

KINRO VINYL WINDOWS & DOORS U-FACTOR and SHGC ACCORDING TO NFRC 100-04 and NFRC 200-04 (WITHOUT GRID)						
PRODUCT	VALUE TYPE	CLEAR Air CLEAR	BRONZE Air CLEAR	CLEAR Argon CLEAR	LOW-E Air CLEAR	LOW-E Argon CLEAR
SERIES 4700 SINGLE HUNG	U-FACTOR	0.50		0.48	0.36	0.32
	SOLAR HEAT GAIN COEFFICIENT	0.61		0.61	0.31	0.31
	VISIBLE TRANSMITTANCE	0.65		0.65	0.58	0.58
SERIES 9750 SINGLE HUNG	U-FACTOR	0.49	0.49	0.47	0.35	0.31
	SOLAR HEAT GAIN COEFFICIENT	0.63	0.47	0.63	0.33	0.33
	VISIBLE TRANSMITTANCE	0.68	0.46	0.68	0.60	0.60
SERIES 9990 HORIZONTAL SLIDER	U-FACTOR	0.50		0.48	0.35	0.31
	SOLAR HEAT GAIN COEFFICIENT	0.63		0.63	0.33	0.32
	VISIBLE TRANSMITTANCE	0.68		0.68	0.60	0.60
SERIES 4700 FIXED WINDOW	U-FACTOR	0.49		0.47	0.34	0.30
	SOLAR HEAT GAIN COEFFICIENT	0.64		0.64	0.33	0.33
	VISIBLE TRANSMITTANCE	0.69		0.69	0.61	0.61
SERIES 9700 FIXED WINDOW	U-FACTOR	0.48		0.46	0.32	0.28
	SOLAR HEAT GAIN COEFFICIENT	0.68		0.68	0.35	0.35
	VISIBLE TRANSMITTANCE	0.73		0.73	0.65	0.65
SERIES 9770 DOUBLE HUNG	U-FACTOR	0.49	0.49	0.47	0.36	0.32
	SOLAR HEAT GAIN COEFFICIENT	0.59	0.49	0.59	0.31	0.31
	VISIBLE TRANSMITTANCE	0.64	0.47	0.64	0.57	0.57
SERIES 1600 SLIDING GLASS DOOR	U-FACTOR	0.47		0.45	0.33	0.29
	SOLAR HEAT GAIN COEFFICIENT	0.65		0.65	0.33	0.33
	VISIBLE TRANSMITTANCE	0.69		0.69	0.62	0.62

LOW E IS PPG SB60 on second surface

KINRO VINYL WINDOWS & DOORS U-FACTOR and SHGC ACCORDING TO NFRC 100-04 and NFRC 200-04 (WITH GRID)						
PRODUCT	VALUE TYPE	CLEAR Air CLEAR	BRONZE Air CLEAR	CLEAR Argon CLEAR	LOW-E Air CLEAR	LOW-E Argon CLEAR
SERIES 4700 SINGLE HUNG	U-FACTOR	0.50		0.48	0.36	0.32
	SOLAR HEAT GAIN COEFFICIENT	0.54		0.54	0.28	0.28
	VISIBLE TRANSMITTANCE	0.58		0.58	0.51	0.51
SERIES 9750 SINGLE HUNG	U-FACTOR	0.49	0.49	0.47	0.35	0.32
	SOLAR HEAT GAIN COEFFICIENT	0.57	0.47	0.57	0.30	0.30
	VISIBLE TRANSMITTANCE	0.61	0.46	0.61	0.54	0.54
SERIES 9990 HORIZONTAL SLIDER	U-FACTOR	0.50		0.48	0.35	0.31
	SOLAR HEAT GAIN COEFFICIENT	0.57		0.57	0.30	0.29
	VISIBLE TRANSMITTANCE	0.60		0.60	0.54	0.54
SERIES 4700 FIXED WINDOW	U-FACTOR	0.49		0.47	0.34	0.30
	SOLAR HEAT GAIN COEFFICIENT	0.58		0.58	0.30	0.30
	VISIBLE TRANSMITTANCE	0.61		0.61	0.55	0.55
SERIES 9700 FIXED WINDOW	U-FACTOR	0.48		0.46	0.32	0.28
	SOLAR HEAT GAIN COEFFICIENT	0.62		0.62	0.32	0.32
	VISIBLE TRANSMITTANCE	0.66		0.66	0.58	0.58
SERIES 9770 DOUBLE HUNG	U-FACTOR	0.49	0.49	0.47	0.36	0.32
	SOLAR HEAT GAIN COEFFICIENT	0.53	0.44	0.53	0.28	0.28
	VISIBLE TRANSMITTANCE	0.57	0.42	0.57	0.50	0.50
SERIES 1600 SLIDING GLASS DOOR	U-FACTOR	0.47		0.45	0.33	0.29
	SOLAR HEAT GAIN COEFFICIENT	0.57		0.57	0.30	0.30
	VISIBLE TRANSMITTANCE	0.61		0.61	0.54	0.54

