

Installation Guidelines

For Quaker Window Products Aluminum flange fin sub-sill & receptor system using a T-mulled twin window unit.

Installer:

- **Read these instructions completely before starting any installation.** Failure to install and maintain our product according to these instructions will void any warranty, written or implied.
- These instructions are consistent with ASTM 2112 "Standard Practice for Installation of Exterior Windows, Doors and Skylights" into common wall constructions. Contact your architect or construction professional for installation into other building designs or constructions methods.
- The installer is responsible for consulting the contractor, structural engineer, architect, or consumer, for proper installation according to local codes and/or ordinances.



Warning:

- Proper eye and hearing protection must always be worn when installing, removing or performing adjustments to Quaker window and door products.
- Use power tools properly! To avoid personal injury, always follow manufacturers' instructions for safe operation of power tools.
- If broken, glass can fragment causing injury. All Quaker products are available with safety glass. In many areas, local building codes require safety glass in certain locations and/or applications. Unless Quaker's stipulations dictate safety glass or safety glass is specifically ordered, Quaker windows are not provided with safety glass. Before installing, Quaker recommends consulting local building codes for more definitive information.

Caution:

- Lead-based paint may be present in older homes, and the removal of windows may cause this paint to be disturbed. In order to minimize exposure to lead-based paint dust, please consult www.epa.gov/lead.
- Care must be taken to properly recycle or dispose of old materials. Any recyclable materials should be separated from non-recyclable or hazardous materials. Please consult with local or state authorities regarding proper disposal of non-recyclable or hazardous materials.
- Some codes require the use of pressure treated lumber to line rough openings. Corrosion resistant materials, such as stainless steel or hot-dip galvanized steel, must be used for fasteners and anchors having direct contact with pressure treated lumber.

Important:

- Quaker reserves the right to change the information contained in these guidelines without notice.
- Maintain a minimum of ¼" between the exterior window frame and any trim, siding or masonry to allow for expansion.
- Window nailing flanges and drip caps (integral or applied) do not take the place of window flashing. All windows and doors must be properly flashed and sealed around the perimeter.
- Use of Quaker products in barrier EIFS systems (synthetic stucco) is not recommended. To do so will void all warranties (written or implied) and Quaker Window Products Co., Inc. will not be held responsible for any claims or damages resulting from water infiltration.
- Do not drill through window sill to install alarm wires.
- If using muriatic acid or brick wash cleaning solutions, please follow the manufacturer's instructions found on the product label or on the manufacturer's website.

Handling and Storage:

- Do not store units outside, or in a hot environment.
- When carrying window, always keep it in a vertical position. **Do not carry flat**, doing so could result in damage to the unit.
- Stack units as straight as possible to avoid bowing. Do not lay flat!

These instructions are for installing Quaker's aluminum flange fin sub-sill & receptor system into a wood or concrete/masonry wall. The rough opening must be lined with a 1 ½" thick wood buck. Contact your Quaker window and door supplier for more information on installing units in other wall conditions. Please visit our website at www.quakerwindows.com or call at 1-800-347-0438 for additional literature and information.

Tools required by installer:

- Safety Glasses
- Hearing protection
- Utility knife
- Rubber mallet
- Caulk Gun
- Level
- Tape measure
- Stapler
- Metal cutting saw
- Drill / screwdriver



Materials required by installer:

- Backer Rod
 - ¼" to ½" diameter closed cell foam
- Insulation
 - Fiberglass or similar strips
 - Minimally expanding low pressure polyurethane window and door spray foam. **(Must be compliant with AAMA 812-04)**
- Shims
 - Made of cedar or synthetic material
- Screws
 - Screw size may vary per wall/framing needs.
 - Fasteners must be corrosion resistant and compatible with materials contacted and or penetrated.
- Silicone Sealant
 - 100% silicone ASTM C920 compliant
 - Neutral cure (modified oxime) only
 - Some sub-states made need to be primed before sealed. Consult the sealant supplier.
- Flashing
 - Self-adhesive flexible flashing that complies with ASTM-D779

Step 1: Inspect unit and sub-sill / receptor before installation

- A. Match up the sub-sill and receptor with the correct window unit and opening. Sub-sill & receptor will be labeled to match sales order & line number of the window unit.
- B. Remove all shipping packaging material (blocks, pads, protectors, stretch wrap) and dispose/recycle properly.
- C. Inspect unit for any damage or defects, and make sure the unit operates properly.
- D. Verify that the window unit is the correct size and configuration.
- E. Contact the nearest Quaker distributor if there is a problem. Provide the sales order number on the warranty sticker (see <http://quakerwindows.com/wp-content/uploads/2013/04/Warranty-sticker-locations01-30-2015.pdf> for sticker locations).

