



Pella® 250 Series Premium – Hinged Patio Door Installation Instructions

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WARRANTY INFORMATION

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 door frame types. Installation instructions for use with other construction methods or frame types may be obtained from Pella® Corporation, your local Pella retailer or www.installpella.com. 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.



Always read the 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 written Limited Warranty for details, including exceptions and limitations at pella.com/warranty, or contact Pella Customer Service at 877-473-5527.

BY PURCHASING, INSTALLING OR USING PELLA PRODUCTS (INCLUDES PELLA GOODS AND PELLA SERVICES), YOU AGREED TO THE TERMS OF THEIR RESPECTIVE LIMITED WARRANTIES AND YOU AND PELLA FURTHER AGREE TO ARBITRATE DISPUTES ARISING OUT OF OR RELATING TO YOUR PELLA PRODUCTS, AND YOU WAIVE ANY RIGHT TO PARTICIPATE IN A REPRESENTATIVE OR CLASS ACTION RELATED TO PELLA PRODUCTS unless you notify Pella of your decision to opt out of the Arbitration Agreement no later than ninety (90) calendar days from the date you purchased or otherwise took ownership of Your Pella Goods. Opting out of the Arbitration Agreement will not affect the coverage provided by any applicable limited warranty pertaining to Your Pella Products. For opt out information and additional details please read the Limited Warranty and Arbitration Agreement for your Pella Products at www.Pella.com/arbitration.

IMPORTANT: Consult a contractor or architect for recommendations on installation procedures that may vary from this manual depending on certain city, county or state codes.



BEFORE BEGINNING FRAME ASSEMBLY AND INSTALLATION:

Read through and understand all the assembly steps and the installation process.
Carefully remove shipping/packaging materials and check for any product damage.
Confirm the correct product was received. (Size, color, handing, etc..)
Confirm all parts as listed in the QC Checklist are present and accounted for.

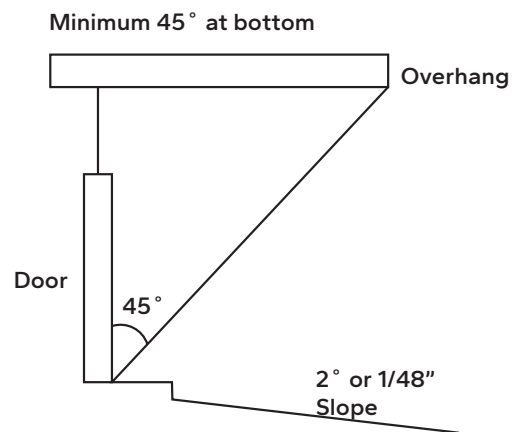
If there are any missing parts, product damage, wrong parts, or other issues...



DO NOT assemble! Contact Pella Customer Service at: 877-473-5527.
Or Contact your local sales representative or customer service team.

Before purchasing and installing, verify performance of product meets the requirements of the application and region. Not all products or sill types are rated for water performance. To reduce the likelihood of water infiltration where application exceeds product performance, install doors under an overhang that extends to meet a 45-degree line from the door sill and slope the exterior 2 degrees away from the door or use a stepdown.

FAILURE TO DO SO MAY RESULT IN DAMAGE TO THE INTERIOR OF THE STRUCTURE.



Tools List:

- #2 Phillips handheld screwdriver
- Pry bar
- Level
- Square
- Safety glasses
- Utility knife
- Hammer
- Wood block
- Mallet
- Tape measure
- Drill with 3/8", 9/64", and 3/4" bits
- Fine tooth chop saw
- Sealant gun with polyurethane sealant
- Speed square

Supply List:

- Moisture resistant shims/spacers (12 to 20)
- 2" galvanized roofing nails (1/4 lb.)
- #8 x 2-1/2" screws to fasten nail fin
- Masonry screws for concrete applications (Minimum of 3/16" diameter x 3")
- Closed cell foam backer rod/sealant backer (21 to 30 ft.)
- Pella® SmartFlash™ foil backed butyl window and door flashing tape or equivalent
- Pella Window and Door Installation Sealant or equivalent high quality, multi-purpose sealant.
- Low expansion, low pressure polyurethane insulating window and door foam sealant. DO NOT use high pressure or latex foams
- Sill pan 6-5/8" x (Rough Opening Width +2)
- Pella aluminum sill support or wood blocking
- Interior trim and/or jamb extensions (15 to 40 ft.)



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.
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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 Pella 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 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's 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 on 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's installation instructions. Product modifications that are not approved by Pella Corporation will void the warranty.

CARE AND MAINTENANCE: Refer to the Pella Owner's Manual. Visit www.pella.com or your local retailer for more information.

CLEANING INSTRUCTIONS: Refer to the Pella Owner's Manual for comprehensive maintenance and cleaning information. Visit www.pella.com or your local retailer for more information.

GLASS: Remove any protective film and labels and clean the glass, using a soft, clean, grit-free cloth and mild soap or detergent. Be sure to remove all liquid by wiping dry or use a clean squeegee.

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

PELLA® 250 SERIES DOOR FRAMES: The vinyl frame may be cleaned using the same method as the glass. For stubborn dirt, a "non-abrasive" cleaner such as Bon-Ami® or Soft Scrub® may be used.

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.



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.**

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.

Understand ALL manufacturer's instructions before beginning to install your product.

- Do not work alone. Use safe lifting techniques.
- Always wear your P.P.E. (e.g. safety glasses, gloves, ear protection, etc.).
- Use caution when handling glass.
- Operate hand/power tools safely and follow the manufacturer's operation instructions.
- Do not put stress on corners of frames.
- Store door in a well-ventilated area in a vertical, leaning position to allow air circulation.
- Protect from exposure to direct sunlight during storage.
- Install only into vertical walls and when conditions and sheathing are dry.

NOTICE It's very important to make sure the threshold is level the entire length of the opening and the distance from the interior to the exterior.

NOTICE FAILURE TO PROVIDE ADEQUATE ROUGH OPENING SILL PROTECTION FOR WOOD THRESHOLDS WILL VOID PRODUCT WARRANTY.

NOTICE Proper steps must be taken when flashing and applying sealant to ensure proper waterproofing of the unit.

1 Opening Preparation:

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

NOTICE It is critical the bottom is level and does not slope to the interior or exterior.

B. **Remove dirt, oil or debris** from the opening and surrounding wall surfaces.

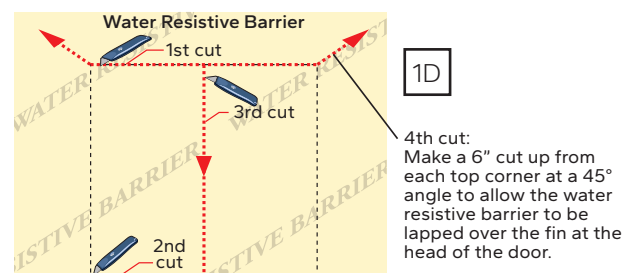
C. **Confirm the door will fit the opening.** Measure all four sides of the opening to make sure it is 1/2" to 3/4" larger than the door in both width and 1/2" larger in height. Measure the width and height in several places to ensure the header or studs are not bowed.

NOTICE 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.

NOTICE It is important to consider the door's exposure to weather, the exterior landing surface type and its proximity to the door sill, and to confirm impervious exterior surfaces properly slope away from the door prior to continuing with installation.

D. **Cut the building wrap.**

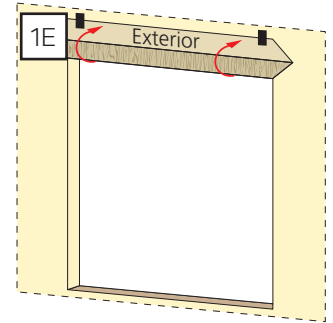
E. **Fold the building wrap in at the jambs** and staple it in place. Fold the top flap up and temporarily fasten with flashing tape.



