



**PERMATIMBER®**

# ECO DECKING INSTALLATION GUIDE

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[www.permacomposites.com](http://www.permacomposites.com)

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## GENERAL GUIDELINES AND PRECAUTIONS

**PLEASE. ENSURE YOU READ THESE INSTRUCTIONS COMPLETELY BEFORE COMMENCING INSTALLATION.**

With correct installation, PermaTimber® Decking will provide years and years of enjoyment. Please read these instructions before installing your deck and refer to them during installation.

Thanks to its special combination of reclaimed hardwoods and recycled plastics, PermaTimber® Decking is a long-lasting, low-maintenance outdoor living product. PermaTimber® Decking maintains a natural wood look and feel, yet can far outlast all-natural timbers with an ability to handle even the toughest of conditions. Our materials are made from 87% of recycled materials.

Due to the natural wood elements in PermaTimber®, it has some unique behavioural characteristics (expansion/contraction) that must be considered when installing. PermaTimber® contains natural timber elements. As you would be aware, timber has different natural appearances, and to ensure PermaTimber® does indeed look like timber, it may also experience similar variations in colour, tone, and grain.

As a result of this Perma Composites® may have natural variation in each decking board and in some instances slight variation between a sample and final colour. The customer/installer is responsible for inspecting each decking board for colour, finish, size, and other issues prior to installation. Any type of structure should not be fixed to the decking.

**Perma Composites® warranty information can be found at [www.permacomposites.com](http://www.permacomposites.com)**

You can download the guide by  
scanning the QR Code or visiting  
[www.permacomposites.com/  
brochure-installation-guide-library/](http://www.permacomposites.com/brochure-installation-guide-library/)



## SUBFRAME INFORMATION

PermaTimber® Decking can be installed onto any new or existing subframe, provided the existing frame is of sound strength, meets the recommended spans and is in good condition. When designing your subframe, be sure to note the following;

- PermaComposites® can supply FRP and Joist systems. Please contact us for stockists and information.
- All perimeter edges of your PermaTimber® Deck are to be supported by joists. There is to be no overhang of boards.
- If a cut-out is required to allow for any existing structures, this is to be supported around all edges of the cut-out.
- All joists/supports run perpendicular to the decking boards.
- It is recommended an allowance is made for a 1-2mm fall (per metre) in your subframe going away from any adjoining structures to allow water to easily run off.
- A min 100mm clearance is required underneath decking boards for airflow and for water to not pool underneath.

If laying a commercial deck, please consult Perma Composites® to ensure spans, product & design is suitable prior to laying, in accordance with your install standards and loads.

PermaTimber® fixings MUST be used to install your deck or you may risk voiding your warranty.

Please Note: Face fixing through PermaTimber® Decking is not recommended and may void your warranty (refer install guide page 7 for recommendations for face fixings. Not recommended to face fix your whole deck, only corners and edges.).

Once your subframe is complete, you will need to measure out the fit of the decking boards to determine if any end pieces will require trimming. If there are intricate cuts to be made, we suggest you consult a professional installer or chat to a PermaTimber® consultant.

PermaTimber® don't recommend ripping any pieces of decking below 45mm in widths. If a board requires to be installed less than 45mm, cut the two boards that connect and half the difference so both are over 45mm.

Loads of any caliber added should be taken into account when installing the subframe spacing; such as spas, water features and large planters.

## FIXINGS

### Stainless Steel Screws



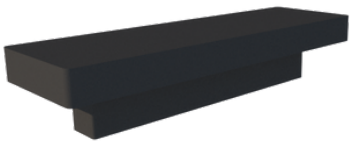
### Anti-Creep Clips



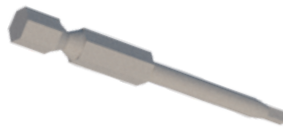
### Start/Stop Clips



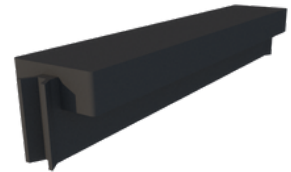
### Rebate Double Fixing Clip (146 & 295 Only)



### Drivers



### Double Fixing Clip (225 Only)



*Please Note: Fixing Clips will require screws that are not included within our products.*

## TOP SCREW FIXING

In regards to Top/Face fixing you will need to follow the instructions below when installing. We recommend the use of a Stainless Steel grade Decking Screw.

### Screw Fixing

Pre-Drilling and Countersinking is essential when top fixing with screws. The pre-drill size must be at least 1.5mm greater than overall thread size width of screw being used. Screw down with Low to Medium Torque making sure you do not overtighten/drive screw in, make sure screw claps down decking board. Screw to finish flush with top of Decking board.

Stainless Steel Screws recommended are DFX005 (timber subframe) or DFX006 (Steel Subframe), only for use for the fixing clips. **Screws supplied from PermaTimber® are not designed for use with our Anti-Creep or Start/Stop Clips.**

## CLIPS PER BOARD

Different boards require a different amount of clips per board.

Start Stop clips are used only on the first row of boards. Each Start Stop Clip needs one screw for each board on the joist line. Anti-Creep clips are used on each board, no matter the size of the board (one per board). For more information regarding clips, as well as information regarding how many screws are needed and fixing clips, please visit [www.permacomposites.com](http://www.permacomposites.com) and view our decking calculator for further information.