Step 2: Prepare rough opening

- A. The material/lumber quality and fasteners must be structurally adequate for design load requirements.
- B. Measure and verify the size of the rough opening. The rough opening should be a minimum ½" (but not to exceed 1") wider and taller than your flanged sub-sill/receptor unit.
- C. Verify the rough opening is flat, plumb, level, and square. (Fig. 1)
 - Take diagonal measurements to check for square.
 - The sill plate beneath the unit must be level for proper unit operation.
- D. Cut the weather-resistant barrier (WRB) in a "1" pattern. (Fig. 2)
 - Fold back the WRB sides and sill toward the interior and staple into place. (Fig. 3)
- E. Cut the top corners of the WRB at 135° and 9" long. (Fig. 2)
 - Fold flap up and temporarily tape in place. (Fig. 4)



- When installing into a wall with exterior rigid foam insulation panels, place solid blocking material behind the nail fin to provide proper support when fastening the unit.



Fig. 1

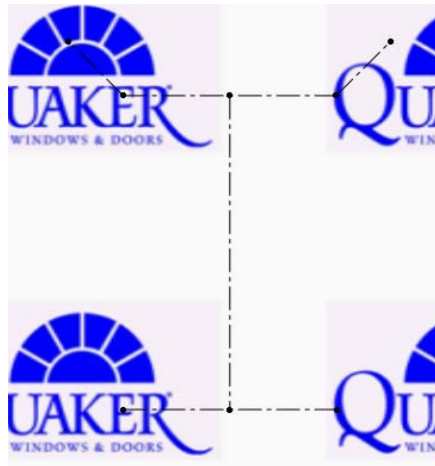


Fig. 2

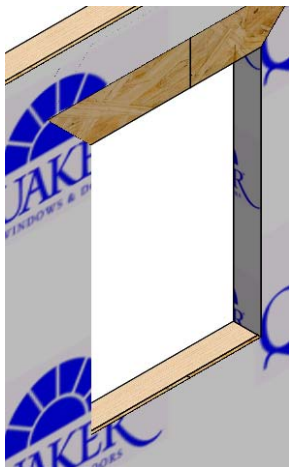


Fig. 3



Fig. 4

Step 3: Sill Flashing

- A. Flashing must meet ASTM-D779 performance requirements.
 - Use flashing that is 6" minimum in width
 - When using WRB and OSB substrates, or with applications under 45°F, spray an application adhesive (available at you Quaker dealer) around the perimeter of the window before applying flashing. Different applications require different spray adhesives so please check with your dealer for the proper type.
- B. Measure the width of rough opening and cut a length of flashing that is 12" wider than the rough opening. This will allow you to run the flashing 6" up each side. (Fig. 5)
- C. Apply sill flashing to exterior side first allowing for a minimum of 3" of flashing to be below the sill, and a minimum of 6" up each side. (Fig. 5)
- D. Flashing tape must cover the entire sill plate. If needed, apply an additional flashing piece over the first one (start from the exterior and work toward the interior). Maintain a minimum 1" overlap.

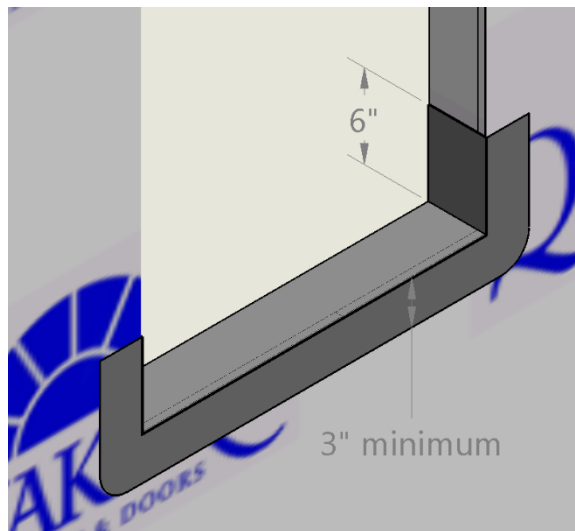


Fig. 5

Step 4: Flange Sub-sill/receptor system assembly (if parts have been factory cut skipped to step E)

- A. Measure the sill opening and square cut the sub-sill $\frac{1}{2}$ " less than opening to allow for level & shimming.
- B. Cut the head the same as the sub-sill, but miter cut both ends at 45 degrees.
- C. The jamb will be handed left and right and notched at the factory to fit the sub-sill. Measure the opening height and miter cut at 45 degrees the head side of jambs $1 \frac{1}{16}$ " less than opening to allow for leveling & shimming.
 - Note: when cutting all material use caution not to cut weather-strip to short.
- D. Using the screw slots as a guide, cross drill the head end of the mitered receptor jamb with an $11/64$ " drill for corner assembly screws. (Fig. 6)
- E. Assemble all four parts together with supplied screws using a total of 8 screws. (Fig. 7 & 8)

