






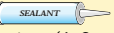




# HINGED PATIO DOOR INSTALLATION INSTRUCTIONS









## Installation Instructions for Typical Wood Frame Construction.

These instructions were developed and tested for use with typical wood frame wall construction in a wall system designed to manage water. **These instructions are not to be used with any other construction method.** Installation instructions for use with other construction methods, multiple units or bow and 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. Determining the appropriate installation method is the responsibility of you, your architect, or construction professional. If you are not able to perform the steps shown in this instruction, return the product and the purchase price will be refunded.

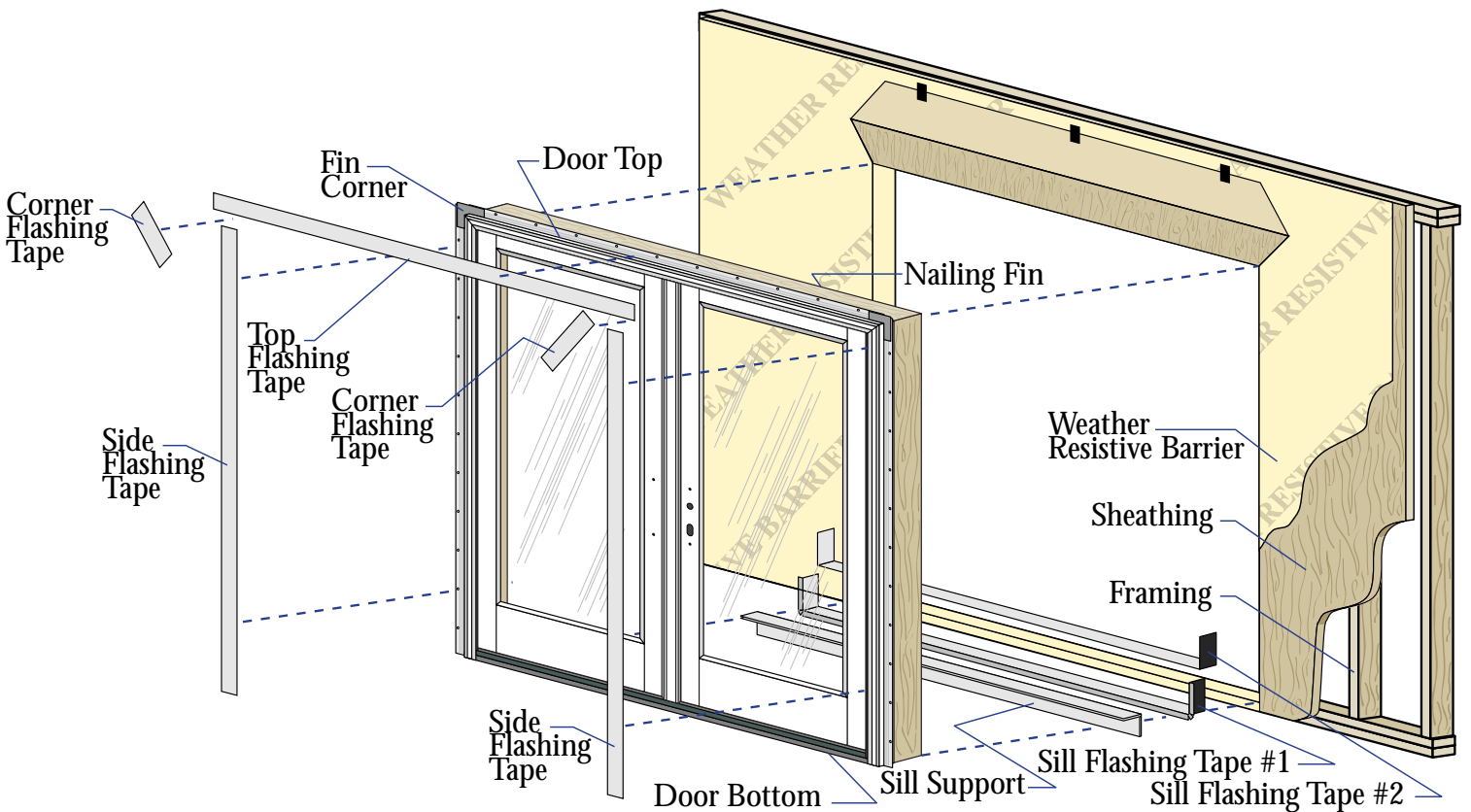
### YOU WILL NEED TO SUPPLY:

- Cedar or Impervious shims/spacers (12-20) 
- 2" galvanized roofing nails (1/4 lb.) 
- 1 16d nail 
- Closed cell foam backer rod/sealant backer (12-30 ft.) 
- Pella foil backed butyl window & door flashing tape or equivalent 
- High quality exterior grade polyurethane or silicone sealant (2-3 tubes per door) 
- Low expansion window & door foam insulation (1-2 cans)   
Do not use high expansion foams.
- Pella aluminum sill support or 2 x 4 wood blocking 
- Interior trim and/or jamb extensions (15 to 40 ft.)

### TOOLS REQUIRED:

- Tape measure 
- 6' Level 
- Square 
- Hammer 
- Stapler 
- Scissors or utility knife 
- Screwdrivers (#2 Phillips & small flat blade) 
- Drill 

REMEMBER TO USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.



# 1 ROUGH OPENING PREPARATION

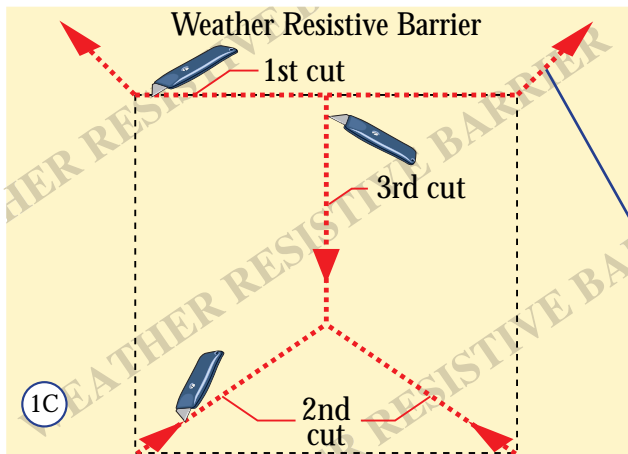
- A. **Verify the opening is plumb and level.**

*Note: It is critical that the bottom is level.*

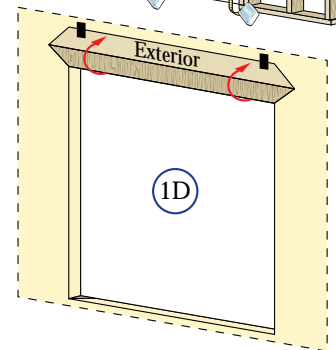
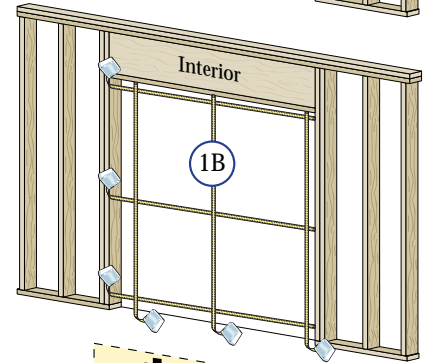
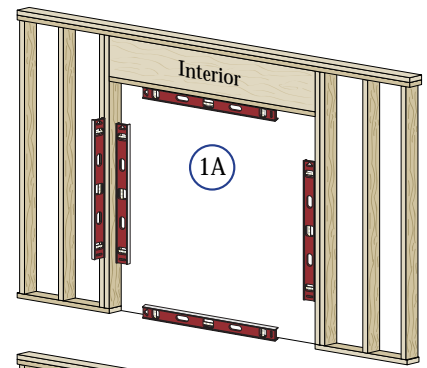
- B. **Verify the door will fit the opening.** Measure all four sides of the opening to make sure it is 3/4" larger than the door in width and 1/2" larger in height. On larger openings measure the width and height in several places to ensure the header or studs are not bowed.