Maximum Decking Span Requirements			
Decking	Dimensions (mm)	Residential Use	Commercial Use
146	146 x 22 x 5400	450mm	400mm
225	225 x 30 x 5400	750mm	600mm
295	295 x 23 x 5400	600mm	500mm

*Please Note: The above noted spans must not be exceeded. Failure to adhere to spans may increase the risk of board failure. Residential Spans are based on 2 kPa and Commercial spans are based on 5 kPa. Spans are based on joist centres.*

## EXPANSION GAPS

Thanks to its special combination of recycled materials, PermaTimber® Decking will expand and contract per metre along its length. Ordinarily this does not cause any problems, provided special attention is given at the time of installation. Take note of the ambient temperature at the time of installation, and adjust butt joints accordingly by referring to the table.

The boards expand and contract due to differing weather temperatures, much like traditional timber does. When installing the decking, please refer to the expansion table to see what the expansion per metre length is for each of the boards. Half each side refers to how much expansion is caused each side. For example, if the deck was installed at 20°C, each end will be expanded by 0.5mm per metre, equating to 1mm per metre, when compared to 0°C.

Note: When constructing your PermaTimber® Deck, be sure to always let the ends of the boards overhang the end of your last joist. Then cut all of the PermaTimber® Decking boards along the outside edge at the same time to stop the temperature for changing and changing the gap size. This expansion is per metre, not per board, and is expanding lengthways. Please make calculations based upon the length of your board.

The Table below refers to the expansion per metre length for the board when installing the deck. For example, if the deck was going to be installed in the winter at 0°C, the expansion will be 2mm per metre (10.08mm per 5.4m board) in summer at 40°C. Expansion per metre length has a safety factor of +/- 2%.

Gapping Requirements		
Ambient Temperature (°C)	Required gap per metre length of the board at each end (mm)	Required gap for a 5.4m board at each end (mm)
0°C ≤ Ambient temperature < 10°C	1.3 mm	7
10°C ≤ Ambient temperature < 20°C	1 mm	5
20°C ≤ Ambient temperature < 40°C	0.6 mm	3
Ambient temperature ≥ 40°C	0.4 mm	2

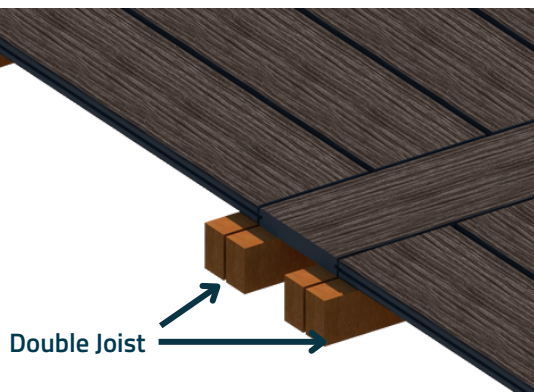
# BOARD JOINING METHODS

Always remember to leave expansion joints when Butt joining.

Butt joins must always occur over a double joist. Staggering butt joints is the best way to manage any effects from expansion and contraction.

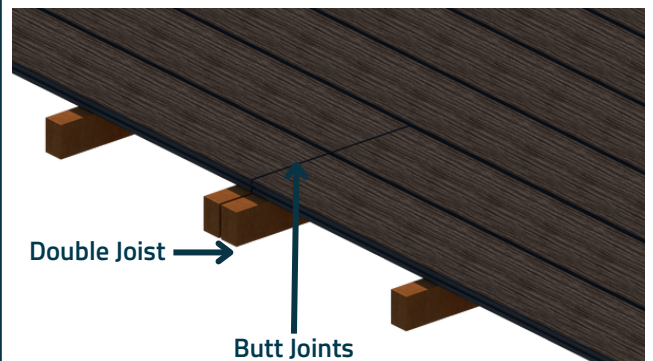
Breaker boards are the recommended method of installation in larger decks.

## 1. Breaker Boards



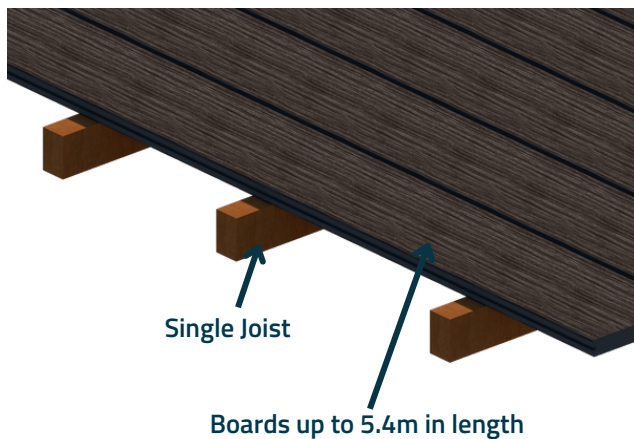
## 2. Butt Joints

Butt joints can be used, but to minimise expansion gaps, boards can be cut smaller. To avoid uneven gapping we suggest staggering the PermaTimber Decking Boards