1 Opening Preparation (continued):

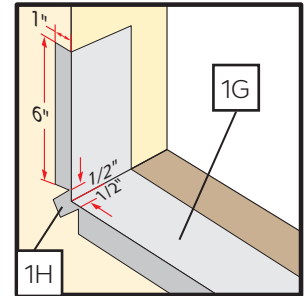
NOTICE If using a sill pan or if the door will be installed on a concrete slab, refer to the instruction page at the end of this instruction.

F. Cut two pieces of flashing tape 12" longer than opening width.

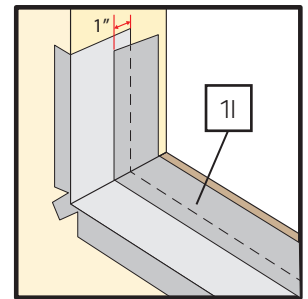


G. Apply sill flashing tape #1 at the sill extending 1" to the exterior and 6" up each jamb.

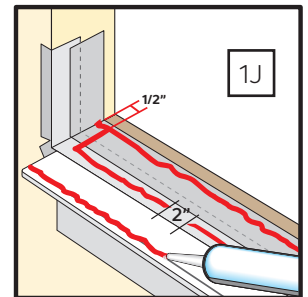
H. Cut 1" wide tabs at each corner by tearing the foil 1/2" each way from the corner.



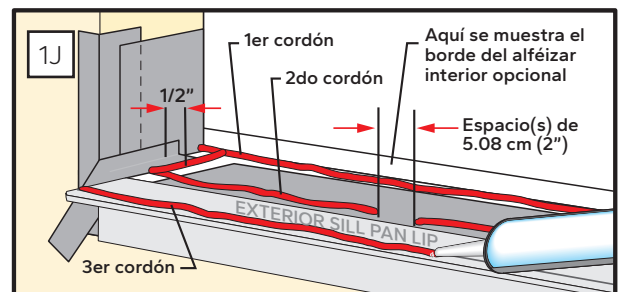
I. Apply sill flashing tape #2 overlapping tape #1 by at least 1" by 1" minimum.



J. Place three 3/8" beads of sealant across the opening sill. Place the interior-most bead 1/2" from where the interior of the door sill will remain after installation. Continue this bead up the sill pan lip, if applicable.



K. Place a second bead beginning from the interior bead 1/2" from each side, out to the exterior of the framing and along the opening. Leave 2" voids 4" from the corner and at center. Place a third bead where the exterior of the door sill will remain after installation.



2 Frame Installation:

- A. **Single doors are shipped with the panel installed.** Remove panel from the frame by using a provided construction handle to open the panel and swinging it to the open position. Lift the panel straight up off the hinge mounts; use of a suction cup is recommended.
- B. **Center the bottom of the door frame in the opening and tilt the door into position.** Do not slide the door into the opening. Sliding will damage the sealant lines. Check the jambs for plumb and confirm there is room for shimming between the jambs and opening on each side.



- C. **While a helper holds the door in place,** walk across the sill to compress the sealant and confirm the frame is firmly on the sill plate, free of any humps due to the sealant under it.



- D. **Confirm the sill is level.** Place a level on the sill to confirm the sill is level. Add shims to level the sill as needed.



For Doors without a nail fin, proceed to step 3J.

2 Frame Installation (continued):

Doors with a Nail Fin:

- E. Place shims between the frame and rough opening at the sill to center the door in the opening and wedge the bottom of the frame in place.



- F. Insert a screw through the exterior nail fin near the sill on each side of the frame.

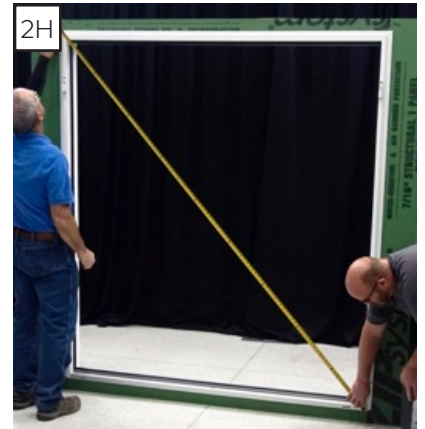


- G. Place shims between the frame and rough opening at the head of the jamb to wedge the top of the frame in place while adjusting the shims as needed for plumb, level, and square.



2 Frame Installation (continued):

- H. Measure the frame diagonally to confirm the frame is square in the opening.



- I. Insert a screw through the exterior nail fin near the head on each side of the frame.



Doors With or Without a Nail Fin:

- J. Remove the weatherstrip from the jambs and head of the frame.



2 Frame Installation (continued):

- K. **On one jamb**, starting behind one hinge, insert and fasten an installation screw with shim(s) between the frame and the rough opening. Repeat at the other hinge. Check the jamb for plumb with a level into the area where the weatherstrip was removed.



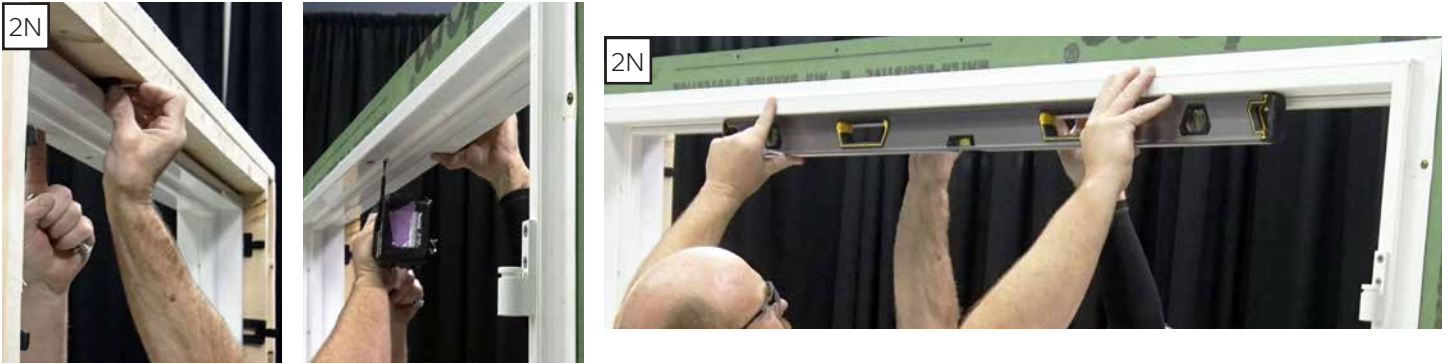
- L. **Continue on the same jamb**, insert and fasten an installation screw with shim(s) between the frame and rough opening. Work along the jamb spacing the installation screws & shims no more than 16" apart. Check the jamb with a level while installing the shims and frame screws. Finish installing the screws 3"-6" from each corner.



- M. **Repeat fastening the installation screws** and shims on the other jamb.

2 Frame Installation (continued):

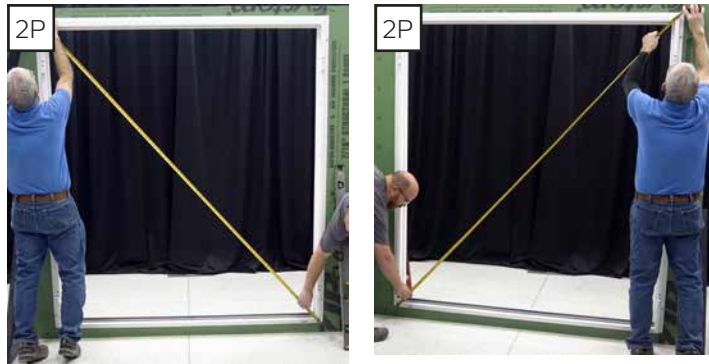
N. Beginning in the center of the head, shim and install a frame screw checking the head with a level.



