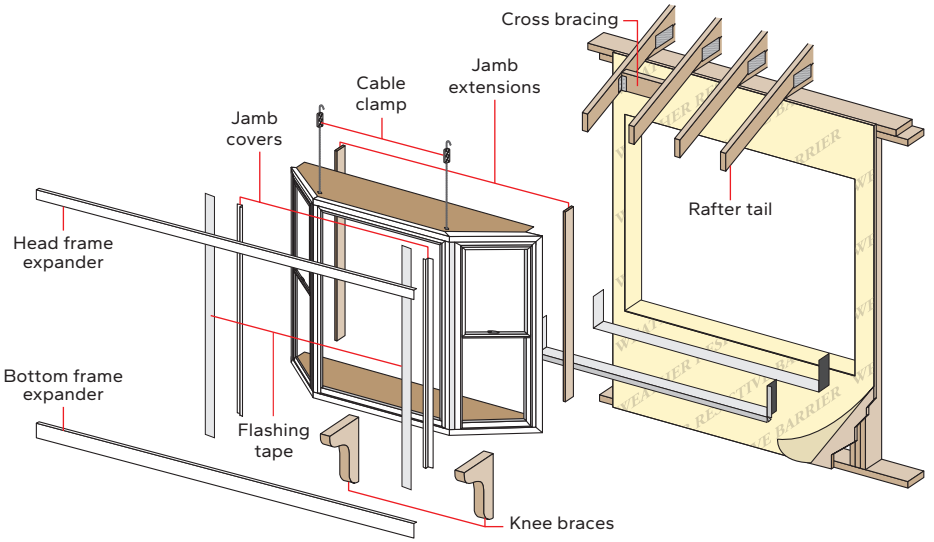
BAY AND BOW WINDOW WITH SEAT BOARD

ANGLE JAMB / NEW CONSTRUCTION INSTALLATION INSTRUCTIONS

Lea las instrucciones en español en el reverso.



WARRANTY: For applicable product warranty and arbitration information, please see product website.

Note: These instructions may be used for all aluminum-clad wood Bay and Bow windows that have a head and seat board. Support cables are installed in factory assembled bay and bow combinations.

⚠ CAUTION ***The factory-installed support cables must be attached to members capable of supporting 1,300 lbs. If the members cannot support 1,300 lbs., knee braces must be used in addition to the cables. Bay and bow units are not intended to support any roof structure. Consult an architect, engineer or construction professional if the ability of the members to support the bay or bow is not known.***

You Will Need to Supply:

- Cedar or Impervious shims/spacers (12 to 20)
- 10d galvanized finish nails or #8 x 2 1/2" flat head corrosion-resistant screws (4 to 6)
- Closed cell foam backer rod/sealant backer (20 to 35 ft.)
- Foil backed butyl window and door flashing tape or equivalent
- Installation Sealant or equivalent high quality, multi-purpose sealant (1 tube per window)
- Low expansion, low pressure polyurethane insulating window and door foam sealant. DO NOT use high pressure or latex foams
- Interior trim and/or jamb extensions (25 to 40 ft.)
- Knee braces (2)


Tools Required:

- Tape measure
- Level
- Square
- Hammer
- Stapler
- Scissors or utility knife
- Sealant gun
- Drill with a #2 Phillips and a #3 square drive bit
- 3/16" wrench or socket
- 1/2" open end wrench










GIF-000000603-1 Part Number: 80AT0103

IMPORTANT SAFETY AND PRODUCT INFORMATION

Safety Alert Symbol Reference: These symbols are intended to alert you to potential injury hazards and information. Obey all safety messages.

COULD Result in:	**WARNING** Major Injury/Death	**COULD** Result in:	**CAUTION** Minor Injury	**COULD** Result in:	***NOTICE*** Product or Property Damage	**COULD** Result in:	***IMPORTANT*** Procedure and Product Info.

WARNING To ensure safety and security and help prevent property damage, including possible damage to your window or door, close and lock windows and doors any time they are not being used for venting on a nice day, and particularly during high winds or rain. Ensure all windows and doors are properly fastened to the wall structure according to the product anchor instructions. It is the responsibility of the Buyer or User, the architect, contractor, installer, or other construction professional to ensure the appropriate windows and doors are chosen for the project and the wall construction is designed to resist all loads in accordance with local building code requirements.