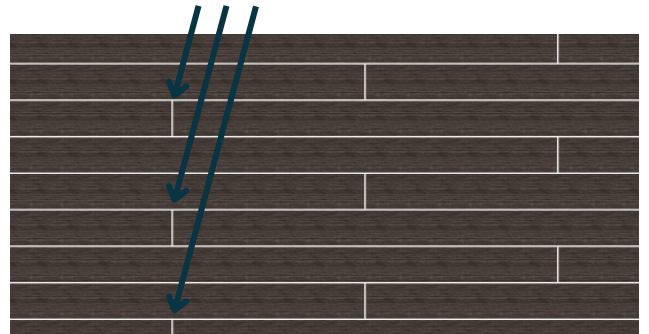


## 3. Full Boards

Can be used on decks of 5.4m in length and under



## Butt Joints

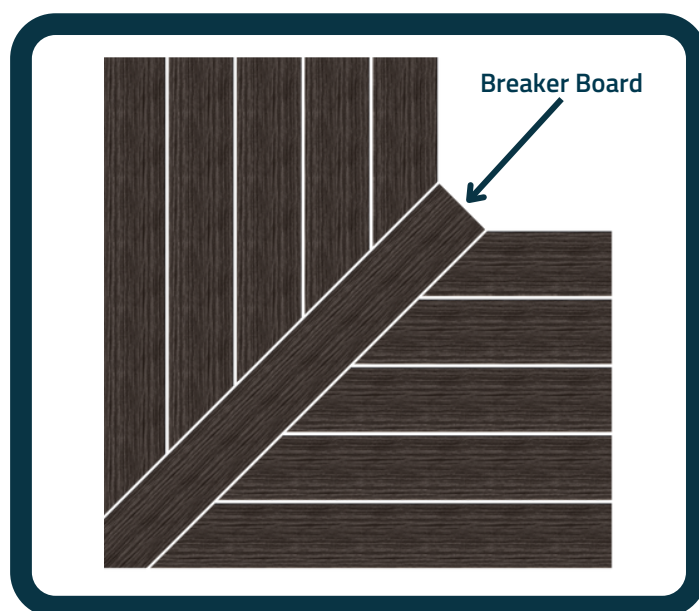
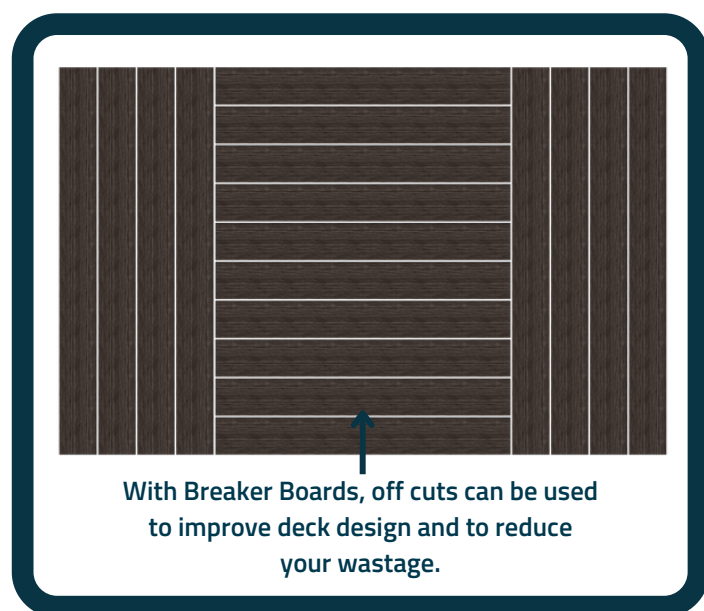
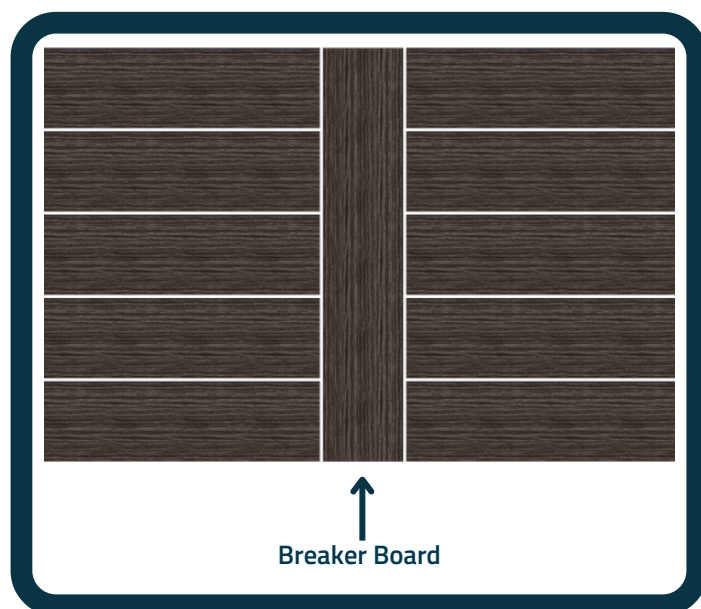
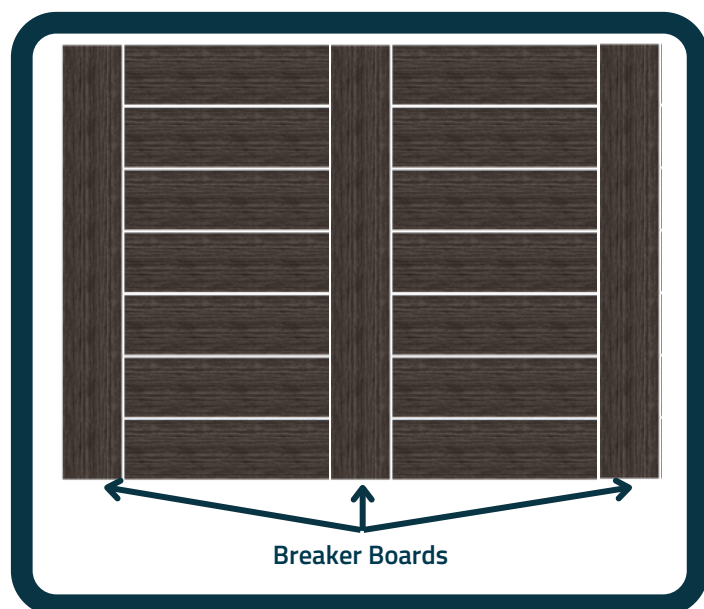


