



Installation Guidelines

For Aluminum Quaker Window Products with Sub-Sill and Receptor (Single Hung, Double Hung, Sliding Window, Fixed Window, Casement, Awning, and Hopper)

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 AAMA IPC-08 "Standard Practice for Installation of Windows and Doors in Commercial Buildings" 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 products into a wood or concrete/masonry wall with the use of sub-sill and receptor. 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.

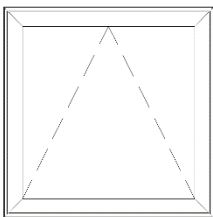
Tools required by installer:

- Safety Glasses
- Utility knife
- Drill / screwdriver
- Caulk Gun
- Level
- Tape measure
- Metal cutting saw
- Pop-rivet gun
- Rubber mallet

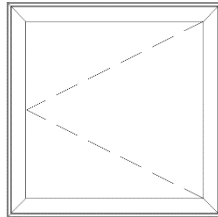


Materials required by installer:

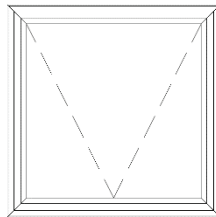
- Insulation
 - Fiberglass or similar strips
 - Minimally expanding low pressure polyurethane window and door spray foam. **(Must be compliant with AAMA 812-04)**
- Shims
 - Made of cedar or synthetic material
- Screws
 - Screw size may vary per wall/framing needs
 - Fasteners must be corrosion resistant 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 sealing. Consult the sealant supplier.



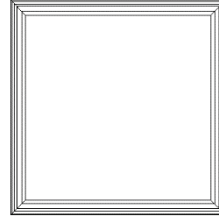
Awning



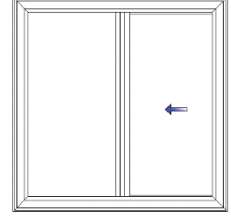
Casement



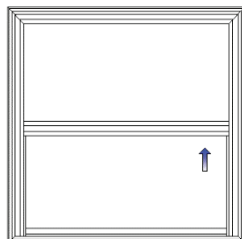
Hopper



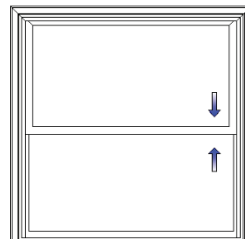
Picture window



Sliding window



Single Hung



Double Hung



Typical sub-sill and receptors are cut 4" long.

The installer will need to be field cut and end dam both sides of sub-sill to fit the masonry opening.

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

- A. Match up the sub-sill and receptor with the correct window unit. Sub-Sill & receptors 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. See shop drawings for the proper opening sizes per sub-sill and receptor system being used.
- C. Verify the rough opening is flat, plumb, level, and square. (Fig. 1)
 - Take diagonal measurements to check for square.
 - The sill beneath the unit must be level for proper unit operation.
- D. Check the fit of the sub-sill making sure the conditions are level, the installer can pre-apply the shims to the sill condition prior to installation of the sub-sill. (Fig. 2)



Note: Take measurements at three locations (head, middle, sill for width and left, middle, right for height). Use the smallest of the three measurements to ensure the replacement window can be installed square, level, plumb in both directions, and with a straight sill.

