



JOINING MULLION ASSEMBLY INSTRUCTIONS FOR 2-WAY JOINTS FOR 350 SERIES WINDOW WITH 5/8" INTEGRAL FLANGE OR DOUBLE WALL FLUSH FLANGE

Be sure to thoroughly read and understand all the steps before beginning the mullion assembly process. It is recommended this process be completed by a construction professional.

YOU WILL NEED TO SUPPLY:

- Pella Window and Door Installation Sealant or equivalent high quality, multi-purpose sealant (1 tube per window)
- Pella® SmartFlash™ foil backed butyl window and door flashing tape or equivalent
- Isopropyl Alcohol



MULLION KIT, PARTS INCLUDED:

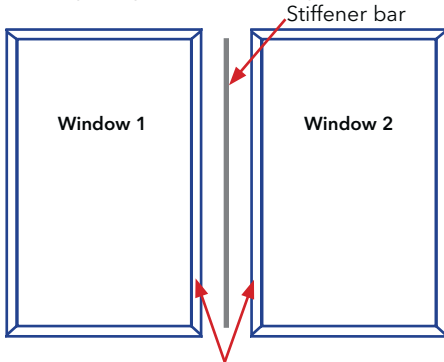
- (1) 1" Aluminum Mullion Reinforcement bar with foam tape applied
- (2) Plastic injectable end splices
- (2) End clips
- (1) 1" Interior mullion cover
- (1) 1" Exterior mullion cover
- (2) Foam backer plugs
- (16) #10 x 3/8" Flat Head screws
- **Optional:** (2) 14 gauge x 4" Stainless steel mullion reinforcements

TOOLS REQUIRED:

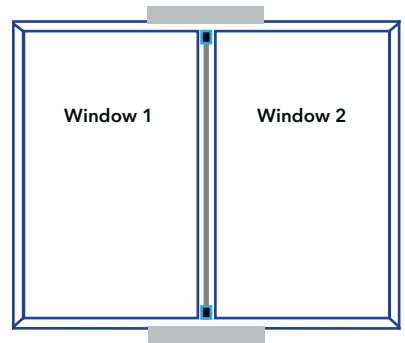
- Tape measure
- Hammer
- Phillips screwdriver
- Sealant gun
- Drill w/ 1/8" bit
- Clamps
- 1/4" wide chisel
- Utility knife
- Scissors
- Straight edge (level)
- Marker (fine point) or pencil
- Combination square
- Rubber mallet
- Hacksaw
- Circular trim saw or vibration cutting tool
- Putty Knife

1 Prepare the Windows

- Remove the packing material from the windows.** Inspect product; DO NOT mull or install damaged windows.
- Lay out the windows on a flat surface with exterior side up** in the intended mullion assembly position(s). Place a mark on the jamb on the sides to be combined. Flanges on these edges of the windows will be removed.
- Make sure any fixed windows on flat surface are in the correct orientation** by matching alignment of glazing beads (exterior glazing stops). The exterior horizontal glazing beads run through to the frame corners.



Remove flange from these sides

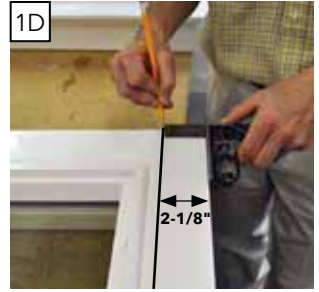
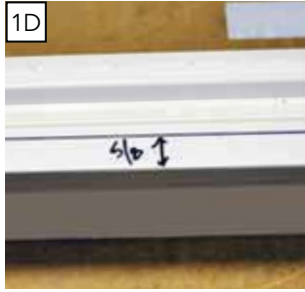


■ = Foam Plug

■ = End Clip with End Splice

1 Prepare the Windows (continued)

- D. **Draw a line across the flange on the sides of the windows to be mulled.** This is to mark the location of where to cut the flange. Locate the line $5/8$ " from the flange for units with $5/8$ " Integral flange and $2-1/8$ " from the edge of the flange for units with Double Wall flush flange. When cut along this line, the flange will be correctly cut into two pieces. And the accessory groove will not be damaged.