## BREAKER BOARDS

Breaker Boards are a good way to reduce expansion joints. A breaker board is simply a normal PermaTimber® decking board installed at 90 degrees to other boards. Running full boards with butt joints may result in gaps of over 10mm once boards have cooled and contracted. Breaker boards are an effective way to reduce this issue and are the preferred method of installation for PermaTimber® Decking. Breaker boards can enhance your deck design, minimise wastage and eliminate expansion issues.

Breaker boards are supported by double joists on either side, and held down by rebated double fixing clips or anti-creep clips (no double rebated fixing clips for 225 decking, as this uses a different fixing clips. See *Fixings*).

See examples of different breaker board configurations below.

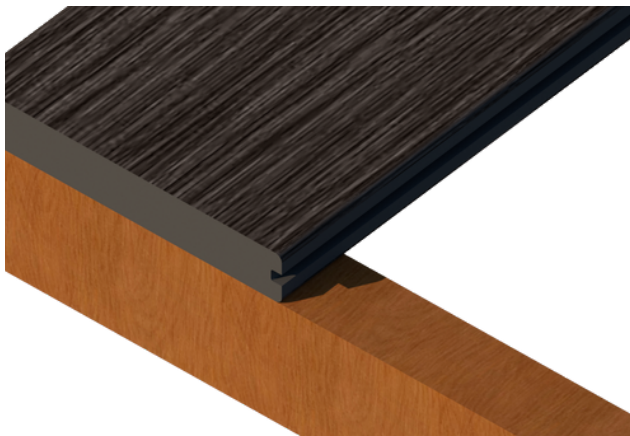
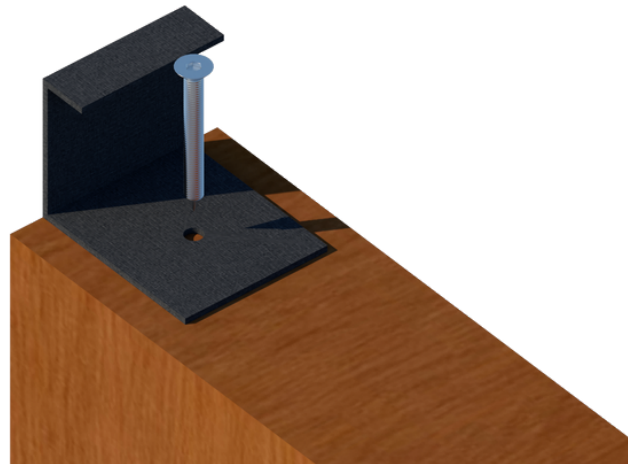


## INSTALLATION STEPS (OPTION 1)

### STEP ONE

Begin laying your deck from the outside of the deck, working towards the wall or house. If the deck is against the wall or house, use a fixing clip against the house /wall to provide the correct spacing.

First, set your start/stop clips up at the end of each joist. Begin by screwing in a Start/Stop clip to the joist. This will hold your decking boards in position. Screws supplied from PermaTimber® are not designed for use with our Anti-Creep or Start/Stop Clips.



### STEP TWO

Slide the first board in against the Start/ Stop clips.

Ensure that the clips are positioned into the manufactured grooves of the decking board.

### STEP THREE

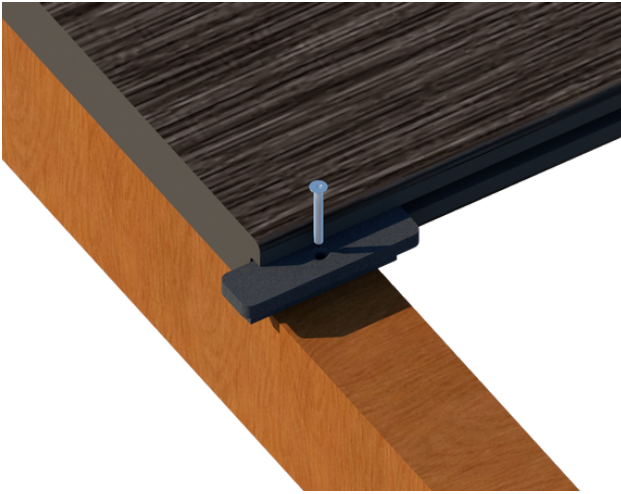
Now install your first Fixing Clip. On each joist, insert a fixing clip so that it is positioned within the groove on the decking board and the screw is threaded into the clip only.

Slide the second board into the first, ensuring the clips slide into position into the grooves.

Fix Clips must be used on each and every bearer, failure to do so may allow the board to flex unnecessarily and will void the warranty.



## INSTALLATION STEPS (OPTION 1)



### STEP FOUR

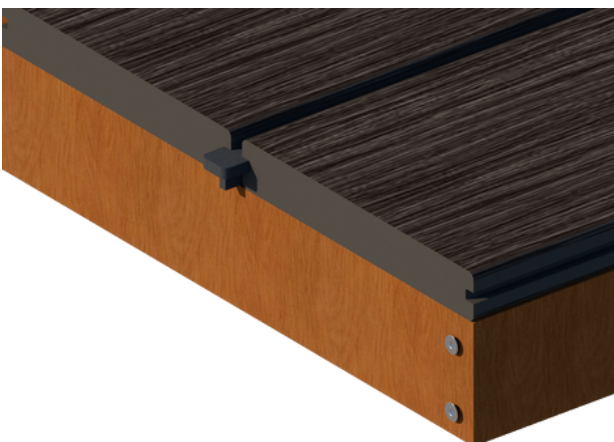
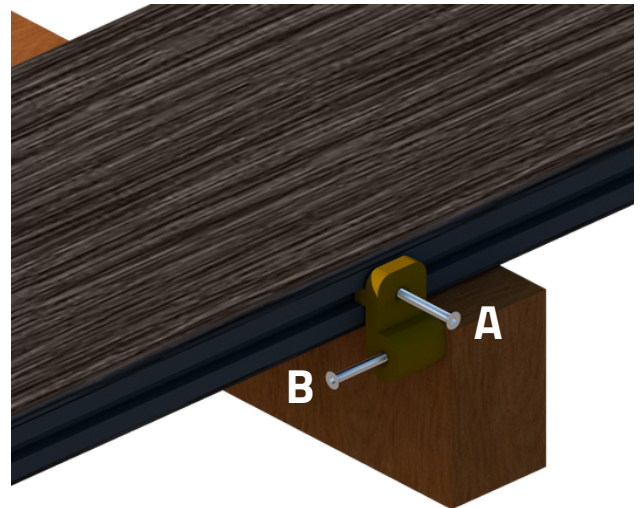
Screw the fixing clip with the supplied screws to the joist using a slow speed on your drill, while applying lateral pressure to the decking boards.

The type of fixing screws that you use will be determined by the sub-frame material. After the board has comfortably slid into place, partially screw the fixing clip down. Then slide your next board into place before fully fixing it. Be sure to use a slow speed on your drill when fixing.

### STEP FIVE

Anti-creep clips prevent the boards from creeping side to side along the joist. First, align your decking board in its final position.

Ensure you pre-drill the side of the Decking board prior to installing the anti-creep clip to prevent splitting. Fix (a) an Anti-Creep clip to the middle of the board, adjacent to a bearer. Then (b) screw the anti-creep clip into the bearer to stop any movement. Use one anti-creep clip per board on the middle bearer. Screws supplied from PermaTimber® are not designed for use with our Anti-Creep or Start/Stop Clips.



### STEP SIX

Repeat steps 3 to 5 until finished. Continue this process until your decking area reaches its final stages.

For your last board installation please refer to steps 7a and 7b.

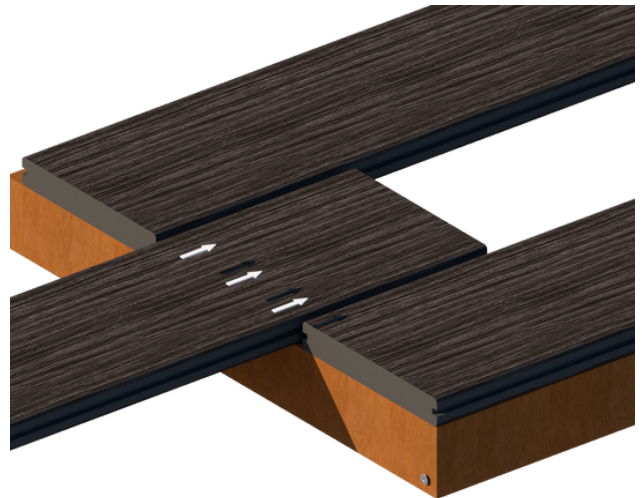
## INSTALLATION STEPS (OPTION 1)

### STEP SEVEN (A)

If your deck is not framed by a wall on both sides, you can use the following method.

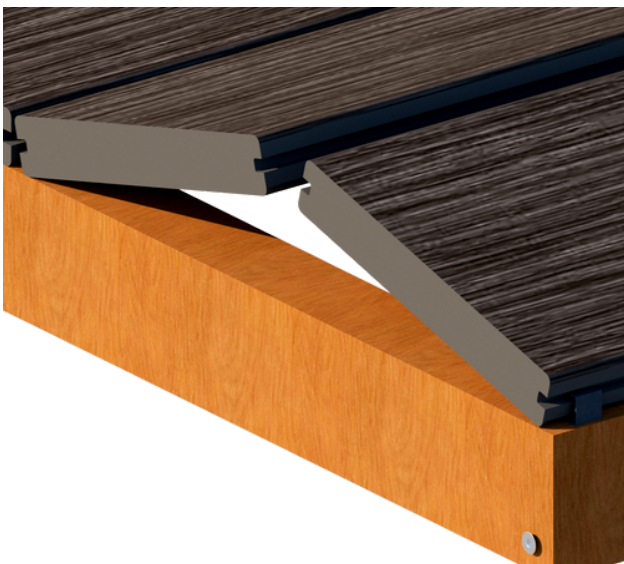
At the end of your deck, fix a Start/Stop Clip to all joists after measuring the correct position. Leaving the second last board from the edge of the deck out, install the final decking board so that the Start/Stop Clips are positioned within the grooves of the board. These Start/Stop clips will give a clean finish to the edges of the deck.

Then insert the fix clips to the remaining joists, ensuring the screw makes contact with the subframe to hold them into position and then slide the second last board in from the edge of the deck. Now you can fully fix the screws.