CAUTION Many doors in older homes are painted with lead-based paint. Removal of old doors may disturb this paint. Proper precautions must be taken to minimize exposure to dust and debris. Consult state or local authorities and/or go to ***www.epa.gov/lead*** for more information.

NOTICE Products must be stored in an upright, level position not exposed to weather. The storage must be ventilated and provide protection from direct sunlight and excessive temperature.

IMPORTANT NOTICE These instructions were developed and tested for use with wall systems designed to manage water. These instructions are not to be used with any other construction methods or window frame types. Installation instructions for use with other constructions methods or frame types may be obtained from the product website or your local product seller. Building designs, construction methods, building materials, and site conditions unique to your project may require an installation method different from these instructions and/or additional care. Determining the appropriate installation method is the responsibility of you, your architect, or construction professional. Additional preparation or anchoring may be required to comply with local building code requirements.

CARE AND MAINTENANCE: Refer to the product website or contact your local retailer for more information.

CLEANING INSTRUCTIONS: Refer to the product website or your local retailer for more information.

NOTICE DO NOT apply any other types of film to the glass. Doing so could void product warranty.

NOTICE Do not use solvents such as mineral spirits, toluene, xylene, naphtha or muriatic acid as they can dull the finish, soften the vinyl and/or cause failure of the insulated unit seal.

NOTICE Do not use isopropyl alcohol on laminated surfaces as it will damage the finish. Keep door tracks clear of dirt and debris. Keep weep holes open and clear of obstructions.

NOTICE DO NOT use abrasives. DO NOT scrape or use tools that might damage the surface.

NOTICE DO NOT use inappropriate solvents or brickwash or cleaning chemicals. If you do, permanent damage can result and the product failure, loss or damage would not be covered by the Limited Warranty.

INTERIOR FINISH (WOOD WINDOWS): Paint or finish immediately after installation. If products cannot be finished immediately, cover with clear plastic to protect from dirt, and moisture. Remove any construction residue before finishing. Sand all wood surfaces lightly with 180 grit or finer sandpaper. DO NOT use steel wool. BE CAREFUL NOT TO SCRATCH THE GLASS. Remove sanding dust. Products must be finished according to these instructions; failure to follow these instructions voids the Limited Warranty. Finishing panel edges is optional for Patio Doors.

NOTICE To maintain proper product performance do not paint, finish or remove the weatherstripping, mohair dust pads, gaskets, or vinyl parts. Air and water leakage will result if these parts are removed. After finishing, allow venting doors and doors to dry completely before closing them. If paint, stain or finish gets on the weatherstripping, wipe it off immediately with a damp cloth.

WINDOW CLEANING AND PREP INSTRUCTIONS FOR UNFINISHED OR PRIMED WINDOWS: Dry wipe dust from windows gently. Examine window for possible smudges or fingerprints made from normal handling or construction. To remove smudges, lightly wipe surface with warm water. Scuff sand with light grade sand paper or abrasive pad (220 grit or higher). Rinse surface with warm water. Let window surfaces dry completely before applying finish.

- On casement and awning windows, it is optional to paint, stain or finish the vertical and horizontal sash edges.
- On single-hung and double-hung windows, do not paint, stain or finish the vertical sash edges, any finish on the vertical sash edges may cause the sash to stick; it is optional to paint, stain or finish the horizontal sash edges.

Product warranty WILL NOT cover interior paint and stain finish imperfections for any product that is not factory finished or painted. For additional information on finishing see the product website or owner's manual.

NOTICE The use of unapproved finishes, solvents or cleaning chemicals may cause adverse reactions with door materials. Product warranty does not cover problems caused by the use of unapproved materials. If in doubt, contact your local retailer or representative.

REMEMBER TO USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

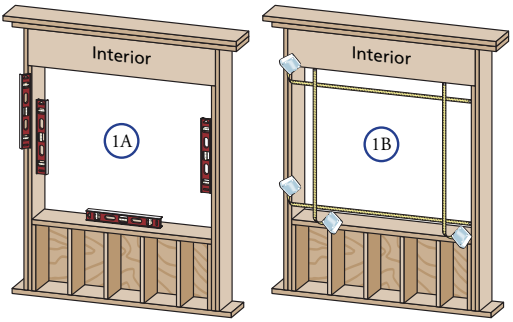
1 Rough Opening Preparation:

A. **Confirm the opening is plumb and level.**

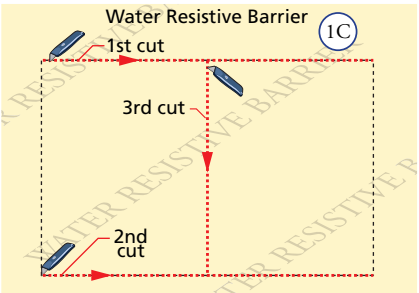
Note: It is critical the bottom is level.