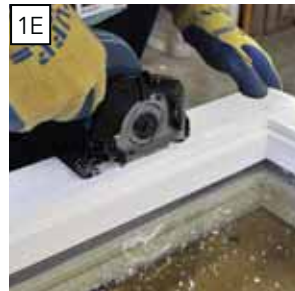


- E. **Set the cutting tool depth to $1/8$ ".** A circular saw or vibrating cutting tool may be used to cut through the flange. Cut along the mark on the flange the entire length of the side to be mulled.

$5/8$ " Integral Flange



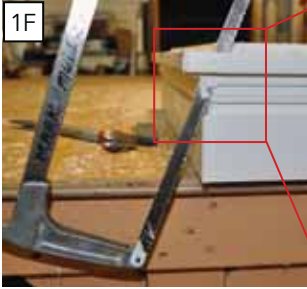
Double Wall Flush Flange



1 Prepare the Windows (continued)

- F. **Use a hacksaw to cut through each end of the flange.** This is to completely separate the flange from the flanges on the adjoining sides of the window. The saw can also be used to clean off the corner below the flange.

5/8" Integral Flange

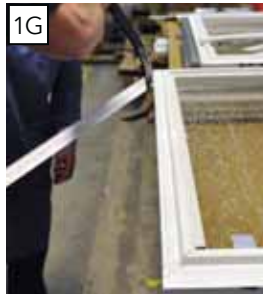


Double Wall Flush Flange

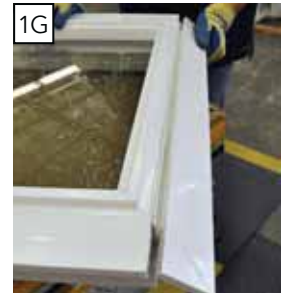


- G. **Remove the cut portion of the flange from the edge of the window.** Use a pry bar; start at one end and pry to remove the flange. There will still be part of the flange in the accessory groove still to be removed.

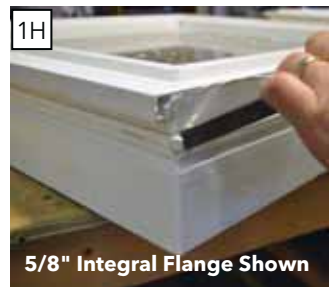
5/8" Integral Flange



Double Wall Flush Flange



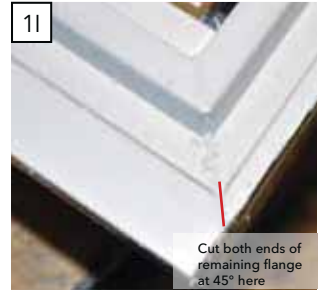
- H. **Clean the edge.** If needed use a chisel to clean off any excess material from the edge where the flange was removed. Clean the corner of the frame as needed.



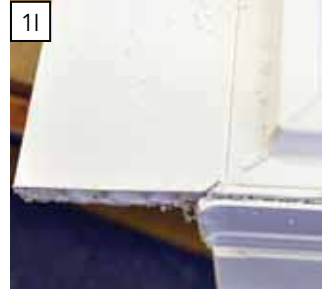
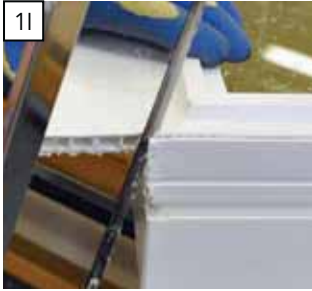
1 Prepare the Windows (continued)

- I. **Cut each corner of the flange remaining in the frame accessory groove.** Use a utility knife or small chisel to cut through the flange and out side edge of the accessory groove. DO NOT cut into the window frame edge.