LOW E IS PPG SB60 on second surface



Revised November 26, 2012

Metal, Vinyl, Flush Mount and Recessed Fin Windows Recommended Installation Instructions

These installation instructions are recommendations only. Local building codes may impose additional requirements, and those codes may supersede these instructions. Additional resources include:

AAMA 2400 - Standard Practice for Installation of Windows with a Mounting Flange in Open Stud Frame Construction for Low Wind/Water Exposure

FMA/AAMA 100 - Standard Practice for the Installation of Windows with Flanges or Mounting Fins in Wood Frame Construction. (specifically designed for installations subject to extreme wind/water climate exposure)

Kinro makes no warranty, expressed or implied, with respect to these or any other third party instructions. Kinro shall not be liable for any damage or liability that may arise in connection with any product installation not performed by Kinro

I. Rough Opening Preparation

- A. Opening for windows should be framed in accordance with the required standards for size of window used in order not to apply any loading to the window which may hamper its operation. The prepared rough opening should allow a minimum 1/8" clearance on each side, the head and the sill, including the thickness of pre-finished paneling, shims, liners, etc., where used.
- B. **Window rough opening should be level, plumb and square:** Check width, height, and diagonal measurements to assure the opening is level, plumb and square. **It is recommended that the sill of the rough opening be straight and level. Bowed or warped sill framing members can result in a crowned sill of the window.**
- C. Make certain all window mounting surfaces are securely fastened and flat around the perimeter of the rough opening. Check the opening for correct size per section A above.
- D. Weather Resistance: Prepare the rough opening in accordance with prevailing codes. A number of solutions exist that are appropriate for site location and it is not the intent of Kinro to advocate only one. Flashing guidelines for openings can be found in the current version of **AAMA 2400 and FMA/AAMA 100** as referenced above or as published by the manufacturer of the flashing system in use.

II. Window Installation

Note: Installing vinyl windows with vinyl nailing fins on top of vertical or horizontal metal siding will void all warranties. Vinyl nailing fins will be damaged and leaks may occur. Aluminum mounting flanges are available specifically for this condition.

- A. It is recommended to apply a quality, non-hardening, water resistant sealant to the back of the window mounting flanges in order to provide a water tight seal with the homes weather-proof envelope. Suitable types include 1/8" thick putty or butyl tape or a 1/4" bead of gunnable sealant. The tape or caulk bead should be applied centered over the mounting holes on the back of the window mounting flange.

CAUTION:

- For vinyl windows, do not use a sealant that contains solvents which may chemically attack vinyl.
- The use of foam tapes is not recommended for window installation.

