

INSTALLATION GUIDELINES: ZENITH SERIES using perimeter installation fin

Wall systems designed to manage water or that have been upgraded to manage water are important for a trouble free installation. Site conditions, building designs, building materials and construction methods vary from project to project. Determining the proper installation is the responsibility of you, your architect or construction professional. Installation will require a minimum of two (2) or more people depending on the size/weight of the windows, size of the project and schedule.

1. INSPECTION:

Customer should conduct a thorough inspection of the window products after receiving them. Windows should be inspected for proper type, operability, shipping damage, and size. **All damages or freight claims must be submitted in writing within 48 hours of receipt to; service@thinkalpen.com.** Follow these steps when inspecting new window products:

- Thoroughly inspect the windows, note that some products contain items that are not to be removed until after the windows are installed properly.
- Lock all sashes opened during inspection prior to installation.
- Check for proper size and location prior to the start of installation.

2. STORAGE AND HANDLING:

Alpen HPP does not recommend storing windows prior to installation, but if necessary windows should be properly stored when installation will not take place immediately. The following recommendations will help you store and protect the products until installation can begin:

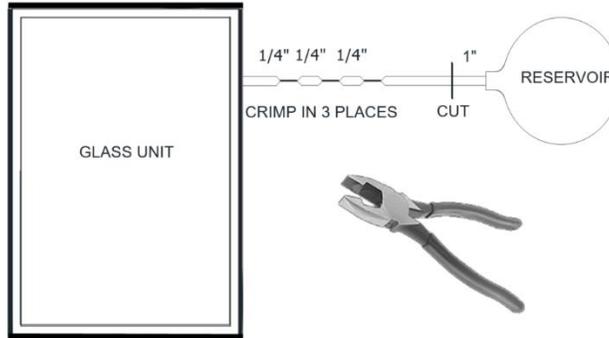
- Windows shall be transported in an upright position with all manufacturers' packaging in place. Then stored or staged in an upright position, sitting on the sill, as close to 90 degrees as possible. Keep windows away from moisture and off the ground. **Do not lay flat, transport flat or carry flat.**
- Installers should wear clean gloves when handling products.
- Do not rack, twist, drag or pull window frames.
- All windows shall be stored in the upright position as close to 90 degrees as possible and placed on their sills.
- If packaging is removed, store with non-abrasive separators between frames.
- Handle units with shipping handles or glass cups during installation as much as possible. Use appropriate manpower when lifting large units.
- Windows shall be stored out of the weather in a clean, dry, low- traffic area, away from direct sun light, extreme temperatures and extreme temperature changes. Do not leave wrapped windows exposed to weather, sunlight or heat. Do not store windows in containers, trailers, or areas that might undergo dramatic fluctuations in temperature and humidity, or is also used for storage of hazardous or chemical materials. Off-gassing of these materials may degrade the window finish or seals.
- If windows must be stacked so some lean against others, always stack the largest units at the back in a completely upright position and proceed forward with gradually smaller units. **Never lean units larger than 40" tall.**

3. RESERVOIR REMOVAL INSTRUCTIONS:

- a. Once the units have arrived at the jobsite, allow them to acclimate to their openings/jobsite conditions for a minimum of 24 hours if possible. Larger units may take up to 72 hours.



- b. Once acclimated, the capillary tube requires crimping in three places, and reservoir removal. Crimping should be performed between 12 and 3 PM, or when the temperature is at the expected seasonal average. Ensure the glass panes are flat before crimping.
- c. Crimp (hard enough to collapse or flatten the tube) the capillary tube 1/4" from the edge of glass/glazing bead, again at 1/4", and again at another 1/4". Use the flat jaws of a pair of pliers (shown).



- d. Cut the tube 1" from the end. Remove the reservoir and then dip the cut end in a sealant that adheres to steel. Let sealant dry.
- e. Tuck the capillary tube under/behind the glazing bead using a plastic putty knife or tape to the edge of the IGU for "Glass Only" products.
- f. Please reference "Breather Tube Tucking Instructions" or call your Sales Representative for more information.

4.

