

**Important: Read all section before you start.**

<p><b>The diagrams and instructions outlined in this guide are for illustration purposes only. Decking should be installed by a competent individual.</b></p>	<p><b>Planning</b></p> <p>Plan the layout of your deck before starting to ensure the best possible results. We recommend drawing out a plan of your proposed project to minimise errors and make your deck perfect.</p>
<p><b>Safety</b></p> <p>When dealing with any type of construction project it is necessary to wear appropriate safety equipment to avoid any risk of injuries. Castle Composites recommends the following safety equipment when handling, cutting and installing CastleWood Decking:</p> <p>Gloves, Respiratory Protection, Long Sleeves, Trousers, and Safety Glasses.</p>	<p><b>Construction</b></p> <p>CastleWood is not intended for use as columns, support posts, beams, joist stringers or other primary load bearing members. CastleWood must be supported by a solid substructure. While CastleWood Decking is great for replacing old deck surfaces, it cannot be installed on top of existing deck boards.</p>
<p><b>Tools</b></p> <p>Standard woodworking tools may be used. It is recommended that all blades have a carbide tip. Standard stainless steel or acceptable coated deck screws and nails are recommended.</p>	<p><b>Routing</b></p> <p>CastleWood Decking comes with all grooves already routed and no further routing should be carried out.</p>
<p><b>Environment</b></p> <p>A clean, smooth, flat and strong surface is needed to install CastleWood correctly. If installation does not happen immediately, CastleWood should be stored on a flat surface at all times.</p>	<p><b>Static</b></p> <p>Static build-up is a natural occurring phenomenon that can occur with many plastic products. Dry and windy environments may make this even more apparent. This can vary depending on climate and age of the deck.</p>

## **Ventilation**

CastleWood Decking cannot be installed directly onto a flat surface – it must be installed on a substructure, allowing adequate and unobstructed airflow under the deck, which prevents excessive water absorption. A minimum of 100mm between deck and ground level should be left under the deck surface to ensure adequate ventilation and to promote drainage and drying.

## **Heat and fire**

Excessive heat on the surface of CastleWood Decking from external sources such as fire can potentially cause CastleWood Decking to melt, sag, warp, discolour, increase expansion/contraction, and accelerate weathering. Additionally, reflection of sunlight from energy efficient windows (windows with Low-Emissivity (Low-E) glass) can potentially warp heat affected products.

Current or potential CastleWood customers who have concerns about possible damage by Low-E glass should contact the manufacturer of the product containing the Low-E glass and seek a solution to reduce or eliminate the effects of reflected sunlight.

## **Fasteners**

When fastening CastleWood, we recommend that you use our 'T-Clip' Hidden Fastener System or the Aslon Aluminium Substructure System, both of which are available from Castle Composites.

Use white chalk, straight boards, or string lines as templates for straight lines. NEVER USE COLOURED CHALK. Coloured chalk can permanently stain CastleWood and we strongly recommend against using it.

## **Board Spacing**

Two board ends should never be installed on the same joist. When butting up the ends of the board they must be installed on separate joists with separate clips. You should ensure that you leave a gap of 3mm between each board to allow for expansion/contraction. At the board joints there must be a joist at each end of the boards. These double joists should have a gap between them of at least 5mm to allow rainwater to drain away from the board joints.

## **Framing**

First determine the decking span. i.e. How far apart your joists will be.  
Adequate spacing of the joists is required to keep the deck boards from bending.

**For commercial applications your joists should be spaced, at a maximum, every 300mm.**

**For domestic/residential applications your joists should be spaced, at a maximum, every 400mm.**

The frame needs to be completely level before installing any boards.

## **Decking**

When installing the deck, the first and last board of your project will need to be held in place with a starting accessory. Every other board will use the hidden fasteners for installation.