*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 weather resistive barrier (1C).**



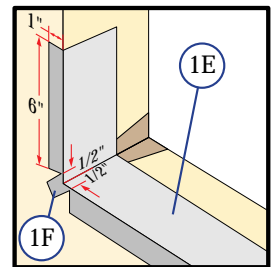
4th cut:  
Make a 6" cut up from each top corner at a 45° angle to allow the weather barrier to be lapped over the fin at the head of the door.



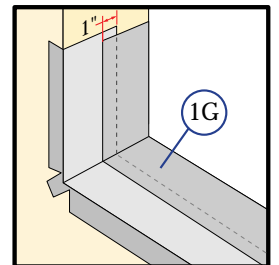
- D. **Fold the weather resistive barrier (1D).** Fold side and bottom flaps into the opening and staple to inside wall. Fold top flap up and temporarily fasten with flashing tape.

- E. **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 (1E) 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.*



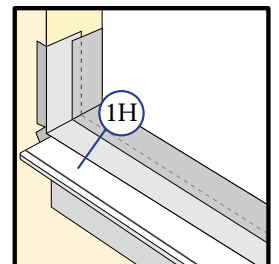
- F. **Tab the sill flashing tape and fold.** Cut 1" wide tabs at each corner (1/2" from each side of corner) (1F). Fold tape to the exterior and press firmly to adhere it to the weather resistive barrier.



- G. **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 (1G).

**In-swing Architect Series® and Designer Series®:** If the wall depth is greater than 5", add a third piece of flashing tape. The flashing tape should come to within 1" of the interior face of the framing.

*Note: The flashing tape does not need to extend all the way to the interior of the framing.*

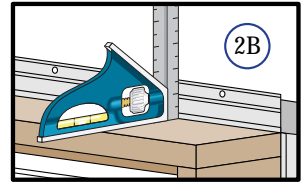


- H. **Attach the aluminum sill support or wood blocking** to the exterior of the box plate to support the edge of the door sill. Place the sill support flush with the subfloor.

## 2 SETTING AND FASTENING THE DOOR

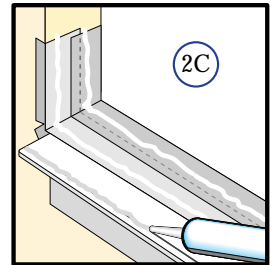
- A. **Remove plastic wrap and cardboard packaging from door.** Do not remove plastic shipping spacers. The shipping spacers will help keep the door square during installation. Do not unlock or open the door until it is fully fastened.

*Note: If screens, grilles or hardware are removed from the door at this time, label them and store them in a protected area.*



- B. **Fold out installation fin to 90°.** Be careful not to remove or tear the fin corners.

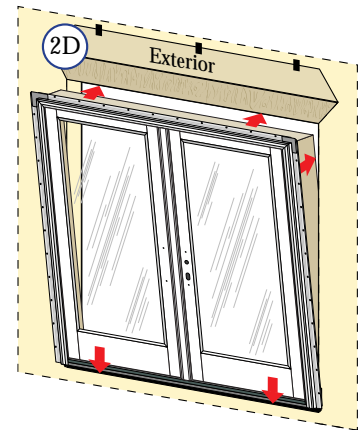
*Note: If the fin is not at 90°, the door will not line up correctly on the interior.*



- C. **Place three 3/8" beads of sealant.** The first bead should be approximately 3/4" from the exterior of the rough opening, the second bead should be placed so it is under the wood interior threshold of the door. Placement will vary depending on wall thickness and door type. Place a third bead of sealant in the groove of the sill support or 1/4" from the exterior edge of the wood blocking

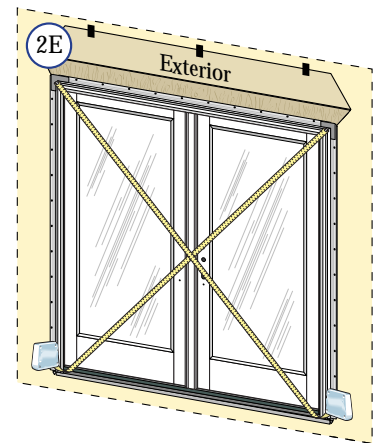
### 2 OR MORE PEOPLE WILL BE REQUIRED FOR THE FOLLOWING STEPS.