B. **Confirm the window will fit the opening.** Measure all four sides of the opening to make sure it is 3/4" larger than the window in both width and height. On larger openings measure the width and height in several places to ensure the header or studs are not bowed.

Note: 1-1/2" or more of solid wood blocking is required around the perimeter of the opening. Fix any problems with the rough opening before proceeding.



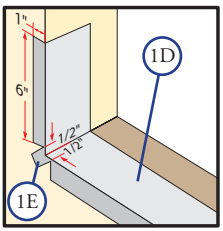
C. **Cut the water resistive barrier.** Fold side flaps into the opening and staple to inside wall.



D. **Apply sill flashing tape #1.** Cut a piece of flashing tape 12" longer than the opening width. Apply at the bottom of the opening as shown (1D) so it overhangs 1" to the exterior.

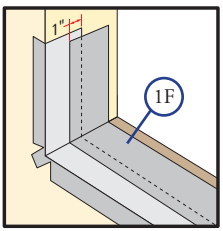
Note: The tape is cut 12" longer than the width so that it will extend 6" up each side of the opening.

E. **Tab the sill flashing tape and fold.** Cut 1" wide tabs at each corner (1/2" from each side of corner) (1E). Fold tape to the exterior and press firmly to adhere it to the water resistive barrier.

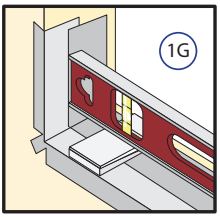


F. **Apply sill flashing tape #2.** Cut a piece of flashing tape 12" longer than the opening width. Apply at the bottom, overlapping tape #1 by at least 1". DO NOT allow the tape to extend past the interior face of the framing (1F).

Note: The flashing tape may not fully cover the framing members.



G. **Install and level sill spacers.** Place 1" wide by 3/8" thick spacers on the bottom of the opening 1/2" from each side. Keep shims back 1/2" from interior face of window. Add shims to ensure the spacers are level. Once level, attach spacers and shims to the opening to prevent movement.



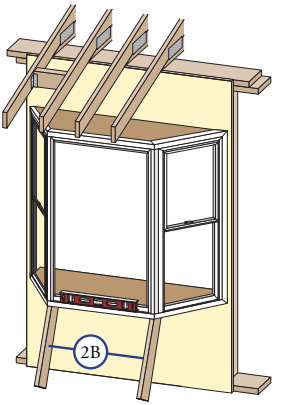
2 Setting the Window:

TWO OR MORE PEOPLE WILL BE REQUIRED FOR THE FOLLOWING STEPS.

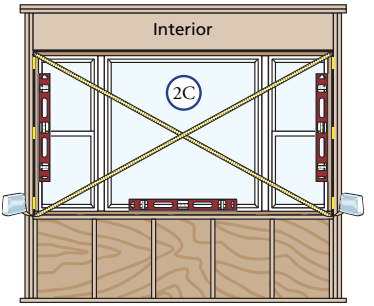
Note: In some installations, the cable clamps will not be accessible for cable attachment and adjustment after the window is installed. For this type of installation proceed to Cross Bracing Mount - Non Accessible Cable Attachment. The cable and clamp will have to be measured and installed before the window is installed.

A. **Insert the window from the exterior of the building.** Place the seat of the window at the bottom of the opening and slide the top into position. Center the window between the sides of the opening to allow clearance for shimming.

B. **Place temporary bracing** under the seat of the window and raise the unit until level as shown (2B).



C. **Plumb and square window.** Place shims 1" from the bottom and top of the window between the window and the sides of the opening. Adjust the shims as required to plumb and square the window in the opening. Place shims at the midpoint of the window sides.

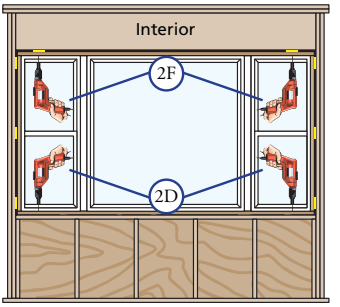


D. **Nail one 10d finishing nail or drive a #8 x 2-1/2" long screw** on each end, through the seat board into the rough opening.