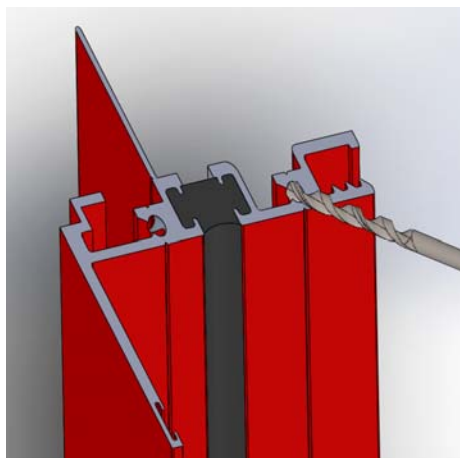


Fig. 6



Fig. 7



Fig. 8

Step 4: Flange Sub-sill/receptor sealing

- A. Apply self-leveling sealant to both corners inside where the sub-sill and receptor come together covering all seams. (Fig. 9a & 9b)
- B. Apply self-leveling sealant to both corners inside where the jamb and head receptors come together covering all seams. (Fig. 10)
- C. Peel backing off the supplied corner gaskets and install over exterior side of flashing flange on the bottom two corners to cover gap between flanges. (Fig. 11) Apply sealant to cover any hole between gasket and frame. (Fig. 12)

