



**Lamboo® LambooFusion™ Wall Cladding - Hidden Clip Fastening System
Horizontal Cladding Installation Guidelines over Plywood**



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Installation Guidelines:

All information provided within this document is to be used as reference only. It is required under the LambooFusion™ Limited Warranty that a trained professional install the LambooFusion™ wall cladding product. All products should be installed according to local building codes. Failure to do so could lead to personal injury and affect wall cladding performance and void the product warranty.

Pre-Check Information:

Prior to installation, review the following pre-check items to be sure they have been done properly:

1. Make sure your structural sheathing has been attached properly to the framed wall system according to manufacturer's instructions and local building codes. Plywood is the required substrate to attach the wall cladding. The panel thickness should be rated for structural application and must be a minimum of 5/8" thick. Thicker plywood makes a stronger wall and has greater holding strength for the screws. Always reference local and international building codes as it pertains to exterior sheathing.

Note: Foam and gypsum boards are not structural panels. Do not use foam, gypsum, or OSB as the mounting substrate for this system.

2. 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. There are many products available to address requirements of the exterior wall in your climate zone.
3. 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.

Tools Required:

LambooFusion™ wall cladding products can be installed with common building tools used in the building industry. All tools should be used according to the applicable manufacturers' instructions. The following are basic tools required for installation:

- Cordless Drill (18v or greater recommended)
- Chalk Line
- Carpenter's Level or Laser Level
- Carpenter Square
- Tape Measure
- Miter Saw
- Jig Saw
- Hand Router
- All Proper Protective Equipment (PPE) (i.e., safety glasses, gloves, etc...)

It is important to use sharp tool bits and blades when making cuts into the LambooFusion™ wall cladding or other parts of the wall cladding sub-structure. Avoid wearing loose clothing when using tools which spin at high RPMs.



Do's and Don'ts: The following information provides additional “Do's” and “Don'ts” when installing and using the LambooFusion™ Wall Cladding products:

- For any direct fastening of the wall cladding, be sure to pre-drill prior to installing fastener.
- Static electricity may occur naturally.
- Color and grain patterns are utilized to mimic real wood and will promote variations in finished color due to the various angles and impression depths left by embossing the materials. These variations are not considered defects.
- LambooFusion™ Wall Cladding products are not meant to be mounted directly to concrete. A sleeper should be used with a minimum height of 1/2". The sleeper should be mounted to the concrete with the appropriate fasteners where the wall cladding product will be mounted to the sleepers either by face fastening or using the hidden clip system.
- **Excessive Heat Warning**
 - The LambooFusion™ Wall Cladding will generate high surface temperatures during certain parts of the day when directly exposed to sunlight, fire, or reflection of sunlight onto the wall cladding surface.
 - The LambooFusion™ Wall Cladding should also not be installed where low-emissivity (Low-E) glass is used. Low-E glass is designed to prevent heat gain within a structure and can cause unusual heat build-up on exterior surfaces. Excessive heat build-up greater than normal exposure limits could potentially cause several issues not covered by warranty, including but not limited to sagging, bowing, warping, discoloration, excessive expansion/contraction, and accelerated weathering.
- **Construction Debris**
 - Keep wall cladding surfaces clear of unnecessary clutter and build-up of waste and drop materials. Unused or scrap wall cladding boards if not handled correctly could damage installed wall cladding surfaces.
 - **IMPORTANT:** Do not allow dust from concrete, landscape blocks, rock, or other masonry products to accumulate on the wall cladding surface. If any dust should occur, it should be cleaned immediately. Failure to do so may cause surface staining that is not covered by warranty.

EXPANSION AND CONTRACTION:

The LambooFusion™ Wall Cladding products will have some expansion and contraction due to changes in temperature. The expansion and contraction encountered may result in slight gaps, which may be noticed at the ends of boards or in splice joints. Fastening the wall cladding according to the Installation Guidelines will help minimize issues due to expansion and contraction.

It is important to keep wall cladding products stored in cool areas prior to installation. Wall cladding exposure to direct sunlight prior to installation will cause the materials to build-up heat and expand causing the boards to lengthen.

