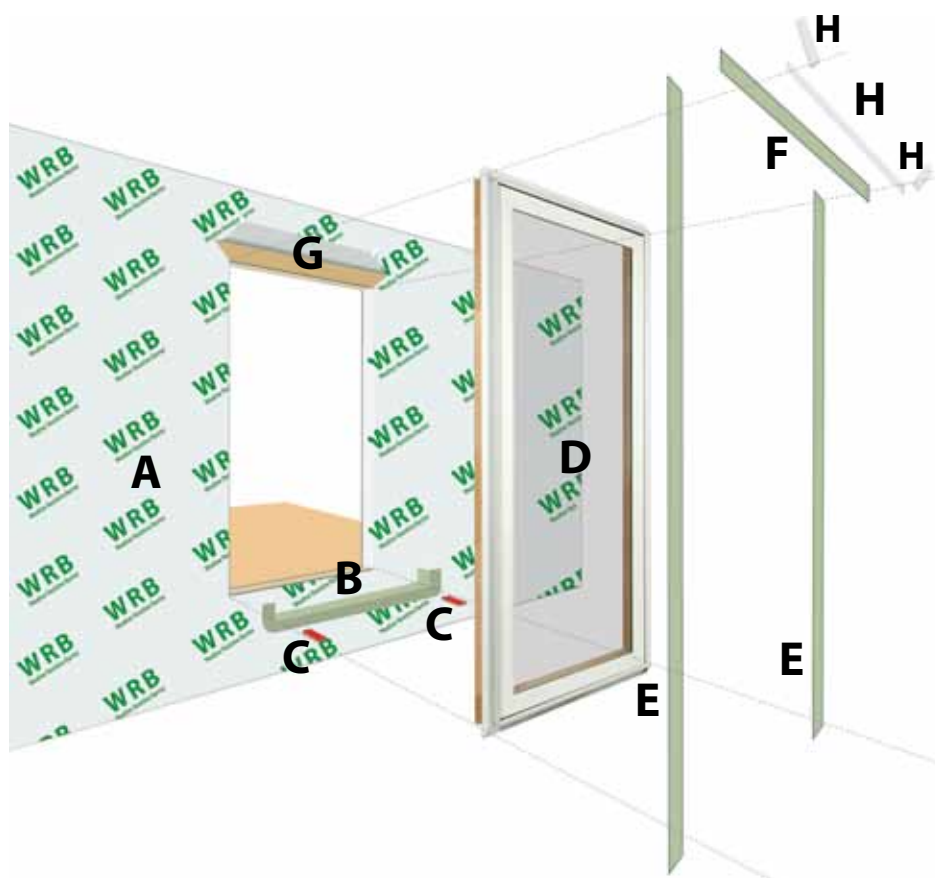




Sun New Construction Window Installation Instructions



- A. Apply Weather Resistant Barrier
- B. Apply Sill Flashing Tape
- C. Place Waterproof Sill Shims
- D. Caulk Back of Nail Fin Sides & Top, Set Window, Fasten
- E. Apply Side Flashing Tape
- F. Apply Top Flashing Tape
- G. Fold Down WRB Top Flap
- H. Apply WRB Tape to Top Flap Seams, bottom first then sides

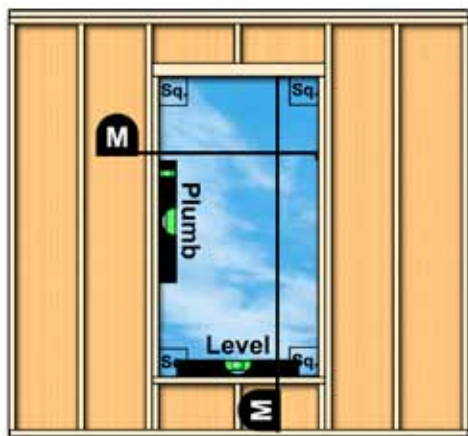
Needed:

- Polyurethane Sealant (AAMA 808 compliant for windows and doors)
- 1-1/2" to 2" Galvanized Roofing Nails
- Self-Adhesive Flashing Tape
- Formable Flashing Tape
- 1/8" Waterproof Flat Shims
- Weather Resistant Barrier & Tape
- Foam Backer Rod
- Low Expanding Window & Door Foam
- Jamb Shims

Safety glasses, tape measure, level, putty knife, utility knife, hammer, staple gun, screw gun, caulk gun, other

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

1



The Rough Opening

- a) Frame opening 1/2" larger than the window width & height.
- b) Sill & Head must be level.
- c) Sides must be plumb.
- d) Corners must be square for rectangular products.

