FIELD COMBINATION ASSEMBLY USING 1/2" MULLION REINFORCEMENT AND WOOD SUBSILL

Note: The wood subsill system may be used with all Pella Clad windows.

YOU WILL NEED TO SUPPLY:

- High quality exterior grade polyurethane
- 1/2" backer rod
- Wood subsill
- Subsill clips
- #8 x 1-1/4" flat head stainless steel screws
- #8 x 2-1/2" flat head stainless steel screws
- #6 x 5/8" flat head stainless steel wood screws
- #10 x 3" flat head stainless steel wood screws
- #8 x 2" flat head wood screws
- Installation clips or # 8 x 3" finish head screws
- 1/2" aluminum mullion reinforcement
- Mullion anchors (subsill and angle)
- Mullion cover
- 1" frame expander

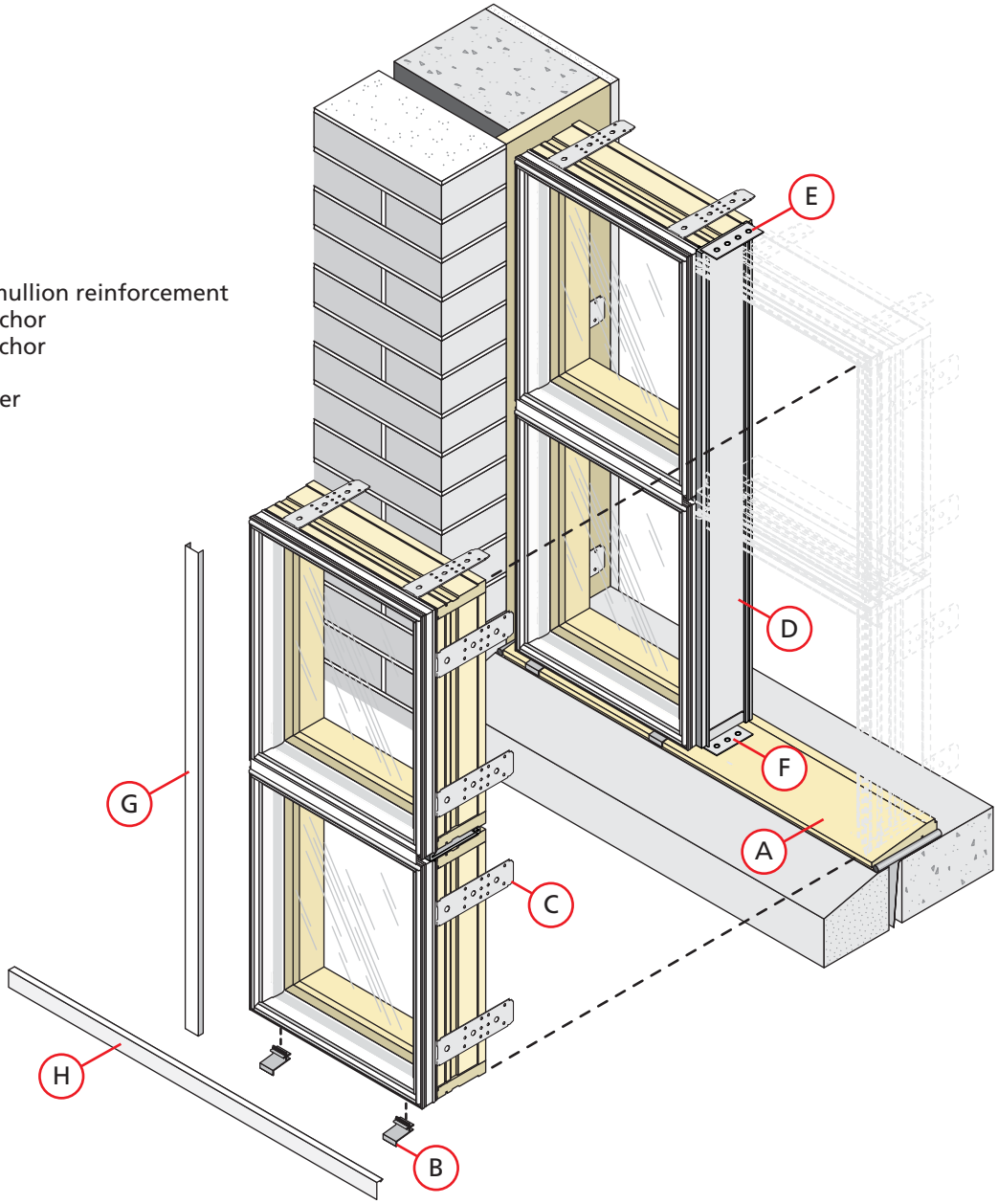
TOOLS REQUIRED:

- Tape measure
- Hacksaw or Reciprocating saw
- Hammer
- Rubber mallet
- Drill
- #10 Torx head driver bit for finish head screws

REMEMBER TO USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

LEGEND:

A. Wood subsill
B. Subsill clip
C. Installation clip
D. 1/2" Aluminum mullion reinforcement
E. Angle mullion anchor
F. Subsill mullion anchor
G. Mullion cover
H. 1" frame expander



Note: Subsill is required when no other through wall flashing is present at the bottom of the rough opening. If subsill is not required, proceed to Step 2.

1 INSTALLING SUBSILL

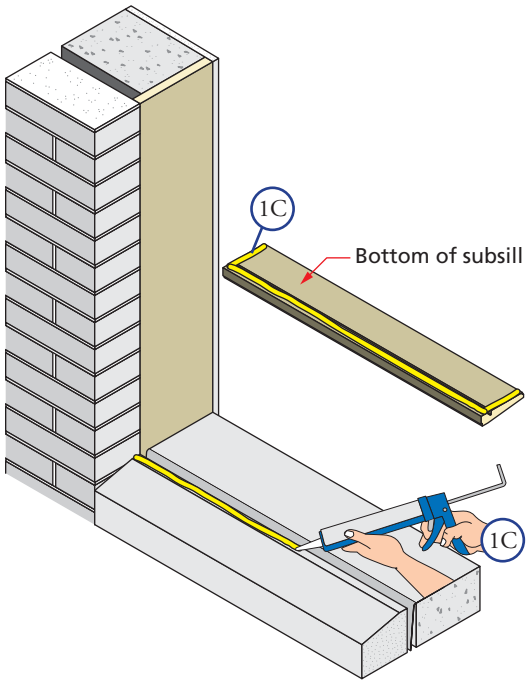
A. **Check the opening to ensure the product will fit.** Combination width plus 3/4", frame height plus 1-1/2".

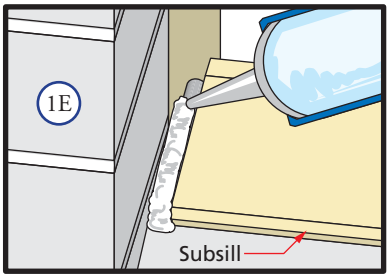
B. **Cut the subsill 1/2" shorter than the opening width.**

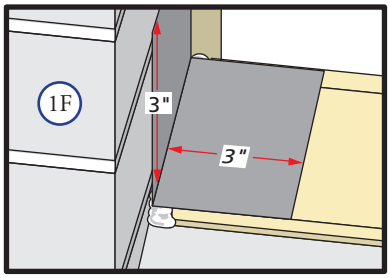
C. **Apply sealant** to the rough opening and the bottom of the subsill.

D. **Center and fasten the subsill to the opening** using #8 x 2-1/2" flat head stainless steel screws or masonry screws with a minimum 1" embedment.

E. **Seal the ends of the subsill to the opening** with 1/4" backer rod and sealant.





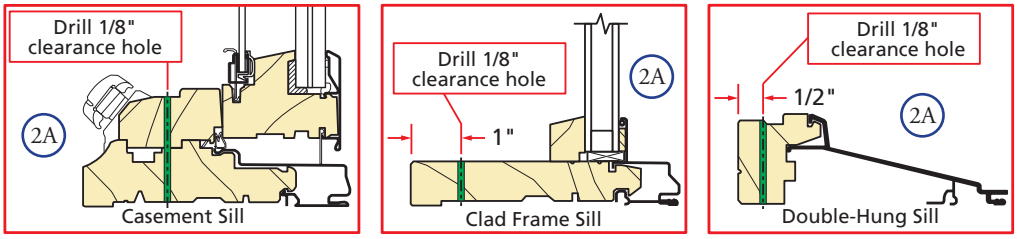


F. **Cut two 6" long pieces of flashing tape.** Apply the tape to the ends of the subsill; lap 3" onto the subsill and 3" up the rough opening on each side.