5/8" Integral Flange

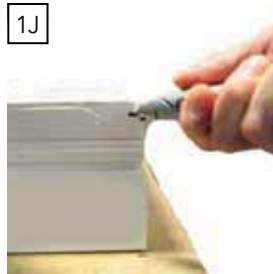
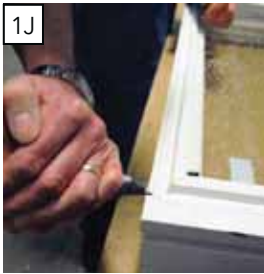


Double Wall Flush Flange

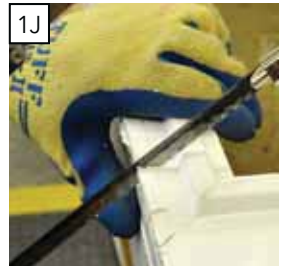
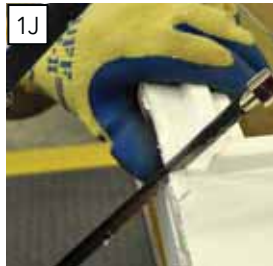


- J. **Cut out a small notch out of one end of the accessory groove** 1/4" from the corner to access the flange for removal from the groove.

5/8" Integral Flange



Double Wall Flush Flange



1 Prepare the Windows (continued)

- K. **Pry up the end of the flange and grasp it with a pliers or vise grips.** A flat blade screwdriver may be used to help pry the flange out of the accessory groove.

5/8" Integral Flange



Double Wall Flush Flange



- L. **Double Wall Flush Flange Only:** Flip the units over so the exterior side is down and use a hacksaw to trim each corner below the flange as shown. Once trimmed, turn the unit back over so the exterior side is up.

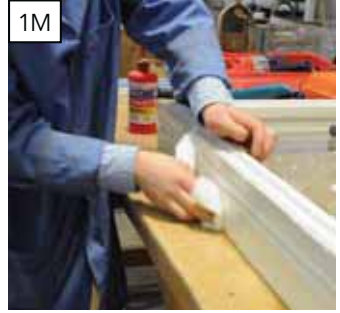


1 Prepare the Windows (continued)

Repeat 1D - 1L on the side of the other window to be mullied.

M. **Clean the side of the frame where the units will be mullied together with isopropyl alcohol.**

5/8" Integral Flange Shown:



2 Exterior 2-Way Mullion Assembly

If using factory supplied mullion kit proceed to step 2D.

A. **If not using a kit with parts pre-cut to length**, cut the stiffener bar and mullion covers as follows:

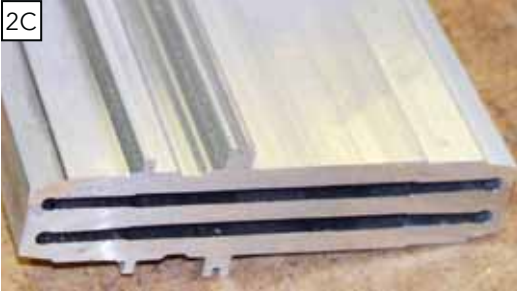
Stiffener Bar(s) = Mull length - 3/4" Steel Reinforcement bar(s) = Mull length - 6"	KEY: FW=Frame Width CW=Combination Width FH=Frame Height CH=Combination Height
MULL COVERS:	
• 5/8" Flange (Interior Only)	• Vertical Through Cover = FH - 7/16" • Horizontal Through Cover = FW - 7/16"
• 5/8" Flange (Exterior Only)	• Vertical or Horizontal Cover = FW or FH + 1-1/4"
• Double Wall Flush Flange (Interior Only)	• Vertical Through Cover = FH - 7/16" • Horizontal Through Cover = FW - 7/16"
• Double Wall Flush Flange (Exterior Only)	• Vertical or Horizontal Cover = FW or FH + 4"

B. **Clean both sides of the stiffener bar and the sides of the windows** to which the bar will be applied. Wipe the bar and frame jambs down to remove any dirt or debris with a paper towel or cloth and Isopropyl Alcohol.



