



Thank you for selecting JELD-WEN products. Attached are JELD-WEN's recommended installation instructions for Aluminum 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 home, 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 AND 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.

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.

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.

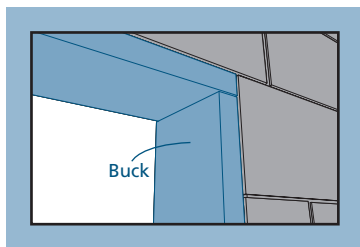
Estimated Install Time for New Construction	<input type="checkbox"/> First Time: 2 hrs	
	<input type="checkbox"/> Experienced: 1.5 hrs	
	<input type="checkbox"/> Professional: 1 hr	

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.



FULLY SHEATHED WALL CONSTRUCTION

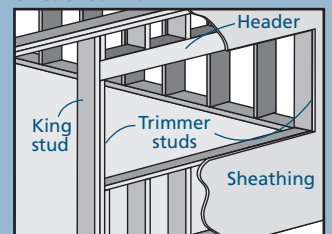
The wall framing is covered by sheathing. Windows will be mounted flush against the sheathing. This installation assumes building wrap is properly installed prior to installation.

OPEN-STUD CONSTRUCTION

If self-adhesive 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 vinyl sheathing. 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.

Sheathed Wall



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.

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! 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 mullied 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).
- Sealant: We recommend OSI® QUAD® Max Sealant or equivalent. This can be used in any exterior 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 water degradable shims.

For installations into a stud-framed wall:

- 4", 6", or 9" (as required by local code and window configuration) wide self-adhesive flashing: We recommend OSI® Butyl Flash Tape or equivalent.
- Spray adhesive/primer for self adhesive flashing. Such as Loctite® 300 or equivalent.
- For mullied units, a drip cap 1/8" longer than the frame width is required (if not supplied).

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

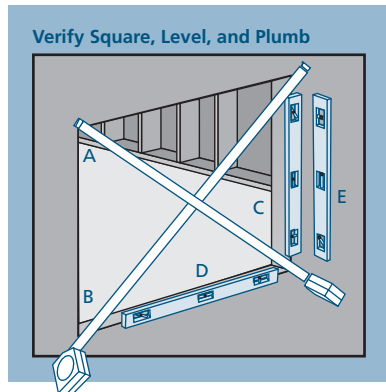
- Cosmetic damage
- Product squareness (diagonal measurements not more than 1/8" different)
- Correct product (size, color, grid pattern, handing, glazing, energy-efficiency requirements, etc.)

- Splits, cracks, holes, missing sections or other damage to the nail 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 above 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) and (D). The maximum allowable deviation is 1/16" for every 2' of rough opening (not to exceed 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.
- Verify the header is supported by trimmer studs.

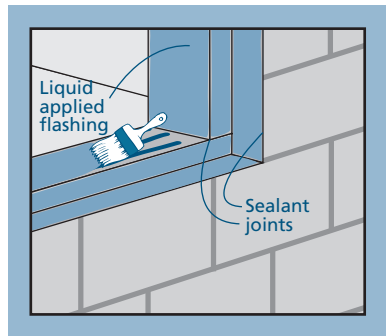
FOR RETROFIT INSTALLATIONS

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.

Note! Where the window will sit on the sill, shim to provide continuous support to the sill. This shimming must be 1/2" shorter than the width of the window frame, be 1/4" narrower than the depth of the window frame sill, should level the rough opening sill and be no more than 1/4" thick.

4. Align the shimming on the sill flush with the exterior and centered between the side jambs. If installing a mulled unit, leave gaps at the mull joint(s) so they don't sit on the shimming and tack into place or secure with sealant. **SKIP to section 5, "INSTALL WINDOW."**

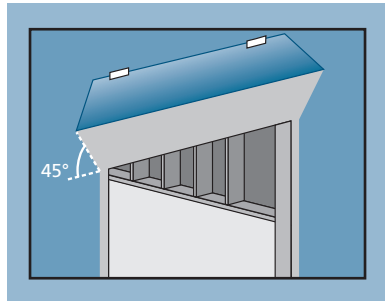
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PREPARE STUD-FRAMED WALL

