



INSTALLATION GUIDELINES FOR APPLICATION OF VINYL WINDOWS WITH NAILING FINS

READ THESE GUIDELINES COMPLETELY BEFORE BEGINNING. Inspect the rough opening and product thoroughly. Do not install if there is any observable damage, condition or other irregularity that could impact installation or unit performance. Ensure compliance with local building codes, project requirements, and good building practice, as these requirements supersede these guidelines. The product warranty includes important information regarding Ringer Window's products. Complete product warranty and other pertinent information is available by calling Ringer Windows or online at www.ringerwindows.com.

FAILURE TO FOLLOW THESE GUIDELINES AND BUILDING CODE REQUIREMENTS MAY AFFECT THE REMEDIES AVAILABLE UNDER THE WARRANTY.

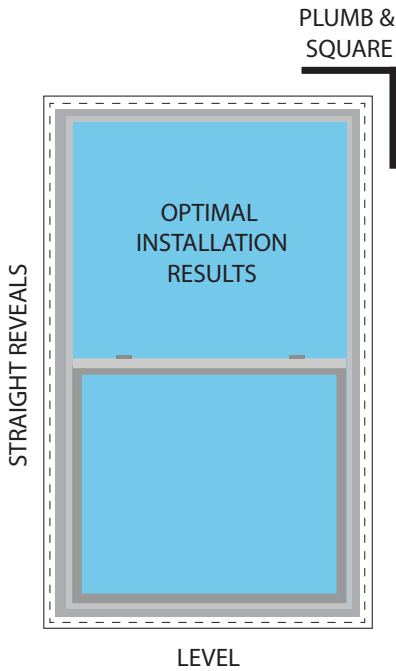
1. Make sure the rough opening is plumb, square and the sill plate is level. Rough openings should be no wider than ½" larger than window frame in width and height.
2. If the building has weather resistant barrier (e.g., house wrap) prepare the opening according to the manufacturer's instructions. Use of appropriate flashing material is recommended. Sill flashing should be installed before setting the unit. Jamb flashing will be installed over the nail fin after the window is affixed, overlapping the sill flashing and extending up past the top nail fin approximately 2". Head flashing should also be applied over the nail fin and jamb flashing, extending no less than 1 inch beyond the outer edges of the jamb flashing. Integrate any barrier system, ensuring adequate seals between materials and at transitions. Flashing must be rated to meet ASTM D-779 - 24-hour water resistance.
3. Keep sash closed and locked throughout installation. Keep jambs plumb and square with head and sill. Be careful not to "crown up" or "bow down" the sill or head. Constantly check width at the meeting rails of single and double-hung units (center point on casements) to avoid a "bowed out" installation.
4. Apply a continuous 3/8" bead of premium grade, compatible exterior sealant to the interior (backside) of the nail fin near the outside edge, in line with the pre-punched holes **on all sides, before** setting the window into the rough opening.
5. Vinyl windows can be more flexible than non-vinyl windows and as such, require attention to properly set the window into final position before it's permanently attached. The window, or mulled sets of windows, should be placed flat on the sill plate so that the weight of the window(s) is equally distributed and supported directly on the sill. If necessary, place flat setting shims on the rough opening sill plate under the bottom corners of the window to ensure equal spacing within the opening. For Single or Double Hung units, remove shims or blocks under the sill except at the frame corners after installation. For units with intermediate jambs and for all slider units, continuous shim or horizontal shims are recommended under each intermediate jamb and meeting rail to ensure sill remains level. Apply additional shims as necessary to maintain a level sill throughout installation.
6. Place a temporary fastener in the slot provided in the nail fin at each top corner, check level and square of the window by measuring the diagonals. Open bottom sash to check "reveal" (space) between the bottom of the sash and the window sill. Close and relock the sash, adjusting if necessary. Place fasteners in the bottom corners and check again for level, plumb and square.
7. Secure the window with fasteners that penetrate the framing by a minimum of 1". Install fasteners straight, not angled. Keep the sash locked until all sides are secure. Prior to fastening ensure all frame members are plumb, straight, and level. Fasteners should be applied securely into every other slot on all sides. Do not distort the nail fin with the fasteners.
8. Apply sealant over exposed fastener heads, any unused slots, and the outside edge of the nail fin where it comes in contact with the barrier or sheathing. Continue flashing installation as appropriate.
9. Vinyl windows can be more flexible than non-vinyl windows and as such, require attention to properly set the window into final position before it's permanently attached. Place and secure shims along the perimeter and at the meeting rail/check rail, as needed, to prevent the frame from bowing. These shims should remain after installation. Caution should be taken to not deflect the frame and hinder sash operation. Unlock and operate the sash(es). Visually inspect all sight lines. Check to see that all reveals between the frame and sash elements are straight and even AND not bowed or concave. Adjust or shim as required to ensure consistent sash reveal.
10. Insulate between the window frame and rough opening with fiberglass batt insulation or equal. Expansion foam can impair operation or distort frame. Ringer Windows does not recommend using expansive foams and it could affect the user's rights under the warranty.
11. Allow a ¼" gap between the exterior cladding, siding, brick, stucco or stone and the window frame on all sides (except vinyl j-channel). The gap (expansion joint) should be filled with correct size backer rod, then sealed with a high grade exterior sealant and will need to be maintained.