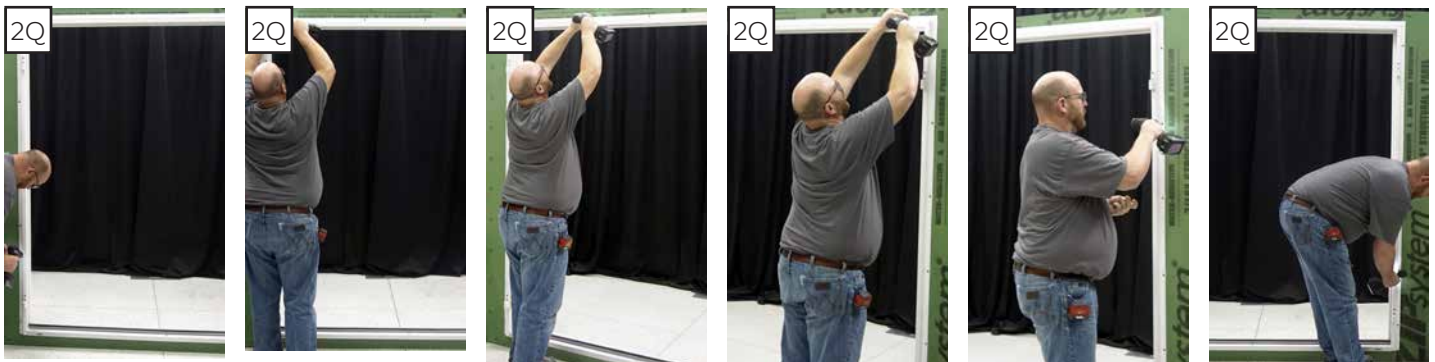
O. Finish installing the head frame screws and shims spaced no more than 16" apart and 3"-6" from the corners. Continue to check the head with a level.



P. Measure the frame diagonally to confirm the frame is still square in the opening.

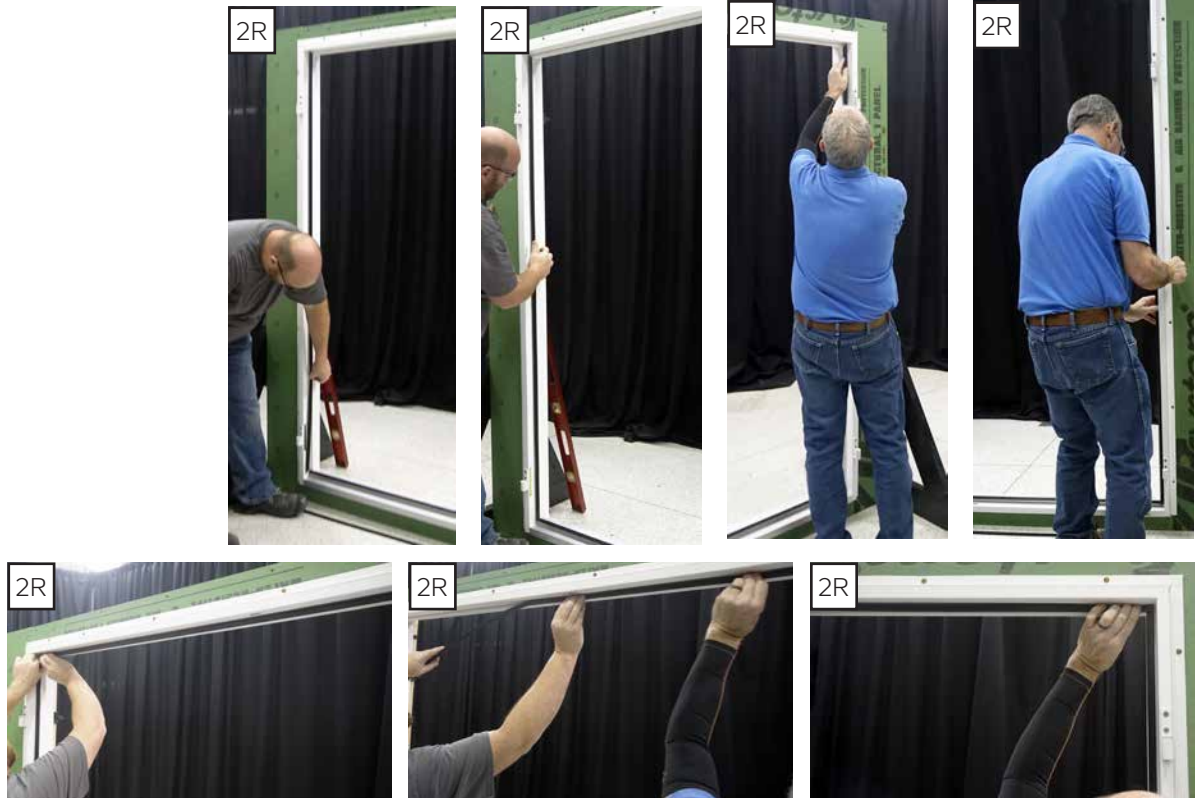


Q. Complete the frame install by inserting screws through the nail fin spaced every 12".



2 Frame Installation (continued):

R. Reinstall the frame weatherstrip.



3 Panel Installation:

A. If installing a laminate unit, be sure to remove the protective film from the frame and the panels before installing panels.

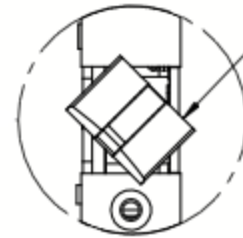
B. Using suction cups, align the panel hinge pins with the frame hinge mounts and lower the panel onto the frame.



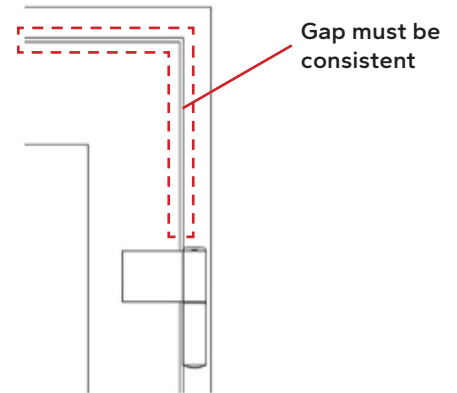
3 Panel Installation (continued):

C. **There is a possibility the latch bolt** may need to be reversed on the door panel locking bar. Pull the bolt outwards from the housing and simply twist it to face the opposite direction. It may be easier to use a pair of pliers with a rag or something to protect the bolt from pliers' teeth damage.

LATCH BOLT CAN BE PULLED OUT AND ROTATED 180° WITH PLIERS FOR OPPOSITE HANDED DOORS.

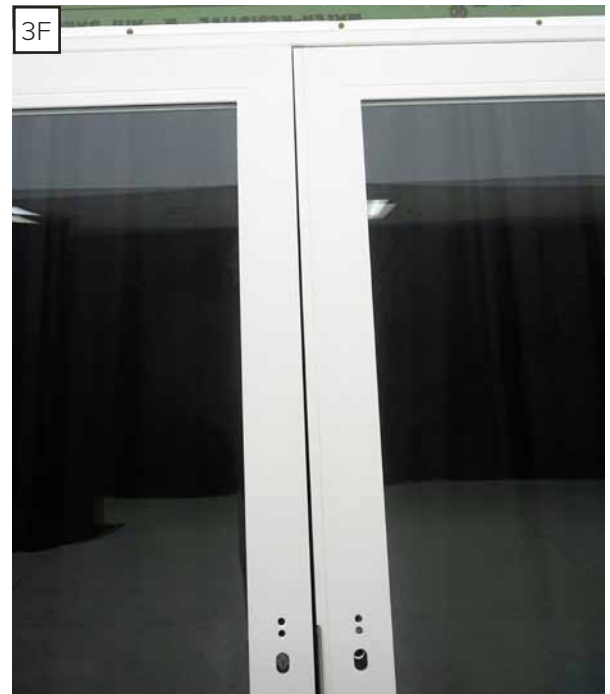


D. **Check the reveal from the top of the top hinge**, panel to frame and to the top of the panel corner to the frame. It should be a consistent gap, if not; adjust accordingly and follow the same process with the bottom hinge to bottom of the panel. The reveals around all the panels should be consistent.