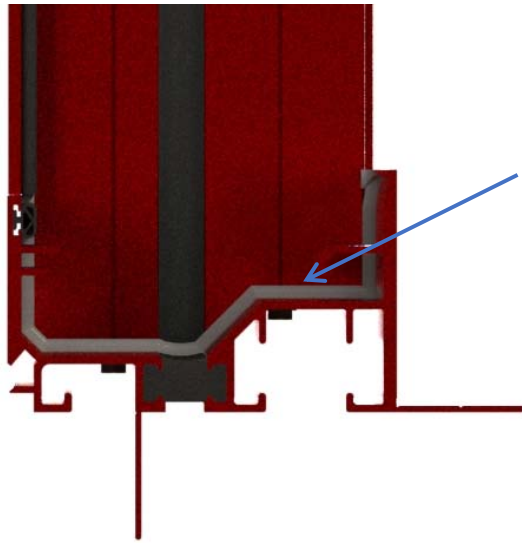


Fig. 9a

Sill self-leveling
sealant locations

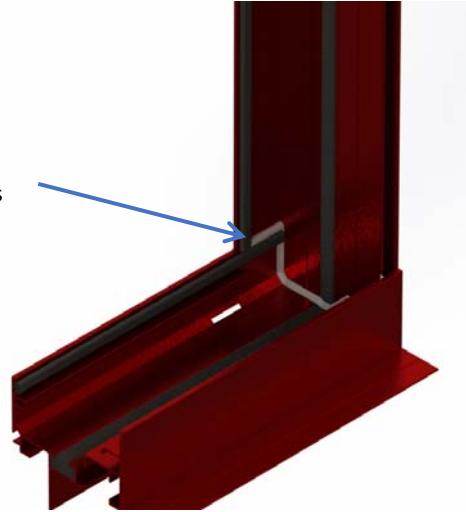


Fig. 9b

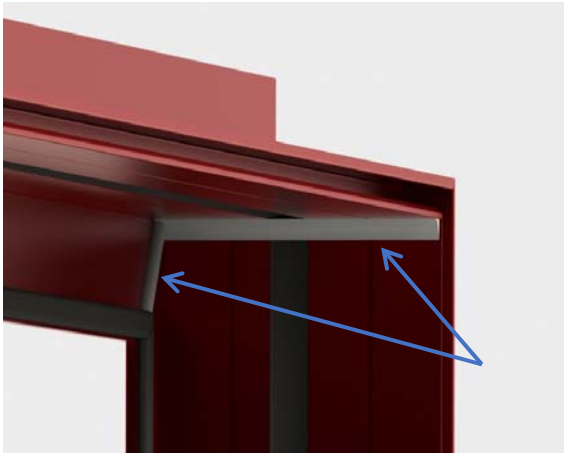


Fig. 10

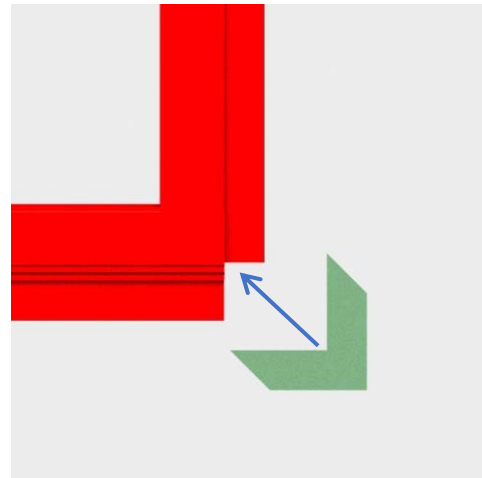


Fig. 11

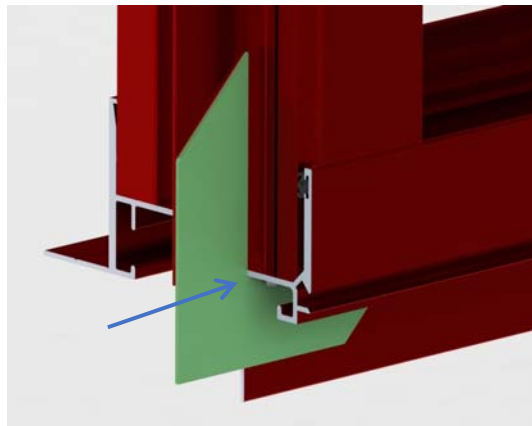


Fig. 12

Step 5: Flange Sub-sill/receptor system Installation preparation

- A. Test fit the flashing flange system into the opening to ensure a proper fit that is plumb, level, and square. Check and mark points in sub-sill anchor flange, jamb & head receptors for places to drill pilot holes for installation.
- B. Remove flashing flange system.
- C. Drill pilot holes in the interior sub-sill anchor flange per shop drawings or anchorage calculations. Typically 3" from the ends and 12" on center. (Fig. 13)
- D. Drill pilot holes in the jamb and head receptor per shop drawings or anchorage calculations. Typically 3" from the corners and 12" on center. **Keep all pilot holes on the interior side of flashing flange.** (Fig. 14)