- D. **Insert the door from the exterior of the building. DO NOT slide the bottom of the door into the opening. Sliding will damage the sealant lines.** Place the bottom of the door at the bottom of the opening, then tilt the top into position. Center the door between the sides of the opening to allow clearance for shimming, and insert one roofing nail in the first hole from the corner on each end of the top nailing fin. These are used to hold the door in place while shimming it plumb and square.



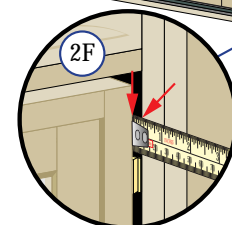
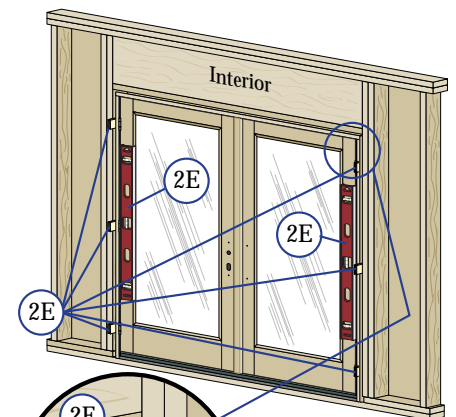
- E. **Plumb and square door.** Place shims at each hinge and lock strike location between the door and the sides of the opening. Insert shims in other locations as needed starting up 6" from the bottom of the door to square it in the opening. Make sure that the reveal around the door(s) is equal. On double doors, make sure that panels are even across the bottom.

*Note: On center latch double doors the lock strike will not be shimmed since it is located in the center of the unit. DO NOT OVER SHIM.*



- F. **Check the interior reveal.** Make sure the measurement from the interior face of the door to the interior face of the wall is equal at several points around the door.

*Note: If the dimensions are not equal, check to make sure the fins are folded out to 90° at all points.*



## 2 SETTING AND FASTENING THE DOOR (continued)

G. **Fasten the door to opening** by driving 2" galvanized roofing nails into each pre-punched hole in the nailing fin.

*Note: Make sure the fin corner is lying as flat as possible.*

H. **Carefully open the door(s) and remove all shipping spacers.**

*Note: Be sure to remove the spacers from the bottom edge of the door panel.*

I. **Place a dab of sealant in each of the pre-drilled holes** in the bottom of the unit, then insert a #8 x 2" stainless steel screw (provided) into each hole.

*Note: Single doors will have 2 pre-drilled holes, double doors will have 4.*

J. **On center latching (double) doors** place shims at the top of the door frame near the center strike plate. Secure the shims by inserting a 16d galvanized finish nail into the upper door frame through the shims and into the rough opening.

J1. **On center hinged double doors**, insert and attach shims directly above the astragal in the center of the unit.

K. **On each hinge, starting at the top, insert a 3" long screw** (provided) into the open screw hole. Make sure that the screw passes through the shims and into the structural framing.

*Note: This step does not apply to center hinge double doors.*

L. **Check door operation.** Open and close the door to check for proper operation. Make sure the door will latch correctly.

*Note: If there are any problems with the operation, recheck and adjust the reveal. Plastic shims located behind the hinges may be removed to adjust the reveal between the door panel and door frame. Additional hinge shims may be added if required.*

M. **On doors with a lock strike in the side**, drill a 1/8" diameter x 2" deep pilot hole through the lock strike and into the rough opening. Insert a #8 x 3" screw (provided) into pilot hole making sure that it passes through the shim and into the stud.

*Note: This step does not apply to center latching double doors.*

## 3 INTEGRATING THE DOOR TO THE WEATHER RESISTIVE BARRIER

A. **Apply side flashing tape.** Cut 2 pieces of flashing tape 4" longer than the frame height of the door. Apply one piece to each side over the nailing fin and onto the weather resistive barrier. The tape should extend 2" above the top of the door and 2" below the bottom of the door. Press the tape down firmly.

