

INSTALLATION INSTRUCTIONS

SERIES 2250T OPERABLE WINDOW



- Thermally broken casement, awning & hopper windows
- Installation preparation
- Window alignment & anchorage
- Glass sizing & setting glass
- Protection & cleaning

INSTALLATION NOTES

All materials should be checked for quantity and quality upon receipt. MPG must be notified immediately of any discrepancies in shipment.

Store units in a dry, safe area. If exposure to rain, condensation or any water contact is likely, then all packaging material should be removed. Wet packaging materials will discolor and may stain finishes and paints. Do not store window units flat or stacked upon each other.

Check the openings and surrounding conditions where you will install the window units. Remember; if the construction is not per the construction documents, it is your responsibility to notify the general contractor in writing. Any discrepancies must be brought to the general contractor's attention before proceeding with the installation. Do not proceed until openings are within specified tolerances and suitable for positive anchorage.

Consult the sealant manufacturer for perimeter sealants and backer rod selection. Install sealants in strict accordance with the manufacturer's recommendations and specifications.

Isolate and protect finished aluminum surfaces from all contact with dissimilar metals, uncured masonry, muriatic acid and other material cleaning compounds or other products / materials that may cause permanent staining or surface destruction. Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609.1 for anodized aluminum and AAMA 610.1 for painted aluminum. Refer to the *MPG 2250T Cleaning and Maintenance* document.

Window anchorage fasteners are not supplied by MPG. Due to the varying perimeter conditions and performance requirements; perimeter anchor fasteners are not specified in these instructions. For perimeter anchor fasteners; refer to installer's shop drawings and consult with the fastener supplier.

Due to the diversity of the local, state and federal building codes; it is the responsibility of the architect, owner or general contractor to assure that the products selected for use on projects comply with all applicable building codes and laws. MPG exercises no control over the use or application of its products, glazing materials and operating hardware and assumes no responsibility thereof.

Cutting tolerances are plus or minus one thirty second of an inch (1/32") unless noted otherwise.

All windows must be installed plumb, square, level and in accordance with approved shop drawings and these installation instructions.

All sealants, primers, shims, fasteners, glazing tape (if sold unglazed), water diverters, sill flashings and accessory trim are the responsibility of the installing contractor.

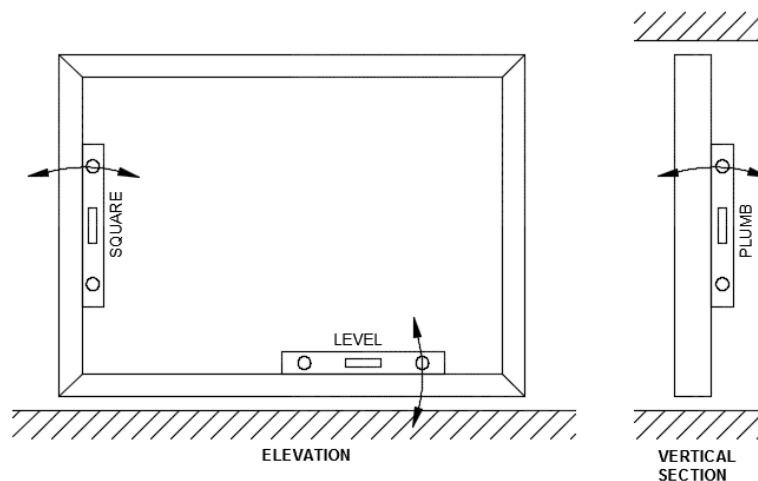
INSTALLATION

Preparation:

1. The rough opening should be checked for the correct size and building tolerances as noted in the building documents. Any discrepancies should be brought to the general contractor's attention before proceeding with the installation.
2. Allow a minimum clearance of 1/4" around the perimeter of the frame. Make sure all wall cavities around the window opening are sealed to prevent air flow. Inspect for solid load bearing material at the sill and for adequate building material for suitable anchorage around the opening.
3. Establish the window reference lines for the interior/exterior plane of the windows to be installed. Use bench marks, offset lines or reference points provided by the general contractor or project drawings.
4. Determine the high point of the opening sill using a level or transit.