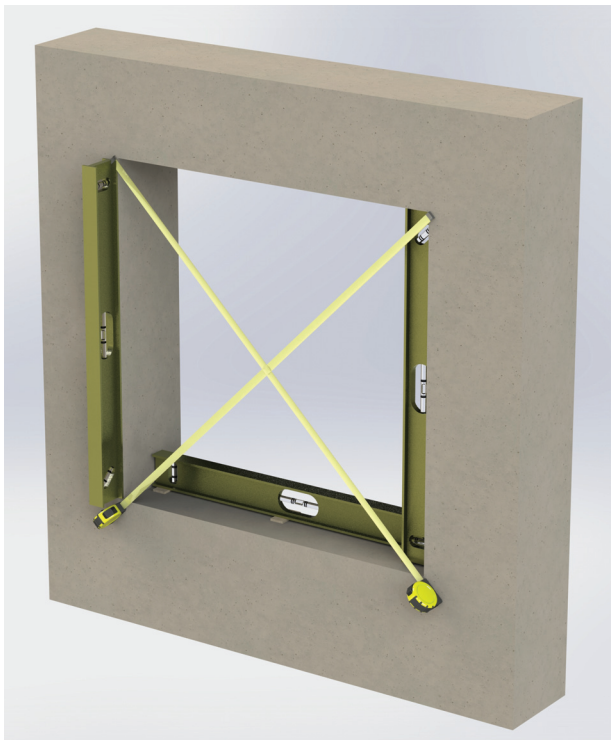


Fig. 1

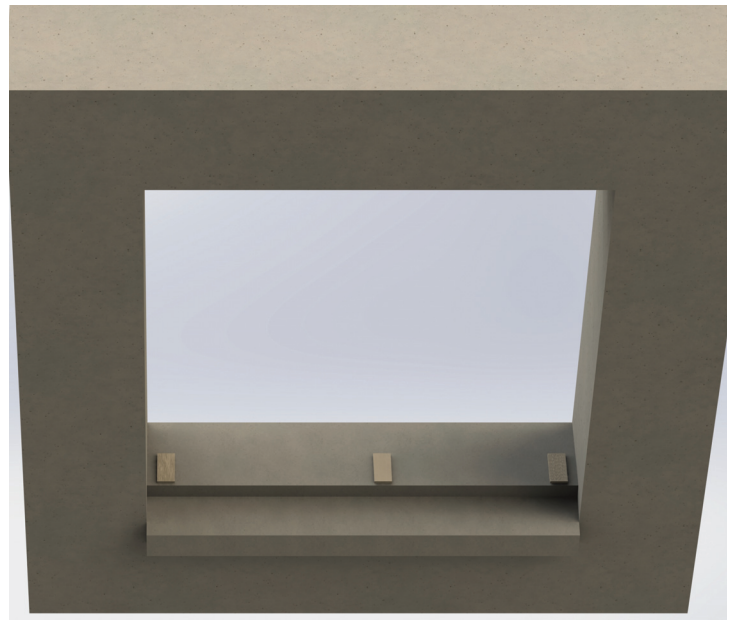


Fig. 2

Step 3: Sub-Sill preparation

- A. Measure the opening and trim the sub-sill (per shop drawings) typical $\frac{1}{2}$ " to $\frac{3}{4}$ " less than opening to allow for end dams and rivet heads. **Note:** You may want to cut the sub-sill on both sides to center weep holes in opening.
 - If using U-channel installation method for sub-sill cut the U-channel to match sub-sill length.
- B. When applying end dams, make sure to properly clean off the ends of both the sub-sill and the end dam with appropriate solvent to ensure a good seal. After applying solvent, immediately dry off the material. Do not allow the solvent to air dry on the material. **Note: It is critical that this step not be overlooked as oil, grease and dirt deposited during the manufacturing process can have a detrimental effect on the adhesion capability of the sealant.**

Step 4: Sub-Sill End Dam installation

- A. Peel the backing off the end dam and firmly stick it onto the end of the sub-sill with the hard acrylic side facing the exterior.
 - Use a roller to make sure end dam is properly adhered to the sub-sill.
 - Fasten the end dam with the supplied pop-rivets. (Fig. 3)
 - **Note:** the end dams are handed.
- B. Apply self-leveling sealant to the inside edge between the sub-sill and the end dam covering all edges. (Fig. 4)
- C. Apply a cap bead of sealant over all pop-rivet heads. (Fig. 5)
- D. Repeat steps A thru C for the other side of sub-sill.