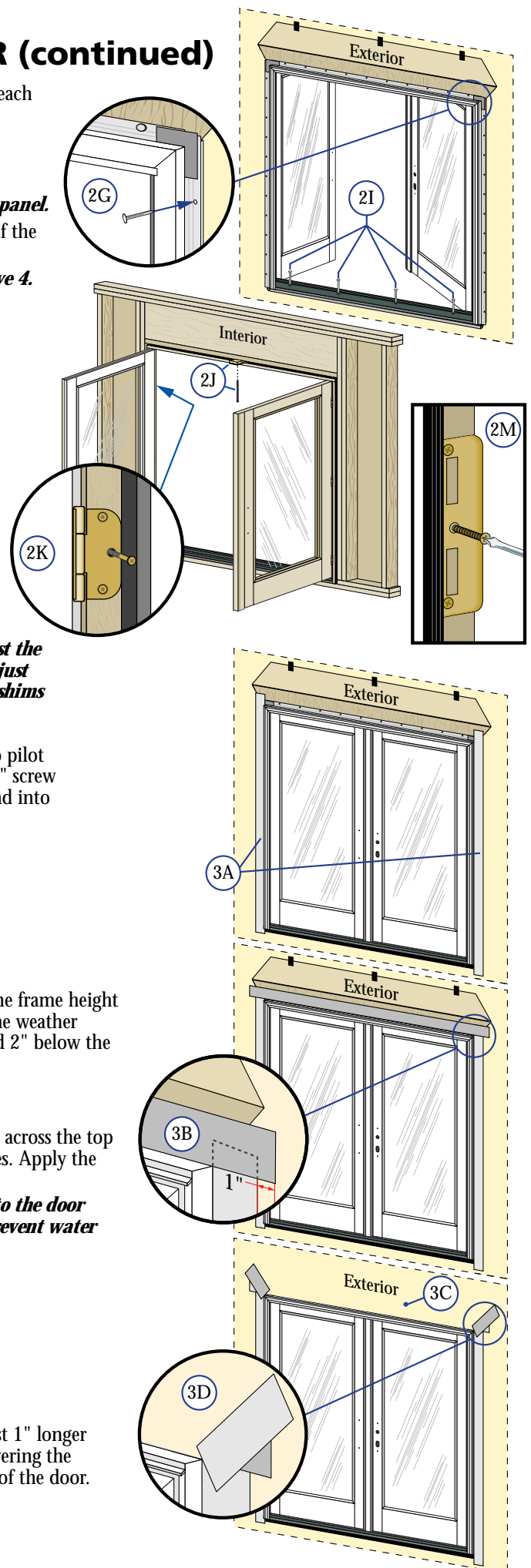
B. **Apply top flashing tape.** Cut a piece of flashing tape long enough to go across the top of the door and extend at least 1" past the side flashing tape on both sides. Apply the tape over the top nailing fin as shown.

*Note: The tape should cover the entire nailing fin, but not extend onto the door frame. The top flashing tape must overlap the side flashing tape to prevent water from getting behind it.*

C. **Fold down top flap of weather resistive barrier** (3C).

D. **Apply flashing tape to diagonal cuts.** Cut pieces of flashing tape at least 1" longer than the diagonal cuts in the weather resistive barrier. Apply the tape covering the entire diagonal cut in the weather resistive barrier at both upper corners of the door.

*Note: Be sure to overlap the top corners (3D).*



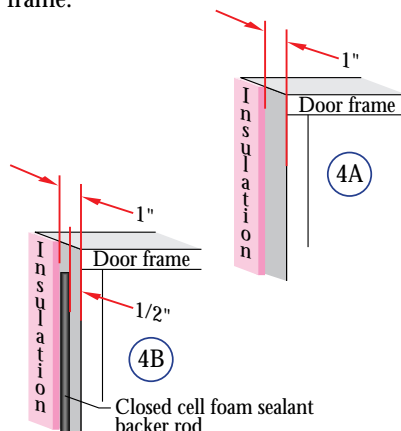
# 4 INTERIOR SEAL

*There are two different methods for creating an interior seal.*

## Fiberglass Insulation Method

- A. **Loosely fill the interior space between the door and the rough opening with fiberglass insulation** to within 1" of the interior of the door frame.