Installation:

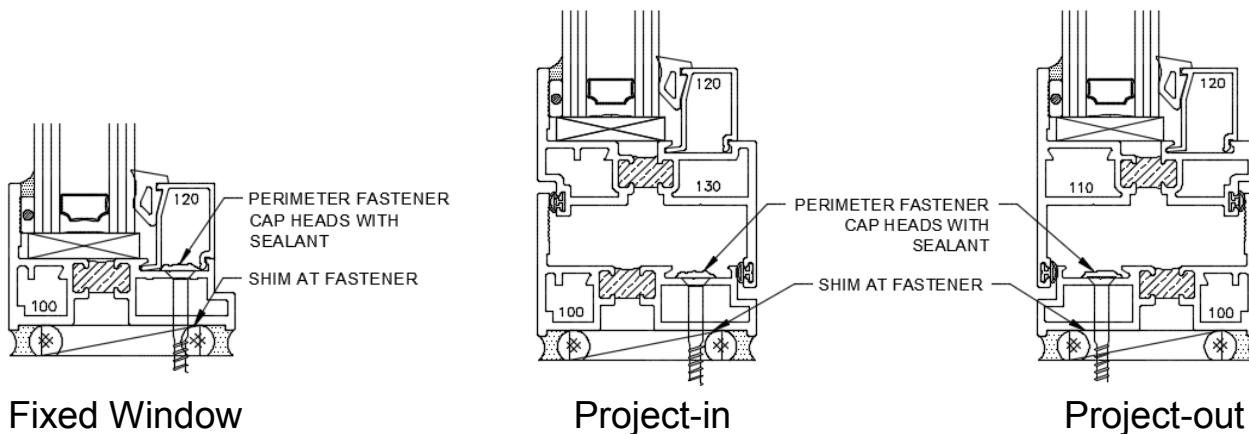
1. Set the window frame into the opening and using a level; make sure the unit is level, square and plumb. Use shim materials that are solid bearing and non-deteriorating. Solid PVC shims are preferable.



2. Shim window under each jamb and at each anchor location.
3. Frame fasteners should be determined by engineering calculation for size type and location. MPG will not be responsible for providing and/or specifying anchors on windows installed by other contractors.
4. Review system details for optional anchor locations within the window profile.

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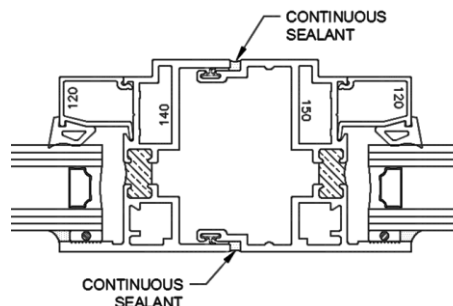
Locate fasteners within the frame as shown in the details below. Place fasteners similarly in the jambs and head of the window unit. Do not drill or fasten through the polyurethane thermal break material. Note: If the units are pre-glazed; the glass stops must be removed in the field to install the fasteners. All casement windows must be securely anchored at hinged jambs at each hinge location. This will transfer cantilevered sash loads into the building structure.



Sealants:

1. Prior to installing perimeter sealants; be sure to clear the frame surfaces of any loose dirt or debris. The window or opening surface shall not be wet or contain frost and the temperature should be above 40° Fahrenheit.
2. Install open or closed cell backer rod around the interior and exterior of the window with type as recommended by the sealant manufacturer.
3. Sealants and primers shall be suitable for use considering the materials being caulked. Consult the project documents for sealant specifications.
4. The window units shall be perimeter sealed on both the exterior and interior in compliance with MPG's laboratory test results.

Provide continuous sealant along both sides of stack mullions.



