



# Contemporary Cladding Horizontal & Vertical Installation Guide

V071021



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**IMPORTANT:**  
**Read All Sections Before You Start**

For the most up to date information, please visit our website [www.wrg.ie](http://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 conductive 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](http://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.

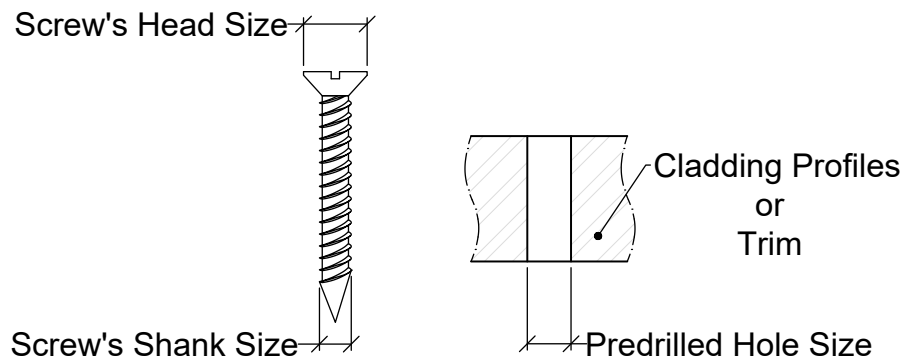
Use white chalk, straight boards, or string lines as templates for straight lines. NEVER USE COLOURED CHALK. Coloured chalk will permanently stain UltraShield products and are not recommended.

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.




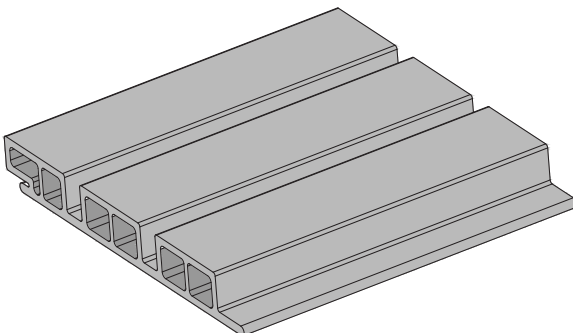
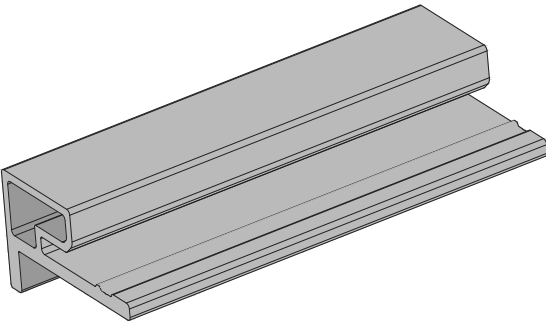
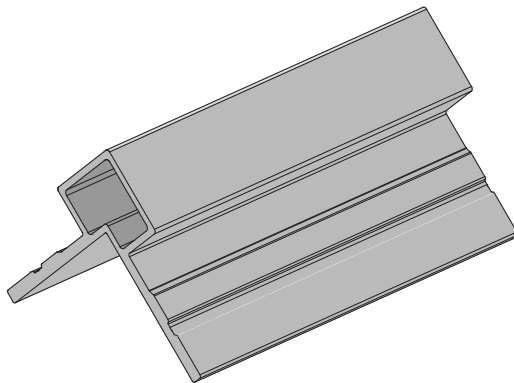
## Predrill

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.**

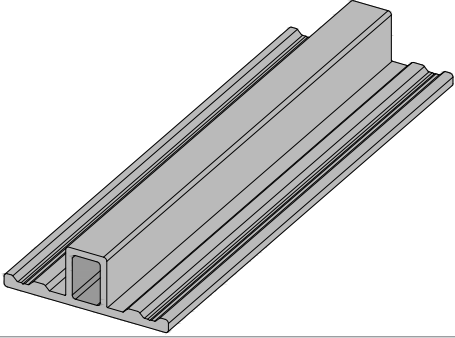


The predrilled hole size should also be smaller than the screw head size.

## Contemporary Cladding Parts

Product	Purpose	Part
<b>K1650001</b>	Aluminium Rail used for the installation of the first board 3000mm	
<b>K1650006</b>	Cladding Clip used at every joist to fix each board to the joist 50 per pack with screws	
<b>K1650011</b>	Rubber Stopper used on the last cladding board 10 per pack with screws	
<b>K1630106</b> <b>K1630111</b> <b>K1630001</b> <b>K1630006</b>	Contemporary Cladding Board 196.5 x 25 x 2700mm 196.5 x 25 x 3600mm (Silver Grey & Teak)	
<b>K1630011</b> <b>K1630111</b>	Edge Trim, used for the installation on the outermost edge (Silver Grey & Teak)3000mm	
<b>K1630016</b> <b>K1630116</b>	External Corner Trim, used for the installation on the outside corners (Silver Grey & Teak)3000mm	

