



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. 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 house, which can draw water through very small openings. Our installation method integrates the window with the weather barrier of the structure (typically building wrap).

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 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

- 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.
- Precast Sill**
A pre-formed concrete block placed in the sill of a masonry/block wall to support a window.
- 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.
- Shiplap**
The layering method in which each layer overlaps the layer below it so that water runs down the outside.
- Weep Hole (weep channel)**
The visible exit or entry part of a water drainage system used to drain water out of a window.

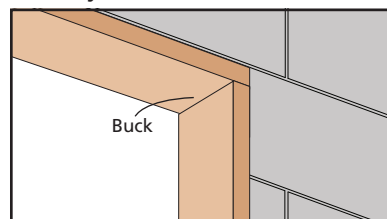
ROUGH OPENINGS

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 studs (often called a buck) has already been properly fastened and sealed to the concrete/masonry wall by a building professional.

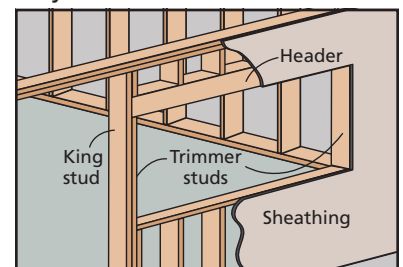
Masonry/Block Wall Construction



Fully Sheathed Wall Construction

The wall framing is covered by sheathing. Windows will be mounted flush against the sheathing. This installation assumes building wrap is properly installed prior to installation.

Fully Sheathed Wall Construction



ROUGH OPENINGS CONTINUED

Open-Stud Construction

If self-adhered flashing is to be applied so that it is wider than the framing of the wall, it may be necessary to cover the wall with backing support sufficient to support the entire width of the flashing.

This backing support should be a non-water degradable, thin (max. 1/8" thick) sheet material such as lauan or plywood. Completely surround the rough opening with the backing support. Backing support must be applied before building wrap.

The window will be mounted with the nailing fin flush against the applied backing support.

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 Window Handling

- Make sure operable windows are locked 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 carry flat or drag on floor.
- Do not put stress on joints, corners or frames.
- Store window 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.

- 1 3/4" galvanized roofing nails or #8 x 1 1/4" pan head or washer head (stainless steel recommended) screws. Fasteners must penetrate at least 1" into framing (or as required by local code).
- For mulled and/or PG50 or above units: #8 x 1 1/4" pan head or washer head (stainless steel recommended) screws. Screws must penetrate at least 1" into framing (or as required by local code).
- For Wind Zone 3 (WZ3) Products (Tilt Single Hung, Tilt Double Hung and Horizontal Slider Windows): Four #8 x 2 1/2" flat head screws (stainless steel recommended) are needed to go through the bracket and anchor the bracket to the rough framing.

- 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.
- Non-compressible or non-water degradable shims.

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.
- For mulled units, a drip cap 1/8" longer than the frame width is required.

For installations into a buck:

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

Needed Tools

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

1 REMOVE PACKAGING AND INSPECT WINDOW

Remove Packaging

Remove shipping materials such as corner covers, shipping blocks or pads. If there is a protective film on the glass, do not remove it until installation and construction are 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.).

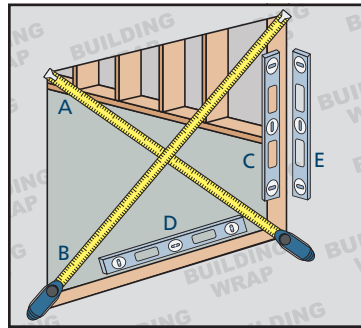
- Cracked frame welds or other frame damage.
- Splits, cracks, holes, missing sections or other damage to the nailing fin longer than 6" and/or within 1/2" of window frame.
- For side-by-side mulled units, a drip cap that extends the length of the frame plus 1/8" overhang on each end is required.

