



WINDOW INSTALLATION INSTRUCTION

Preparing for Installation

- A. Remove plastic wrap, cardboard, and/or wood crating from the windows. Do not remove shipping spacers located between the window sash and frame. DO NOT open the window until it is securely fastened.
- B. Inspect the product for any damage such as cracks, dents or scratches. DO NOT install damaged windows.
- C. Remove screens and hardware packages (if necessary). Label them and set aside in a protected area.
- D. Windows come with pre-drilled installation holes centered in the installation screw pocket. If opening substrate does not allow for the minimum edge distance listed in the Installation Anchor Requirements Table at the end of this booklet, pilot new holes increasing edge distance in the same locations, add framing, or adjust window in opening as required.
- E. Before installation, remove dirt and debris from all surfaces of the opening.

1. Prepare the Opening

WOOD FRAME WALLS AFTER BUILDING WRAP

- A. Confirm the window will fit in the opening. Measure all four sides of the opening to make sure it is 1/2" to 3/4" larger than the window in both width and height (on larger openings, measure in several places).
Fix any problems with the rough opening before proceeding.
- B. Cut the building wrap along head and sill, down the middle vertically, and 6" diagonally at each head corner.
- C. Fold the building wrap in at the jambs and staple it in place. Fold the top flap up and temporarily fasten with flashing tape.
- D. Cut 2 pieces of flashing tape 12" longer than opening width.
- E. Apply sill flashing tape #1 at the sill extending 1" to the exterior and 6" up each jamb.
- F. Cut 1" wide tabs at each corner by tearing the foil 1/2" each way from corner.
- G. Apply sill flashing tape #2 overlapping tape #1 by 1" minimum.
NOTE: Press all tape down firmly.
- H. Install and level sill shims. Place 1" wide x 1/4" to 3/8" thick shims 1/2" from each side. Keep shims back 1/2" from the interior face of the window. Place additional shims under each mullion.
- I. Attach shims to prevent movement after they are level.
NOTE: Improper placement of shims may result in bowing the bottom of the window

MASONRY CONSTRUCTION WOOD FRAME ONTO WOOD BUCK

- A. Apply water resistant coating. Extend the coating into the opening on all four sides and onto the wall surface at least 9". The water-resistant coating may be a self-adhered sheet membrane (SASM) or a liquid applied flashing. Ensure continuity between the water-resistant coating in the opening and the rest of the wall surface. SASM 's must be overlapped in a water shed fashion. Apply all water-resistant coatings according to the manufacturer's directions.
NOTE: Allow liquid flashing to dry according to the manufacturer's recommendations.
- B. Apply 2 beads of sealant to the masonry opening where the wood buck will be attached. NOTE: Ensure the sealant is compatible with the water-resistant coating.
- C. Pre-drill and fasten the treated wood buck to the masonry opening using code-approved fasteners.
- D. Apply water resistant coating (optional) over the wood buck and onto the masonry opening. If using liquid applied flashing, allow it to dry according to the manufacturer's recommendations before proceeding
- E. Install and level sill shims. Place 1" wide x 1/4" to 3/8" thick shims 1/2" from each side. Keep shims back 1/2" from the interior face of the window. Place additional shims under each mullion.
- F. Attach shims to prevent movement after they are level.
NOTE: Improper placement of shims may result in bowing the bottom of the window
- G. Apply a continuous, 3/8" tall bead of sealant on the surface of the buck where the flush flange will be placed.

2. Joining Mullion (if applicable)

NOTE: Standard 1" x 5" tube mullion comes sealed and attached to one window, mullion clips (end anchors) not required for standard 1" x 5" tube mullions

- A. On mating window (not containing the tube mullion), apply a continuous sealant bead to the back of the window flange, across top of window frame, down the length of the frame approx. 1/4" from the pre-drilled installation holes, and across the bottom.
- B. Join the two windows together, clamp as needed to ensure sealant is wetting out and overall combination width/height will fit in the rough opening.
- C. Drill 13/64" pilot holes in tube mullion at each pre-drilled anchor location.
- D. Install #12 x 5/8" PH or HH screws at each anchor location.

