



Thank you for selecting JELD-WEN products. Attached are JELD-WEN's recommended installation instructions for vinyl bay, bow and garden windows which incorporate an integral nailing fin. Read these instructions thoroughly before beginning. They are designed to work in most existing applications, however; existing conditions may require changes to these instructions. If changes are needed, they are made at the installer's risk. For installations other than indicated in these instructions, contact a building professional.

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

Not all window types can 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.

**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 warranty as part of the terms of sale.

## GLOSSARY

### Mull Joint

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

### Mulled Unit

Two or more window units structurally joined together.

### 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

First Time: 4.0 hr.

Experienced: 2.5 hr.

Professional: 1.5 hr.



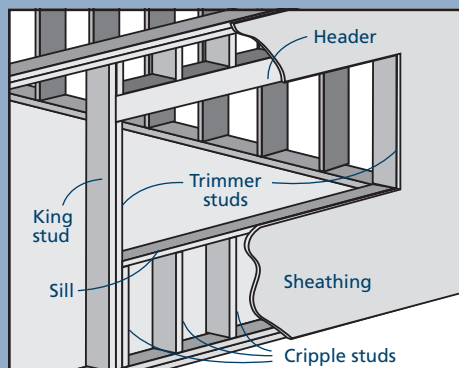
## ROUGH OPENINGS

This installation guide specifically addresses sheathed wall and open-stud construction. Windows without an integral head and seat board must be placed on a structure that provides continuous support to the sill.

### FULLY SHEATHED WALL CONSTRUCTION

The wall framing is covered by sheathing and the window will be mounted with the nailing fin flush against the sheathing.

Sheathed Wall

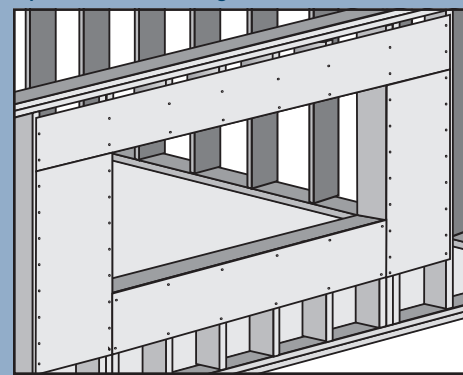


### OPEN STUD CONSTRUCTION

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 vinyl sheathing. Completely surround the rough opening with the backing support as shown. Backing support must be applied before building wrap.

Open-Stud with Backing



## 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.
- If disturbing existing paint, take proper precautions if lead paint is suspected (commonly used before 1979). Your regional EPA ([www.epa.gov/lead](http://www.epa.gov/lead)) or Consumer Product Safety Commission offices provide information regarding regulations and lead protection.
- Use caution when working at elevated heights.

- **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.

### WINDOW AND MATERIALS HANDLING

- Make sure operable windows are closed and 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 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](http://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 bay and bow windows only: #10 x 3 1/2" corrosion resistant pan head screws. Screws must penetrate at least 1" into framing (or as required by local code).

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

### NEEDED TOOLS

- Tape measure
- Utility knife
- Level (4' minimum recommended)
- J-roller
- Caulking gun
- Drill with 1/8" tapered bit and 3/8" countersink
- Hammer

## 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 YOUR 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.)

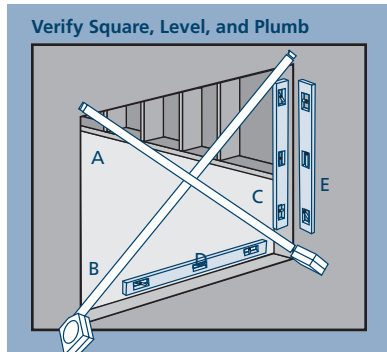
- Cracked frame welds or other frame damage
- Splits, cracks, holes, missing sections or other damage to the nailing fin longer than 6" and/or within 1/2" of window frame
- For units with integral head and seat boards, ensure the top of the mull joints are covered and sealed with silicone

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 bay or bow window are each 1/2" smaller than the rough opening width and height. The rough opening for the garden window should be at least the same size as the window frame.
- 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 plumb and level (C, E) 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.
- Verify the exterior face of the rough opening is 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

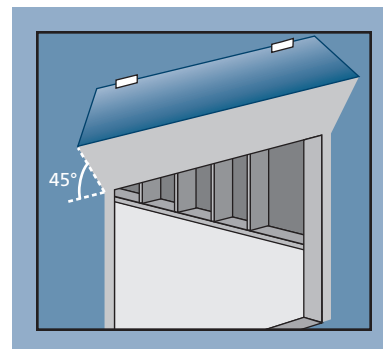
### PREPARE ROUGH OPENING

#### PREPARE BUILDING WRAP

**Note!** Check with your building wrap manufacturer to verify that the following steps do not void their product warranty.