E. **Check the entire jamb**, top to bottom for consistency on the hinge adjustment gaps and adjust accordingly to have a straight, uniform gap, top to bottom. (See hinge adjustment, page 14.)

F. **When the jamb reveals are straight and even**, check the top reveals. Starting from the hinge side corner, look at the gap from the corner edge of the panel to the frame. On a double door; both doors need to have the same gap to continue. If needed, raise or lower one panel to mirror the other. (See hinge adjustment, page 14.)



3 Panel Installation (continued):

HINGE ADJUSTMENTS



Allen wrenches supplied for adjustments.



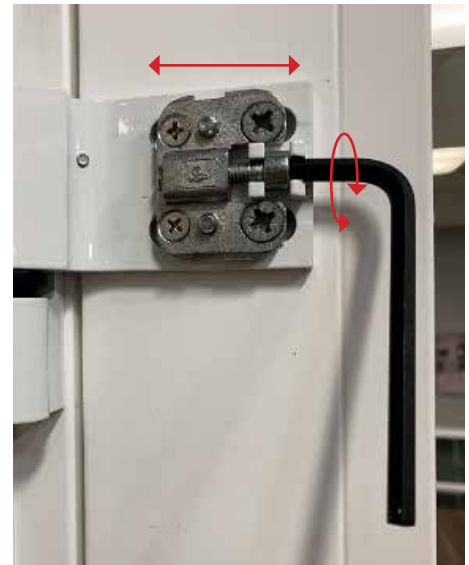
Up and down adjustments: adjust ALL hinges evenly to distribute the weight evenly.



Remove hinge cap for side-to-side adjustments.

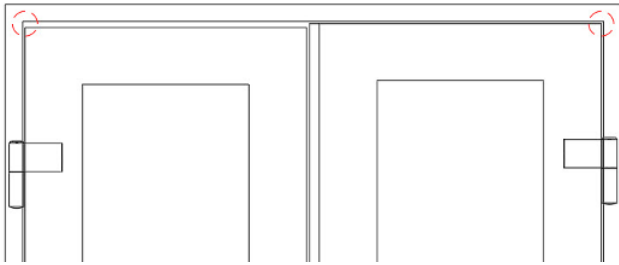


Back out set screw to remove face plate.

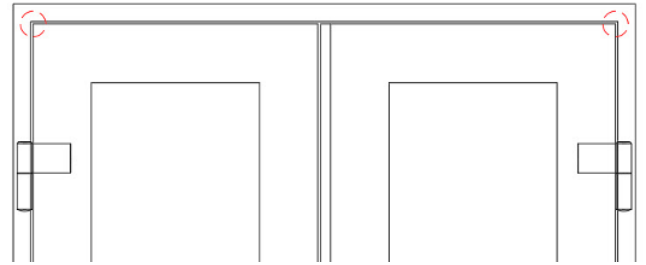


Side-to-side adjustments may need to slightly loosen the four Philips screws in order to adjust evenly. Re-tighten when done.

3 Panel Installation (continued):



INCORRECT REVEALS



CORRECT REVEALS

G. **With both hinge side corners even**, check the top of the two panels in the middle where they meet and make sure they are both at the same level. If the corners are at the same elevation but the middle of the two panels do not align, make some corrections in the frame and/ or hinges.

POSSIBLE REVEAL CORRECTIONS

- Check jamb reveals for a consistently straight and even reveal.
- Confirm the frame is plumb, level and square.
- Add or take away shims from particular hinge(s).
- Tighten or loosen top screw that is in the jamb aligned with the top hinge.
- Pull the top or bottom of the frame one way or the other depending on what the top middle reveal of the two panels show.

H. **Confirm a shim is behind every hinge and at the top of the frame where the shoot bolt engages.** On a single door, shim behind all three locking points. This is a necessary step to ensure all the locking and hinge points are well supported and free from any flex and or movement, eliminating service issues in the future.

4 Hardware Installation:

A. **Install the handle hardware.**
(See hardware diagram pages 19-21.)

Inactive/Passive Handle Hardware:

B. **Place one of the square/rectangular washers** over the 2-piece spindle in the correct orientation. The washer must be oriented so it will fit under the escutcheon plate. Insert the spindle into the panel and place the other washer over the spindle on the other side of the panel.



4 Hardware Installation (continued):

- C. **Position an escutcheon plate** with the bushing installed in the handle hole onto each side panel.



- D. **Insert and tighten** the two attachment screws.



- E. **Place a handle over each spindle** and install and tighten the set screw.



Active Handle Hardware:

(See also the hardware diagram pages 20-21).

- F. **Insert thumbturn tongue** with the breakoff tab facing the exterior orientation.



4 Hardware Installation (continued):

G. **Insert the 2-piece spindle** through the lock mechanism in the panel.



H. **Insert a bushing into the handle hole** in the interior and exterior escutcheon plate.



I. **Position each escutcheon plate** with the bushing installed in the handle hole onto each side of the panel. The plate with the thumbturn goes on the interior side of the panel.



J. **Insert and tighten the two attachment screws.**



4 Hardware Installation (continued):

Active Handle Hardware (continued):

- K. Place a handle over each spindle and install and tighten the set screw.



- L. Install the top and bottom shoot bolt plates. Shut the passive door and check to see how much play there is. The panel needs to be firm against the frame stop. Install the supplied shoot bolt plates so they help push the panel tight to the frames stops. Using the supplied self tapping screws, install the shoot bolt plates.