FASTENERS:

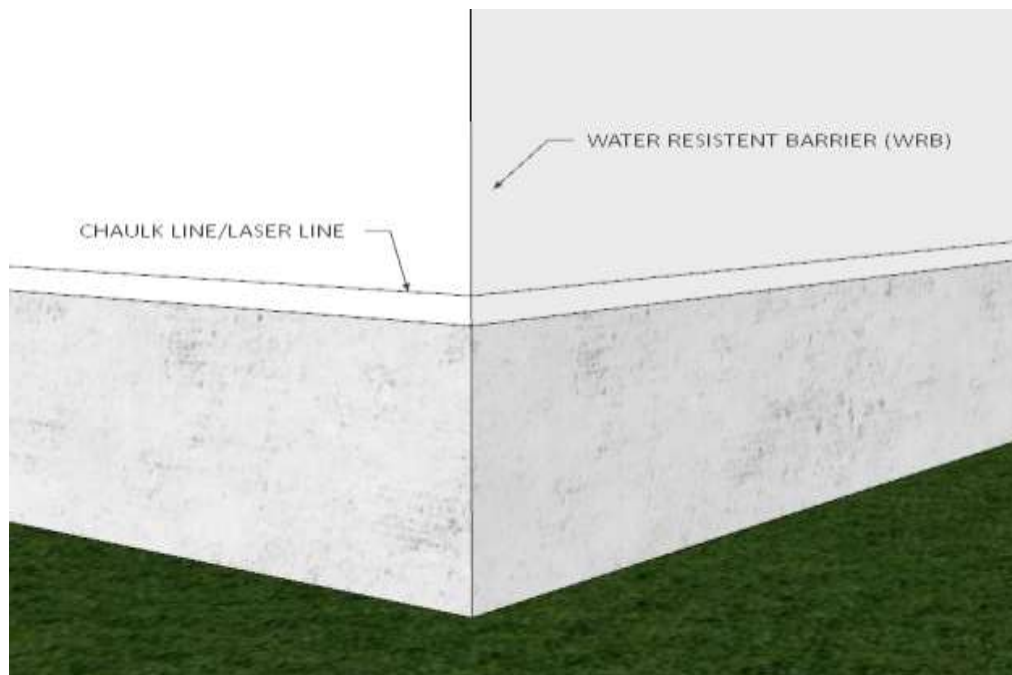
- It is recommended that high-quality fasteners be used based on the following specifications:
 - Stainless Steel Screws

- Minimum Screw Size: #10
- Face Fastening Screws Minimum Length: 2"
- Fasteners should drive at least 3/4" to 1" into the solid framing behind the wall cladding.
- Avoid using flat head screws. Trim head screws typically provide better results. Always sample the type of fastener in a scrap piece of wall cladding prior to using for final installation.
- For installation near coastal areas with a high salt content in the air, use stainless steel fasteners with a minimum alloy of 316 stainless steel.

Wall Cladding Installation Steps and Guidelines:

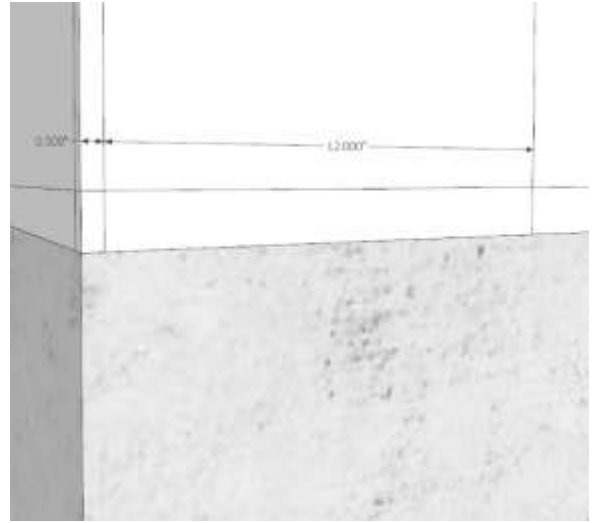
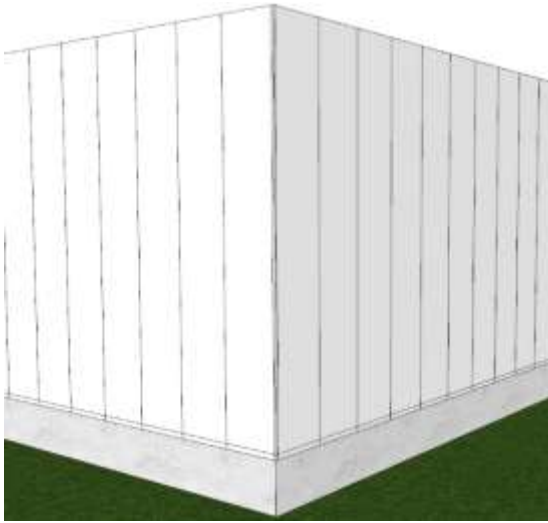
Step 1 – Proper acclimation is imperative. Before starting any exterior installation, always make sure your material has properly acclimated to local site conditions. Failure to properly acclimation on site could result in poor or undesired results. Typical acclimation time for LambooFusion™ products are at least 24 to 48 hours prior to installation.

