

Tundra Series Windows

January 2016

New Construction Installation Instructions Nail Fin, J-Fin and Brickmold Applications

 **ATTENTION!** Read and understand all installation instructions before installing this product.

Introduction

If you do not understand these instructions, or cannot perform the installation as specified in these instructions, do not install this product. Have the product installed by a qualified professional capable of following the instructions, or contact your *Tundra Window* Dealer or Representative to obtain further information. Failure to follow these installation instructions will void the *Tundra Window* Warranty and may result in product malfunction or failure. You may also refer to ASTM E 2112 Standard Practice for the Installation of Exterior Windows, Doors and Skylights for additional installation guidelines.

 **ATTENTION!** These Installation Instructions were developed for use with typical wood frame wall construction in a wall system designed to manage water. If your application is different, you may require additional installation instructions, methods and materials. It is the responsibility of the consumer, architect or construction professional to verify the installation method for your application.

 **ATTENTION!** Tools required for installation: tape measure, level, square, hammer, stapler, utility knife, screw drivers, sealant gun, and appropriate personal protective equipment.

 **ATTENTION!** You will need to supply: cedar shims/spacers, 2" galvanized nails, closed cell sealant backer rod/sealant backer, flexible window pan flashing tape, straight flash window tape, non-expanding insulating foam sealant, high quality exterior grade sealant, head drip cap.

 **ATTENTION!** LEAD POISONING IS PREVENTABLE. If your home was built before 1978, old lead paint on your walls, doors, windows, and sills may be dangerous. For additional information please refer to www.epa.gov/lead. Please check with your local authorities for ordinances governing the proper disposal of your demolition and building materials.



ATTENTION! Proper management of water and moisture is an essential part of any structure. All structures must have a functional, engineered drainage system as part of its exterior finished wall system. Walsh Building Products cannot control or be responsible for water/moisture management beyond the product itself. All products manufactured by Walsh Building Products must be properly installed as described per these installation instructions. All products manufactured by Walsh Building Products must be properly flashed and a complete vapor barrier applied to seal the product opening. Proper installation of drainage systems, flashing, water and vapor barriers are the sole responsibility of the owner or their agents.



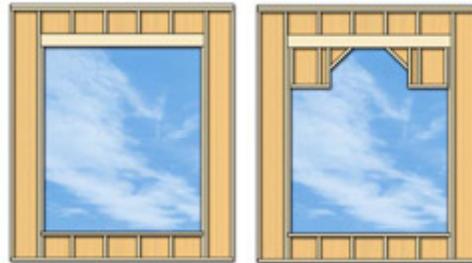
Step 1: Prepare the Rough Opening



ATTENTION! Building codes have minimum egress size requirements for certain window applications and locations. It is the responsibility of the building designer or builder to verify and meet these code requirements.



ATTENTION! Radius and Special Shape units. Units with curved members or units that are special geometric shapes require custom framing to conform to the shape of the unit. The rough opening should be prepared for the over-all width and height of the unit. Additional framing support should be added once the product has been received and precise dimensions can be determined. Add framing members that provide support to all sides of the unit as well as the exterior wall sheathing.



- Verify rough opening size. The rough opening should provide approximately 1/4" clearance between the sides and top of the product and the framing.
- Verify that rough opening sill (bottom) is level. The rough opening sill must be level as the product sits on this when installed.
- Verify that sides are square and plumb. Rough opening sides that are not square and plumb can prevent the product from being installed correctly.
- Check the exterior sheathing surface. The exterior sheathing surface should be smooth and free from any uneven areas, raised nail heads, protrusions, or any obstruction that could keep the product nailing fin from seating evenly around the entire perimeter of the opening.



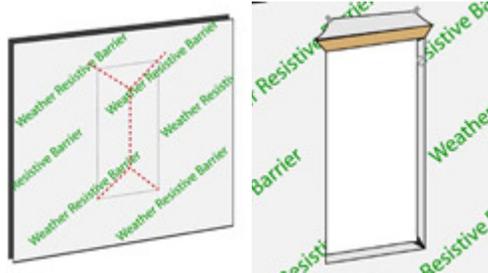
ATTENTION! Correct any problems with the rough opening before proceeding.

Step 2: Preparing a Weather Resistive Barrier

Most new homes use a weather resistive barrier to reduce air and water vapor penetration through the wall system. The following instructions provide the correct method for integrating a weather resistive barrier with windows.

Even if a weather resistive barrier is not used, follow all the steps that incorporate flashing tape.