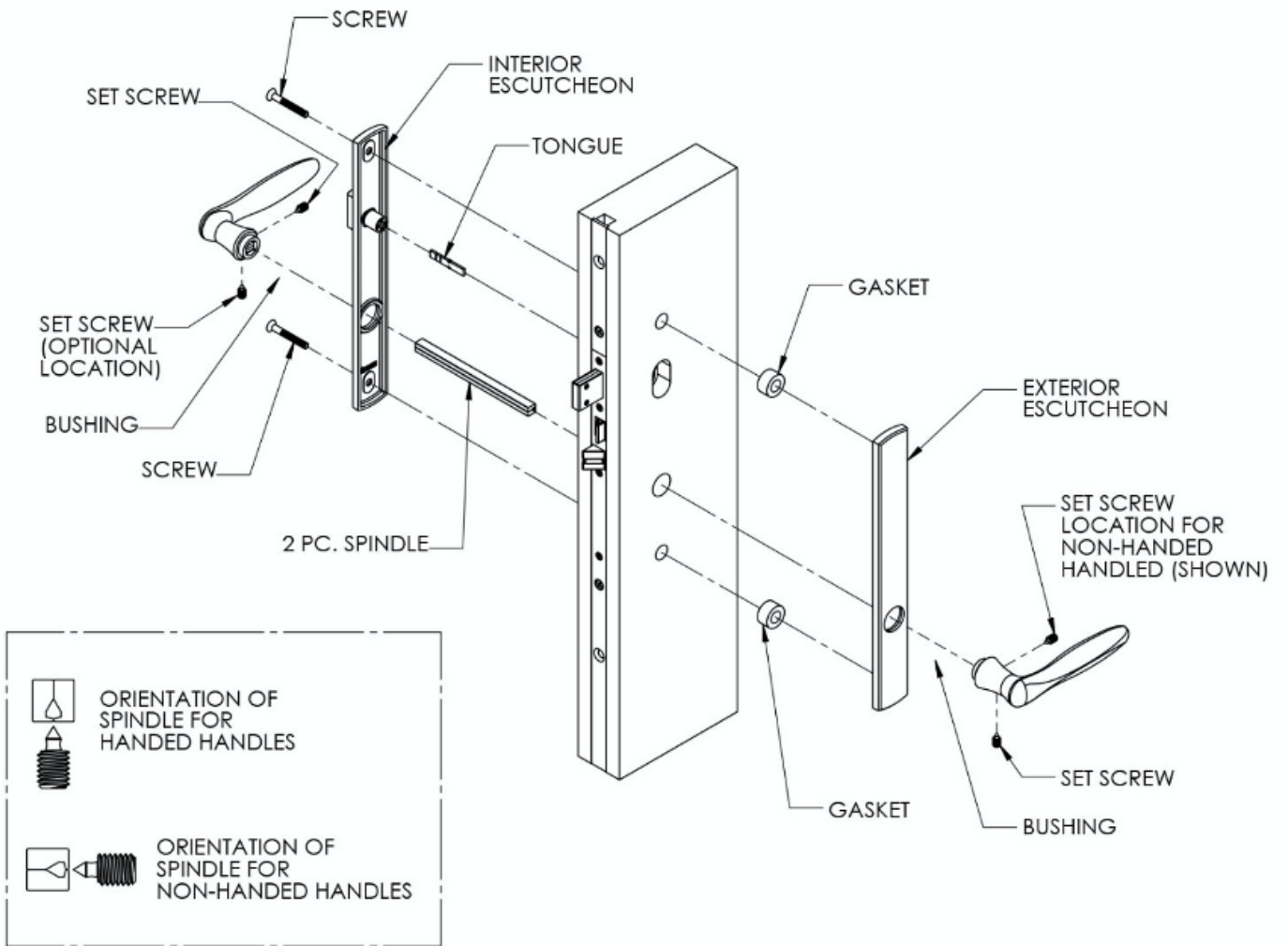


- M. On a double door it is necessary to place shims between the passive panel and the sill, close to where the shoot bolt engages into the frame and the threshold. This will keep the threshold down allowing the sealant to dry without crowning of the threshold.

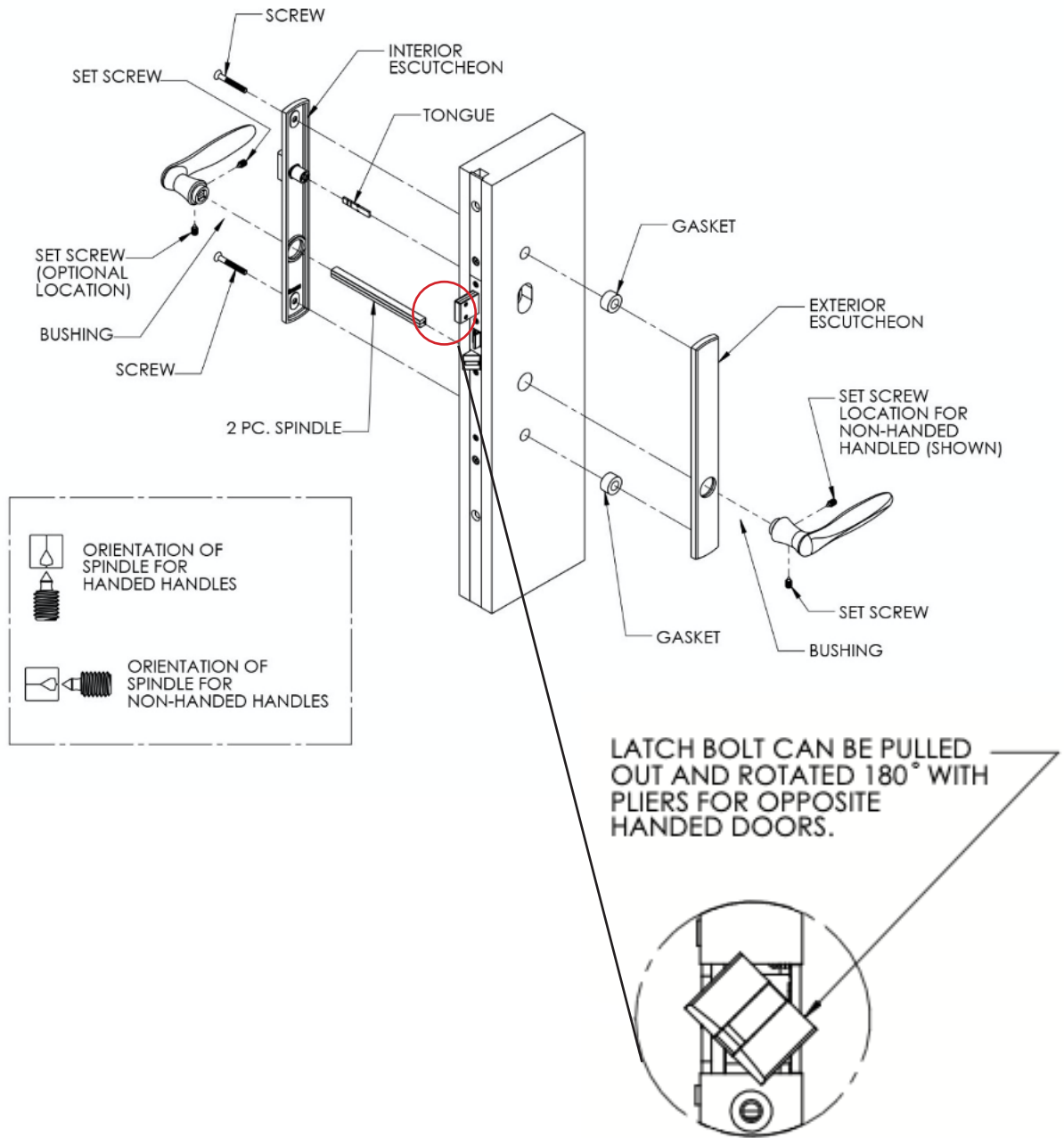
IF POSSIBLE, LEAVE FOR 48 HOURS!



