TECHNOTES

Pella® Aluminum Clad Wood Windows with Louvers

Projects that require louvers for PTAC (packaged terminal air conditioners) or VTAC (vertical terminal air conditioners) and need to be incorporated into a window combination are common in commercial applications like hotels. Air handling mechanical louvers in window combinations are less common; however, can be accommodated for as well. Pella Corporation offers solutions for projects requiring louvers which are manufactured by others and installed in Fixed Frame Direct Set windows for aluminum clad wood windows. Whether louvers are installed by Pella as is always recommended or by the Pella Distributor below are key details you should know regarding this offering. Please note that while less common the louver for a VTAC unit is installed in a Pella window frame like a PTAC except for its orientation. For simplicity a PTAC unit is used for reference in this Technote.

How does the system typically work?

Often in the design of hotels the Architect will indicate a PTAC louver needs to be incorporated into a window combination. When a louver inside a window combination is required the window supplier is expected to provide the louver and the HVAC contractor the PTAC unit along with a sleeve to attach the PTAC unit to the louver. To control the intrusion of air and water caused by the difference in width and height of the PTAC louver and the PTAC sleeve a blank-out panel (see PTAC unit diagram below) is added to the interior side of the louver. A typical PTAC sleeve measures 42" x 16" and an opening is cut in the louvers blank-off panel by others to align with this sleeve. The blank-out panel may be a flat sheet of aluminum or an insulated panel. (See photos below.)

How does water entering the louver exit the building structure?

Most PTAC systems are typically designed to manage water independently of the window system. The PTAC sleeve is normally drained either directly to the building's plumbing system or through the wall. The louver also weeps to allow for water to drain out of the unit. The Pella Fixed Frame Direct Set window when prepared per the Exterior Mounted Flanged Louver instructions allows incidental moisture that may penetrate the louver to be drained to the exterior from below the louver's bottom flange; however, it is not intended to be a primary drainage solution for the PTAC system. (See Exterior Mounted Flanged Louver photos below.)

Who will be supplying the louver, panel, and air-conditioner unit?

Pella can install the PTAC louver by special order request through the Pella approval process. Work with the Custom Solutions team for approval and pricing, and Pella Architectural Services for installation and combination design. Since some louvers can require installation in open Fixed Frame Direct Set windows prior to being combined with other windows it is critically important to recognize that if the louver is to be installed by the Distributor consideration must be given to whether these units may need to be ordered separately and not in a factory combination. Due to circumstances which prevent ordering factory combinations with louvers, the complexity associated with the installation of louvers, and so that the "installation" of the louver in the Pella window frame can be warranted it is recommended that Pella windows be ordered with factory installed louvers. *The actual louver itself which is manufactured and provided by others is not warranted by Pella Corporation. (See Warranty below)*

Pella has an established relationship with Reliable Products for the supply of louvers. Reliable is a major supplier of louvers in the industry and serves many window companies; however, Pella does not limit the use of our frame to only this supplier (see PTAC aluminum clad wood louver installation requirements below). While we have not certified Reliable as a supplier, they have the capability to match Pella colors, offer a wide selection of PTAC louver products, and manufacture louvers to custom capabilities to integrate into the Pella aluminum clad wood Fixed Frame Direct Set window. Reliable sells direct to the PDSN or contractor, provides engineering support, and has their own architectural sales team which can provide product catalogs, literature, and pricing. Reliable louvers also accommodate and are approved to integrate with most major brands of PTAC systems.

Typical louver construction is similar for most brands of PTAC systems; however, each PTAC sleeve brand requires unique attachments and screw hole locations that integrate with the louver. Reliable has the specifications to provide the louver and appropriate attachments to integrate with the major brands of PTAC systems.

Contact Reliable Products

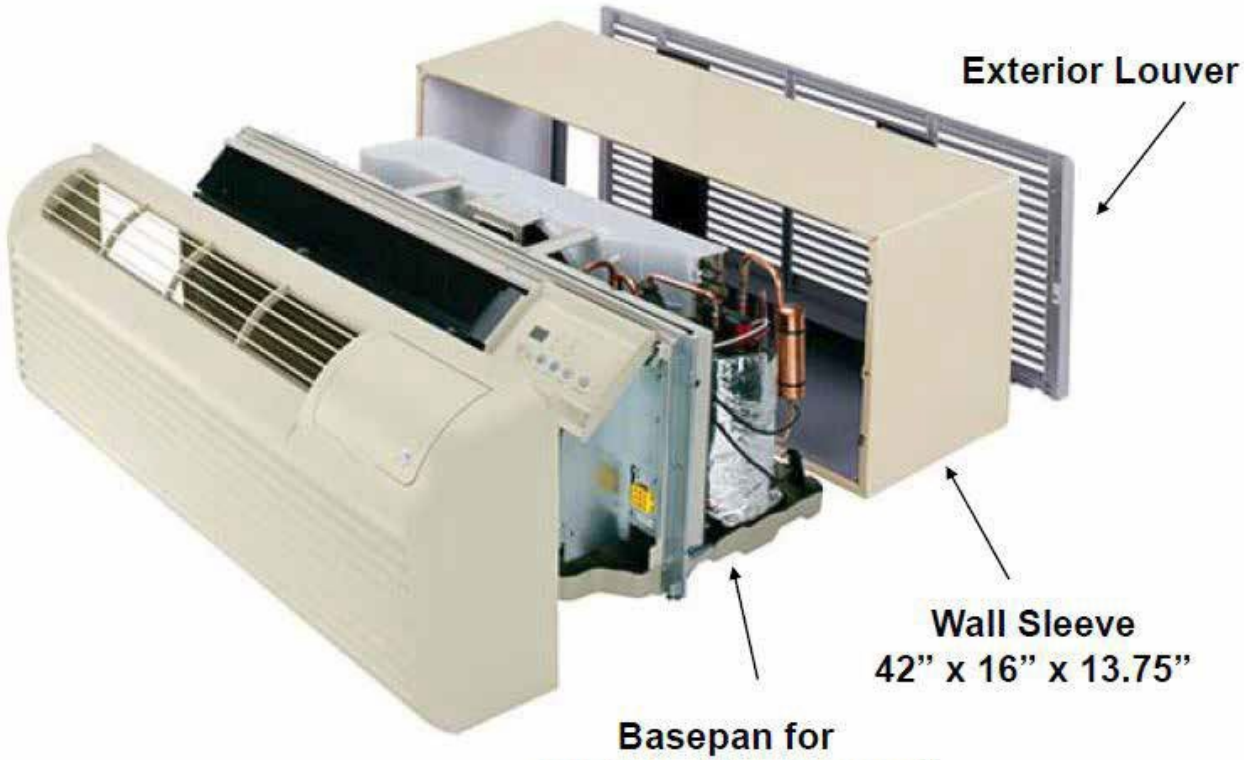
Phone: 1-800-624-3914 ask for architectural sales Fax 800-508-1469

