

THERMO-FIT REPLACEMENT WINDOW INSTALLATION INSTRUCTIONS (BRICKMOULD / NO NAILING FLANGE)

Casement, Awning, Fixed Casement, Direct-Set, Double-Hung,
Single-Hung & Horizontal Slider Windows

Materials included:

- (10) #8 x 1-1/2" Phillips Pan head screws
- (10) #8 x 2-1/2" Phillips Pan head screws
- (2) #6 x 2" Phillips Flat head screws (for Casement & Awning windows)
- (10) 3/8" Hole plugs

Recommended materials:

- Flexible flashing tape (width determined by application and wall thickness)
- Caulking
- Fiberglass or non-expanding foam insulation
- Shims

Recommended tools:

- Tape measure
- Level
- Square
- Hammer
- Drill/screw gun
- Drill bits (1/8" and 3/8")
- Caulking gun
- Utility knife

Fasteners supplied are used for typical window openings and installation practices. They may not be suitable for all window rough openings and installation practices.

Fastener length must allow for sufficient penetration of the substrate to transfer the load from the window to the rough opening substrate and comply with local building code requirements.

All fasteners must be corrosion resistant and be compatible with the materials contacted with.

The perimeter joint between window exterior and the exterior building material must conform to siding manufacturer's recommendations. All masonry, stucco, or synthetic stucco systems require an expansion joint around the window perimeter that must be filled with sealant compatible with the building material and window components.

For siding details for windows with and without integral J-channel see the siding manufacturer's recommendations.

Due to variables in local building codes, jurisdictions and the variety of building details these are recommended instructions only.

Penetrations and openings in exterior walls shall be flashed or sealed in such a manner that it will inhibit entry of water into the wall cavity or penetration of water to the building structural framing components.

Self-adhered membranes used as flashing shall comply with AAMA 711.

Refer to AAMA or ASTM for more additional installation guidelines.



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1 Step 1. Rough opening size

- The rough opening must provide a shim space on all sides.
- Check the rough opening dimensions against the units actual frame width and height. Need 1/4" for each side and 1/2" for the head. (fig. 1)
- Make sure the walls are plumb and not twisted. Check the rough opening for square by measuring diagonally from corner to corner in both directions. Measurements cannot differ from each other by more than 1/4". Check the sill for level and make sure jambs are plumb. (fig. 2)

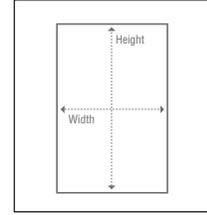


fig. 1

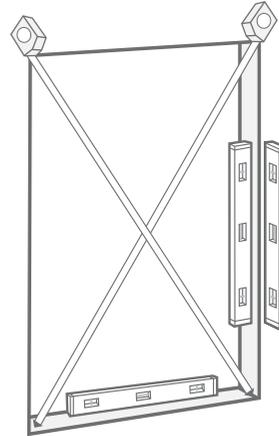


fig. 2

Exterior brickmould unit installation requires a weather barrier self-adhering tape to be applied before the window is placed into the rough opening.

2 Step 2. Prepare the sill with flashing tape

Thermo-Tech recommends a flexible flashing tape for ease of use. If a flexible tape is not available use **alternate step 2** for sill flashing.

- Cut the flexible flashing tape at least 12" longer than the width of the rough opening sill. (fig. 3)
- Remove the release paper, cover the horizontal sill by aligning flashing tape inside edge of sill and adhere into rough opening along the sill and up the jambs a minimum 6". (fig. 4 & 4a)

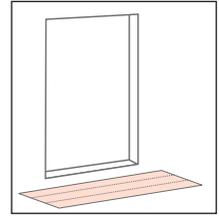


fig. 3

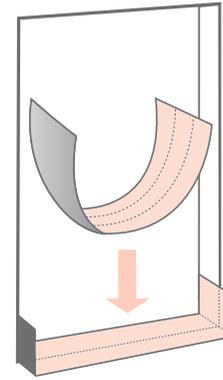


fig. 4

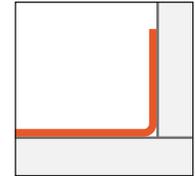


fig. 4a

- Fold down onto the face of the exterior wall, it will be necessary to use mechanical fasteners to hold the corners against the wall at the flexed corners. (fig. 5)

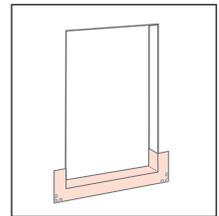


fig. 5

NOTE: When removal of existing windows/doors is necessary, proper precautions and procedures for lead paint management may be required. Visit www.epa.gov/lead for more information. Consult www.energystar.gov/products/recycle/where_do_old_windows_doors_go for recycling/reuse of old building components.