- B. **Do not** remove any shipping clips (if provided on the window series being installed) and **always keep operating sash closed and locked during installation.**
- C. Always handle windows with care. Always pick them up by both side jambs using both hands. **Never** pick up and handle windows by the header only, sill only, or by one side jamb only. This can damage the windows and possibly rupture the glazing seal and/or joint caulking, thus resulting in a possible leak.
- D. Carefully insert the window into the opening. Center the window in the rough opening with the sill of the window resting on the sill of the rough opening. Press the mounting flange against the mounting surface.

Note: All fasteners should be driven straight into the mounting flange. See section III for fastener information.

- E. The following sequence of fastener installation is suggested: Drive the first fastener at approximately the center of one vertical frame jamb mounting flange. Drive the second fastener on the opposite mounting flange at the approximate center. Drive the third fastener at the center of the sill flange. (**Note: When installing windows check the window sill for straightness. If the window sill is crowned, apply light pressure at the center of window sill until it is level. While holding the sill level, drive the third fastener into the center of the sill flange.**) Drive the fourth fastener at the center of the head flange. Run fasteners, from one of the above fasteners, to the end of each frame member. Repeat this step until all fasteners have been inserted from the center of the vertical frame jamb outward to both ends of each member. Finish installing the fasteners from the center of the Frame Head and Sill outward to the ends of each member. See attached drawing for visual guide to fastener placement of assorted window types.

This sequence of fastener installation applies to both vertical and horizontal sliding windows, flush mount and recessed fin mount, for both metal and vinyl windows.

- F. Avoid damage to the seal between the glass and the window glazing member. Power drivers should be adjusted so as not to cause excessive dimpling of the window flanges. Careless mounting procedures could negate window certification and Kinro warranty.
- G. If the exposed surfaces of the rough inside opening are to be trimmed out with pre-finished paneling, it must be done in such a manner so as not to distort or twist the window frame members and make the operating sash tight or inoperable. If interior trim is installed prior to window installation insure that enough room is left to allow the window to fully seat against the exterior wall surface. Do not obstruct tilting sash operation or locking mechanisms with inside trim, wood molding, etc.
- H. Windows should be checked after installation to make sure that all moving panels, mechanisms, latches, and other hardware function properly. Any shipping clips must be removed prior to operation of the window. All windows should be checked for out-of-square or bowing of frame members. If any of the above problems are present, window should be removed and re-installed properly. **Double hung windows require extra care during installation. Double hung windows do not have fixed glass, which offers additional frame stability.**
- I. The window's exterior mounting flanges should be checked after the installation to assure an all-weather seal. It is recommended to seal the outside top of window (full width) with a good quality sealant for additional insurance and/or flash after installation in accordance **AAMA 2400** or **FMA/AAMA 100** as referenced above or instructions published by the manufacturer of the flashing system in use.
- J. For vinyl windows, leave an appropriate gap between the edge of the siding material and the window frame to allow for siding expansion and contraction.
- K. For vinyl horizontal sliding & fixed windows 72" in width and greater, Kinro recommends a sill support (minimum 1" thick) or angle bracket support, dependant on exterior home finish, to be installed underneath the projected frame sill on the outside.

- L. The use of any appurtenance system not approved for the Egress window or any alterations of an approved appurtenance system negates the window certification. The operating instructions and certification label are a permanent part of the Egress unit and must not be removed.
- M. There should not be any obstruction placed, attached, or located inside or outside an Egress window which would hamper direct access to Egress Devices or encroach on the minimum dimensions for horizontal, vertical, and square feet of area required for exiting.

Caution: Flammable fabrics could prevent access to the exit devices.

- N. An operational check of each installed **Egress Window or Device** shall be made at the installation site. For HUD manufactured homes it is recommended that the home manufacturer record and retain a permanent record of the serial number of the Egress unit in direct correlation with the serial number of the Manufactured Home in which it is installed. This will facilitate correction, recall and notification for non-compliance defects and/or imminent safety hazards.