 - Always follow the fastener/anchor manufacture's guidelines for proper edge distance, load capacity and installation techniques.

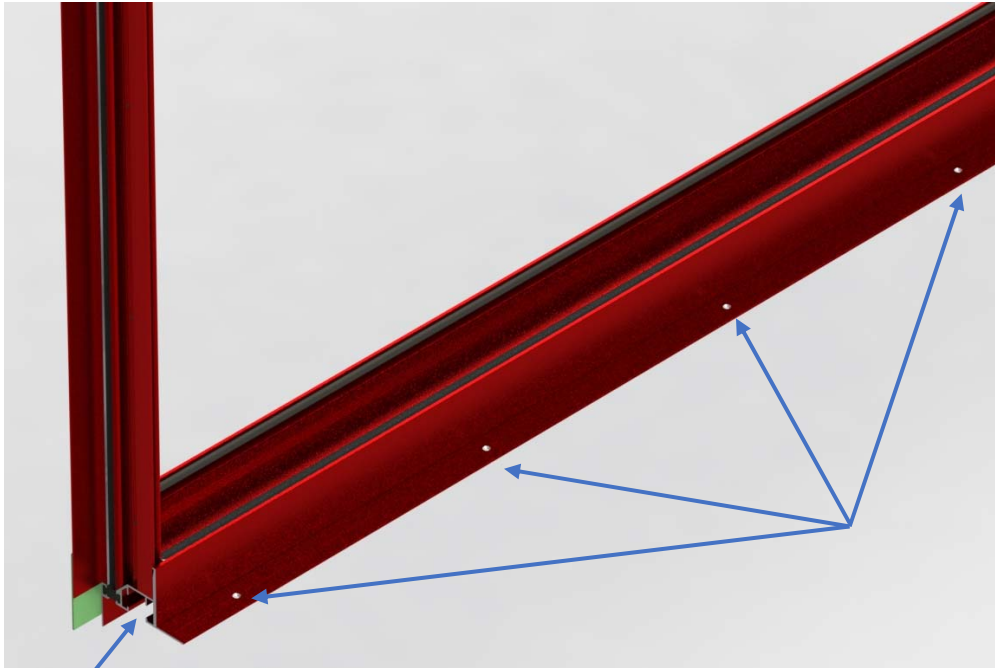


Fig. 13

Insulated cavity
before installation.

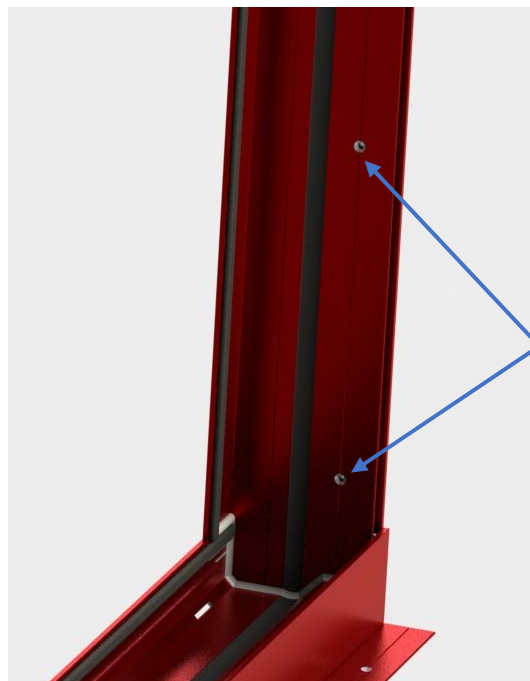


Fig. 14

Step 6: Flange Sub-sill/receptor system Installation

- A. Apply a ¼" diameter bead of 100% neutral cure silicone sealant along the interior side of the flashing flange.
 - Bead must run continuously around both sides and across the head. (Fig. 15)
 - Use a discontinuous bead at the sill to allow for any drainage. Alternate using a 6" long bead with 1" gaps. (Fig. 16)
- B. Center and set the flashing flange system into the rough opening. Pulling the system tight towards the interior making sure flashing flange is tight against the WRB.
- C. Temporarily screw the window into place using a screw through the pre-drilled pilot holes on the sub-sill anchor flange. Do not drive the screw in fully. (Fig. 17)