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

- Verify the width and height of the window are each 1/2" - 5/8" smaller than the rough opening width and height. Mulled units should be 3/4" narrower.
- Verify the rough opening is square. The (A) and (B) measurements should be the same. Maximum allowable deviation from square is 1/8" for windows 20 sq. ft. and smaller, and 1/4" for windows larger than 20 sq. ft.
- Verify the rough opening is level and plumb (C, D and E). The maximum allowable deviation is 1/16" for every 2' of rough opening (not to exceed 1/8").

Verify Square, Level and Plumb



- 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 (king and jack/trimmer) should be used to support the header at all rough openings.

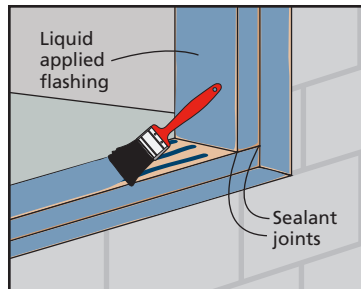
For Retrofit Installations

After removing the old window, remove sufficient cladding (siding, stucco etc.) to expose enough intact building wrap to properly seal the window to the opening. If damaged, apply new building wrap in shiplap 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 BUCK

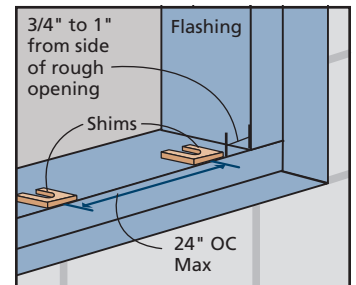
NOTE: This section applies to installations into a masonry wall only. For installations into a stud-framed wall, begin with section 4, "PREPARE STUD-FRAMED WALL."

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 with liquid applied flashing as shown.
3. If installing into a four-sided buck, seal the sill in a similar manner.



4. Place shims on the buck 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.
- One shim placed 3/4" to 1" in from each side wall of the buck.
- 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.



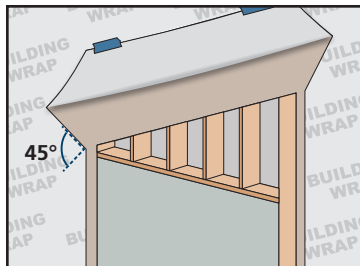
Shims may be temporary held in place with sealant. **SKIP to section 5, "INSTALL WINDOW."**

4 PREPARE STUD-FRAMED WALL

Prepare Building Wrap

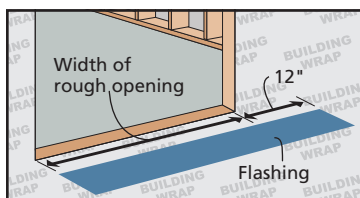
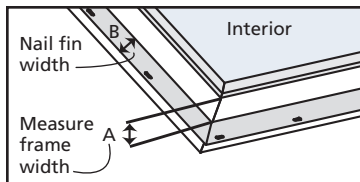
NOTE: Check with the building wrap manufacturer to verify the following steps will not void their product warranty.

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 sufficiently to allow the nailing fin to be mounted against the sheathing.

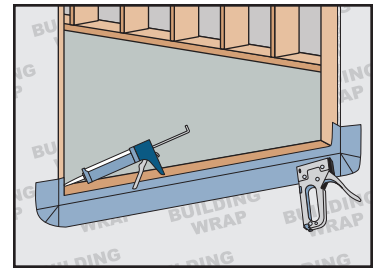


Prepare/Shim the Sill

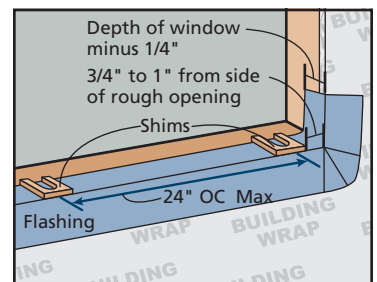
1. Use self-adhered flashing to waterproof the sill.
2. Flashing must have at least 2" of visible material below nail fin. Flashing width must be at least measurement **A** (Frame Width) + **B** (Nail fin Width) + 1 3/4".
3. Measure the width of the frame from the interior to the nail fin and subtract 1/4". Transfer this measurement from the outside edge of the rough opening sill and draw a line all along the rough opening sill. This is where the back of the flashing will sit.
4. Cut a piece of flashing the length of the sill plus 12".



