. Engage the #8 x 2" flat head screw until the first click is heard and then adjust the side jamb as needed, prior to adding shims.

Jamb Adjuster



- Add additional shims as necessary to ensure proper alignment of the window frame. Larger windows usually need additional shims. Shims can be secured with sealant or adhesive. **NOTE:** Shims should be cut back 1/4" - 1/2" from the interior face of the main window frame.



5 FASTEN PRODUCT (SIZE AND SPACING)

Window Install and Fastening

Vinyl windows without a nailing fin can be installed in a variety of ways. These instructions address the installation into a framed opening, existing non-sloped window frame and existing sloped sill (pocket) window frame. Each of these methods is described below as well as some general considerations.

General Installation Considerations

- **Stud Framed Opening:** These instructions address securing the window by (A.) Through frame fastening or (B.) Installation clips.
- **Existing Non-Sloped Sill Window Frame:** This is considered to be a non-pocketing installation method. These instructions address securing the window by (A.) Through frame fastening
- **Existing Sloped Sill Window Frame:** This is considered to be a pocketing installation method. The window will typically come with additional components (i.e. sill adapter). These instructions address securing the window (A.) Through frame fastening or (B.) Stop-in method.

General Fastening Considerations

- **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.**
- A #8 corrosion resistant pan head screw is recommended.
- Fasteners must be long enough to embed into the structural framing by a minimum of 1 1/4".
- Fastener heads should be mounted flush against the outer wall of the window frame and/or installation clip.
- Shims should be located at each fastener location to prevent deflection of the frame.
- Removing certain components before pre-drilling installation holes and/or installing the window frame (e.g., track filler, sash, etc.) may be beneficial.
- Fastener spacing is based on the product performance grade (PG), refer to **"Fastener Location Table"** for proper spacing.

Fastener Location Table

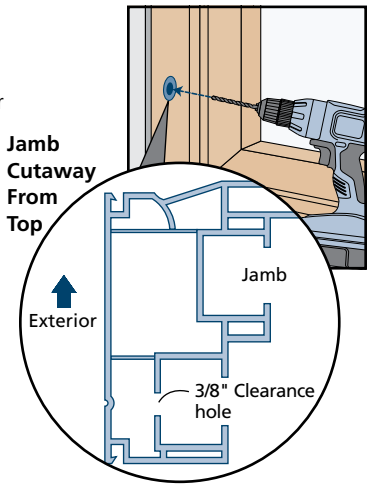
Products are fastened according to performance grade (some holes may be pre-drilled). Performance Grade (PG) is located on the purchase paperwork or gold AAMA label fixed somewhere on the frame, generally in the head jamb. Look for something like this example: R-*PG20*-122X76 (48X30)-HS. If this label is missing, use the PG50 and above fastener pattern.

PG20	3" – 6" from the corners and every 24" on-center.
PG35	3" – 6" from the corners and every 18" on-center.
PG50 and above	3" – 6" from the corners and every 12" on-center.
PG50 or above Fixed	Fasten window through each nailing fin hole (every 4") on the jambs and 8" apart along the head and sill.
Mull Joints	From the middle of the mull joint, apply a fastener at 2" and at 4". Repeat for the opposite side of the mull joint.

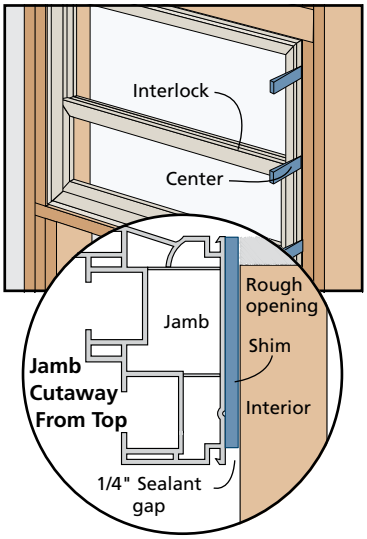
5 FASTEN PRODUCT (SIZE AND SPACING) *CONTINUED*

A.) FASTENER THROUGH FRAME:

1. Use a pencil to mark the fastener locations on the window frame as defined in the **"Fastener Location Table"**.
2. At each fastener location drill a 3/8" clearance hole through the first wall of the frame only. DO NOT drill through the outer wall of the window frame.

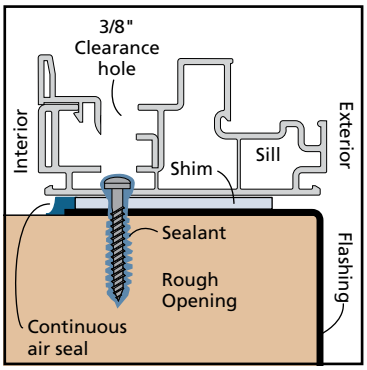


3. Once all the fastener holes have been identified, secure one of the upper frame corners by placing a fastener through the frame. **A shim is required at each fastener location to prevent frame deflection. NOTE: Shims should be cut back 1/4" - 1/2" from the interior face of the main window frame.**
4. Inspect the window for square, level, plumb and twist (shim and adjust as needed).