2 PREPARING AND INSTALLING WINDOWS

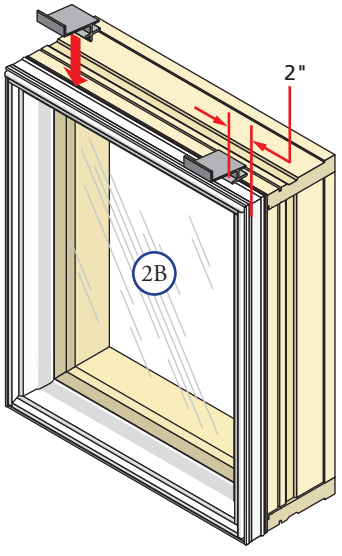
A. **Pre-drill 1/8" diameter installation holes** into the sill of the window. Place the holes 6" from each end and not more than 16" on center.

Note: On vent casements, place the holes so that they do not interfere with the roto operator and the latch points on the lock side of the window.

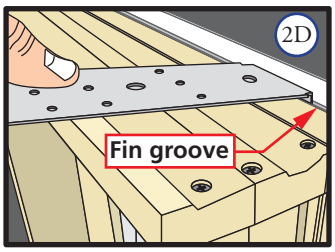


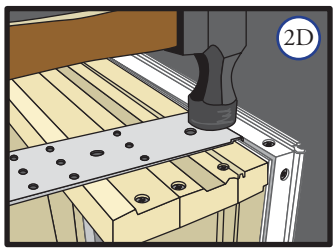
B. **Place subsill clips on the bottom of each window or stack of windows** 2" from the ends and not more than 16" on center.

C. **Install installation clips** on the head and left jamb of the first window or combination. Position the clips beginning 6" from each end or mullion joint, then not more than 16" on center.

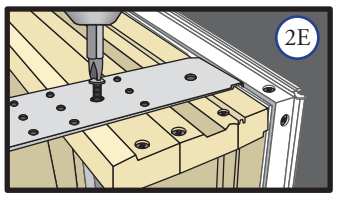


D. **Install the installation clips into the fin grooves.** Hold the clip so that one corner is started into the fin groove. Using a hammer, tap that corner into the fin groove, then tap the other corner of the clip into the fin groove.





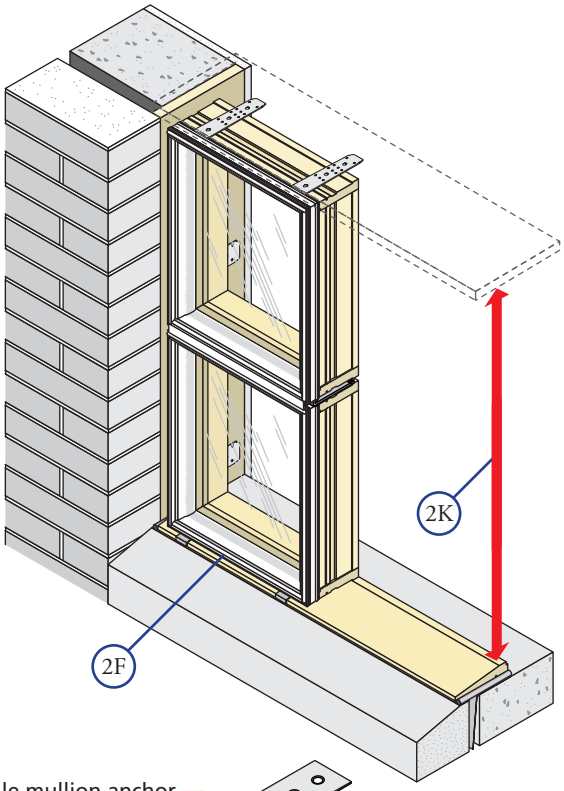
E. **Drive one #6 x 5/8" screw** through the slotted hole in the center of the clip. ***Note: Screws should not be used on the sill of double-hung windows.***



F. **Set the first window or stack of windows on the left side of the opening** as viewed from the exterior.

G. **Insert one #8 x 1-1/4" or longer flat head stainless steel screw into one pre-punched hole in the top installation clip.** This will hold the window in place while shimming.

H. **Place shims** between the window frame and the rough opening, 1" from the top and bottom of the window and at the mid-point of the window side. Adjust the shims to plumb and square the window in the opening. Also shim behind all jamb installation clips. DO NOT shim between the head of the window and the rough opening.