## CastleWood

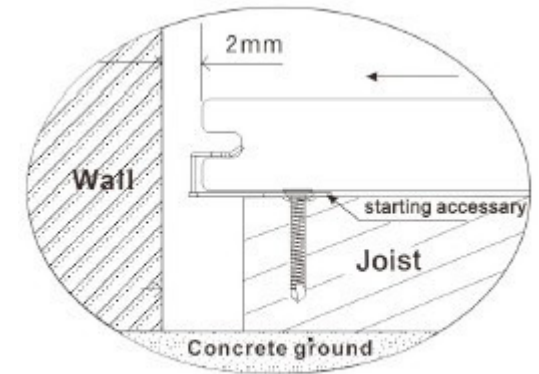
### Using a Starting Accessory

1. A starting accessory can be used by first fixing the accessories onto the joist.
2. First pre-drill into the joist, then fix the starting accessories into the joist as shown in diagram 1.
3. Then take your first board and push it into the starting accessories as shown in Diagram 1



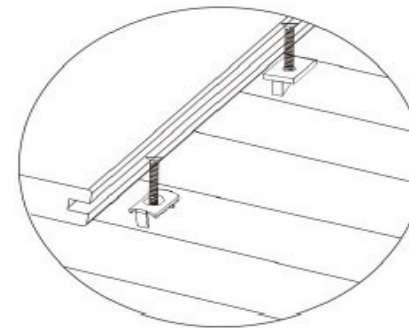
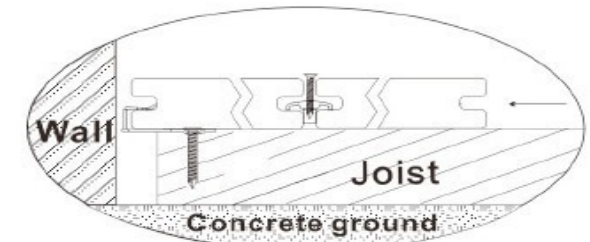
TC-5  
(Stainless Steel)

## CastleWood Decking Installation Instructions

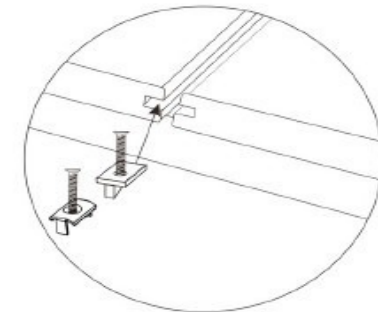


**Diagram 1**

**Before installing hidden fasteners, always consider which style/pattern of deck you would like. Plan out where the locking and moving clips will be**

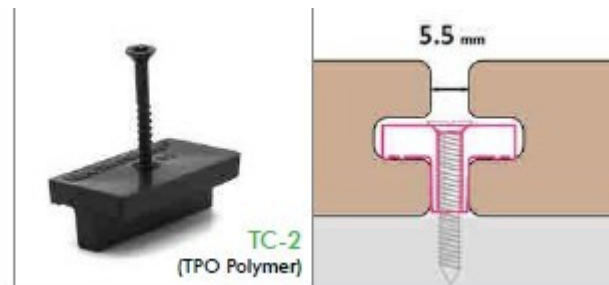


take your next board and slide it into the fasteners as shown in diagrams 2



**T Clip System**

- Economical
- Easy installation
- 5.5 mm gap



**T-Clip Hidden Fastener System**

Installing hidden fasteners with CastleWood is relatively simple and quick compared to regular timber.

**going on each joist.**

Installing hidden fasteners in CastleWood:

### **T-Clip System**

1. First slide the TC-1 and TC-2 clips into the groove of the boards, with the screws facing up.
2. After getting all the TC-1 and TC-2 clips into position,  
  
and 3.
3. Now tighten the screws from the top to lock them into position.
4. Repeat steps 1-3 until the deck is finished.

**Note: For an easier installation, try first pushing all the boards together and then coming back and sliding the T-Clips into the grooves and then into place on each joist, as shown in Diagram 4.**

### Expansion and Contraction

Expansion and contraction needs to be taken into consideration when installing any wood-plastic composite. It's a natural tendency for objects to expand and contract from changes in temperature.