www.reliablelouvers.com

TECHNOTES

Pella® Aluminum Clad Wood Windows with Louvers

PTAC Unit Details
(Packaged Terminal Air Conditioner)



TECHNOTES

Pella® Aluminum Clad Wood Windows with Louvers

PELLA® CLAD FRAME FIXED DIRECT SET WINDOW

Used in Conjunction with PTAC Louvers

PTAC sleeve and louver supplied by others.

Typical Interior Window / Louver Detail



Typical Exterior View



PTAC sleeve - typically supplied through PTAC vendor



PTAC Louver Detail



Optional insulated blank-out panel shown.

SERVICE PARTS

What new service part accessories are available?

No new service parts are needed. The PTAC louver and system suppliers may require new service parts. Please utilize their supply network to obtain the parts they require.

ORDER ENTRY

How do I order the aluminum clad wood fixed frame window?

The open aluminum clad wood Fixed Frame Direct Set window is found in the Pella offering under the fixed windowproduct type. Select the necessary attributes such as the frame color and frame type (nailing fin options). The glazing option you will need to select is Pella Reserve “ready to glaze”. Please remember, you will be sent a Fixed Frame Direct Set window frame that is dry fit with a piece of glass.

What are lead times?

Pella aluminum clad wood Fixed Frame Direct Set windows will follow the standard and rapid response lead times.Please see the lead time calendar on mypella.com.

WARRANTY

What will be covered in the warranty?

Most PTAC systems are typically designed to manage water independently of the window system. The PTAC sleeve is normally drained either directly to the building’s plumbing system, or through the wall. The louver also weeps to allowfor water to drain out the unit. The Pella aluminum clad wood Fixed Frame Direct Set, when prepared per the Exterior Mounted Flanged Louver instructions, allows incidental moisture that may penetrate the louver to be drained to the exterior from below the louver’sbottom flange, but it is not intended to be a primary drainage solution for the PTAC system. (See Exterior Mounted Flanged Louver photos below.)



Since Pella Corporation is only supplying the frame, Pella will not warrant the louver, panel or any other part of the system not supplied by Pella from the factory. To communicate this in the Pella Limited Lifetime Warranty, an exclusion has been added. Below is the exclusion statement added to the Warranty.

- Installation of other than standard factory installed glass in Pella frames.

UNIT IDENTIFICATION

What unit identification will be on the unit for service purposes?

To identify the manufacture date of the open Fixed Frame Direct Set window, use the unit I.D. of the Pella window unit abovethe open aluminum clad wood Fixed Frame Direct Set window. No serial number information will be included on the open aluminum clad wood Fixed Frame Direct Set window.

SERVICE

Who will perform the service calls?

Pella will perform the work on the open aluminum clad wood Fixed Frame Direct Set window as related to the frame material. Any work needed related to the PTAC louver, sleeve or air-conditioner unit, or seal of the louver to the fixed window frame will be the responsibility of the supplier of those materials. Pella will perform the service on the factory glazedunit used in conjunction with the open aluminum clad wood Fixed Frame Direct Set window.

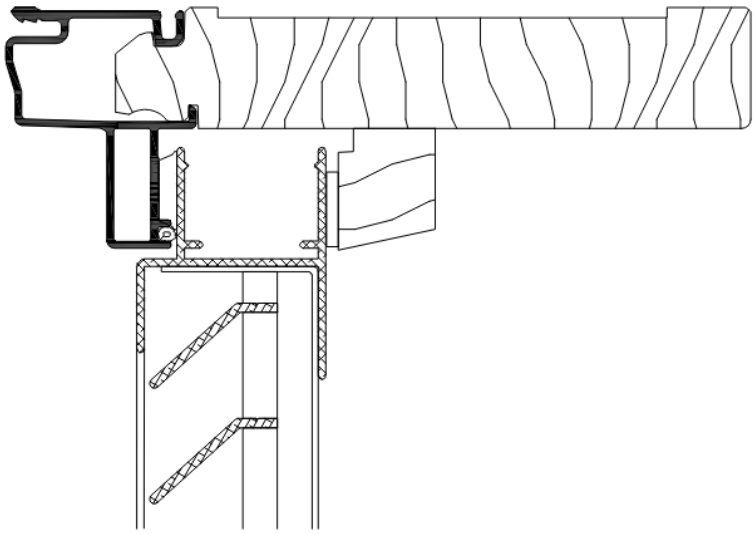
INSTALLATION

How do you install a PTAC louver into a Pella aluminum clad wood Fixed Frame Direct Set window frame?

There are two primary options for installing louvers into Pella Fixed Frame Direct Set windows: Glaze-In Frame Louvers and Exterior Mounted Flush Flanged Louvers.

