






SUBFRAME INSTALLATION INSTRUCTIONS






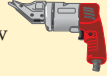
The Subframe provides adaptability of clad windows to existing openings. In most cases, only the sash of existing windows will have to be removed. The Subframe permits the installation of the units from the inside of the building.

Installation recommendations for other types of wall construction, wall systems, conditions, multiple windows or bow/bay windows, may be obtained from Pella Corporation or a local Pella retailer. Building designs, construction methods, building materials, and site conditions unique to your project may require an installation method different from these instructions, and additional care on your part. Determining the appropriate installation method is the responsibility of you, your architect, or other construction professional.

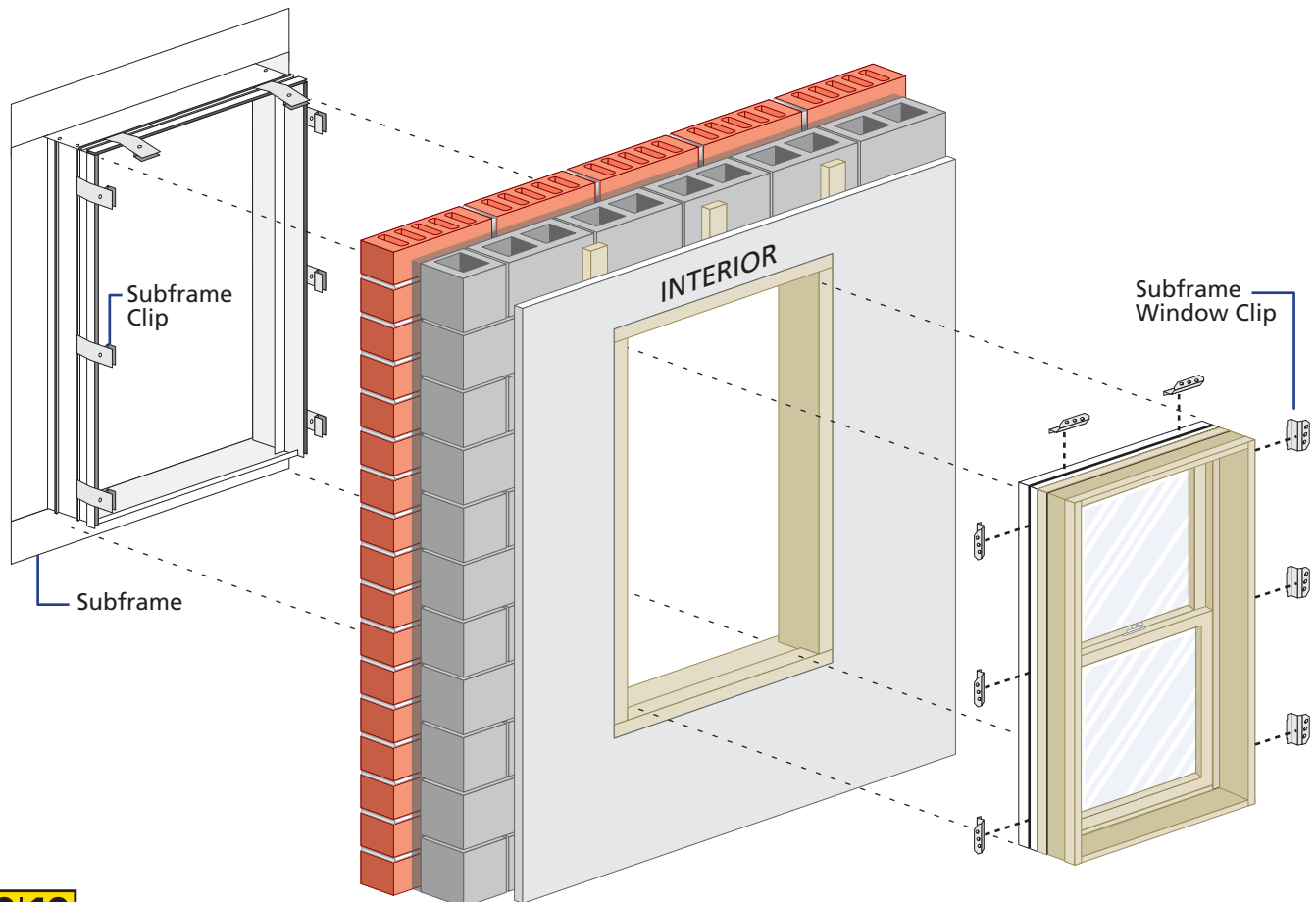
YOU WILL NEED TO SUPPLY:

- Cedar or Impervious shims/spacers (12 to 20) 
- High quality exterior grade polyurethane or silicone sealant (1 tube per window) 
- Great Stuff™ Window and Door Insulating Foam Sealant by the Dow Chemical Company or equivalent low pressure polyurethane window and door foam - DO NOT use high pressure or latex foams. 
- Subframe clips
- Subframe window clips
- Subframe vinyl receptor gasket
- #8 or #10 x 1-1/4" pan head stainless steel screws
- Subframe Head (1), Sill (1) and Jamb (2)
- Wood blocking
- #8 x 5/8" pan head stainless steel screws

TOOLS REQUIRED:

- Tape measure 
- Level 
- Hammer 
- Screwdriver 
- Drill 
- Electric shear or saw 
- Table with smooth soft covering to prevent scratching of subframe finish

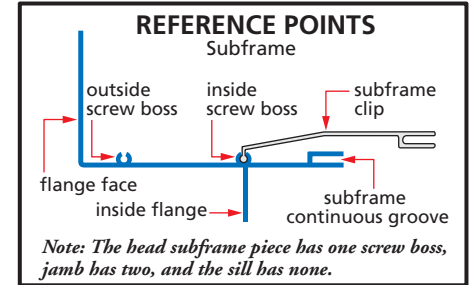
REMEMBER TO USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.



Always read the Pella® Limited Warranty before purchasing or installing Pella products. By installing this product, you are acknowledging that this Limited Warranty is part of the terms of the sale. Failure to comply with all Pella installation and maintenance instructions may void your Pella product warranty. See Limited Warranty for complete details at <http://warranty.pella.com>.

1 PREPARING AND ASSEMBLING THE SUBFRAME

- A. **Remove the sash and parting stop** from the existing window.
- B. **Check the condition of the existing window frame.** Repair damaged frame members and install wood blocking in the existing sash channels, making the frame jambs and head flush from interior to exterior.
- C. **Check to make sure the sill is level.** The sill must be level from side to side and from interior to exterior. If the sill is not level, make corrections before proceeding to the next step.
- D. **Layout the head, sill and jamb subframe pieces** in their appropriate position on a table with the flange face facing down.



Note: The table should be covered with carpet or other material to prevent scratches to the subframe painted surfaces.

- E. **Install the subframe clips.** Slide clips into the inside screw boss of the head and jamb subframes, placing one clip 6" from each end of the subframe and no more than 16" on center. To hold the clips at the proper spacing, the screw boss may be crimped or the clips held with tape at the desired spacing.

Note: A minimum of two subframe clips per jamb and head are required.

- F. **Assemble the subframe** using #8 x 5/8" pan head stainless steel screws. Drive the screws through the pre-drilled screw holes in the head and sill subframe pieces, into the outside and inside screw boss of the jamb subframe members.

- G. **Measure the width and height** of the masonry opening and the assembled subframe prior to cutting subframe flanges to ensure that cutting the flanges will not make the subframe too small for the masonry opening.

Note: The following measurement will be used to remove the excess material from the subframe jamb flanges.

- H. **Measure** the existing masonry opening width and subtract 1/4" from this dimension. Measure the overall width of the subframe assembly and subtract this dimension from the opening dimension. Divide this dimension in half.

- I. **Using the final dimension from Step H, trim off the excess material** from each subframe jamb flange using an electric shear or saw.

Note: The following measurement will be used to remove the excess material from the subframe head flange.

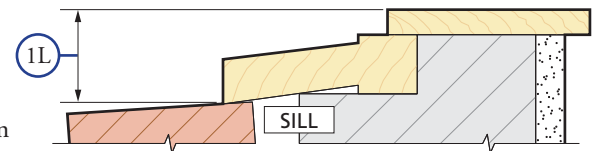
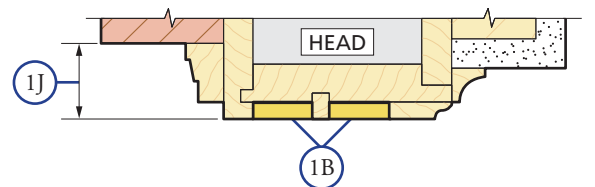
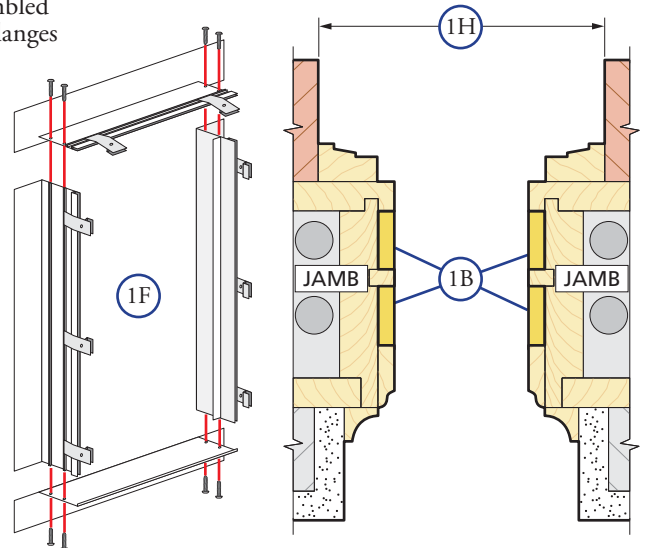
- J. **Measure** from the head of the masonry opening, to the inside of the existing window frame or wood blocking. Subtract this dimension from 3".

- K. **Using the final dimension from Step J, trim off the excess material** from the subframe head. Round or bevel the corners of the subframe head flange face.

Note: The following measurement will be used to remove the excess material from the subframe sill.

- L. **Measure** from the sill of the masonry opening, to the top of the existing window stool and subtract 3-7/16".

- M. **Using the final dimension from Step L, trim off the excess material** from the subframe sill. Round or bevel the corners of the subframe sill flange face.

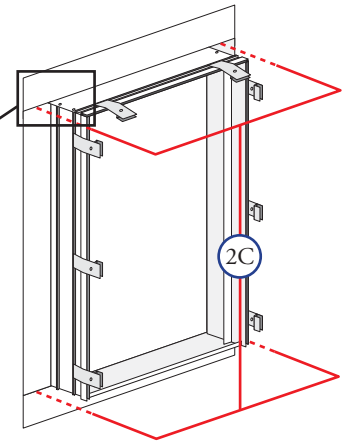
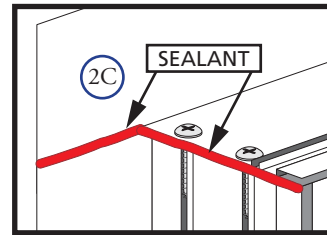
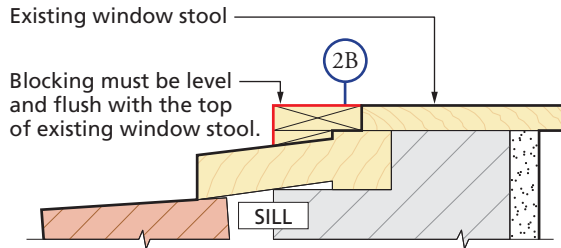


2 INSTALLING SUBFRAME

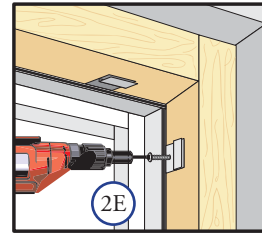
- A. **Dry fit the subframe into the opening.** From the interior, turn the subframe assembly sideways and pass it through the opening to the exterior. Turn it to its correct orientation, and pull it into position. If adjustments are needed, mark the location of the areas requiring adjustment. Check to make sure all the subframe clips will be attached to solid material. Bring the subframe back into the interior. Make any adjustments required to the subframe assembly before proceeding to the next step.

2 INSTALLING SUBFRAME (continued)

- B. **Prepare the existing opening.** Install treated wood blocking as required. Blocking at the sill must be level and flush with the top of the existing window stool.

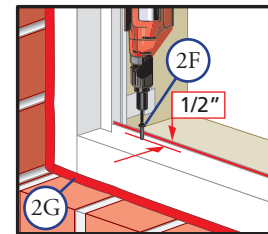


- C. **Place a bead of sealant** on the back of the subframe flanges where the vertical and horizontal members meet. Place a bead of sealant on the backside of the subframe corners. Place sealant over the screw threads that are visible at the screw boss, then plug the screw boss with sealant at the bottom of the screw threads.



- D. **Position the subframe assembly into the opening.** Level the sill and check the subframe assembly for square. Check the subframe width at the head, center and sill.

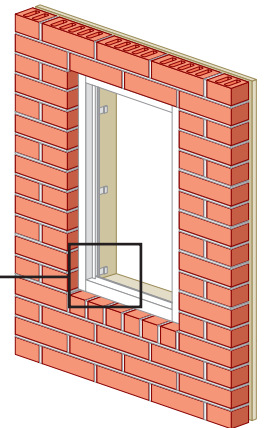
- E. **Fasten the subframe clips to the opening.** Using #8 x 1-1/4" flat head corrosion resistant screws, attach the subframe clips to the existing window frame or blocking. Shim between the clips and existing window frame, if required, to prevent the subframe from twisting.



- F. **For openings wider than 36"**, drive #8 or #10 x 1-1/4" flat head stainless steel screws through the subframe sill into blocking and/or opening. Install screws within 1/2" from the interior edge of the subframe sill.

Note: Screws driven into the sill must be countersunk and heads sealed.

- G. **Place a corner bead of sealant** around the perimeter of the subframe flange, sealing the flange to the masonry opening.



3 PREPARING THE WINDOW(S) FOR INSTALLATION

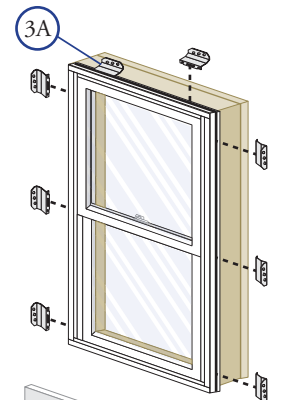
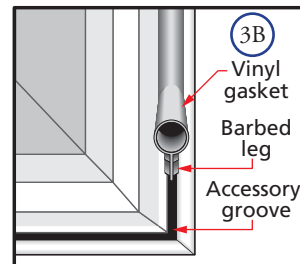
Note: If windows are to be mullied together, follow the instructions for mulling clad windows.

- A. **Install window clips on window(s).** Place clips 4" from each corner and not more than 12" on center. Compare the window clip locations to the subframe clip locations. Adjust the window clip location, if necessary, to prevent interference with the subframe clips.

Note: For mullied windows, place clips 4" from each side of the mullion joint, and not more than 12" on center.

- B. **Insert a continuous piece of vinyl gasket** in the accessory groove at the head and jambs of the window(s). Begin at the bottom of one jamb and insert the barbed leg of the gasket into the accessory groove, end at the bottom of the opposite jamb.

Note: When applying the vinyl gasket to mullied windows, notch the barbed leg on the back of the gasket at the mullion joint.

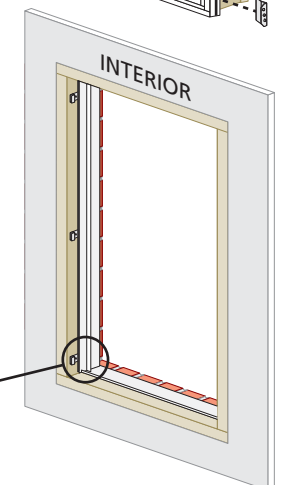
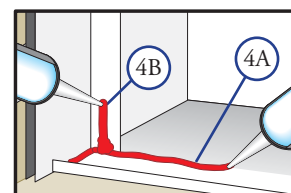


4 SETTING AND FASTENING THE WINDOW

- A. **Apply a 1/4" continuous bead of sealant** along the bend on the sill.

- B. **Apply a generous bead of sealant** approximately 1" up each side of the interior jamb flanges on the subframe.

Note: This sealant must connect with the sealant at the sill.



4 SETTING AND FASTENING THE WINDOW (continued)

- C. **Set the window into the subframe from the interior.** Hold the window to the top of the subframe opening and center it between the subframe jambs. Slide the window to the exterior. Slowly allow the window to slide to the bottom of the subframe opening.

Note: Ensure the sill of the window is all the way in and against the subframe flange. DO NOT smear the sealant at the sill while installing the window.