We have taken this into consideration and created a clip system which will ensure your deck experiences zero warping or distortion after installation so that you can enjoy the perfect deck everyday.

We generally recommend placing the TC-1 clip at the centre of your layout to allow expansion to take place at either side. An expansion gap of 2-3mm should then be left at both ends of the boards to avoid warping or distortion due to expansion and contraction.

### Functions of each clip:

**The TC-1 secures the board and controls the direction in which expansion and contraction takes place. The TC-2 locks yet also permits flexibility so that each board can still expand and contract enough so that it doesn't warp, distort, or buckle from these movements.**

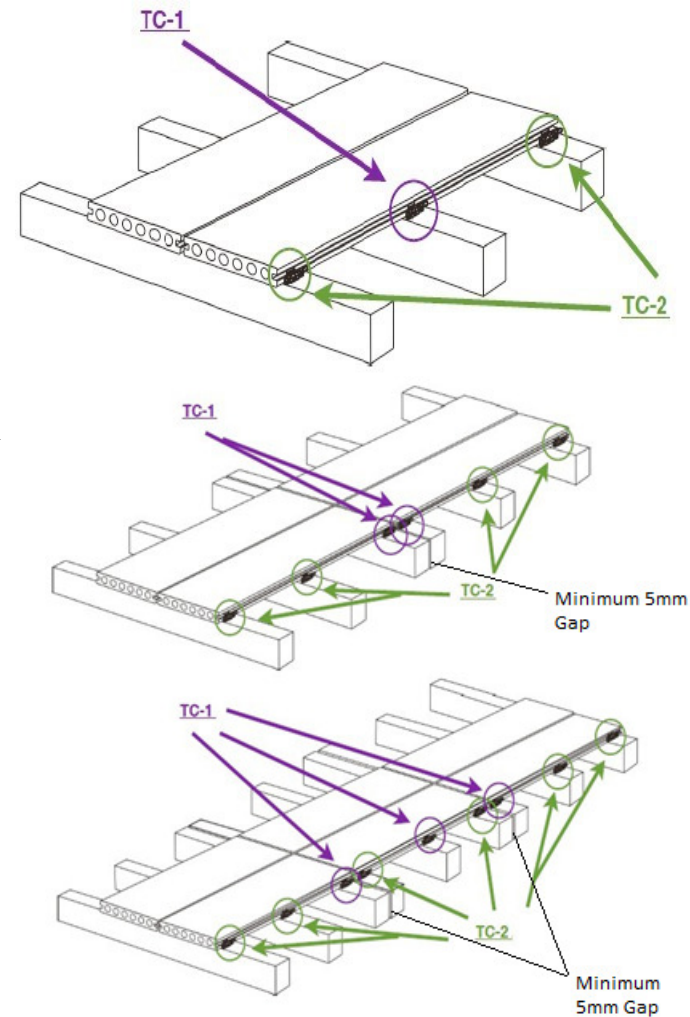
### **Fascia Board**



TC-1  
(Stainless Steel)



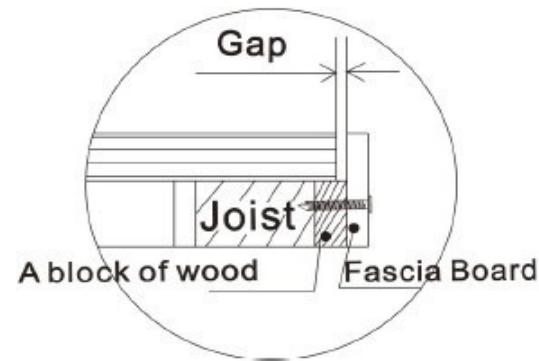
TC-2  
(Plastic)



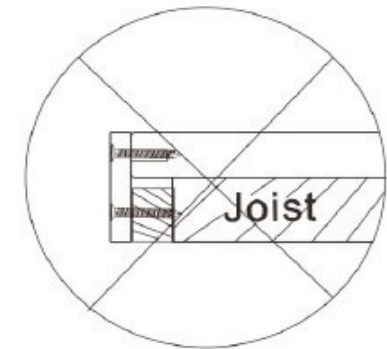
First make sure you know which type of installation you are doing for your fascia board. There are two types:

**Option one: Installing against the length of decking**

1. Firstly, the distance from where the board is locked to the end of the deck where the fascia board is to be installed, needs to be measured.
2. After measuring, remember that your expansion gap will be 2mm from the locking clip.
3. Since there will be a gap at the end of the deck, you will need an extra piece of wood at the end of the joist to make up the gapping distance.
4. The fascia board will now be installed into the block of wood and into the joist as shown in diagram 5.



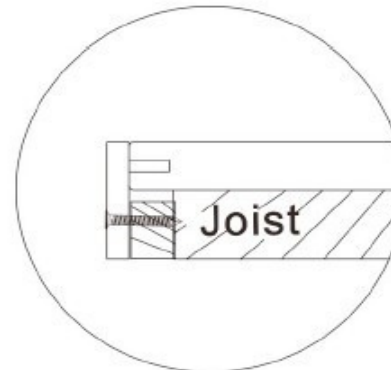
**Diagram 5**



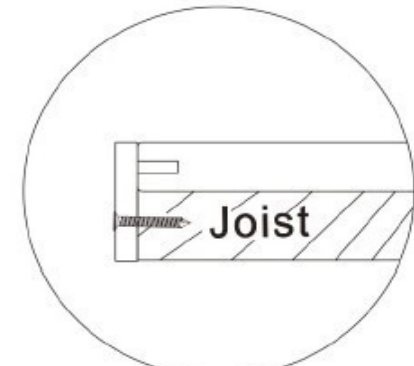
**Diagram 6**

**Option two: Installing against the width of the decking**

1. If you have installed where the edge of the board hangs over the joist, a block of wood will need to be added, as shown in diagram 7.
- If you have installed where the edge of the board is flush with the joist, then the fascia will be installed through the joist as shown in diagram 8.



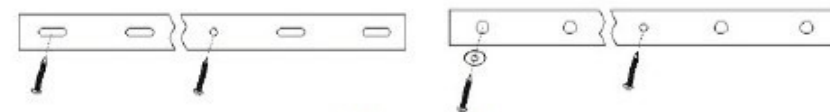
**Diagram 7**



**Diagram 8**

If you have installed using the TC-5 starting accessory, you will need a gap of 2-3mm between the board edge and the fascia board to accommodate.

2. First, pre-drill the holes in the fascia board.



**Diagram 9**



*(Continued overleaf...)*

You should fix your board in the middle, as shown in diagram 9, with oversized or routed holes to either side to allow for thermal movement. It is recommended that you use washers.

3. The fascia board will be installed into the block of wood and through the joist.

**Note: Never install the fascia by drilling into the decking, as shown in diagram 6.**

**You should always install the fascia into the joist.**

**You should always pre-drill the fascia board.**

## Warranty

CastleWood Decking boards come with a 25 year warranty for residential applications and 10 years for commercial applications.

The following are covered under the warranty:

1. CastleWood will be free of any mould. That is, mould originating from within the board and not caused by biodegradable materials resting on the surface of the deck. i.e. vegetation build up, or falling leaves.
2. CastleWood will be free from stains. (i.e. household liquids, such as, ketchup, mustard, beer, wine, oil etc...) Due care and attention should be paid to ensure that substances with the potential to cause staining are not spilt on the deck, and that where they have been spilt, that they are cleaned up within a reasonable time frame.
3. Colour fading. CastleWood may subtly change colour through time and normal wear and tear. However, where there has been an extreme change of colour such as Walnut changing to pink, blue, green, white or yellow, we will replace these boards.
4. Cracking of any kind that is not due to improper installation.
5. Bending, so long as you have adhered to our installation guide and the maximum spans listed therein.
6. De-lamination of the boards (where the surface covering comes away from the board, revealing the core.)
7. Chalking. This is where the whole product turns white.