Step 2 – Create a level line for the starter clips on the wall. 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 clip 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. The level line should be positioned approximately 1-1/4" above the bottom of the sheathing or 1-1/4" above the top of the foundation sill.

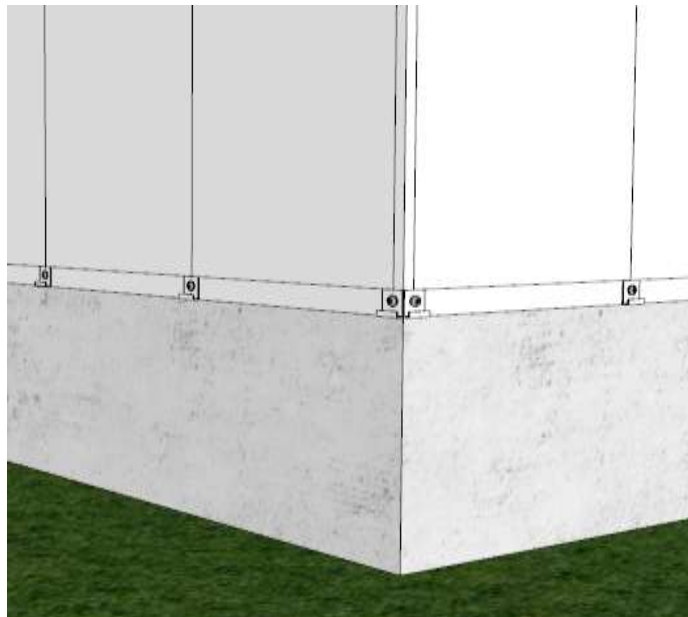


Note: Take your time is performing this step well. The squareness of your installed cladding will depend on the level of the starter clips or rail to begin the installation process.

Step 3 – Create the vertical level lines for the installation of the wall cladding clips. This can be done with laser lines, or a snapped chalk line. The first and last vertical lines should be placed 1/2" in from the corners of the wall. Space all other lines 12" O.C.



Step 4 – Installing starter clips. Install starter clips by placing the first clip as close to the inside and outside corners of the wall for maximum support. Install the remaining starter clips at the intersection of the horizontal and vertical lines. Try to place the starter clip's center at the intersection line where the vertical and horizontal lines meet.



Step 5 – Install your window and door trim. Now is the time to install all window and door trim and put proper flashing in place. Always follow the window and door manufacturer's installation and flashing instructions.



