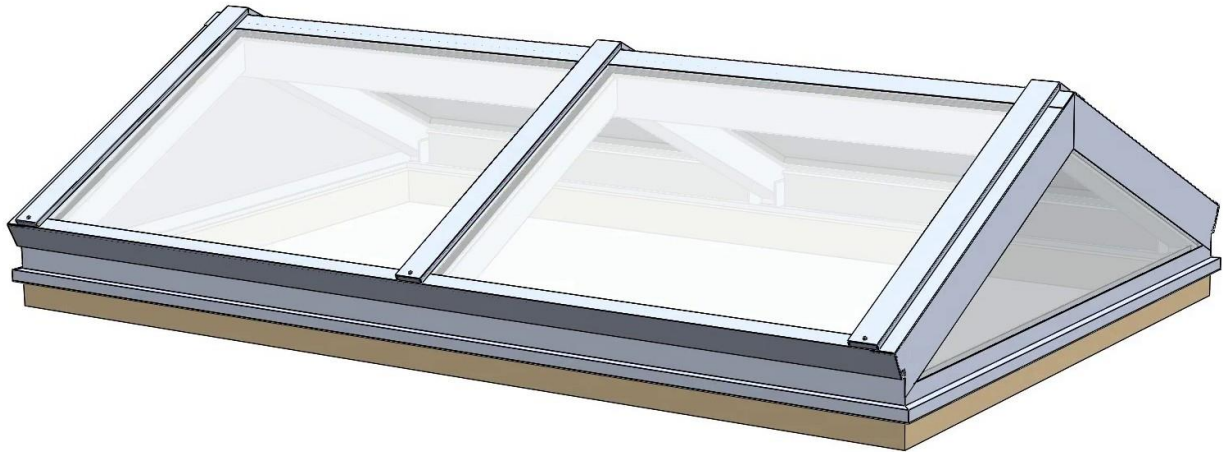


## **GABLED RIDGE Structural Skylight Installation Instructions** Rev 5-28-24





## INTRODUCTION

Thank you for purchasing a DÄLYTE Skylight. To ensure that it gives you many years of high-performance service, it is important that before commencing any work, you read these instructions fully and ensure that they are strictly followed for a successful and trouble-free installation.

We recommend that the installation should be undertaken by DÄLYTE's Installation Team or an approved glazing professional with proper safety and glass handling equipment. This will ensure a reliable product and enable the property owner to benefit from the full warranty on the product.

If you require assistance beyond the scope of this manual, please do not hesitate to contact DÄLYTE at (800) 748.2036 or [info@dalyteusa.com](mailto:info@dalyteusa.com)

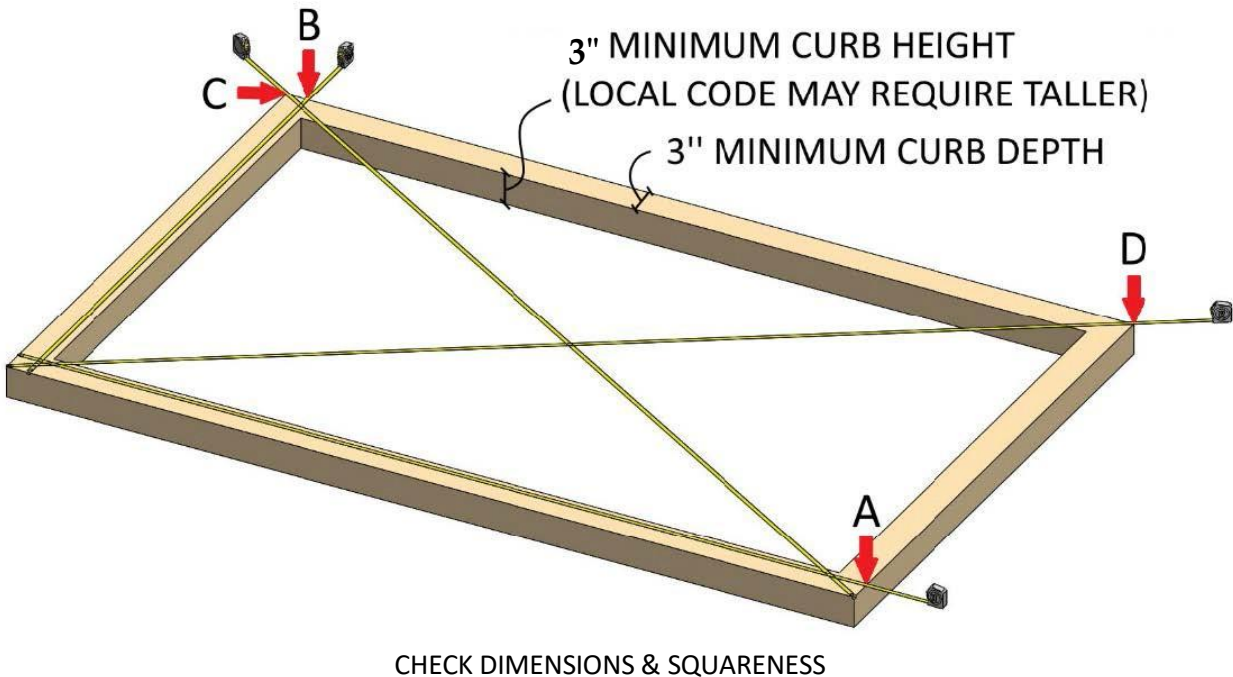
## BEFORE YOU START

### 1) SAFETY CONSIDERATIONS

Installation of your skylight may involve working at heights, working at an unusual angle, being in unfamiliar locations or all of these. Before work is started, take a moment to consider the best way to carry out the task and what hazards you might encounter. These products can be very heavy, so consideration should be given to getting the product onto the roof safely and extreme safety precautions taken during installation.

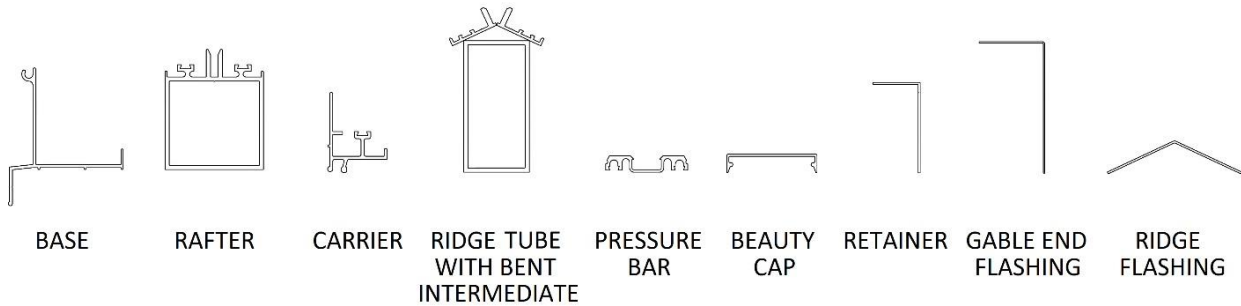
2) Thoroughly review and understand the instructions, Submittal Shop Drawings and Safety considerations. Note: DĀLYTE follows LEAN principles of continuous improvement in its work and reserves the right to make improvements. If you have any questions do not hesitate to reach out to DĀLYTE for assistance.