2 Exterior 2-Way Mullion Assembly (continued)

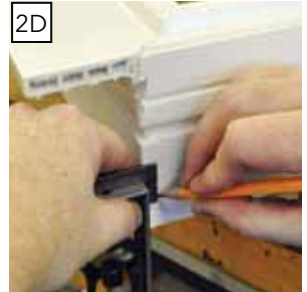
- C. **Apply two strips of adhesive tape on the flat surfaces as shown** to each side of the stiffener bar. Make sure the tape is applied the full length of the bar. Be sure to press the tape to the surface of the bar along the length of the bar to ensure good adhesive contact.



- D. **Place a mark 3/8" from the end of jamb** on one of the windows to mark the correct location of where to apply the stiffener bar.



5/8" Integral Flange



Double Wall Flush Flange

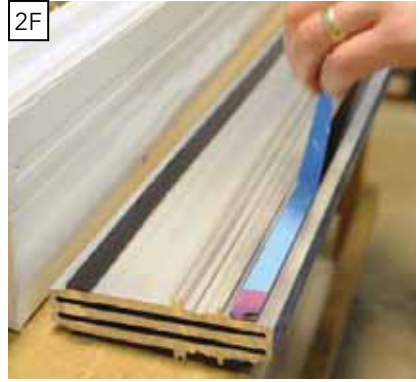
- E. **Dry fit the stiffener bar and the end clip** between the windows to make sure there is a good fit and tape contact all along the frame. It may be necessary to file the flange to ensure a proper fit of the end clip.



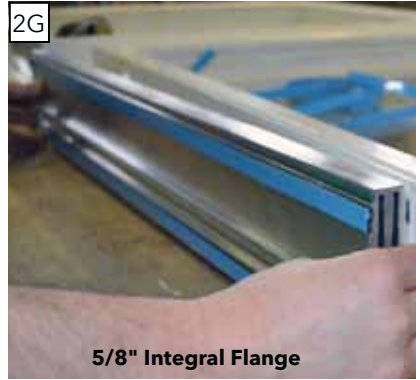
Double Wall Flush Flange Shown

2 Exterior 2-Way Mullion Assembly (continued)

- F. Remove the release paper from the two strips of tape on one side of the bar.



- G. **Install stiffener bar to first window.** With the exposed tape toward the window, align one end of the bar with the mark on the frame and attach the bar to the window. Press bar firmly against the window.



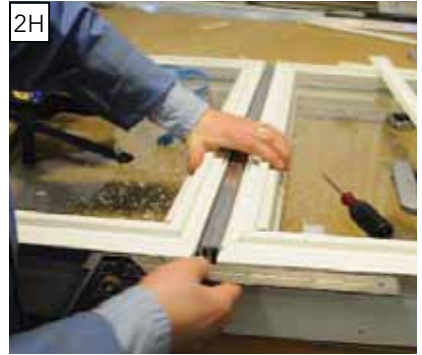
Double Wall Flush Flange



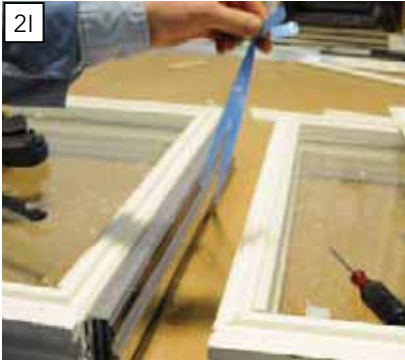
5/8" Integral Flange

2 Exterior 2-Way Mullion Assembly (continued)

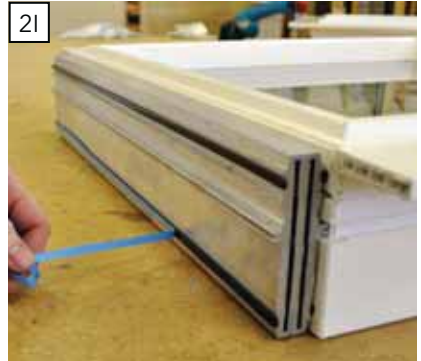
- H. **Align the second window with the first** to confirm the units will properly align and make contact along the length of the stiffener bar.