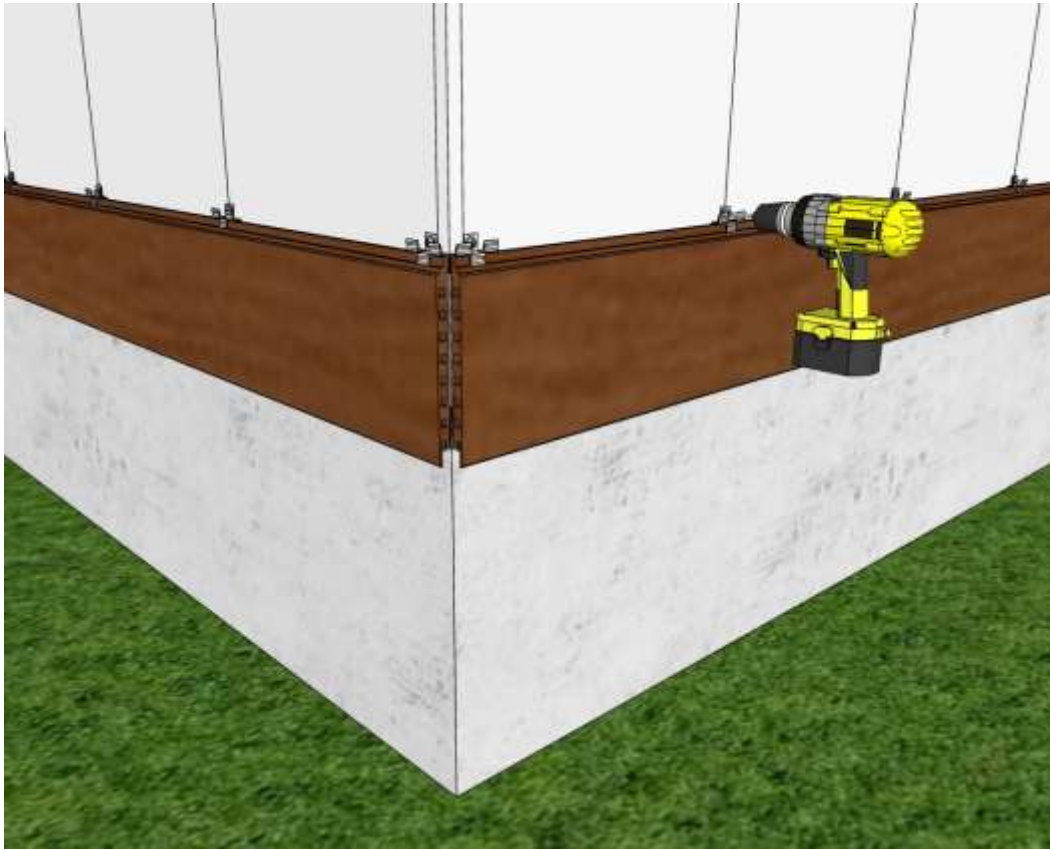
Step 6 – Insert Bottom Pieces of LambooFusion™ Wall Cladding board into the Starter Clips. Place the bottom groove of the wall cladding material into the starter clips. Seating each board properly gives the best alignment for your wall. On inside corners, it is recommended to use of a butt joint. Leave a 1/4" gap from the end of the wall cladding to the inside of the wall.

When butting pieces together, leave at least a 1/8" gap between pieces to allow for expansion and contraction. In geographical locations where temperatures can exceed 95° F, it is recommended to leave at least a 1/4" gap from one piece to another.

1/8" Gap at
outside corner
where pieces
meet.



Step 7 – Installing the wall cladding panel clips. Now begin attaching the wall cladding clips to the top of the siding board. Space the wall cladding clips at the pre-marked vertical lines using one (1) screw per clip. For shorter runs, don't short yourself on the clips, add an extra clip anywhere needed.