*Note: Packing the insulation too tightly may cause the sides of the door to bow.*

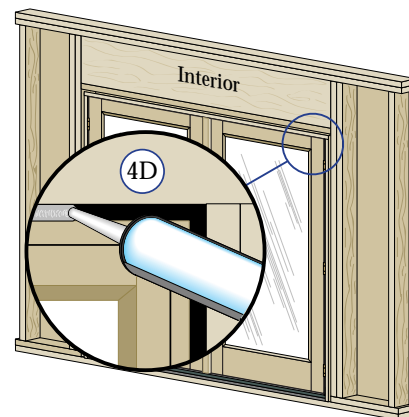
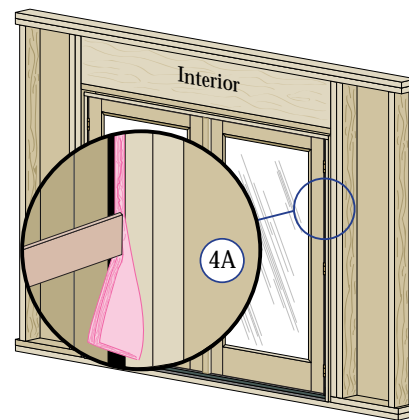


- B. **Insert closed cell foam sealant backer rod** into the space to within 1/2" of the interior of the door frame.

- C. **Check the door operation** by opening and closing the door.

*Note: If the door does not operate correctly, check for plumb, square and that the sides are not bowed. If the sides are bowed, remove the backer rod and insulation then adjust shims as required and repeat the above steps.*

- D. **Apply interior line of sealant over the backer rod.** Tool and finish the interior sealant.



## Foam Insulation Method

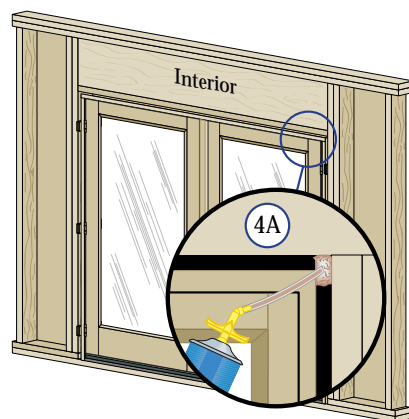
*Caution: Ensure use of low expansion polyurethane window and door installation foams and strictly follow the foam manufacturer's recommendations for application. Use of high expansive foams or improper application of the foam may cause the door to bow and hinder operation.*

- A. **Apply insulating foam.** From the interior, insert the nozzle of the applicator approximately 1" deep into the space between the door 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. Allow the foam to cure completely (usually 12 to 24 hours) before proceeding to the next step.

*Note: Do not completely fill the space from the back of the fin to the interior face of the opening. Over filling the space may cause the door frame to bow.*

