

Climate-Shield® Rain Screen System Wood Siding Horizontal Installation Guidelines CS2 Rain Screen Clip and CSAC8 Attachment Channel on Non-Structural Sheathing

*Foam and gypsum boards are not suitable structural panels for direct fastening of the rain screen clips. If your rain screen system is being installed over a *non-structural exterior panel* such as foam insulation, exterior gypsum or a masonry wall, a structure to fasten the rain screen clips to the wall is required. A **z-girt** or **attachment channel** works best, depending on your project design requirements. Climate-Shield manufactures either of these components in marine grade aluminum to *ensure that there is no galvanic action*.

Typical Wall Assemblies Best Suited for Climate-Shield Attachment Channel Method include the following:

<u>Wall Assembly</u>	<u>Fastening Structure for Rain Screen Clips</u>
OSB, plywood or fire rated plywood over wood studs	No fastening structure required -* Refer to Climate-Shield Standard Installation Guidelines
Masonry wall, including concrete block, brick or poured concrete	Climate-Shield Attachment Channel
Exterior gypsum over steel studs	Climate-Shield Attachment Channel
Foam insulation up to 1-1/2" thick over wood or steel studs	Climate-Shield Attachment Channel
Foam insulation over 1-1/2" thick over wood or steel studs	Climate-Shield Z-Girt - * Refer to Z-Girt Installation Guidelines
Link to architectural details: http://www.mataverdedecking.com/architectural-details-and-specifications	

Before starting your Climate-Shield Rain Screen installation, check that these important items have been done properly:

Pre-Check 1 – Make sure the drainage plane material has been properly installed. Use the appropriate AWB (Air and Water Barrier) or WRB (Weather Resistant Barriers) as specified by the architect or designer.

Pre-Check 2 – All windows and exterior doors should now be installed properly. Check to ensure that the installation (and flashing) instructions from the door and window manufacturers were properly followed.

Note Window and door manufacturer's installation instructions always take precedent over these guidelines.*

Climate-Shield Attachment Channel Installation Method

The **Climate-Shield Attachment Channel CSAC8** is made from marine grade aluminum and comes pre-drilled every 3" to allow you the maximum flexibility of fastening this structure to your wall assembly.

Important Note*: Because there are so many different types of screws that can be used to fasten the CSAC8 to your specific wall system, no screws are provided with this component. Always consult with the project engineer to determine the proper length, size, type of screw and the proper spacing before fastening the attachment channel to your wall system.

If your wall is slightly out of plane, shimming behind the attachment channel may be necessary to create a flatter wall surface.

Climate-Shield Attachment Channel Installation Method

Step 1 – Proper wood acclimation is imperative. Before starting any exterior wood installation, *always* make sure your wood has properly acclimated to local site conditions. Failure to properly acclimate wood on site is a recipe for poor results and dissatisfaction. [Critical Wood Acclimation Guidelines here.](#)

Step 2 – Pre-finishing all siding boards prior to assembly is the only way to ensure that all 4 sides are coated evenly. It is highly recommended to coat all wood siding with a UV inhibiting sealer prior to installation. A UV inhibiting sealer helps the wood acclimate more slowly and minimizes surface checking and wood movement. Even if your goal is to allow the wood to naturally gray or silver out over time, a UV inhibitor at this point will help protect the wood when it is most vulnerable. [Pre-finishing options for hardwood siding and decking here.](#)

Step 3 – Create a level line for the starter rail on all walls where the bottom of the siding will be installed. This can be done with laser lines, or a snapped chalk line. We recommend that you complete this on all walls, to ensure the starter rail level line will be consistent on all sides of the building. This step is critical to a successful siding installation and should be done with accuracy.

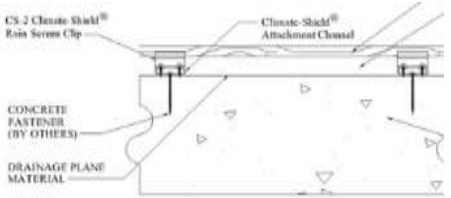
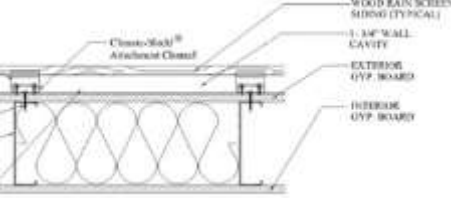
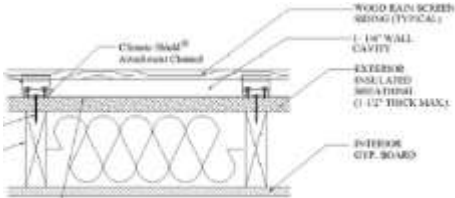
**Take the time to do this step well, and all your next rows of siding will be properly aligned as you build.*

Step 4 - Install the outside corners you have selected. The Climate Shield System offers both Aluminum Extrusions and Solid Wood outside corner components, or you may provide your own corners. Regardless of the outside corner you have selected, make sure they are aligned plumb and square with the level line starter course. This will ensure that the ends of your siding boards will fit precisely with a 90-degree end cut. If you have selected the Climate-Shield marine grade aluminum outside corners, install the base piece component now with the screws provided. They are the proper length and are made from stainless steel, the finest choice for your building. (The outside corner finish piece installs after all the wood siding is installed)

Step 5 – Install your window and door trim. Climate-Shield offers window and door trim packages, or you can design your own. Now is the time to install them and put proper flashing in place. Always follow the window and door manufacturer's installation and flashing instructions.

Step 6 – Install the Climate-Shield CSAC8 Attachment Channels. Because the attachment channel is marine grade aluminum, there will be no galvanic action between the clips, screws and attachment channel. Be sure to use the proper screws to your wall, as recommended by the project engineer, at the proper spacing. Click on the links below for a full view of the appropriate wall detail.