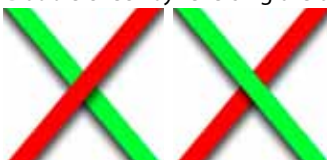
- Additional support framing for Radius and Special Shape products must be added as needed.
- Additional support framing is required for Clad Exterior Trim options to provide stud framing behind nailing fin area.

Avoiding Call Backs Tip!

Wall Must Be In True Plane

Why? - Failure to have a True Framing Plane will create a twist in the product frame which will make it difficult to close properly and latch.

Check wall by running two strings diagonally across the opening with the corners flush against the exterior wall surface. One string will overlap the other in the center. If the strings don't touch in the center, or if one pulls the other down, the wall is not framed in a true plane. Double check by reversing the overlapping strings.





Sun New Construction Window Installation Instructions

2



Test fit window in the opening

- a) Remove all packaging from the window. This includes the clear wrap, cardboard protectors and wood transportation support from bottom nailing fins (on mulled units). Make sure to keep the sashes closed and locked while installing the window.
- b) Place the window in the opening and check all clearances. You should have approximately 1/4" on the sides and 1/2" at the top. The extra space at the top allows for shims to be applied at the sill. See Step 5.
- c) Remove the window and make any necessary adjustments to the framing now.

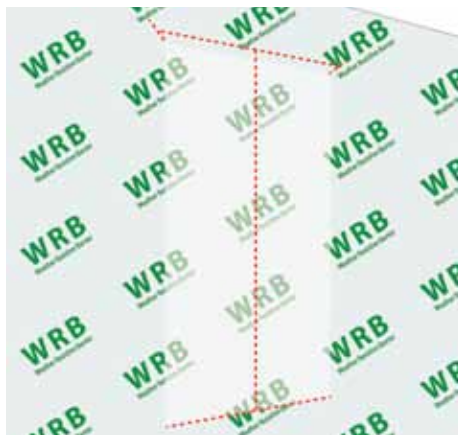
3_a



Integrating The Weather Resistive Barrier

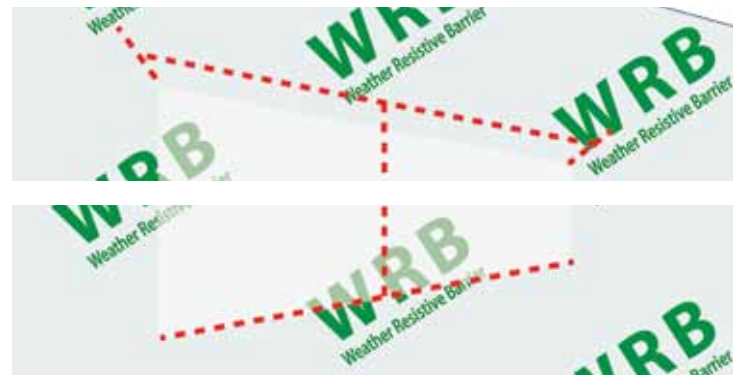
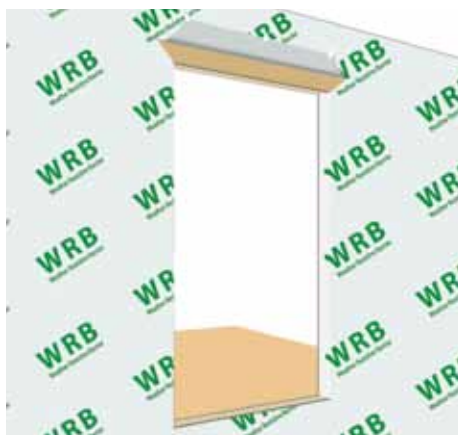
- a) Apply Weather Resistive Barrier (WRB) to the exterior wall surface per manufacturers instructions.