PTAC Louvers with Glaze-In Frames:

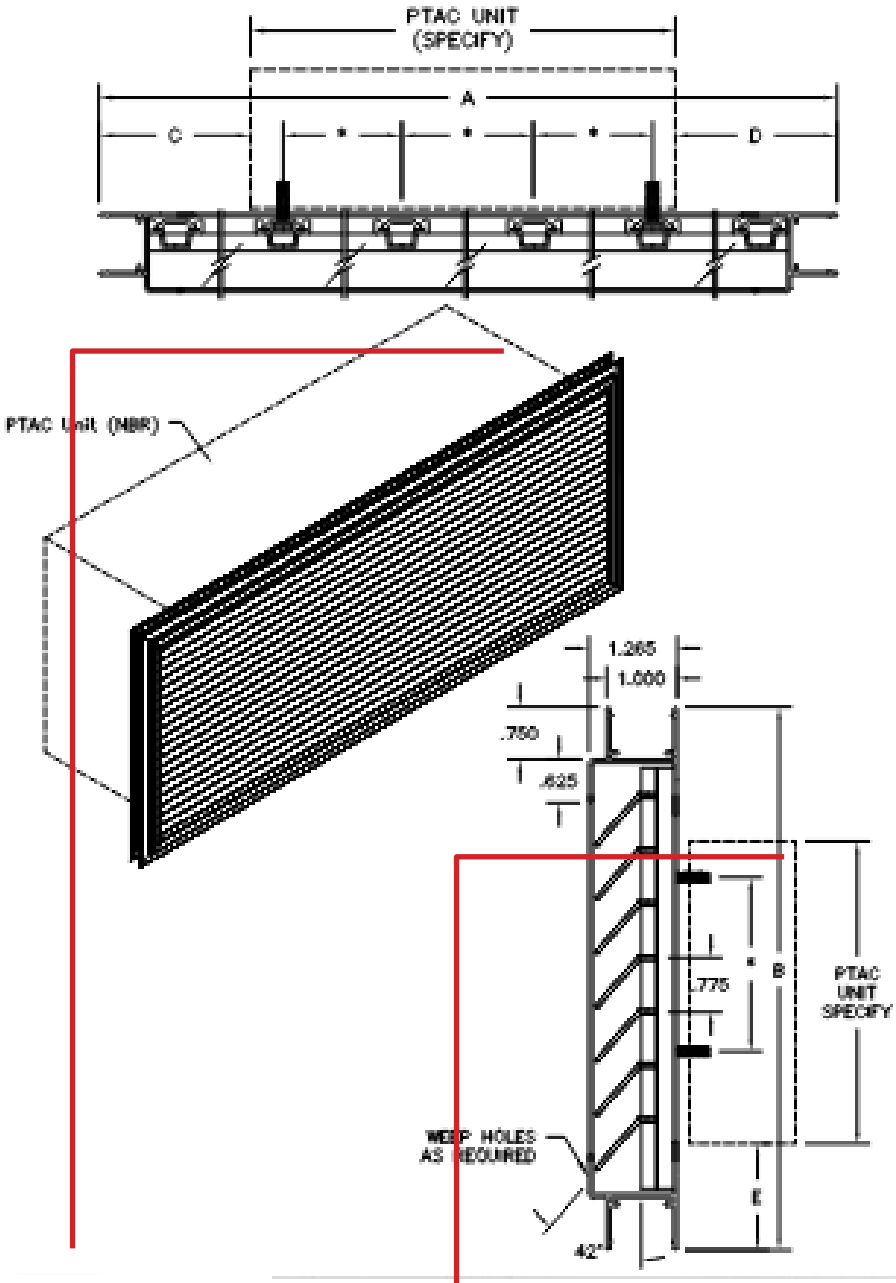
The common method for installing a PTAC louver into an aluminum clad wood Fixed Frame Direct Set window is to glaze the louver into the frame just as you would a piece of insulating glass. Submitting requests for a custom variance to have the factory install glaze-in frame PTAC louvers is recommended.



TECHNOTE

Louver Design

AEL - 42 W/ 2323 FRAME



STANDARD CONSTRUCTION

- Extruded aluminum; 6063-T5
- 42" architectural decorative louver PTAC wall application w/ 2323 frame

OPTIONS

- ☐ Clear or anodized finish
- ☐ Prime coat
- ☐ Baked Enamel (Kynar 50%)
- ☐ Pearlized 50 or 70
- ☐ Kynar 70%
- ☐ .040 (1) aluminum sheet
- ☐ .040 (1) aluminum (2 sides) with 1" (25) insulation
- ☐ Other blankoff required
- ☐ Exterior mounting holes as required
- ☐ See AEL frames for perimeter frame options

VARIATIONS

- ☐ External drains standard weeps
- ☐ Using drain tube kits
  - ☐ Left or ☐ Right
- ☐ Internal drains
  - No drain holes in rear of louver
  - Drain holes for PTAC emergency over flow
- ☐ PTAC unit type _____
- ☐ Sleeve model _____
- ☐ Add'l drain info _____

Notes:

1. Face view for illustration purposes only
2. Dimension "E" = bottom of louver to bottom of PTAC cabinet
3. Dimensions in inches, parenthesis ( ) indicate millimeters

* Dimensions determined by unit, model, and type.