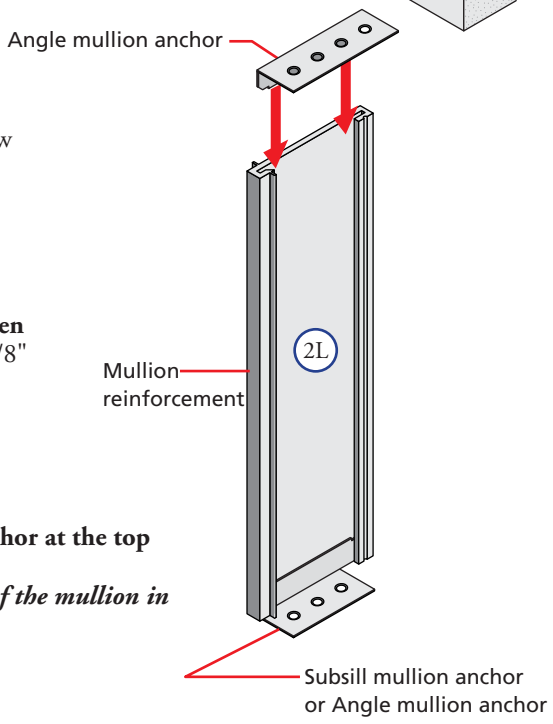


I. **Fasten the remaining installation clips** to the rough opening by driving one #8 x 1-1/4" or longer flat head stainless steel screw into one of the pre-punched holes in each installation clip.

J. **Install a #8 x 2" or longer flat head wood screw** into the pre-drilled screw holes at the sill.

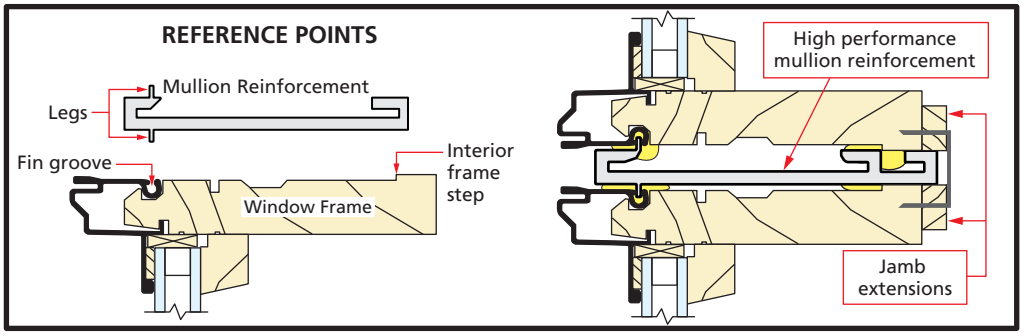
K. **Measure from the top of the subsill to the top of the opening at the open jamb** of the window stack and cut the aluminum mullion reinforcement 3/8" shorter than the measurement.

L. **Place a subsill mullion anchor at the bottom and an angle mullion anchor at the top** of the mullion reinforcement.
Note: If subsill is not used, use an angle mullion anchor at the bottom of the mullion in place of the subsill mullion anchor.