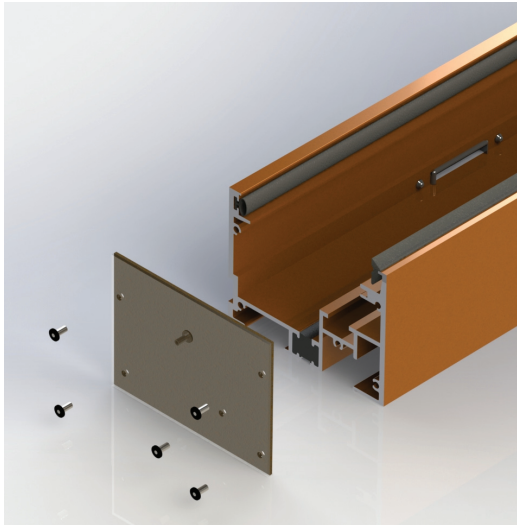


Fig. 3

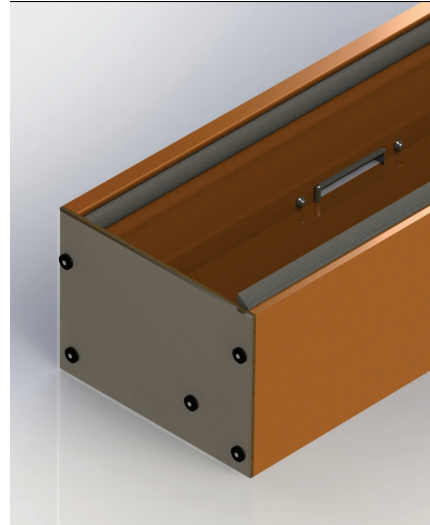


Fig. 3a

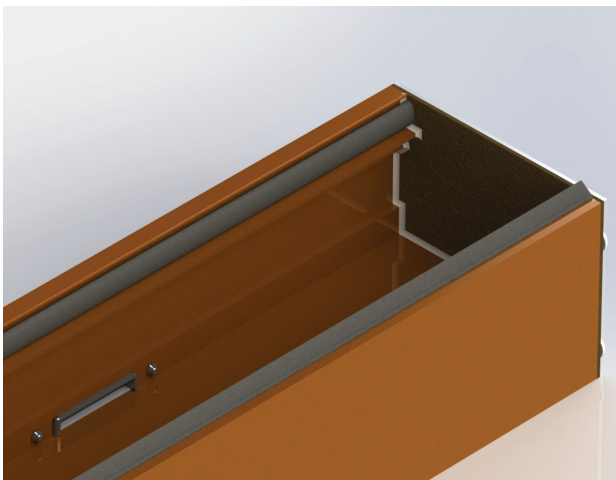


Fig. 4

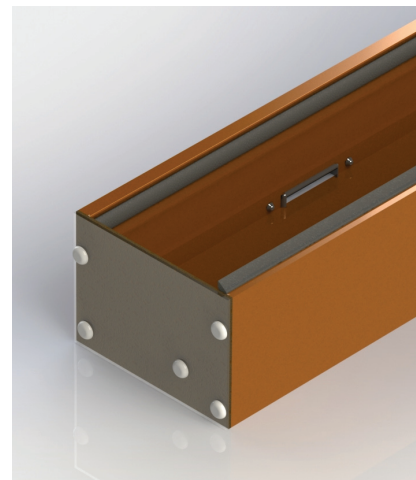


Fig. 5

Step 5: Sub-Sill with End Dam installation

- A. If flashing is present, determine where the window will be positioned to ensure that the perimeter seal is inboard of the flashing so water drainage will occur outboard of the perimeter joint at the head receptor.
 - Once the location is determined test fit the sub-sill and check for level. Shim as need to achieve a level sill, and mark the outside edge of sub-sill. This mark will be used to measure the placement of the U-channel. Remove sub-sill.
- B. Install the U-channel 2 7/16" to the interior of the mark (or exterior of sub-sill).
 - Make sure to center the U-channel in opening to allow for the end dams to slide over the ends. (Fig. 6)
 - Pre-drill holes and fasten the U-channel with screws by others per shop drawings or anchorage calculations. Typically 3" from the ends and 12" on center. (Fig. 7)
 - Always follow the fastener/anchor manufacture's guidelines for proper edge distance, load capacity and installation techniques.
- C. Set the sub-sill over the U-channel. (Fig. 8)
- D. Apply sealant at the end of the end dams to the opening and along the bottom edge of sub-sill to opening. Make sure not to block weeps with sealant. (Fig. 9)