### STEP SEVEN (B)

If your deck is framed by a wall on either side, you can use the following method.



At the end of your deck, fix a Start/Stop Clip to all joists after measuring the correct position. Leaving the second last board from the edge of the deck out, install the final decking board so that the Start/Stop Clips are positioned within the grooves of the board. These Start/Stop clips will give a clean finish to the edges of the deck. Place fixings clips in between the third last and second last boards. Now you can drop your final board into place. In the last groove begin inserting fixings clips and slide them into place using a screwdriver. Be careful not to scratch your boards. Align the fix clips with your sub frame ensuring you have one for each joist. Once the fix clips and board are in their final positions, you can firmly screw down the fixings.

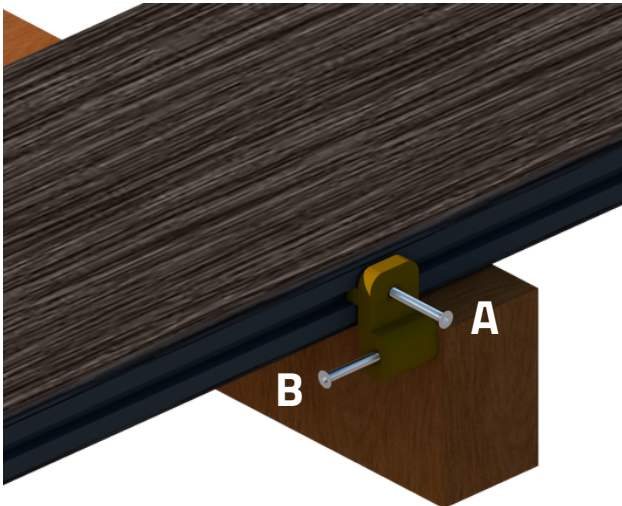
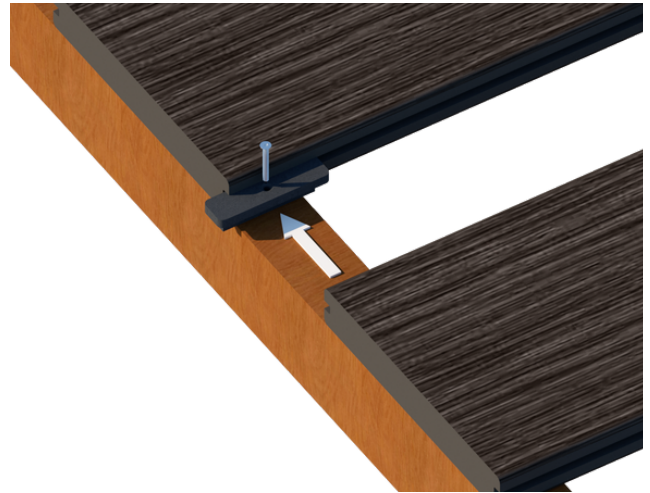
END OF OPTION 1

## INSTALLATION STEPS (OPTION 2)

### STEP ONE

Begin constructing your deck from the outside, working towards the wall or the house. Install the fixing clip into the edge of the deck board.

After when that is screwed in, slide the second board into the first one. Use a fixing clip against the house /wall to provide the correct spacing. Screw this down so the first board becomes secure in place.



### STEP TWO

Anti-creep clips prevent the boards from creeping side to side along the joist. First, align your decking board in its final position.

Ensure you pre-drill the side of the Decking board prior to installing the anti-creep clip to prevent splitting.. Fix (a) an Anti-Creep clip to the middle of the board, adjacent to a joist. Then (b) screw the anti-creep clip into the bearer to stop any movement. Use one anti-creep clip per board on the middle bearer.

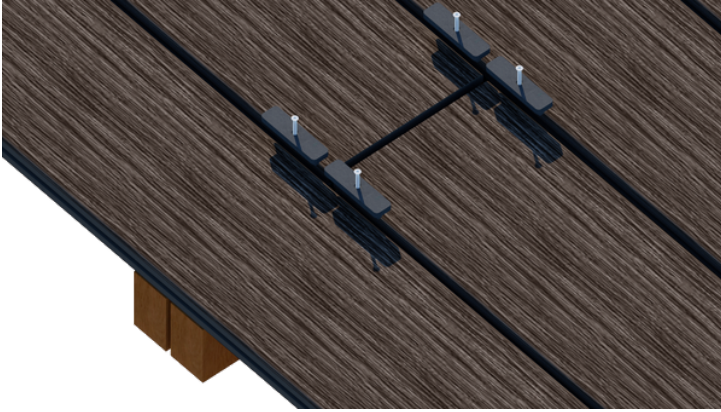
### STEP THREE

Slot the second board into the first board to ensure a consistent gap. The fixing clip will determine the gap between the boards width-ways.

All of this information can be found under the heading *Expansion Gaps* within this installation guide.