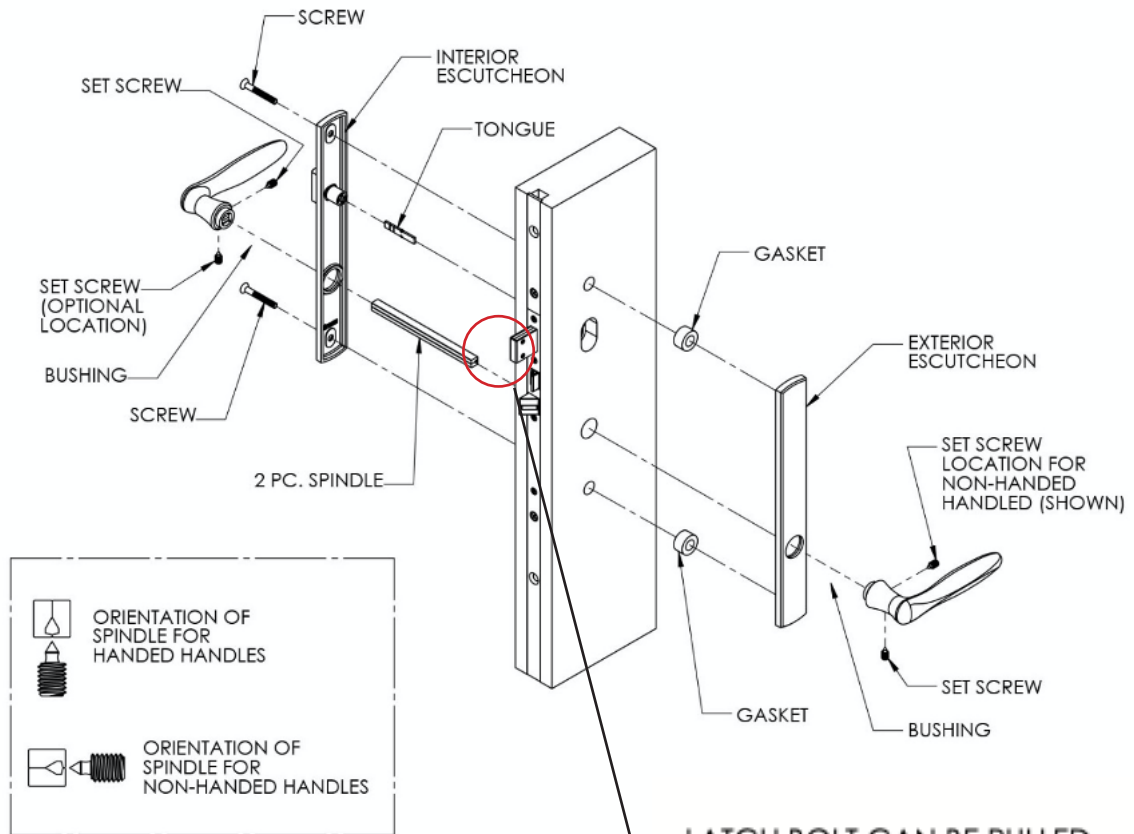
INACTIVE/PASSIVE HANDLE HARDWARE:



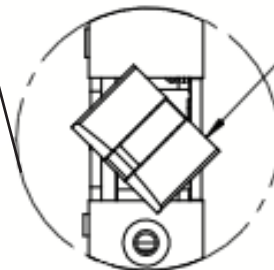
ACTIVE ASSEMBLY WITH KEY LOCK:



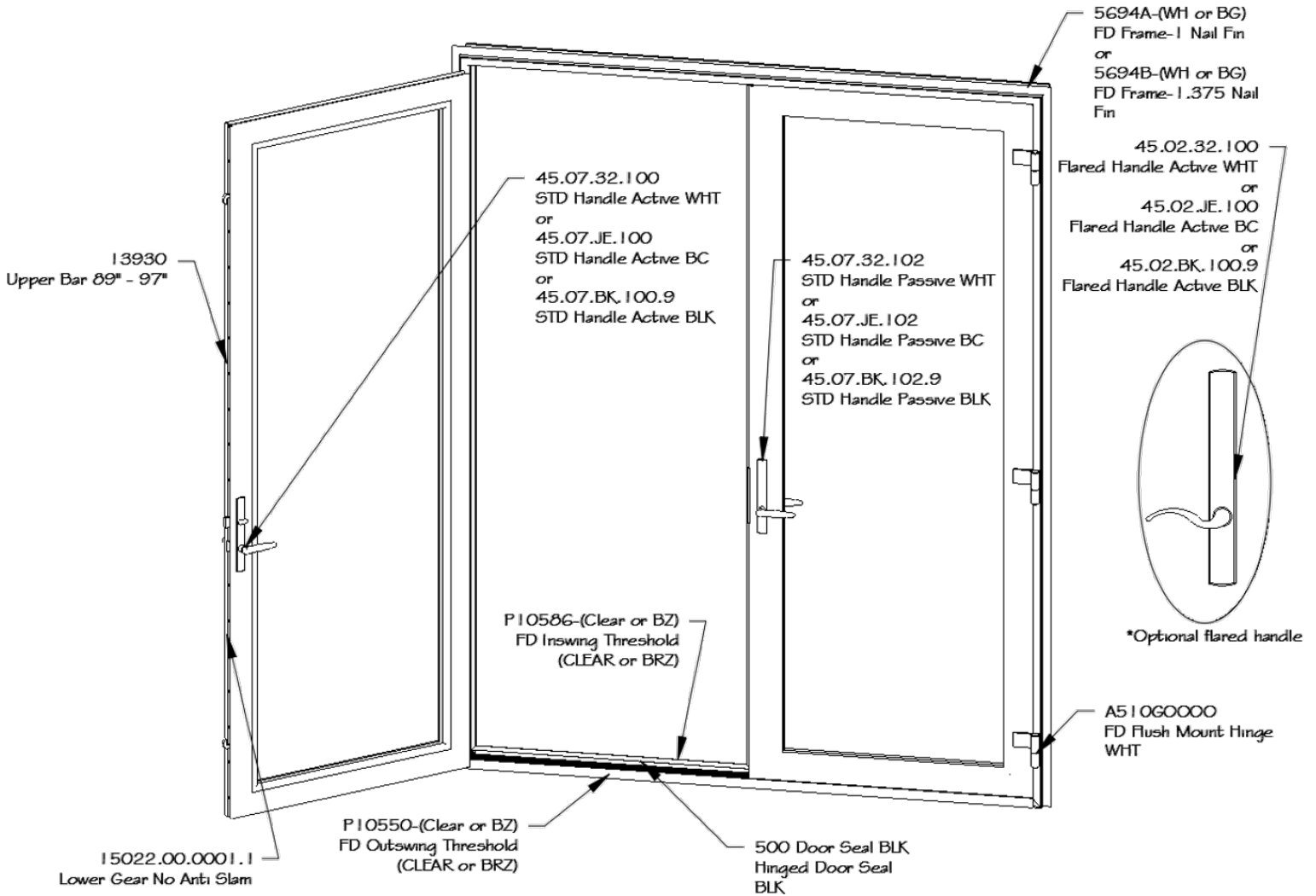
ACTIVE ASSEMBLY WITHOUT KEY LOCK:



LATCH BOLT CAN BE PULLED OUT AND ROTATED 180° WITH PLIERS FOR OPPOSITE HANDED DOORS.