ALTERNATE STEP 2

- a. Apply a piece of self-adhering window flashing tape to the sill at least as long as the original brickmould opening width (**fig. 6**). Apply to the face of the exterior wall so a minimum 1" extends above the opening and the remainder extends beyond each side of the opening to original brickmould opening (**fig. 7**). Cut along the corners of the rough opening and fold down onto the sill. (**alternate fig. 7a**)
- b. Cut the second piece of self-adhering window flashing tape the thickness of the wall plus at least 1". Make the tape length a minimum of 18" longer than the width of the opening. (**fig. 8**)
- c. Align flush with the interior of the wall and extend edge of the tape at least 1" past the exterior wall surface (**fig. 8a**). Start the piece 9" up the side of the rough opening and run it to the bottom of the opening, to the other side of the opening and 9" up the other side. Use a utility knife to cut the sill piece on both corners of the rough opening, and fold along the outside wall.

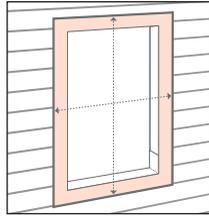


fig. 6

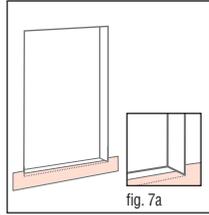


fig. 7

fig. 7a

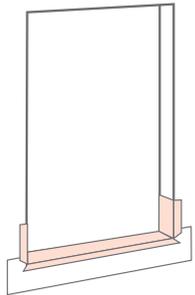


fig. 8

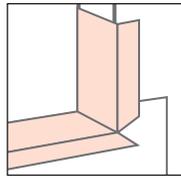


fig. 8a

3 Step 3. Prepare the rough opening with flashing tape

- a. Cut two side pieces of weather barrier tape to length, measure 1/2" up from the bottom of the sill flashing to 1" above the rough opening head. Apply the side self-adhering window flashing tape to the exterior. The window flashing tape on the jambs and the head must be flush with the edge of the rough opening. (**fig. 9**)

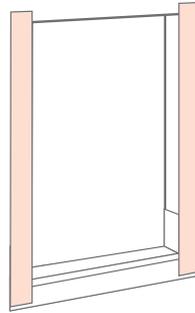


fig. 9

- b. Cut the window flashing tape for the head so it overlaps the side jamb tape by 1" on each side. (**fig. 10**)

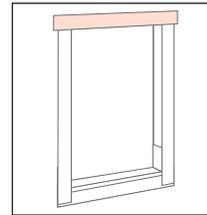


fig. 10

4 Step 4. Prepare the opening with caulk

- a. Apply a continuous 3/8" nominal bead of caulk at the window head and jambs to wall or back side of the brickmould. DO NOT APPLY CAULK ACROSS BOTTOM SILL, BRICKMOULD OR WALL to allow for drainage. (**fig. 11**)

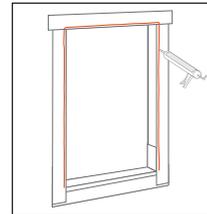


fig. 11

5 Step 5. Prepare to install the window

- a. Immediately set the window into the opening before the caulk has a chance to form a skin over it.
- b. Shimming the window: **The sill of the window must be supported in a straight and level position**, with the shims at all locations where the jambs, intermediate jamb or stiles meet the sill. Select and apply shims on the sill as described above. For multiple wide twin, triple mulled units there needs to be a shim under each mullion, intermediate jamb and the center stiles of the slider. Check mulls for level. The number of shims will vary depending on the overall size of the window. (**figs. 12, 13, 14 & 15**)

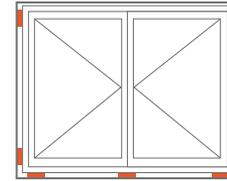


fig. 12 - Casement window (interior view)

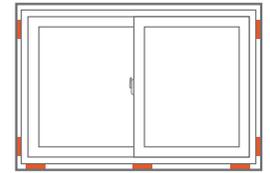


fig. 13 - Slider window (interior view)

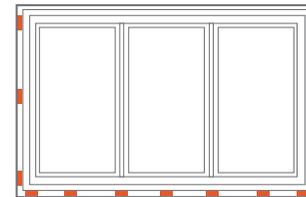


fig. 14 - Multiple wide units (interior view)

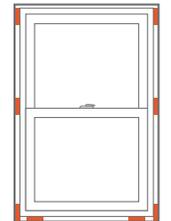


fig. 15 - Single/Double-Hung window (interior view)

- c. Check for plumb and shim accordingly. When unit is level and plumb install the first fastener.

6 Step 6. Fastening the window to the rough opening using Trimline face mount brickmould

Fastening the window to the rough opening using the 1-1/2" and the 2" Trimline face mount brickmould with and without the sillnose.

a. Follow **steps 1 thru 5** for flashing and shimming window.

b. Remove the snap on cover from the brickmould. (**fig. 16**)

c. Pre-drill 3/16" holes for screw placement through the brickmould. (**fig. 17**)

d. Locate the holes 8" to 12" apart on the brickmould. (**fig. 17**) For fastening the window with the Trimline face mount brickmould.

f. On bigger windows and when using the brickmould sillnose it is necessary to fasten the actual window and window sill further. (*Do not fasten through the sillnose.*)

g. Follow the main instructions for fastening the windows other than through the Trimline face mount brickmould (**steps 7 & 8**) utilizing the proper instructions for their respective window type.

h. When done fastening the window you can snap the face trim back onto the brickmould to conceal the fasteners.

i. Follow **step 9** to finish the window installation.

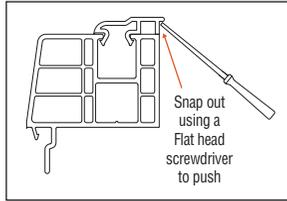


fig. 16

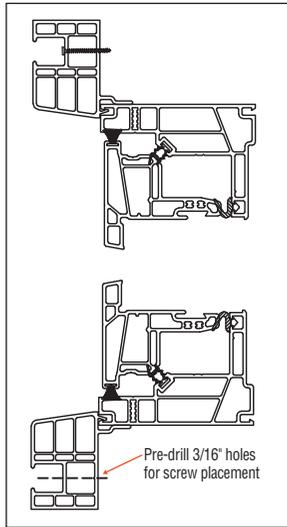
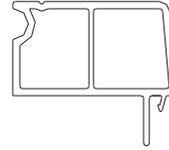


fig. 17

7 Step 7. Fastening the window to the rough opening using flat brickmould

Fastening the window to the rough opening using the 1-1/2" and the 2" flat brickmould.



FOR CASEMENT WINDOWS

a. Pre-drill 1/8" holes in the location shown on **fig. 18**.

b. Shim behind each screw.

c. Ensure the window frame is level, square and plumb.

d. Fasten the window through the main frame with #8 x 2-1/2" Pan head screws. (**fig. 18 & 19**)