## INSTALLATION STEPS (OPTION 2)



### STEP FOUR

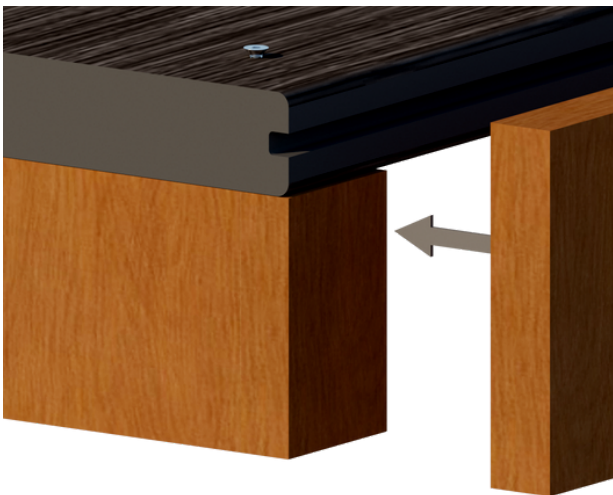
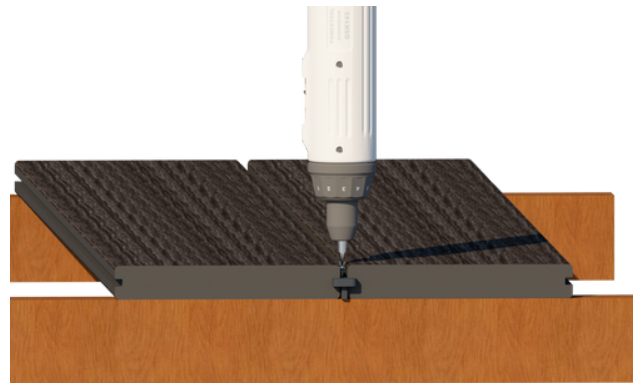
Always make sure that the fasteners are on their own independent joists. With two boards meeting each other, a sister joist must be installed in order for the deck to retain it's consistency in strength.

Each end of the board must sit on it's own separate joint, and no boards should share the same joint when fasteners are installed.

### STEP FIVE

Now continue Steps 1-3 for each of the remaining boards. Make sure all gaps remain consistent and all boards are secured in place.

Continue with this method until the last board is ready to be installed.



### STEP SIX

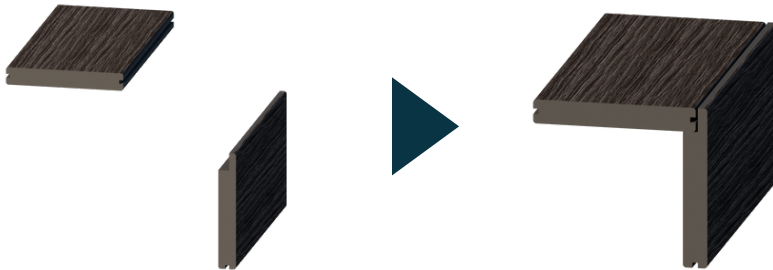
Any face fixing must have an oversized hole for movement. Screw a hole 1mm bigger than the screw, then face fix with the oversized hole. Then, face fix a finishing board to hide the screw. See *Finishing Boards* on Page 14 for more information. Minimum edge to drill hole: 25mm.

END OF OPTION 2

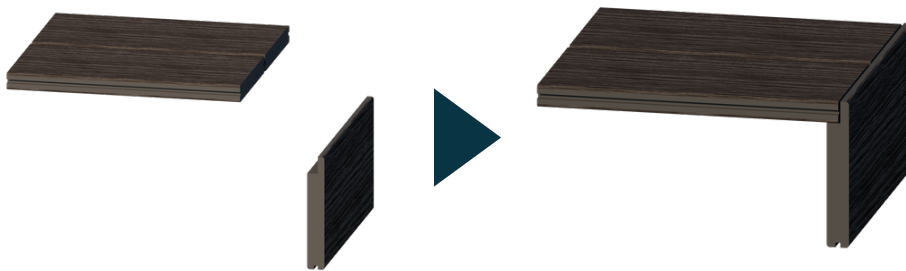
## EDGE FINISHES

There are three different ways you can finish off the edges with our PermaTimber® Decking. Each finish may need the help with a saw or a router, please make sure you are trained with this machinery when using it. If you are not trained, finishing boards will be the easiest way to complete your PermaTimber® Decking as this requires no specialty tools.

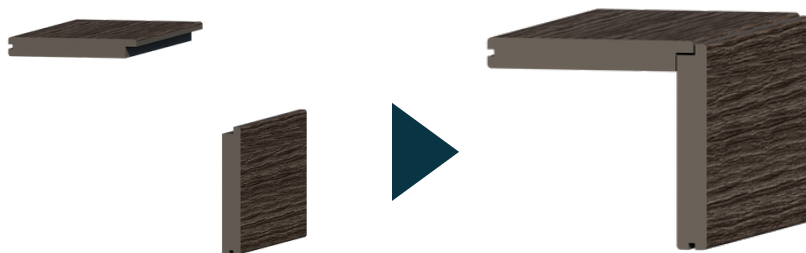
See below for different diagrams and types of fit for finishing.



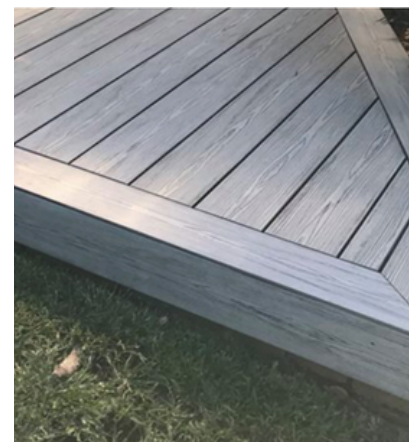
With the edge Board, rip the rebate closest to the bottom of the decking board off. Then attach the decking board lengthways by slotting it into the crevasse. Routing may be needed for the decking board to be flush with the crevasse.