- I. **Remove the tape release paper from the other side of the bar.**

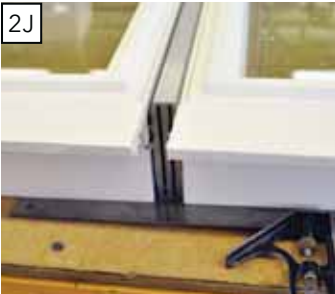


5/8" Integral Flange:



Double Wall Flush Flange

- J. **Use a straight edge to ensure window alignment** and install the second window to the first window and the stiffener bar.



Double Wall Flush Flange



5/8" Integral Flange

2 Exterior 2-Way Mullion Assembly (continued)

Note: 2K-2L Mullion cover steps apply to 5/8" Integral flange mullion assembly. Exterior mullion covers for double wall mullion assemblies are installed later.

- K. **Trim a 1-1/8" portion of the attachment legs off each end of the exterior mullion cover.** This will allow the cover ends to lay flat on top of the window flanges. Score the legs with a utility knife and then bend to snap off.

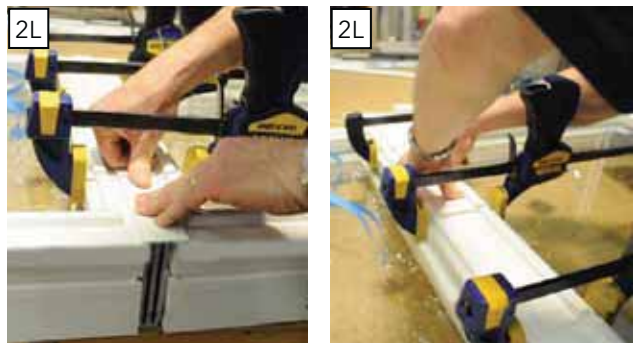


Note: Clamps may be used to help draw the mullion joint together and ensure adequate tape adhesion.



5/8" Integral Flange

- L. **Install the exterior mullion cover.** Apply pressure to seat the mullion cover legs into the window accessory grooves. If needed, use a mallet to fully seat the cover.



5/8" Integral Flange shown

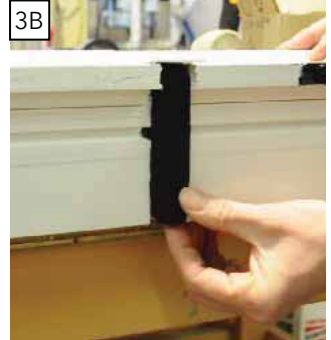
3 Install Mullion End Clips

- A. **Insert reinforcing steel into both slots of the stiffener bar. (As needed.)**

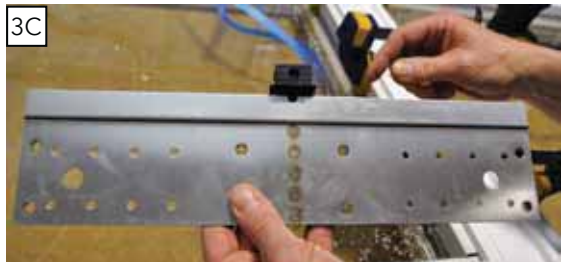
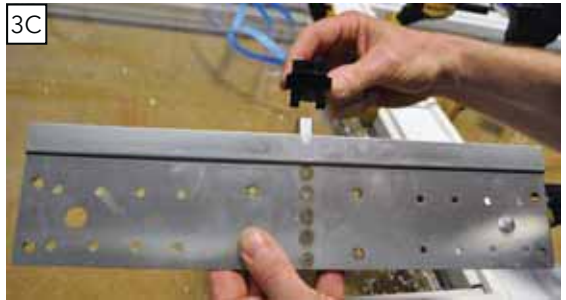


Note: Steps 3B-3F apply to 5/8" Integral Flange units. Double Wall Flush Flange units proceed to step 3G.