5. Place flashing on rough opening sill, wrapping the flashing up 6" on each jamb as shown.
6. Pull release tape and set flashing into place.
7. Fold the flashing down onto the sheathing. Mechanically fasten if necessary.
8. Smooth out any bubbles or creases with a J-roller. Remove and replace if necessary.
9. 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.
- One shim placed 3/4" to 1" in from each side of the rough opening.
- No more than 24 inches on center between additional shims.
- For mullied units ensure there is a shim located 1/2" either side of the mull joint.

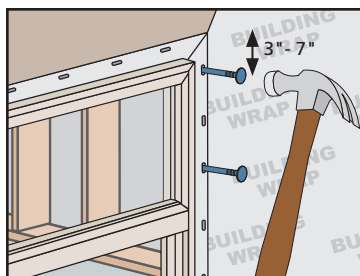
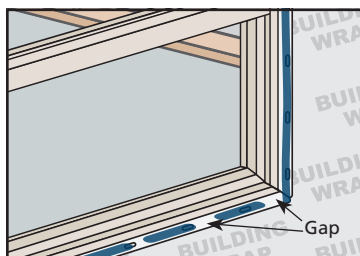


Shims may be temporarily held in place with sealant.

5 INSTALL WINDOW

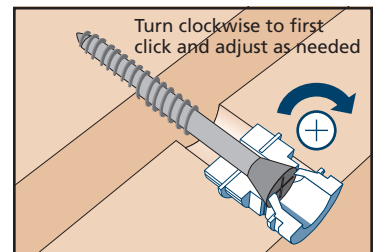
WARNING! To avoid injury, use at least two people to install. Adequately support the window until completely fastened.

1. Run a continuous 3/8" bead of sealant around the interior side of the nail fin on the side jambs and head. On the sill, leave at least a 2" gap every 8" where it will contact the rough opening.
2. Place window onto the shims and tilt into the rough opening.
3. Fasten window through the nailing fin between 3" - 7" from one upper corner.

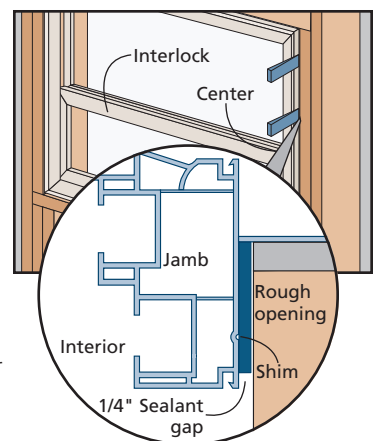


NOTE: On some double-hung operating units only, jamb adjuster hardware is mounted in the middle installation holes to allow for some jamb adjustment. Install jamb adjuster screws until captured (first 'click'), the screw may then be screwed in or out to adjust the jamb as needed.

Jamb Adjuster



4. Shim at each interlock, or in the center, and within 4" - 6" of each corner on the side and head jambs. Apply additional shims to the side and head jambs as necessary to ensure window position within the opening is plumb, level, and square. Larger windows usually need additional shims. Shims can be secured with sealant or adhesive.
5. Inspect window for square, level, and plumb. Test for proper operation (remove and reinstall if necessary).

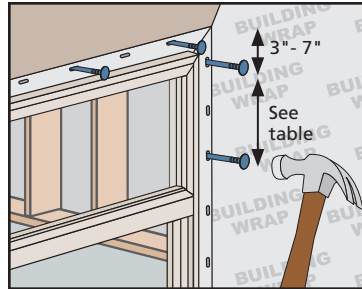


5 **INSTALL WINDOW CONTINUED**

Secure Window

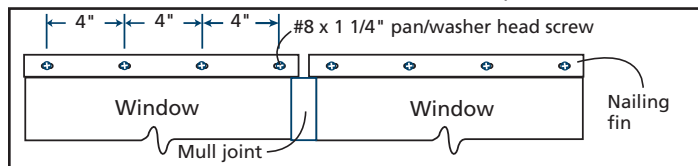
Areas such as Florida and the Texas TDI region have different anchoring requirements based on product certification. For information on specific products, visit www.floridabuilding.org or www.tdi.texas.gov and follow the anchoring schedule given in the drawings for the product instead of the anchoring schedule in this document.

NOTE: Fastener (anchor) heads must be flush. Do not dent nailing fin. Use the table below to find the correct product and fasten it as directed.



PG20 up to PG35	Fasten window through the nailing fin holes 3"-7" from the corners and 12" apart all the way around the window.
PG35 up to PG50 Awning, Casement, Fixed, Hung, Slider, PD	Fasten window through the nailing fin holes 3"-7" from the corners and 8" apart all the way around the window.
PG50 or above Awning, Casement, Slider, PD	Fasten window through the nailing fin holes 3"-7" from the corners and 8" apart all the way around the window.
PG50 or above Fixed	Fasten window through each nailing fin hole (every 4") on the jambs and 8" apart along the head and sill.
PG50 or above Hung	Fasten window through the nailing fin holes 3"-7" from the corners. Then, install fasteners 12" on center on the jambs, with fasteners every 4" on both sides of the Interlock. Install fasteners 8" apart along the head and sill.
Mull Joints	The first 12" beyond mull joints, on both sides, must be fastened through each nail fin hole.
Continuous Head and Sill PG35	The first 4" from center, on both sides, must be fastened every 2" .
Continuous Head and Sill above PG35	The first 6" from center, on both sides, must be fastened every 2" .

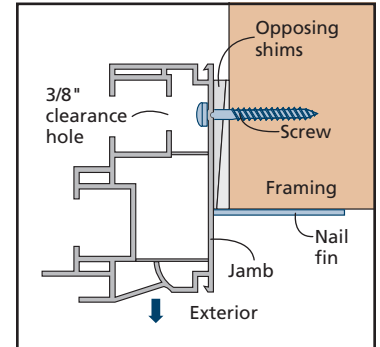
Mull Example



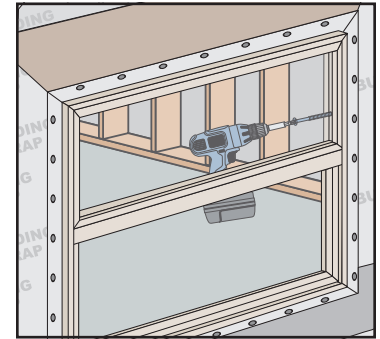
For PG50 OR ABOVE Tilt Hung Windows ONLY

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



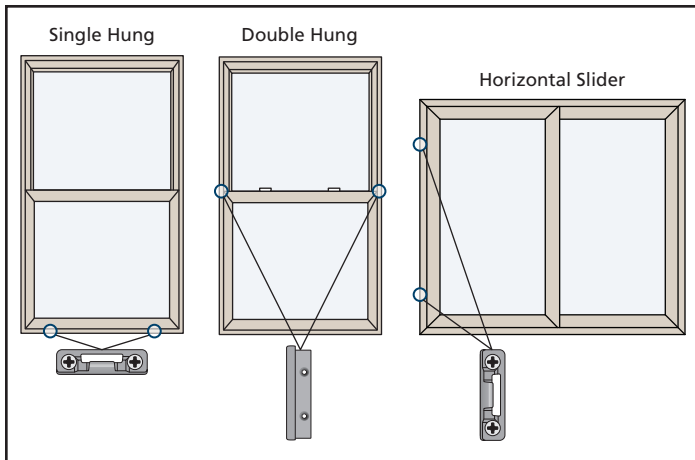
2. Drive one #8 x 1 1/4" pan/washer head screw through the jamb and shim. Repeat for opposite side.



5 **INSTALL WINDOW CONTINUED**

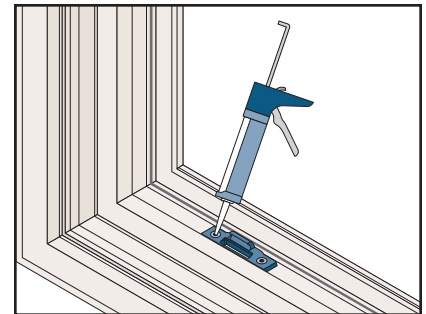
For WZ3-IMPACT Tilt Single Hung, Tilt Double Hung and Horizontal Slider Windows ONLY

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).