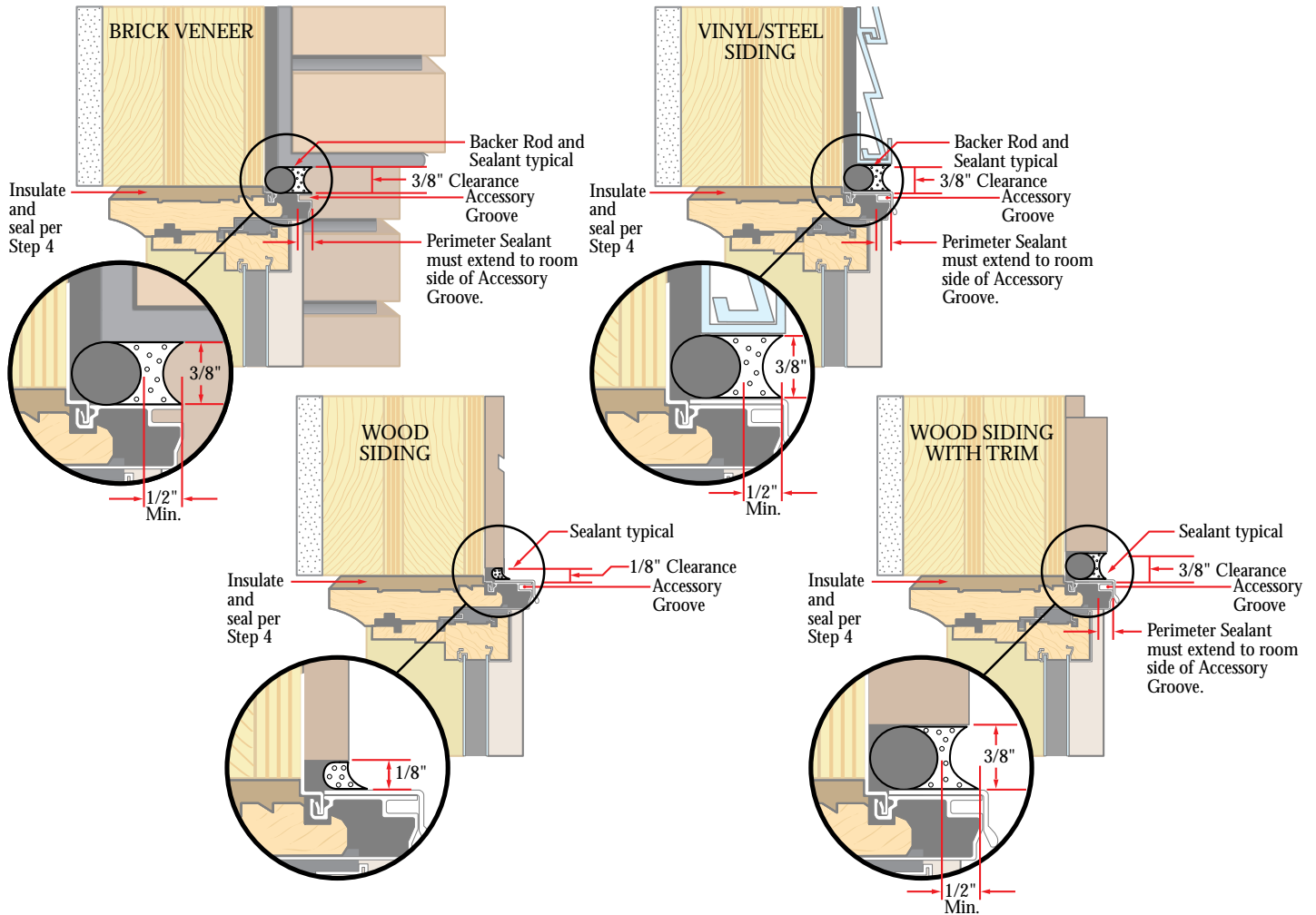
- B. **Check the door operation** by opening and closing the door.

*Note: If the door does not operate correctly, check to make sure it is still plumb, level and that the sides are not bowed. If the sides are bowed, remove the foam with a serrated knife and repeat the above steps.*



# 5 SEALING THE DOOR TO THE EXTERIOR WALL CLADDING

**Note:** When applying siding, brick veneer or other exterior finish materials, leave adequate space between the door frame and the material for sealant. Refer to the illustration that corresponds to your finish material. Not allowing adequate space and not using backer rod may cause the sealant to break down prematurely and allow water to infiltrate.



