

# Installation: Nail Fin Frames

Before beginning any window installation, carefully review the entire "INSTALLATION INSTRUCTIONS" document. Contact the manufacturer with any questions.



*Every RAM Industries window product has been designed and tested to meet or exceed industry performance and engineering standards. The key to preserving this performance is the proper installation, care and maintenance of these products. Failure to correctly install your window product may result in improper functioning and will void the manufacturer's warranty.*

## **WINDOW STORAGE AND HANDLING**

- Care should be taken when handling or storing a window product to protect against damage.
- Do not drop or drag a window unit at the jobsite to avoid racking or damaging the window. Racking a window may compromise the factory applied joint seal in the window frame or cause the window to become out of square.
- Handle the window unit by the jambs and not the by head section.
- For temporary storage at the jobsite, all windows should be stacked in a near vertical position with the window oriented in the proper direction.
- The protective wood corner blocks supplied with the window should be kept on the frame during storage to elevate the window frame off the ground and to prevent the windows from rubbing together.
- During temporary storage, protect the windows from weather elements by storing in a dry and well-ventilated environment.

## **ROUGH OPENING PREPARATION**

- Ensure that the rough opening does not contain any dissimilar metals, which may lead to galvanic corrosion with the aluminum window frame. If a dissimilar metal is used in the rough opening framing, it must be completely isolated from the window frame.
- The rough opening for the window should be sized one-half inch (1/2") larger than the window size (outside measurement of the window frame) in width and height. Provide a minimum of one-quarter inch (1/4") clearance at the top or head of the window frame and one-eighth inch (1/8") clearance on each side or jamb of the window frame. (Note: When using a rigid sill panning product, the rough opening dimensions may have to be adjusted accordingly to account for the height of the panning.)
- The rough opening framing should be level, plumb, square and structurally adequate.
- On shapes such as round tops, eyebrow arch tops, rakes (polygons), bulls-eye (round) and octagons, make sure there is proper bracing in the rough opening framing.
- Sheathing and weather-resistant barrier should be installed around the entire perimeter of the rough opening in a weatherboard fashion. (Note: The flashing paper referred to in this document is to be no less than nine inches (9") wide (or wider as required by local codes) and shall be barrier coated reinforced to provide twenty-four (24) hour minimum protection from water penetration per ASTM D 779.) (Note: The flashing paper should be self-adhering or must be applied using galvanized nails or corrosion resistant staples.)
- A rigid or flexible sill-panning product should be installed following the manufacturer's instructions.
- Apply a strip of flashing paper horizontally immediately below the sill, cut sufficiently long enough to extend past each side of the window, so that it projects at least three inches (3") past the vertical flashing to be applied later. Fasten the top edge of the sill flashing, but do not fasten the lower edge, so the weather resistant barrier, applied later, may be slipped up and underneath the window flashing paper in a weatherboard fashion.
- Place temporary shims at each corner of the rough opening where the jamb meets the sill. (Note: The shims should be a non-porous, non-absorbent and inorganic material.)

## **WINDOW PREPARATION**

- Place the window product at the appropriate rough opening and remove the protective wood corner blocks from the window frames.
- Inspect each window unit for correct size, type and any hidden damage. If a problem exists, immediately report it to your distributor.
- Make sure that the operable sash is closed and locked during the entire installation process.
- Apply a three-eighths inch (3/8") nominal continuous bead of sealant to the backside (interior) of the nail fin at the head and jambs only. Do not apply sealant on the backside of the nail fin at the sill. Also apply a heavy bead of sealant along the seams of all window frame and nail fin joints at the corners. (Note: The sealant material should conform to AAMA 800-92 and should be compatible with the flashing material per each manufacturers' recommendations. Refer to ASTM E 2112 for guidance on sealant selection.)

## WINDOW INSTALLATION

- Insert the window into the rough opening from the outside and rest it on the temporary shims.
- Adjust the placement of the window unit by shimming at the head, jambs and sill.
- Cross measure the window unit diagonally in both directions and adjust as necessary to achieve a level, plumb and square condition as well as an even reveal around the frame opening.
- Ensure there are no crowns and dips in the head, jambs or sill.
- Secure the full perimeter of the window unit with the equivalent of 6d galvanized or corrosion resistant fasteners at twelve inches (12") on center. In each direction from the corners, there must be a fastener within six inches (6"), but not closer than three inches (3"), to prevent frame distortion or fracture of joint seals. Take care not to damage the nail fin by over tightening the fasteners. (Note: Operable windows require additional fasteners located within one inch (1") each side of, and in the same plane as the hinge or pivot.)
- Recheck the window unit for level, plumb and square. Check the operation of the window (if applicable) that it operates smoothly without any binding and the locks are able to engage completely.
- Apply a continuous bead of sealant to the exposed nailing fin at the top (head) and sides (jambs) of the installed window unit. Continue the jamb sealant vertically approximately 8 inches above the top of the window. The sealant applied horizontally at the head should not extend beyond the jamb sealant. Also apply a heavy bead of sealant along the seams of all window frame and nail fin joints at the corners. (Note: The application of sealant to the exterior surface may not be necessary if using a self-adhering type flashing over the nail fin. Consult the flashing paper manufacturer as needed.)
- Starting at each jamb, embed the flashing paper into the sealant on the nail fin and fasten in place. The flashing paper should be cut sufficiently long enough to extend at least three inches (3") past the sill flashing paper and at least six inches (6") above the head of the window.
- At the window head, embed the flashing paper into the sealant on the nail fin and fasten in place. The flashing paper should be cut sufficiently long enough to extend at least three inches (3") past the flashing paper at each jamb. Weather-resistant building paper should then be applied in a weatherboard fashion.
- On the interior of the window unit, apply a backer rod or loosely packed insulation and a continuous bead of appropriate sealant to the entire joint between the window frame and the building structure. (Note: The use of pressurized expandable foam-type insulation is not recommended as it may cause damage or impair the operation of the window unit and void the warranty.)
- To finish the exterior of the window when applying brick, stone, stucco, siding, etc., the Owner / General Contractor is responsible to ensure that the weather barrier is continuous by effectively sealing the material to the window frame.
- Refer to the separate "CARE & MAINTENANCE INSTRUCTIONS" regarding the proper cleaning and care required for the window frame, glass and components. (Note: The "CARE & MAINTENANCE INSTRUCTIONS" document provides important information regarding protecting the window product immediately after installation and during the building construction process.)

Refer to "AAMA Installation Masters" or applicable ASTM standards for additional detail or clarifications. Installation of RAM products must be in accordance with the standards set forth in ASTM E 2112. AAMA, ASTM and/or EIMA guidelines supercede these instructions.

The key to any window installation is preparation. Careful planning and attention to detail can help ensure the installation of a properly functioning window.