III. Fasteners

- A. Fasteners should be selected to ensure compliance with applicable building codes. Consideration should be given to wind loads, temperature variations, and other site conditions. Screws, nails, or staples may be used as fasteners for your installation into wood framing. Only screws should be used for window installation into metal home framing. The fastener must penetrate the framing at least one (1") inch, allowing for exterior sheathing.

Fasteners for use in wood framing include:

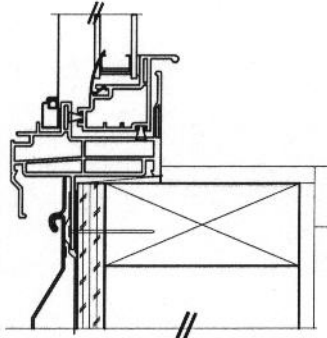
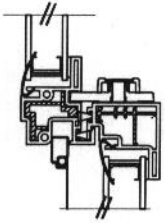
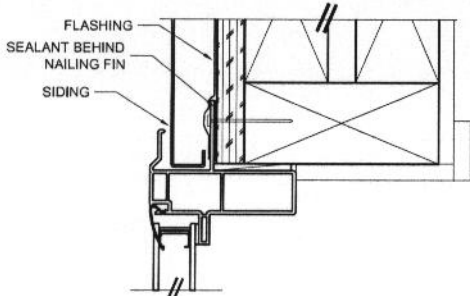
1. 6D smooth shank nails (min. 1 1/2" penetration)
2. 6D ring shank nails
3. 16 gauge adhesive coated staples, 7/16" crown.
4. #8 pan head screw

Note: Any fastener, either screw, nail, or staple that is left exposed to the weather should be plated or otherwise coated to prevent corrosion.

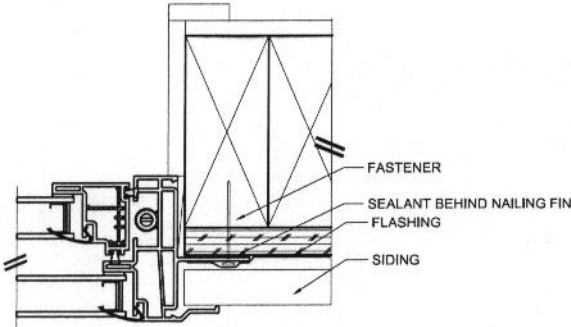
- B. It is suggested that one fastener be placed in or near every prepunched mounting hole for maximum anchorage strength. Fasteners should be spaced a maximum of 4" from the mounting flange corners and a maximum of 4 1/2" on center between fasteners around the perimeter of the mounting flange. The fastener location from the mounting flange edge should be no greater than 0.135 for all products.

Note that actual anchorage methods and materials may be dictated by the project plans or applicable local codes. Methods may also be as directed by an Architect or Professional Engineer. Site specific requirements may be enforced by the Florida Building Code or Texas Department of Insurance. Consult the FBC and/or TDI website for anchorage specifics when applicable.

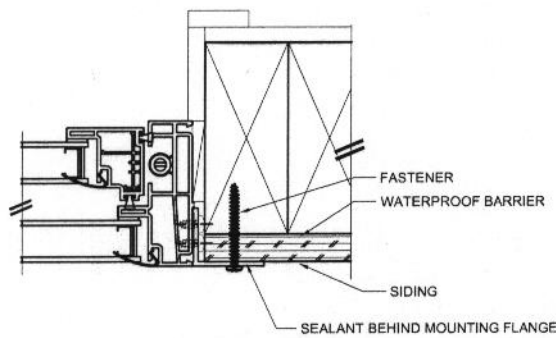
Kinro makes no warranty, expressed or implied, with respect to these or any other third party instructions. Kinro shall not be liable for any damage or liability that may arise in connection with any product installation not performed by Kinro