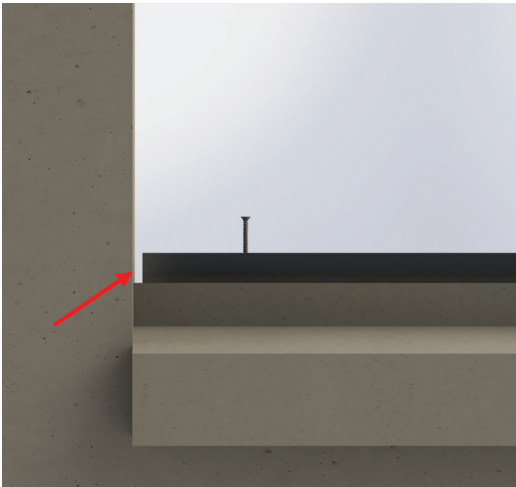


Fig. 6

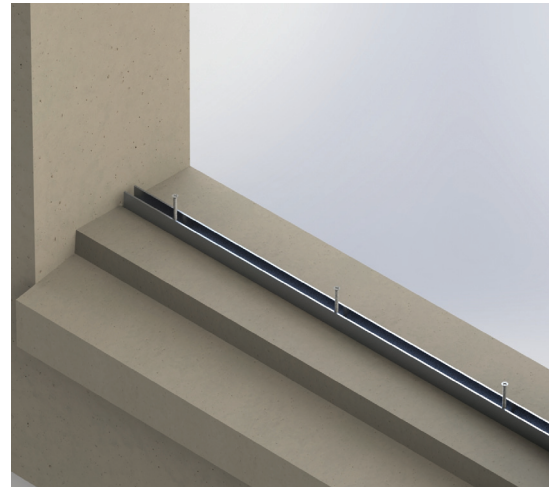


Fig. 7

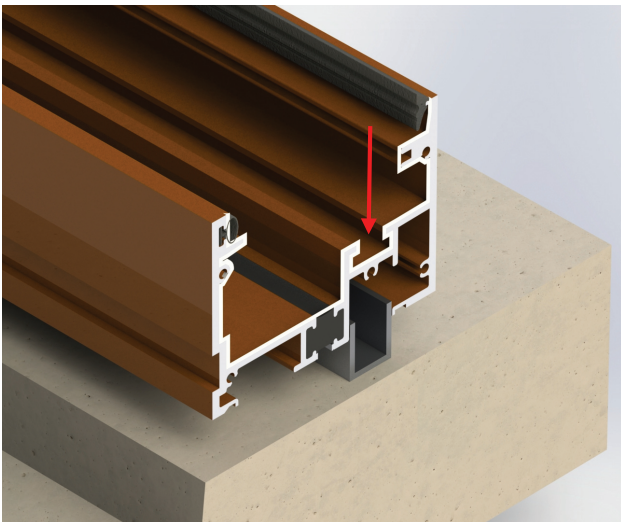


Fig. 8

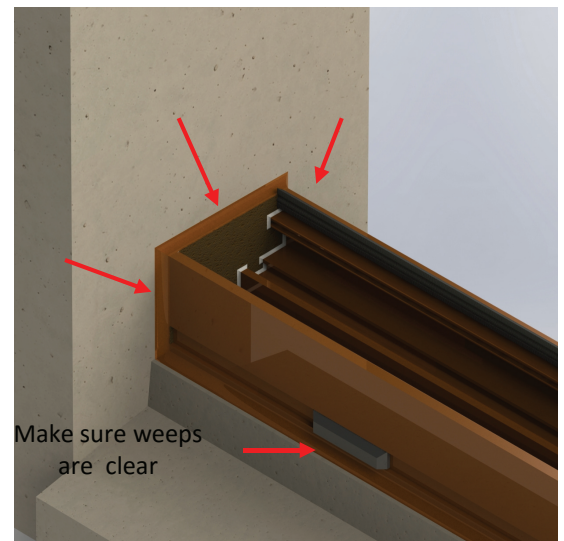


Fig. 9

Step 6: Head Receptor installation

- A. Square cut the head receptor clip $\frac{1}{2}$ " less than horizontal opening to allow for proper joint geometry. Trim weather strip to appropriate length using caution not to stretch material.
- B. Use a story board or straight edge to level up from the sub-sill to locate the head receptor location. (Fig. 10)
- C. Drill pilot holes into the receptor at shimmed locations to install head receptor.
 - Fasten receptor with screws by others per shop drawings or anchorage calculations. Typically 3" from the ends and 12" on center. (Fig. 11)
 - Always follow the fastener/anchor manufacture's guidelines for proper edge distance, load capacity and installation techniques.
- D. Shim as needed to level head receptor before tightening all screws.
- E. Apply sealant between receptor exterior and opening. Also seal both ends of head receptor to the opening. (Fig. 12)

