

Deck Preparation

See full instructions on www.wrg.ie before starting.

DECK
CALCULATOR
PAGE 49

FAQ'S
PAGE 50

Planning Your Deck

Designing and building a deck can be a fun and rewarding experience. You probably have given some thought as to what you want in a deck, now is the time to really visualise it. What will your deck be used for, relaxing, entertaining, will you put garden seating, BBQ and tables with a parasol on it and how many people might you have on your deck. Will there be children and elderly people using it.

These are the questions you need to look at before starting.

- (1) Where will I install the deck.
- (2) What size do I want the deck.
- (3) Which deck board do I like best
- (4) Decide on what direction you would like the boards to run
- (5) Which substructure will I use: Hardwood, *Steel or Aluminium joists.
**Steel joists > 2mm must be pre drilled and specific Steel Joist Installation Kits must be used.*

Follow the fitting instructions carefully, see full instructions on www.wrg.ie before starting.

Location & Deck Size

When deciding the size of your deck, look around at the space you have, your house, the size of your garden and what proportion of deck will enhance and improve the look of it. Your deck should have a southerly aspect. Is the ground level or falling? How close to the house do I want it? When deciding on the size of deck you need to take into account that the deck boards are 3.6m in length. You can make a deck any length, but you do not want to have a deck with very short end boards.

Tools Required

Whiteriver Decks can be installed using the same tools that you would use for fitting any timber deck. • Tape Measure • Electric Saw • Level • Square • Cordless Drill • Building Line • Safety Goggles

General

Composite decking has a composition of 60% timber, 30% HDPE Plastic and 10% Resins / Pigments etc. While the timber element is very stable (it is kiln dried to very high temperatures to remove the cell structure), the HDPE expands and contracts on the length of the board in line with changes in temperature and humidity. It is necessary to leave a perimeter gap of 10mm around the entire deck and any fixed objects/obstructions and also a 5mm spacing must be left at each short board end to allow for normal seasonal movements.

Design

Once you have made a decision on the above, now you need to decide on the deck design. A deck that is well designed can do amazing things to any home. First decide on the direction you would like the boards to run. Will there be steps? Would you like hand rails around it? What colour will suit your garden and house best?

Ventilation and Site Conditions

The site should be free draining and there should be a fall of at least 5% to let water drain off. The ground/substructure should be properly supported - please consult with an engineer if you are unsure. Whiteriver composite decking 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 decking to prevent excessive water absorption.

Good ventilation is the key to your deck performing well in the long term.

For non screed surfaces, plan a minimum of 100 mm (4 inches) of continuous net free area under the decking surface. This is required to allow for adequate ventilation on all deck types so air can circulate freely between adjacent joist members to promote drainage and drying. Air must have an entry point and exit point to the subconstruction.