3_b



- b) Cut WRB over window opening as indicated in illustration. Cut 1" above the top of the opening to allow for taping of this flap to the top flashing. See step 16. Cut bottom even with sill framing.

3_{c-d}



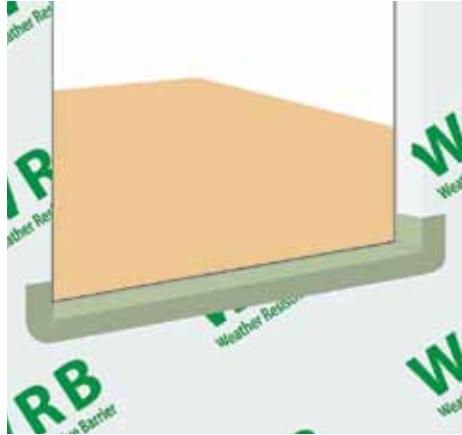
- c) Wrap sides into opening. Fasten. Trim excess.
- d) Temporarily fold up top flap and tape out of the way in preparation for setting the window.





Sun New Construction Window Installation Instructions

4

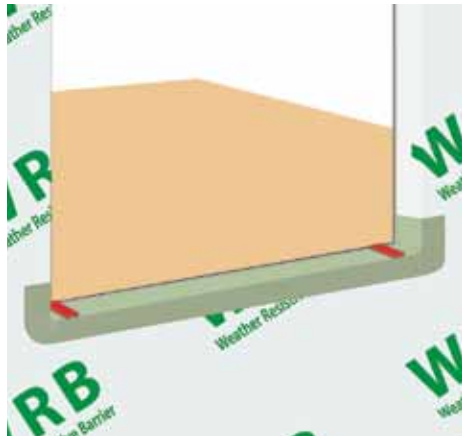


Note: All Flashing is to be applied in Weatherboard fashion.

Apply Sill Flashing

Using Flexible Flashing Tape, run up the sides about 3". Apply flush with the interior edge of the window opening. Overlap the face of the WRB on the exterior about 2" to 3".

5



Shim at the Sill

Place 1/8", flat, waterproof shims on the sill. They should be placed near each side of the window. If the window is a mullied unit, add shims under each mull point. The shims must be level across the opening so that the window unit will sit level when it is placed in the opening.

6



Apply Sealant to Back of Nail Fins or to the WRB - Top and Sides Only

Using AAMA 808 compliant polyurethane sealant, apply a continuous bead, 1/4" to 3/8" in width, to the back-side of the top and side nail fins or to the corresponding surface of the WRB. Do Not apply sealant to the bottom nail fin or below the window opening. Leave that area bare to allow for drainage.

7



Set the Window in the Opening

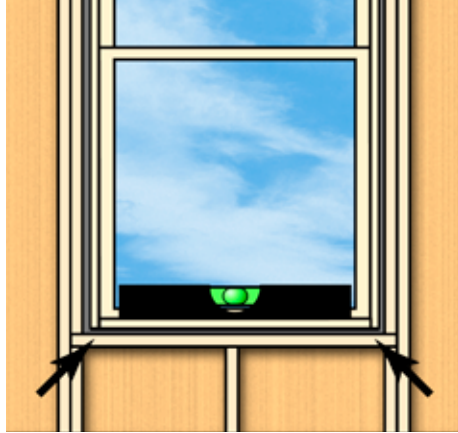
- a) With the sealant applied, set the window in the opening.
- b) Center the unit so that there is equal space on both sides. Make sure that it is resting on the Sill Shims and that they are at the support points specified in Step 5.
- c) Temporarily fasten the unit in the opening using a wood block and screw. The wood block should overlap the nail fin on one side the unit, near the top. Apply the screw approximately 1/2" from edge of nailing fin. Loosely fasten the block just enough to hold the unit in place but allow for shifting of the frame for adjustments. See the following step. Keep the hole close enough to the nail fin so that it will be covered by the flashing tape when it is applied.