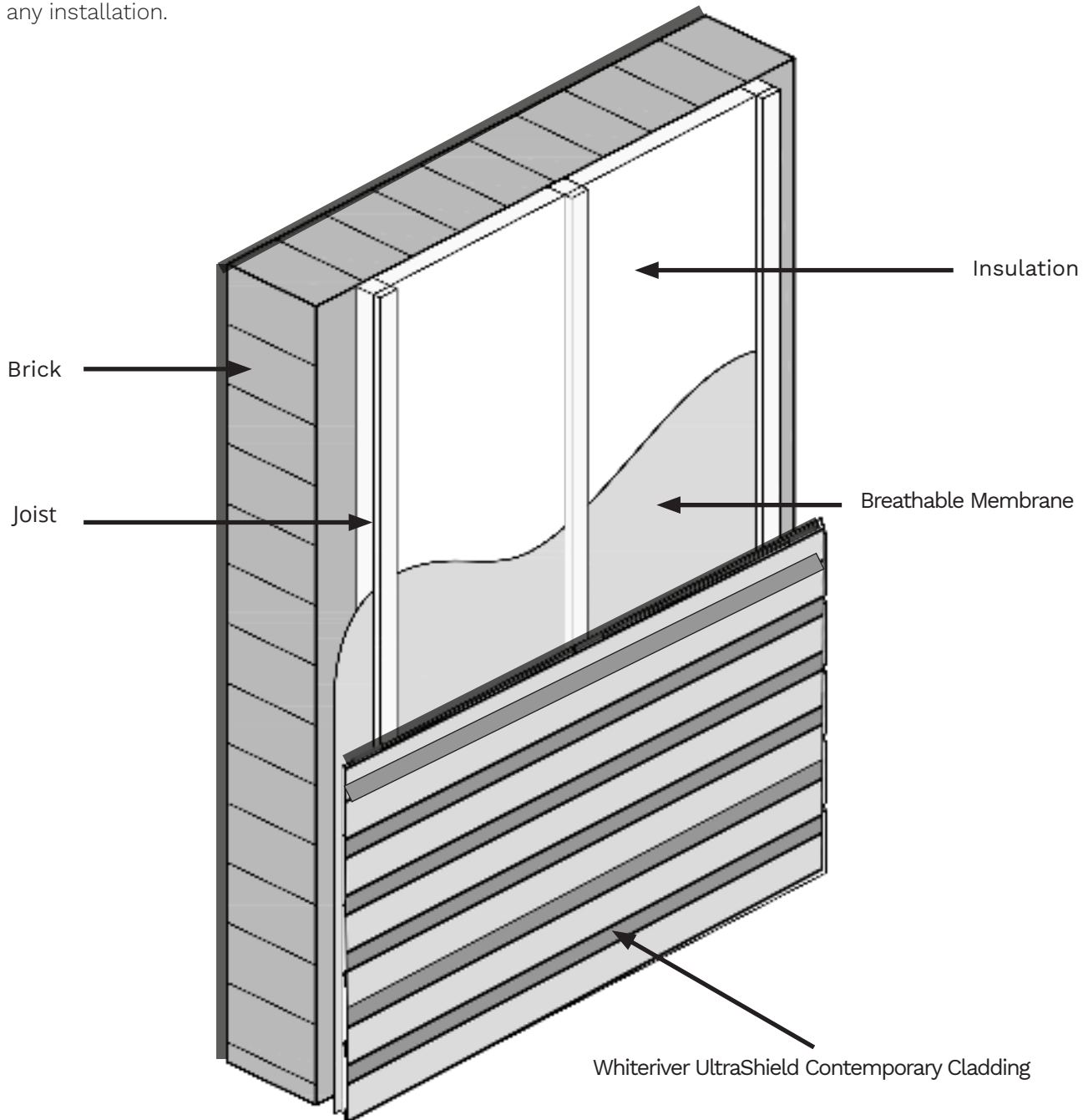
## Contemporary Cladding Parts

Product	Purpose	Part
<b>K1630021</b> <b>K1630121</b>	Joiner Trim, used for the on the butt joint installation (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.



## Joists 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.

Wood joists should be fixed into position at a maximum of 500mm centres. All joists needs to be flat and levelled against the wall surface use shims if necessary.



# Fixing Installation

## Edge Trim (UH59)

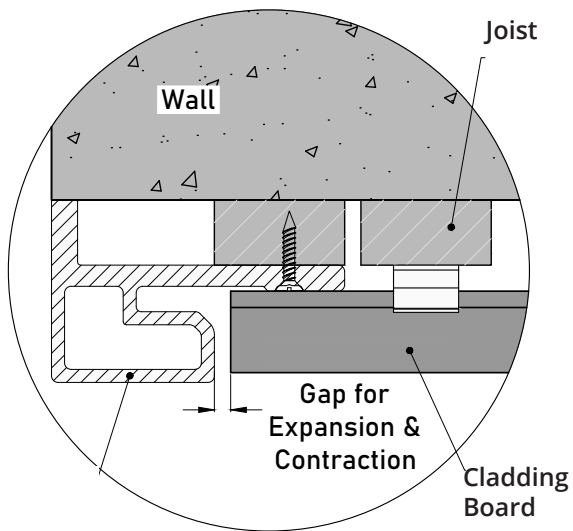


Diagram 1

## Inside Corner Detail No trim used

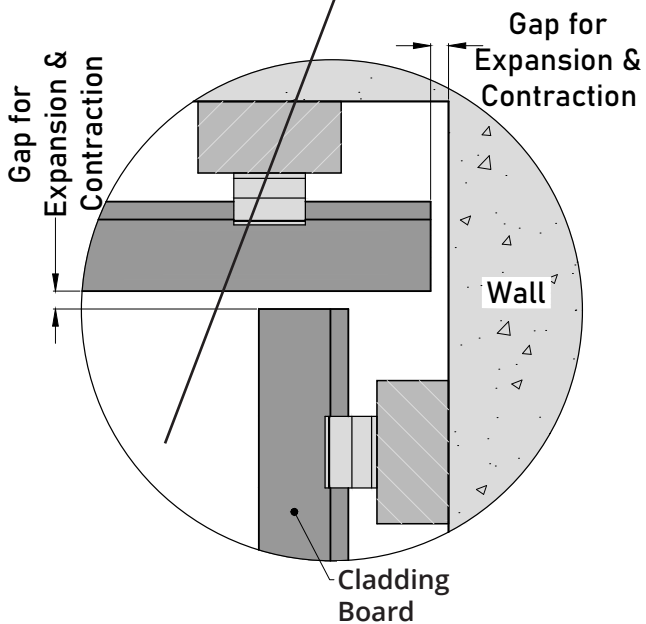


Diagram 2

## External Corner Trim(UH60)

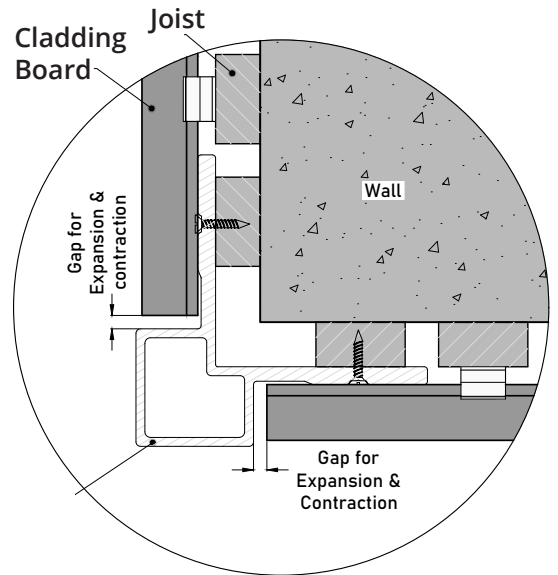


Diagram 3

## Joiner Trim UH70

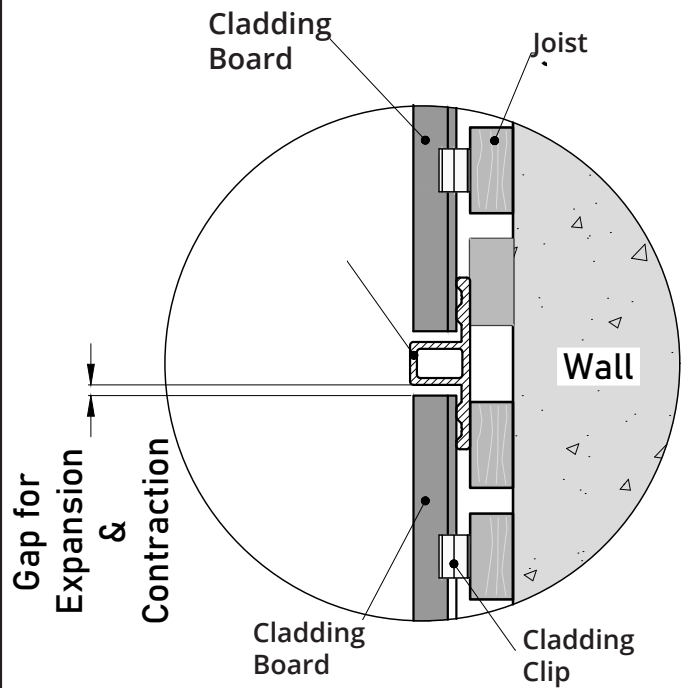
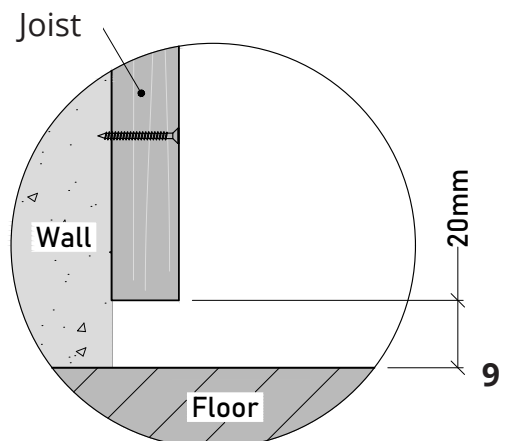
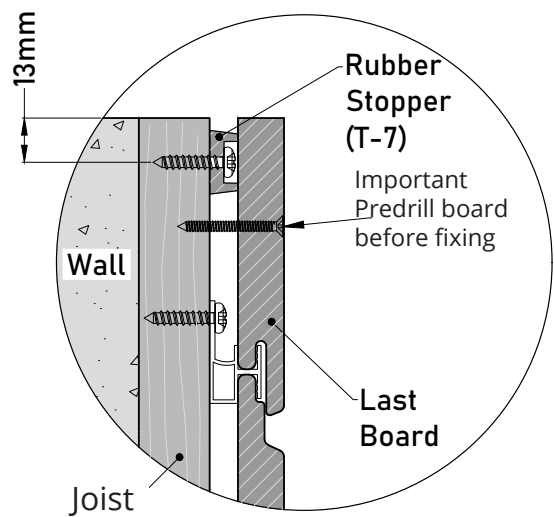
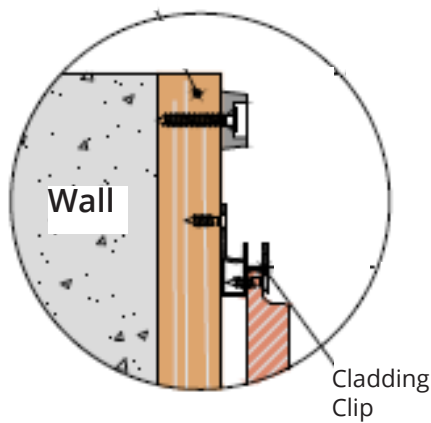
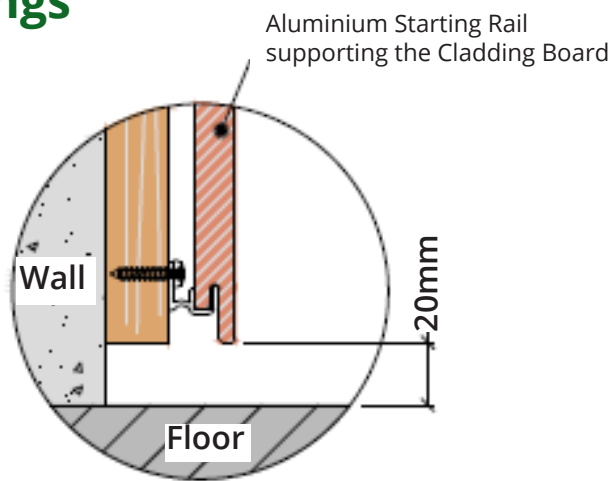


Diagram 4



# Fixings



# 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

Installation Temperature (Celsius)	Length(Metres)		
	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

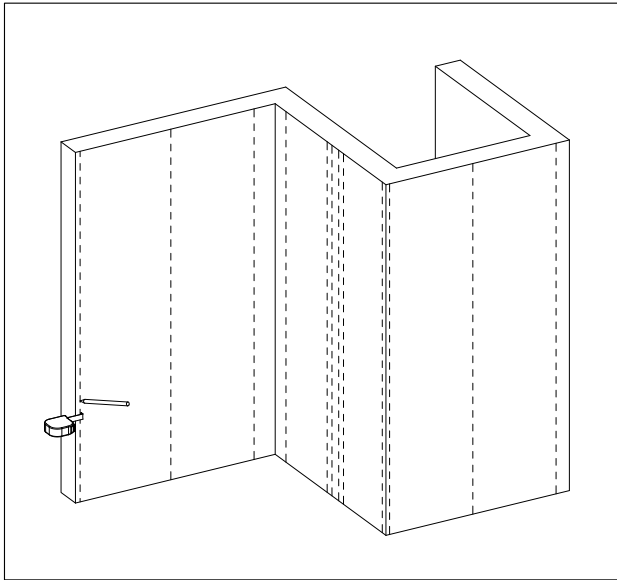
E.g If your Installing 3.6m length board at 20°C you need to leave 2.5mm gap

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.**

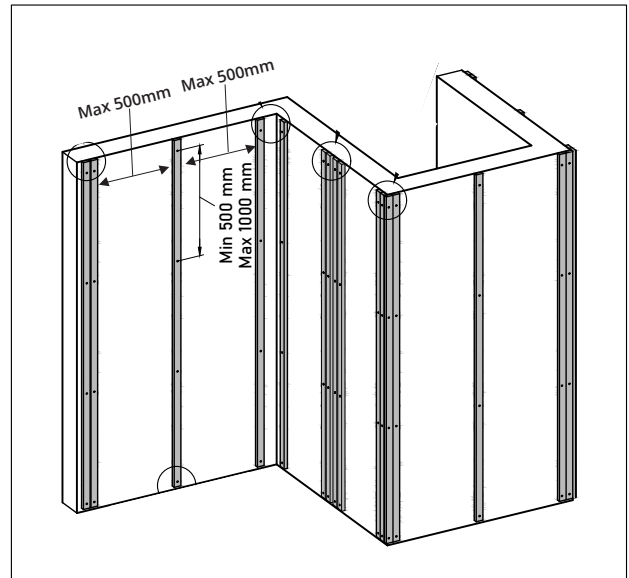
# Contemporary Cladding System Horizontal Installation

Measure and chalk the joists according to the span data specified on [page 8](#) of this installation guide, as shown in [Diagram 1](#).



**Diagram 1**

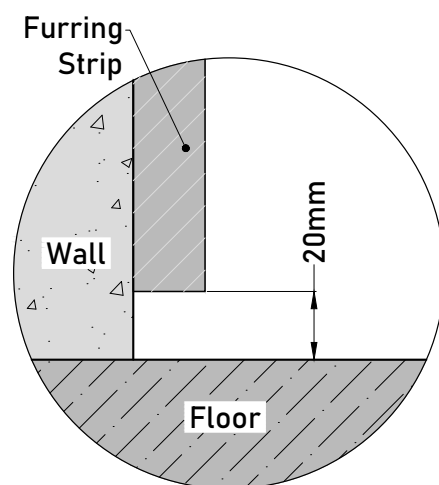
Fix the joists onto the wall that you intend to install with screws at least 500mm and a max of 1000mm centres, as shown in [Diagram 2](#).



**Diagram 2**

**Please Note:**

1. A minimum gap of 20mm needs to be left at the bottom of each joist opposite the floor, as shown in [Diagram 3](#).

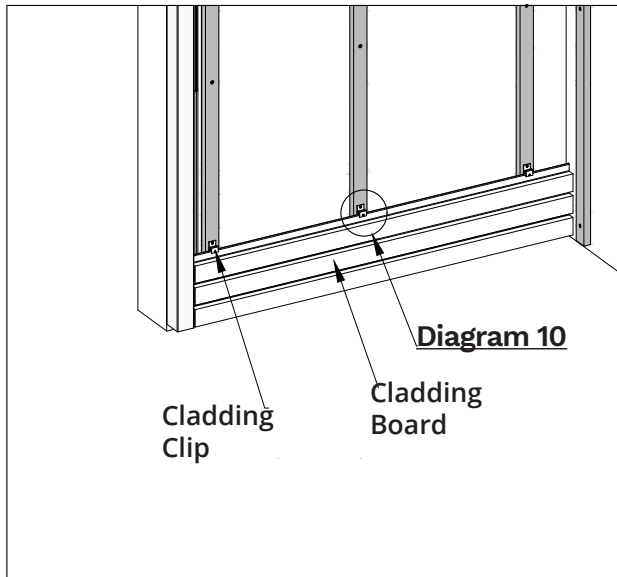


**Diagram 3**

# Contemporary Cladding System Horizontal Installation

## Installing the First course

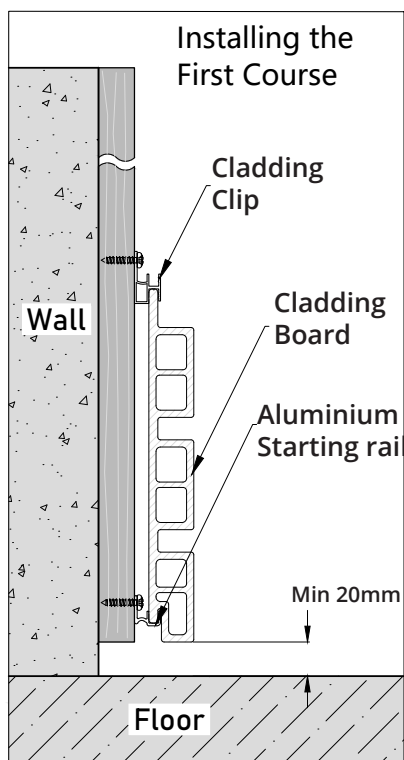
Put the first Cladding Board over the Aluminium Starting Rail and fasten it onto the joist with Cladding Clip, as shown in [Diagram 4](#) and [Diagram 5](#)



**Diagram 4**

### Please Note:

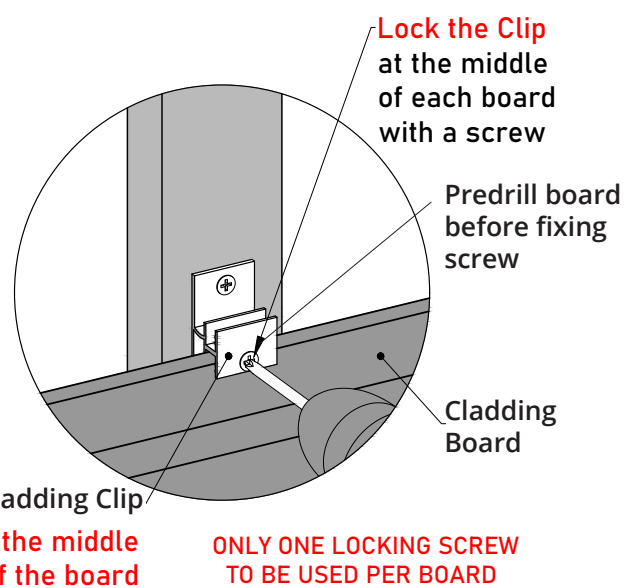
The gap between the cladding board and the floor should be at least 20mm, as shown in [Diagram 5](#).



**Diagram 5**

### Please Note:

Since the composite wood must allow for expansion and contraction due to temperature change, the board must be **locked at one fixed point** to allow the remaining board to move freely. When installing horizontally, it is required to **lock the Cladding Clip at the middle of each board**, as shown on page 14. **DO NOT LOCK** any other Cladding Clips for the same board.

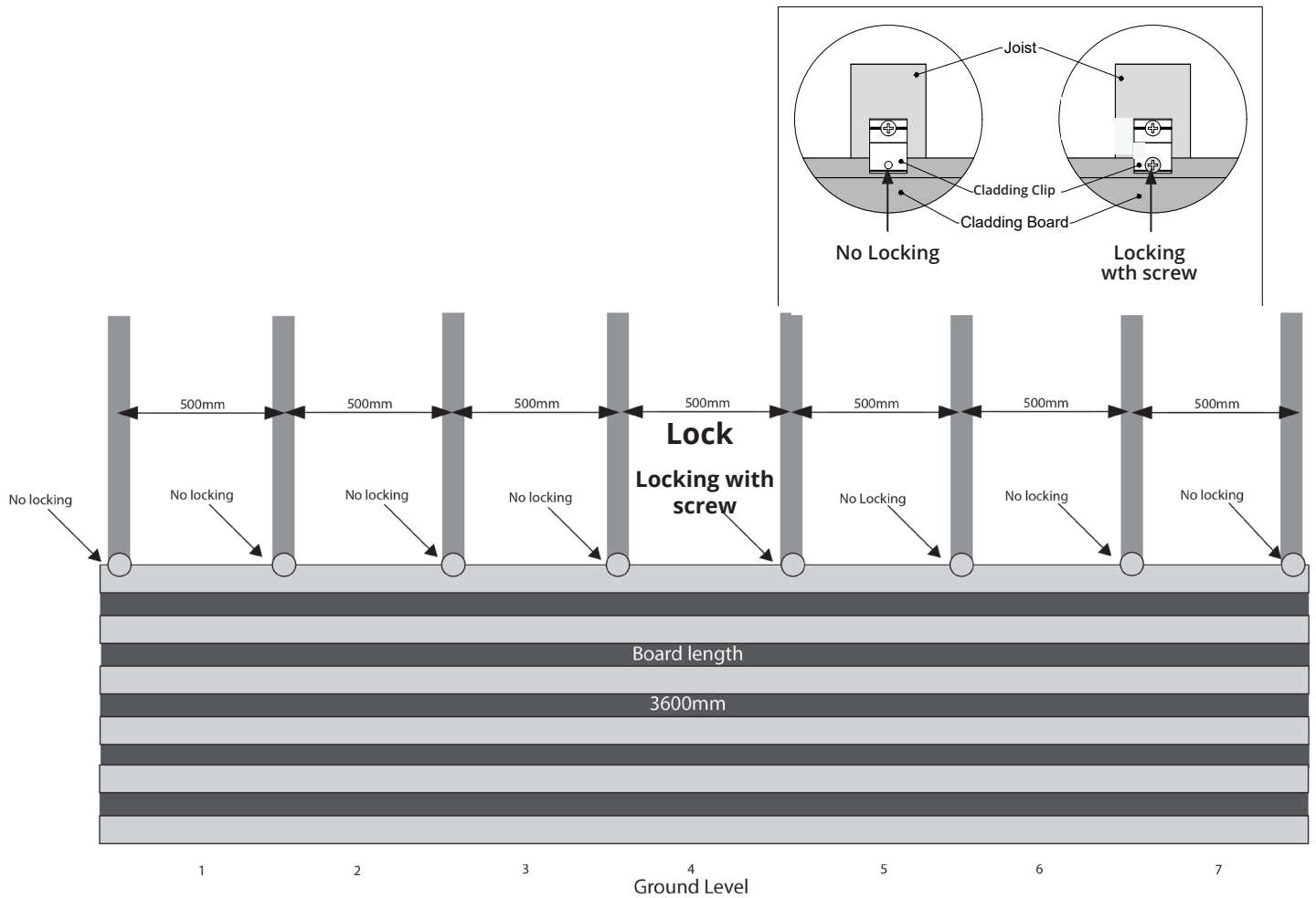


**Diagram 6**

### Please Note:

The gaps between the cladding board, Edge-Trim (UH59), External Corner Trim (UH60), the adjacent wall, and board in the inside corner are vital to avoid warping or buckling. Please select the appropriate gap value according to the [Expansion and Contraction Values](#) table on [page 11](#) of this installation guide.

# Horizontal Installation



## Locking the Cladding Board

Since the composite wood must allow for expansion and contraction due to temperature change, the board must be locked at selected points only to allow the remaining board to expand and contract freely. In the case where there is a need to lock the board, Cladding Clip comes with a separate hole. Make sure to Predrill cladding before fixing with locking screw.

**Note: The instructions for the position of locking screws is different for Vertical and Horizontal Installations.**

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

**Horizontal Installation:** Only use locking screws on the middle clip in every board. Therefore only one clip per board is fixed with locking screw.

**For expansion gaps please refer to the chart on page 11, and also look at how the trims are to be installed.**

# Contemporary Cladding System Horizontal Installation

Put the second board over the first board's Cladding Clip and fasten it onto the joist with the Clip, as shown in Diagram 7, Diagram 8, Diagram 9.

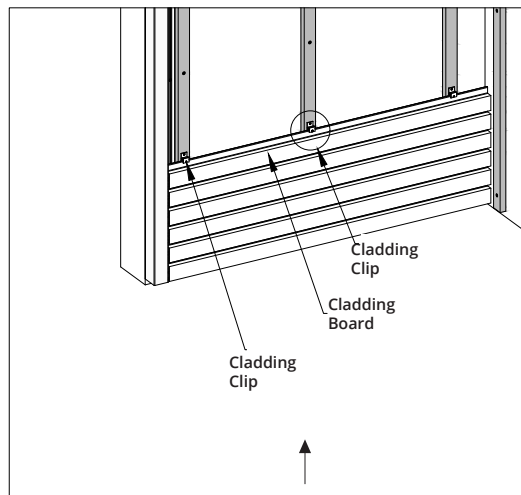


Diagram 7

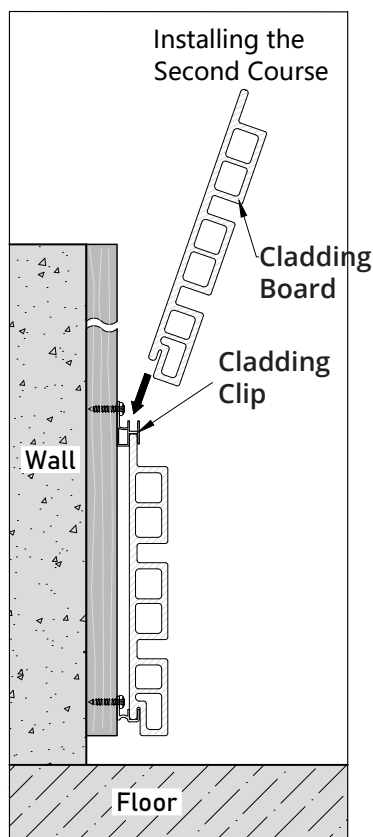


Diagram 8

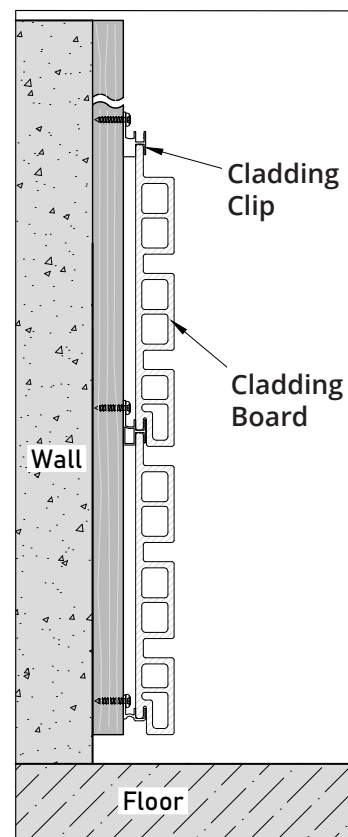
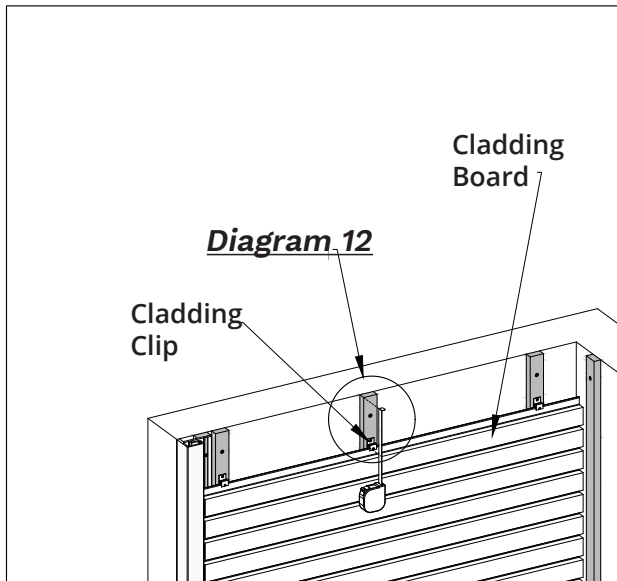


Diagram 9

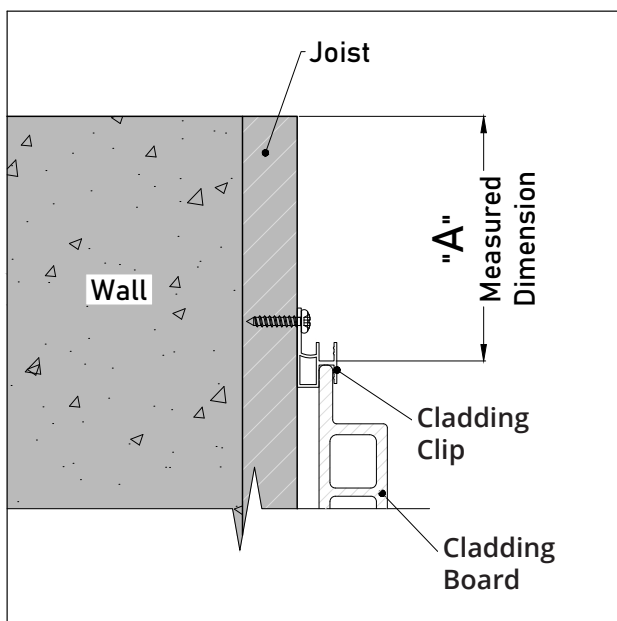


## Installing the last board

When you are at the last board, measure the distance between the top of the joist and the Clip (cladding clip, as shown in [Diagram 10](#) and [Diagram 11](#).

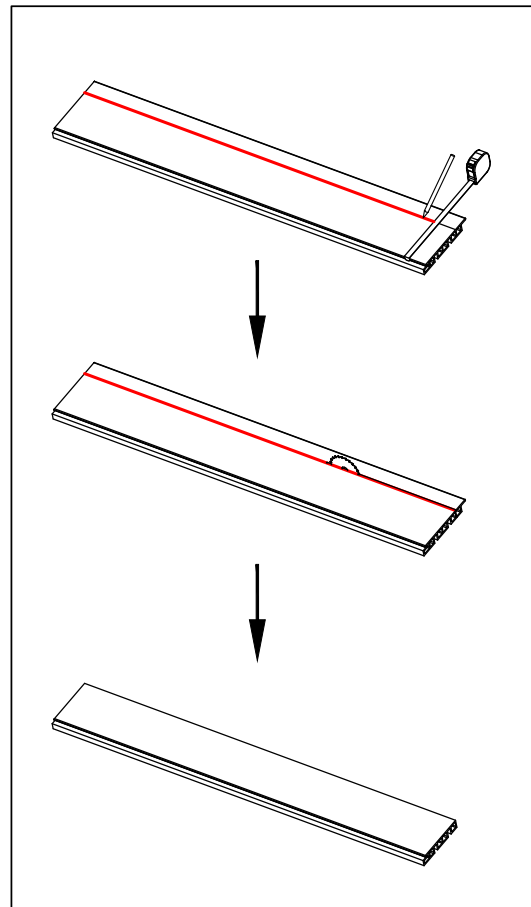


[Diagram 10](#)

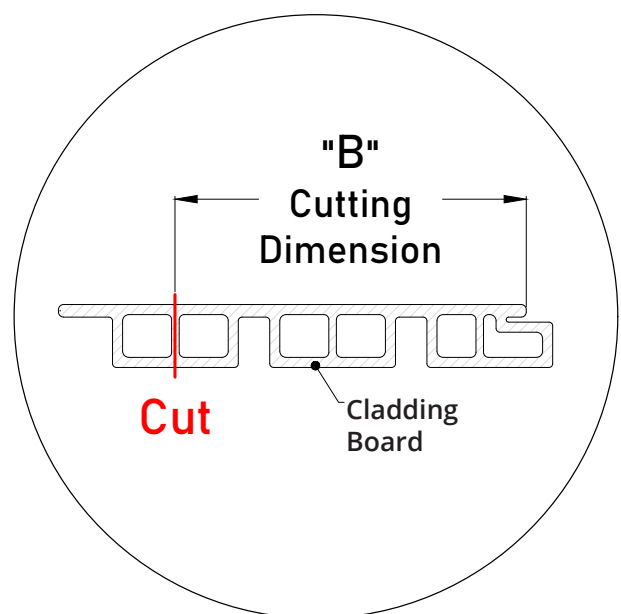


[Diagram 11](#)

Cut the board according to the measured dimension, as shown in [Diagram 12](#) and [Diagram 13](#).



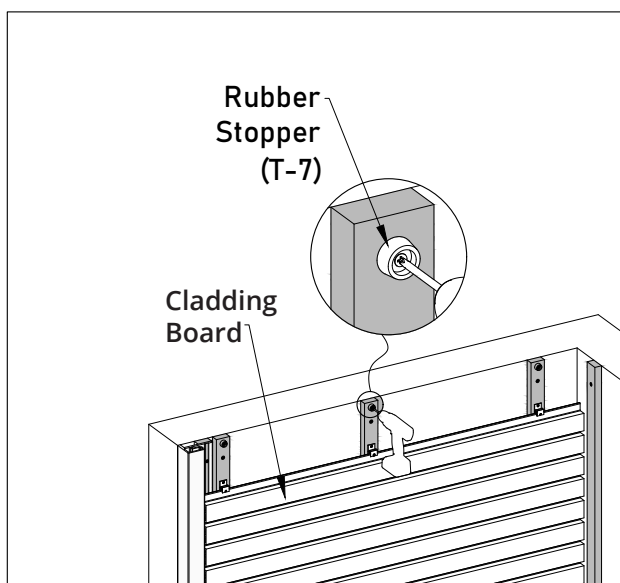
[Diagram 12](#)



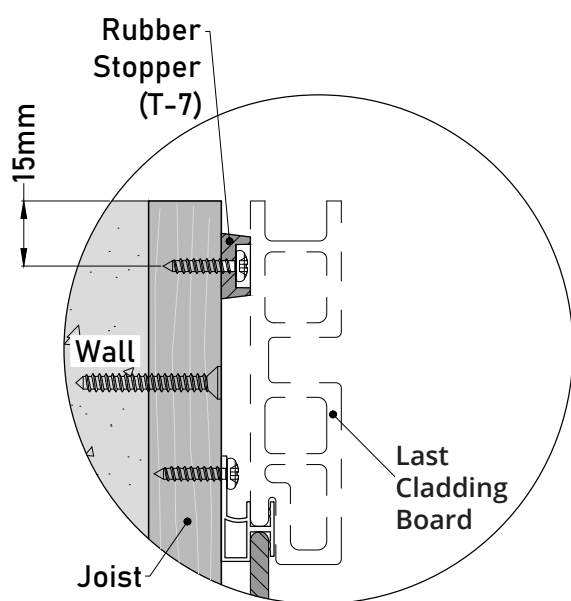
[Diagram 13](#)

## Installing the last board

Install the Rubber Stopper (T-7) onto each joist with screws, as shown in [Diagram 14](#) and [Diagram 15](#)

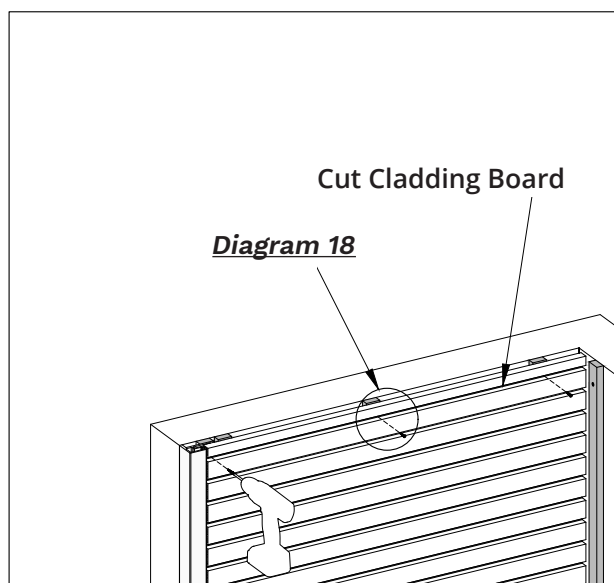


[Diagram 14](#)

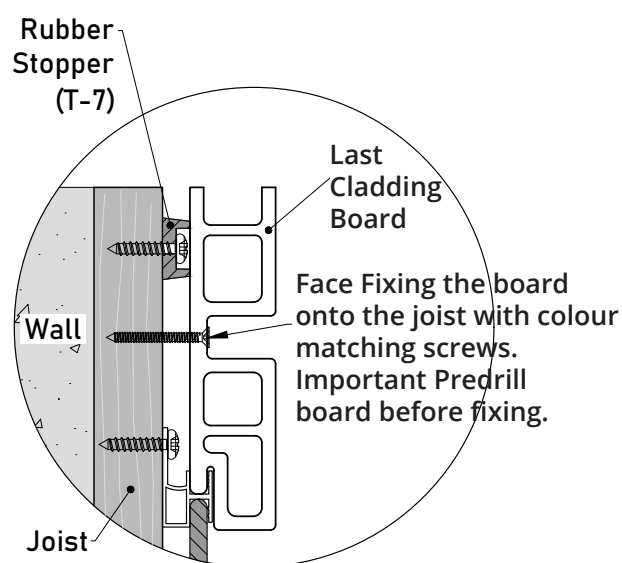


[Diagram 15](#)

Put the cut cladding board over the Cladding Clip in place and then face fix it onto each joist along the length of the board against the Rubber Stopper (T-7), as shown in [Diagram 16](#) and [Diagram 17](#).



[Diagram 16](#)



[Diagram 17](#)

### Please Note:

Pre-drill the screw holes on the cut board before face fixing onto the joist to allow for expansion and contraction.

# Cladding Vertical Installation

## Framing

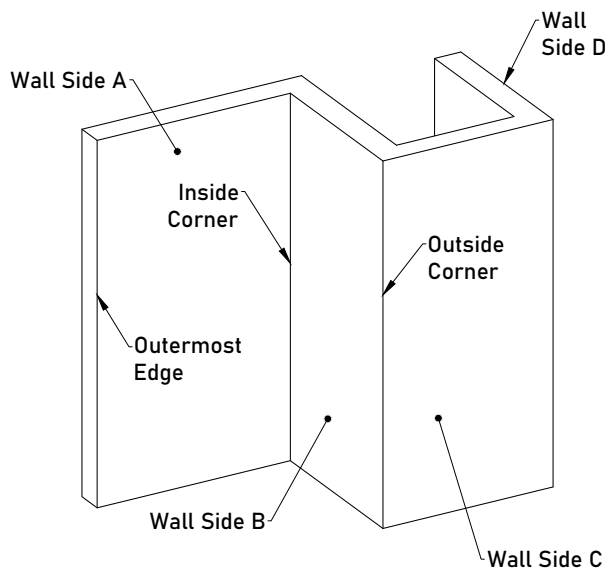
The frame needs to be level before installing the Cladding Boards.

### **Note:**

**An adequate span between the joists is required to keep the cladding boards from bending.**

**Please review page 8 of this installation guide to see what span is needed.**

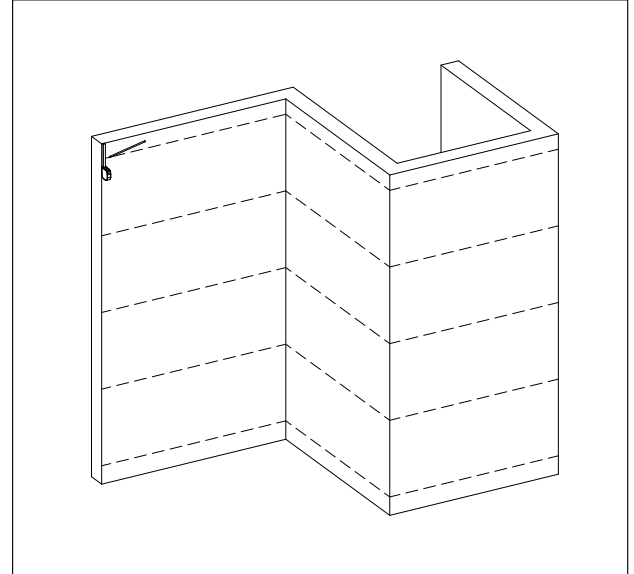
The below diagram shows the wall replicating different scenarios potentially occurring when installing the cladding boards.



### **Note:**

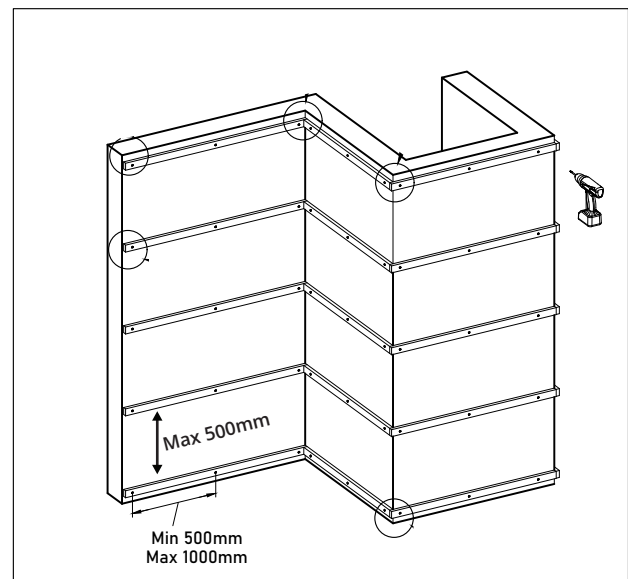
**We are using wood joists for this installation.**

Measure and chalk the joists according to the span on data specified page 8 of this installation guide, **as shown in diagram 18.**



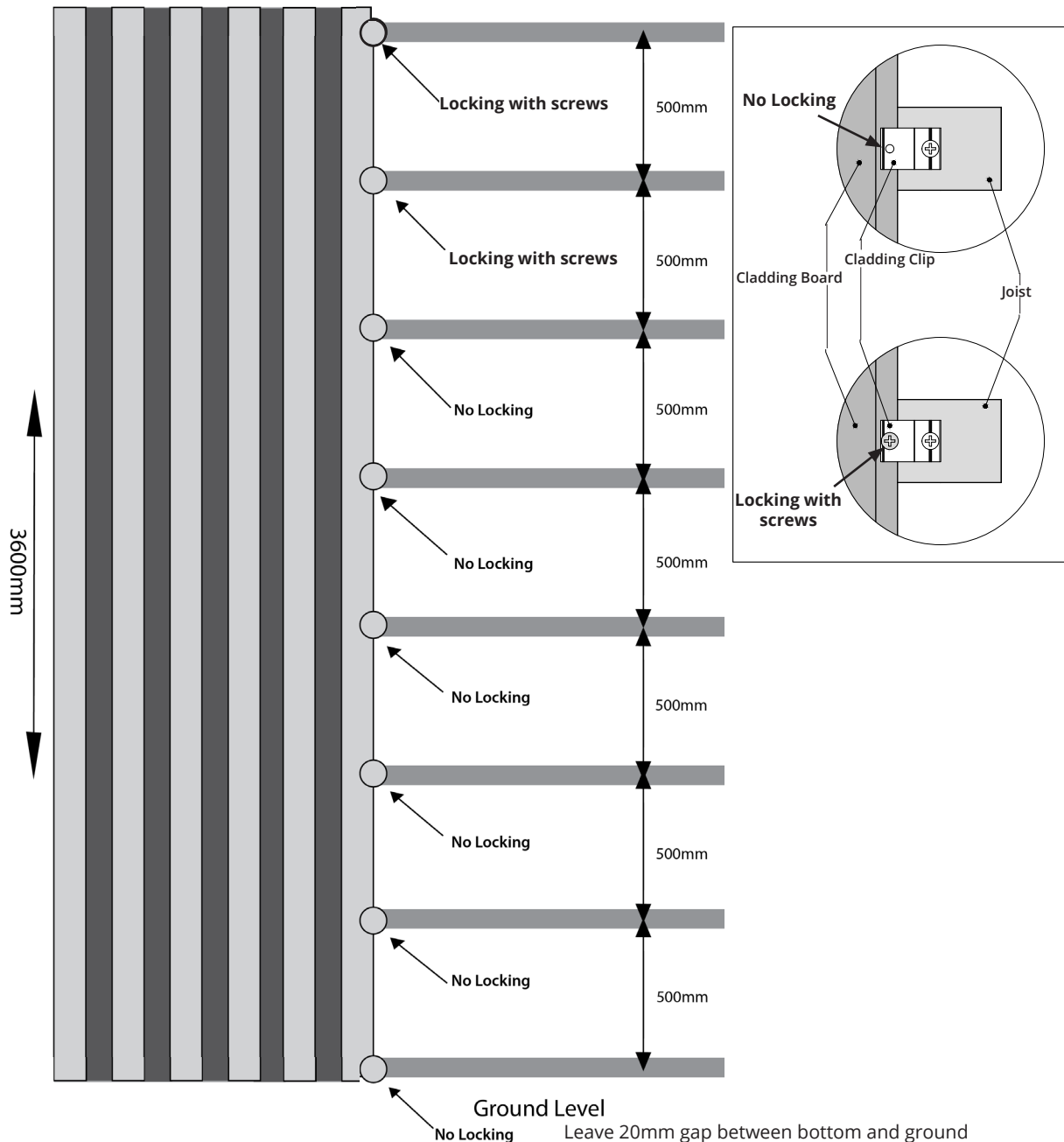
**Diagram 18**

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 19



**Diagram 19**

## Vertical Installation



## Locking the Cladding Board

Since the composite wood must allow for expansion and contraction due to temperature change, the board must be locked at selected points only to allow the remaining board to expand and contract freely. In the case where there is a need to lock the board, Cladding Clip comes with a separate hole. Make sure to Predrill cladding before fixing with locking screw.

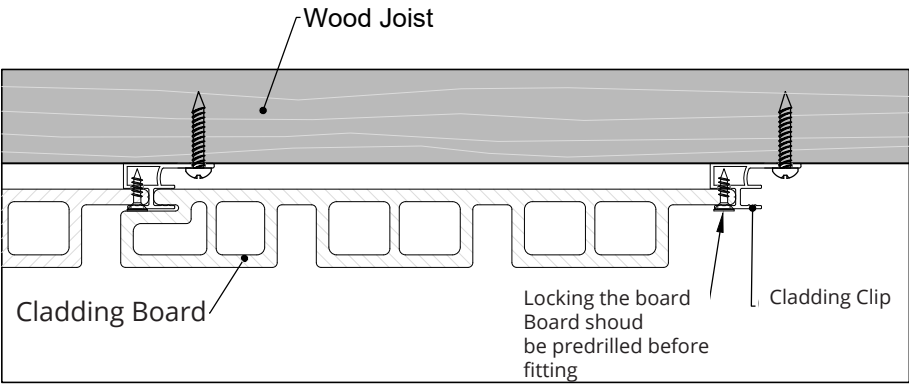
**Note: The instructions for the position of locking screws is different for Vertical and Horizontal Installations.**

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

**Vertical Installation:** Only use locking screws on the top two clips on every board. Therefore only two clips per board is fixed with backing screws.

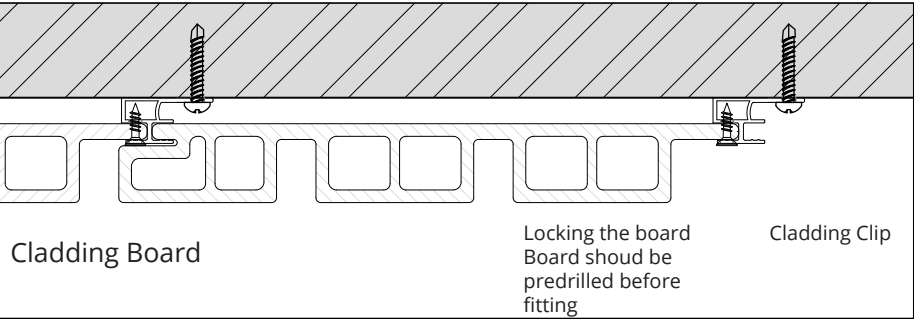
For expansion gaps please refer to the chart on page 11, and also look at how the trims are to be installed.

# Vertical Installation



**Diagram 20**

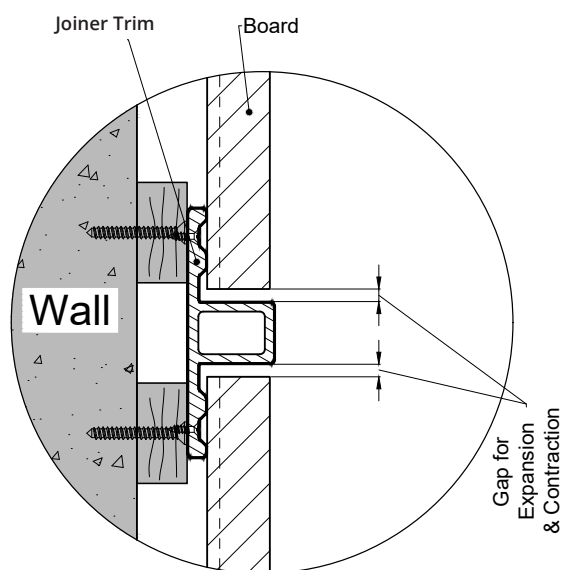
Aluminium joist



**Diagram 21**

## 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 22. It is also required to lock the top two Cladding Clips at the top of each board.



**Diagram 22**



# Contemporary Cladding Horizontal & Vertical Installation Guide

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