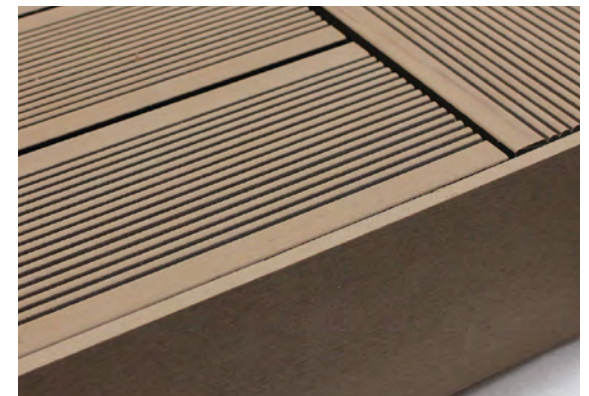
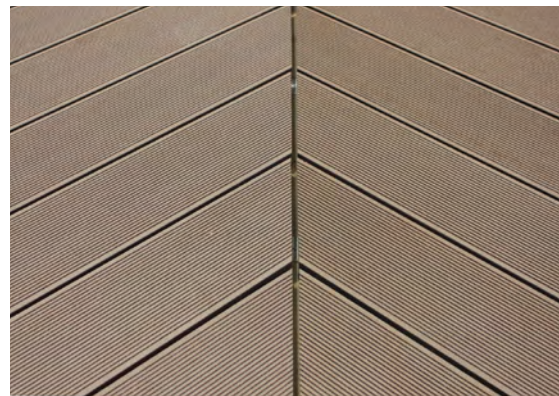
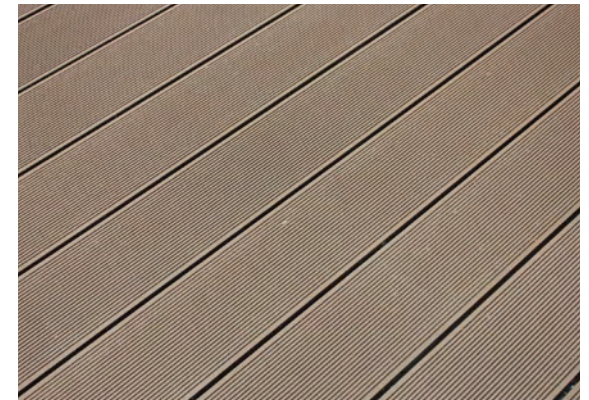
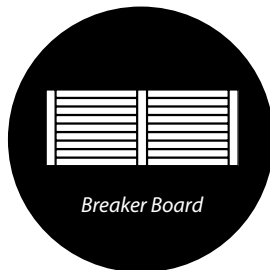
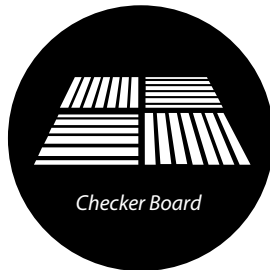
For screed surfaces, we recommend a minimum clearance of 100mm (4 inches) from the ground level. In this case, the joist should be built in two criss cross layers to allow for air movement. For small balcony areas, less than 10m², it is possible to have a lower clearance provided sufficient drainage and air movement can be provided. For balcony projects, we recommend getting the design reviewed by an engineer.

Please note areas that are walled in on all sides are not suitable for deck installation as there will not be enough air movement under the deck. If there is any dampness under the deck, it can lead to mould build up underneath the deck and excessive expansion and contraction in the boards. In summary, it is vital that the area underneath the deck is free draining and per above, adequate ventilation is provided for.

If you require any technical advice, please contact our sales office.

Direction of deck

There is no correct deck direction, it is purely personal preference but whatever you choose dictates the sub-frame design and configuration. Things to consider: Think about where you or your guests will view the deck. Looking along the length of the boards will make the deck look longer, while looking across the boards creates an illusion of width. Would you rather the deck looked longer or wider? Also, most of our deck boards contain grooves which affect both the slip resistance qualities in particular directions and also the aesthetic of the board. Board lengths are 3.6 metres long.



Composite Decking Installation Do's & Dont's

✓
LEAVE A 10MM GAP
AROUND WHOLE DECK
TO ALLOW FOR
MOVEMENT

✓
ENSURE THERE IS
GOOD AIR CIRCULATION
AROUND WHOLE
DECK

✓
LEAVE 5MM
EXPANSION GAP
BETWEEN ALL
BOARDS

✓
DOUBLE JOIST
WHERE BOARD ENDS
MEET. EACH BOARD
END SHOULD HAVE
ITS OWN CLIP
& JOIST.