VERTICAL SECTION
LAP FIN WITH VINYL SIDING



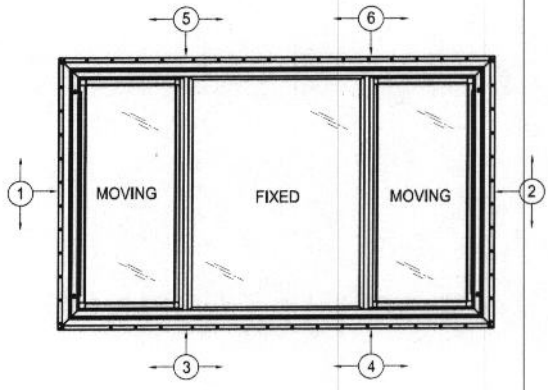
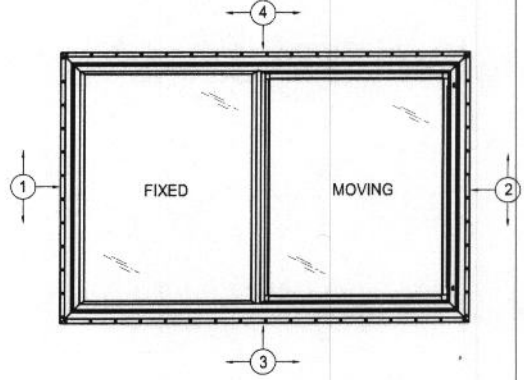
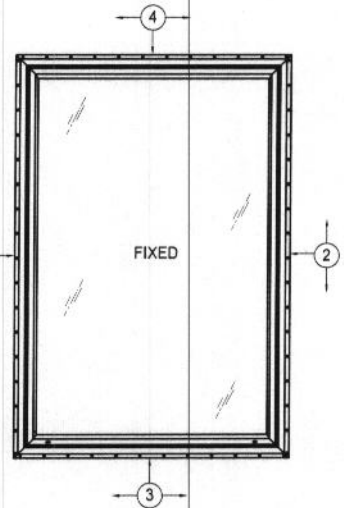
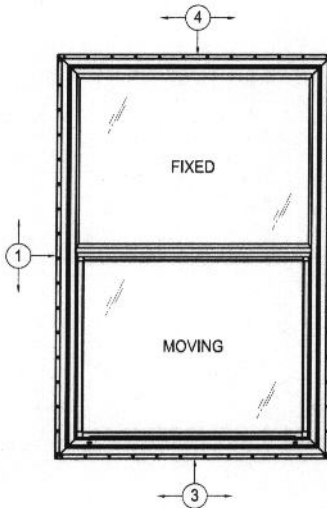
HORIZONTAL SECTION
LAP FIN WITH VINYL SIDING



HORIZONTAL SECTION
FLUSH FIN

IT IS RECOMMENDED TO ALWAYS START AT THE APPROX. CENTER OF THE NAILING FIN.

AFTER INITIAL FASTENERS ARE PLACED, RUN ALL OTHER FASTENERS FROM ONE FASTENER TO THE END OF THE NAILING FIN OR MOUNTING FLANGE.



TITLE: TYPICAL INSTALLATION AND ANCHORAGE DETAILS			
	<small>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF KINRO. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF LIPPERT COMPONENTS, INC. IS PROHIBITED.</small>		DATE: 9-19-12
			SCALE: NONE
ENG. RJL	DWN. RJL	SHEET 1	OF 1

Kinro

PRODUCT LIMITED WARRANTY

I. DURATION

This warranty is honored for a period of one year from the date of original retail purchase by the original retail purchaser or eighteen (18) months from date of delivery to the manufacturer or dealer by Kinro, whichever occurs first.

II. COVERAGE

Kinro warrants the product sold pursuant to this Warranty to be free of defects in materials and workmanship under normal use only when installed and maintained in accordance with Kinro's instructions and used for its intended purpose. This Warranty is extended only to the original retail purchaser.