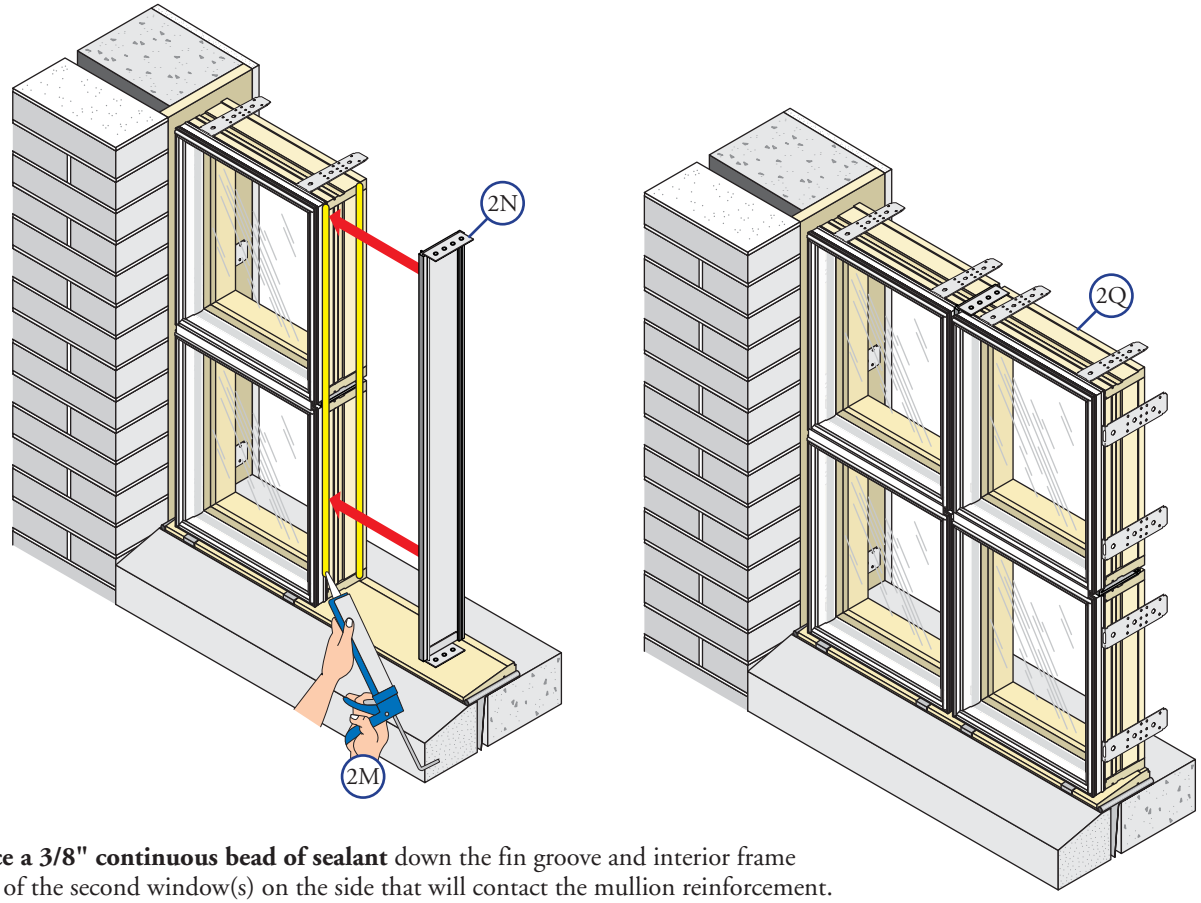


2 PREPARING AND INSTALLING WINDOWS (continued)

M. **Place a 3/8" continuous bead of sealant** down the fin groove and interior frame step of the window(s).



N. **Position the mullion reinforcement with the two anchors facing away from the window(s).** Press the leg of the mullion reinforcement into the fin groove and fasten the two anchors into the opening with #10 x 3" flat head stainless steel screws or masonry screws with a minimum 1" embedment.



O. **Place a 3/8" continuous bead of sealant** down the fin groove and interior frame step of the second window(s) on the side that will contact the mullion reinforcement.

P. **Place a bead of sealant** over the heads of the screws of the sill mullion anchor.

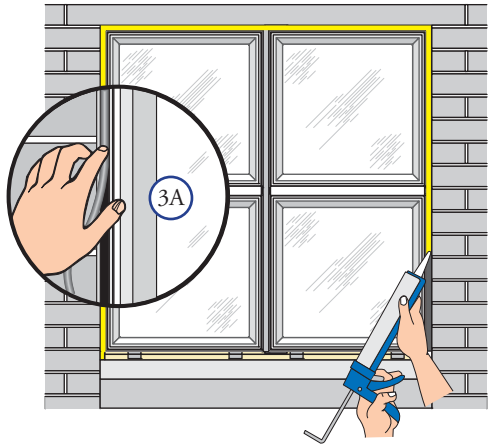
Q. **Place the second window(s) next to the reinforcement so that the leg of the reinforcement is in the fin groove.** Attach the combination at the head with installation clips and to the subsill at the sill using #8 x 2" flat head wood screws.