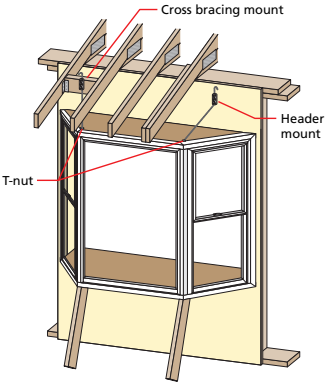
E. **Continue placing shims/spacers** between the seat board and the rough opening at not more than 16" on center. Ensure the seat board is flat.

F. **Nail one 10d finishing nail or drive a #8 x 2-1/2" long screw** on each end, through the head board into the rough opening.

G. **Place shims** between the head board and the rough opening at not more than 16" on center. Ensure the head board is straight and level.



3 Cable Clamp Installation:

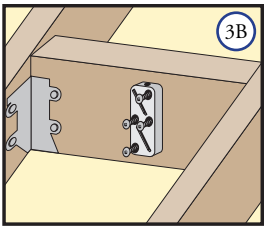


Note: Support cables are installed in factory assembled bay and bow combinations.

Install Cable Clamps based on type of installation needed. Cross Bracing Installation consists of attaching 2 x 6 cross bracing between the rafter tails. Header Mount Installation consists of attaching to a solid structural member – header, sill plates or wall stud.

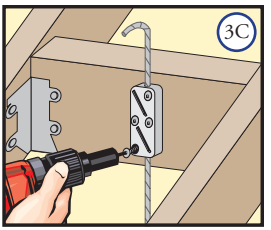
CROSS BRACING MOUNT OF CABLE CLAMPS:

A. **Install 2 x 6 cross braces** between the rafter tails, directly above the cable holes in the bay/bow head board.



B. **Install the cable clamps** directly above the T-nuts where adequate support is available. Holding the clamp parallel to the up-running cable, drive the #12 x 3-1/4" square screws partway into the mounting surface using a #3 square drive bit.

C. **Run the cable up through the bottom of the cable clamp.** Hold the cable up tight above the clamp and drive the two center clamp screws all the way in to lock the cable in place. Drive in the remaining #12 x 3-1/4" square screws all the way.



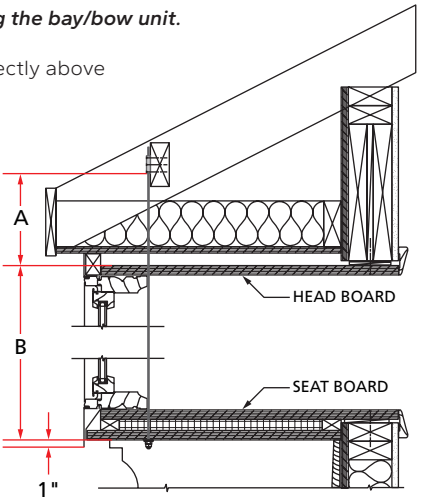
Note: Make sure all 4 screws are driven in at maximum torque. Additional tensioning may be done with the nuts on the opposite end of the cable at the bottom of the bay/bow unit.

CROSS BRACING MOUNT – NON ACCESSIBLE CABLE ATTACHMENT:

Note: Install the cable clamp and cable prior to installing the bay/bow unit.

A. **Install 2 x 6 cross braces** between the rafter tails, directly above the cable holes in the bay/bow head board.

B. **Remove the cable from the bay/bow unit.** Measure the distance from the bottom of the cable clamp to the bottom of the header plus 3/8" head clearance (A dimension). Measure the height of the unit from the top of the head board to the bottom of the seat board (B dimension). Add "A" to "B" to get the correct length of cable hanging from the bottom of the cable clamp. Insert the cable end through the round hole of the cable clamp. Ensure the correct length of cable is hanging below the bottom of the cable clamp. Tighten the two cable clamp corner screws. Insert one screw into each of the center holes in the cable clamp, and tighten to fully clamp the cable in position.



3 Cable Clamp Installation (continued):

C. **When the bay/bow unit is being installed,** thread the threaded end of the cable through the "T" nut, down the length of the bay/bow unit, and out the drilled hole in the seat board. Place a washer and two hex nuts on each cable end.

Note: The interior mullion cover can easily be removed for this purpose and must be reinstalled when installation is complete.

HEADER MOUNT OF CABLE CLAMPS:

This method may only be used if the projection of the bay/bow is 18" or less.