- B. **Apply slotted foam end plug.** Remove the release paper from the back of the plug and place it onto the end of the stiffener bar. Press it into place to ensure adhesion.



- C. **Assemble the end clip.** Place the end splice onto the end clip as shown. End splices will be color matched to the window color.



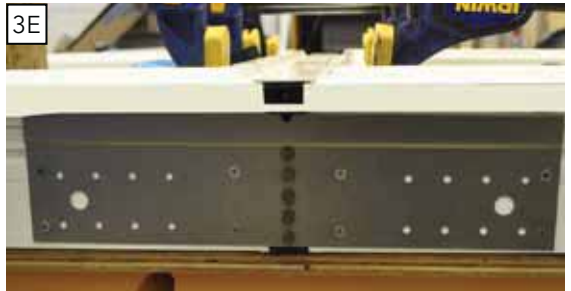
3 Install Mullion End Clips (continued)

- D. **Insert end clip through the foam end plug slots** and into the slots on one end of the mullion stiffener bar as shown. A mallet may be used to help tap the clip into place.



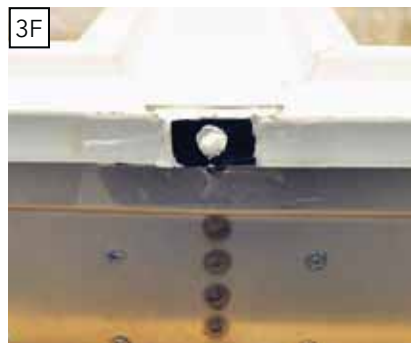
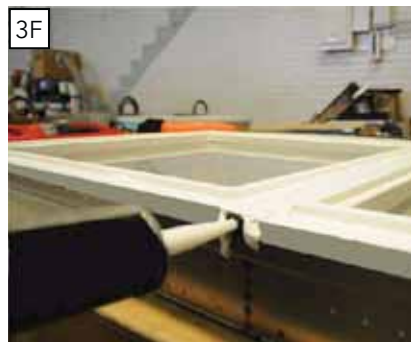
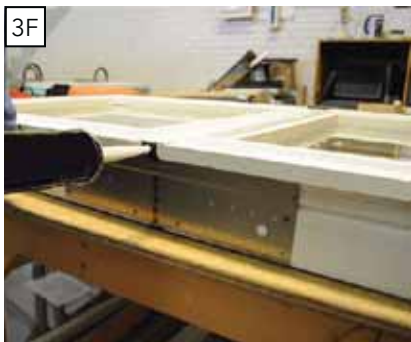
- E. **Install eight (8) 3/8" flathead screws in the end clip.** DO NOT use screws longer than 3/8".

NOTE: DO NOT over-tighten screws.



3 Install Mullion End Clips (continued)

- F. **Inject sealant into the hole in the end splice** until sealant is visible on each side of the splice and under the mullion cover. Clean off excess sealant as needed.



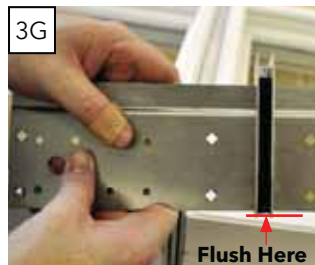
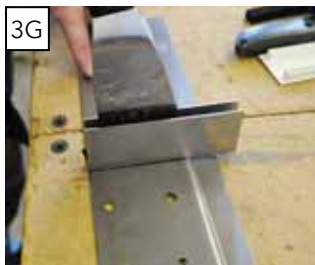
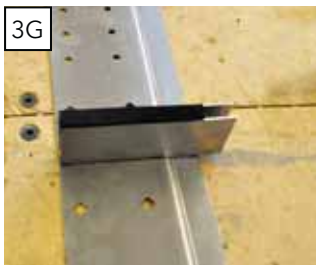
Repeat 3B-3F on other end of the combination.

For 5/8" Integral Flange go to Step 4.

Note: Steps 3G-3U apply to Double Wall Flush Flange units.