AAMA INSTALLATION METHOD SELECTOR	A	A1	B	B1
Weather Barrier Applied (First) Prior to Window		✓		✓
Sill Flashing Applied Prior to Window Installation	✓	✓	✓	✓
Jamb Flashing Applied to Opening (Before) Window			✓	✓
Window Set in Place (With Sealant on Back of Flange)	✓	✓	✓	✓
Jamb Flashing Applied w/ Sealant (After) Window	✓	✓		
Head Flashing Applied After Window Installation	✓	✓	✓	✓
Weather Barrier Applied (After) Window	✓		✓	

A = Flashing applied after the window B = Flashing applied before the window 1= WRB applied before window

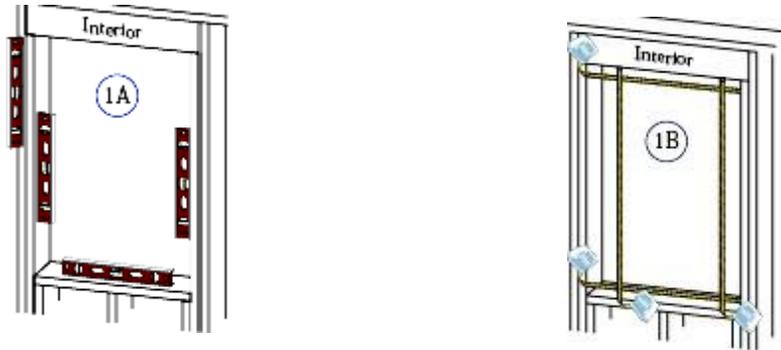
Each project is different. The most frequently used method on new construction, with weather resistant barrier and fin is the AAMA A1 Method. Other Methods are mentioned in the text that follows, but the primary description in this document is the A1 Method.

5. PREPARE WINDOW OPENING:

- a. Verify the rough opening is level and square. Verify the window will fit the opening. Allow 1/4" (+/- 6mm) space between window frame and rough opening at the jambs for shimming and adjustment (1/2" overall in width). Minimum R. O. allowance is 1/2" overall. Be sure to consider perimeter accessories in this equation to determine window frame size as a larger allowance may be necessary. Allow for shim space at the bottom of the window (use enough shims to fully support the window and insure sill remains

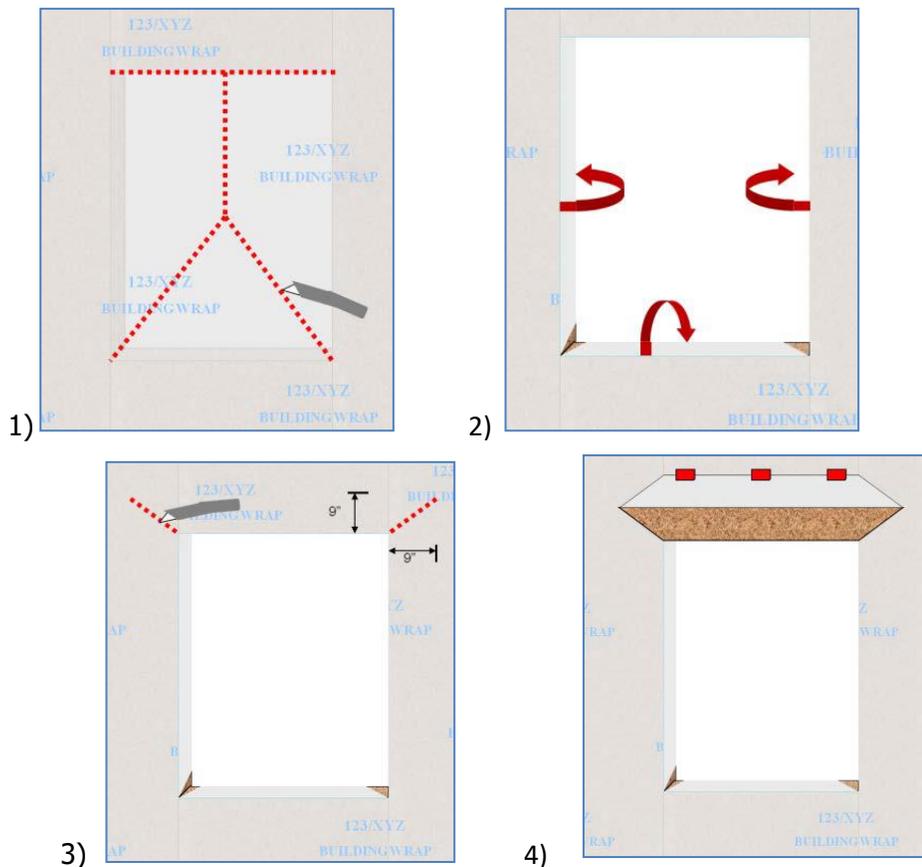
straight) and the remaining space at the top of the window to allow for movement of the header above the window. **Shim space may be larger depending on project-specific installation requirements. Measure width and height at several points along span to ensure dimensions are uniform and no bowing or warping exists. (Shim window at the sill and jambs, not at the head).