On the edge board, rip the rebate closest to the bottom of the board and attach the other decking board via slotting in into the newly made crevasse. Routing may be needed for the decking board to be flush with the crevasse.



With the decking board, rip the bottom rebate that will be connected to the edge board. Then, rip the bottom rebate off the decking board. Now, making sure they align, connect the two boards together, slotting in until fit. Routing may be needed for a better fit.

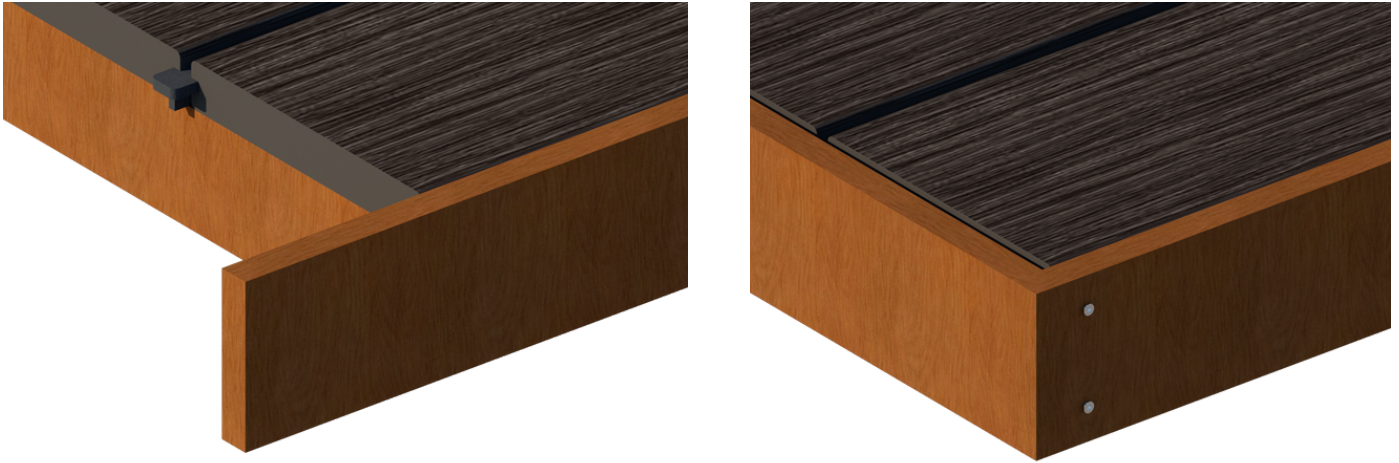


## FINISHING BOARDS (NOT REQUIRED)

You can use touch up paint to cover the heads of the screws if you wish.

It is necessary to pre drill a clearance hole in the Finishing Board. Ensure that the pilot hole is 1mm - 1.5mm larger than the gauge of the screw to allow for the expansion and contraction of PermaTimber Finishing Boards. Screws required for fixing boards are Stainless Steel Decking Screws.

This will give your deck a complete finish, with no fixings being visible from the front, back or sides.



## MAINTENANCE

Low maintenance is required!

One of the great benefits of all PermaTimber® products is that they don't require any oiling, painting, or staining. Simply sit back and enjoy your deck after installation.

Chairs will need a protective caps on each of their legs to ensure that no scratches will be made from pulling/pushing chairs onto the deck.

Scratched your deck? Don't stress! Light scratches can be sanded lightly off so that your deck looks fantastic for life! Sand in the direction along the board only. We are not liable for items that are placed on the deck where no protection is involved.

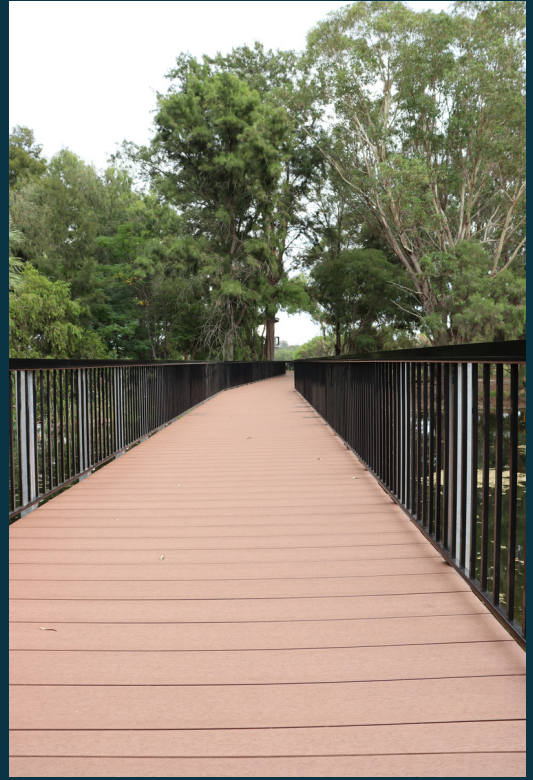
When new, residuals tannins may be visible in the wood floor component. These tannins may leach out the first few times it is wet, but the tannins can be removed by washing with water multiple times or if the board is exposed to water and dried off several times. For more information please view our care guide regarding tannins.

If you need to clean your deck, simply hose it down and use a brush to remove any stubborn stains. You can also use a light pressure cleaner and some mild detergent.

There is a complete care guide available on our website to detail how best to clean your decking. Visit [www.permatimber.com.au](http://www.permatimber.com.au)

For more information about maintenance and care of your boards, please refer to the information on our care guide by scanning the QR code below.





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