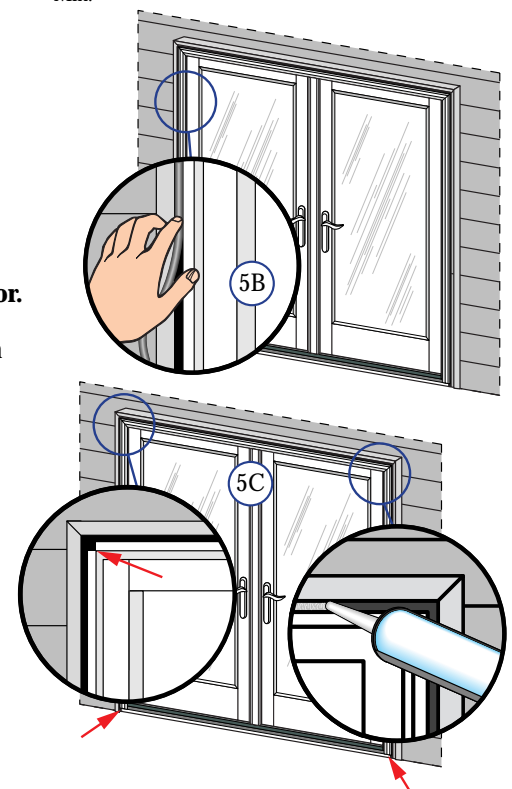
A. **Install the hardware.** Refer to the instructions included in the hardware box.

B. **Insert backer rod into the space around the door** as deep as it will go. This should provide at least a 1/2" clearance between the backer rod and the exterior face of the door.  
**Note: Backer rod adds shape and depth for the sealant line.**

C. **Apply a bead of high quality exterior grade sealant to the entire perimeter of the door.** Pump extra sealant into the corners of the door to fill the cavity deeper than the depth of the notches. At each end of the bottom of the door, insert sealant into the spaces between the bottom of the door and the sill support and connect it to the perimeter sealant.  
**Note: Filling the corners to the depth of the notch will help prevent water from penetrating into the cavity.**

D. **Shape, tool and clean excess sealant.** When finished, the sealant should be the shape of an hourglass.  
**Note: This method creates a more flexible sealant line capable of expanding and contracting**

E. **Remove plastic guards at the base of the door** once construction is complete.



# 6 INTERIOR FINISHING

Visible wood surfaces of Pella Products must be finished. Failure to do so voids the Limited Warranty. If products cannot be finished immediately, cover with clear plastic film to protect from dirt, damage 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. If your window has an interior removable glass panel, remove it and finish the wood between the panes. This may help prevent condensation.

For information on types of finish recommended by Pella Corporation, and for other information, see the Pella Owner's Manual or [www.pella.com](http://www.pella.com).

***Note: To maintain proper product performance do not paint, finish or remove the weather-stripping mohair dust pads, gaskets or vinyl parts. Air and water leakage will result if these parts are removed. If paint, stain or finish gets on the mohair weather-stripping immediately blot it thoroughly with a rag and allow it to dry. Flake off any remaining residue. After finishing, allow windows to dry completely before closing them or reinstalling removable glass panels. Pella Designer Series Products have breather holes in the sash which must be clear for maximum performance. Do not get paint or other finish in the breather holes.***

Pella Corporation is not responsible for finishing imperfections. Use of inappropriate finishes, solvents, brickwash or cleaning chemicals will cause adverse reactions with window and door materials and voids the Limited Warranty.

## EXTERIOR FINISH

The exterior frame and sash are protected by aluminum cladding with a Pella EnduraClad® or EnduraClad Plus baked-on factory finish that needs no painting. Clean this surface with mild soap and water. Stubborn stains and deposits may be removed with mineral spirits. Do NOT use abrasives. Do NOT scrape or use tools that might damage the surface.

Use of inappropriate finishes, solvents, brickwash or cleaning chemicals will cause adverse reactions with window and door materials and voids the Limited Warranty.

## CARE AND MAINTENANCE

Care and maintenance information is available in the Pella Owner's Manual. You can obtain an owner's manual by contacting your local Pella sales representative. This information is also available at [www.pella.com](http://www.pella.com).

## IMPORTANT NOTICE

Because all window and door systems 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 unanticipated water infiltration; deficiencies in building design, construction and maintenance; failure to install Pella products in accordance with these instructions; or the use of Pella products in 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 you, your architect, or a construction professional. Moisture problems, including unacceptable water infiltration, have been associated with barrier systems, such as EIFS (also known as synthetic stucco). Pella products should not be used in barrier EIFS systems unless Pella's current, recommended installation procedures for installation of windows and doors into EIFS are used. Any other use of Pella products with barrier EIFS systems will void the Limited Warranty.

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