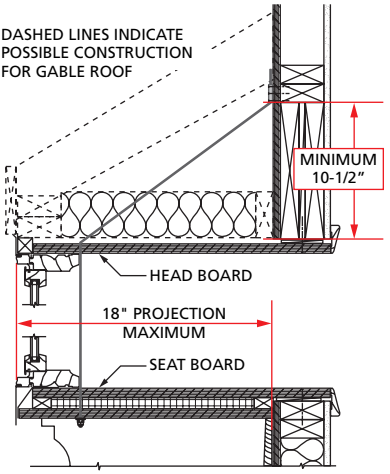
Use the Cross Bracing method if the projection of the bay/bow is more than 18".

Note: Be sure that the cable clamps are secured to a solid structural member – header, sill plates or wall stud. If the structural member or cable clamps are not securely attached, they may loosen during or after installation causing the bay/bow unit to sag.

A. **Install the cable clamps.** Drive the #12 x 3-1/4" square screws part way into the mounting surface using a #3 square drive bit.

B. **Run the cable up through the bottom of the cable clamp.** Hold the cable up tight above the clamp and drive the two center clamp screws all the way in to lock the cable in place. Drive in the remaining #12 x 3-1/4" square screws all the way.

Note: Make sure all 4 screws are driven in at maximum torque. Additional tensioning may be done with the nuts on the opposite end of the cable at the bottom of the window.



4 Fastening the Window:

A. **Tighten the top hex nut on both cable ends.** Using a 3/16" wrench or socket, hold the cable end in position while tightening the top hex nut with a 1/2" wrench or socket. This will keep the cable from twisting as the hex nuts are tightened with a wrench.

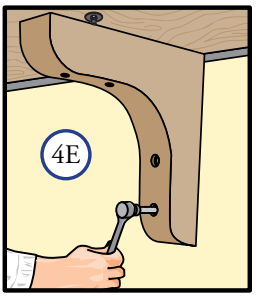
B. **Secure the seat board and head board** by using 10d finishing nails or 2-1/2" long screws on 16" centers; nail or screw through the head board, seat board and shims into the rough opening.

C. **Remove the temporary bracing.** Check the window for level, plumb, sash reveal and operation. Readjust, if needed.

Note: Be sure to use the temporary support when readjusting the nuts.

D. **Tighten the locking (bottom) nut on both cable ends and remove the temporary support** once the final position is found. DO NOT cut the threaded end off the cable as this will prevent future adjustment should it be needed.

E. **Installation of knee braces is recommended** to help support the weight of the bay/bow unit. Weight calculations must take into account the weight of the items that may be placed on the seat board of the bay/bow unit. Knee braces are required if the upper roof/framing members cannot support 1,300 lbs. or more.

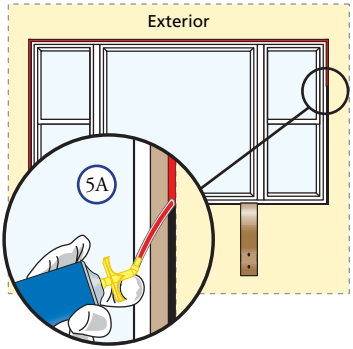


5 Insulating Foam Application:

CAUTION ***Ensure use of low pressure polyurethane window and door insulating foams and strictly follow the foam manufacturer's recommendations for application. Use of high pressure foams or improper application of the foam may cause the window frame to bow and hinder operation.***

A. **Apply insulating foam sealant (see Caution above).** From the exterior, insert the nozzle of the applicator approximately 1" deep into the space between the window and the rough opening and apply a 1" deep bead of foam. This will allow room for expansion. Apply sealant across interior surface of shims to create a continuous seal. For windows with jamb extensions installed, ensure the foam is placed between the window frame and the rough opening, not between the jamb extension and the rough opening. Follow foam manufacturer's instructions.

Note: It may be necessary to squeeze the end of the tube with pliers to be able to insert into the space between the jamb boards and the rough opening, and between the head and seat board and the rough opening.

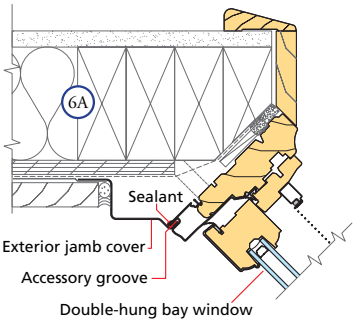


6 Sealing the Bay/Bow Unit to the Exterior Wall Cladding:

When applying siding, brick veneer or other exterior finish material, leave adequate space between the jamb cover and the exterior finish material for sealant.