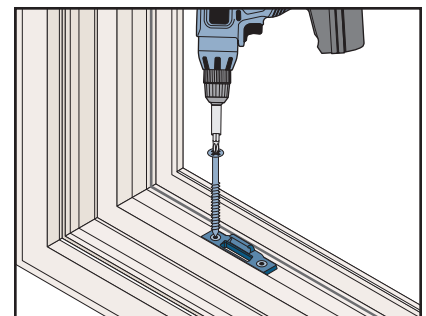
1. Double check that the windows are installed plumb, level and square.
2. Operate the window to verify bracket location is correct and there are no clearance issue. If a clearance issue is identified adjust brackets as necessary for proper operation.

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.

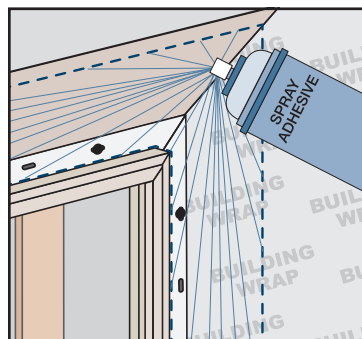
6 **FLASH WINDOW - WINDOWS INSTALLED INTO STUD-FRAMING ONLY**

Cut pieces of self-adhered flashing as follows:

Min. sizes or other specified	PG50 or below (4" flashing)	Above PG50 (6" flashing)
One header piece	10" longer than the header	14" longer than the header
Two side pieces	8" longer than the jamb	12" longer than the jamb

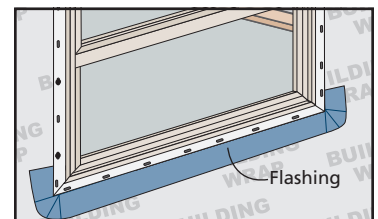
Spray Adhesive/Primer

Protect window from overspray and apply spray adhesive according to instructions on the product to nailing fin and building wrap around the window as shown.

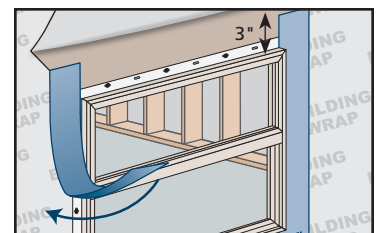


Apply the Self-Adhered Flashing

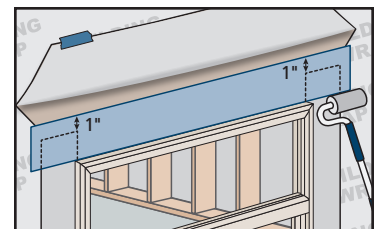
NOTE: Keep the edge of the self-adhered flashing as close to the window frame as possible and apply over the nail fin.



1. Apply the side pieces starting 3" above the header and overlap the flashing on the sill as shown.
2. Install drip cap if required. Pre-drill through the nailing fin if required.



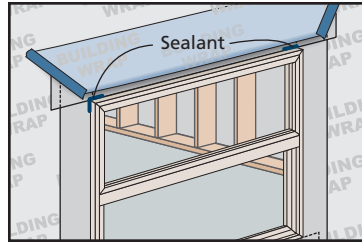
3. Center and apply the header piece above the header, overlapping the side pieces as shown.
4. Press the flashing down with a J-roller, being careful to remove any gaps or bubbles beneath self-adhered flashing (remove and replace if necessary).



7

COMPLETE INSTALLATION

1. Release the building wrap from above the header (previously taped up) and overlap the header flashing. Seal the ends with self-adhered flashing or building wrap tape.
2. Adjust window for best operation.
3. Seal the top corners of the window with a 1/4" bead of sealant. Tool into a fillet shape.



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 manufactures' guidelines.
- Leave an expansion/contraction gap of approximately 3/8" between 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. by covering the unit with plastic.

Continuous Air Seal

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.

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

Thank you for choosing