b.



c. When the weather resistant barrier is in place: (See drawings below)

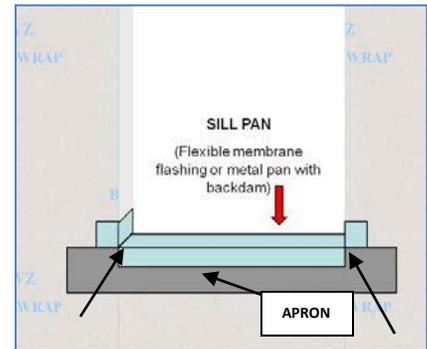
- 1) Score with modified “I” pattern or upside-down “Y”.
- 2) Then fold the WRB to the interior and tape
- 3) Cut building wrap at the head – outside to corner of the opening in a 45 degree cut on both sides of the opening. Length of cut is about 12-3/4” diagonal measurement. Straight dimensions from the head and jambs should be 9”.
- 4) Fold up WRB flap at head and temporarily fold and tape flap as shown.



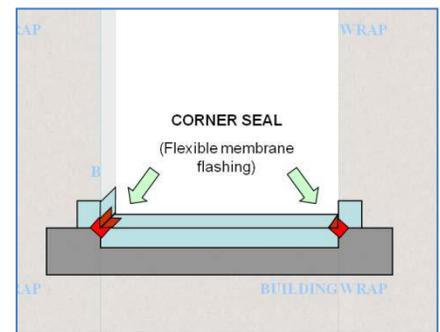


6. SILL FLASHING & DRAINAGE:

- a. Cut sill flashing “apron” for the front of the opening using 9” self-adhering flashing. (Size = R.O. + 18”.) Place a bead of sealant at the exterior front corners of the sill where building wrap and apron flashing meet. – Long arrows in drawing right show location - Tool sealant before installing sill flashing or pan flashing. (If this is an A or B method without the building wrap in place, attach the top of the “apron” flashing, but leave the lower portion of the flashing loose so the building wrap or paper can be slid under the flexible flashing. Then both can be securely attached, but in weather board fashion.)



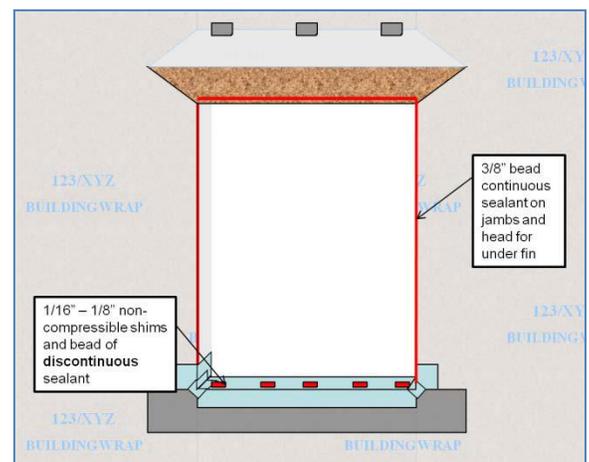
- b. Flexible Flashing with membrane - placed and cut as sill pan. **Make sure to allow for back dam and create positive drain to the exterior.** 6” side legs are recommended on flashing. (Metal pans can be used, but conduct cold to the interior of the building unless you insulate at the back dam.) (Refer to *Installation Masters Training Manual Addendum* dated August 2007 for back dam height based project performance requirements. The Building Science Corporation has suggestions for creating positive drain and back dams.)
- c. Cut and place small pieces of flexible flashing in the corners for a redundant corner seal. Be sure to make it as smooth as possible and avoid any wrinkles.



7. SHIMS:

Use 1/8” thick minimum non-compressible, impervious shims. Thicker shims may be required depending on window rough opening but should not exceed 1/4”. Shims should be at least 1-1/2” wide and long enough to fully support the window frame. Place shims every 6-8” along window sill and within 1” from corners. Shims can be set in sealant to hold them in place. Ensure adequate and level support of window frame is achieved. (Block shims, horse shoe or U-Shape at sill.)