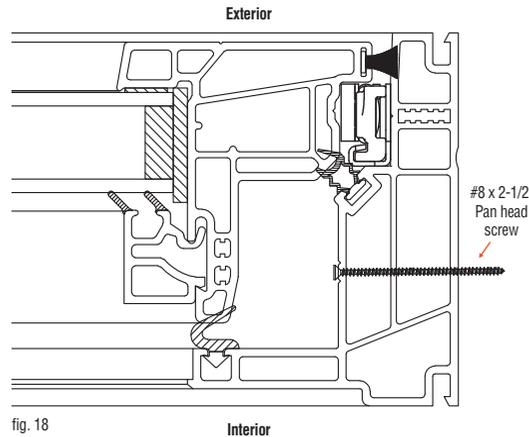


fig. 18

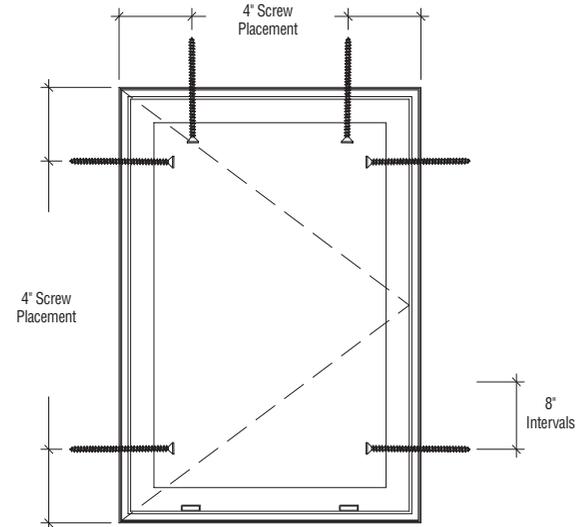


fig. 19

e. Quantity of screws are determined by the size of the window. Place four screws within 4" of each corner on the jamb sides and then space the screws approximately 8" to 12" apart on the remainder of the jamb. For the head use 2 screws four inches from the corner. (**fig. 19**)

f. To fasten the sill use two #6 x 2-1/2" Phillips Flat head screws. Remove two screws, one from each side of the operator bracket. Place a small amount of silicone caulk in the screw hole and insert screws through those holes into the rough opening. (**fig. 20**)

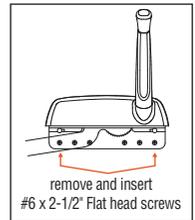


fig. 20 - Operation bracket

FOR AWNING WINDOWS

- Pre-drill 1/8" holes in 6 areas as shown on **fig. 21** and **fig. 22**, then at 8" intervals.
- Shim behind each screw.
- Ensure the window frame is level, square and plumb.
- Fasten the Awning window through the main frame (**fig. 19 & 20**) with #8 x 2-1/2" Pan head screws. Quantity of screws are determined by the size of the window.

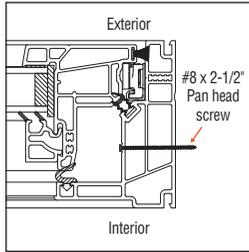


fig. 21

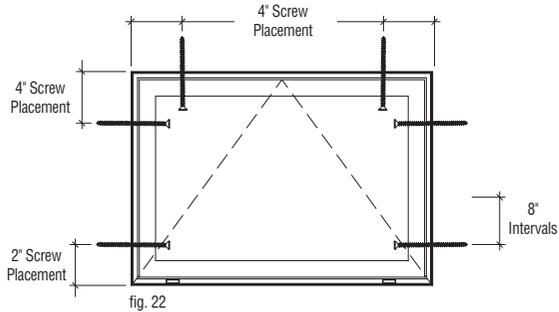


fig. 22

- To fasten the sill, use two #6 x 2-1/2 Phillips Flat head screws. Remove two screws from each side of the operator bracket. Place a small amount of silicone caulk in the screw holes and insert screws through those holes into the rough opening. (**fig. 23**)

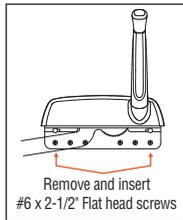


fig. 23

FOR FIXED CASEMENT WINDOWS:

- Pre-drill 3/8" access holes through the outer wall of the frame as shown on **fig 24**. Place the holes 4" from each corner and then spaced evenly every 8" to 14" apart. The number of fasteners are dependent on the overall frame size.
- Insure the window is level, square and plumb. (**fig. 2**)
- Shim behind each screw location.
- Fasten the 4 corners first with a #8 x 2-1/2" Pan head screws.
- Finish fastening the frame through the 3/8" access holes. Fill the cavity with sealant so it comes out of the access hole, use 3/8" hole plugs to seal the hole and conceal the fasteners.

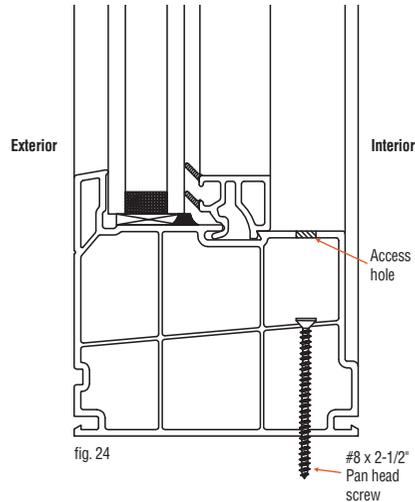


fig. 24

FOR DIRECT-SET PICTURE WINDOWS:

- From the exterior pre-drill 3/8" access holes through the outer wall of the frame as shown on **fig. 25**. Place holes 4" from each corner and then spaced evenly every 8" to 14" apart. The number of fasteners are dependent on the overall frame size.
- Ensure the window is level, square and plumb. (**fig. 2**)
- Shim behind each screw location.
- Fasten the 4 corners first with a #8 x 1-1/2" Pan head screws .
- Finish fastening the frame through the 3/8" access holes. Fill the cavity with sealant so it comes out of the access hole, use 3/8" hole plugs to seal the hole and conceal the fasteners.