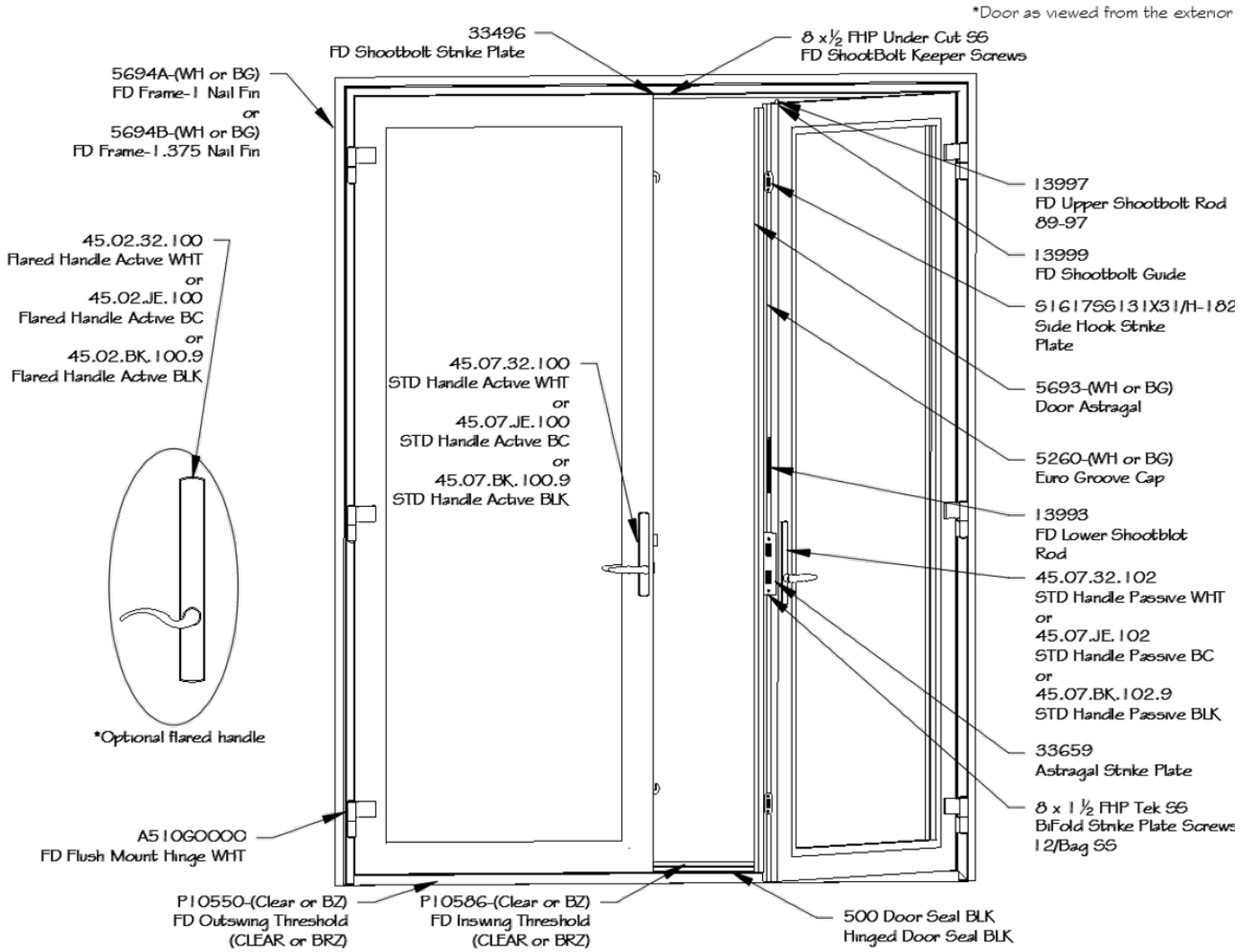


FRAME AND PANEL – EXPLODED VIEW:

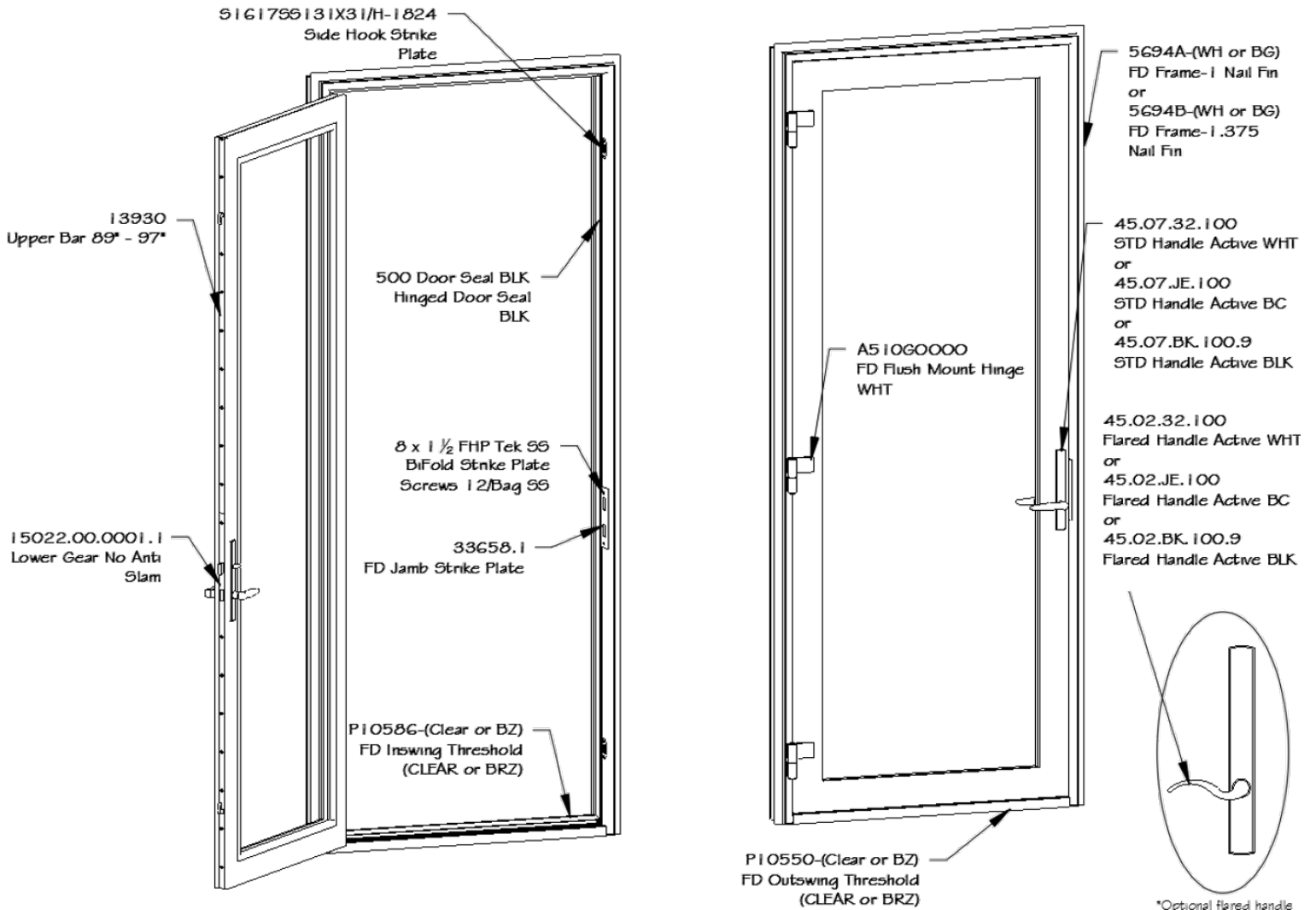


*Door as viewed from the exterior

FRAME AND PANEL – EXPLODED VIEW 2:



SINGLE DOOR – EXPLODED VIEW:



Door as viewed from the exterior



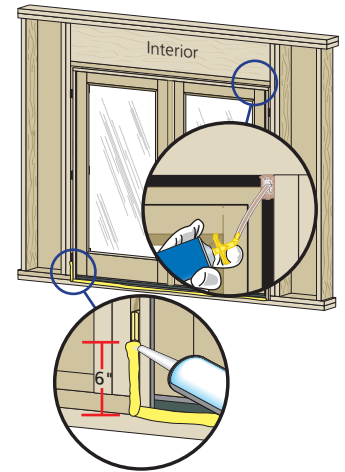
Interior Sealant Instructions

CAUTION: Continuous backer rod (as necessary) and a high quality, low-odor interior sealant such as Pella Window and Door Installation Sealant (or equivalent) is recommended for commercial or high performance installations to create the continuous interior seal. Follow the directions on the cartridge. For standard performance or products with factory applied jamb extensions, use low pressure polyurethane insulating foams. Follow the directions on the can. Do not use high pressure or latex foams. Fiberglass batt or similar insulation is not recommended as it can absorb water and does not act as an air seal.

- A. Insert the nozzle or straw between the rough opening and door frame from the interior. Use pliers (if necessary) to compress the end of a straw tube to allow it to fit in tight openings.
- B. Place a 1" deep bead of foam approximately 1" from the interior of the frame to allow for expansion. DO NOT fill the entire depth of the rough opening cavity.