3) It is very important to check and double-check that the curb dimensions match the Submittal Shop Drawings. Be sure to review and compare the “diagonal” dimensions of the curb to check for squareness and adjust, as necessary.

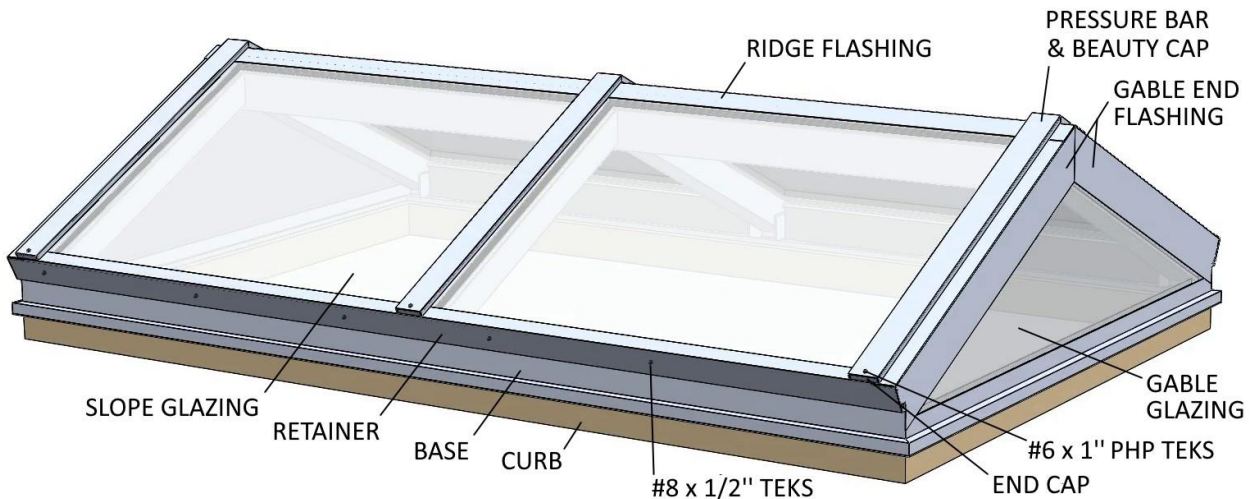


**TYPICAL INSTALLATION TOOLS NEEDED:**

- Safety gear (Fall protection, hard hat, safety glasses, gloves, sturdy boots, first aid kit, etc.)
- Tape measure, Level & Marker
- Cordless drill & assorted bits (5/16", 3/8", 7/16", etc.)
- 1/4" hex drive impact screwdriver & bits (#2 & #3 Philips, 1/4" hex, 3/8" hex, 9/16" hex, etc.)
- Framing Square
- Utility knife & Razor Blades
- Caulking gun, tooling spatulas & Paper Towels or Rags
- Metal snips
- Rubber Mallet (16oz) & wood block
- Small Prybar
- Rivet Gun & rivets.
- Glass Vacuum Cups (for glass glazing)
- And other assorted tools



**Names of main Skylight parts**

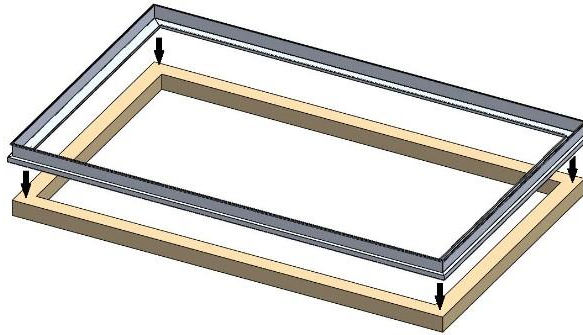


**EXTERIOR PART NAMES**

**General Note** on Silicone color selection: Clear Silicone is always used between the top of the wood curb & the bottom of the BASE frame and the Anchor screws. A frame finish “matching” silicone is used between two or more pieces of aluminum (gray silicone for Clear Anodized Frame and Black Silicone for Dark Bronze Anodized frame). Black Silicone is used to seal anywhere the silicone touches the black EPDM gaskets.

**1) FRAME assembly and installation.**

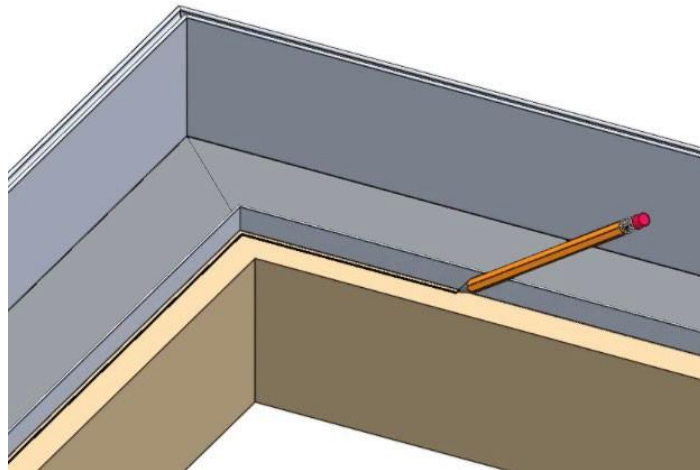
- Unpack and familiarize yourself with the Skylight parts, Packing List & Submittal Drawings. This can be done on the roof or spread out on the ground.
- BASE: Dry-fit the BASE on the curb to confirm where it will sit (Note the BASE typically is in 1 or 2 welded assemblies for smaller to medium or several in pieces with splice plates for extra sealing for larger Skylights). On the larger SKYLIGHT BASES, you might want to add “temporary” screws to hold them down.



Dry-fit the BASE (it should overhang ½” all-around)

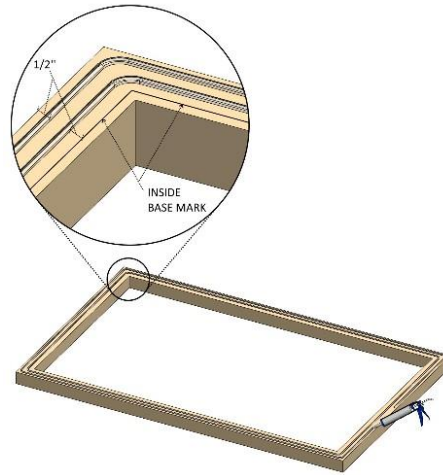
○

Dry-fit the BASE to confirm proper fit as detailed in the Submittal Drawings, then mark the inside edges so you know where to apply clear silicone later, then remove the BASE.



Mark the interior edge of the BASE (this will help when applying silicone later)

- Clear Silicone Caulk the curb in the area where the BASE will sit. Do this by laying down (2) ¼" diameter beads of clear silicone under where the BASE was determined to lay during the dry-fit. First one will be under the BASE at ½" from the line you drew marking the inside edge of the BASE and the second ½" from the exterior edge of the curb.



Apply 2 BEADS ¼" Clear Silicone

- Place the BASE on the curb with two beads of clear silicone and center the BASE to the curb. If the BASE is several pieces, take care to place the splice plates under any joints on the BASE and to generously "butter" them with clear silicone to seal. Firmly press the base into the curb to spread the silicone.
- Make sure the BASE is square.

