

Installation instructions for composite deck boards

Your guide to installing our Evolution and Revive collections.



CONTENTS

INSTALLATION INSTRUCTIONS (FOR COMPOSITE DECKING)

READ BEFORE YOU START	02
DECKING SUPPORT STRUCTURE	07
DECKING BOARD AND INSTALLATION ACCESSORIES	09
FLOATING FRAME SYSTEM INSTALLATIONS	11
IMPORTANT NOTES BEFORE INSTALLING DECKING	12
GAPPING AND OVERHANG	13
EDGE BOARD INSTALLATION	14
THE FIRST BOARD INSTALLATION (WITH START CLIPS)	15
THE FIRST BOARD INSTALLATION (WITH COLOUR-MATCHED SCREWS)	16
PLASTIC FIXINGS INSTALLATION	17
LOCKING CLIP INSTALLATION	18
DECKING EDGE FINISHING AND INSTALLATION	22
FASCIA BOARD INSTALLATION	23
L-CORNER TRIM INSTALLATION	25
STAIR TREAD INSTALLATION	26
APPENDIX	28
CARE AND CLEANING GUIDE	29

READ BEFORE YOU START

IMPORTANT:

Prior to installing any composite decking system, it is recommended that you check with building regulations for any special requirements or restrictions. The diagrams and instructions outlined in this guide are for illustration purposes only and are not intended to replace a licensed professional. Any construction or use of wood-plastic composite (Herein after referred to as WPC) product must be in accordance with building regulations. The consumer assumes all risks and liabilities associated with the construction and use of this product.

Please read carefully and refer to the corresponding instructions during the installation. The methods and accessories involved in this instruction are the only recognised by the warranty.

Failure to follow this instruction or use other installation method besides this instruction may invalidate the warranty.

SAFETY

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

ENVIRONMENT

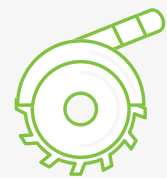
A clean, smooth, flat, and strong surface is needed to install WPC products correctly. Please check with building regulations before ever installing any type of decking. If installation does not occur immediately, WPC products need to be put on a flat surface at all times. Never ever should it be put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

DECKING TEMPERATURE

Like many other outdoor surfaces, such as concrete, asphalt, beach sand, wood decking, other brands of composite decking, etc., our decking can get hot due to weather and sun exposure. On such days, care needs to be taken to make sure skin does not have extended contact with the surface of the deck, especially with young children and those with special needs. Please note also that the darker the color, the hotter the deck will feel. For hotter climates, consumers should consider choosing a lighter color.

TOOLS

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



**Circular
saw**



**Smart
bit**



**Safety
glasses**



**Cordless
drill**



**Chalk
line**



**Hearing
protection**



**Spirit
level**



**Ecodek
spacer**



**Dust
mask**

CONSTRUCTION

WPC products are NOT intended for use as columns, support posts, beams, joist stringers or other primary load bearing members. WPC products must be supported by a suitable substructure. While WPC products are great for retrofits, WPC products CANNOT be installed on existing decking boards.

VENTILATION

WPC 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. A minimum of 25 mm of continuous net free area under the decking subframe is required for adequate ventilation on all decking, so air can circulate between adjacent members to promote drainage and drying.

STORAGE

Acclimating at least 2 days prior to installation is recommended. Acclimating the boards will get rid of any unwanted shrinkage issues seen during and after installation.

If the products won't be used for a long time, please keep the package complete and store in a well-ventilated and drained indoor environment, avoid direct sunlight and rainwater. Products must be raised up by joist and stacked neatly on a even and solid ground. Uneven ground will cause the products to deform and warp. The spacing of each joist should be no more than 500mm. Do not store the products by putting on the ground directly.

During the construction, please cover products that are not in use to prevent the sand and gravel generated by the building work from falling on the surface and causing scratches by friction with the surface. Please lift and drop the products gently, and it is forbidden to drag or extract the products.

PLANNING

Plan a layout for your decking before starting it to ensure the best possible looking decking for your project. When installing ANY decking product, mixed toned boards, it is a good idea to mix and match all of the boards on the job site prior to installation to ensure an appealing mix of light and dark tones.

PRODUCTS NEAR LOW-E WINDOW

Be aware of excessive heat on the surface of products from external sources such as but not limited to fire or reflection of sunlight from energy efficient window products. Low-impassivity (Low-E) glass can potentially harm 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 products to melt, sag, warp, discolour, increase expansion/contraction, and accelerate weathering. Current or potential 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.