✓
USE GOOD
QUALITY HARDWOOD
JOISTS

PRE DRILL FACIA
BOARDS BEFORE
FIXING

✓
USE RECOMMENDED
CLIPS TO SECURE
BOARDS TO JOISTS

✓
USE STEEL
INSTALLATION KITS FOR
FIXING TO
STEEL JOISTS

✓
PRE DRILL STEEL
JOISTS TO RECEIVE
STAINLESS
STEEL SCREWS

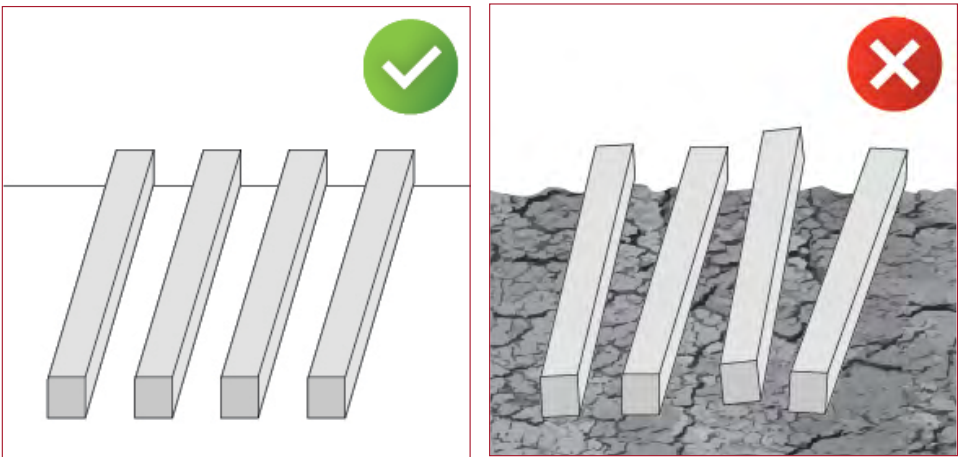
✓
ACCLIMATISE BOARDS
TO THE ENVIRONMENT
FOR 3 DAYS PRIOR TO
INSTALLATION

✗
SCREW DIRECTLY
THROUGH BOARDS

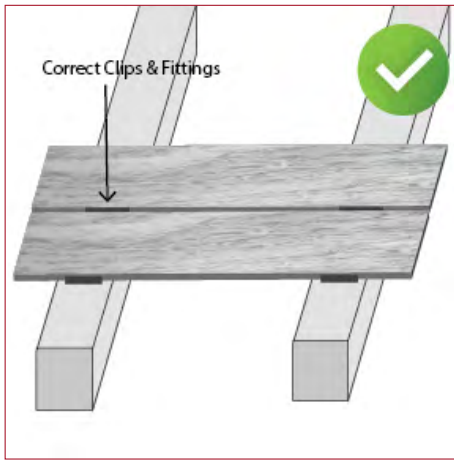
✗
STORE BOARDS
ON SOLID OR UNEVEN
SURFACES

✗
INSTALL IN AREAS
THAT HAVE WALL
ON ALL SIDES

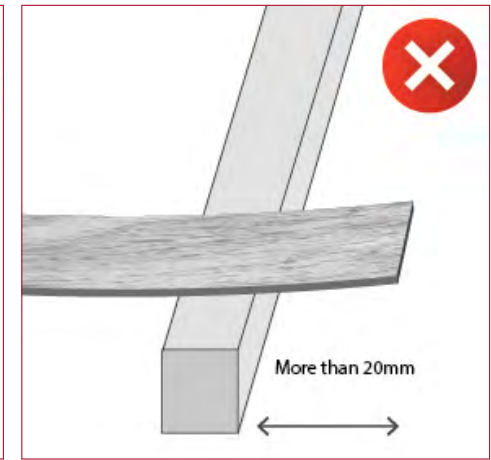
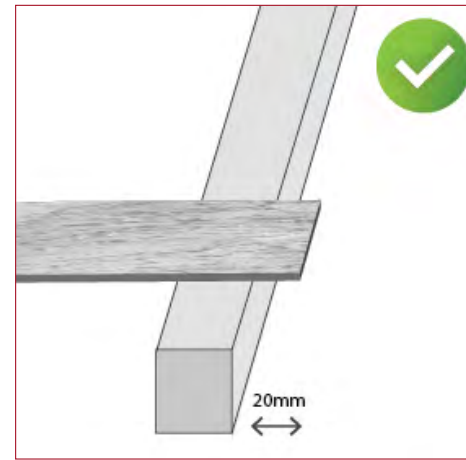
*Please read full instruction before starting installation. Failure to install composite decking correctly will result in the deck becoming structurally unstable.
A 10mm gap around the whole deck must be left for expansion and a 5mm gap between board ends.*