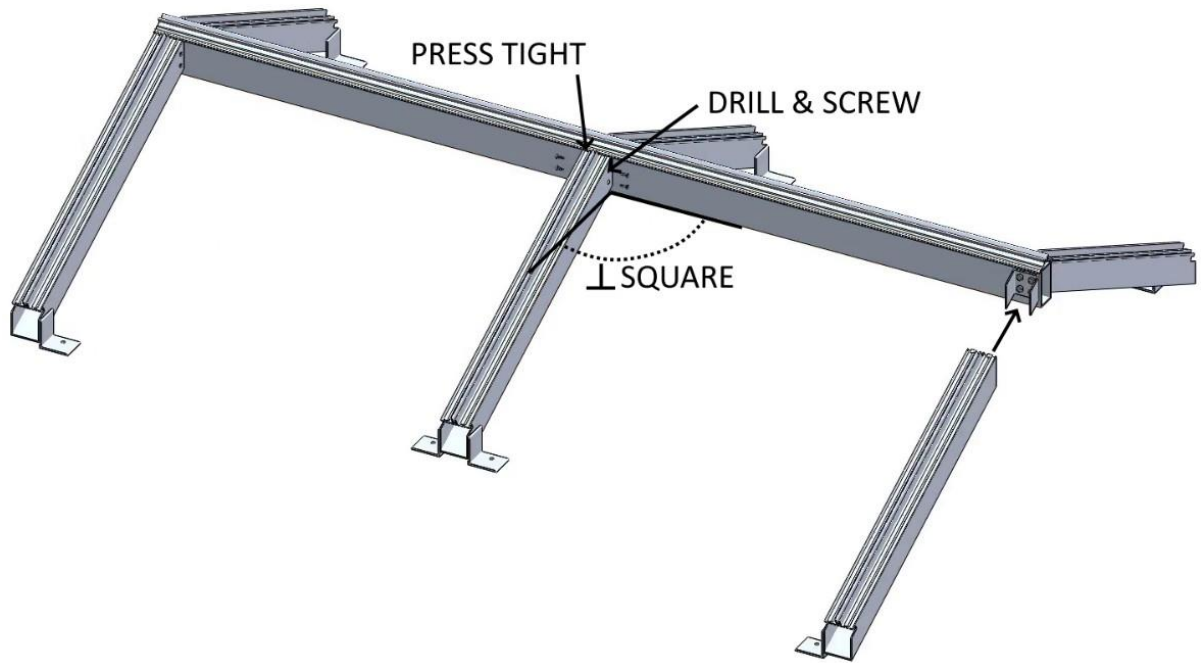


Install the BASE on the curb with two beads of clear silicone.

**PRO TIP:** This will form two layers of gasket-like protection to keep the weather out so pay special attention to this step, because this is a common trouble area.

**PRO TIP:** Even though the BASE might not be fastened at this point, always keep an eye on it for squareness.

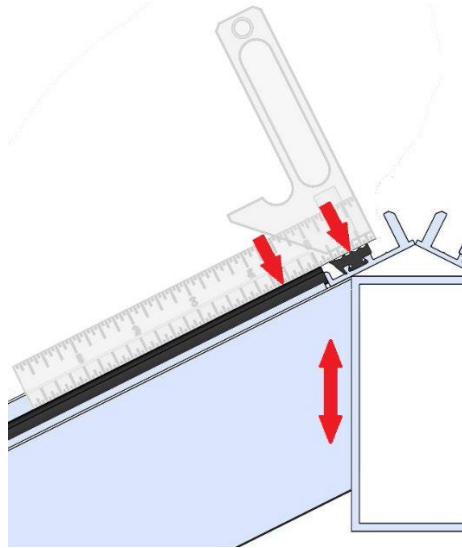
- RAFTER & RIDGE TUBE Assembly



See Description below (note this assembly is called a “spider”)

- Slide the END RAFTERS over “U” shaped clip at ends of RIDGE TUBE. (RIDGE TUBE has “U” shaped clips preinstalled and END RAFTERS have only one “L” shaped clip at the base that faces towards the middle of the Skylight). You will need push/seat the RAFTER firmly into the RIDGE TUBE (no gaps) as you drill a 3/16” tap hole while aligning the top gasket track plane, then screw in a #12 x ½” FHP screws. You will need to do this four times for each RAFTER.

- Note: when you drill & fasten the RAFTERS to the RIDGE TUBE, take care to align the tops of the gaskets/tracks so they are all in the same “plane” and that there is no gap at the RIDGE TUBE



Align tops of gasket or tracks when drilling and fastening RAFTER to clips on RIDGE TUBE

- Once you have assembled the END RAFTERS, you will do a similar process with the remaining middle RAFTERS (these have two “L” clips at the base).

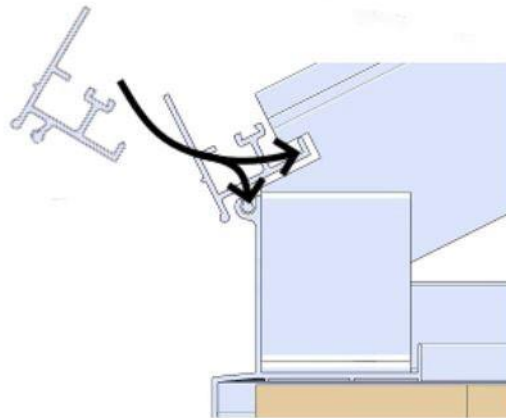
**PRO TIP:** The RIDGE TUBE / RAFTER assembly is often called a “spider” and on larger skylights it must be built over the opening but on smaller Skylights, it can be built next to the opening and carefully carried into place, setting it on top of the BASE.



- Then run a bead of clear silicone in the groove of the Base extrusion where the Carrier will sit on and place CARRIER on the lower end of the RAFTERS in the slot provided (note- do this prior to fastening the RAFTERS to the BASE (you will often need to twist these together due to tight fit))

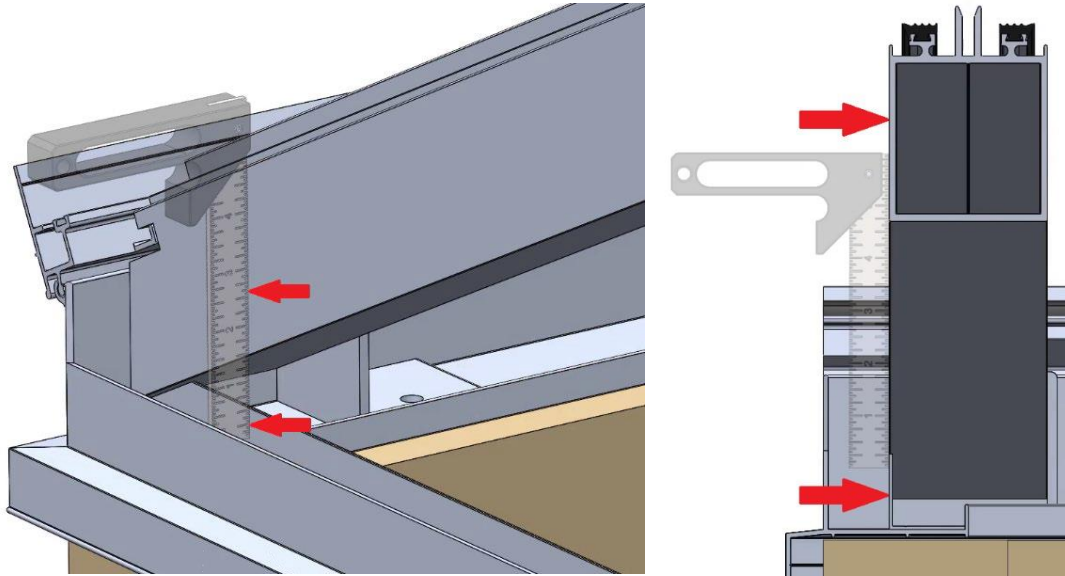


Place CARRIER into slot before lagging RAFTERS down.