Fig. 15

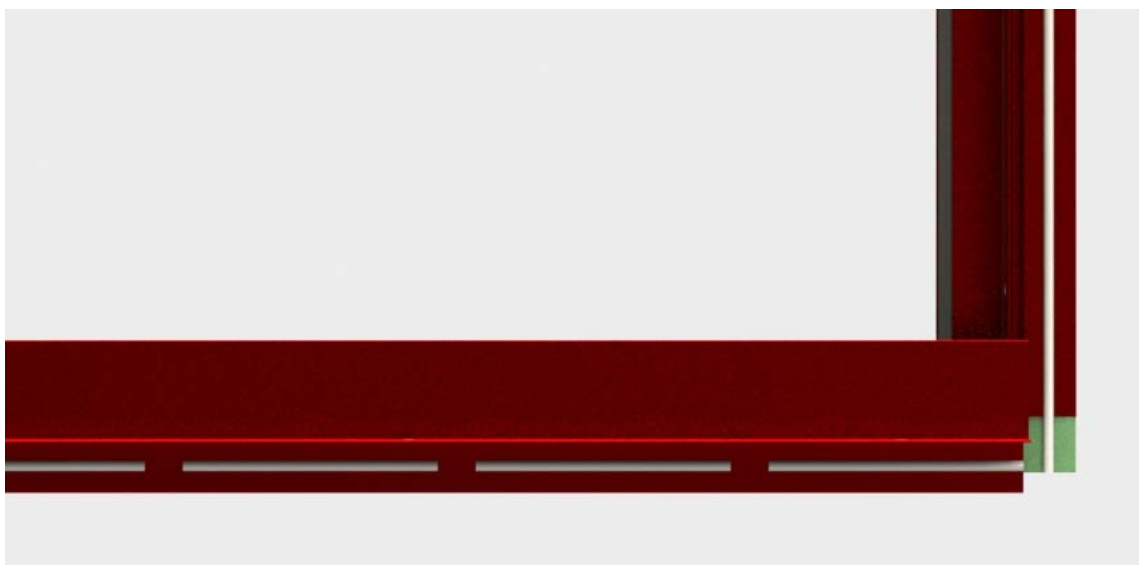


Fig. 16



Fig. 17

Step 6: Flange Sub-sill/receptor system Installation (cont.)

- D. Square, plumb, and level the flange fin system into the opening shimming as needed at each fastener location. (Fig. 18)
- E. Apply sealant in installation holes or on screws.
- F. Fasten the flange fin system to framing with screws by others per shop drawings or anchorage calculations. (Fig. 19)
 - Always follow the fastener/anchor manufacture's guidelines for proper edge distance, load capacity and installation techniques.

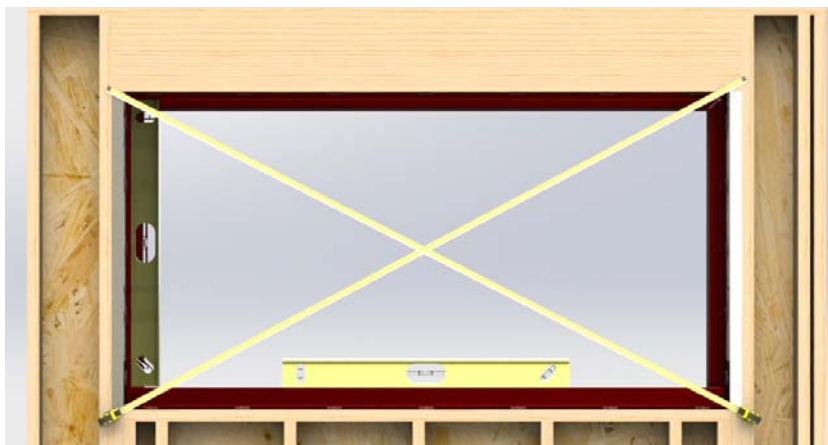


Fig. 18



Fig. 19

Step 7: Exterior flashing

- A. Cut two pieces of flashing tape for jamb flashing extending 1" above flashing flange system head flange and 4" to 6" below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame. (Fig. 20)
- B. Cut a piece of flashing tape for the head flashing, which extends beyond outer edges of jamb flashings. Remove release paper and install completely covering mounting flange and adhering to exposed sheathing or framing members. (Fig. 21)
- C. Flip down upper flap of WRB so it lays flat across head flashing, then **trim 1"– 2" above the window opening**. (Fig. 22)
- D. Tape along all cuts in WRB and across head of the window with flashing tape and tape both angle cuts. (Fig. 23)



Fig. 20



Fig. 21



Fig. 22



Fig. 23

Step 8: T-mull anchor plate installation

- Cut the anchor plate to the same length as the sub-sill interior legs that have been notched.
- Install the anchor plate at an angle sliding the leg into the notch in the sub-sill, and then press the anchor plate down until it snaps into place. (Fig. 24)



Fig. 24

Step 9: Window installation

- Apply a bead of sealant to the legs of the sub-sill where the window will rest. (Fig. 25)
- Install the first window in opening and set the interior leg of the window onto the sub-sill frame, then push the window head and jamb in against the head and jamb receptors. Measure to locate the window is the correct distant from the jamb receptor per shop drawings. Snap in temporary closer pieces to hold window into place. (Fig. 26)
- Place a level on the window sill to verify that the sill is level. Adjust the shims as needed to ensure a level condition.