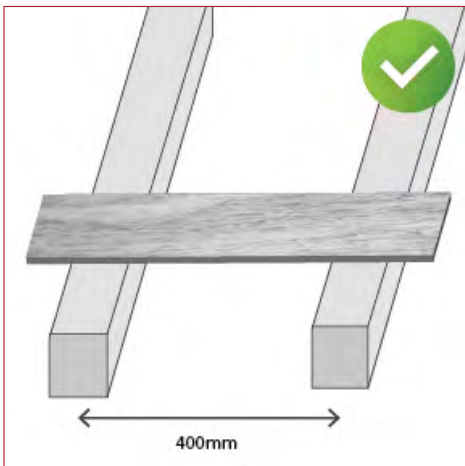
A structurally sound sub frame must be installed ensuring there is no movement prior to fixing boards to the joists. A 5% fall to allow water to drain and a minimum 100mm free air space between the boards and the ground beneath to allow sufficient airflow to prevent the build up of moisture is essential.



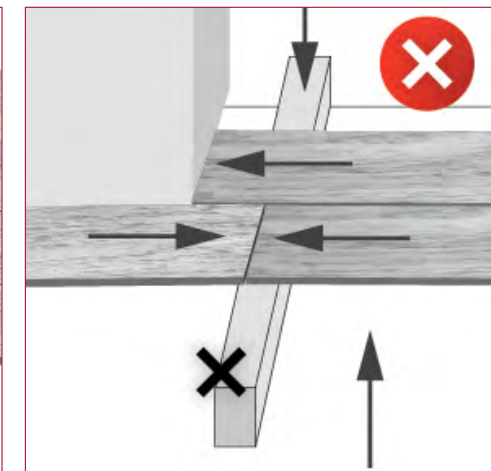
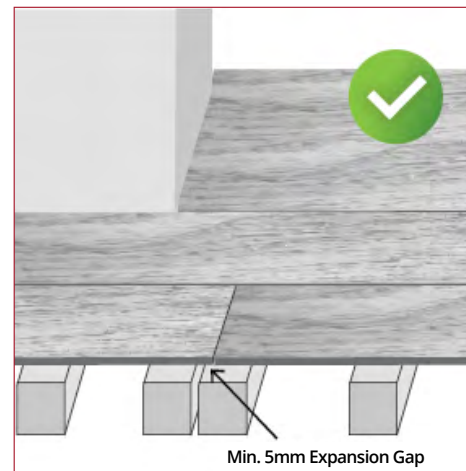
Composite decking should only be installed using correct clips and fixings - failure to do this will effect the structure of the deck as well as warranty. Never screw directly through the boards. Steel joists >2mm must be pre drilled and specific Steel Joist Installation Kits must be used.



Maximum overhang 20mm



Joists must be set to maximum 400mm centres for stability and to avoid warping.

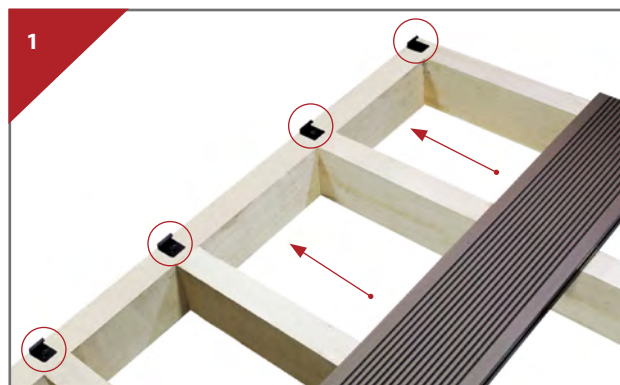


Board ends butted together must be supported by separate joists and have a min 5mm gap for expansion. Failure to do this may result in structural failure and warping.