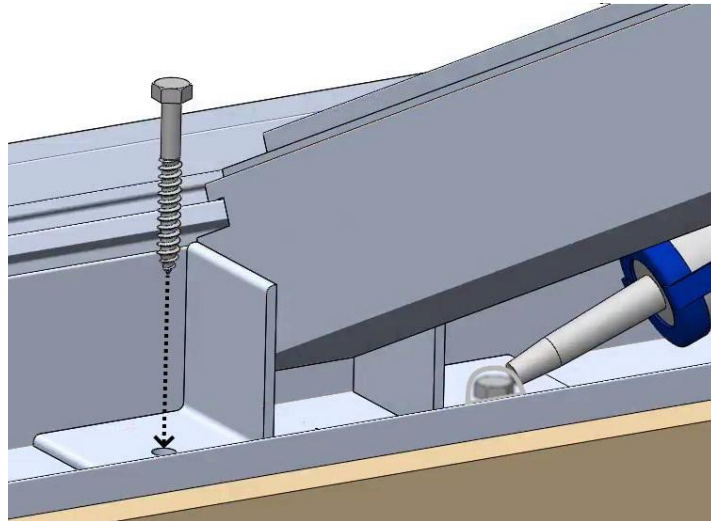
Make sure the CARRIER lower "tongue" goes properly into the "groove" on the BASE.

- FASTEN RAFTERS thru BASE into curb with LAG BOLTS,
  - 1<sup>st</sup> - align END RAFTERS with GABLE BASE Glazing Slot- see drawing.



Gable Base Glazing Slot aligned with outside of End Rafter

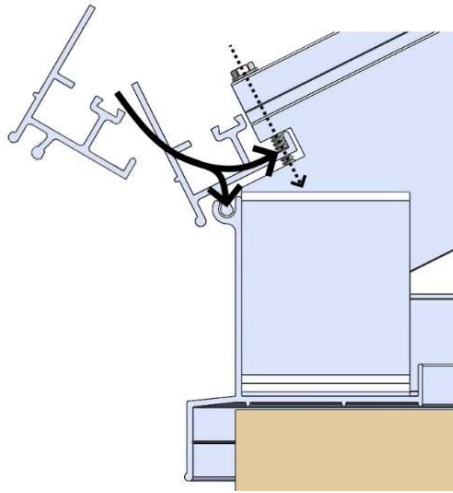
- 2<sup>nd</sup> - Check your glazing dimensions for proper fit before fastening Rafters.
- 3<sup>rd</sup> - For a wood curb, typically you will use 3/8" x 3" Lag Bolts. Once you locate the proper location, drill a 1/4" "tap" hole and inject two pumps of the provided clear silicone into the hole then screw in LAG BOLTS snugly (Installer provided)
- Also Lag in GABLE BASE at this time in a similar way.
- Then place clear silicone on the heads to seal the LAG BOLTS



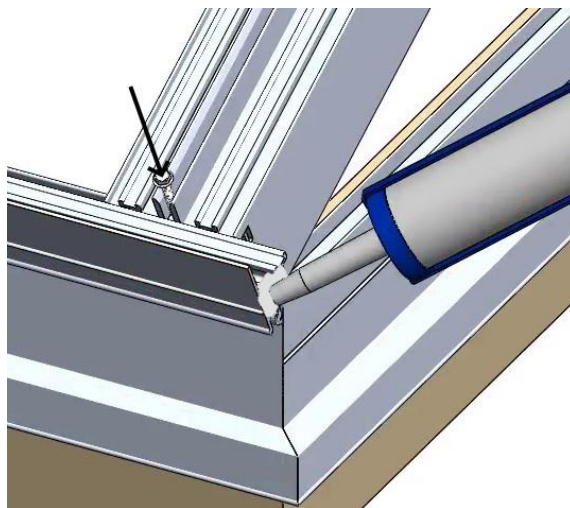
Anchor RAFTER Clips and silicone seal the heads.

**PRO TIP:** Before unit is lagged into place, this is your last chance to make any adjustment for squareness—Make sure to use framing square to ensure that corners are “square @ 90-degrees) and pull diagonals.

- After Rafters are lagged into place, fasten CARRIER to the centerline of the RAFTER with a #10 x 1 ½” PHP screw (one at each rafter)
- Create the END DAMS on the CARRIERS to control water With DC 791 Black Silicone pump/form and tool an “end dam” on the ends of the CARRIERS (this ensures if any water gets into the CARRIER, it will be properly wept to the exterior).



Double check lower tongue is in groove and fasten Carrier thru screw boss.



Silicone any splices on the interior and create End Dams on both sides of each carrier.

2) Prepare installed FRAME for GLAZING (Glass or Polycarbonate MW)

- Install the GASKETS that rest under and on top of the glazing.
  - Review Submittal Drawing and Note the gasket profile and how there is a side with a larger lip that faces the center of the GLAZING.

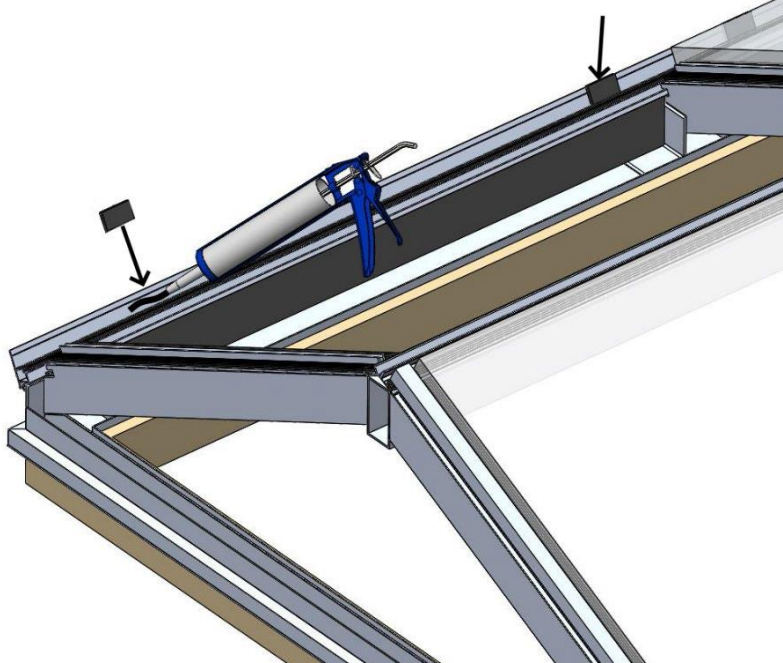


Install GASKETS on Rafters, Pressure Bars, Carrier & Ridge

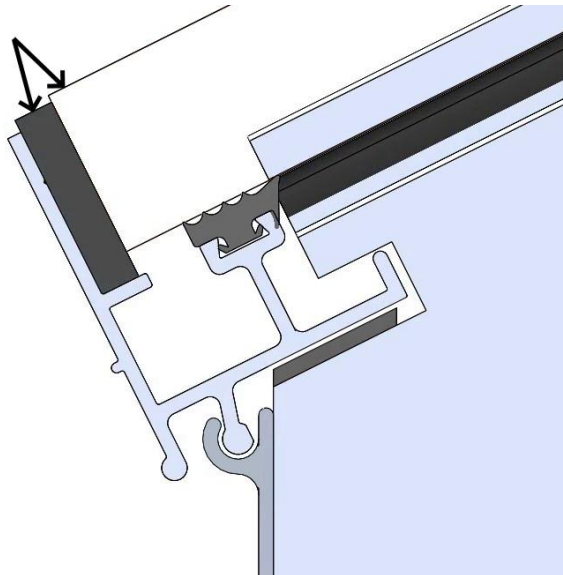
**PRO TIP:** do not stretch the EPDM rubber gasket as you install it because it could shrink and pull away from the corners causing weather to get in. It is better to “compress” the gasket into place (compress as in if the rafter is 34” long, cut your gasket at 35” and “compress” to fit the 34” space)

**PRO TIP:** when cutting the gaskets, make sure you achieve clean, 90deg cuts to seal well (later before you set the GLAZING, you will put a dab of black silicone on each of the four gasket corners to seal these joints)

- Install the SETTING BLOCKS that the lower edge of the Glazing rests on
  - For each GLAZING LITE, on both sides place a 3" long bead of black DC 791 Silicone 6" from each end on the CARRIER, then place the ¼" thick SETTING BLOCK on it (lower edge of GLAZING will rest on these)

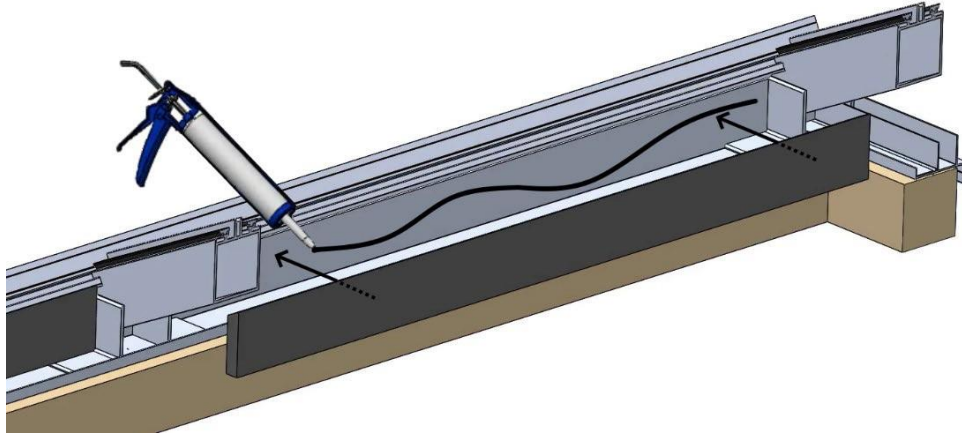


- Adjust or cut the rubber SETTING BLOCKS so they are just below the exterior plane of the GLAZING



Note: SETTING BLOCK is just below the exterior plane of the Glazing

- Install Insulation Foam
  - Test fit and cut as needed.
  - Use the clear silicone provided to run a 3/16" bead to bed the insulation foam per Submittal Drawing.

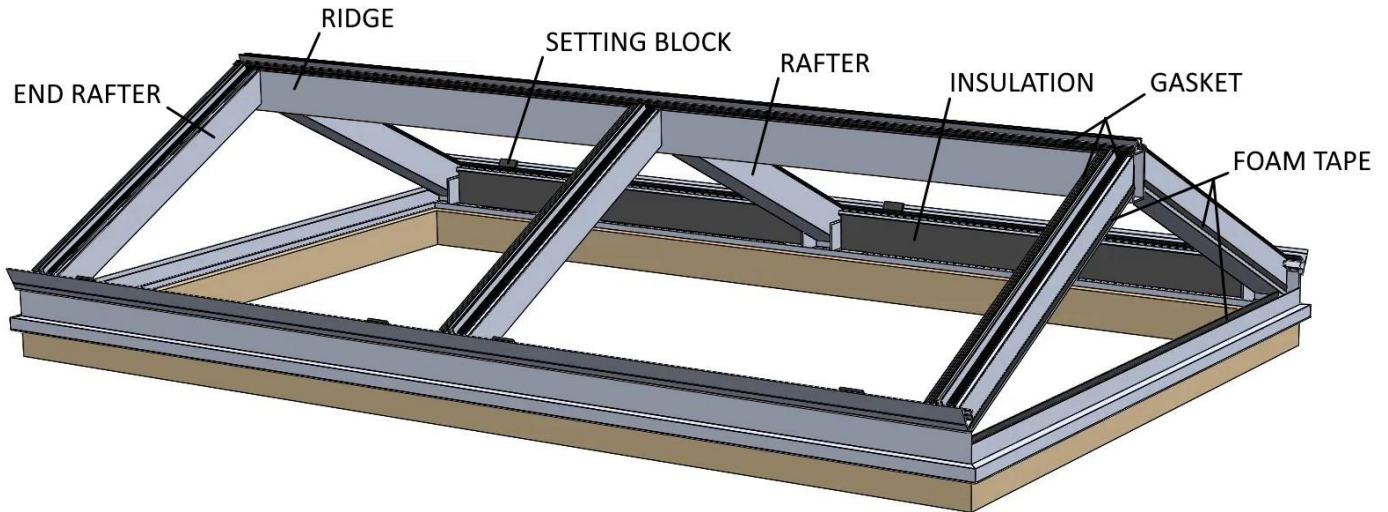


Install INSULATION on Base

**PRO TIP:** Make sure your hands are clean when handling the Insulation.



3) REVIEW FRAME and to check if it is ready for GLAZING:



Completed FRAME ready for GLAZING.

- Check the LAG BOLTS to make sure there is a clear silicone sealing the screw head to the angle clip and along the BASE.
- Check Carrier End Dams for any gaps and fix if needed.
- Check for Insulation to be in place.
- Check for squareness.
- Check GASKETS & SETTING BLOCKS are still in place
- Check that they provide Glazing fits in the openings
- Check Silicone seal at all splices.
- Review Condensate getters/passageways; use a small bottle to pour water in the condensate gutters to see if water is handled properly.
- Wipe down frame with a clean rag to remove any fingerprints, etc.