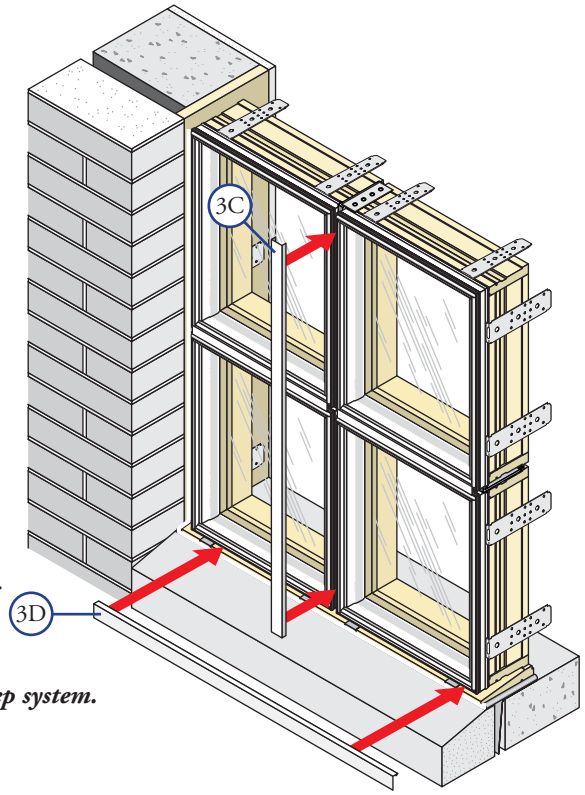
R. **Continue setting reinforcements and windows until the total combination is complete.**
Note: The end combination needs to be attached to the opening at the jamb with installation clips or finish screws.

S. **From the exterior, fill the top of each mullion reinforcement with sealant.**

3 EXTERIOR SEAL AND DETAILING

A. **From the exterior, insert backer rod** at the top and sides into the space between the window frames and the rough opening. The backer rod should be approximately 3/4" back from the face of the windows.





B. **Apply a bead of high quality exterior grade sealant** to the top and sides of the window. Connect the sealant at the sides to the sealant line between the subsill and the side of the opening. Connect the perimeter sealant at the top of the opening to the mullion reinforcement.

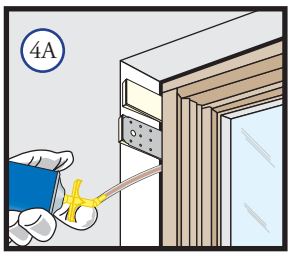
C. **Cut a piece of mullion cover 5/8" shorter than the combinations,** center on combinations and use a rubber mallet to snap the mullion cover in place.

D. **Place a 1" frame expander at the sill of the opening.**
Note: DO NOT seal the frame expander to the opening, as this is the weep system.

4 INTERIOR SEAL

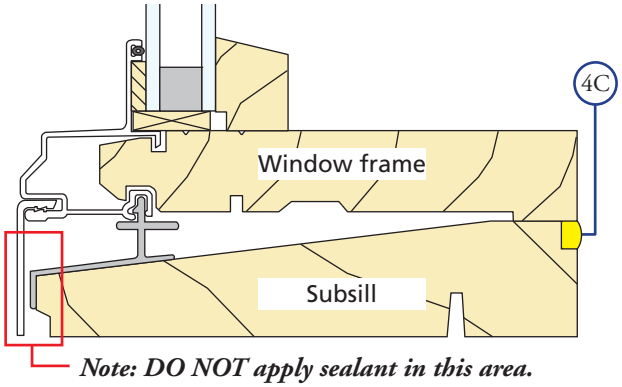
Caution: Ensure use of low pressure polyurethane window and door installation foams and strictly follow the foam manufacturer's recommendations for application. Use of high pressure foams or improper application of the foam may cause the window to bow and binder operation.

A. **Apply insulation foam.** From the interior, apply foam at each clip location, between the installation clip and the rough opening. Then, insert the nozzle between the window frame and the rough opening and apply a 1" deep bead of insulation, ensuring the insulating foam is between the window frame (not the jamb extension) and the rough opening. Also ensure the insulating foam contacts the flashing tape at the bottom of the rough opening. This will allow room for expansion of the foam and will minimize squeeze out. Allow the foam to cure completely (usually 8 to 24 hours) before proceeding to the next step.
Note: DO NOT completely fill the space from the back of the backer rod to the interior face of the opening.



B. **Check window operation** by opening and closing the window.
Note: If the window does not operate correctly, check to make sure it is still plumb, level and that the sides are not bowed. If adjustments are required, remove the foam with a serrated knife. Adjust the shims, and reapply the insulating foam sealant.

C. **Apply a bead of sealant to the interior groove of the subsill,** sealing it to the sill of the windows.
Note: This bead of sealant must connect to the insulating foam at the sides of the opening.



Note: DO NOT apply sealant in this area.