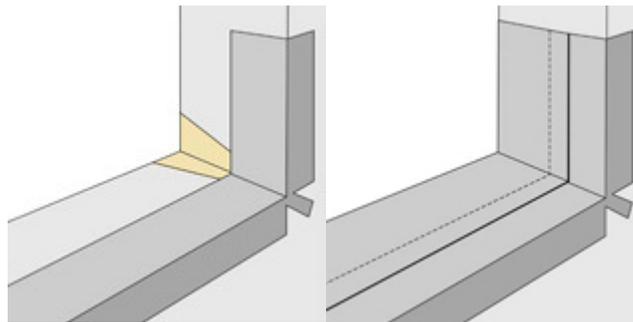
a) Cut weather resistive barrier. Find the edges of the window opening and mark a vertical center line at the middle of the opening. Cut a line diagonally from each corner to the vertical center line. Finally, cut the vertical center line between the top and bottom diagonal cut meeting points. (see illustration).



b) Fold weather resistive barrier into the sides and sill. Fold side and bottom flaps into the opening and staple in place.

c) Fold top weather resistive barrier. Fold the top flap outward and up and temporarily tape out of the way. This will be used in Step 5 b).

d) Apply sill flashing tape. Cut a piece of flashing tape 12" longer than the width of the opening. Apply to the bottom of the sill as shown. The flashing tape should overhang to the exterior at least 1". The flashing tape should also extend up each side approximately 6".



Cut tabs for folding

1" Overlap to form dam

Note: Flashing tape is available in two types, one for straight lengths, and the other which can be flexed to conform to curves.

e) Cut tabs in the sill flashing tape and fold. Use flexible type flashing tape which can be conformed to bend into the corners or, using straight flashing tape, cut a 1" wide tab at each corner. The tab should be centered on the corner notch. Fold the tape to the exterior and press it firmly into place.

f) Apply sill dam. Cut a second piece of flashing tape the same length as the one used in Step 2d. This will function as a dam against water flowing to the inside if it somehow reaches the sill. Apply to the sill overlapping the first piece 1", with the remainder of the flashing tape extending to the inside. Trim excess at the interior edge.

Step 3: Removing the Packaging

 **ATTENTION!** Do not sit or store products in direct sunlight. *Tundra Window* products are shipped in protective packaging. This packaging is designed to protect the product from dirt, dust and minor debris while being shipped, handled and stored. Because of the characteristics of this packaging, do not sit or store products (with the protective clear wrap packing) in direct sunlight. Keep uninstalled products in a safe place, out of direct sunlight. Remove the clear wrap packing before installing the products.



a) Remove the packaging. Remove the protective plastic wrap and any other packing materials from the window. Be careful not to cut the screen cloth or damage the window. Leave the sash in the closed and locked position until later. Some products also have additional support member attached for shipping and handling. These members may be wood strips used to protect the nail fins, or shipping handles (on some door products) that are added to assist in transporting the product. Remove these additional support materials prior to installation.

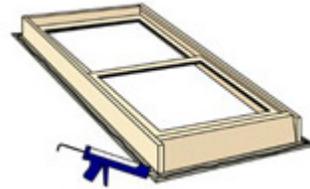
Step 4: Jamb Extension

All *Tundra Window* products are available with factory applied jamb extensions to meet various wall thickness requirements.

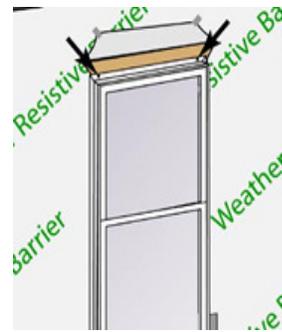
Step 5: Setting the Window

 **ATTENTION!** These steps may require 2 or more people.

- a) Apply Sealant to nail fin / brickmould. Place the window on a suitable work surface exterior face down. Apply a continuous bead of High Grade Exterior Sealant to the back side of the top and side nailing fins / brickmould near the outer edge of the fin / brickmould. Do not apply sealant to the bottom nailing fin / brickmould. Note: High Grade Exterior Sealant should conform to AAMA 808 specification.
- b) Place window into opening. From the exterior, place the window into the opening. With the bottom of the window resting on the sill, center the window from side to side, then press in place to contact the High Grade Exterior Sealant with the weather resistive barrier or sheathing surface.
- c) Temporarily fasten. To temporarily hold the window in the opening, fasten the top corners of the window through the nail fin / brickmould with 2" nails or screws. Note: a nail can be driven through the vinyl nail fin but you may find it helpful to use the pre-punched holes for fastening. Note: While temporarily fastening, leave nail heads raised in case they need to be pulled for window adjustment purposes.



d) Level the sill. The window must be level, plumb and square to operate correctly. Working from the interior side of window, place a level on the window sill and check for level. If necessary shim under the low corner until level is achieved. You may need to loosen the top corner to



make this adjustment.