3. Setting and Fastening the Window

- A. Flush Flange – Apply sealant to the back of the window flange.
- B. Insert the window into the opening by placing the window sill on the sill spacers and tilting the window up. Center the window between jambs.
- C. Level the window across the head. Adjust the sill shims as necessary.
- D. Plumb and square the window using shims at each anchor location. Adjust shims to plumb and square the window.

- E. Install installation screws while continually checking plumb and square. See Installation Anchor Requirements Table at the end of this booklet for approved fasteners.
- F. Check window operation. Install crank handle (if necessary), lift the lock lever(s) and turn crank handle to open the window. Open and close the window to test for proper installation.

Note: Adjust shims to correct any issues with plumb, square, operation or reveal. G.

Close and lock the window.

4. Integrating with the Building Wrap (if necessary)

- A. Apply head flashing and seal as required (if applicable).
- B. Fold down top flap of weather resistive barrier.
- C. Apply flashing tape to top diagonal cuts. Cut pieces of flashing tape at least 1" longer than each diagonal cut. Lap tape 1" past end of cut onto weather barrier. Overlap multiple pieces of tape by 1" when necessary.
- D. Install interior sealant. Refer to the interior sealant instructions at the end of this booklet.
- E. Install exterior sealant. (After wall cladding is installed) Refer to the exterior sealant instructions at the end of this booklet.

Interior Sealant Instructions

CAUTION: Use low pressure polyurethane window and door insulating foams. Follow the directions on the can. Do not use high pressure or latex foams.

- A. Insert the nozzle or straw between the rough opening and window frame. This can be done from the interior or exterior.
- B. Place a 1" deep bead of foam approx. 1" from the interior of the frame to allow for expansion. DO NOT fill the entire depth of the rough opening cavity.
NOTE: Apply foam between the frame and rough opening, NOT between jamb extensions and the rough opening.
- C. To ensure a continuous interior seal, apply sealant over the interior surface of any shims or clips interrupting the foam seal. Backer rod (as necessary) and sealant can be used in place of the low expansion foam to create the interior seal. However, foam has greater insulating properties. Fiberglass batt or similar insulation is not recommended as it can absorb water and does not act as an air seal.

Re-check window operation and remove shipping spacers after foam installation. Excess foam may be removed with a serrated knife after it cures.

Exterior Sealant Instructions

Flush Flange – If flush flange is installed against exterior wall cladding, place a corner bead of sealant on the top, sides and bottom of the window along the edge of the flange where it meets the wall.

Block Frame – If the space between the new window frame and the opening is greater than 1/4", insert backer rod 3/8" deep in the space around the window. Backer rod adds shape and controls the depth of the sealant line. Apply a continuous bead of sealant to the entire perimeter of the window. Shape, tool and clean excess sealant. When finished, the sealant should be the shape of an hourglass.

Frame Cap Installation

After all inspections are complete install frame caps. Install head and sill parts first, then jambs (trim as needed).

<u>INSTALLATION ANCHOR REQUIREMENTS TABLE</u>			
Opening Type (Substrate)	Frame Screws	Minimum Embed	Minimum Edge Dist.
Min. 2x4 Wood Frame or Buck	No. 12 PH or HH SMS or Wood Screw	1-1/4"	7/8"
Min. 18 ga. 33 ksi Metal Stud	No. 12 GR. 5 PH or HH Self Tap/Drill Screw	Full	1/2"
Min. 1/8" A36 Steel	No. 12 GR. 5 PH or HH Self Tap/Drill Screw	Full	1/2"
Min. 1/8" 6063-T5 Aluminum	No. 12 GR. 5 PH or HH Self Tap/Drill Screw	Full	1/2"
Min. C-90 CMU or 2500 psi Concrete	1/4" HH Concrete Screw*	1-1/4"	2"

*Concrete screws shall be Elco Ultracons (C.S.), Elco Crete-Flex (S.S.), ITW Ramset/Red Head Tapcons (C.S. or S.S.) or Hilti Kwik-Con II (C.S. or S.S.).