INSTALLING A PERGOLA ON DECKING

Keep in mind that if you are planning to install a Pergola on your deck, you will need access to the underside of the deck. Pergola mounts with a 254 mm x 254 mm aluminum plate on the underside of the deck, creating a clamping effect on both the top and bottom of the deck for maximum strength. If installed, water barriers and any under deck coverings will have to be removed to properly install the pergola posts.

You need to consider the location of your pergola posts with respect to joists.

GROUND TREATMENT

A smooth and solid ground base that ensures good ventilation and drainage is crucial to the longevity of the decking. Please exercise proper ground treatment methods according to the ground condition at the job site. Here are the tips for some specific ground conditions, such as sandy land, soft soil, and grassland:

1. Build a concrete foundation. Dig holes in the ground with a suitable interval and then pour concrete in. They act as a foundation for timber or metal framing. Then you can install the decking on the frame.

2. Or timber/composite posts. Fix the posts into the ground using concrete at suitable intervals. Fixing the decking frame to the posts. Then you can install the decking on the frame.

EXPANSION AND CONTRACTION

WPC decking will experience expansion and contraction with changes in temperature. Expansion and contraction are most significant where extreme temperature changes occur. Changes in length are most significant during the installation process, and should be taken into account if working in extreme temperatures. A good example would be cutting your decks during a hot afternoon, letting them sit outside overnight in the cool air and then installing them the next morning, and you will notice a certain amount of contraction. The best way to minimise this problem is to fasten your decks after cutting as soon as possible.

ADJUSTABLE PEDESTAL SYSTEM

Adjustable Pedestal System are mainly used to solve the problems of installing decking on concrete surfaces with a fall, and raising the whole decking system.

DECKING SUPPORT STRUCTURE

FLOATING FRAME SYSTEM

A floating frame is a substructure between a solid surface and decking, Drainage, access, and airflow are critical.

Water must be able to flow through and away from the deck. For repairs and removal of debris, joist system access may be necessary.

- 1. The floating frame system must be level and have no uneven undulations. Any uneven areas of the substructure will transfer to the decking, resulting in uneven decking.
- 2. When used with a floating frame system, the decking must be supported below its entire length. If using in a roofing application the supports must run in the direction of the pitch of the roof to facilitate proper drainage.

JOIST

WPC and aluminium joists may be used in areas with a hardened sub base such as an existing patio/concrete slab, provided that adequate ventilation and drainage are ensured.



Aluminium Joist



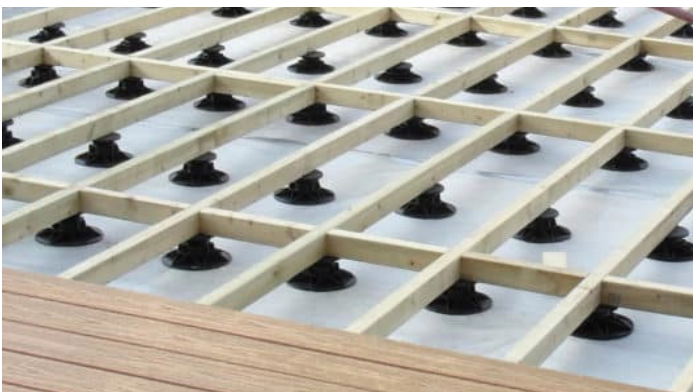
Composite Joist



Wood Joist

FRAMING

It's recommended that code-compliant materials, such as pressure-treated wood and aluminium joists, be used for the framing. Please follow the manufacturer's instructions for proper installation. The framing must be level without undulations, and the joist spacing should be determined depending on specific situations



Pressure-Treated Wood Framing



Aluminium Framing



Composite Framing

DECKING BOARD AND INSTALLATION ACCESSORIES

DECKING BOARD		
Dimensions (W/T) mm:		Structures:
138*23	140*23	Solid 
		Bridge Hollow 

SQUARE EDGE		
Dimensions (W/T) mm:		Structures:
138*23		

FASCIA BOARD		
Dimensions (W/T) mm:		Structures:
140*12		

L-CORNER		
Dimensions (W/T) mm:		Structures:
56*51		

ACCESSORIES

Hidden Deck Fixings



- Plastic Fixings
- PF-01 Plastic clips with self-tapping screw
 - PF-02 Plastic clips with self-drilling screw