⚠ ATTENTION! Only place shims under the bottom corners. Shimming anywhere else under the bottom rail may cause it to bow, except mullied units and 3-lite sliders, these units should be shimmed at the mullions or meeting rail points.

e) Square the sides. Working from the interior side of window, measure diagonally from one top corner of the window frame to the opposite bottom corner. Next, measure the other corners. These measurements should be equal. If they are not, the window is not square. Shift the bottom of the window until these measurements are the same.



f) Fasten all four corners. Once the window is level and square, fasten all four corners, additional fasteners are required on all frame members in excess of 36" horizontally and 48" vertically.

g) Shim the window sides. Use a level or good straight edge to check the sides for plumb. Apply shims (on both sides of the window) at the top and bottom corners, the midpoint, and halfway between the corners and the midpoint. Shim to achieve plumb.



⚠ ATTENTION! Do not over-shim or under shim. Do not shim above the window. Proper shimming is required for correct operation and optimum performance of the window.

h) Check operation. Check the operation of the window. Unlock the sash and check its full operation. Sashes should open and close completely without binding. Tilt-in sash windows should tilt-in and close without excessive force. Hung sash windows midpoint meeting rails should be parallel with each other. Sashes that are difficult to open or tilt (tilt-sash windows only) are probably over-shimmed and have too much tension against the jambs. If a window is under-shimmed it will not have a proper weather seal and hung sash windows will slip or slide down when opened. If the window does not seem to operate properly, go back to step 2e and adjust the window for level, square and plumb, readjust the shims as needed for proper installation.

i) Finish fastening. Once you have verified that the window is level, square and plumb, and that it operates correctly, finish fastening through the nail fin / brickmould, applying a nail at least every 12" or a screw every 24" on brickmould.



Step 6: Flashing the Window

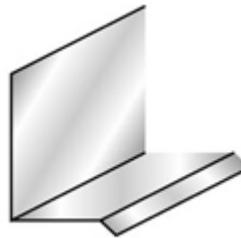
 **ATTENTION!** All products manufactured by Walsh Building Products must be properly flashed and a complete vapor barrier applied to seal the product opening. Proper installation of drainage systems, flashing, water and vapor barriers are the sole responsibility of the owner or their agents.



a) Apply side flashing tape. Cut 2 pieces of flashing tape 4" to 6" longer than the rough opening height. Apply one piece to each side, covering the nailing fin and sealing against the weather resistive barrier or sheathing. The tape should extend 2" to 3" below the bottom of the opening and 2" to 3" above the top of the opening.

If your window is a single unit (one unit wide) skip to step 6 c)

Note: On multi-wide nail fin units and all brickmould units a separate drip cap must be installed. This drip cap must run the entire width of the brickmould and multi-wide nail fin units. It must form a drip edge that extends beyond the top, outer most face of the window unit. It must form a 90° angle at the back and cover the nailing fin. This cap may be purchased pre-formed from a building materials supplier or it may be made from typical aluminum flashing, available in rolls (coil stock) from a building materials supplier.



b) Install the drip cap on top of the window and fasten it to the wall sheathing with galvanized roofing nails.



c) Apply top flashing tape. Cut 1 piece of flashing tape long enough to go across the top of the window and extend at least 1" past each piece of side flashing tape. Apply the tape so that it covers the nail fin / drip cap and seals against the exposed sheathing (left exposed in step 2 c).

d) Fold top flap down. If a weather resistive barrier was used, fold the top flap (temporarily taped out of the way in Step 2 c) down over the top flashing tape applied in the previous step.

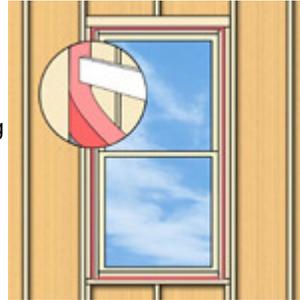
e) Apply corner flashing tape. On weather resistive barrier applications, cut 2 pieces of flashing tape at least 1" longer than the diagonal cuts on the top weather resistive barrier flap. Apply the tape to each top corner so that it completely covers each diagonal cut and overlaps the top corners.



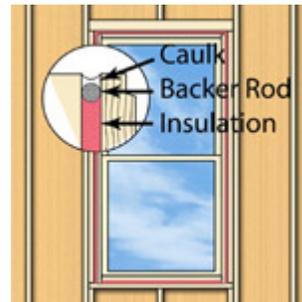
ATTENTION! Do not apply flashing tape to the bottom nailing fin or brickmould.

Step 7: Insulating & Applying Interior Seal

a) Apply closed cell foam wrap to the window prior to installation or loosely fill the space between the window and the rough opening with fiberglass insulation. Be careful not to pack the insulation too tightly. Over packing may cause the window to bow.

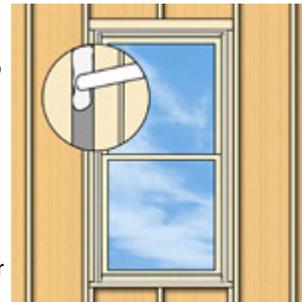


b) Apply backer rod. Apply 1/4" backer rod over the fiberglass insulation and press in place so that it is recessed approximately 3/8" to 1/2".



c) Apply sealant. Apply High Grade Exterior Sealant over the backer rod and tool to finish the seal.

d) Alternate Method: Apply foam insulation. Using quality low expansion foam, apply a 2" thick bead of foam approximately 1" deep into the space between the window perimeter and the rough opening framing. Note: no backer rod or caulk seal is needed for this method.



ATTENTION! Do not use high expanding foam as it will cause the window to bow. Follow foam manufacturer's recommendations for application.

e) Apply interior trim. After insulating and sealing the window perimeter apply interior trim, all trim may be supplied by sources other than Walsh Building Products. Follow traditional methods for applying trim. Walsh Building Products Interior Casing for radius window products may require manipulation to conform to the curve of the window product. Begin by fastening at the center point of the window curve and work to the outer edges, fastening as proper alignment is achieved.

Step 8: Applying Exterior Seal

The seam between the product perimeter and the exterior wall finish material must be sealed around the entire product. Failure to apply this seal may result in water penetration around the product

 **ATTENTION! Masonry Applications.** All masonry applications require a 3/8" sealed expansion joint between the product perimeter and the masonry surfaces. This allows for the difference in expansion and contraction of wall/building structure and the masonry. Failure to apply this expansion joint may result in distortion or damage to the product and failure of product operation. Failure to apply this expansion joint will void the warranty.

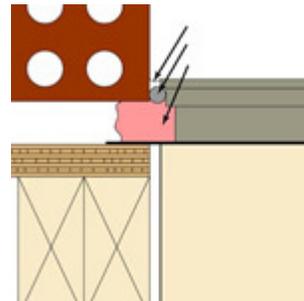
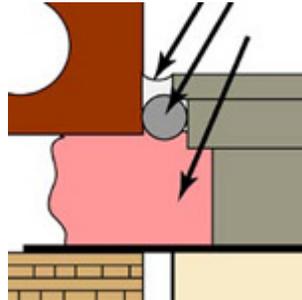


a) Exterior perimeter space. Typical siding applications and other wall finish systems that are attached to the wall structure do not require an expansion joint. Masonry applications and other wall finish systems that are set separately on a foundation require a 3/8" space between the product perimeter and the exterior wall finish material.

b) Apply backer rod. (Masonry Applications only) Apply closed cell foam backer rod to the space between the exterior perimeter of the window and the wall finish material.

c) Apply sealant. Apply a bead of high quality exterior sealant to the perimeter space. On Masonry applications this should cover the backer rod.

d) Finish the seal. Finish the seal by tooling and shaping the perimeter seal so that it is slightly concave. Clean the excess sealant from the window and wall finish surfaces.



Step 9: Cleaning

Glass Surfaces

Clean glass surfaces with regular household glass cleaner as needed.

Wood Surfaces

Painted and stained wood surfaces should be cleaned according to the finish manufacturer's instructions.

Vinyl Surfaces

Clean with a mild soap and water solution and a soft clean cloth.

Chemicals and Cleaners

Do not allow any chemicals, chemical vapors, acids, cleaners, brick or masonry cleaner, abrasives, or other substrates to contact (directly or indirectly) any of the product surfaces, parts, and hardware. Deterioration or damage to the product may result. Protect all surfaces, parts, and hardware during all phases of construction and finishing. Surface scratches as well as damage from any such chemical, chemical vapor, acid, cleaner, brick or masonry cleaner, abrasive, or other substrate is not covered by the warranty.