PTAC Wall Sleeve bolts to louver

Blank off panel covers area outside of wall sleeve

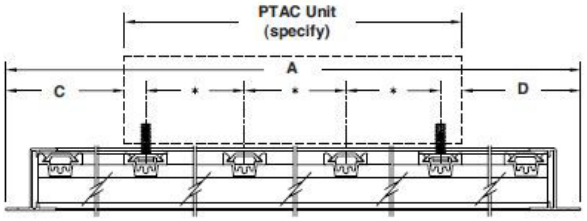
TECHNOTE

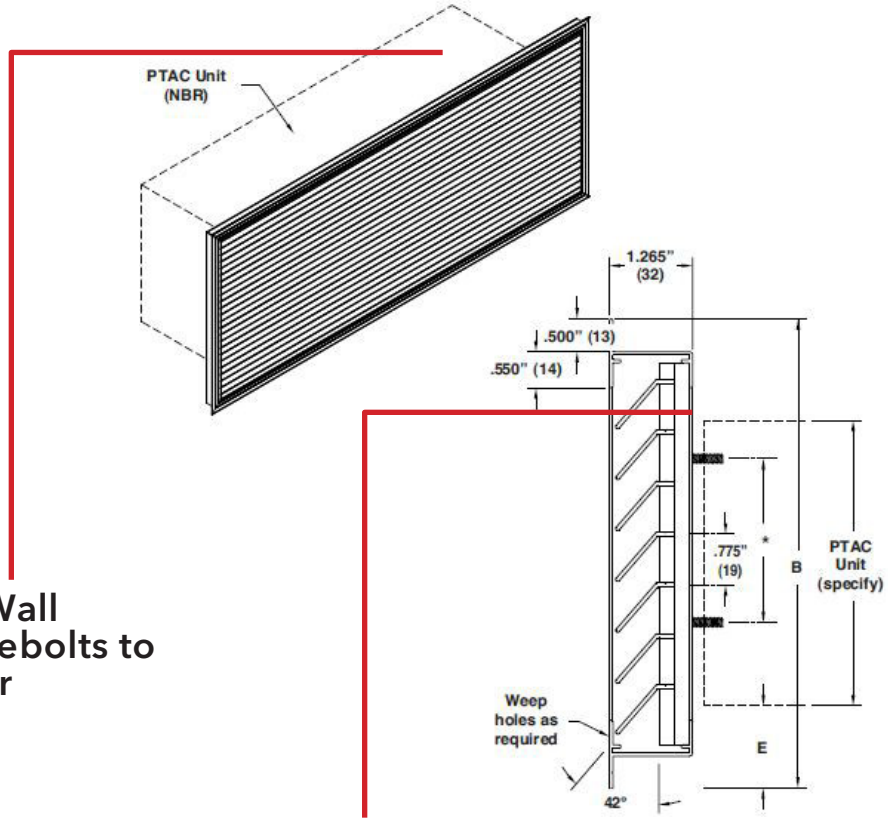
Exterior Mounted Flanged Louver into Pella Fixed Frame Direct Set Instructions (factory installed):

The installation instructions below represent an alternative method of installing louvers into aluminum clad wood Fixed Frame Direct Set windows which includes specifications required for the louver to integrate with the window frame and procedures to measure the louver. The instructions for this method of glazing louvers is based on internal testing and is intended for applications requiring a flanged louver. Regardless of which method is used it is recommended that product be ordered with louvers installed in the factory by Pella.

Louver Design

AEL - 42 W/ 2381 FRAME (POSITION #2)





PTAC Wall Sleevebolts to louver

Blank off panel covers area outsideof wall sleeve

STANDARD CONSTRUCTION

- Extruded aluminum; 6063-T5
- 42° architectural decorative louver PTAC wall application w/2381 frame post #2

OPTIONS

- ☐ Clear or anodized finish
- ☐ Prime coat
- ☐ Baked Enamel (Kynar 50%)
- ☐ Pearledized 50 or 70
- ☐ Kynar 70%
- ☐ .040 (1) aluminum sheet
- ☐ .040 (1) aluminum (1 side) with 1" (25) insulation
- ☐ .040 (1) aluminum (2 sides) with 2" (51) insulation
- ☐ Other blankoff required
- ☐ Exterior mounting holes as required
- ☐ See AEL frames for perimeter frame options

VARIATIONS

- ☐ External drains
- ☐ Using drain kits
  - ☐ Left or ☐ Right
- ☐ Internal drains
  - No drain holes in rear of louver
  - Drain holes for PTAC emergency over flow
- ☐ Unit type _____
- ☐ Model _____
- ☐ Add'l drain info _____

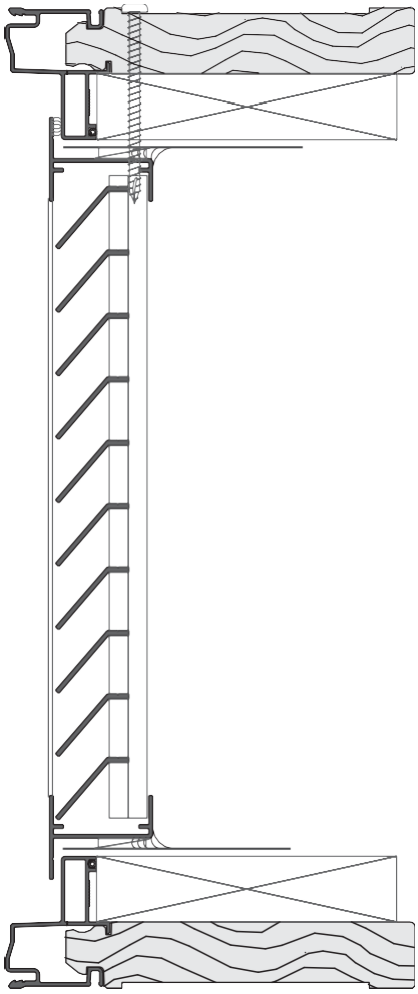
Notes:

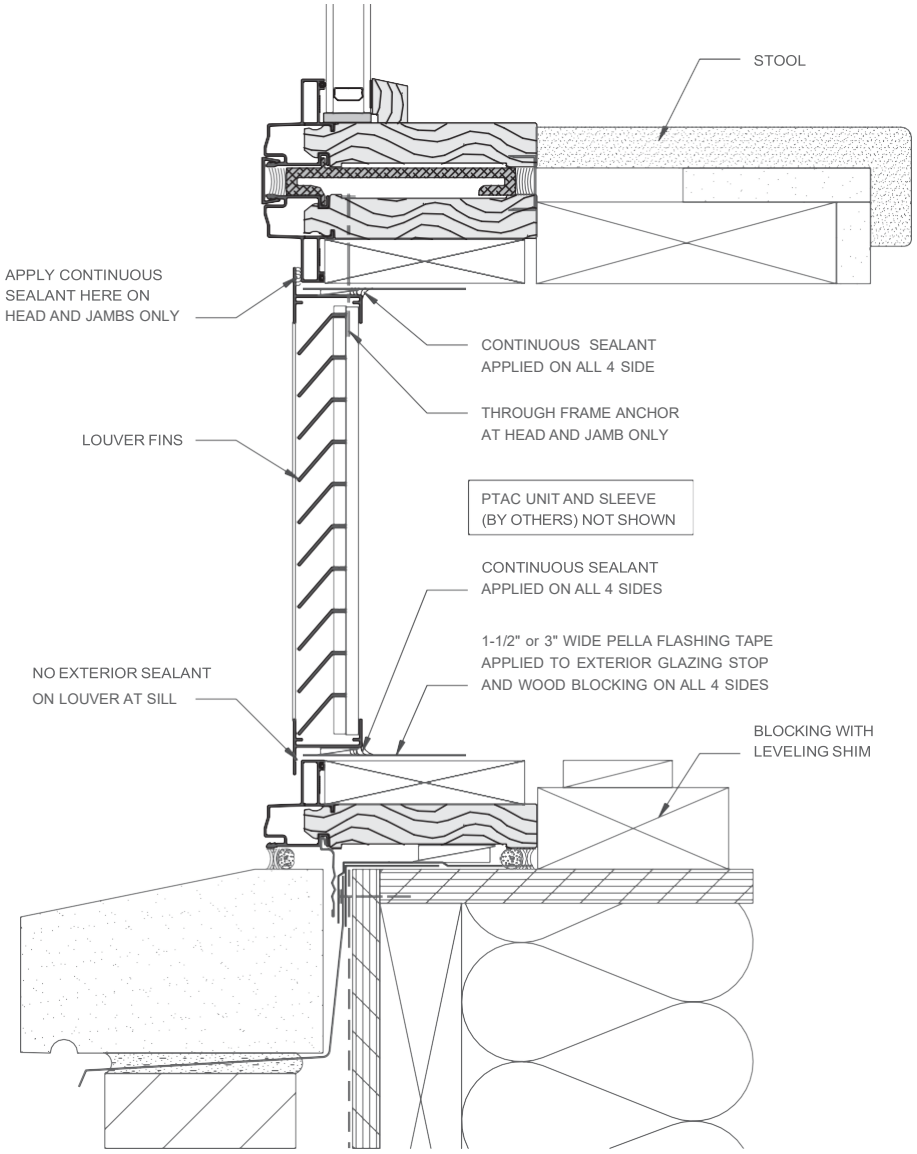
1. Face view for illustration purposes only
2. Dimension "E" = bottom of louver to bottom of PTAC cabinet
3. Dimensions in inches, parenthesis ( ) indicate millimeters

* Dimensions determined by unit, model, and type.

TECHNOTE

Exterior Mounted Louver Section Details





TECHNOTE

Exterior Mounted Flanged Louver into Pella Fixed Frame Direct Set Instructions (field installed):
Note: This process is approved for use by Pella Distributor professionals only.

These instructions were developed and tested using an interior glazed Pella Aluminum Clad Wood Fixed Frame Direct Set withan aluminum louvered panel designed for PTAC applications.

It is the responsibility of the PTAC wall sleeve manufacturer, architect, contractor and installer to allow for the proper drainage of water that collects inside the PTAC wall sleeve and the louvered panel. Failure to provide a proper method of water removal could result in property damage. The Pella Clad Wood window frame is not intended to be used as a meansfor removing water that collects in the PTAC wall sleeve, the PTAC unit or the louvered panel. It is the responsibility of the architect, contractor and/or installer to insure the PTAC sleeve is sealed to the louvered panel per the sleeve manufacturesrecommended procedures.

WARNING: No load shall be placed on the louvered panel or the Pella Clad Wood Fixed Frame Direct Set Window. When the PTAC wall sleeve is attached to the louvered panel, it must also be anchored to the building structure usingmechanical fasteners as directed by the wall sleeve manufacturer. Failure to follow the wall sleeve manufactures guidelines may result in property damage, personal injury or death.

Louvered Panel Parameters:

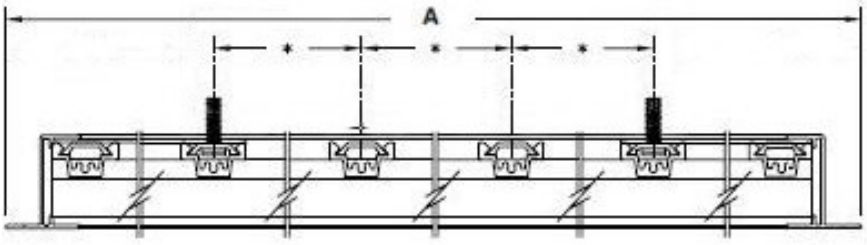
The Reliable AEL – 42 with 2381 frame louvered panel must measure 2-1/2" - 2-3/4" less than the overall window frame widthand height. The louvered panel weep system must drain to the exterior. Insulated louvered panels may be used.

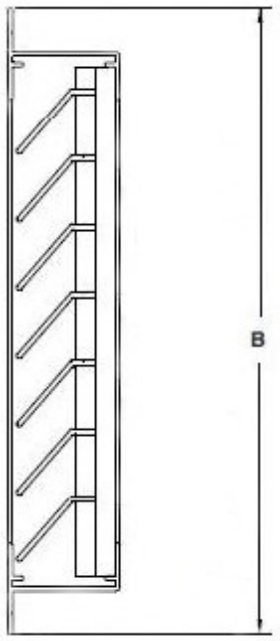
1 WINDOW FRAME AND LOUVERED PANEL PREPARATION:

A. **Remove the packing from the window.** Inspect the window frame and report anydamage to your Pella retailer immediately.

B. **Remove the packing from the louvered panel.** Inspect the louvered panel and reportany damage to your louvered panel supplier immediately.

C. **Measure the louvered panel** (flange to flange "A" & "B") to ensure a proper fit to thewindow frame. The louvered panel should measure 2-1/2' to 2-3/4" less than the window frame in both width and height.





TECHNOTE

2 GLAZING THE LOUVERED PANEL INTO THE WINDOW FRAME:

A. **Attach blocking.** Fasten 13/16" x 3-13/16" (.804" x 3.8125") EnduraGuard treated wood blocking inside of exterior glazing stop so it is flush with inside face of aluminum glazing stop and flush with interior face of wood frame. Attachwith fasteners 2" from each corner and in the center of each side.