Sun New Construction Window Installation Instructions

8



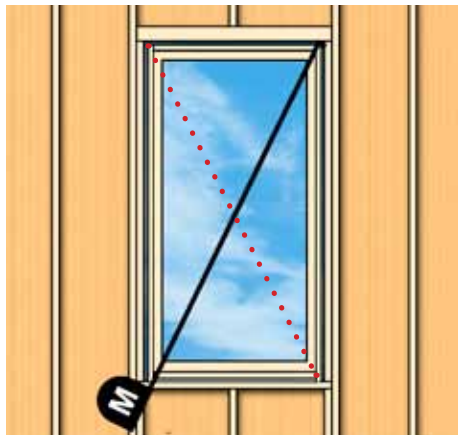
Level the Sill

Verify that the sill is level. If not, shim with additional waterproof shims to level.

Avoiding Call Backs Tip!

Leveling is the first step in making sure the window is installed square. A level sill ensures that water will drain properly and is the foundation for sash-to-frame alignment.

9

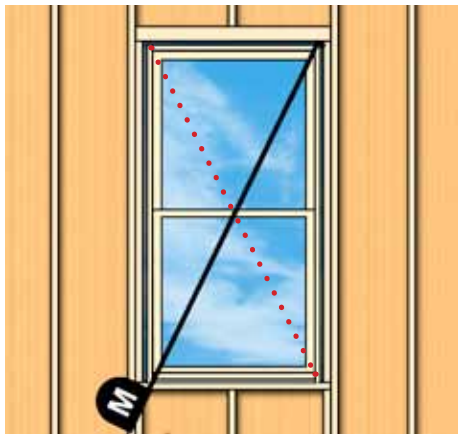


Square the Window Frame

- a) Check that the window is square. To do this, measure diagonally from one top corner to the opposite side bottom corner and then measure the other two corners. These measurements should be the same (within 1/16th of an inch). If they are not, the window is set in the opening out-of-square.
- b) Adjust if necessary - shift either the top or bottom of the window sideways until both diagonal measurements equal each other.
- c) When the window is square, permanently fasten the four corners of the unit through the exterior nail fins.

Avoiding Call Backs Tip!

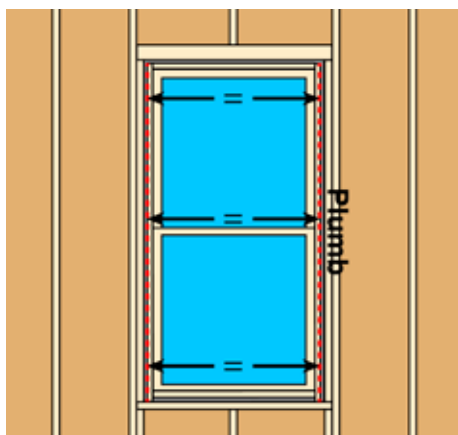
Squaring the window frame ensures that the alignment relationship between the sash and frame is correct.



Casement Window: Failing to do so will cause misalignment between the latches and keepers, preventing proper closure. Out of square will also cause the top hinge pin to interfere with sash closure. It is also possible that the adjustable hinges will not have enough adjustment to allow the square sash to fit in the out of square frame.

Double Hung Window: If the window frame is not installed square, the alignment of the sashes in relationship to each other and the jamb liners will be off. This will create gaps between the sashes and the jamb liners, as well as the head and sill. This will cause air leakage, possible water leakage and sash drift.

10



Plumb & Shim Sides

- a) Check the side jambs to verify that they are plumb. Use a straight edge to check that the sides are not bowed. Also measure across the width of the window frame near the top, middle and bottom and verify that the frame width is the same. If not, correct with shims.
- b) Shim at multiple points along the sides of the window. Do not shim the top of the window.



Sun New Construction Window Installation Instructions

10

continued



Avoiding Call Backs Tip!