Locking Clip
LC-01

Start Clips



Start Clips
TH-A2

Screws



Screw
SS-T1/SS-T2
4*35



Screw
SS-T3/SS-T4
4*25



Colour Screw
SS-T5/SS-T6
4*35



Colour Screw
T63
5*63

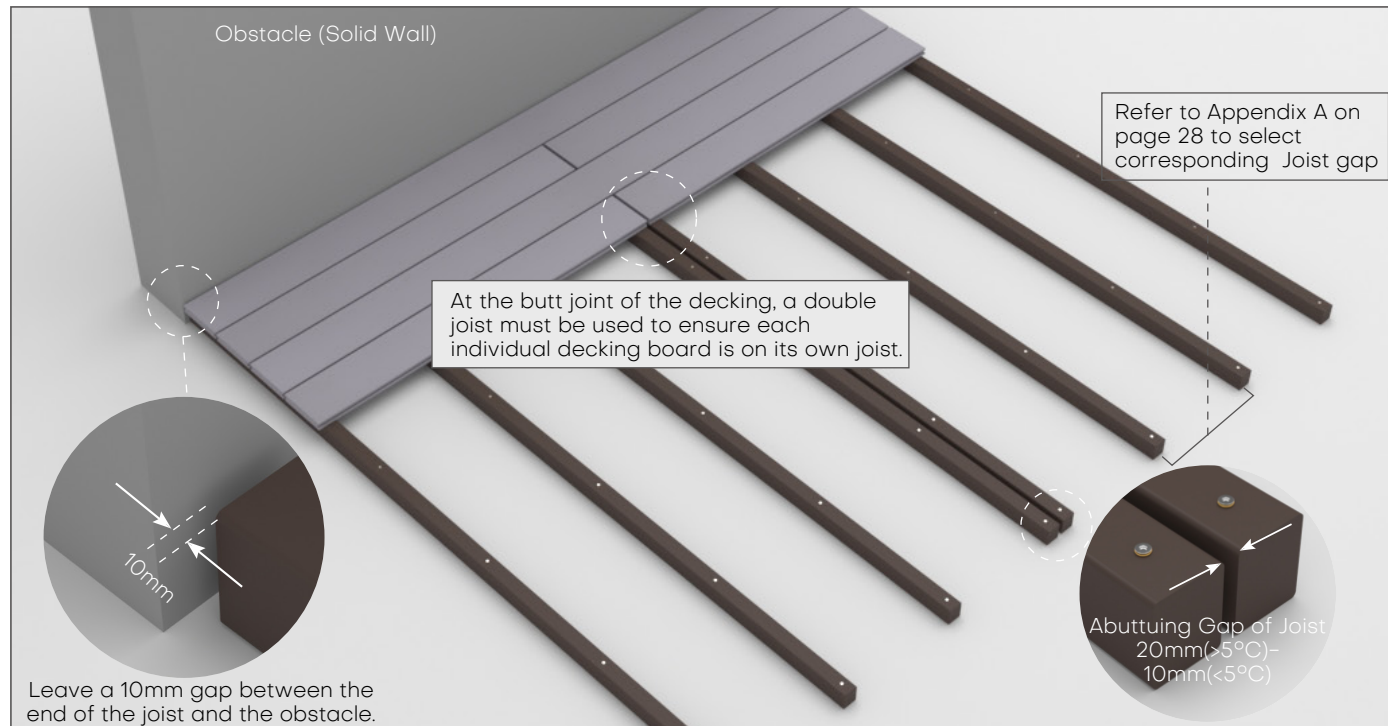
FLOATING FRAME SYSTEM INSTALLATIONS WITH COMPOSITE JOISTS



! IMPORTANT:

The composite joist should be installed on a flat, sturdy ground with good ventilation and drainage.

1. Normally, the joist should be laid as vertical to the decking as possible, the joist spacing should be determined depending on specific situations (Refer to Appendix B on Page 28 for more information). If the joist and the decking cannot be vertical, please select the corresponding joist gap according to the angle between the joist and the decking (Refer to Appendix A on page 28 for details).
2. Leave a 10mm gap around the perimeter of the deck.
3. At the butt joints of the decking, a double joist must be used. The end of each board must sit on its own joist to ensure that the board will not slide off the joist, wise the warranty will be invalid.
4. The composite joist must be supported every 500mm or 1000mm 500mm when using a Low Profile Bearer and 1000mm when using a Superstiff Joist.