Hardware Adjustments & Maintenance:

1. Hardware has been pre-adjusted in the factory for free and easy operation of the sash assembly. Delivery transportation and installation conditions may require field adjustments following the installation process. Field adjustments are not the responsibility of MPG. Any required adjustments should be made before the installers work is completed.
2. If hardware has been contaminated with dust, dirt or debris; flush the components with clear water. Use mild soap to loosen stubborn dirt. Flush with clear water and then dry. Lubrication may be required after cleaning.

Lubrication

After the hardware is clean and dried it must be lubricated to restore the smooth operation, and in some cases corrosion resistance. There are a number of commercially available products which can be used. It is recommended that the replacement lubricant be similar to what was removed. (If the gears were coated with grease before you cleaned them, re-lubricate only with grease, not a spray such as WD40, etc.) The following list of products will help you know where each should be used.

Lithium Grease: Use on all gear drives; such as operators and locks. Best choice due to waterproofness.

WD40 or CD2: Use on all sliding or rotating joints; such as rollers, pivots, brackets, hinges and chains. Another area this lubricant can be used is in the sliding pin inside the bolt and to the lock cylinder on bi-fold door hardware. Attaching a tube to the nozzle will help concentrate the spray and direct it to the appropriate spot. There are access areas on dropbolt products to allow this procedure to be done without having to remove the locks from the doors. These lubricants won't last as long as oil.

Automotive Grease or Petroleum Jelly: Will work in same areas as White Grease, but is not as waterproof and it will attract dust. Be careful when applying grease since it will stain any wood it contacts.

Light Oil such as 3 in 1 Oil: Can be used on sliding or rotating joints. Care must be used when applying due to possible staining of wood parts.

Graphite: Can be used on sliding and rotating joints. Also works well on cam locks and hinges.

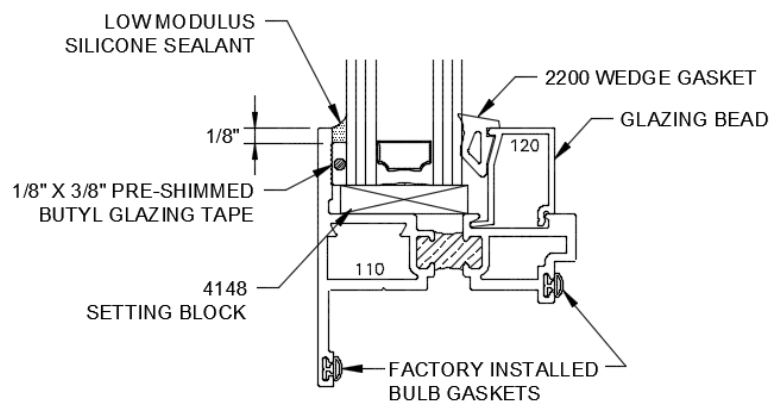
GLAZING

One inch insulated glass units are the standard for the 2250T window system. Windows to be glazed with a narrower glass thickness will require alternate glazing materials. Consult MPG for alternate glass thickness glazing material requirements. Units glazed with non-standard products by other contractors are not covered under warranty.

GLAZING

Casement Windows:

1. Verify that the frame and sash are properly aligned with an 1/8" margin around the entire perimeter of the sash.
2. Remove the glazing beads and clean the exterior glazing leg with isopropyl alcohol and using the two-cloth cleaning method.
3. Install a pre-shimmed butyl glazing tape, 1/8" x 3/8" equal to Tremco POLYshim II Tape around the four sides of the opening. Tape at corners of sash shall have a full 90 degree over-lap. Meld together the corner over-laps and any butt splices with your fingers to form a water-tight seam. Over-lap splices are not permitted.
4. Hold the glazing tape back 1/8" from the top of the sash glazing leg to allow for a silicone wet seal.