Plumbing and Shimming the sides ensure there is no bow to the sides of the window frame.

Casement Window: Failure to shim the sides may allow them to bow out slightly. This can cause the frame height to shrink slightly. This height shrinkage can cause the top rail of the sash to rub on the head rail hinge pin, making it hard to open or close the sash.

Double Hung Window: Failure to shim the jambs at the meeting rails and making the jambs plumb will cause operational issues with the balance system (sash drift) which may not be correctable with the adjustable balance shoes. It will also reduce the weathering effectiveness of the window by allowing the sash to not have a uniform seal with the jamb liners.

11



Finish Fastening Through The Nail Fin

Note: if your window has Sun Exterior Trim, as in Brick Mold or Casing, the nailing fin is actually on the extruded trim. It is to be treated the same as instructed below. The fasteners must penetrate actual stud framing.

- a) Finish fastening the window through the nail fin, applying fasteners every 8 to 10 inches all around the window. Use 1-1/2" to 2" galvanized roofing nails.
- b) Seal the heads of the fasteners with a dab of sealant.

12



Apply Side Flashing

Using Self-Adhesive Flashing Tape, apply flashing so that it covers the nailing fin and overlaps the adjacent Weather Resistant Barrier. Be sure to cover the fastener heads on the nailing fin. Flashing should extend on each side just above the top nail fin and below the bottom nail fin.

Do Not flash the bottom nail fin. Leave unflashed to allow for drainage.



Sun New Construction Window Installation Instructions

13



Drip Cap (for Field-Mulled Units)

Sun single window units, with their integrated nailing fin, do not require an additional drip cap. Muller units do. In most cases, units that are mulled at the Sun Factory will already have the drip cap installed. Units that are mulled in the field require a drip cap to be installed across the top full width of the unit. Sun's Extruded Drip Cap snaps into the accessory groove on the window frame. Other drip caps must be fastened and sealed by other methods.

14



Apply Top Flashing

With the top WRB flap still folded out of the way (see step 3), apply Self-Adhesive Flashing Tape across the top of the window. It should cover the nailing fin, including fastener heads, and overlap the adjacent wall sheathing surface above the nailing fin. The flashing should extend approximately 1" beyond the side flashing on both sides of the opening. It should also cover the tops of the side flashing. See illustration.

15



Fold Down the Top WRB Flap & Tape

- Remove the tape that is temporarily holding the top WRB flap out of the way.
- Fold the WRB flap down so that it covers the top flashing.



- Using WRB tape, first tape along the top of the unit. Then tape down the angled side seams of the WRB, making sure that the side tape overlaps the horizontal tape. See illustration.



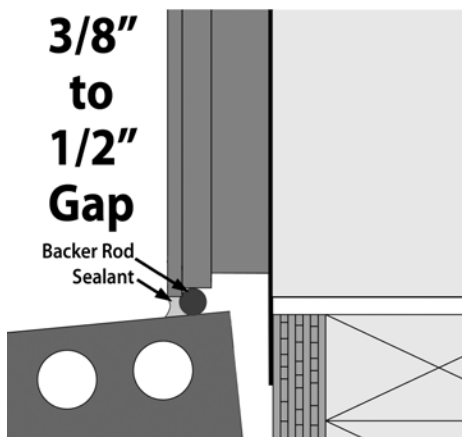
16



Seal Interior Seams with Low Expansion Foam

- a) Using Low Expanding Foam made for windows and doors, apply a continuous fill around the perimeter of the window, between the edges of the window and the wall framing.
- b) At the bottom, fill the back (interior) edge, but do not fill the whole cavity under the sill of the window. It is important to leave an open void under the sill to allow for drainage to the exterior should water ever enter the frame cavity.

17



Exterior Wall Treatments: Information for the Masonry Installer

Avoiding Call Backs Tip! Provide Clearance Between Product and Masonry & other exterior treatments

Be sure to allow the following:

- Minimum 1/8" on sides, head and sill for all non-masonry treatments.
- Minimum 1/4" on sides and head of masonry treatments
- Minimum 3/8" to 1/2" at the sill of masonry treatments

Why? - The main wall structure will expand, contract and move independently and at a different rate than the masonry wall, often resulting in some shifting and settling of the main wall. This causes the bottom of exterior frame of the window to contact the masonry wall which in turn exerts upward pressure against the window sill, deforming it and forcing it to contact and bind against the bottom of the sash. This damages the window and prevents it from operating correctly.