4) **Set the slope GLAZING.**

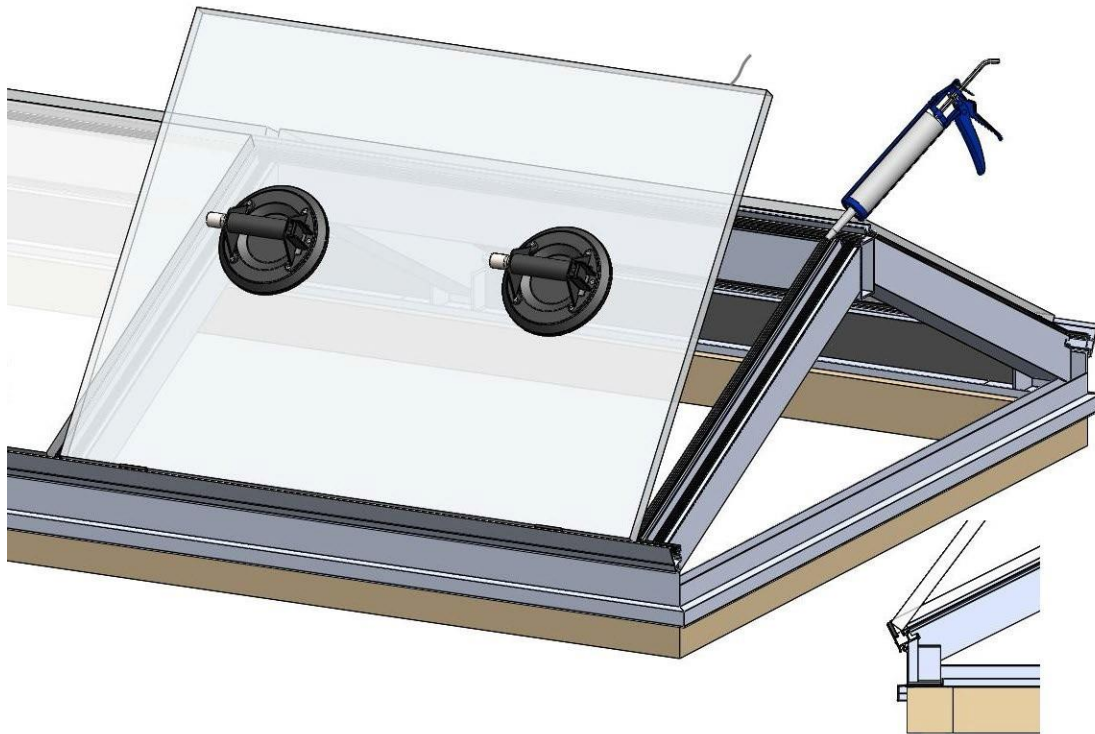
- Insulated Laminated Glass under 100lbs: usually can be installed by two persons if roof access is reasonable (Insulated Laminated Glass over 100lbs, is best left up to DÄLYTE or your local glazing professional with proper glass handling equipment)
- Polycarbonate Multiwall is lightweight and simpler to handle and install (watch for windy conditions).



Glazing- note which side goes to exterior.

- Get the GLAZING up to where the skylight is located (for glass use Vacuum Cups)
- Identify the exterior of the glass and place your Vacuum Cups on that side.  
 Exterior is the side with the single tempered lite (Interior is the laminated lite side)
- Identify the bottom edge of the glass and top of the glass. The bottom is where you will find the “tempering & Laminated Seals,” the top edge is where you typically find the Breather Tubes if included.
- If included- Locate the Breather Tubes (also called Capillary Tubes) and seal them now in accordance with the separate manufacturer’s instructions included for this.
- Clean the interior of the glass and remove any labels.





### Setting Glass (Glazing)

- Place a dab of black DC 791 silicone on the gaskets at each of the four corners to seal the gasket joints.
- Arrange the glass so that the glass bottom edge is down, carefully & slowly lift the glass while moving to its final position on the skylight.
- Now set the glass: take the bottom edge and VERY carefully & slowly lower this edge onto the GASKET on the carrier while pushing slightly back on the SETTING BLOCKS. Take extreme care that the corners do not touch metal. Now that the glass is resting on the carrier, start laying the top down while holding your Vacuum Cups, also being extremely careful not to let the glass touch the metal frame (careful not to pinch your fingers under the glass).
- NOTE the above sequence is for insulated/laminated glass. For Polycarbonate Multiwall the process is similar and simpler with two basic rules: 1<sup>st</sup> the interior cell always run up and down, 2<sup>nd</sup> the panels have a protective film with one side that has writing that signifies the side with the UV coating that must go on the exterior of the skylight.

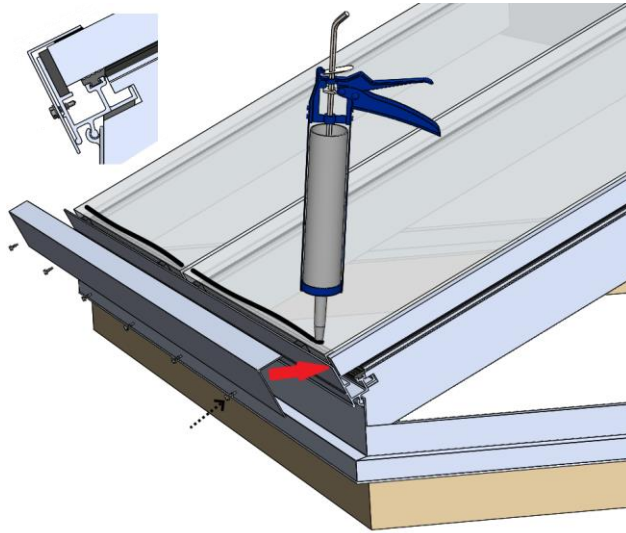
**PRO TIP:** Clean the interior of the glass well because it is hard to reach later.

**PRO TIP:** you can add more setting blocks to adjust the position of the glass, so it is centered in the opening.

**PRO TIP:** take extreme caution to protect the glass edges as they are the most susceptible to damage.

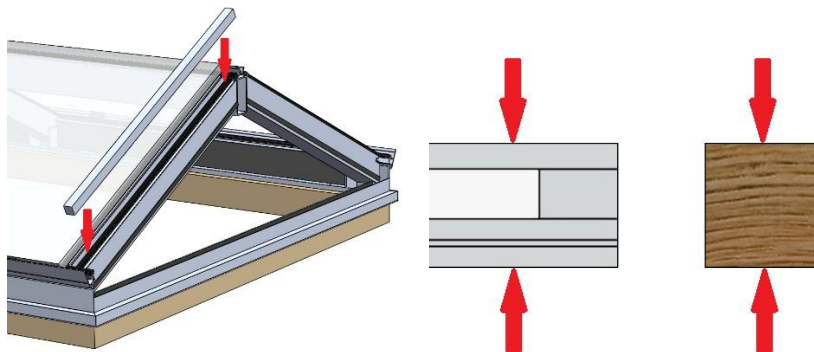
**PRO TIP:** Temporarily install the PRESSURE BARS to hold the newly set glass and protect against wind gusts, etc.