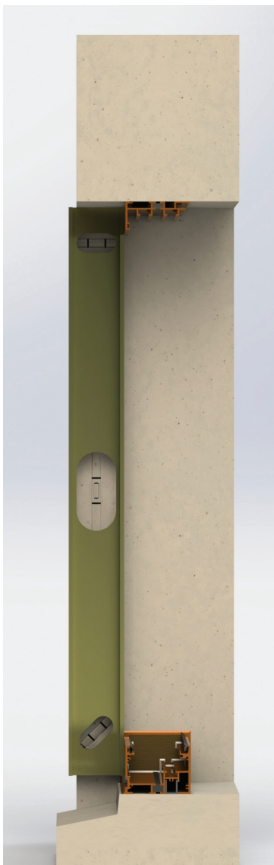


Fig. 10

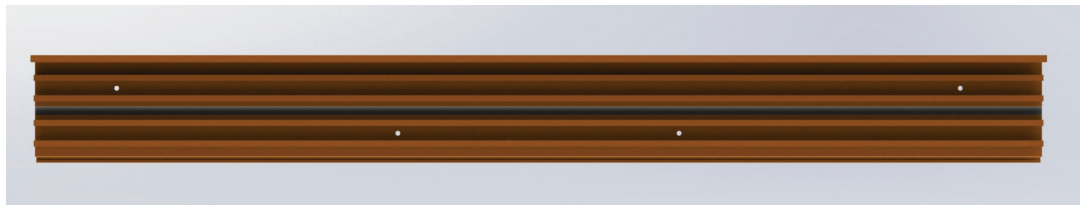


Fig. 11

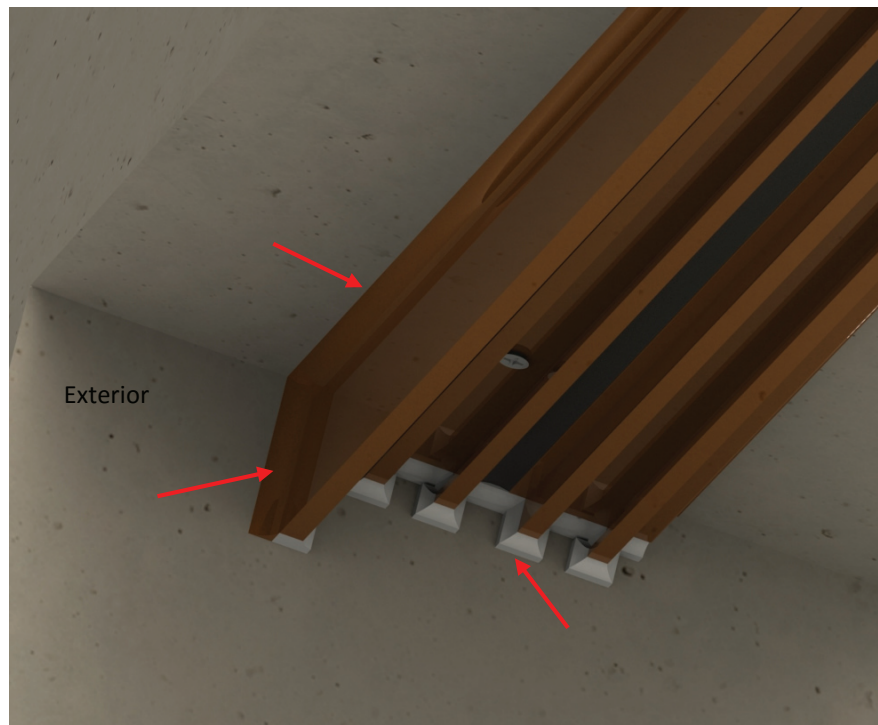


Fig. 12

Step 7: Jamb Receptor installation

- A. Measure from top of sub-sill to the bottom leg of head receptor and square cut the jamb receptor. Trim weather strip to appropriate length using caution not to stretch material. (Fig. 13)
- B. Drill pilot holes into the receptor at shimmed locations to install jamb receptor.
 - Fasten receptor with screws by others per shop drawings or anchorage calculations. Typically 3" from the ends and 12" on center. (Fig. 14)
 - Always follow the fastener/anchor manufacture's guidelines for proper edge distance, load capacity and installation techniques.
- C. Shim as needed to level jamb receptor before tightening all screws.
- D. Apply sealant between receptor exterior and opening. Also seal both ends of head receptor to the opening. (Fig. 15)