In case of defect, Kinro will repair or replace any defective product free of charge or return the original purchase price, provided the claim procedures as set forth in this Warranty are followed.

This Warranty does not cover breakage of glass or torn screening.

The Warranty on any Kinro product furnished as a replacement for a Kinro product will be limited to the balance of the time remaining on the Warranty on the original product.

III. CLAIM PROCEDURES

Upon discovery of a defect or problem with a Kinro product, notify Kinro, Inc., 500 Airport Drive, Mansfield, Texas 76063 in writing, preferably by registered letter for your protection.

The written notice should include name, address, description of defect or problem, make of unit, serial number, location of product and where you can be reached during business hours.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

kinro assumes the responsibility and liability under this Warranty for repair or replacement of the defective product only and shall not be responsible for any incidental, consequential, or special damages resulting from any defect in a Kinro product or failure of a Kinro product to conform with this warranty or any implied warranty existing under the law. The remedy provided for in this warranty shall be the sole and exclusive remedy for any breach of this warranty as well as for any breach of any implied warranty existing under law. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation or exclusion may not apply to you.

This Warranty is in lieu of all other representations and express warranties.

All implied warranties, if any, existing under the law are limited in duration to the period of this Warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

In the event any Kinro product sold pursuant to this Warranty is put to a commercial rental, or other non-personal, non-family or non-household use by the original retail purchaser, then all implied warranties existing under the law are expressly negated, particularly in such event Kinro negates the implied warranty of merchantability and the implied warranty of fitness for a particular purpose.



Kinro

INSULATED GLASS LIMITED WARRANTY

Subject to conditions and restrictions set forth herein, Kinro warrants to the original home owner of its insulated glass units against material visual obstruction due to film formation or dust collection on the interior glass surfaces resulting exclusively from failure of the hermetic seal due to defective materials or workmanship or by means other than glass breakage. The unit is not warranted against glass breakage. Condensation on the interior (room side) of the glass is not a defect in the glass but the result of excessive humidity in the room.

The warranty is for a period of five (5) years from the date of original retail purchase, by the original retail purchaser of the manufactured home. Each unit will have a permanently stamped manufacture date on the spacer inside the unit. A replacement unit of glass will be supplied for failed units under warranty without charge. The warranty period for any replaced insulated glass unit will be the remaining unexpired portion of the original warranty period for the insulated glass unit.

Except as stated in Kinro Product Limited Warranty, Kinro shall not be liable for costs of removal or reinstallation of said defective life of glass, nor any costs or expenses relating to other activities necessary in finishing the reinstallation or damage or loss to other property. Kinro shall not be liable for any other incidental or consequential damages.

This warranty does not apply to units installed in ships, vehicles or commercial refrigeration, or in non-vertical positions. It will not apply to units damaged in handling or installation, nor to those not installed in strict compliance with the glazing instructions provided by Kinro or accepted construction practices.

This warranty shall be voided if the unit is subjected to abnormal stresses from the load application of heat, excessive vibration, building or foundation movement, or when provisions have not been made in accordance with sound practices for adequate expansion or contraction of framing members, application of films to the interior pane of glass, or use of cleansing solution which attacks unit seal, or if glazed with materials which do not remain resilient for the life of warranty, or if glazed with materials which are incompatible with the unit sealant, or if methods and materials used in glazing the unit do not completely repel water for the life of the warranty. Kinro reserves the right to inspect, in the field, any unit which is allegedly defective.

Upon discovery of a defect or problem with a Kinro product, notify Kinro (500 Airport Dr. Mansfield, TX 76063) in writing, preferably by registered letter for your protection. The written notice should include name, address, description of defect or problem, original purchase date, date on glass unit, description of window unit, serial number, location of product, and where you can be reached during business hours.

The warranties set forth herein are in lieu of all other warranties, expressed or implied. All implied warranties of fitness and merchantability are limited to the term of this warranty. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