5. Repeat the steps above for each remaining pre-drilled fastener hole. **NOTE: If installing fasteners in the sill, apply sealant to the screw threads and the head of the screw in the window frame (use more sealant as necessary to completely seal the screw head to the frame).**
6. Insert dust plugs into fastener clearance holes not located in any operation track(s).Replace any removed components (e.g. track filler, sash, etc.).

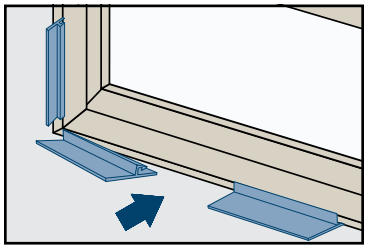
Fasten Window



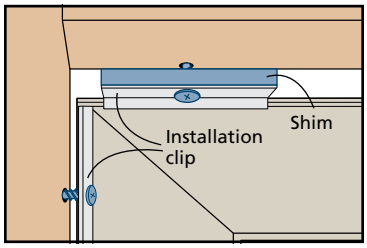
7. For products with a rating of PG 50 or WZ3-Impact refer to **"Special Fasting Requirements"**.
8. Once the window is secured proceed to **Section 6** – Install Drip Cap.

B.) INSTALLATION CLIP:

1. If clips have not already been applied, use a pencil or tape to mark fastener locations on the window frame as defined in the **"Fastener Location Table"**.
2. Snap Installation clips into the "interior" accessory groove at each predetermined fastener location. **NOTE:** Clips cannot be used on windows with applied jamb extension or along the bottom if a rigid sill pan is utilized. In such cases through frame fastening is recommended.



3. Secure one of the upper frame corners by placing a fastener through the install clip. Drive screws until the screw head is flush with clip. **A shim is required behind each clip to prevent deflection.**



4. Inspect the window for square, level, plumb and twist (shim and adjust as needed).
5. Repeat the steps above for each installation clip.
6. For products with a rating of PG 50 refer to **"Special Fasting Requirements"**. Install clips are not meant to be used on WZ3-Impact product.
7. Once the window is secured proceed to **Section 6** – Install Drip Cap.

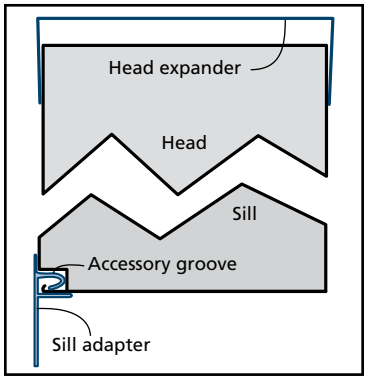
C.) STOP-IN METHOD

NOTE: This method is typically used in a "pocket" style installation where a vinyl window is set into an existing window frame that has a sloped sill. The existing opening should be sound and weather tight prior to installing the vinyl window.

Exclusions: This install method excludes windows with pre-applied extension jambs and impact units.

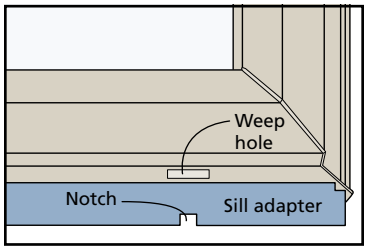
1. Make sure the sloped sill adapter has been installed onto the window.

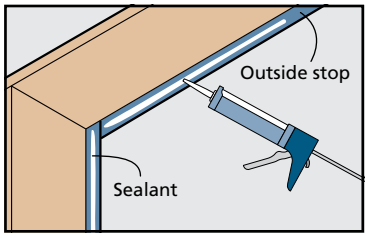
Window Frame and Accessories Shown from the Side



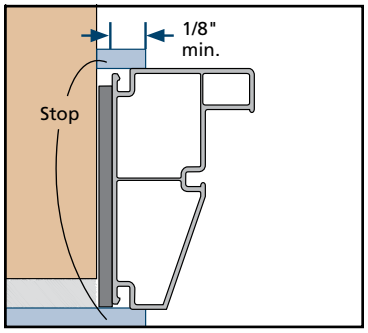
5 FASTEN PRODUCT (SIZE AND SPACING) *CONTINUED*

2. The opening should be prepped so that only the exterior stops are in place. Make sure stops are of an adequate size so they will overlap the exterior face of the frame by a minimum of 1/8" on both sides and the head. **NOTE:** If a stop is present along the bottom make sure this will not block drainage from the weep holes or from under the sloped sill adapter.





3. Apply sealant to the interior face of the side and head stops.
4. Set the window into the opening so the exterior face of the frame makes full contact with the sealant and stops.
5. Along each side apply a shim 4"- 6" from each corner and in the middle of the window frame (shims should be cut 1/4" - 1/2" back from the interior face of the window frame). **NOTE:** Some hung windows have a "jamb jack" along each side. Engage the #8 x 2" flat head screws until the first click is heard and then adjust the jamb jack as needed **prior to** adding shims.
6. Apply additional shims to the side and head jambs as necessary to ensure window position within the opening is plumb, level, square and without twist. Larger windows usually need additional shims. Shims can be secured with sealant or adhesive.
7. Apply head expander if needed. Insulating material may be placed atop of the window frame prior
8. Create a continuous interior air seal by applying lower expansion polyurethane foam or backer rod and sealant between the newly installed window frame and existing opening. The depth of the air seal should be approximately 1/2".
9. Apply interior and secure stops to all four sides of the opening. Stops should overlap the interior face of the frame by a minimum of 1/8".



10. Refer to **Section 7** – After Installation for relevant information.

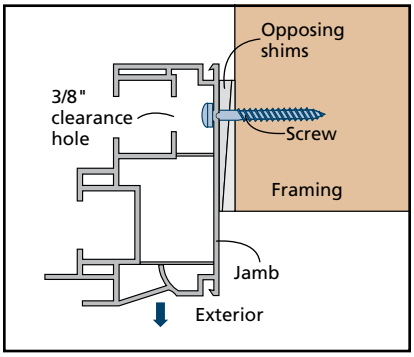
5 FASTEN PRODUCT (SIZE AND SPACING) *CONTINUED*

Special Fastening Requirements

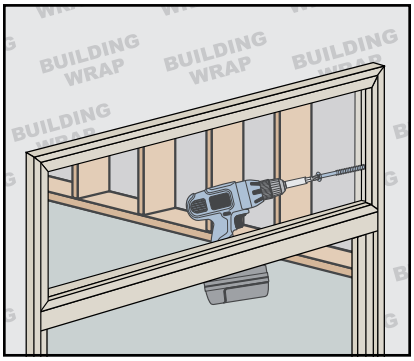
For PG50 OR ABOVE Tilt Hung Windows ONLY

1. From the interior, just above the interlock (where the sashes meet at center), 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.

Double-Hung Jamb Cutaway from Top



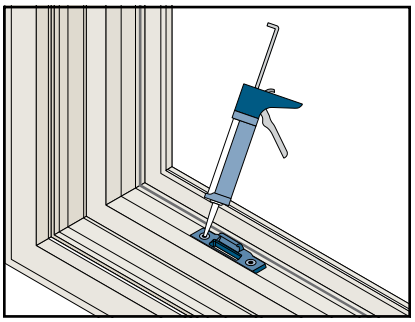
2. Drive one #8 pan/ washer head screw through the jamb and shim. Repeat for opposite side. Ensure to achieve a minimum of 1 1/4" embedment into the structural framing.



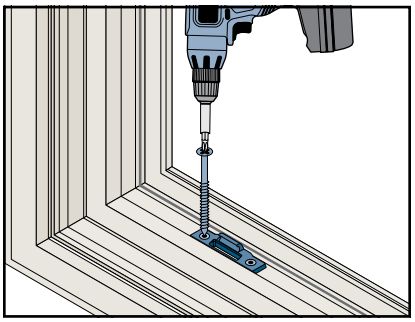
For WZ3-IMPACT Tilt Single Hung, Tilt Double Hung and Horizontal Slider Windows ONLY

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" flat head screw (stainless steel recommended).

1. Double check that the windows are installed level, square and without twist.
2. Operate the window to verify bracket location is correct and there is no clearance issue. If a clearance issue is identified, adjust brackets as necessary for proper operation.
3. Remove one of the factory applied screws. 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 fastener to be applied next.

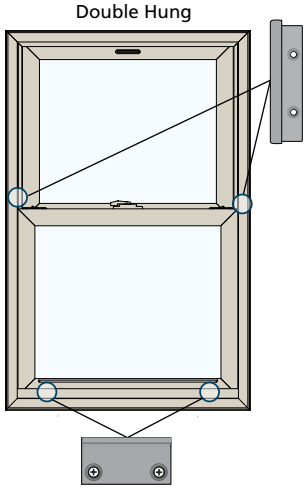


4. Place shim between the window frame and rough opening, in-line with the bracket. Align the shim so that the fasteners go through the bracket and hold the shim in place.
5. Apply a #8 x 2 1/2" screw through the bracket hole. Tighten until snug and squeeze out is observed around the screw head. Wipe off excess sealant and repeat for the other screw.