Fig. 13

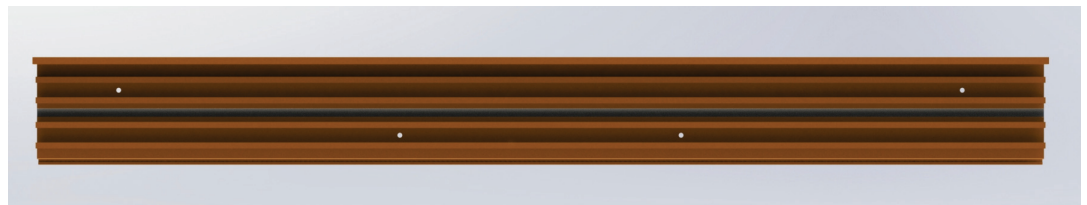


Fig. 14

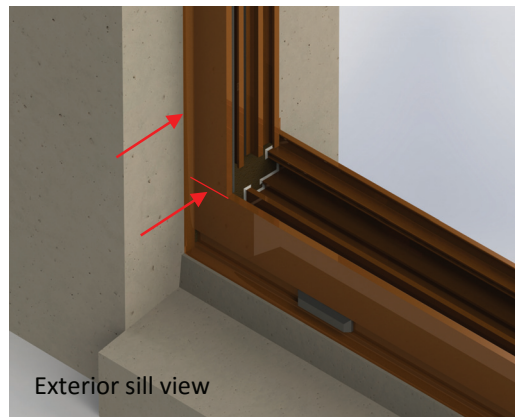


Fig. 15

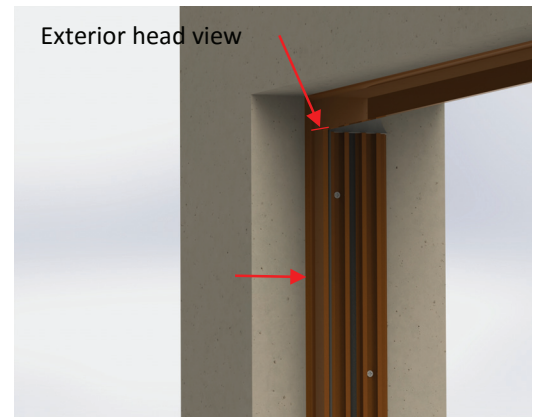


Fig. 15a

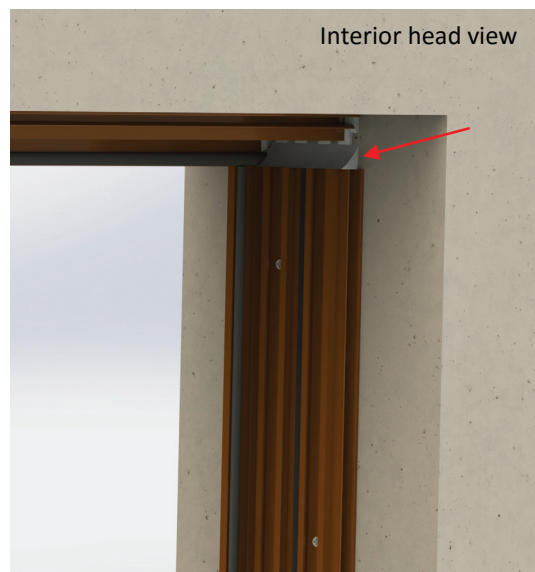


Fig. 15b

Step 8: Window installation

- A. Apply a bead of sealant to the legs of the sub-sill where the window will rest. (Fig. 16)
- B. Center window in opening and set the exterior leg of the window onto the sub-sill frame, then push the window head and jamb in against the head and jamb receptors. Snap in temporary closer pieces to hold window into place.
- C. Place a level on the window sill to verify that the sill is level. Adjust the shims as needed to ensure a level condition.
- D. Apply the sub-sill wedge gasket into the interior side of the sub-sill against the window. (Fig. 17)