- D. **While holding the window in the opening, plumb and square window.**

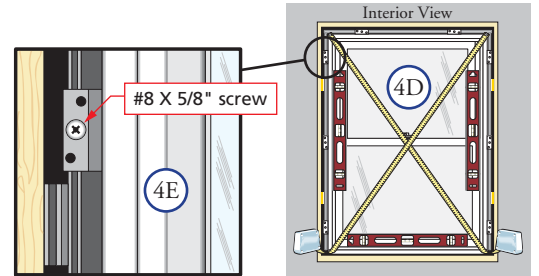
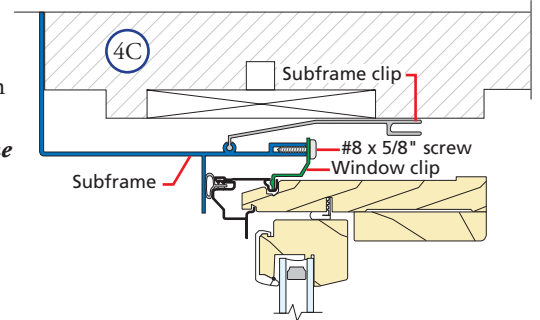
Place shims 1" from the bottom and top of the window between the window and the sides of the opening. Adjust the shims as required.

For windows up to 53" tall: Place an additional shim at the midpoint of each side of the window.

For windows over 53" tall: Place three additional shims along each side of the window, evenly spacing them between the top and bottom shims.

Note: DO NOT shim above the window. DO NOT over shim.

- E. **Fasten the window to the subframe** by driving #8 x 5/8" pan head screws through each window clip, into the continuous groove of the subframe.



5 INTERIOR SEAL

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 to bow and hinder operation.

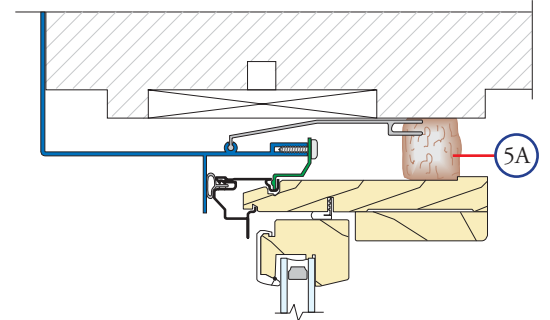
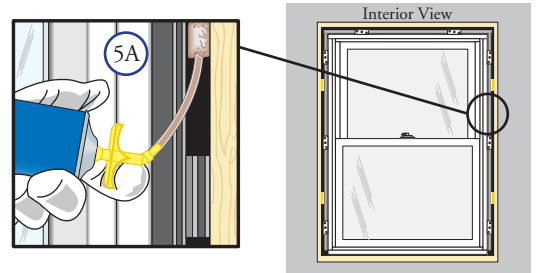
- A. **Apply insulating foam at the head and jambs.** From the interior, insert the nozzle of the applicator approximately 1" deep into the space between the window and the rough opening and apply a 1" deep bead of foam. This will allow room for expansion of the foam and will minimize squeeze out. If using foam other than Great Stuff™ Window and Door Insulating Foam Sealant by the Dow Chemical Company, allow the foam to cure completely (usually 8 to 24 hours) before proceeding to the next step.

- B. **Seal the window sill to the rough opening** with a corner bead of sealant. Ensure the sealant at each end connects to the insulating foam at the window jambs.

- C. **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, square 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.

- D. **Install the interior trim.**



IMPORTANT NOTICE

Because all construction must anticipate some water infiltration, it is important that the wall system be designed and constructed to properly manage moisture. Pella Corporation is not responsible for claims or damages caused by anticipated and unanticipated water infiltration; deficiencies in building design, construction and maintenance; failure to install Pella® products in accordance with Pella installation instructions; or the use of Pella products in wall systems which do not allow for proper management of moisture within the wall systems. The determination of the suitability of all building components, including the use of Pella products, as well as the design and installation of flashing and sealing systems are the responsibility of the Buyer or User, the architect, contractor, installer, or other construction professional and are not the responsibility of Pella.

Pella products should not be used in barrier wall systems which do not allow for proper management of moisture within the wall systems, such as barrier Exterior Insulation and Finish Systems (EIFS) (also known as synthetic stucco), or other non-water managed systems. Except in the states of California, New Mexico, Arizona, Nevada, Utah, and Colorado, **Pella makes no warranty of any kind and assumes no responsibility for Pella windows and doors installed in barrier wall systems. In the states listed above, the installation of Pella products in barrier wall or similar systems must be in accordance with Pella installation instructions.**

Product modifications that are not approved by Pella Corporation will void the Limited Warranty.