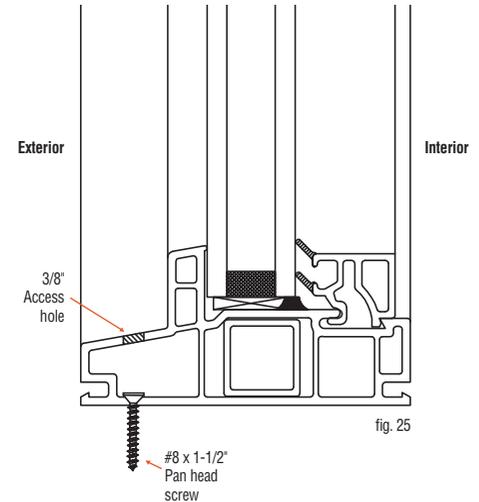


fig. 25

FOR DOUBLE-HUNG WINDOWS (fig. 26)

a. Fasten the Double-Hung window behind the sash stops, top and bottom at each jamb using #8 x 2-1/2" Truss head screws. The sash stops can either be slid out of the way or temporarily removed. Sash stops must be replaced when done fastening the window or balance systems may get damaged.

b. Fasten the center of the window by placing a screw on each side of window just above inside sash.

c. To fasten the sill of the Double-Hung, the screws must be centered inside the pocket of the sill, locate the screws at quarter points (window width divided by four). It will be necessary to drill a 3/8" access hole only through the first layer of the vinyl frame material and then fasten through the 3/8" access hole with a #8 x 1-1/2" Pan head screw, then insert 3/8" hole plug. *It is important to seal the screws and 3/8" plug in silicone caulk to prevent any water intrusion.*

d. To fasten the head of the window unlock window and pull sash down to access the pocket the sash closes into. Follow the same procedure as fastening the sill.

NOTE: *It is not always necessary to fasten the Double-Hung windows in the head and sill. On bigger units it is recommended to help keep the head and sill straight and rigid. It is up to the nature of the installation and the installer.*

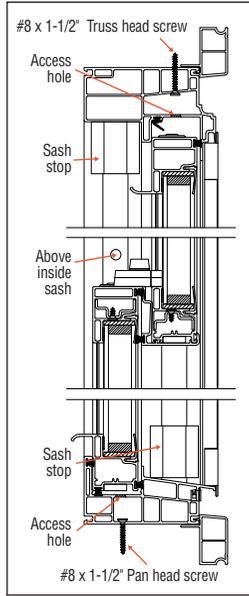


fig. 26

FOR SINGLE-HUNG WINDOWS (fig. 27 & 28)

a. Fasten the top of the Single-Hung behind the sash stops on each side using a #8 x 2-1/2" Truss head screw. Either slide the sash stop down or remove to insert screws.

b. Fasten the bottom jambs by removing the screen and inserting fasteners using #8 x 2-1/2" Flat head screw through the screen retainer slot on each side, replace screen. (fig. 27)

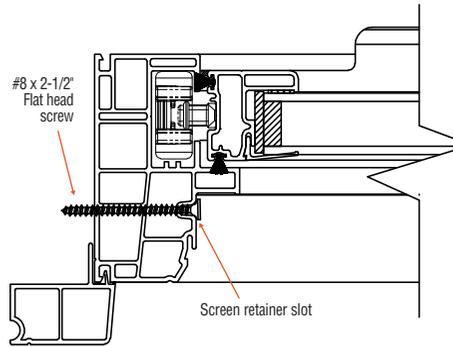


fig. 27

c. To fasten the center of the window place a screw on each side of the window just above the inside sash.