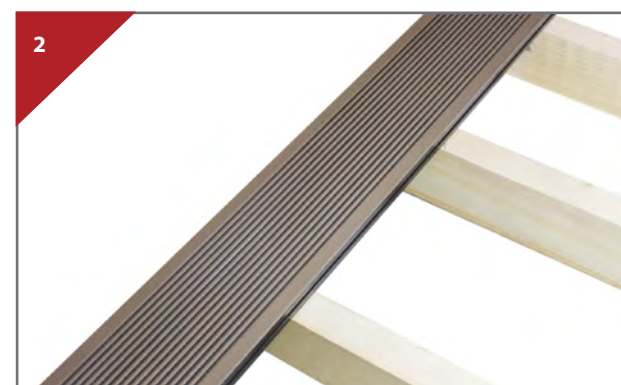
Deck Quick Installation Guide

Before you start here are a few tips:

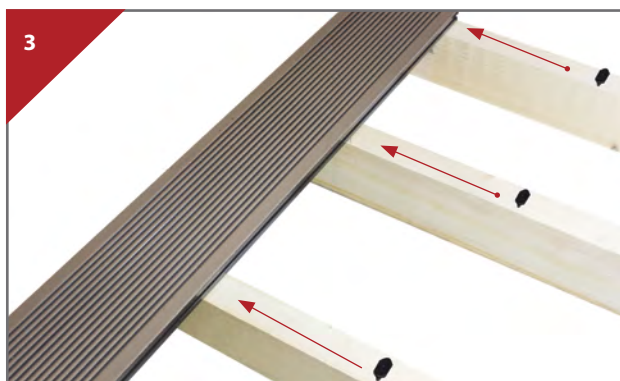
- Make sure you have ordered enough material, so as not to be short. Allow for about 5% waste.
- Store decking on site for at least 3 days, raised off the ground, lying flat and keep it dry.
- Read full set of instructions on www.wrg.ie before starting.
- Ensure there is adequate ventilation under deck. Air should have an entry point and exit point to the subconstruction.
- Make sure you allow for expansion of the decking. Expansion must be allowed on all butt ends including where the deck meets posts and other fixed objects. No objects e.g. post and railing systems etc. should be fixed directly to/through the deck as this will prevent seasonal movement. These should be fixed to the substructure.
- There should be good drainage under deck and there should be a minimum fall of at least 5% to allow for water drainage.
- It is essential to use a movestop clip on the joist nearest the centre of every board. This minimises the amount of expansion that the board can do.
- Whiteriver decking is approved for use over joist centres of maximum 400mm/16" (300mm/12" in commercial use).



Secure start/end clips in line with each joist ensuring that you have allowed an expansion gap of at least 10mm between the first row of deck boards and wall. If two end boards meet on a joist use a start/end clip on each board. Hollow deck boards are not suitable for face fixing.



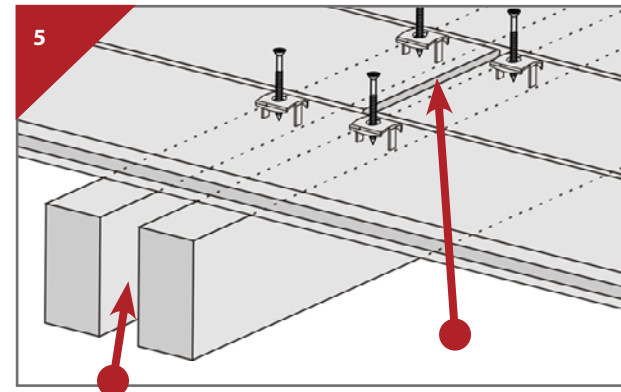
Push the first deck board into the start/end clip. Check that the board is straight and fully inserted into the clip. Please note an expansion gap of 10mm must be placed around any fixed objects within the decking e.g. stair case, post brackets and any permanent fixtures that may prevent the decking expanding and contracting naturally.