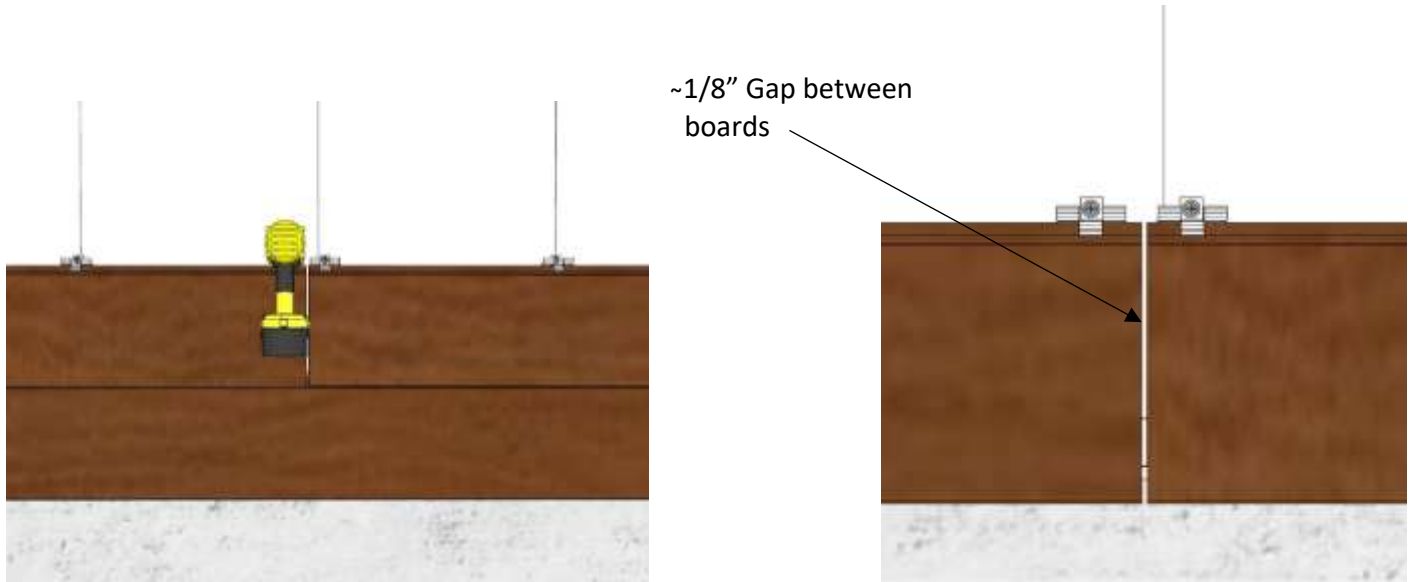


Important: If your board does not seat properly, don't install it. NEVER 'force' a board into place.

Step 8 – Installing remaining rows. Place the bottom of the next board into the clips mounted on the top of the previous layer. Once seated into the clips, place mounting clips on top of the new piece and fasten to the wall. Be sure to place the mounting clips on or near the vertical location lines on the



wall. When butting two siding boards together, be sure to allow a 1/8" gap between boards. This helps with expansion and contraction of the cladding.



Step 9 - Installing the top row. When you reach the top of the wall or areas below window openings, the top profile of the wall cladding may need to be rip cut or notched in order for the wall cladding to seat proper to the wall.



Note: If you trim the width 1/8" to 1/4" narrower than required, it will be easier to install the siding and allows for better ventilation at the top of the wall cavity.

The bottom edge of the top row of siding will seat in the wall cladding clips. The top edge of the siding will need to either be nailed or drilled and face screwed to the sheathing behind the cladding. If the face screwed option is desired, Lamboo can provide plugs for the drilled holes.



Note: Shims or thin blocking may be used behind the top piece of the wall cladding to help with back ventilation of the cladding system (This is only applicable for wall cladding using the hidden clip system).

Step 10 - Installing corner trim. Once installation of the wall cladding is complete, install the outside and inside corner trim pieces. Use a nail gun and construction adhesive to hold the corner trim into place. Apply a brad nail every 10" to 12" a part and 3/4" in from the outside edge.



Storage & Handling:

- Store LambooFusion™ Wall Cladding products on flat level surfaces.
- Store wall cladding materials in a cool, shady area prior to installation. Storing materials in direct sunlight prior to installation could cause materials to build-up heat and expand.
- Do not stack bundles over 4 units high.
- Always leave factory applied protective wrap. If materials are to be stored outside, cover with a non-translucent material.
- Use care when handling materials with forklifts, lulls, skid steers, and other material handling equipment.
- Avoid storing materials in enclosed spaces that may exceed 120°F.

Warranty:

Lamboo offers limited consumer and commercial warranties on its LambooFusion™ Wall Cladding products. For residential applications, there is a fifteen (15) year limited warranty and for commercial applications, there is a ten (10) year limited warranty. For more detailed information in regards to the



LambooFusion™ Warranty, please reference the LambooFusion™ warranty found on our website at www.lamboo.us/warranties.

Care & Maintenance:

- Be sure to clean any chemicals such as lawn care chemicals, insect repellent, or other chemicals that may come into contact with the wall cladding materials immediately to avoid any chemical reactions or discoloration.
- Use typical cleaners found in the market for composite materials. Wall cladding materials can be easily cleaned with the use of a power washer set to the lowest setting (1,200 psi) and the user must start at least 18 inches away from the surface and work their way in until materials show signs of cleaning and no scarring occurs.
 - o NOTE: It is recommended to test cleaners and power washing strength on scrap materials prior to using on finished products.

For any questions that have not been addressed in the guidelines as stated above, please contact one Lamboo’s product specialists through email at sales@lamboo.us or via phone at 866-966-2999.

Notes:
