Traditional Cladding Horizontal & Vertical Installation Guide

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IMPORTANT:

Read All Sections Before You Start

For t For the most up to date information,please visit out website www.wrg.ie

Prior to installing any composite cladding system, it is recommended that you check local building regulations for any special requirements or restrictions. The diagrams and instructions outlined in this guide are for illustration purposes only and are not meant or implied to replace a licensed professional. Any construction or use of UltraShield must be in accordance with all local zoning and/or building regulations. The consumer assumes all risks and liability associated with the construction and use of this product.

Safety

When dealing with any type of construction project, it is necessary to wear appropriate safety equipment to avoid any risk of injuries. UltraShield recommends, but is not limited to the following safety equipment, when handling, cutting, and installing UltraShield: gloves, a respiratory protection, long sleeves, pants, and safety glasses.

Tools

Standard woodworking tools may be used. It is recommended that all blades have a carbide tip. Standard stainless steel or acceptable coated deck screws are recommended.

Environment

A clean, smooth, flat, and strong surface is needed to install UltraShield products correctly. Please check with local building regulations before ever installing any type of cladding. If installation does not occur immediately, UltraShield products need to be put on a flat surface at all times. It should NEVER be put on a surface that is NOT flat.

Planning

Plan a layout for your cladding before starting it to ensure the best possible look for your project.

Construction

UltraShield is NOT intended for use as columns, support posts, beams, joist stringers, support against a force, or other primary load-bearing members. UltraShield must be supported by a compliant substructure. While UltraShield products are great for retrofits, UltraShield products CANNOT be installed on existing cladding boards.

Static

Static can also be more prevalent in areas that are of higher altitude because the humidity is lower. For these areas, be careful of using conducive objects such as metal railing and chairs as static shocks might occur more often. A potential way to lower the amount of static shocks occurring is to apply Staticide (www.aclstaticide.com).

Ventilation

UltraShield products CANNOT be directly installed onto a flat surface. It must be installed onto a substructure, so there is adequate and unobstructed air flow under the cladding to prevent excessive water absorption. A minimum of 25 mm of continuous net free area under the cladding surface is required for adequate ventilation on all cladding, so air can circulate between adjacent members to promote drainage and drying.

Heat and Fire

Excessive heat on the surface of UltraShield products from external sources such as but not limited to fire or reflection of sunlight from energy efficient window products. Low-emissivity (Low-E) glass can potentially harm UltraShield products. Low-E glass is designed to prevent passive heat gain within a structure and can cause unusual heat build-up on exterior surfaces. This extreme elevation of surface temperatures, which exceeds that of normal exposure, can possibly cause UltraShield products to melt, sag, warp, discolour, increase expansion/contraction, and accelerate weathering.

Current or potential UltraShield customers that have concerns about possible damage by Low-E glass should contact the manufacturer of the product, which contains Low-E glass for a solution to reduce or eliminate the effects of reflected sunlight.

Fasteners

When fastening UltraShield products all screws that are face fastened should always be driven in at a 90 degree angle to the cladding surface. Toe screwing should never be done to the products. An extra joist should be added if a 90 degree angle cannot be driven into the board. All fasteners should be on their own independent joists, when two boards ends meet each other there must be a sister Joist. The end of each board must sit on its own Joist.

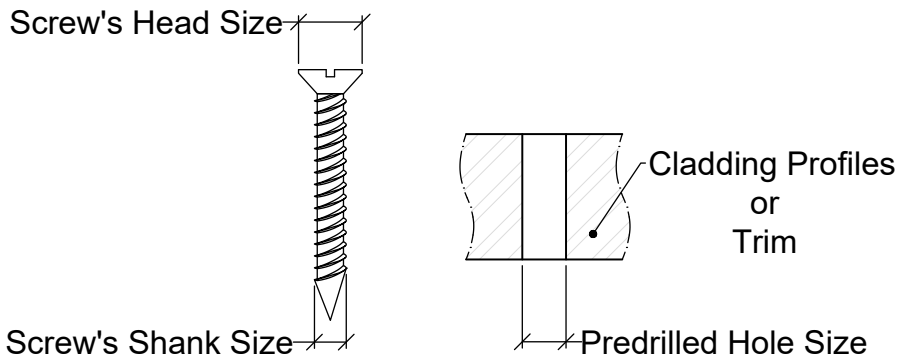
Use white chalk, straight boards, or string lines as templates for straight lines. NEVER USE COLOURED CHALK. Coloured chalk will permanently stain UltraShield products and are not recommended.

All screws that are face fixed should always be stainless steel. Depending on the screws that you use when face fixing, there could be potential bulging or mushrooming. It is recommended to take care of these mushrooms/bulges by taking a rubber mallet and patting them down to give your cladding a better look.

When choosing which screws to use always check first with your local home centres and hardware stores to see if they have screws that are engineered specifically for composite wood. These screws will always work and give UltraShield products the best looking outcome, using other screws that are not recommended for composite could potentially damage/harm the cladding.

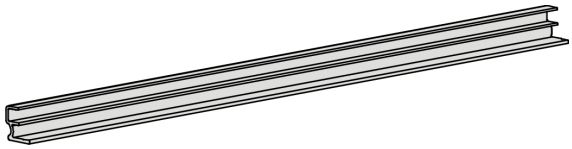
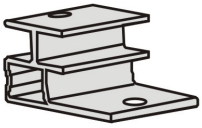
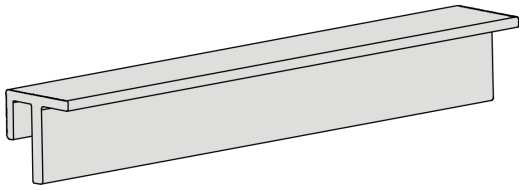
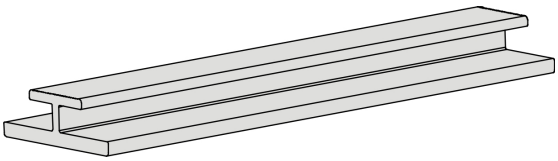
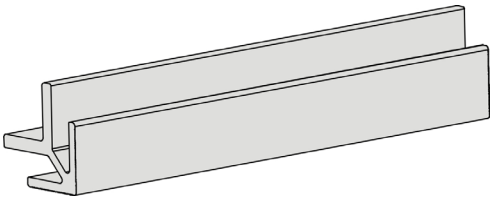
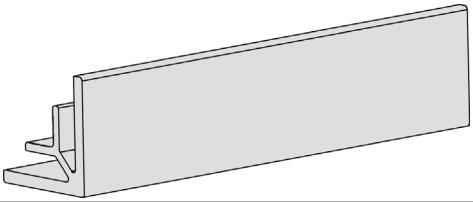
Predrill