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

**Note!** If installing a bay or bow window, proceed with section 4 "PREPARE SILL FOR BAY/BOW WINDOW." If installing a garden window, skip to section 8, "PREPARE SILL FOR GARDEN WINDOW."

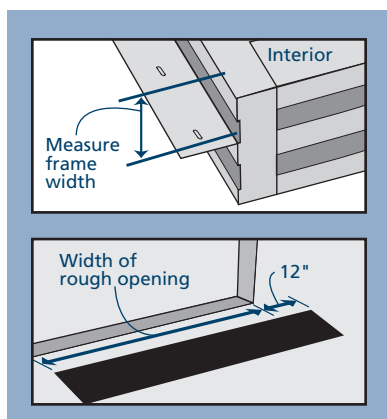


## 4

### PREPARE SILL FOR BAY/BOW WINDOW

#### PREPARE/SHIM THE SILL

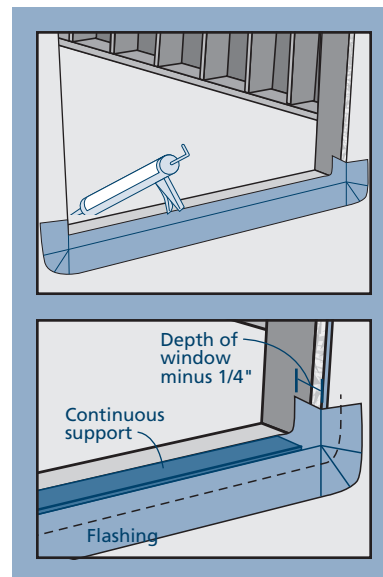
1. Use self-adhered flashing to waterproof the sill.
2. Flashing must have at least 2" of material wrapped below the sill onto the vertical wall. Flashing width must be at least frame width + 1 3/4". Use two pieces in a shiplap manner if necessary.
3. Measure the width of the frame from the interior 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 continuous support as follows:

**Note!** Where the window will sit on the sill, shim to provide continuous support to the sill. This shimming must be 1/2" 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.

10. Align the shimming on the sill flush with the exterior and centered between the side jambs.

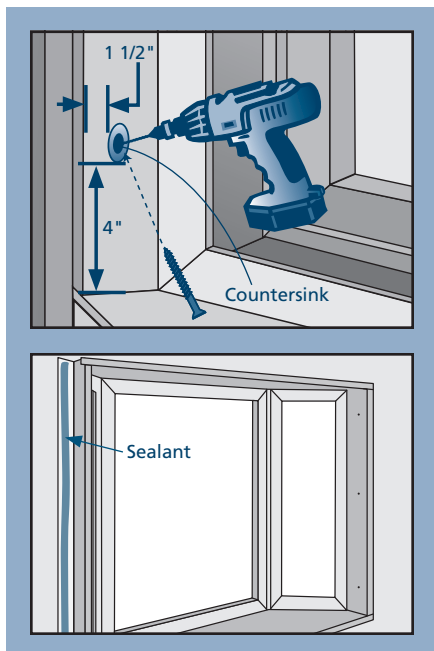


### 5 INSTALL BAY/BOW WINDOW

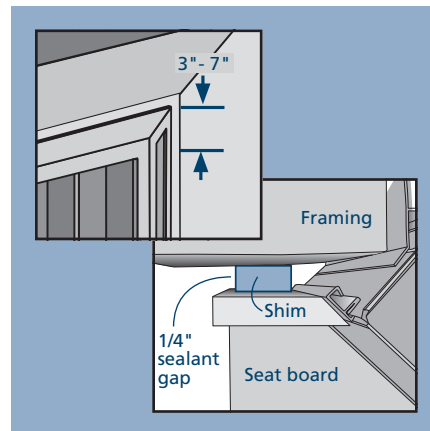
**Warning!** To avoid injury, use at least two people to install. Temporarily support the window until fully installed.

**Note!** Window should be pre-drilled and countersunk before placing inside the rough opening.

1. Pilot holes should be spaced 1 1/2" from interior edges, 4" from each corner and then evenly spaced no more than 12" around the inside perimeter. Drill 1/8" pilot holes and countersink.
2. Run a continuous 3/8" bead of sealant around the interior side of the nail fin on the side jambs.
3. Place window onto the shimming support and tilt into the rough opening. The window sill must rest on and be fully supported by the shimming support.



4. Fasten window through the nailing fin between 3" and 7" from one upper corner.
5. Align side jamb shims with the pre-drilled holes so fasteners will penetrate shims. Shims must be set back at least 1/4" from the interior of the jamb. Secure shims with sealant.
6. Inspect window for square, level, and plumb. Test for proper operation (remove and reinstall if necessary).
7. Using #10 x 3 1/2" flat head screws, fasten the jambs, head, and seat board through the pre-drilled and countersunk pilot holes. Screws should penetrate the previously installed shims.



### 6 FLASH BAY/BOW WINDOW

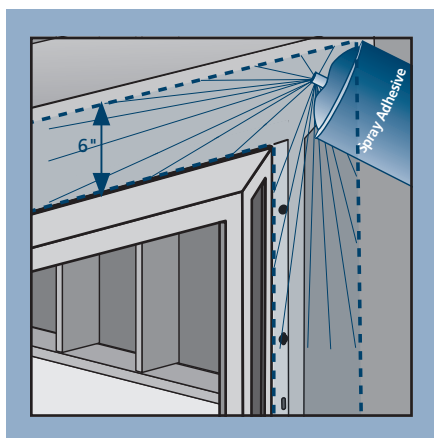
#### PREPARE FLASHING

1. Cut four pieces of self-adhered flashing as follows (these dimensions are based on 4" flashing. If using wider flashing, add material accordingly):
  - One head board piece 6" longer than the head board
  - One header piece 10" longer than the header
  - Two side pieces 8" longer than each side

#### SPRAY ADHESIVE/PRIMER

**Note!** Protect window from overspray.

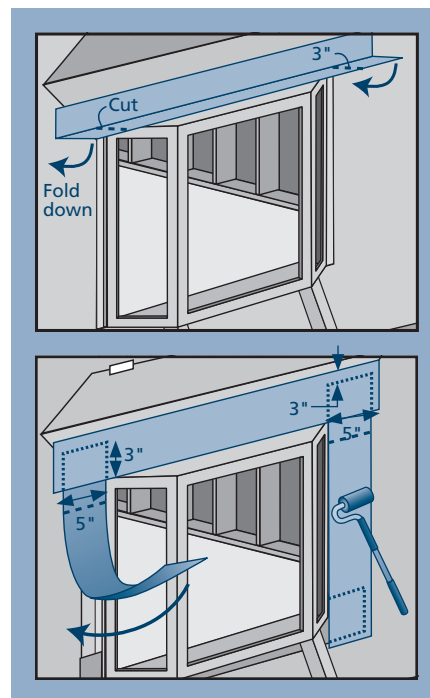
2. Apply spray adhesive/primer as instructed to nailing fin, sheathing and building wrap at the sides and head as shown.



#### APPLY THE SELF-ADHERED FLASHING

**Note!** Keep the edge of the self-adhered flashing as close to the window frame as possible.

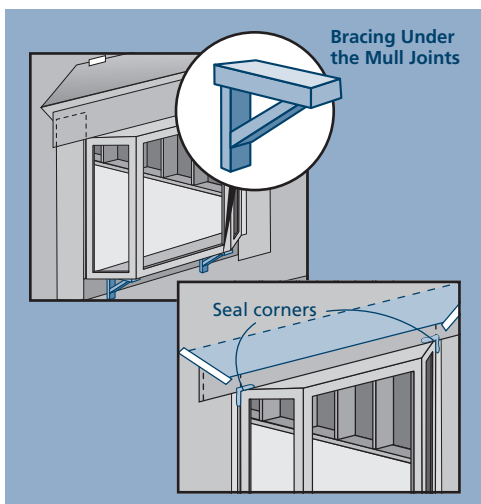
3. Fold the head board piece lengthwise into an "L" shape. Center and apply one leg to head board and the other to the wall above the rough opening header. Cut the corners to allow the flashing to lay flat against the wall.
4. Starting 3" above the header, apply the side pieces.
5. Center and apply the header piece above the header.
6. Inspect self-adhered flashing for gaps or bubbles (remove and replace if necessary). Finish by pressing the flashing down with a J-roller.



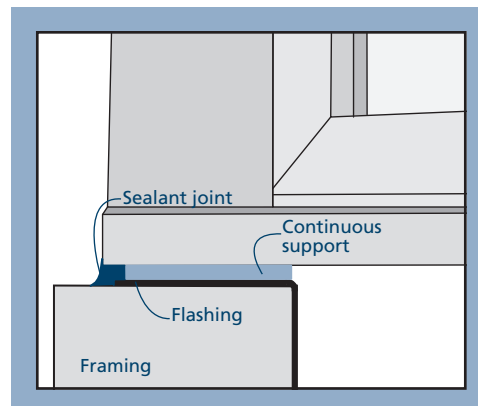
# 7

## COMPLETE BAY/BOW WINDOW INSTALLATION

1. If the window has a pre-installed cable support system, follow the instructions provided by the manufacturer.
2. If the cable support system is not used, build seat board bracing to support at least 750 lbs of total weight (window plus window contents). Primary support should be provided under the mull joints of the unit.
3. Remove temporary support after full support is installed.
4. 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.
5. Seal all four corners of the window with a 1/4" bead of sealant. Tool into a fillet shape.
6. The head and seat boards should be protected and insulated with a structure designed and built as required by local code.



7. 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

1. 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.
2. Install exterior wall surface per manufacturer's guidelines.
3. Protect recently installed units from damage from plaster, paint, etc. by covering the unit with plastic.

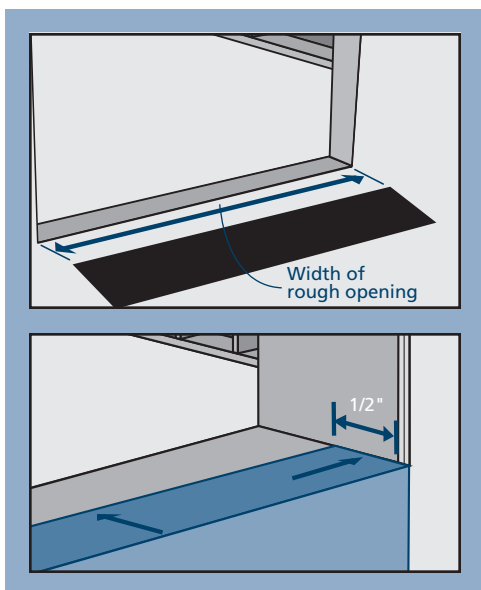
**Note:** End of bay/bow installation instructions.

# 8

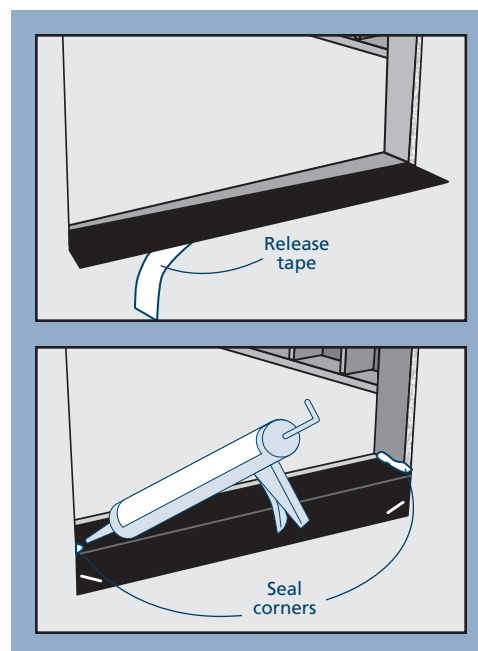
## PREPARE SILL FOR GARDEN WINDOW

**Note!** The sill lip is the garden window's only source of support inside the rough opening. It is very important that the sill be level and flat.

1. Measure the length of the sill and cut a piece of self-adhered flashing the exact length of the sill.
2. Measure and draw a line 1/2" from the exterior edge of the sill; this is where the self-adhered flashing will sit.
3. Pull release tape and set flashing into place.



4. Fold the flashing down onto the sheathing. Mechanically fasten if necessary.
5. Smooth out any bubbles or creases with a J-roller. Remove and replace if necessary.
6. Apply sealant to both ends of the sill where the flashing meets the rough opening.



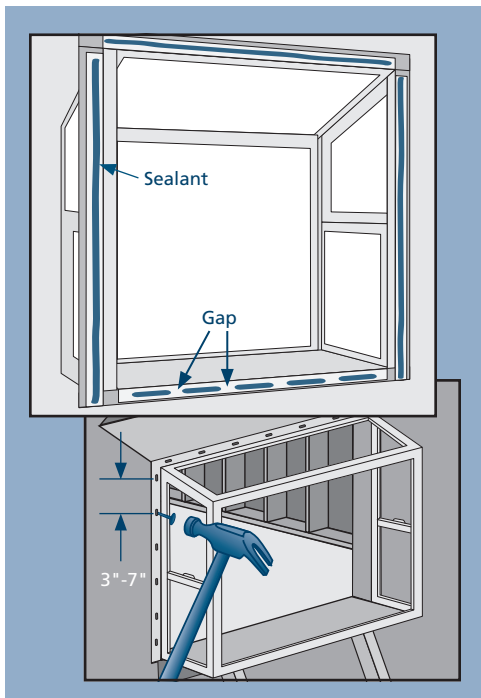


**9**

**INSTALL GARDEN WINDOW**

**Warning!** To avoid injury, use at least two people to install. Temporarily support the window until fully installed.

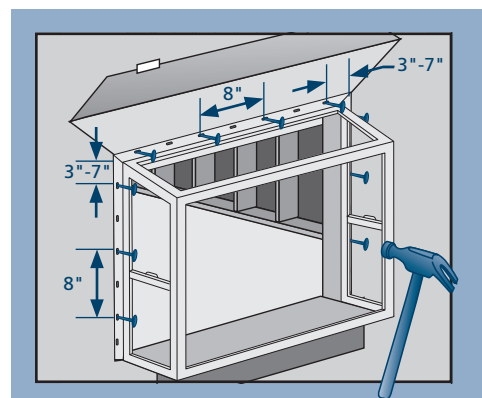
1. Run a continuous 3/8" bead of sealant around the interior side of the nail fin on the side jambs and head. On the sill, leave at least a 2" gap every 8" where it will contact the rough opening.
2. Place window sill onto the self-adhered flashing and tilt into the rough opening. The window sill must rest on and be fully supported by the rough opening framing.



3. Fasten window through the nailing fin between 3"-7" from one upper corner.
4. Inspect window for square, level, and plumb. Test for proper operation (remove and reinstall if necessary).

**Note!** Fastener heads must be flush. Do not dent nailing fin. Always use pre-punched holes or pre-drill with a 3/16" bit.

5. Fasten window through nailing fin holes 3"-7" from the corners and 8" apart all the way around the window.



**10**

**FLASH GARDEN WINDOW**

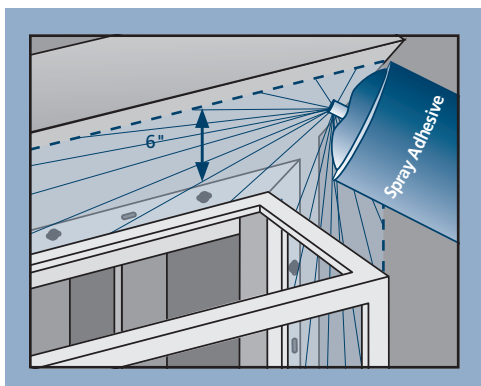
**PREPARE FLASHING**

1. Cut four pieces of self-adhered flashing as follows (these dimensions are based on 4" flashing. If using wider flashing, add material accordingly):
  - One header piece 12" longer than the header
  - Two side pieces 7" longer than each side

**SPRAY ADHESIVE/PRIMER**

**Note!** Protect window from overspray.

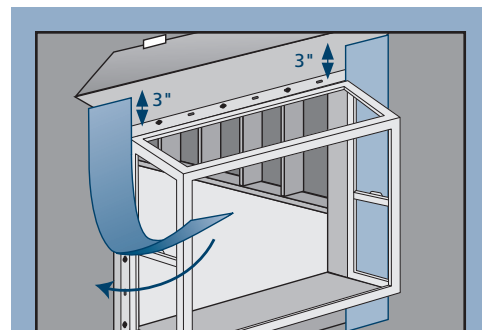
2. Apply spray adhesive/primer as instructed to nailing fin, sheathing and building wrap at the sides and head as shown.



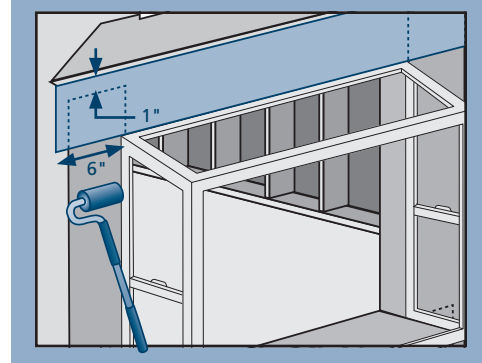
**APPLY THE SELF-ADHERED FLASHING**

**Note!** Keep the edge of the self-adhered flashing as close to the window frame as possible.

3. Apply the side pieces starting 3" above the header.
4. Center and apply the header piece above the header.

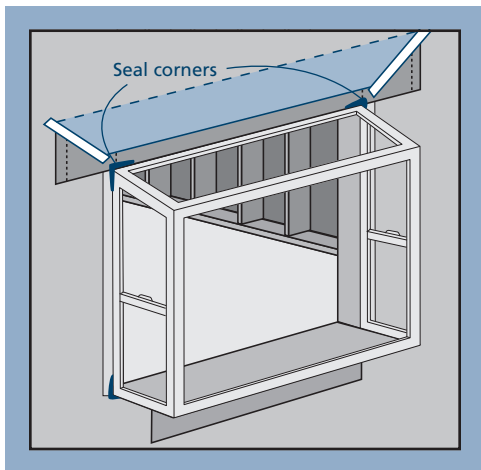


5. Inspect self-adhered flashing for gaps or bubbles (remove and replace if necessary). Finish by pressing the flashing down with a J-roller.



# 11 COMPLETE GARDEN WINDOW INSTALLATION

Garden windows are rated for a weight handling load of 8 lbs. per square foot. Although it is not required, the installer may provide extra support to the garden window with "L" brackets. Build bracing under the mull joints of the unit. To reduce heat loss, the bottom of the window may be insulated. Check local building code requirements.



## INSTALLATION

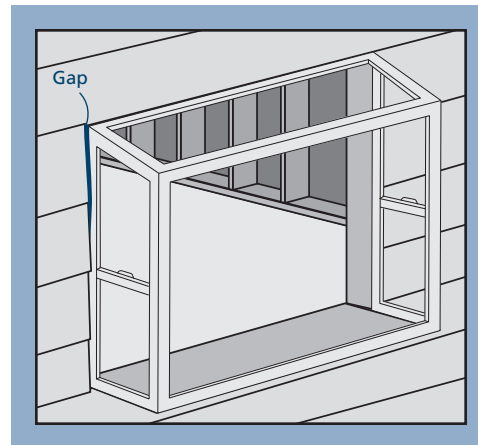
1. Release the building wrap from above the header (previously taped up) and overlap the header flashing. Seal the ends with self-adhered flashing or building wrap tape.
2. Seal the top and bottom corners of the window with a 1/4" bead of sealant. Tool into a fillet shape.
3. Create a continuous air seal around the entire interior perimeter of the window with a bead of sealant where the window contacts the structure.

## 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 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.

- Install exterior wall surface per manufactures' guidelines.
- Protect recently installed units from damage from plaster, paint, etc. by covering the unit with plastic.



Please visit [jeld-wen.com](http://jeld-wen.com) for warranty and care and maintenance information.

Thank you for choosing

**JELD-WEN**  
 WINDOWS & DOORS

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(10/14)