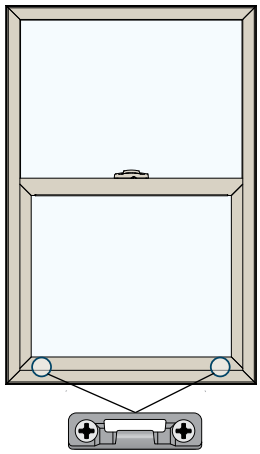


6. Repeat for any remaining brackets.

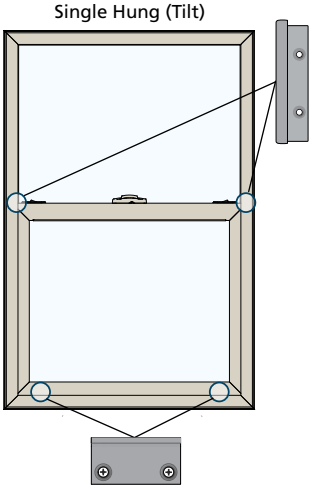
Double Hung



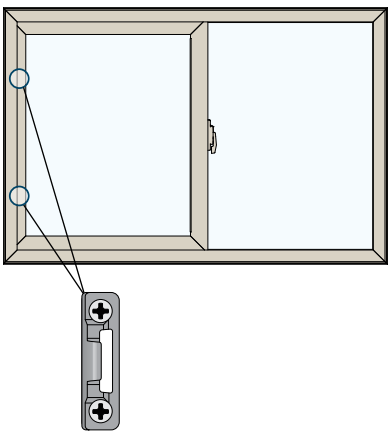
Single Hung (Side Load)



Single Hung (Tilt)



Horizontal Slider

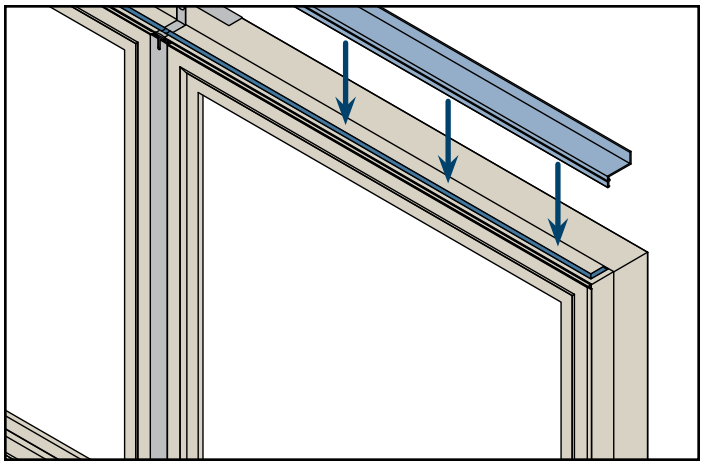


6 INSTALL DRIP CAP

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.

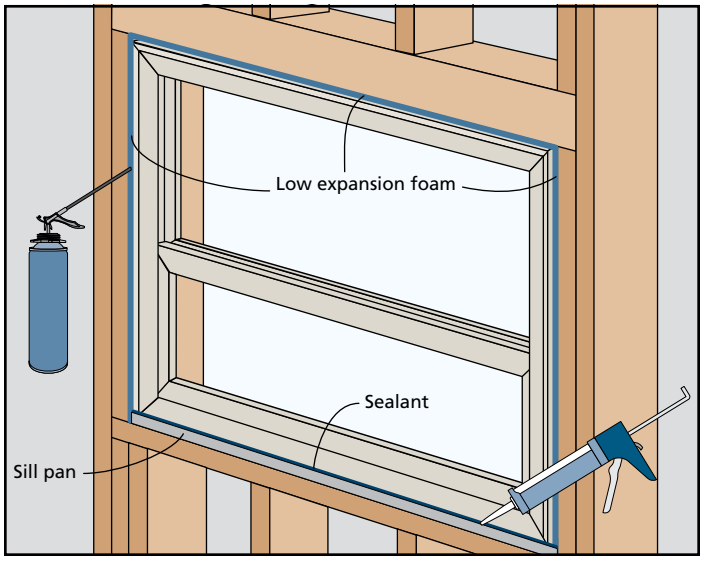


7 CREATE "INTERIOR" AIR SEAL

Continuous 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 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. If needed, apply additional sealant between the sill pan or rough sill and the window frame.



After Installation

- **Ensure weep holes/channels are clear of debris for proper water drainage. Do not seal weep holes/channels.**
- Install exterior wall surface per manufacturer's guidelines.
- Leave an expansion/contraction gap of approximately 3/8" between the window 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.

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

Thank you for choosing