It is recommended to use a 4mm screw for face fixing the boards and the trims onto the joist. When face fixing, **it is always recommended to predrill the holes slightly larger on the profiles and the trims to allow for expansion and contraction response to temperature change, as shown in below diagram.**



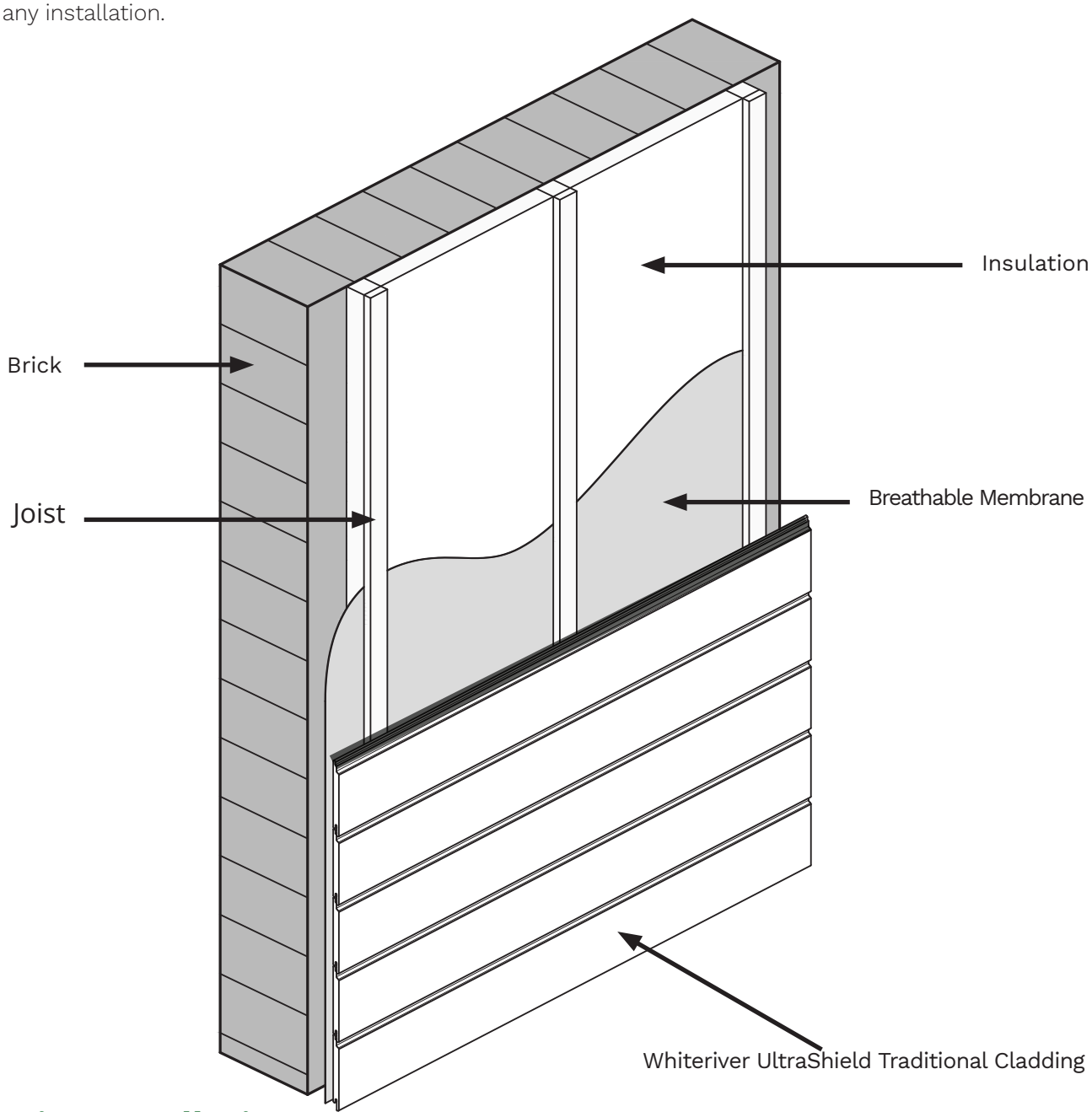
The predrilled hole size should also be smaller than the screw head size.

Cladding Parts

Product	Purpose	Part
K1650001	Aluminium Starting Rail used for Installation of the first board 3000mm	
K1650006	Cladding Clip used at every joist to fix each board to the joist 50 per pack with screws	
K1650011	Rubber Stopper used on the last cladding board 10 per pack with screws	
K1610016 K1610011 K1610006 K1610001	Cladding Board (Silver Grey & Teak) 142 x 13 x 2700mm 142 x 13 x 3600mm	
K1620001 K1620021	End Trim, used on the outermost edges (Silver Grey & Teak) 3000mm	
K1620006 K1620026	Joiner Trim, used if there is a break between two boards to cover up the gap (Silver Grey & Teak) 3000mm	
K1620011 K1620031	Outside Corner Trim, used on the outside corners (Silver Grey & Teak)3000mm	
K1620016 K1620036	Inside Corner Trim, used on the inside corners (Silver Grey & Teak)3000mm	

Under Construction

We recommend for the under construction aluminium or pressure treated wood joists. Each cladding board needs to be supported by a Joist NO MORE than 500mm on centres. Extra care is required in order to provide sufficient joisting in and around obstacles such as windows, fascia's, soffits, guttering, ventilation points etc. Below is an example of the layers that would occur in a typical installation, but an experienced professional should always be consulted prior to any installation.



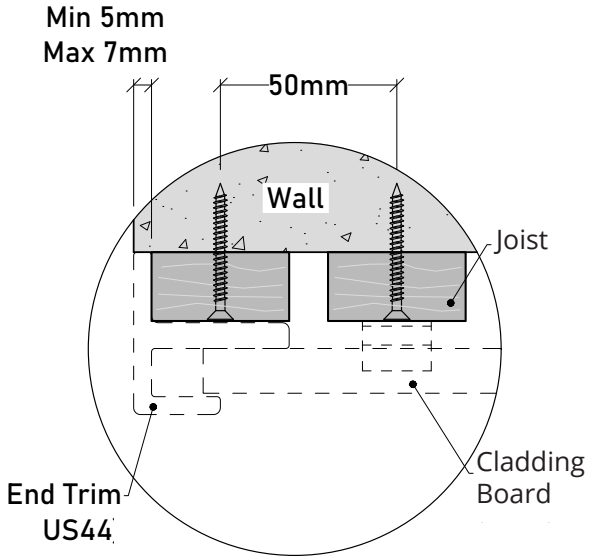
Joist Installation

A building professional should be consulted regarding vapour barriers and insulation for your project. Where a vapour barrier is to be used, it should be a breathable type and must be positioned behind the Joists. The Joist needs to have a minimum thickness of 25mm.

Joists should be fixed into position at a maximum of 500mm on centres. All Joists need to be flat and leveled against the wall surface use shims if necessary.

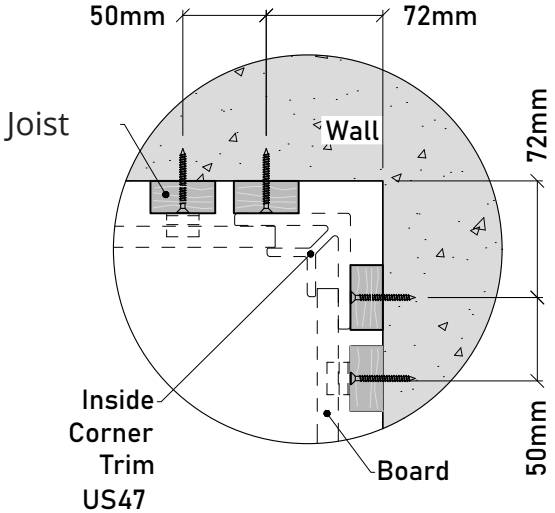
Trims

END TRIM US44

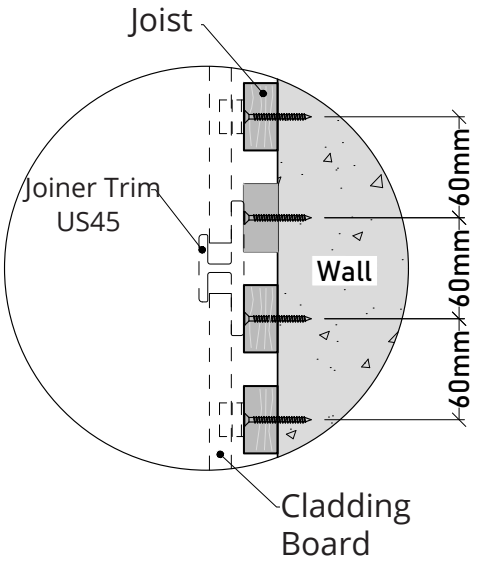


Note:
It is recommended to leave a gap of a min of 5mm and max 7mm between the walls outermost edge and joists.

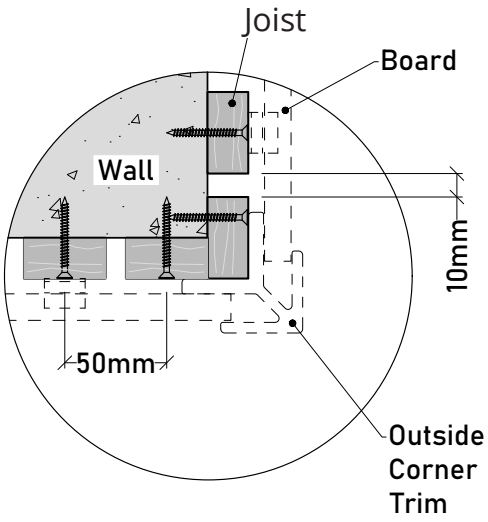
INSIDE CORNER TRIM US47

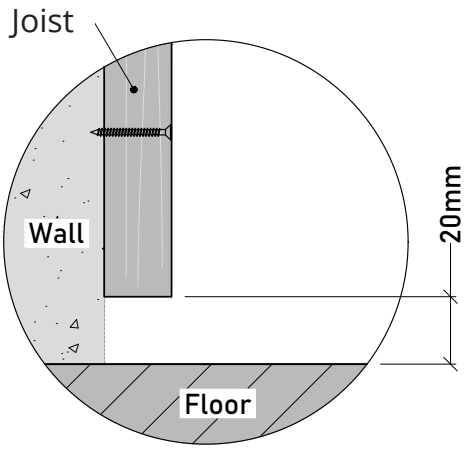


JOINER TRIM US44



OUTSIDE CORNER TRIM US46





Note:
A minimum gap of 20mm needs to be left between the bottom of the joist and the floor.

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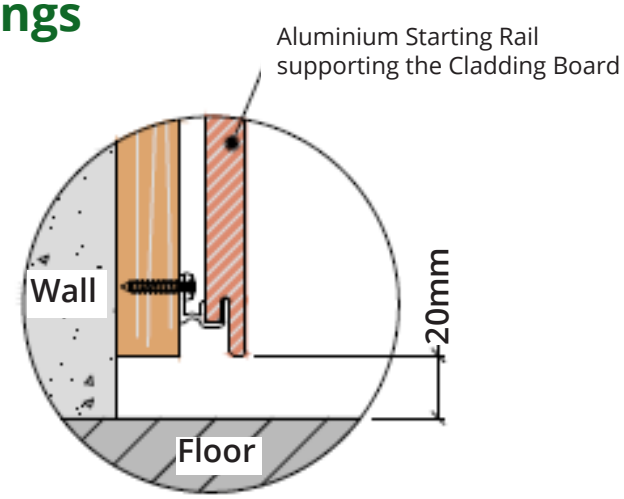
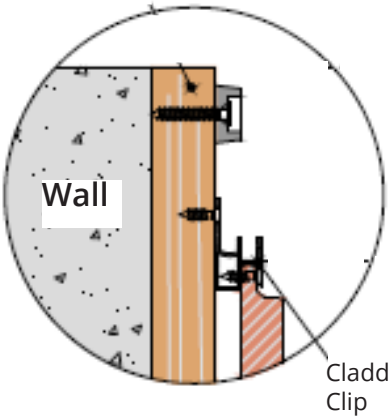
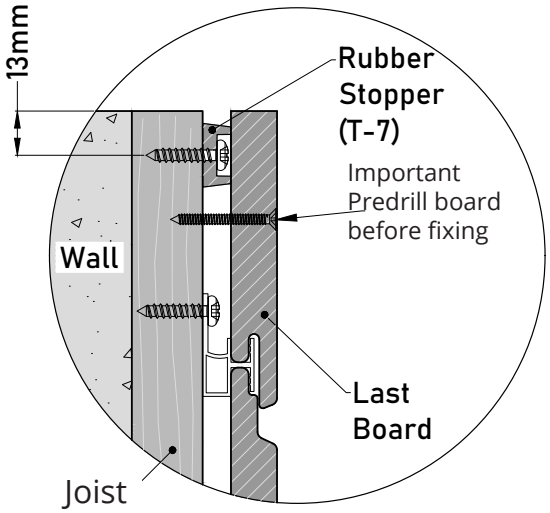
Fixings


Aluminium Starting Rail
supporting the Cladding Board
Wall
20mm
Floor


Wall
Cladding
Clip


13mm
Rubber
Stopper
(T-7)
Important
Predrill board
before fixing
Wall
Last
Board
Joist

Expansion and Contraction Values

UltraShield cladding boards will experience expansion and contraction with changes in temperature. Expansion and contraction are most significant where extreme temperature changes occur. Fastening the cladding boards according to the gapping requirements noted in the following table accommodates for this movement.

Expansion and Contraction table of values for Ireland

Length(Metres)

Installation Temperature (Celsius)	Installation Temperature °C	2.7m Length(Metres)	3.6m Length(Metres)
	0°C	3.0mm	4.5mm
	5°C	3.0mm	4.5mm
	10°C	2.5mm	3.0mm
	15°C	2.5mm	3.0mm
	20°C	2.0mm	2.5mm
	25°C	1.5mm	2.0mm
	30°C	1.5mm	2.0mm

E.g If your Installing 3.6m length board at 20°C you need to leave 2.5mm gap

E.g If your Installing 2.7m length board at 20°C you need to leave 2.0mm gap

Cladding should be acclimatised on site for 72 hours before installation.

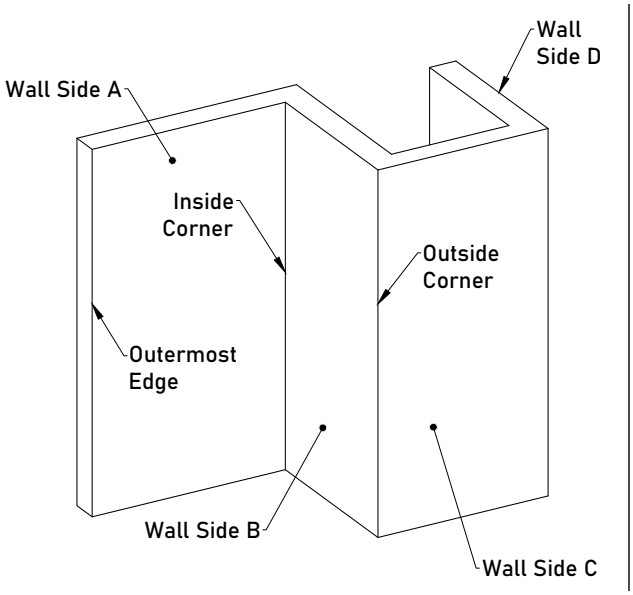
Cladding Horizontal Installation

Framing

The frame needs to be level before installing the Cladding Boards

Note:
An adequate span between the joists is required to keep the cladding boards from bending. Please review page 7 of this installation guide to see what span is needed.

The below diagram shows the wall replicating different scenarios potentially occuring when installing the cladding boards.



Note:
We are using wood joists for this installation.

Measure and chalk the joists according to the span on data specified on page 7 of this installation guide See diagram 4 below

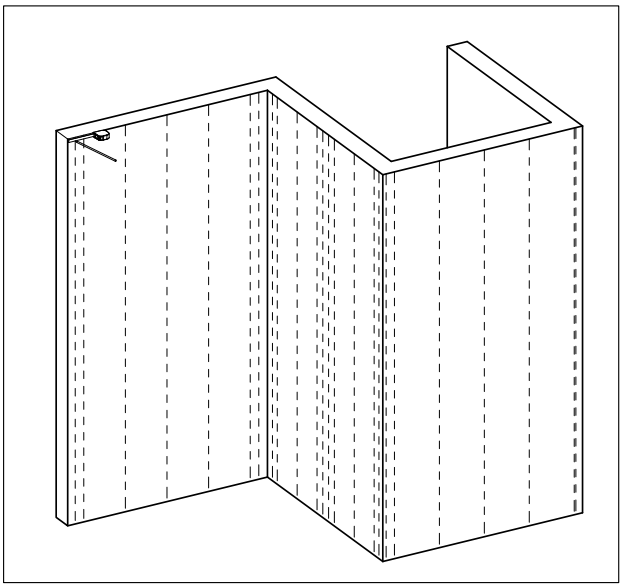


Diagram 4

Fix the joists onto the wall that you intend to install with screws. The distance between the screws should be at least 500mm and max to 1000mm.

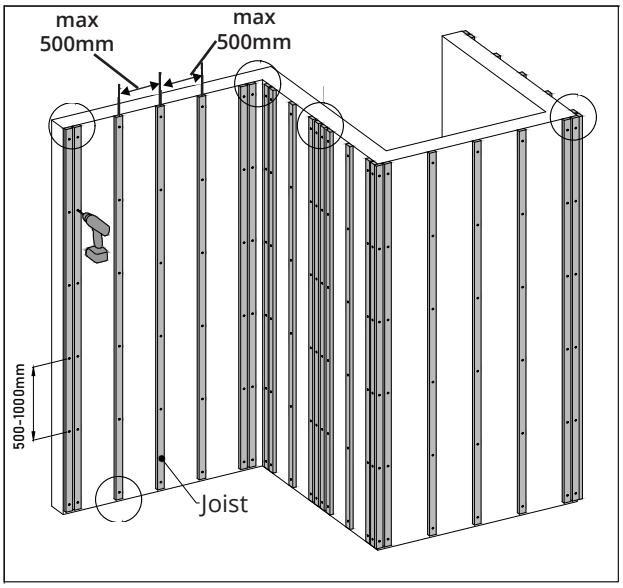
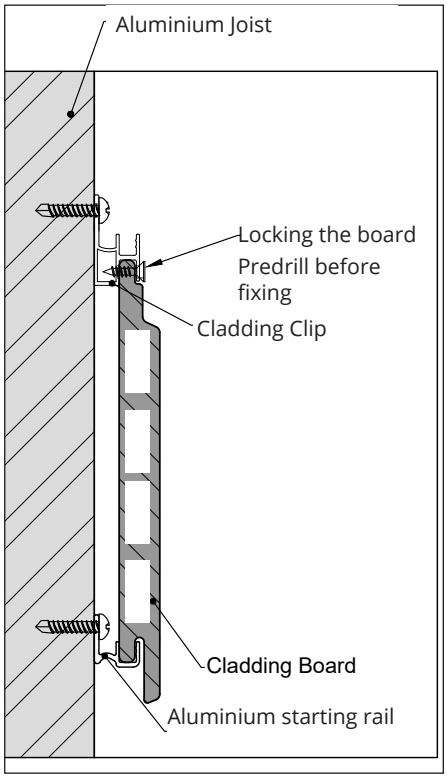
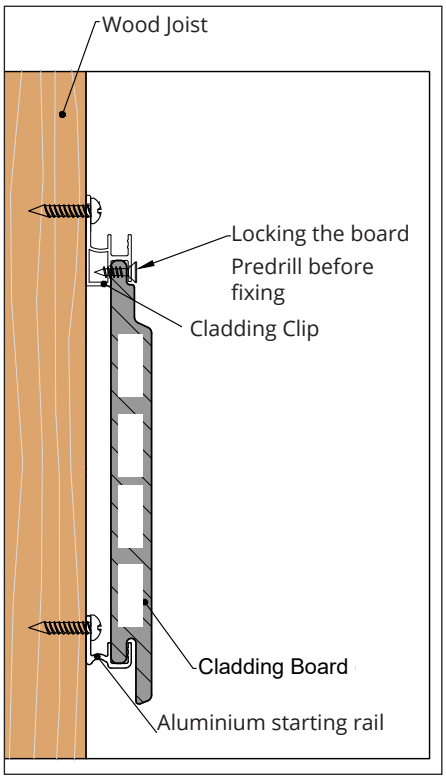


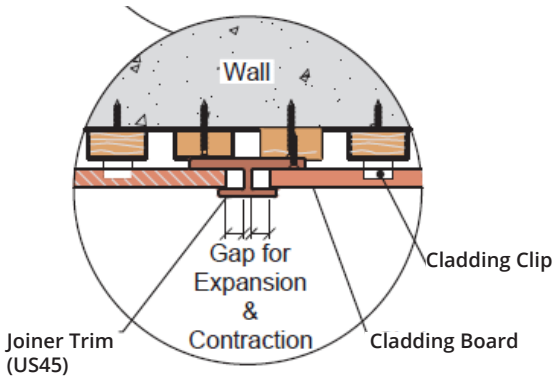
Diagram 5

Horizontal Installation

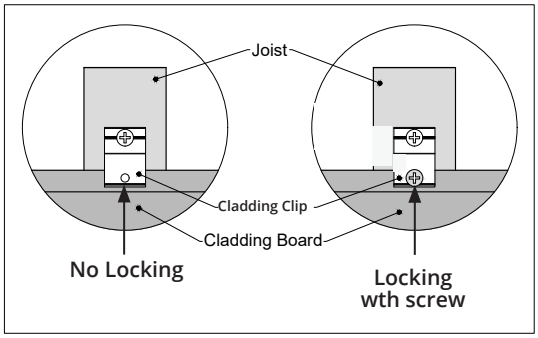


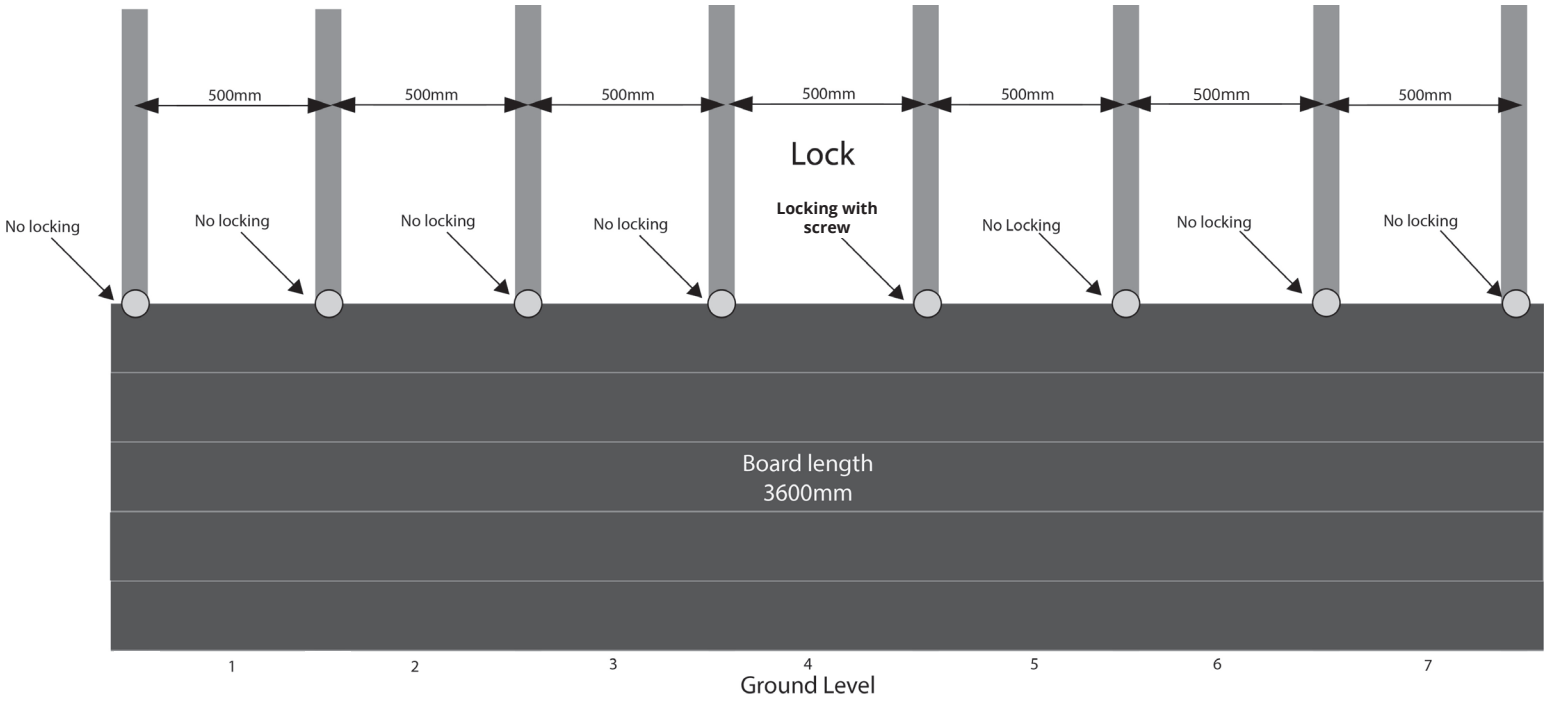


Header Joiner Trim



Horizontal Installation





Locking the Cladding Board

Since the composite wood must allow for expansion and contraction due to changing enviroment, the board must be locked at selected points only to allow the remaining board to expand and contract freely. Cladding Clip comes with a seperate hole for locking screw. Make sure to Predrill cladding before fixing with locking screw. If you dont predrill the board there is a risk of cracking.

Note: The instructions for the position of locking screws is different for Vertical and Horizontal Installations. For Horizontal Installation lock one middle clip only.

IMPORTANT: DO NOT LOCK any other clips other than what is recommended.

For expansion gaps please refer to the chart on page 12, and also look at how the trims are to be installed.

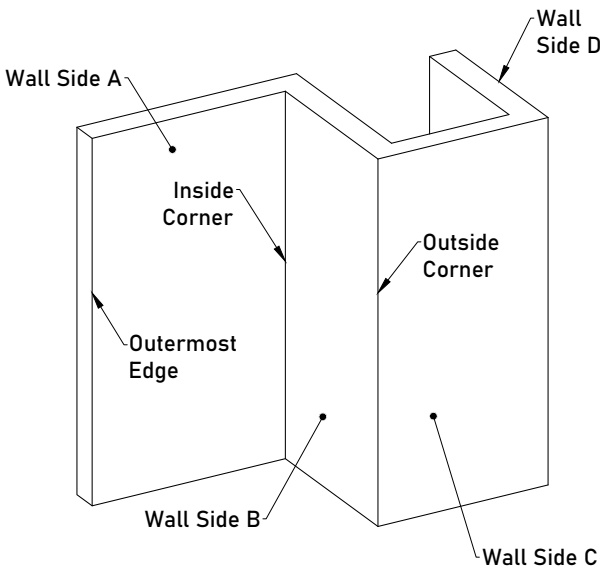
Cladding Vertical Installation

Framing

The frame needs to be level before installing the Cladding Boards.

Note:
An adequate span between the joists is required to keep the cladding boards from bending. Please review page 7 of this installation guide to see what span is needed.

The below diagram shows the wall replicating different scenarios potentially occuring when installing the cladding boards.



Note:
We are using wood joists for this installation.

Measure and chalk the joists according to the span on data specified page 7 of this installation guide, **as shown in diagram 6.**

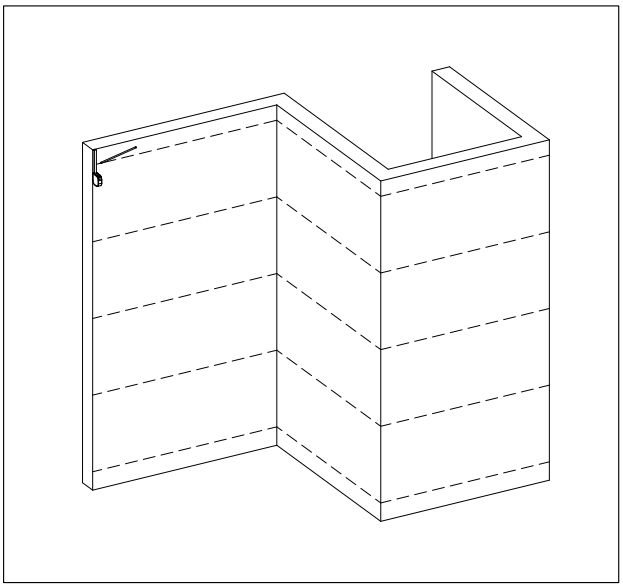


Diagram 6

Fix the joists onto the wall that you intend to install with screws. The distance between the screws should be at least 500mm and max 1000mm, as shown in diagram 7

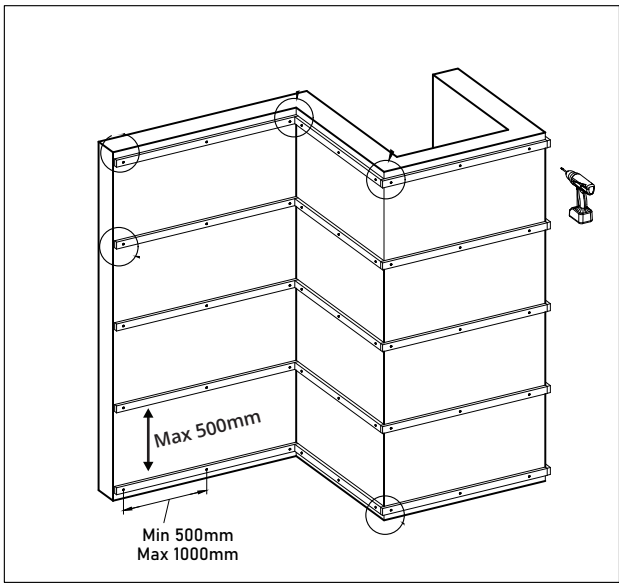
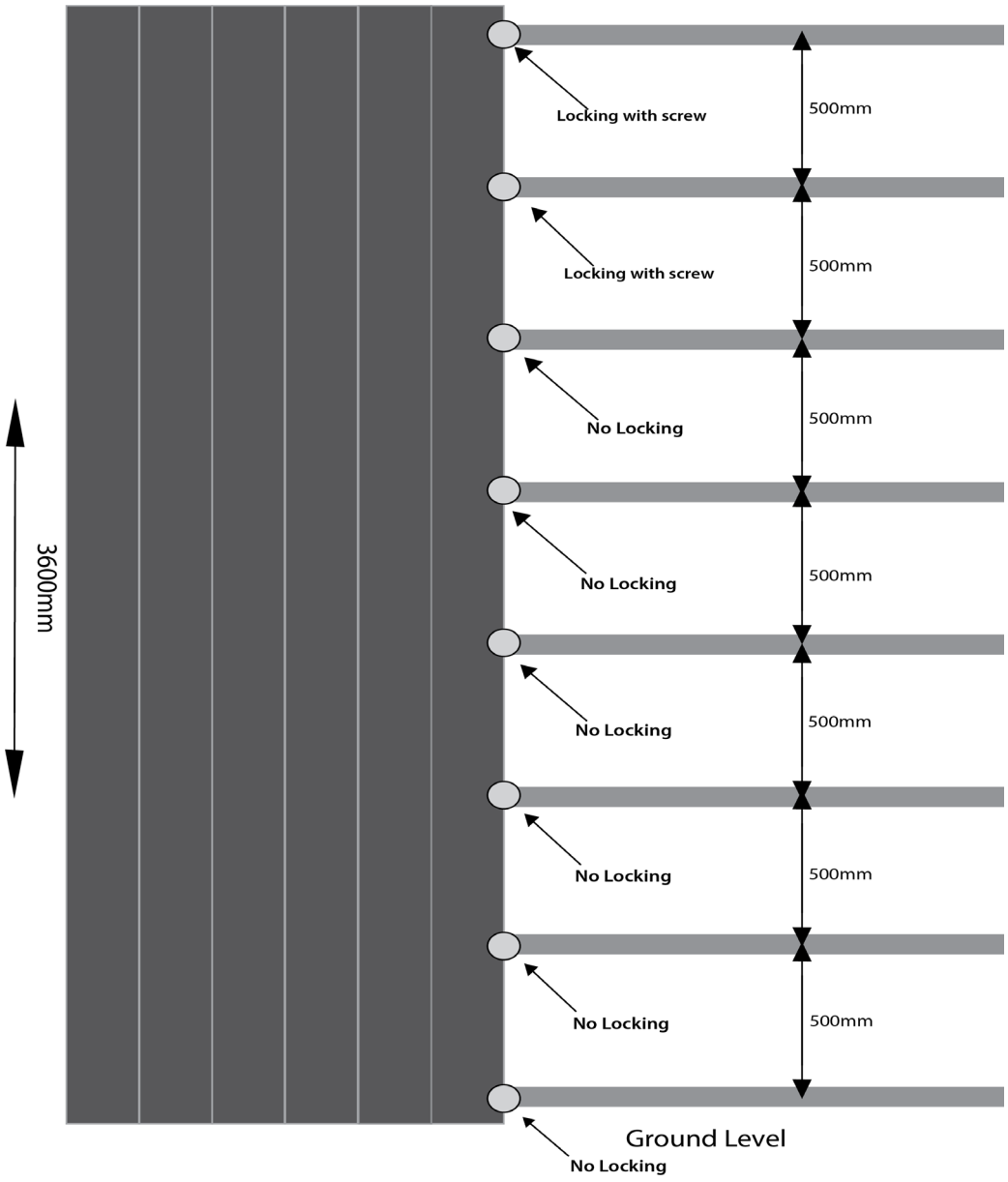
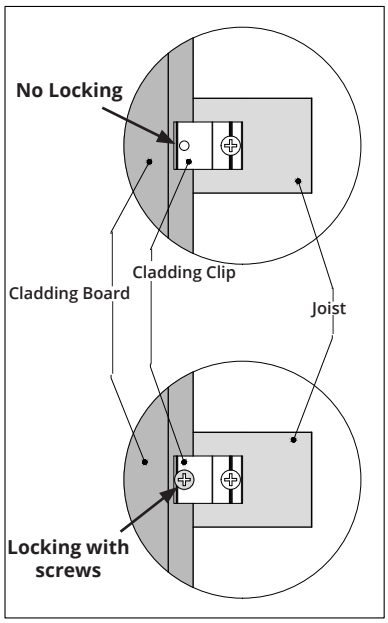


Diagram 7

Vertical Installation





Locking the Cladding Board

Since the composite wood must allow for expansion and contraction due to changing enviroment, the board must be locked at selected points only to allow the remaining board to expand and contract freely. Cladding Clips come with a seperate hole for locking screw. Make sure to Predrill cladding before fixing with locking screw. If you dont predrill the board there is a risk of cracking.

Note: The instructions for the position of locking screws is different for Vertical and Horizontal Installations. For vertical Installation lock one middle clip only.

IMPORTANT: DO NOT LOCK any other clips for the same board other than what is recommended.

For expansion gaps please refer to the chart on page 12, and also look at how the trims are to be installed.

Vertical Installation

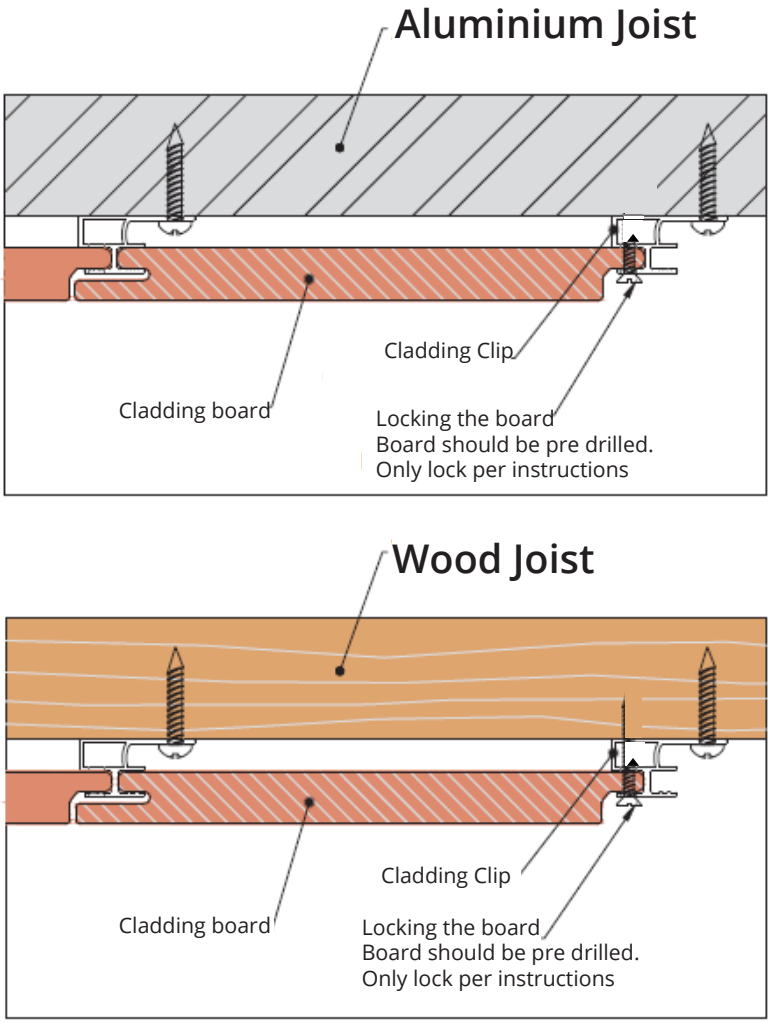


Diagram 8

Vertical Installation

When installing more than one board vertically, it is recommended to utilise the Joiner Trim (US45) at each butt joint as shown in Diagram 9. It is also required to lock the top two Cladding Clips at the top of each board.

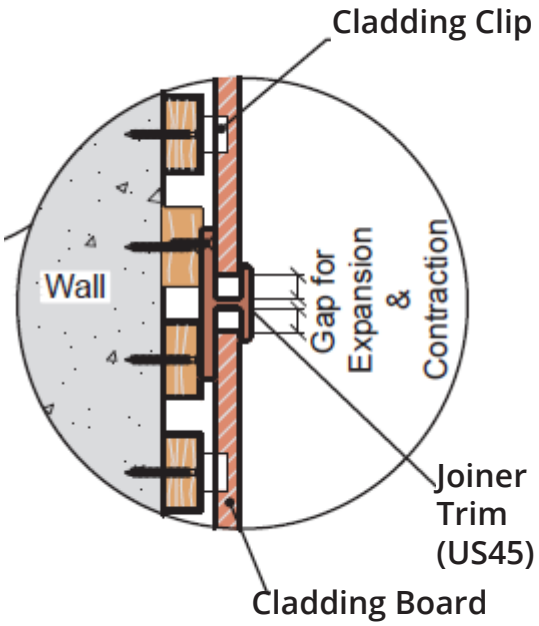
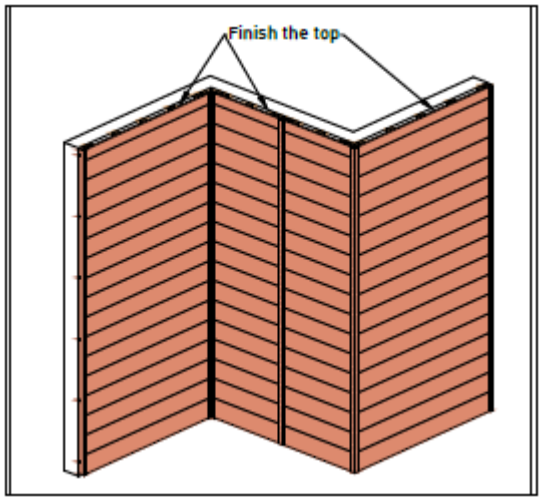


Diagram 9

Finish the top



There are three options recommended to finish the top of the cladding.

Option 1
Put the End Trim (US44) on the board's top edge, as shown in the Diagram 1, Face fixing the End Trim (US44) and the board together onto the joist with screws.

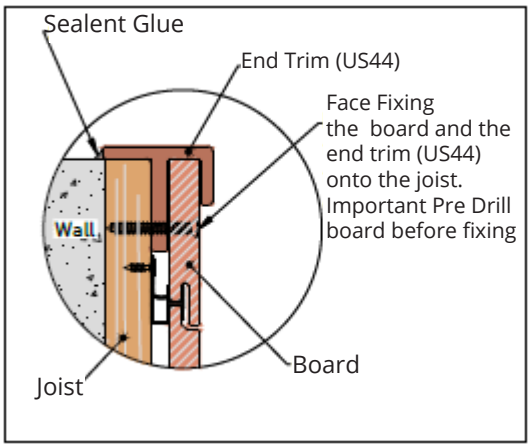


Diagram 1

Note:
1. There is no need to use the Rubber Stopper (T-7) to back up the last board.

Option 2
Cut the End Trim (US44) to make the centerpiece shorter without interfering with the Rubber Stopper (T-7) as shown in Diagram 2.

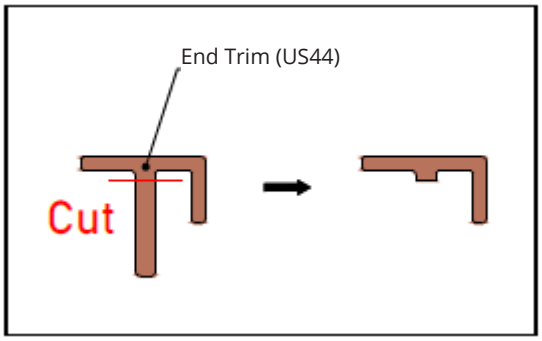


Diagram 2

Option 3
Put the cut End Trim (US44) to make the centerpiece shorter withouth interfering with the rubber stopper (T-7) as shown in Diagram 3.
Remember to Pre Drill.

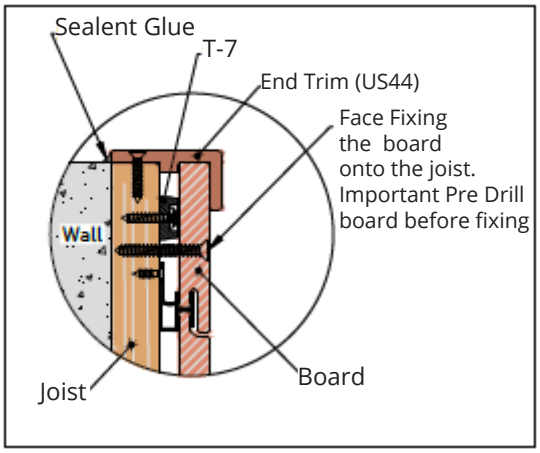


Diagram 3

Traditional Cladding Horizontal & Vertical Installation Guide

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