PREPARE BUILDING WRAP

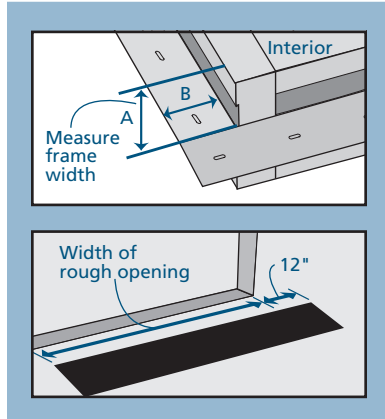
Note! Check with the building wrap manufacturer to verify the following steps will not void their product warranty.

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



PREPARE/SHIM THE SILL

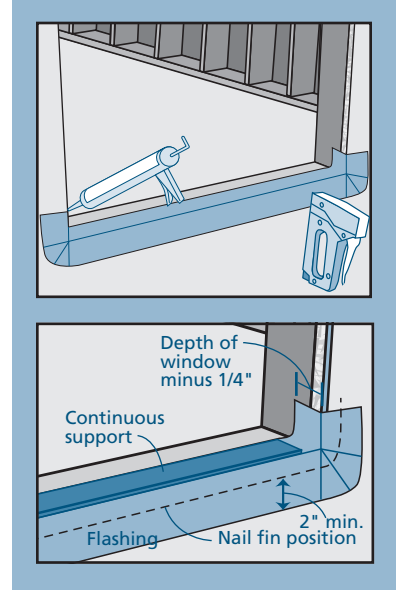
1. Use self adhesive flashing to waterproof the sill.
2. Flashing must have at least 2" of visible material below nail fin. Flashing width must be at least measurement $A + B + 1 \frac{3}{4}$ ".
3. Measure the width of the frame from the interior to the nail fin (measurement A) and subtract 1/4". Transfer 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. Install the shimming support as follows:

Note! Where the window will sit on the sill, shim to provide continuous support to the sill. This shimming must be 1/4" narrower than the depth of the window frame sill, should level the rough opening sill and be no more than 1/4" thick.

10. Align the shimming on the sill flush with the exterior and centered between the side jambs. If installing a mulled unit, leave gaps at the mull joint(s) so they don't sit on the shimming and tack into place or secure with sealant.

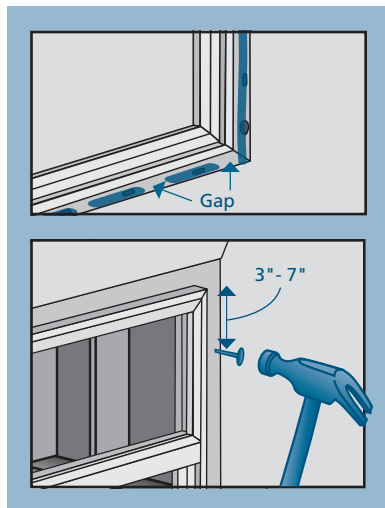


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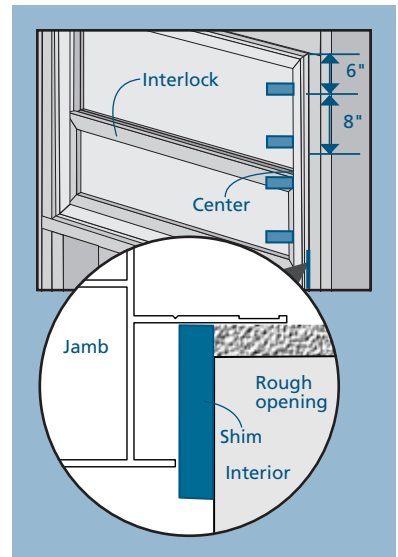
INSTALL WINDOW

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 shimming and tilt into the rough opening. The window sill must rest on and be fully supported by the shimming support.
3. Fasten window with a galvanized roofing nail through the nail fin between 3" - 7" from one upper corner.



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).

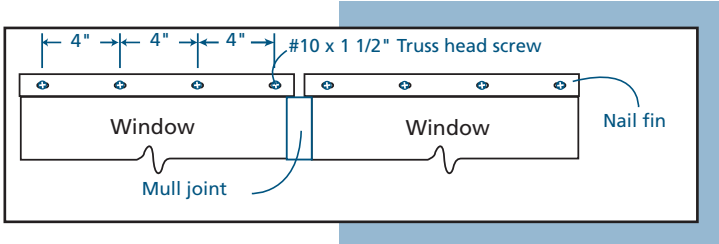


5 INSTALL WINDOW - CONTINUED

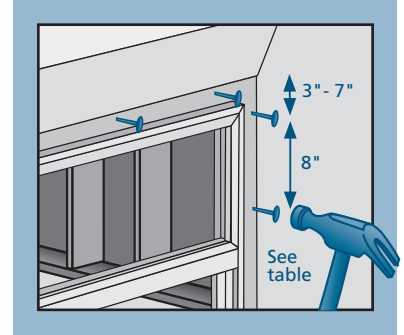
SECURE WINDOW

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.



- Fasten windows through the nail fin holes 3" - 7" from the corners and 8" apart all the way around the window.
- Remove the shims from the side jambs.



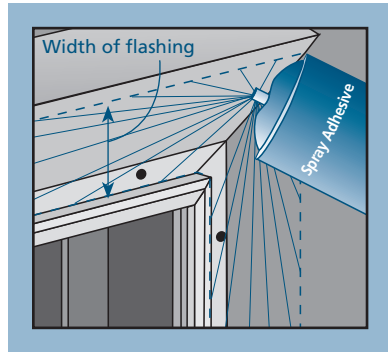
6 FLASH WINDOW - WINDOWS INSTALLED INTO STUD-FRAMING ONLY

Cut pieces of self-adhesive 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

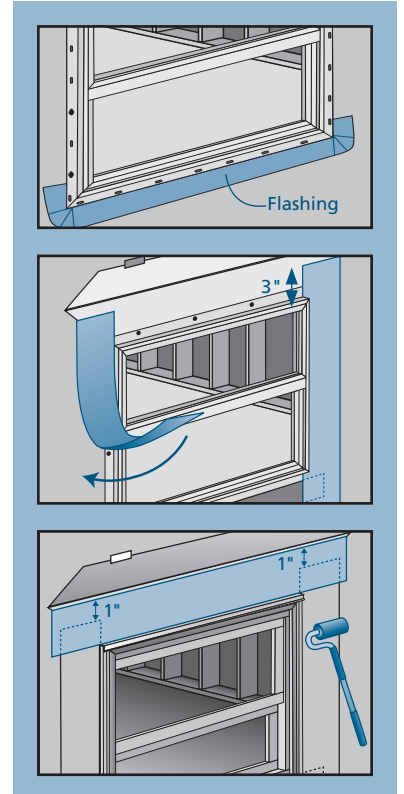
Protect window from overspray and apply spray adhesive according to instructions on the product to nailing fin and building wrap around the window as shown.



APPLY THE SELF-ADHESIVE FLASHING

Note! Keep the edge of the self-adhesive flashing as close to the window frame as possible and apply over the nail fin.

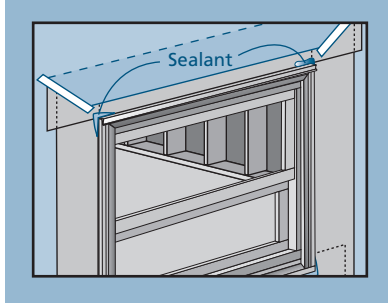
1. Apply the side pieces starting 3" above the header and overlap the flashing on the sill as shown.
2. Install drip cap if required. Pre drill through the nailing fin if required.
3. Center and apply the header piece above the header, overlapping the side pieces as shown.
4. Press the flashing down with a J-roller, being careful to remove any gaps or bubbles beneath self-adhesive flashing (remove and replace if necessary).



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COMPLETE INSTALLATION

1. Release the building wrap from above the header (previously taped up) and overlap the header flashing. Seal the ends with self-adhesive 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.



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.

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 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.

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

Thank you for choosing