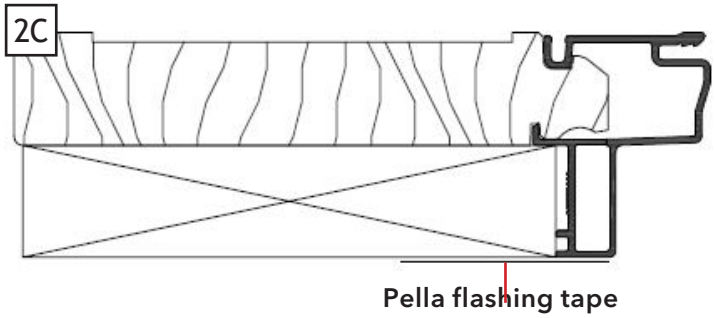
B. **With the exterior (clad side up), seal the inside corners**. Apply a1" long fillet bead of sealant in each of four inside corners of frame.

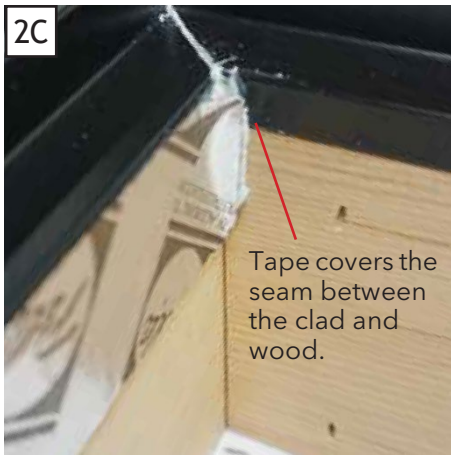


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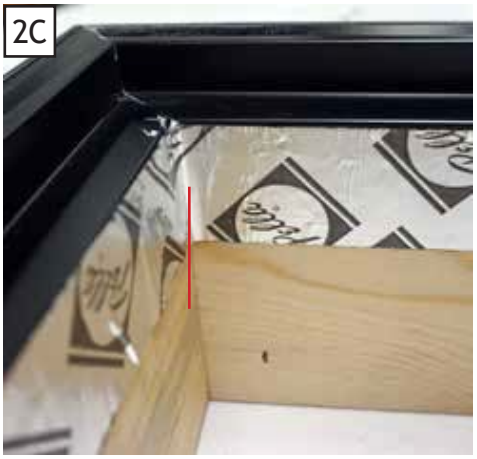
2 GLAZING THE LOUVERED PANEL INTO THE WINDOW FRAME (CONTINUED):

C. **Apply 1-1/2" or 3" Pella flashing tape from outsideface of glazing stop,** over seam between aluminum glazing stop and wood blocking, and onto face of wood blocking. Place the tape over and embed it in the 1" corner sealant beads.











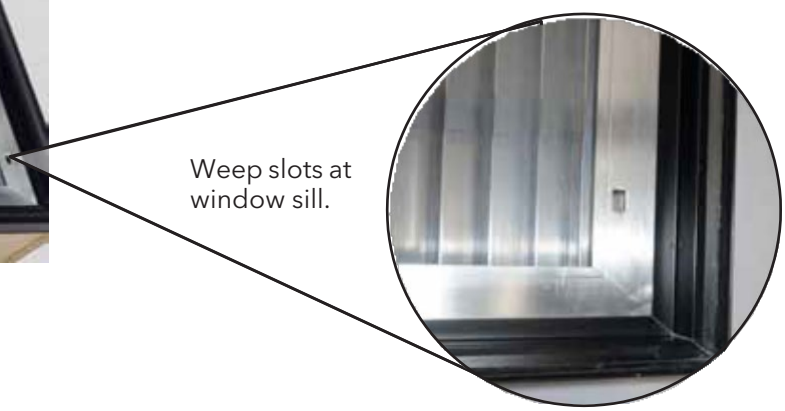


2 GLAZING THE LOUVERED PANEL INTO THE WINDOW FRAME (CONTINUED):

D. **Dry fit the louvered panel into the window frame.** Make sure the bottom of the louvered panel is placed at the sill of the window. The bottom exterior frame of the louver has weep slots in which must be at the sill of the windowwhen installed in the frame.





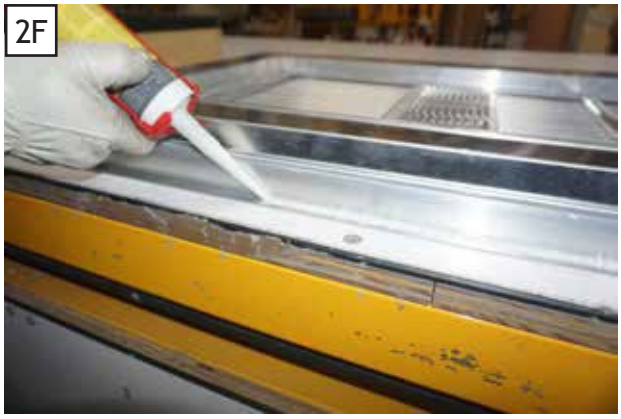


E. **Clean the interior edge of flange** of the louvered panel with isopropyl alcohol.

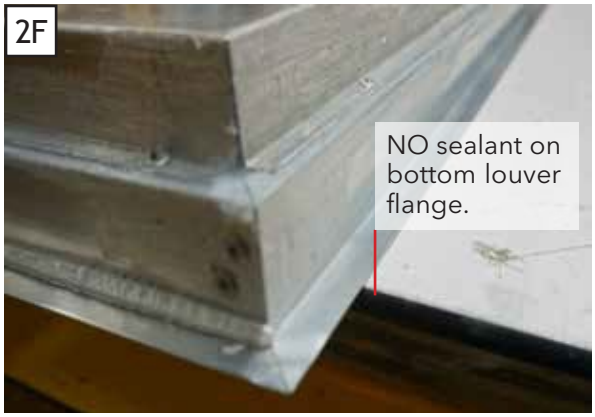


2 GLAZING THE LOUVERED PANEL INTO THE WINDOW FRAME (CONTINUED):

F. **Apply continuous 3/16" - 1/4" bead of sealant to inside face of louver flange at head and jambs only**. Do notapply sealant to the bottom of the louvered panel with the weep slots. The bottom of the panel is installed at the sillof the frame.







G. **Place louver on blocks with** interior side up. Confirm sealant was applied to the head and jambs only.



2 GLAZING THE LOUVERED PANEL INTO THE WINDOW FRAME (CONTINUED):

H. **Position the clad frame** centered on top of the louver.





I. **Position setting blocks/spacers** into each of the 4 corners. Carefully push the blocks over and down so they arealong the edge of the louver.

Note: If using a straight blade screwdriver be careful not to damage or wrinkle the Pella tape.









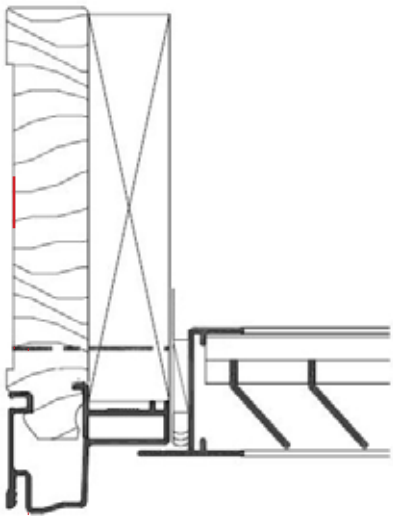
2 GLAZING THE LOUVERED PANEL INTO THE WINDOW FRAME (CONTINUED):

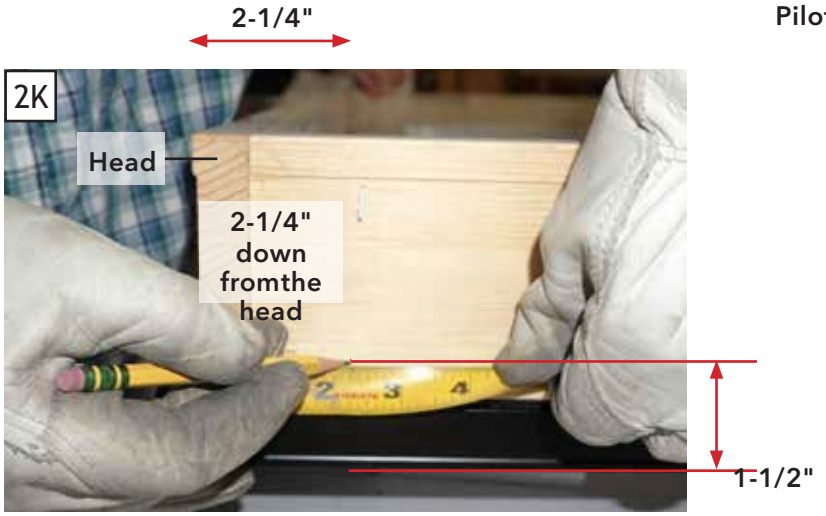
J. **Position setting blocks/spacers** at the head aligned witheach of the louver support bars. Carefully push the blocksover and down so they are along the edge of the louver.

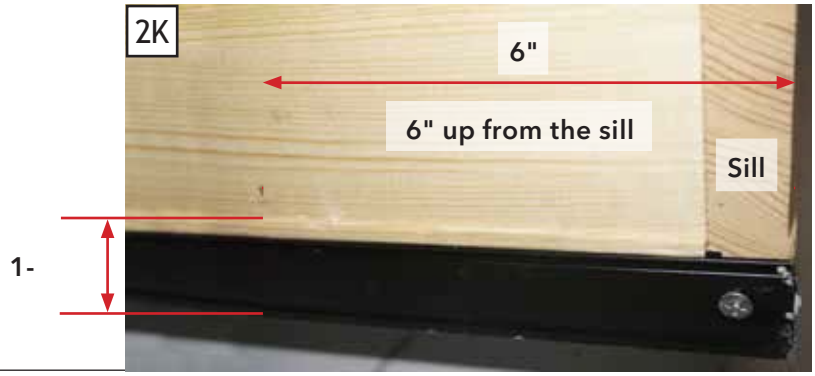
Note: If using a straight blade screwdriver be careful not to damage or wrinkle the Pella tape.



K. **Measure and mark for pilot holes locations on the frame** in each jamb 2-1/4" down from the head and 6" up from each sill corner and located 1-1/2" from the exterior face of the cladding.Also mark pilot locations on the head aligned with each louver support bar location 1-1/2" from the exterior face of the cladding. No hole locations are marked on the sill.

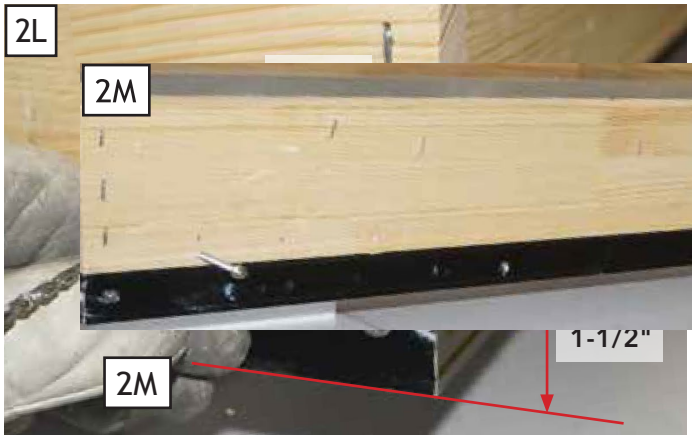






2 GLAZING THE LOUVERED PANEL INTO THE WINDOW FRAME (CONTINUED):

L. **Drill pilot holes with 7/64" drill bit through the frame** and setting blocks at each marked location. DO NOT drill in the Sill.