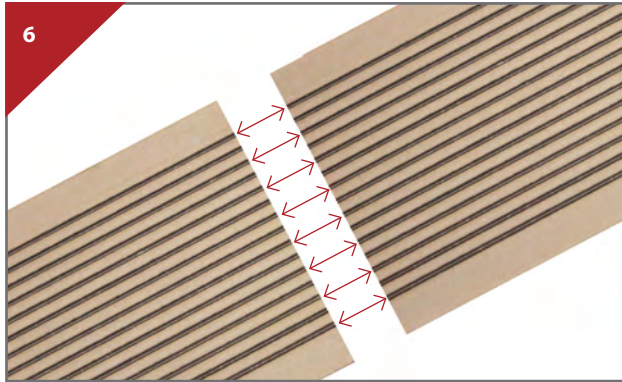
Insert a standard clip into each deck board in line with joist and screw fully but do not overtighten.



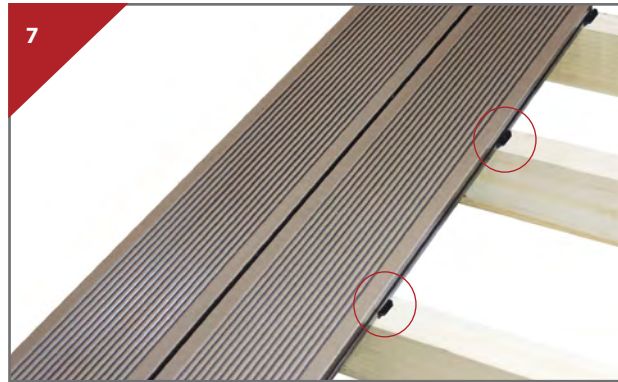
It is very important to install one movestop clip per board onto the joist nearest the centre of the board. This helps maintain a consistent expansion gap.



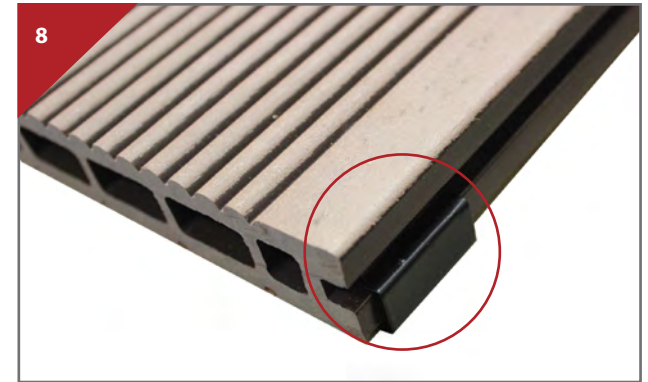
All clips should be on their own independent joists i.e. when two board ends meet each other there must be a sister joist. The end of each board must sit on its own joist with a gap of 5-10mm between joists to allow leaves, dirt and debris etc fall through the deck boards as per image above.



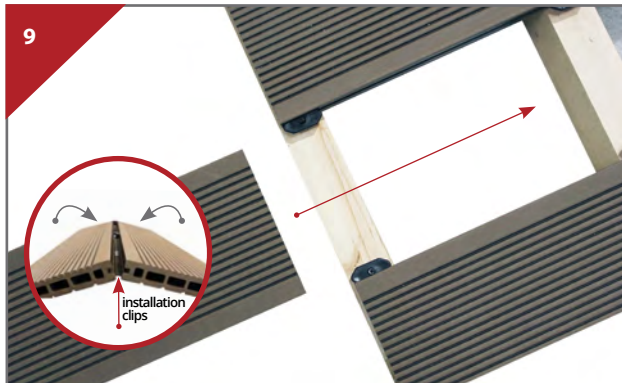
Where the short ends of the deck boards meet, ensure that you leave a gap of 5mm to allow for seasonal expansion and contraction.



Push the second row of boards into the previous installed row of boards making sure that the deck board grooves are in tight on the clips. Continue to keep inserting clips and boards in this way.