CAUTION

- The use of solvents or acids can damage components of this product and will limit rights under the warranty.
- Vinyl windows have pre-punched slots for new construction installation – fastening in any other portion may permanently damage unit and limit rights under the warranty.
- It is the responsibility of the owner, architect, and/or builder to select products that comply with applicable laws, site requirements, building codes and to ensure that installation complies with those same requirements.
- Do not store Ringer Window units in the sun or lay flat before or during installation or transportation.
- ANY PENETRATIONS (e.g. ALARM SENSORS) MADE THROUGH ANY PORTION OF ANY RINGER WINDOWS, INC. PRODUCT MAY AFFECT RIGHTS UNDER THE MANUFACTURER'S WARRANTY.
- Some laws and building codes require safety glass or other life safety considerations. Ordering party is responsible to specify appropriate features and ensure compliance with local laws and building codes. Installer should have knowledge of general requirements and not set or affix non-compliant units.

These guidelines are recommendations only. Check state and local codes for applicable requirements, restrictions, and/or fastening demands. If unit has exterior trim (brick mold/j channel, et.) trim is provided for aesthetic purposes only and not designed to be watertight. Installation into masonry or replacement openings must be sealed to the openings using an approved, proper method. For any questions regarding installation contact Ringer Window and/or refer to AAMA 2400 and/or ASTM 2112.

These installation guidelines are provided for information only; no representation or warranty is made or can be inferred that these guidelines set forth all information necessary for proper installation. Given the variety of field conditions, responsibility for product installation rests with the installer. Do not proceed unless you have addressed the factors necessary to achieve weather-tight installation of a properly functioning product. Ringer Windows, Inc. assumes no liability for any personal injury or property damage incurred in installation. These guidelines, together with the product specifications and warranty set forth the entire scope of liability of Ringer Windows, Inc. with regard to the product.

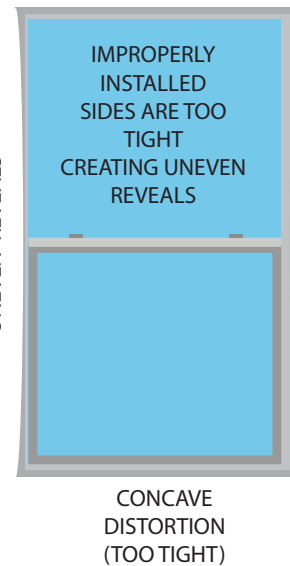
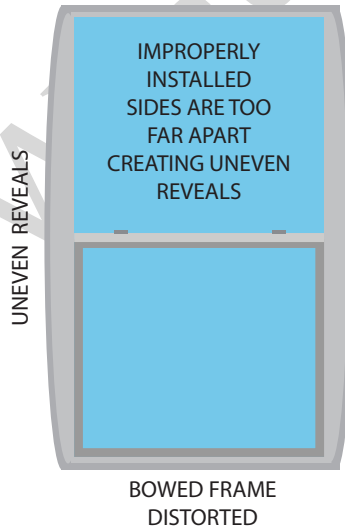
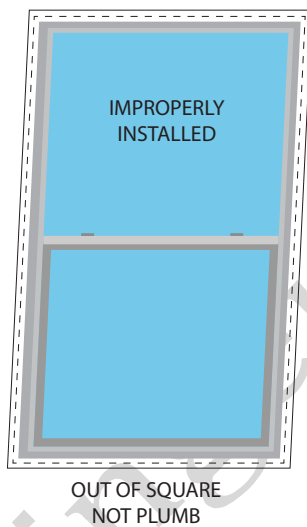


OPTIMAL INSTALLATION

Fastener Guidelines

Nailfin Holes to Use for Fasteners	Standard: Every 6 Inches Impact: Every 4 Inches
Distance From Window Corners	2" From Corner
Building Framing Penetration	1" min or as local codes dictate
Min. Corrosion-Resistant Nail Size	3/8" Minimum Head Diameter
Min. Corrosion-Resistant Screw Size	#8 or Larger Pan Head

Note: Milled units may require additional supports



Improper Installation