Apply a continuous bead of sealant on the edge of the opening at the jambs and the head. A discontinuous bead of sealant can be applied on the face of sill. (Sealant on the opening instead of the back of the fin keeps your hands clean.)

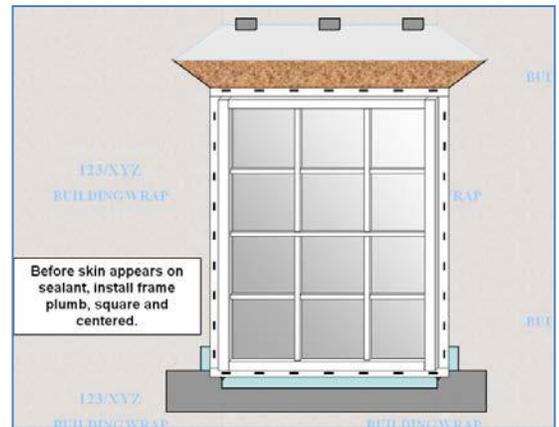




Before skin appears on sealant, using glass cups to lift the window, center window and set window in the opening - sill first. Push the window into the sealant from the bottom to the top.

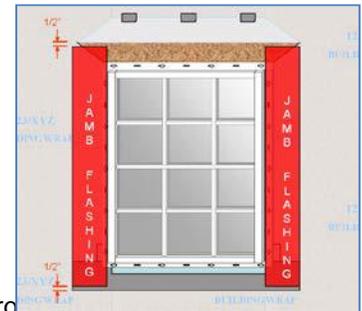
- a. Check window for plumb, level and square. Shim at the jambs. **Fasten the perimeter with coated or stainless steel screws 4" from corners & 6"-8" o.c.** Place clear silicone on the frame corners and seal corner miters of the installation fin. Tool sealant and any squeeze-out on the fin once the window is fastened in place. Seal and tool heads of all fasteners.

Please refer to Installation Masters guidelines for additional information regarding back dam heights, side jamb heights for flashing, redundant lines of sealant, and flashing in weatherboard fashion. Insulating the cavity between the rough opening and frame of the window is important as is the sealing of the window to the interior of the building prior to interior trim-out. This should be done as is most fitting to the opening conditions.



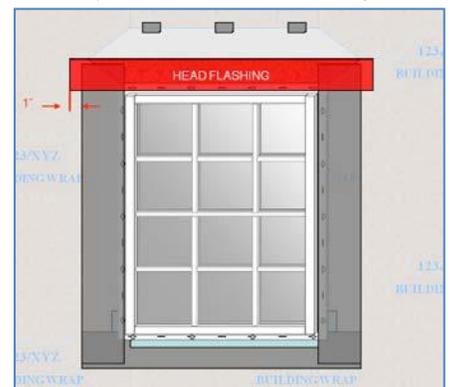
8. JAMB AND HEAD FLASHING:

- a. Apply Jamb Flashing. (Size is R.O. height + 17" - Allowance 1/2" less than 9" at the top and bottom.)



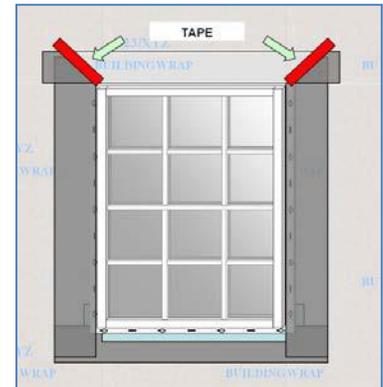
- b. DRIP CAP: Head drip cap flashing can be installed at this time. Separate from redundant water protection. (Drip cap is not an option from Alpen windows. It would be provided by others.) Integrate window with existing drainage plane at head and jambs. Ensure drip cap at window head is in place and effectively sheds water beyond window frame. Water should not be drained down exterior surface of window frame or glass. Failure to provide adequate head flashing/drip cap may void warranty.

- c. Apply Head Flashing over fin and drip cap flashing. (Size is R.O. Width + 20", 1" wider on each side.)





9. Release tape from WRB above window. Allow it to drop over head flashing. Apply weather resistant barrier tape to hold the flap down.



10. ALTERATIONS

Windows should never be load bearing after installation. Window should not be modified to accommodate air conditioners, exhaust fans, etc.

END OF SECTION

Recommended resource for effective water management building details per climate type: “*Builder’s Guide*” Series by The Building Science Corporation (Building Science Press, 2006 & 2009) and AAMA Installation Masters Training Manual for additional detail.