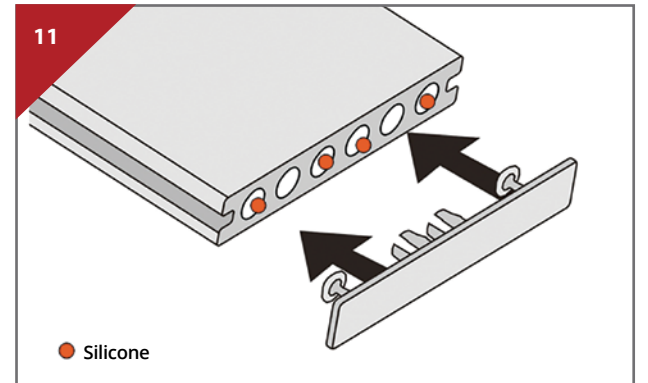
For the last row of boards use a start/end clip in line with each joist. You need to use these clips even if you putting on a fascia board.



If not framed by wall or building on each side, the second last row of boards can be slid into position after you have fixed the last row and the clips for the second last row have been fixed into position. If a wall or house prevents sliding the board in, fix the last board using the start/end clip. Next insert fixing clips into groove of board and then slide them along with a screwdriver into position. (See Insert)



You can use a solid fascia plank for a great looking finish. It is very important to predrill all composite material prior to fixing with a hole slightly bigger than the screw. Fix in two stainless steel screws into the substructure at intervals of 300mm – the fascia board must be pre drilled and fixed to a solid timber plank in all areas (not directly to the butt ends of exposed joists). You must leave a minimum 40mm gap between the bottom of the fascia and the ground to allow for ventilation.



Alternatively place end caps in front of any exposed hollow boards ends and push in as shown. A mallet could be used as well to push in the end caps. A dab of external silicone sealant should be used on the end cap or inside the holes of the board in order to secure the end caps better.

Fitting Posts & Railings

NOTE: IT IS IMPORTANT THAT COMPOSITE MATERIAL IS PRE-DRILLED PRIOR TO INSTALLATION OF ACCESSORIES.

Step 1

As the diagram 2.1 below shows, firstly use expansile bolts to fix the Post Bracket in the right position of measured posts on the concrete ground or in case of timber joists, use coach screws suitable for outdoor use. The post bracket should be fixed to the sub-construction, not the decking. **We recommend that the spacing between two posts should be not more than 1800mm;** this distance is based on the specific spacing between two Spindles. (The standard spacing between spindles is 100mm) Insert the posts into the Post Bracket, then using fixing screws, fix the posts through the holes of the angle iron on the Post Bracket:

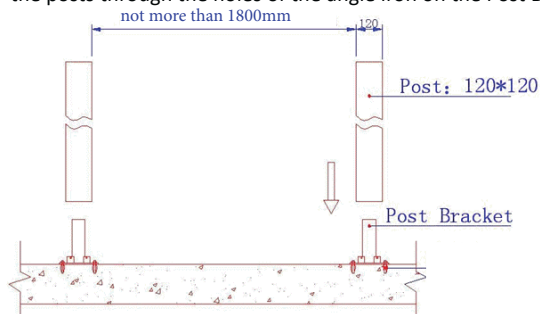


Diagram 2.1

Step 2

After fixing the posts, please insert the Post Flange to the bottom of the posts; then mark the position for the Top and Bottom Handrail on each posts. Drain holes should be drilled into the underside of the composite decking handrail and baserail. This is to prevent water accumulating within. Fix the Handrail Bracket on the marked position on the post, just as diagram 2.2 below shows. We recommend that the spacing between two posts should not be more than 1800mm.