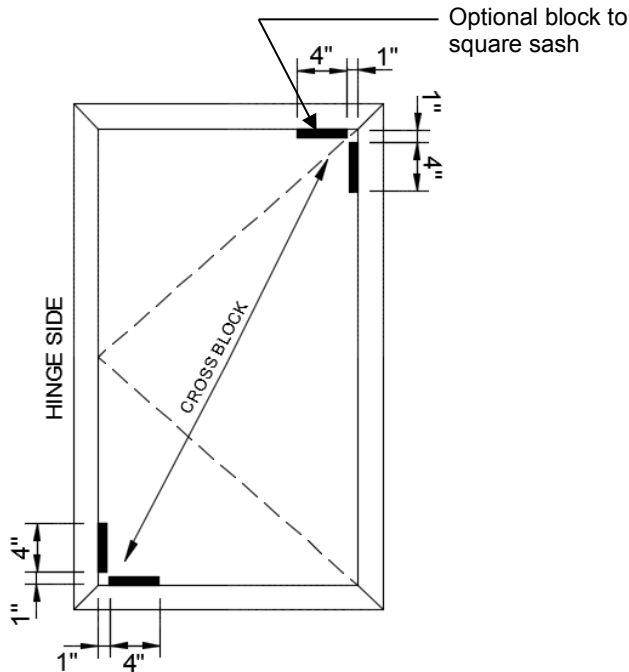
Sash Glazing Detail

5. Place casement glass in sash using the cross-block method of setting block locations. Note that the top of glass setting block (shown on detail) is only required for minor correction of sash sag. Cross-blocking is required in order to transfer glass loads back to the hinge jamb.

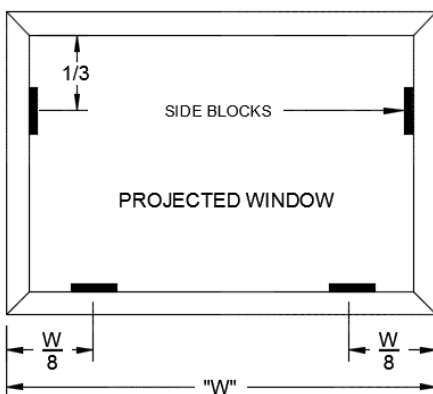
--- See next page for setting block detail ---

6. Center the glass and carefully set the unit down onto the sill setting block. Place and secure the lower side-glass setting block into position. When satisfied with glass positioning; press the glass firmly against the glazing tape.
7. Snap on the interior glass stops (glazing bead). The glass stops are cut and pre-fit in the factory.
8. Install the interior wedge gasket using the tuck method shown on page 7.

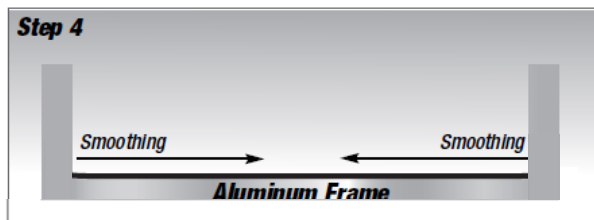
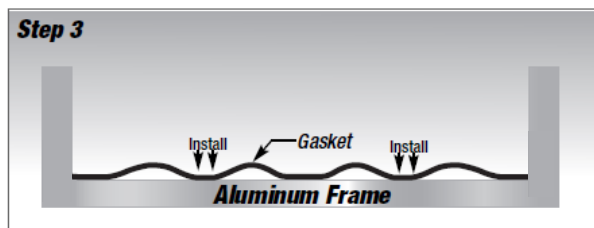
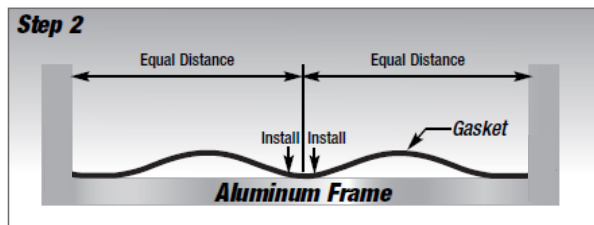
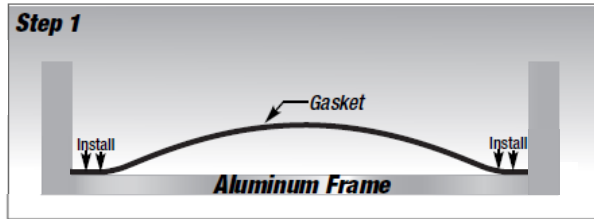
GLAZING