Apply Backer Rod and Sealant to Exterior Perimeter

After the Exterior Wall Treatment is installed . . .

- a) Apply approved sealant to all 1/8" seams.
- b) Apply backer rod and top with sealant all 1/4" and greater seams.

18



Interior Finishing - Wood Surfaces

Wood surfaces must be painted or stained and sealed within 90 days of installation. Follow your finish manufacturers instructions for application of the finish.



Sun New Construction Window Installation Instructions

Additional Instructions:

Cleaning - Product Surfaces:

Removal of Sun Label - The Sun label can be easily removed by simply peeling it from the glass.

Glass - Use typical household glass cleaner and a soft cloth to clean the glass.

Metal Surfaces - The SunClad exterior aluminum should be washed occasionally with a mild soap and water solution and rinsed with a gentle spray of water. Metal hardware surfaces can be cleaned with a cloth dampened with a mild household cleaner, then polished dry with a clean soft cloth.

Vinyl Surfaces - Clean with a mild soap and water solution and a soft cloth.

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

Screens - Remove from the window and wash with a mild soap and water solution. Rinse with a gentle spray of water.

Warnings, Notes, Etc.

- Read All Instructions and Notes. Do not proceed if you are unable to understand and follow these instructions.
- These Instructions are for Typical Wood Frame Construction. Local building codes and other construction concerns may require additional installation instructions per Architect or Building Professional.
- Proper Application of Product: This product is design for typical vertical wall construction. Do not use in roof, sloped walls or aquatic applications.
- To prevent damage to the product and its components, keep product closed and locked throughout all phases of the construction project.
- Failure to follow these installation instructions or the specialized instructions designed by an Architect or Building Professional will void the Product Warranty.
- Read the Sun Product Warranty, available online at www.sunwindows.com/Support/Warranty.html and follow all product application, care and maintenance guidelines. Failure to do so will void the Product Warranty.

- Window and Door products can be heavy. Use caution when handling. Assistance may be needed. Failure to do so may result in injury or damage to the product.
- Prior to installing, do not store the product in direct sunlight. Store in a temperature controlled environment to keep the product from freezing or over heating. Do not stack horizontally. The product may be stacked vertically with additional units, providing no glass surface is load bearing. Failure to do so may result in product damage and will void the Product Warranty.
- Elevated Working Heights - use caution working around unit openings. Follow manufacturers' instructions. Failure to do so may result in injury or death.
- Use of hand and power tools - follow manufacturers' instructions. Failure to do so may result in injury or death.

- Use only Low Expansion Foam designed for windows and doors and follow manufacturers Instructions for application.
- All Product Surfaces must be protected throughout all phases of construction and finishing. Failure to do so will void the Product Warranty.
- Protecting the product from work site conditions and debris is the responsibility of builder, installer, subcontractors
- Raw Wood Surfaces must be protected, properly prepared and finished within 90 days of installation according to the instructions in this document. Failure to do so will void the Product Warranty.
- Chemicals and Cleaning - follow the instructions included in this document for cleaning the product. Do not allow harsh chemicals to contact any of the product surfaces. Failure to protect the product throughout all phases of construction and finishing will void the Product Warranty.
- Follow Glass Cleaning Practices contained in this document. Failure to do so will void the Product Warranty
- Water Management - 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. Sun Windows, Inc. cannot control or be responsible for water/moisture management beyond the product itself. All products manufactured by Sun Windows must be properly installed as described per these installation instructions. All products manufactured by Sun Windows 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. Failure to properly install these systems will void the Product Warranty

***For questions or more information call 1-800-328-1151, Monday to Friday, 8 AM to 4:30 PM Central Time.
For more information visit our website - www.sunwindows.com***