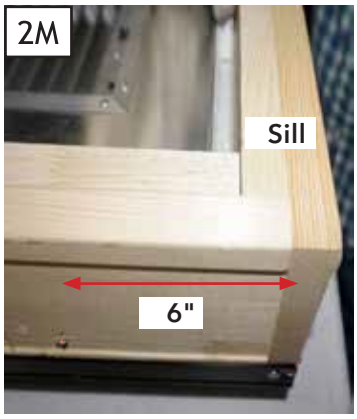


M. **Install - #8 x 2" self-drilling stainless steel pan** th
pilothole location.







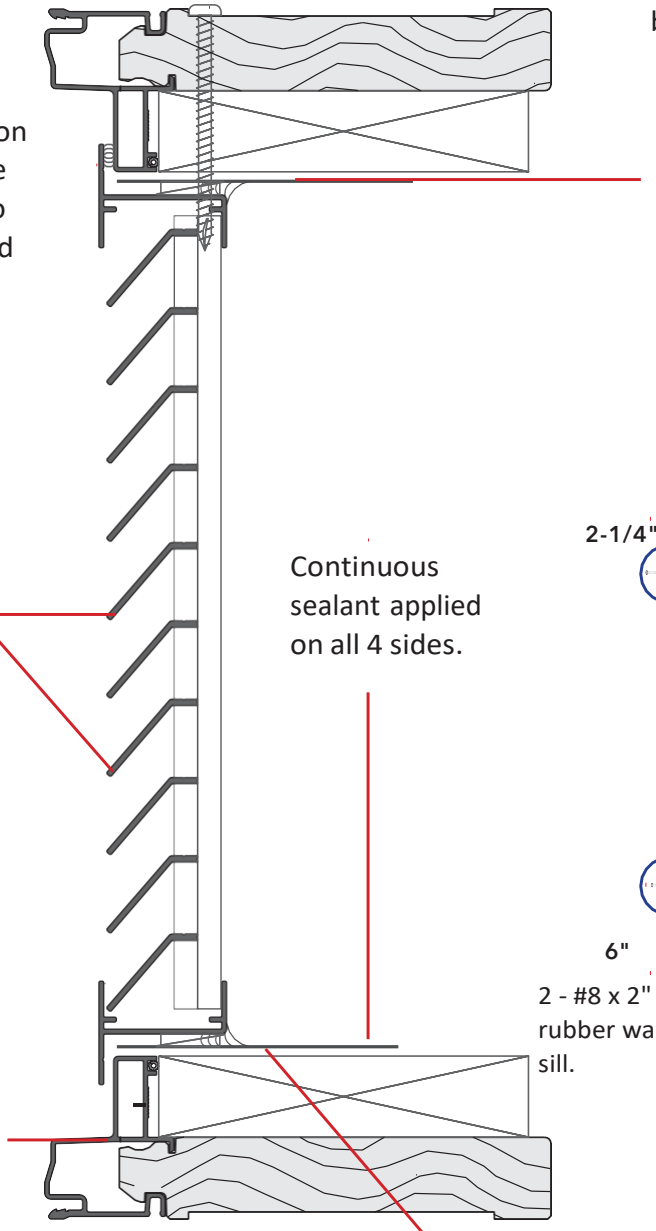


TECHNOTE

PTAC LOUVER INSTALLATION FASTENER AND SEALANT LOCATIONS

#8 x 2" self-drilling stainless steel pan head screw with rubber washeror plastisol under the head to create seal. Screw should penetrate into thehollow of the vertical support bar.

1-1/2" or 3" wide Pella flashing tape applied to exterior glazing stop and wood blocking on all 4 sides.

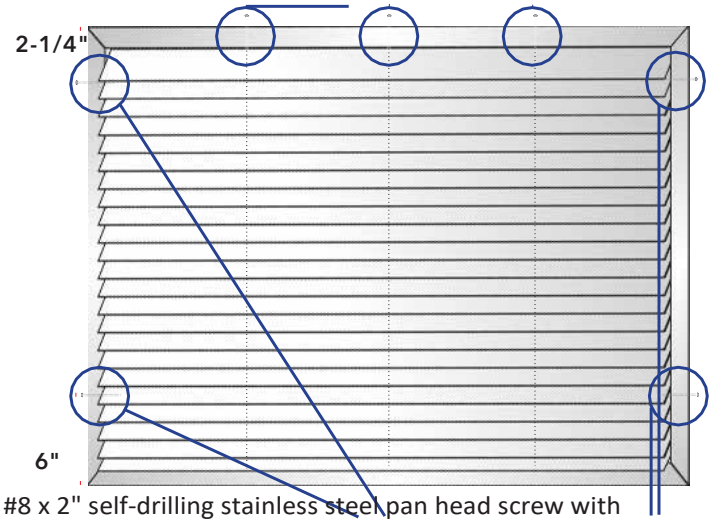


Sealant here on louver before installing into frame at head and jambs (Not at sill).

#8 x 2" self-drilling stainless steel pan head screw with rubber washer throughframe at each vertical louver support bar.Screw should penetrate into the hollow if the vertical support bar. (Number of supports will vary based on unit size.)

Louver fins

Continuous sealant applied on all 4 sides.



2 - #8 x 2" self-drilling stainless steel pan head screw with rubber washer through jambs 2-1/4" from head and 6" up from sill.

NO exterior sealant on louver at sill.

1-1/2" or 3" wide Pella flashing tape applied to exterior glazing stop and wood blocking on all 4 sides.

2 GLAZING THE LOUVERED PANEL INTO THE WINDOW FRAME (CONTINUED):

N. **Apply a continuous 3/8" sealant bead** around the inside perimeter of the unit between the louver and the woodframe blocking.





O. **Shape the sealant bead** to ensure coverage over the edge of thelouver flange.





P. **Turn unit over** and clean off any sealant squeeze-out.





Louver installation completed.

3 INSTALL THE WINDOW FRAME INTO THE OPENING:

A. **Install the window** using the installation instructions publishedon ***installpella.com.***

Note: If mulling this frame to another window frame, follow the mullion instructions as published on installpella.com or those provided by your Pella retailer. If you have questions regarding yourparticular mullion application, please contact your Pella retailer.