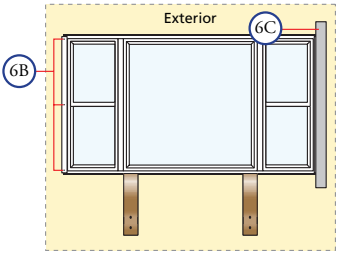
A. **Install the exterior jamb covers** onto the outer two windows. Apply a bead of sealant to the edge of the leg that will be driven into the accessory groove. Drive the short leg into the accessory groove using a block of wood with rounded edges and a hammer.

B. **Nail the jamb covers to the wall** using one nail on each end, and one in the center.



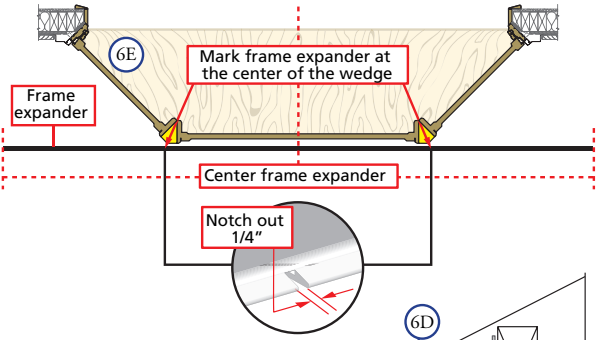
C. **Cut two pieces of flashing tape 6" longer** than the frame height of the window. Apply the flashing tape 3" above the top of the jamb cover, overlapping it onto the water resistive barrier.

D. **Install wood blocking between the top of the window and the soffit as shown.** The blocking should be flush with the exterior of the window frame.



6 Sealing the Bay/Bow Unit to the Exterior Wall Cladding (continued):

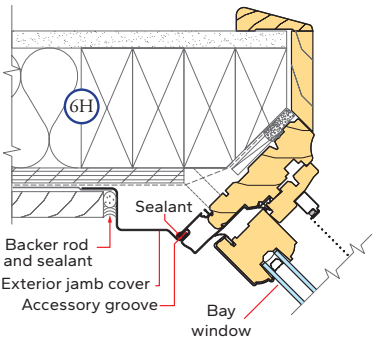
E. **Notch the retainer leg of the top and bottom frame expanders.** Hold the frame expander so it is centered on the center window, and mark the frame expander at the center of the wedge that is between the windows. Cut a 1/4" wide notch out of the retainer leg to allow the frame expander to bend and attach to the flanker windows.

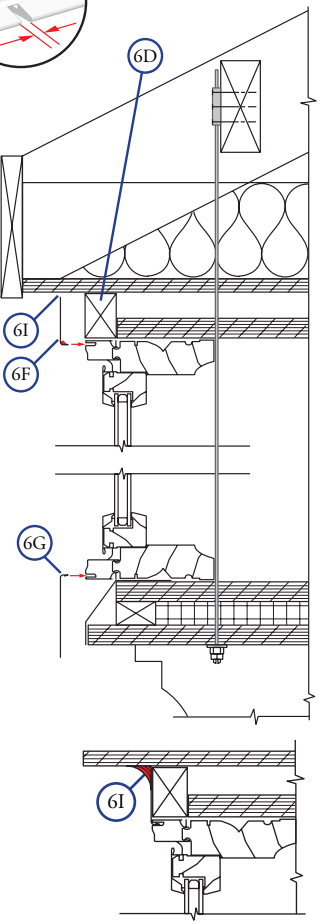


F. **Apply a bead of sealant on the leg of the head frame expander** and install by tapping on using a block of wood with rounded edges and a hammer.

G. **Install the bottom frame expander by tapping** on with a block of wood with rounded edges and a hammer.

H. **Insert backer rod into the space between the jamb cover** and the exterior finish material as deep as it will go. Apply a bead of high quality exterior grade sealant on top of the backer rod. Shape, tool and clean excess sealant. When finished, the sealant should be the shape of an hourglass.





Note: Backer rod adds shape and depth for the sealant line. This method creates a more flexible sealant line capable of expanding and contracting.

I. **Apply a corner bead of sealant** across the top of the head frame expander. Shape, tool and clean excess sealant.

J. **Install the interior jamb extensions** (provided).

K. **Install roofing material per the manufacturer's instructions.**