d. To fasten the sill of the Single-Hung the screws must be centered inside the pocket of the sill, locate the screws at quarter points (window width divided by four). It will be necessary to drill a 3/8" access hole only through the first layer of the vinyl frame material and then fasten through the 3/8" access hole with a #8 x 1-1/2" Pan head screw, then insert a 3/8" hole plug. *It is important to seal the screws and 3/8" plug in silicone caulk to prevent any water intrusion.*

e. To fasten the top or head of the window, center inside the interior pocket at the head located at quarter points (window width divided by four) from each side, drill 1/8" pilot holes centered on the interior pocket and fasten the head with #8 x 1-1/2" Phillips Pan head screws.

f. Drill holes centered in the interior top pocket. (fig. 28)

NOTE: *It is not always necessary to fasten the Single-Hung windows in the head and sill. On bigger units it is recommended to help keep the head and sill straight and rigid. It is up to the nature of the installation and the installer.*

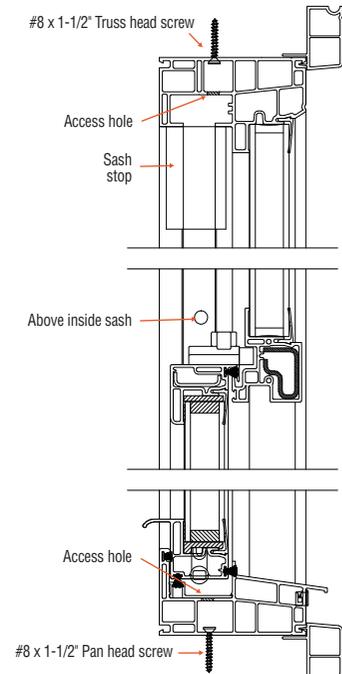


fig. 28

FOR HORIZONTAL SLIDING WINDOWS

a. Fasten the jambs through the interior pocket using a #8 x 2-1/2" Truss head screw. Drill a 1/8" pilot hole for each screw centering the hole in the pocket of the frame, place the screws approximately 16" to 18" apart. Those steps can be repeated for the head also. **(fig. 29)**

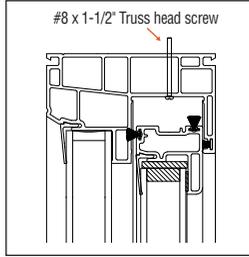


fig. 29

b. To fasten the sill of the slider you first remove the interior sash and then unsnap the bottom track and drill a 3/8" access hole through the first chamber of the frame and fasten through the access hole, it is important to seal the screws in silicone caulk and insert a 3/8" hole plug. **(fig. 30 & 30a)**

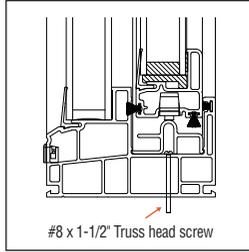


fig. 30

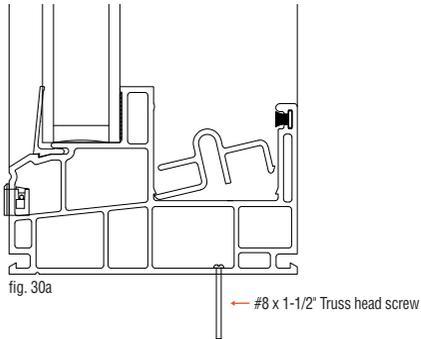


fig. 30a

← #8 x 1-1/2" Truss head screw

8 Step 8. Sash alignment test

(Single/Double-Hung and Slider windows only)

a. Unlock and fully open sash, then close sash until it is open 1/2". The gap should be equal on the Single-Hung and Double-Hung from right to left and on the slider top to bottom. **(fig. 31 & 32)**

If the gap is unequal the unit requires further adjustment.

b. Check for plumb and level. If okay, finish securing the window (including head and sill).

c. Make sure the window operates smoothly and the operable sashes are sitting square in their opening. Also, make sure the unit locks properly.