***Installation Tip –** Rip a sheet of ½” marine grade plywood into 4” wide strips. Attach these strips horizontally at the top of the wall, **before** installing the attachment channels. They will serve as a ‘nailer’ to attach your top course of siding. (Please see installation detail in Step 12)

Masonry Attachment Detail	Exterior Drywall Fastening Detail	Foam Insulation Up to 1-1/2” Thick
 <p>CS-2 Climate Shield® Rain Screen Clip Climate Shield® Attachment Channel CONCRETE FASTENER (BY OTHERS) DRAINAGE PLANE MATERIAL</p>	 <p>Climate Shield® Attachment Channel WOOD RAIN SCREEN SIDING (TYPICAL) 1/2" WALL CAVITY EXTERIOR GYP. BOARD INTERIOR GYP. BOARD</p>	 <p>Climate Shield® Attachment Channel WOOD RAIN SCREEN SIDING (TYPICAL) 1/2" WALL CAVITY EXTERIOR INSULATED SHEATHING (1 1/2" THICK MAX.) INTERIOR GYP. BOARD</p>

Step 7- Install Climate-Shield Starter Rail. To speed up your installation and help maintain *the critical level line* to start your horizontal siding installation, use the Climate-Shield 8' Starter Rail. A laser level works best for this step. The Starter Rail provides a continuous strip at your bottom course of siding. The marine grade aluminum starter rail has pre-drilled holes for mounting to the plywood walls and has weep holes on the bottom to drain any bulk water intrusion. Use stainless steel self-tapping screws to attach the Starter Rail to the Attachment Channel.

Step 8 –Install Cor-A-Vent SV5 siding vent screen to prevent insects from entering the wall cavity from the ground. Cut the siding vent to fit snugly between the Attachment Channels. Because the Cor-A-Vent SV5 siding vent is $\frac{3}{4}$ " thick, and the Attachment Channel is $\frac{1}{2}$ " thick, the Cor-A-Vent will sit $\frac{1}{4}$ " proud on top of the starter rail. These pieces may also be glued to the existing wall surface using the appropriate water-based adhesive for the type of wall, (e.g. concrete, foam insulation or exterior drywall, etc.)

**Note It is also suggested to install the siding vent at the soffit, above door openings and above and below window openings.*

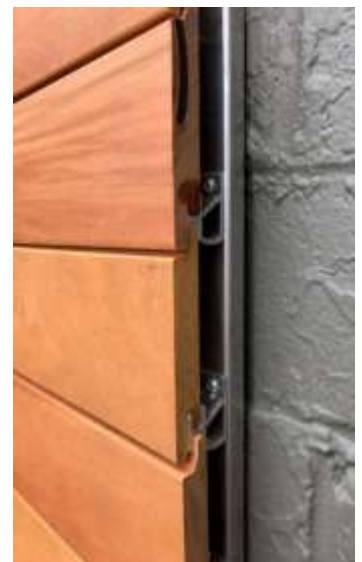
Step 9 – Insert the bottom of a Climate Shield Rain Screen Wood Siding board into the previously attached starter rail. Because the wood is likely to have acclimated somewhat, occasionally you may need to use a rubber mallet to seat the board properly into the starter rail. Seating each board properly gives the best alignment for your wall.

Important Note If your board does not seat properly, don't install it. NEVER 'force' a board into place. You may cut out any bow or bend (defect cutting) and install only the usable portion of the siding board.*

Now begin attaching the Climate-Shield Rain Screen Clips at the top of the siding board to the attachment channel using the self-tapping stainless screws provided for this type of installation. Always use 2 screws per clip.

Step 10 – Cutting the ends of the Wood Siding Boards. In this type of installation (using non-structural sheathing) it is necessary to cut the ends of the boards so they will end precisely in the center of each z-girt or attachment channel. When making this joint in the length of siding, simply fasten a rain screen clip at the bottom and top of the joint and straddle the two boards using the stainless steel self-tapping screws provided for this type of installation. You will automatically get proper alignment of the two boards.

Although this joint can be done with 90 degree cuts, over time the joints may open with weather exposure. Best demonstrated construction practices are for you miter the ends of the siding boards to be joined at a 45° angle (scarf joint), and there will be no gap showing in the future, regardless of the weather. When cutting hardwood siding always apply end-sealer immediately to protect the end of the board and minimize potential checking. This will give you a quality install that you will be proud of for years.



***Important note:** If the siding board has *any* type of defect, blemish, bow, bend, warp, twist, cup, split or other undesirable characteristic, always “defect cut” it to a usable length. **Never** force or bend a wood siding board into place, as it is likely to resume its original shape as the wood acclimates fully on site.

Step 11 – Trimming the Wood Siding Boards around Window and Door openings. Above window and door openings, notch and cut the siding board to fit properly. Depending on your installation, it may be necessary to put blocking above the opening to fasten the bottom of the siding properly. Refer to the architectural plans for this detail.

Step 12- Installing the top row of siding. When you reach the soffit (or areas below window openings), it will be necessary to rip the top of the wood siding to the appropriate width.

Installation Tip* *Rip the board about ¼” narrower to allow you to seat the board into the clip below. The bottom edge of the top row of siding will seat in the rain screen clip.*

The top edge of the siding will need to be drilled and face screwed to the ½” marine grade plywood blocking you installed in Step 6. Use Cor-A-Vent SV5 to properly ventilate and to create a ¾” spacer. Screw through the siding and Cor-A-Vent and use a 2-1/4” stainless steel trim head screws to fasten the siding to the ½” plywood nailer.