Casement Glass Blocking



Projected Unit Glass Blocking



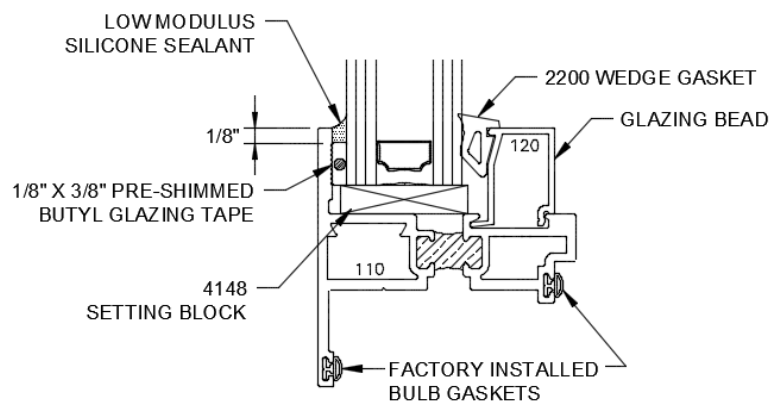
Wedge Gasket – Installation Method

1. Cut the length of interior wedge gasket approximately 1% longer than the opening dimension.
2. Tuck the center and each end of the gasket into the glazing cavity.
3. Then, tuck the mid-areas between the end and the center. Continue to press and install the lifted portions of the gasket until well positioned.
4. Provide hand smoothing or rolling wheel movement towards the center of the glass. This will prevent stretching the gasket away from the corners. Finally; trim the gasket ends for a secure, weather-tight corner.

GLAZING

Projected Windows:

1. Verify that the frame and sash are properly aligned with an 1/8" margin around the entire perimeter of the sash.
2. Remove the glazing beads and clean the exterior glazing leg with isopropyl alcohol and using the two-cloth cleaning method.
3. Install a pre-shimmed butyl glazing tape, 1/8" x 3/8" equal to Tremco POLYshim II Tape around the four sides of the opening. Tape at corners of sash shall have a full 90 degree over-lap. Meld together the corner over-laps and any butt splices with your fingers to form a water-tight seam. Over-lap seams are not permitted.
4. Hold the line of the glazing tape back 1/8" from the top of the sash glazing leg to allow for a silicone wet seal.



Sash Glazing Detail

5. Place the glass in the sash on setting blocks place at eighth point locations. Setting blocks placed closer together may cause the center of the sash to sag.

--- See previous page for setting block detail ---

6. Center the glass and carefully set the unit down onto the sill setting blocks. When satisfied with glass positioning; press the glass firmly against the glazing tape. Place the side-blocks as shown to help maintain a square and aligned sash for proper operation.
7. Snap on the interior glass stops (glazing bead). The glass stops are cut and pre-fit in the factory.
8. Install the interior wedge gasket using the tuck method shown on page 7.

GLASS SIZING

Glass Size Formula

Daylight Opening (w) or (h) + 1"

100 Fixed Frame (no sash)

Daylight Opening = frame size (w) or (h) -2 7/8"

Glass Size = frame size (w) or (h) -1 7/8"

140 Fixed Frame (no sash)

Daylight Opening = frame size (w) or (h) -4"

Glass Size = frame size (w) or (h) -3"

100 No-Leg Frame

Daylight Opening = frame size (w) or (h) -5 1/2"

Glass Size = frame size (w) or (h) -4 1/2"

140 Extended-Leg Frame

Daylight Opening = frame size (w) or (h) -6 9/16"

Glass Size = frame size (w) or (h) -5 9/16"

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