- E. Stuff insulation around the entire perimeter of window.
- F. Measure opening and cut the head receptor closer clip. Trim weather strip to appropriate length using caution not to stretch material. (Fig. 18)
 - Install clip using a rubber mallet to make sure the closer clip snaps into place.
- G. 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.
- H. Check the installed product to ensure that it operates properly and that the reveal is equal between the sash and frame.
- I. Apply sealant around the interior perimeter between closer clips and opening and all joints. (Fig. 19)

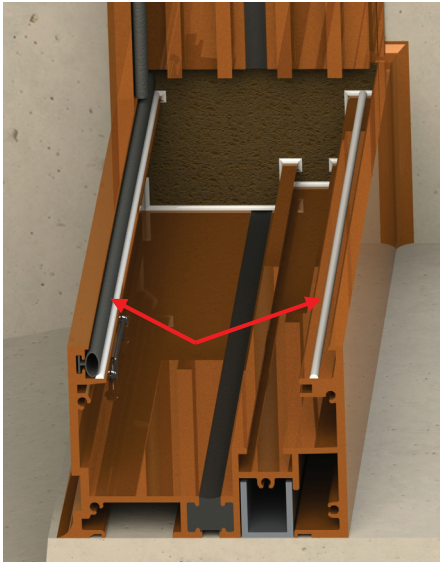


Fig. 16

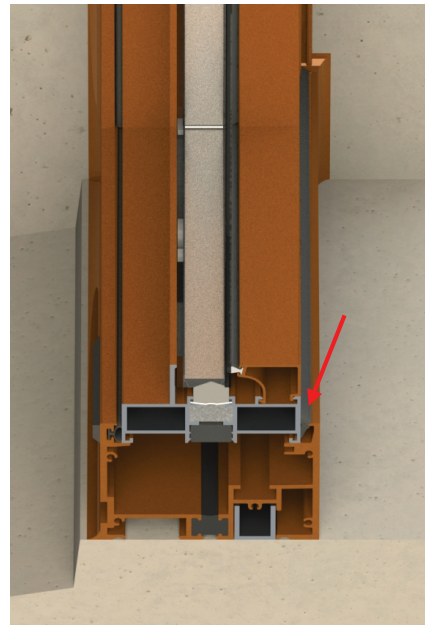


Fig. 17

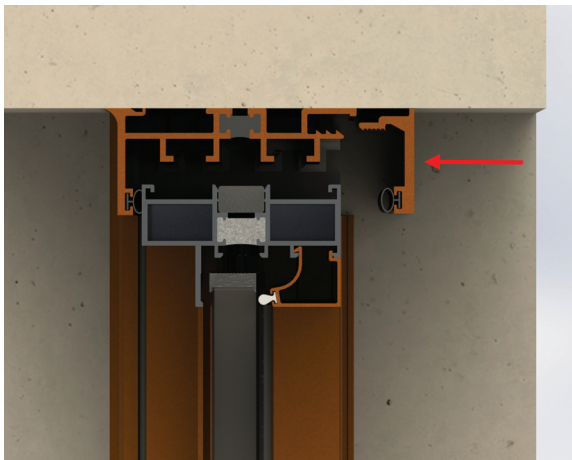


Fig. 18

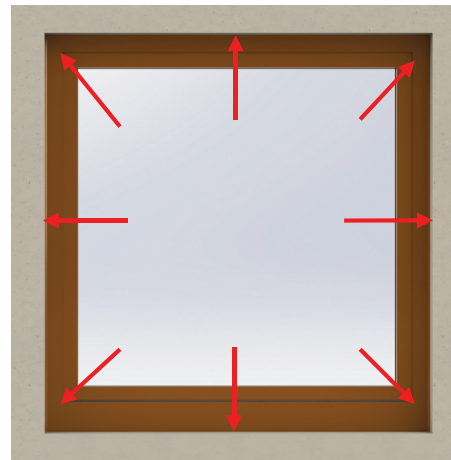


Fig. 19

**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.