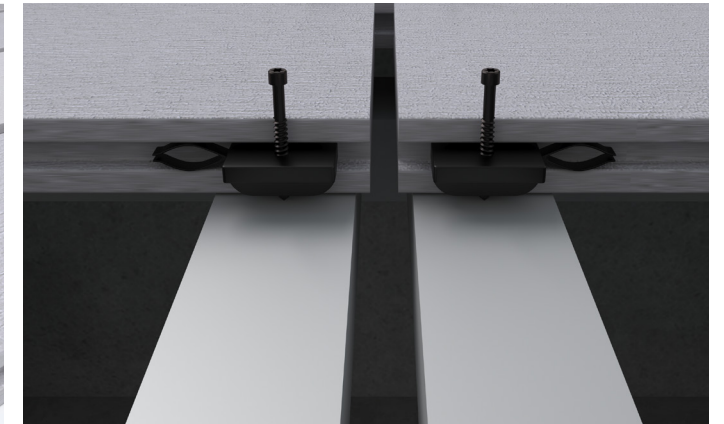
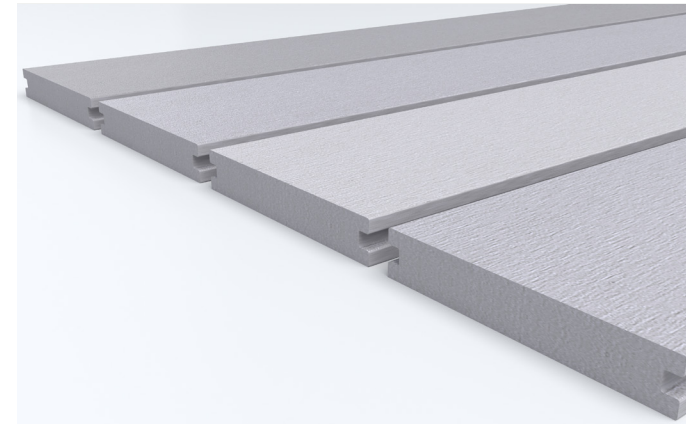


Note: When fixing accessories on the WPC joist with a screw, always pre-drill a pilot hole before securing the screw to avoid damage to the joist.

IMPORTANT NOTES BEFORE INSTALLING DECKING

1. To ensure an appealing mix of color tones, mix and match all boards prior to installation.

2. Hidden Fixings MUST be used at every joist, double joists are needed at the end-to-end joint between decking .



NOTE: Use a drill (with adjustable clutch and torque) and adjust these settings if necessary to ensure screws are securely fixed in Fixings. DO NOT overtighten the screw into the Fixings. Screw head should be flush with the top of the Fixings.

GAPPING AND OVERHANG

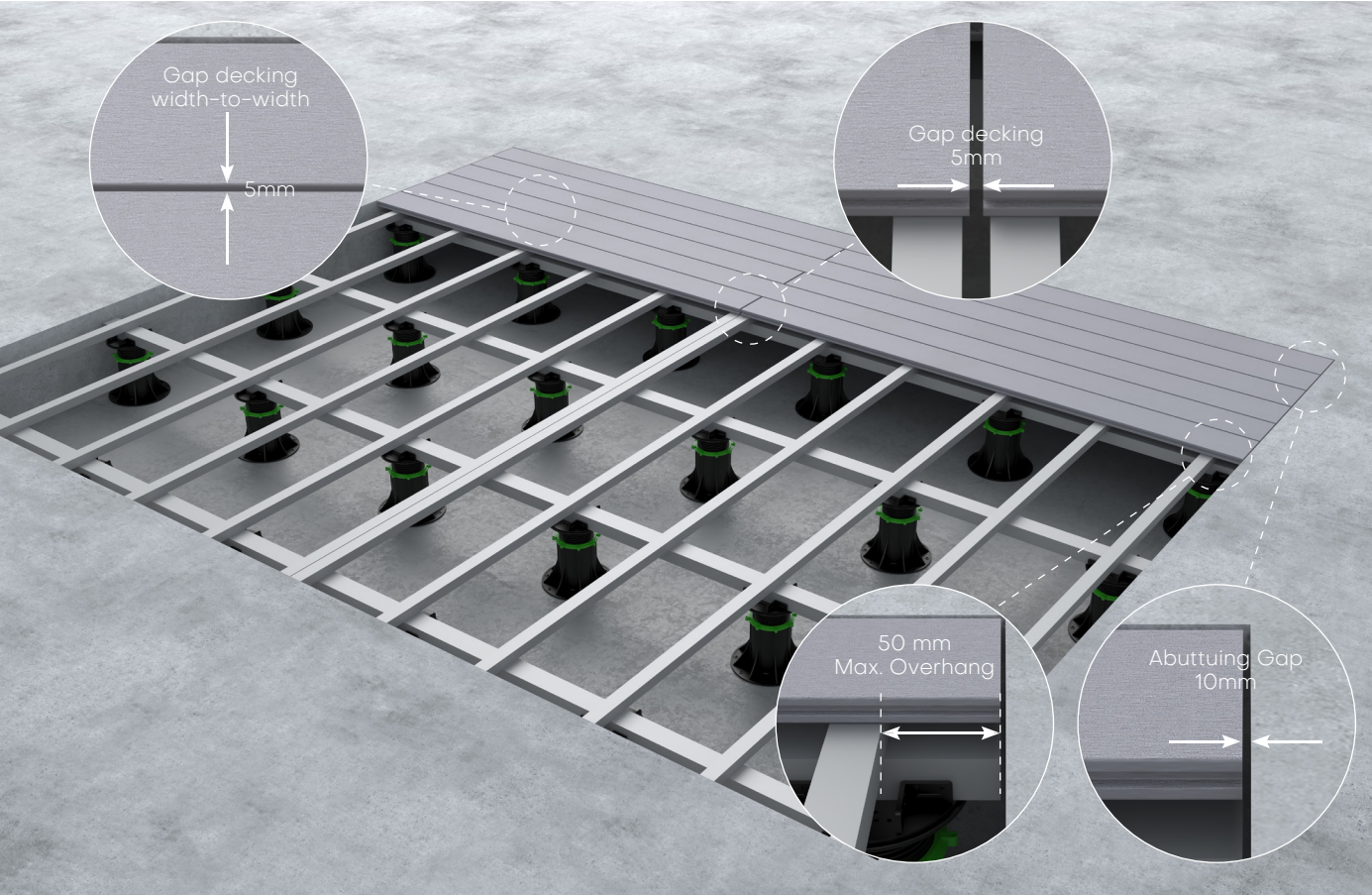
Expansion gaps are essential for both end to end gaps and width to width gaps. The expansion gaps are vital for drainage and thermal expansion/contraction.. Gapping also allows for shrinkage of the wood joist system.

ALWAYS follow ECODEK-recommended gapping guidelines.

Maintain a 5 mm expansion gap at all butt joints between decking boards, and provide a 10 mm clearance around fixed features such as fascias and walls to accommodate material expansion and contraction while ensuring consistent spacing throughout the installation.

Maximum allowable perpendicular overhang for decking is 50 mm.

All decks require air circulation to keep them dry and looking good. To improve air flow, leave openings under the decking.