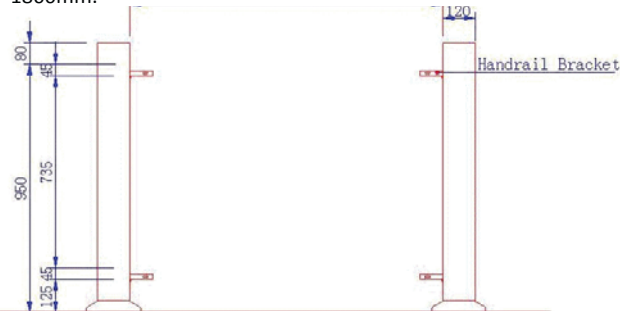


Diagram 2.2

Step 3

As diagram 2.3 below shows: fix the Spindle Bracket on both the Top and Bottom Handrail using the provided screw - the fixing spacing is based on the standard spindle spacing of 100mm. Use external adhesive in the spigot to fix securely and avoid any spindle movement. Install and fix the Top and bottom Handrail to the Handrail Bracket. Remember to pre-drill all composite material.

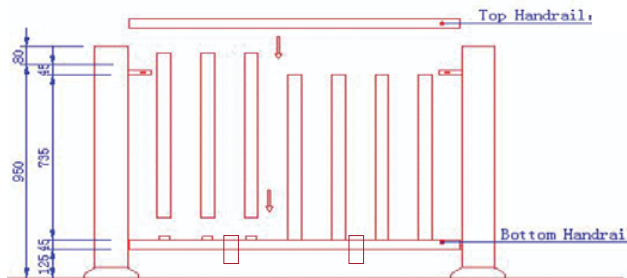


Diagram 2.3

Step 4

Please install minimum 2 pieces of spindles below the Bottom Handrail according the installation of spindles in diagram 2.4. It's essential to avoid the sag by natural gravity.

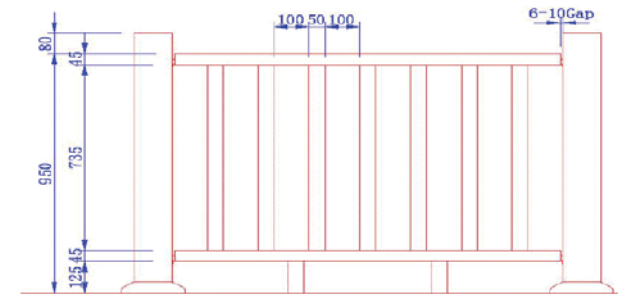


Diagram 2.4

If you need any further assistance in the fitting of your Whiteriver Composite deck, please do not hesitate in contacting your local stockist for more information

Post & Railings

Step 5

Install the Post Cap on the top of posts. Use external adhesive to fix securely. Now you are finished the installation of the Post and Handrail system

Please consult the finished drawing of the post and handrail system as shown in diagram 2.5 below.

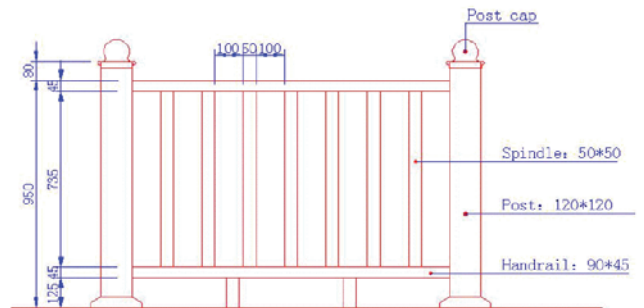


Diagram 2.5

Deck Finishing

When you have finished securing all the deck boards and there is an overhang use a chalk line to mark the board and cut the excess with a circular saw. You can fix the composite angle by using stainless steel screws every 40cm. Screw the angle to the deck board. Pre-drilling is required, do not nail.

Care for your composite Deck

- The deck should be washed with water and soap
- A power washer can be used (max 80 bars)
- If there is oil or grease on your deck use a degreasing agent. If necessary you can use sandpaper, sand with the grain. Please note that if sanding, there will be some colour difference initially but this will blend in over time
- Do not use solvent based cleaners on your deck
- Water stains can appear due to uneven moisture levels, these stains will disappear under UV. Rinse evenly with water and leave to dry naturally