- 5) **COMPLETE RETAINER, GABLE, and FLASHING:** RETAINER & FLASHING SEQUENCE: generally, you install from the bottom to the top (like roof shingles)
- SILL RETAINER: Dry-fit the RETAINER and trim as needed, clean glass, then add a bead of Black Silicone on the lower top edge where the flashing will sit and once it is in the correct position press firmly with your hands to ensure a good seal.
    - Temp in place with tape if needed.
    - Use the #8 x ½" TEKS screw to attach the RETAINER to the CARRIER at centerline of RAFTER. **Note: do NOT over tighten these screws as it might deform the aluminum causing it to pull away from the glass breaking the silicone seal**



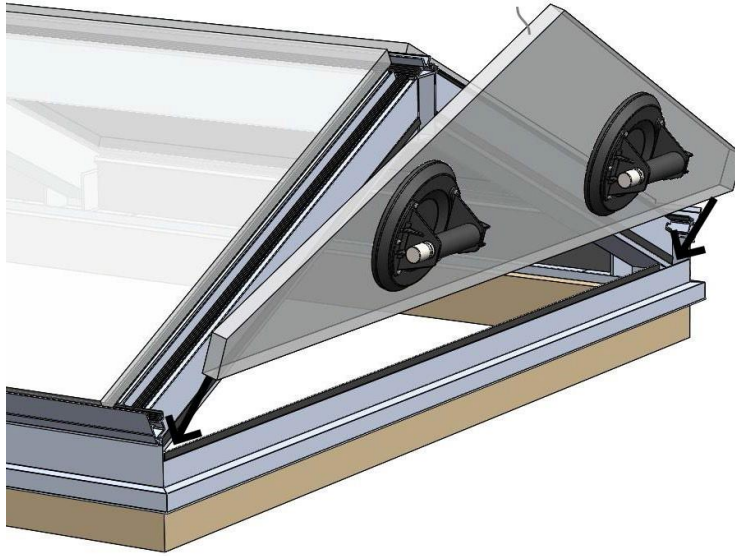
Install Sill RETAINER with black silicone and fasten.

- Install WOOD SPACER checking the thickness matches your glazing thickness.



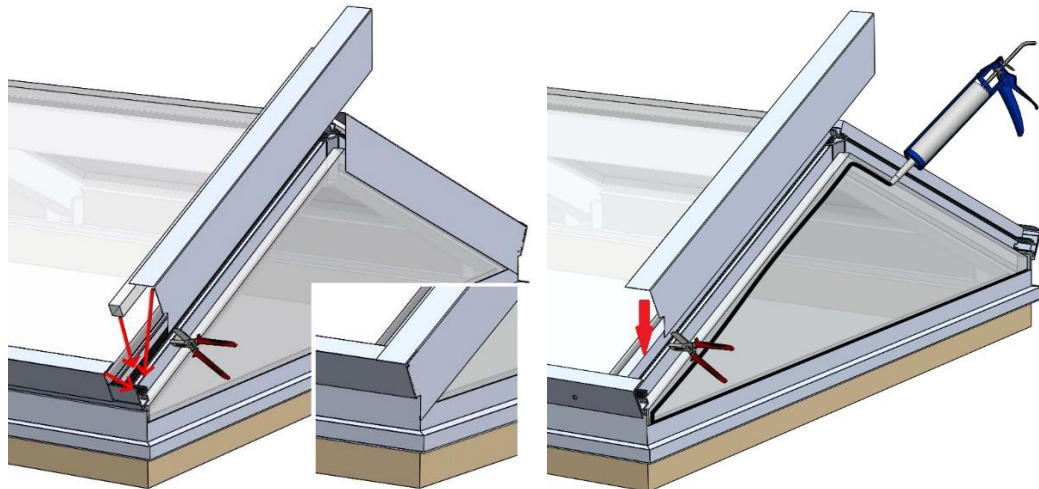
WOOD SPACER thickness to match Glazing thickness.

- GABLE- prepare for glazing and set Glazing.
  - Place glass SETTING BLOCKS in U-Channel at gable sill.
  - Apply 1/8" thick foam tape to outside end of END RAFTER 1/2" up from bottom sloped edge and apply 1/8" foam tape to bottom track- see drawing.
  - Set GABLE GLAZING into sill U-Channel, centering as needed.

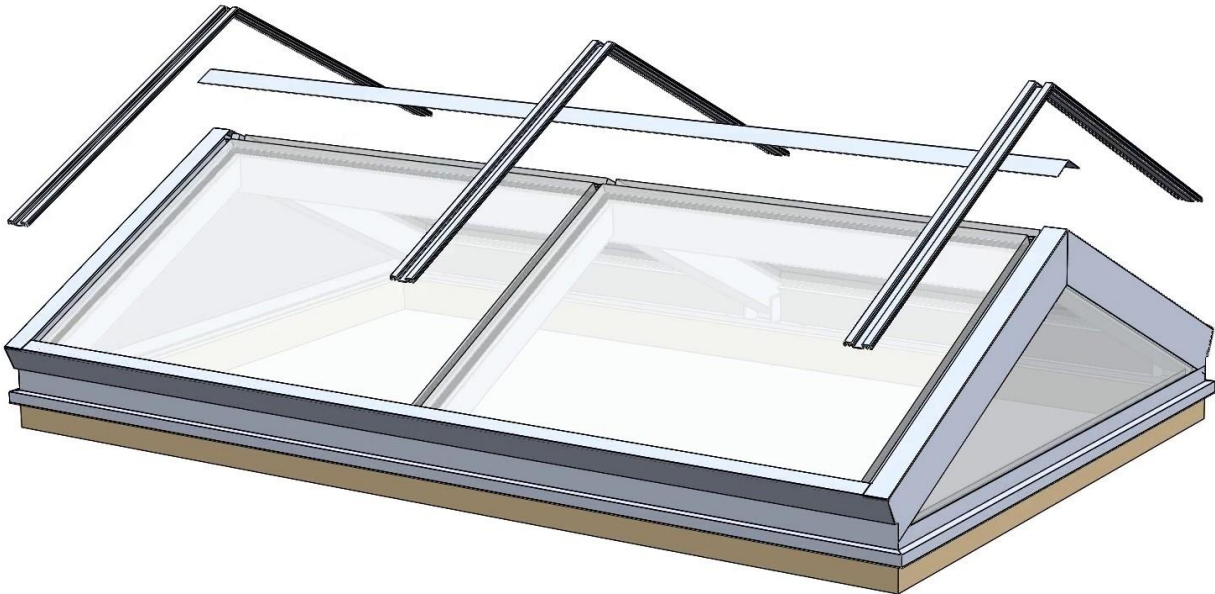


- Carefully set Gable glass in place (extra hands are good or use tape to temporarily hold in place)

Might need to add layers of foam tape at the end rafters to plum glass correctly.



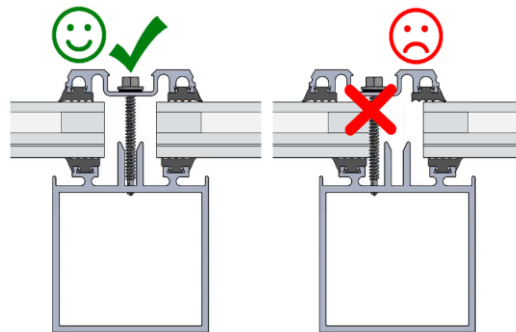
- With wood SPACER in place and before you silicone the glazing.... Dry-fit GABLE END FLASHING Retainer and trim as needed, then run a bead of silicone and install GABLE END FLASHING