NOTE: Apply foam between the frame and rough opening, NOT between jamb extensions and the rough opening.

- C. Re-check door operation and remove remaining shipping spacers after foam installation. Excess foam may be removed with a serrated knife after it cures.
- D. To ensure a continuous interior seal, apply sealant over or around any shims or clips interrupting the foam seal.
- E. Place a continuous bead of sealant across the inner sill at the intersection of the door sill and subfloor. Continue the sealant 6" up each jamb and connect with the bead of foam.

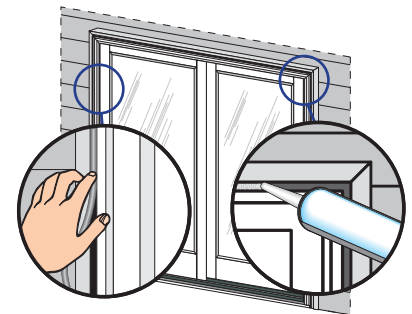


Exterior Sealant Instructions

CAUTION: Use a high quality, multi-purpose exterior sealant such as Pella Window and Door Installation Sealant. Follow the directions on the cartridge.

When applying siding, brick veneer, flashing, or other exterior finish materials, leave adequate space between the door frame and the material for sealant application of sealant.

- A. Insert backer rod 3/8" deep in the space around the door. Backer rod adds shape and controls the depth of the sealant line.
- B. Apply a continuous bead of sealant to the entire perimeter of the door.
- C. Shape, tool and clean excess sealant. When finished, the sealant should be the shape of an hourglass.





OPTIONAL SILL PAN INSTRUCTIONS

Notice: The method of pan construction, flashing, and sealant application may vary depending on the design of the opening sill and exterior landing surface conditions. It is important to consider the exposure to weather, the exterior landing surface's proximity to the door sill, and to confirm impervious exterior surfaces properly slope away from the door.

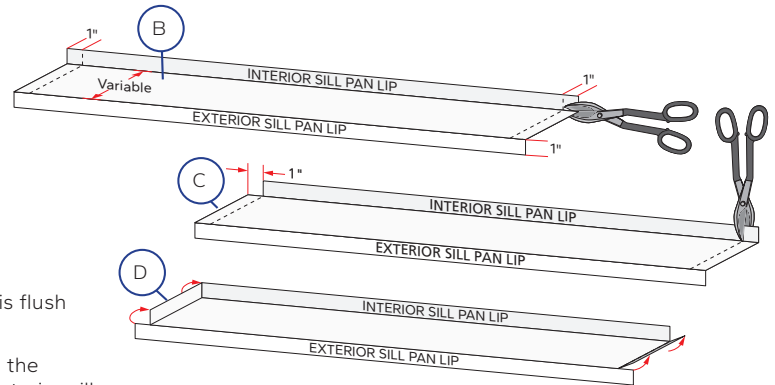
- A. Cut the sill pan to the width of the rough opening plus 2".

NOTE: The 2" added onto the rough opening width is for a 1" bend on each end.

- B. Make a 1" cut in each fold at both end of the sill pan.

NOTE: These cuts will allow the edges of the sill pan to be bent.

- C. Cut 1" off each end of the interior sill pan lip.
D. Bend each end of the center panel up.
E. Install the sill pan by sliding into place until the exterior sill pan lip is flush with the exterior of the rough opening.
F. Apply sill flashing tape. Cut a piece of flashing tape 2" longer than the opening width. Apply at the bottom of the opening, covering the exterior sill pan lip as shown.

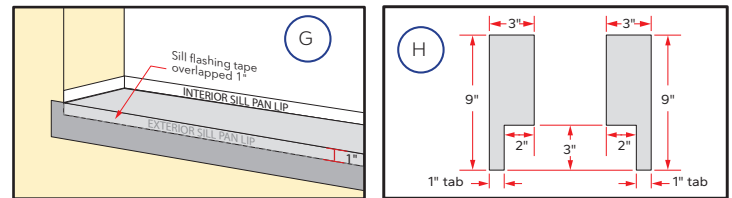
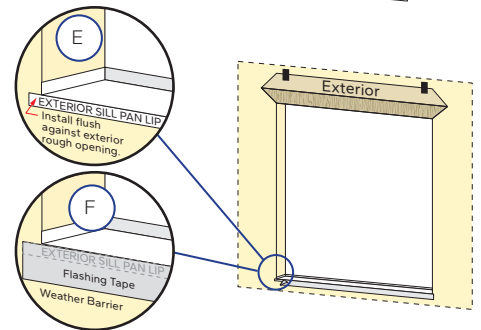


NOTE: If applicable, apply spray adhesive to building felt prior to applying the flashing tape.

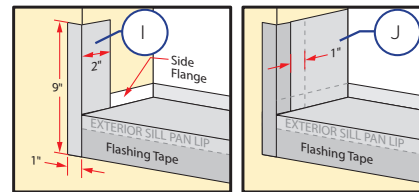
- G. Cut a piece of flashing tape to the width of the opening. Install tape to the sill pan and overlap the flashing tape from step 1F by 1". If needed add a second or third piece of flashing tape until the sill pan is covered to the interior sill pan lip.

NOTE: The purpose of this tape is to seal the sill screws when installing the door.

- H. Cut two 9" pieces of flashing tape with a 1" x 3" tab at the bottom, on opposite corners as shown.
I. Apply the tabbed 9" pieces of flashing tape. The tape is applied so 2" will cover the inside of the rough opening and lap over the side flange of the sill pan. The 1" x 3" tab laps over the bottom flashing tape as shown.
J. Cut two 6" pieces of flashing tape and apply to each side of the rough opening, overlapping the first piece by 1" and lapping the bottom over the side flange of the sill pan as shown.



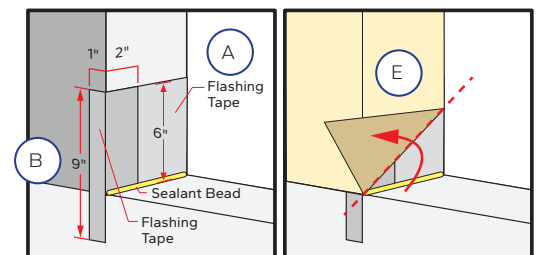
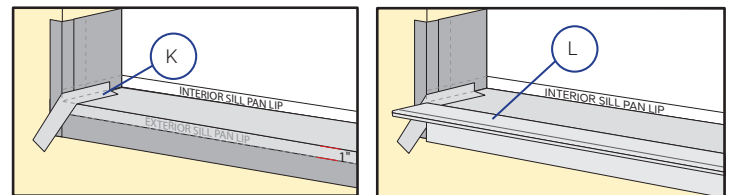
- K. Cut two pieces of flashing tape 1-1/2" x 6" and apply to the bottom corners of the opening by beginning in the corner of the sill pan, with 3/4" of the tape applied to the sill pan and 3/4" of the tape applied to the side flange. The remainder of the tape is to be at a 45 degree angle onto the exterior.
L. 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.



Concrete Slab (without sill pan) Instructions

NOTE: Thoroughly clean the slab where sealants will be installed. Instead of installing flashing tape across the bottom of the rough opening, complete the following:

- A. Install flashing tape at the bottom 6" of the rough opening jambs.
B. Cut two 9" pieces of flashing tape as shown in step 1H above.
C. Install them overlapping the flashing tape installed in step A by 1".
D. Place a 3/8" bead of sealant where the bottom edge of the flashing tape meets the concrete slab.
E. When folding building wrap in at the jambs, cut at a 30 degree angle as illustrated.



Follow the applicable installation method pages to complete the installation except seal the door sill directly to the slab.