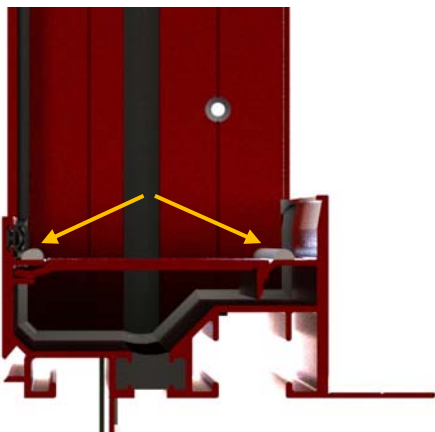


Fig. 25



Fig. 26

Measure the gap between window and receptor per shop drawings.



Step 10: T-mull installation

- A. Measure between the exterior sub-sill and head receptor legs and square cut the T-mull head. **Note:** The T-mull sill should be notched from the factory. (Fig. 27)
- B. Measure to located the spacing between the T-mull and window matches the shop drawings. (Fig. 28)
- C. Install L-angles in a bed of sealant with self-tapping screws. (Fig. 29) **Note:** Make sure screw don't penetrate sub-sill.
- D. Install the next windows following the same steps used in Step 9.

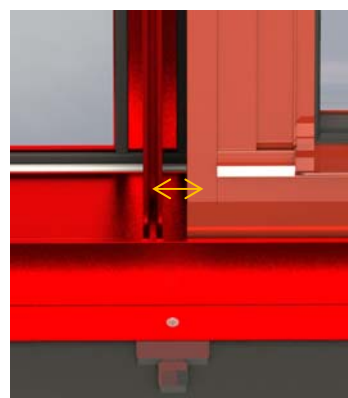
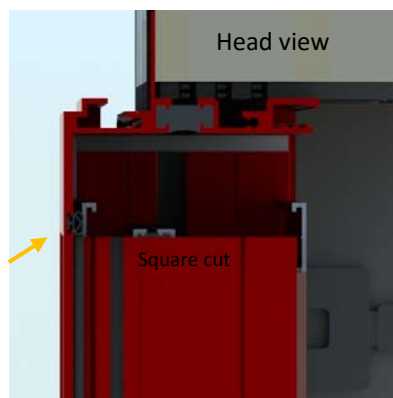
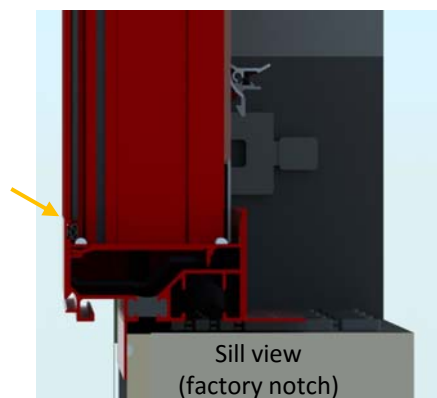


Fig. 27

Fig. 28

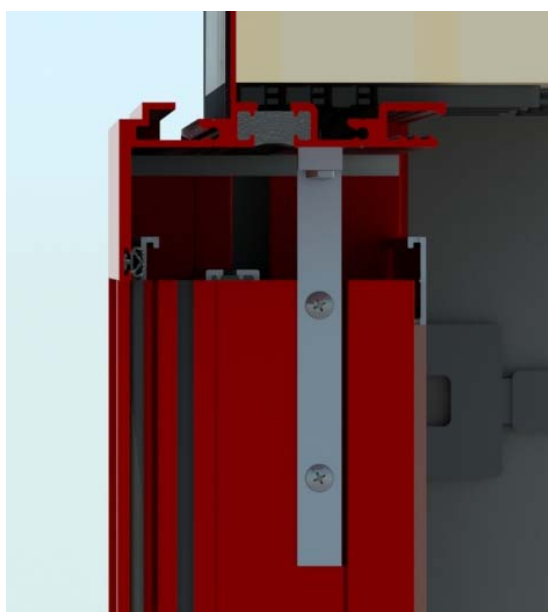
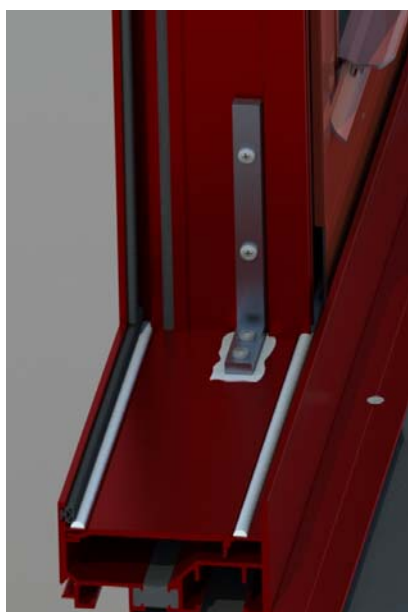
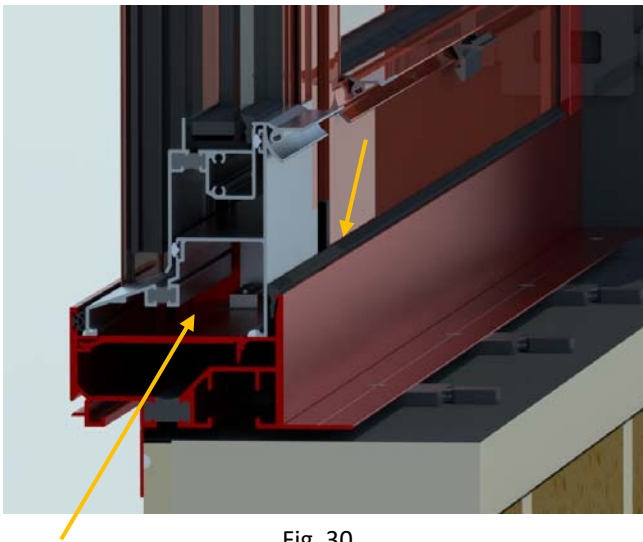