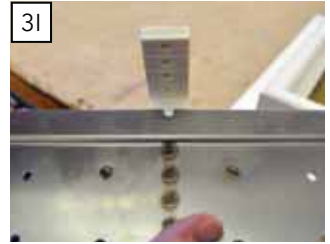
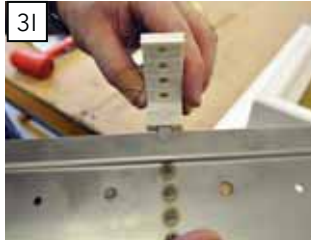
- G. **Carefully turn combination over** so interior side is up.

- H. **Insert plug into end clip.** Align one end of the plug flush to the end clip extensions as shown. Use a putty knife to push the plug down completely against the plate.

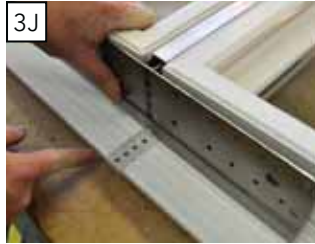


3 Install Mullion End Clips (continued)

- I. **Assemble the end clip.** Place the end splice onto the end clip as shown. End splices will be color matched to the window color.

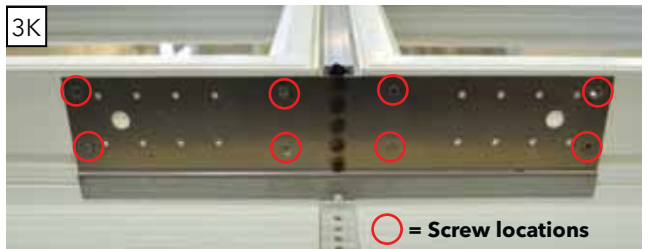


- J. **Insert end clip into the slots on one end of the mullion stiffener bar.** A mallet may be used to help position the end splice into place. The end of the end splice has tabs which must be past the edge of the flush flange as an indicator of correct end clip and splice installation.



- K. **Install eight (8) 3/8" flathead screws in the end clip.** DO NOT use screws longer than 3/8".

Note: DO NOT over-tighten screws.



Repeat 3G-3K on the other end of the combination.

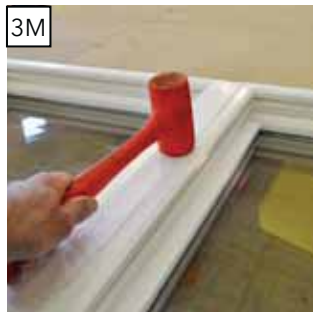
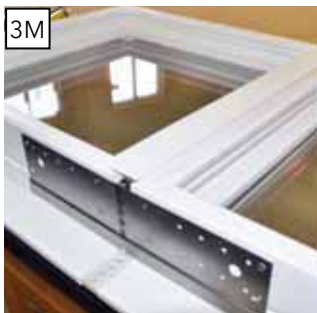
3 Install Mullion End Clips (continued)

- L. **Notch the legs (if needed)** at each end of the interior mullion cover as shown.



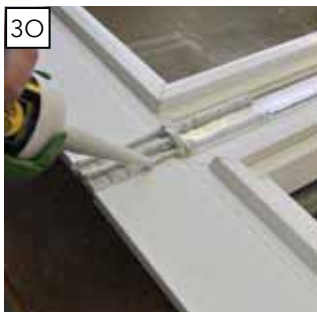
Double Wall Flush Flange

- M. **Install the interior mullion cover.** Align one end of the cover with the inside edge of the accessory groove and install the cover by inserting the legs of the cover into the accessory grooves of the two windows. If needed, use a mallet to seat the cover along the length of the mullion joint. Tap on the cover end to adjust the position of cover as needed.



- N. **Flip combination over** so the exterior side is up.

- O. **Apply sealant on each side of and down the center of the end splice.** Also apply sealant between the end splice and stiffener bar as well as approximately 3" on each side of the stiffener bar and in the accessory groove as shown. Repeat on other end of the combination.



3 Install Mullion End Clips (continued)

- P. **Trim a 2-1/2" portion of the attachment legs off each end of the exterior mullion cover.** This will allow the cover ends to lay flat on top of the window flanges. Score the legs with a utility knife and then bend to snap off.

Note: Clamps may be used to help draw the mullion joint together and ensure adequate tape adhesion.

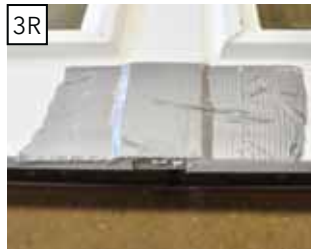


Double Wall Flush Flange

- Q. **Install the exterior mullion cover.**



- R. **Apply duct tape over each flange end of the exterior mullion cover.** This is to hold the cover in place while the sealant is applied in the following steps.



3 Install Mullion End Clips (continued)

- S. **Turn combination over.** Carefully flip the combination over so the interior side is up.
- T. **Inject sealant into each of the 4 holes of the end splice until sealant is visible** on each side of the splice. Inject in each hole until sealant can be seen on each side of the splice where it meets the window flange. Clean off excess sealant as needed.



- U. **Apply a 10" piece of Pella Flashing Tape** over the sealant and end splice. Start the tape on the edge of the double wall flush flange and overlap the end clip.

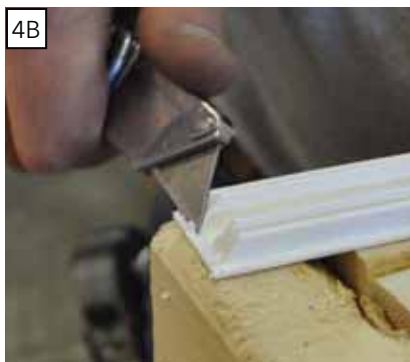


Repeat 3T- 3U on the other end of the combination.

Go To Step 4D.

4 Install Interior Mullion Cover

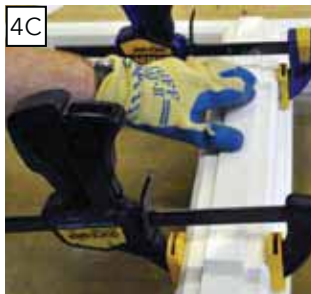
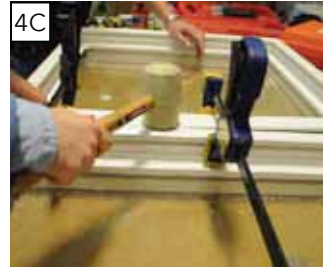
- A. **5/8" Integral Flange only:** Turn combination over. Carefully flip the combination over so the interior side is up.
- B. **Notch the legs (if needed) at each end of the interior mullion cover as shown.**



5/8" Integral Flange

4 Install Interior Mullion Cover (continued)

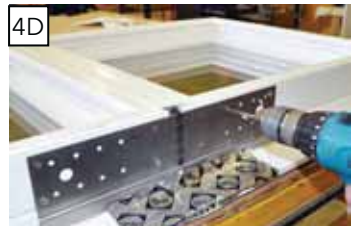
- C. **Clamp the windows together and install the interior mullion cover.** Align one end of the cover with the inside edge of the accessory groove and install the cover by inserting the legs of the cover into the accessory grooves of the two windows. If needed, use a mallet to seat the cover along the length of the mullion joint. Tap on the cover end to adjust the position of cover as needed.



Refer to 350 Series Combination Assemblies Installation Instructions to install the combination.

For 5/8" Integral Flange and Double Wall Flush Flange:

- D. **Use the end clip as a drilling template and drill 1/8" pilot holes through the frame.** Drill through the eight holes closest to the interior for all units EXCEPT CASEMENTS & AWNINGS. For casements drill through the eight holes closest to the exterior flange.



Double Wall Flush Flange Shown

Drill through these 8 holes for:
FX, DH, SH, SW

Drill through these 8 holes for:
CM & AW



Exterior Flange

Double Wall Flush Flange Shown