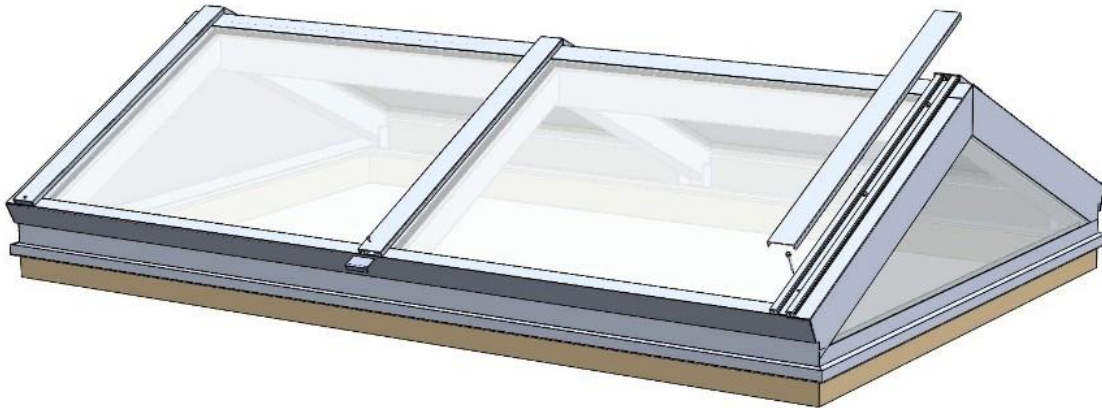
#### RIDGE FLASHING and PRESSURE BARS

- Install RIDGE FLASHING; dry-fit & trim as needed, apply silicone bead between the glass and Flashing (any joints are placed at the center lines of the RAFTERS and silicone sealed).
- Permanently Install PRESSURE BARS (PB) using Hex head Glazier screws w/sealing washers #14 x 1 3/4" long (for 1" to 1 1/16" glass)
- Tighten Glazier screws snug.

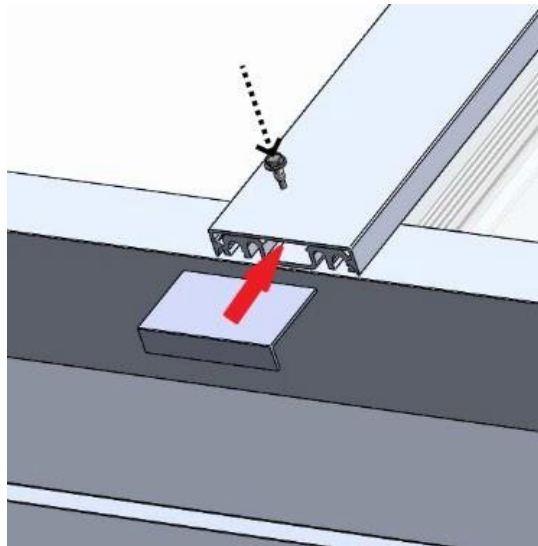
**PRO TIP** Be very careful when placing the Glazier screws thru the PRESSURE BAR into the "screw-boss" because you can accidentally put the screw on the outside of the screw-boss catching an inside edge of the glass causing breakage. Sometimes it is best to install the upper-most screw, then the lower-most to help align all the rest of the screws.



- Install BEAUTY CAPS
- Using a 12" long 2x4 scrap wood that is smooth against the BEAUTY CAP and use a 16oz rubber mallet to gently tap the wood on the BEAUTY CAP onto the PRESSURE BARS till it snaps in place.



Use a smooth 12" block of wood and a mallet to lightly tap BEAUTY CAPS into place meeting at apex.



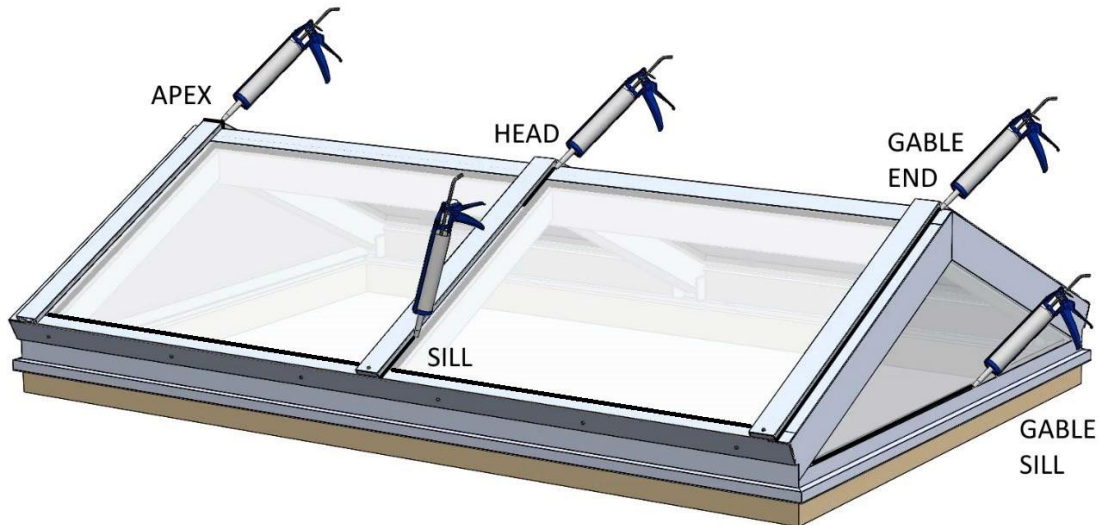
Install END CAPS

- Pump silicone into the cavity to stop water infiltration and install ENDCAPS by sliding between Pressure Bar & Beauty Cap, then fasten by using a #6 x 1" PHP TEKS to screw together at the BC centerline 1/2" from bottom.

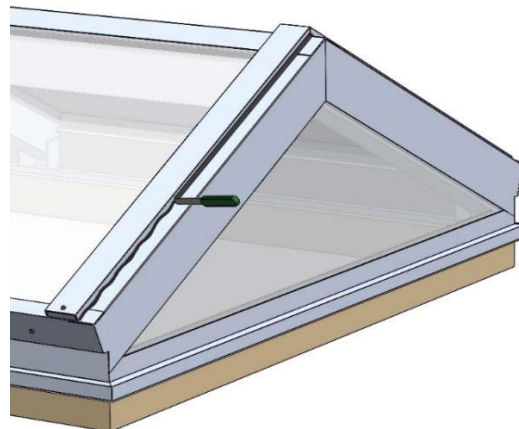


6) **FINAL STEPS**

- Clean if needed– see cleaning & care instructions.
- Check for any loose parts.



Final Silicone



Always “Tool” your silicone joints for proper adhesion

- **FINAL SILICONE SEAL** – Note- all silicone caulk used to seal joints- must be “tooled” with tooling spatulas to ensure proper adhesion. Use painter tape for neatness.
  - SILL Silicone caulk from on top of the retainer up against the gasket up approx. 6” to seal the gap where the gasket goes from on top of retainer to glass.
  - HEAD- Similar to Sill area.
  - APEX - silicone seal where the two sides of the Beauty Cap meet.
  - GABLE ENDS- Silicone Gable End Flashing and Sills
  - Note: for pitches lower than 2:12, extreme weather or hard to access areas, it is recommended that the entire skylight be “wet-sealed” which means in addition to the above, every other joint be caulked & tooled with a small bead of silicone. Basically 100% silicone caulked.
  - Visually inspect skylight and caulking for gaps and silicone seal as needed.

You are done! - Stand back, admire your work, take photos, and share with your friends!!  
Now, on to the next project! Back to work!