Fig. 29

Step 11: Window installation trim

- A. Apply the sub-sill wedge gasket into the interior side of the sub-sill against the window. (Fig. 30)
- B. Stuff insulation around the entire perimeter of window.
- C. Measure opening and cut the head receptor closer clip. Trim weather strip to appropriate length using caution not to stretch material.
- D. Install clip using a rubber mallet to make sure the closer clip snaps into place. (Fig. 31)
- E. Measure between the sub-sill and head receptor clip and cut the jamb receptor closer clips. Trim weather strip to appropriate length using caution not to stretch material.
 - Install clip using a rubber mallet to make sure the closer clip snaps into place.
- F. Check the installed product to ensure that it operates properly and that the reveal is equal between the sash and frame.
- G. Install T-mull base plate with weather-strip. (Fig. 32)
- H. Snap T-mull base plate cap over base plate to finish off mullion. (Fig. 33)



Insulate cavity

Fig. 30

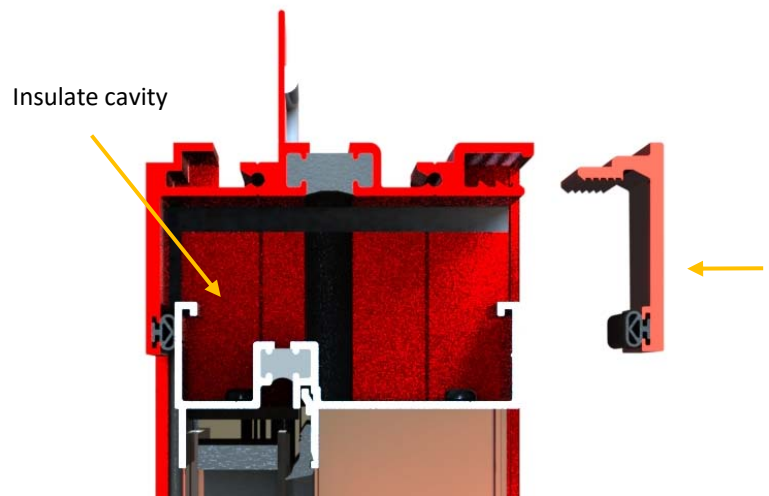


Fig. 31

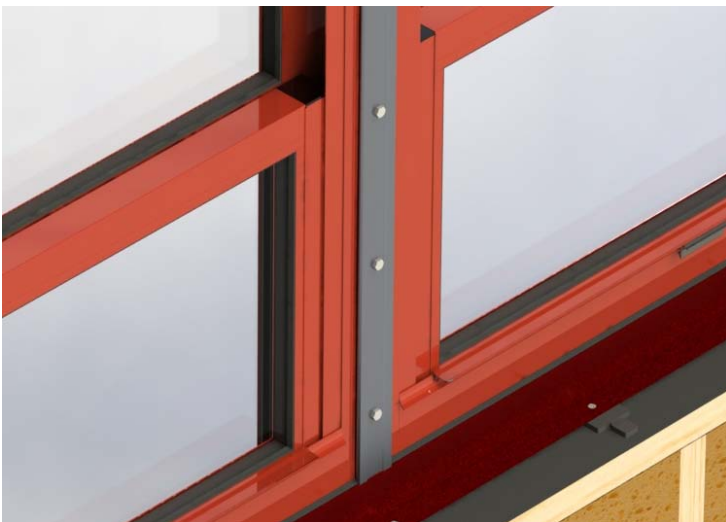


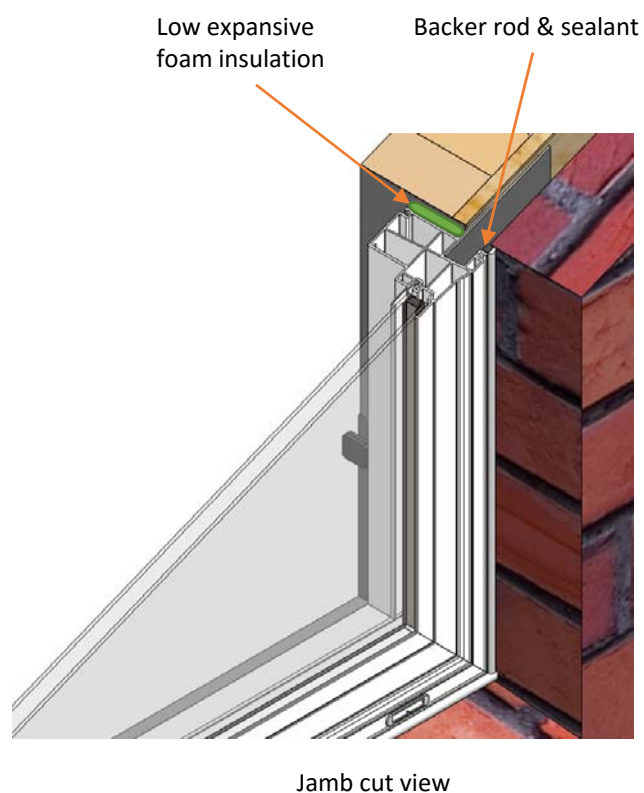
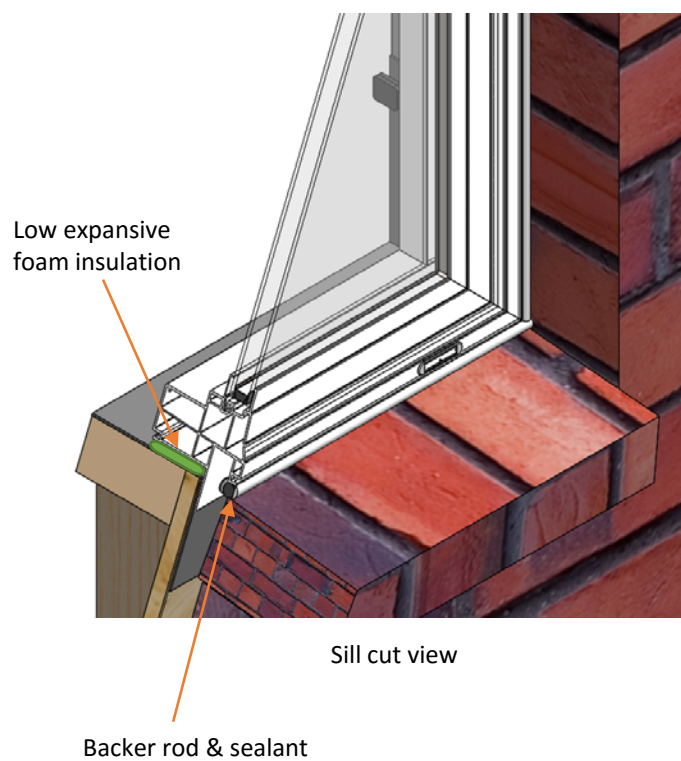
Fig. 32



Fig. 33

Step 12: Sealing the Exterior

- A. **Warning:** Maintain a minimum of ¼" between the window frame, trim, siding, or masonry. Failure to do so will forfeit all warranties (written or implied).
- B. After siding or wall exterior is complete, apply backer rod and sealant between the window frame and exterior finish material on all four sides of unit. Make sure to clean all surfaces before applying 100% neutral cure silicone sealant.



Step 13: Complete the Interior

- A. Insulate between the window frame and the rough opening using loose fiberglass insulation or minimally expanding window and door spray foam insulation that is compliant with AAMA 812-04. Read and follow the manufacturers' recommendations for application and use.
- B. Operate window unit to ensure proper operation. Sash will not operate correctly if window is out of square, over-shimmed or over-insulated.
- C. Allow foam to fully cure before installing interior trim.

Care and Use

An inspection of your windows should be made annually. Visit the Quaker website <http://quakerwindows.com/wp-content/uploads/2013/05/Quaker-Window-Care-Maintenance.pdf> or contact your local independent Quaker distributor for information on the care and use of your product. Ask for the Window Care & Maintenance Guide.

**QUAKER
WINDOWS & DOORS**

504 Highway 63 South
P.O. Box 128
Freeburg, Missouri 65035

Hours:

<i>Monday</i>	<i>7:00 am – 4:30 pm</i>
<i>Tuesday</i>	<i>7:00 am – 4:30 pm</i>
<i>Wednesday</i>	<i>7:00 am – 4:30 pm</i>
<i>Thursday</i>	<i>7:00 am – 4:30 pm</i>
<i>Friday</i>	<i>7:00 am – 4:00 pm</i>
<i>Saturday</i>	<i>Closed</i>
<i>Sunday</i>	<i>Closed</i>

Phone: 800-347-0438

Fax: 573-469-4151

Email: sales@quakerwindows.com