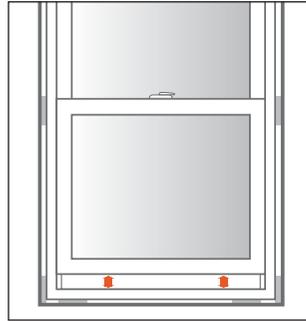


fig. 31 - Single/Double-Hung

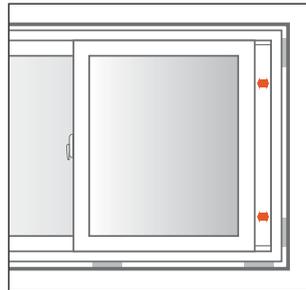


fig. 32 - Slider

9 Step 9. Drip cap installation

It is recommended a drip cap, which can be purchased from Thermo-Tech, be installed on all windows utilizing brickmould.

(fig. 33 - using Water-Resistive Barrier)

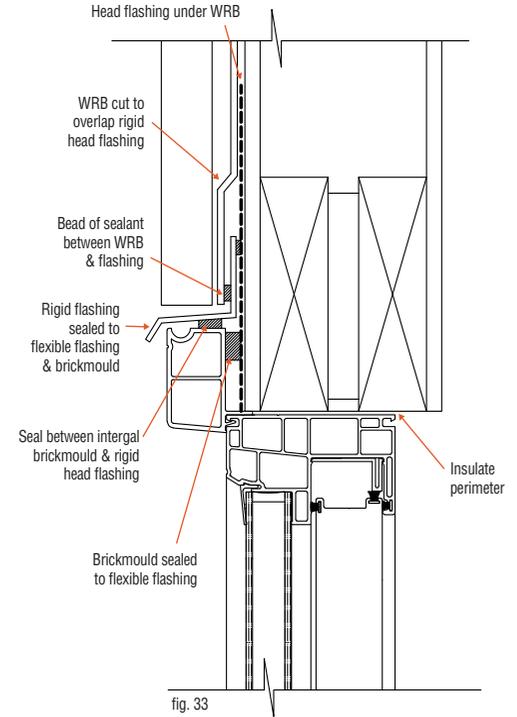
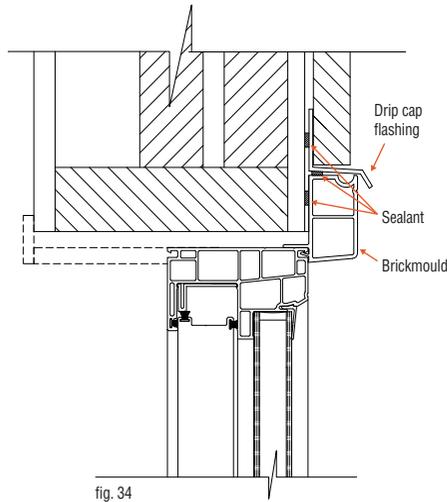


fig. 33

- a. Measure and cut the drip cap that is as long as the top of the window brickmould.
- b. Apply a continuous 3/8" bead of caulk to the exterior face of the flashing tape and on the top of frame. Caulk must be as long as the drip cap.
- c. Place drip cap on top of window, and center its length on the top of window, push tightly down against the caulk.
- d. Nail drip cap in place with galvanized roofing nails long enough to penetrate framing material. Place nails every 12" to 16".
- e. Refer to **fig. 34** for replacement unit applications (drip cap is tucked up under the existing siding).



f. Insulate and seal the interior.

Insulate around 3 sides of the frame, top and 2 sides (low-expansion foam is recommended). Insulate the full cavity from the interior surface of the brickmould to the interior side of the frame.

- g. Completely seal the bottom of frame and at least 6" up each side with caulking that is compatible with the vinyl frame and framing material.
(fig. 35, 36 & 37)

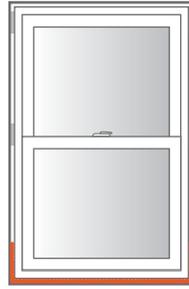


fig. 35 - Single/Double-Hung window (interior view)

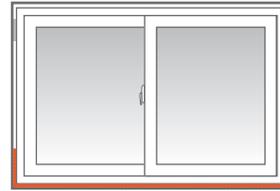


fig. 36 - Slider window (interior view)

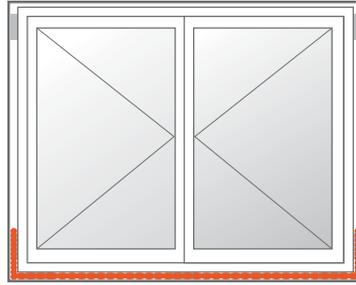


fig. 37 - Casement window (interior view)