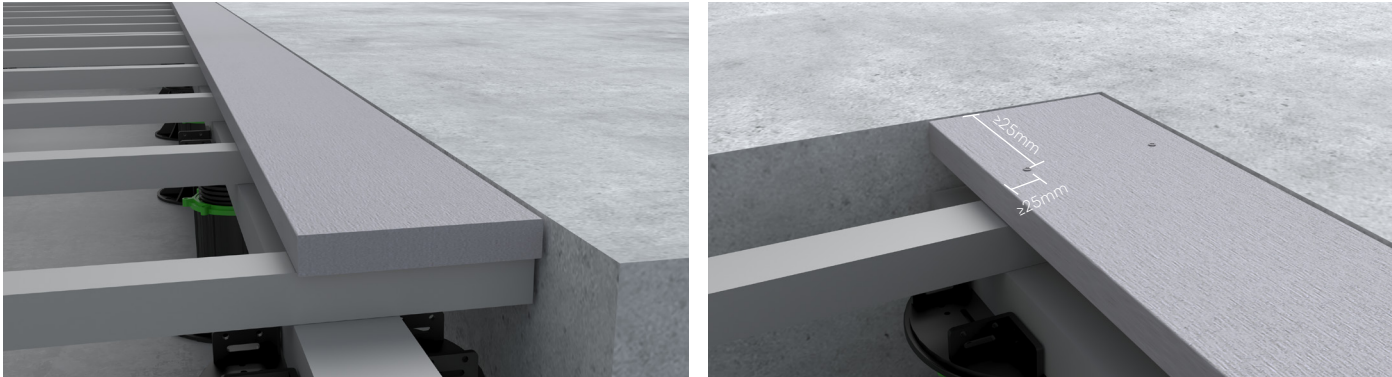


EDGE BOARD INSTALLATION
WITH COLOUR-MATCHED SCREWS

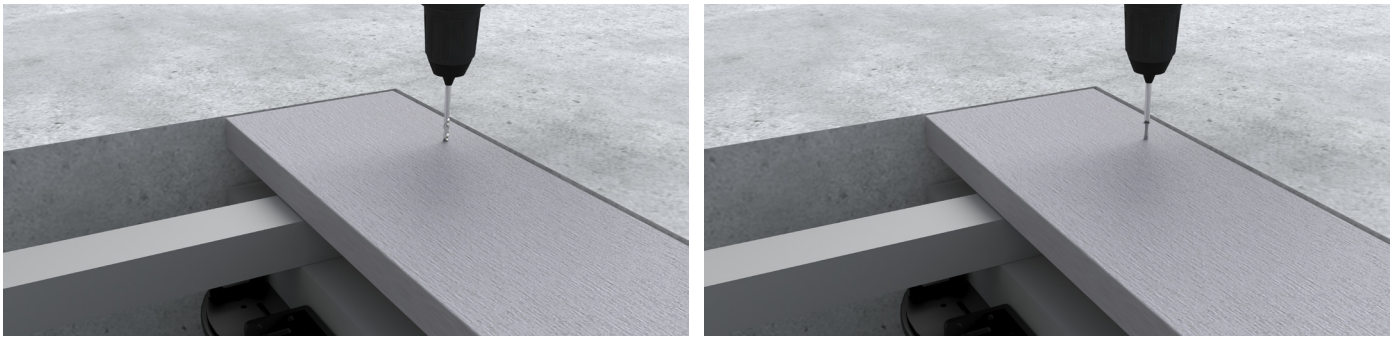
Square Edge Board
138*23



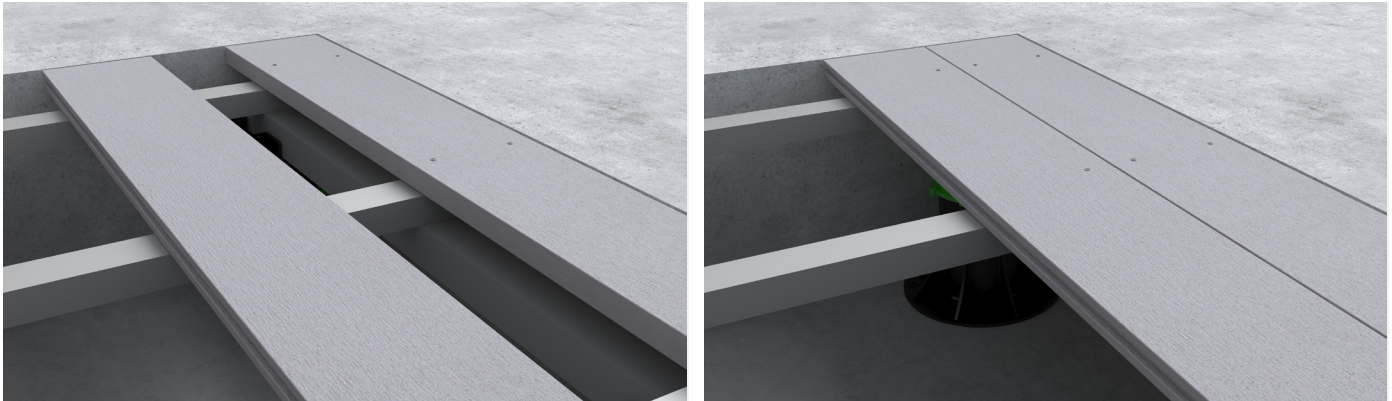
1. Place the first board on the joists and fix it with colour-matched screws. Keep screws at least 25mm away from board ends and edges to prevent splitting.



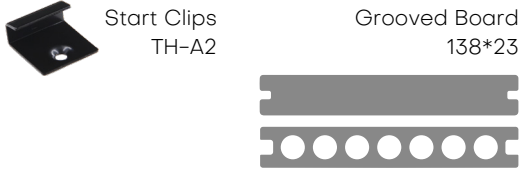
Note: Always pre-drill a pilot hole before fixing the screw to avoid damage to WPC products.



2. Place the decking board into position and secure the side adjacent to the starter board with color-matched screws. For the following boards, use plastic clips for fixing and maintain a 5mm gap between the decking board and the starter board to ensure consistent spacing throughout the installation.

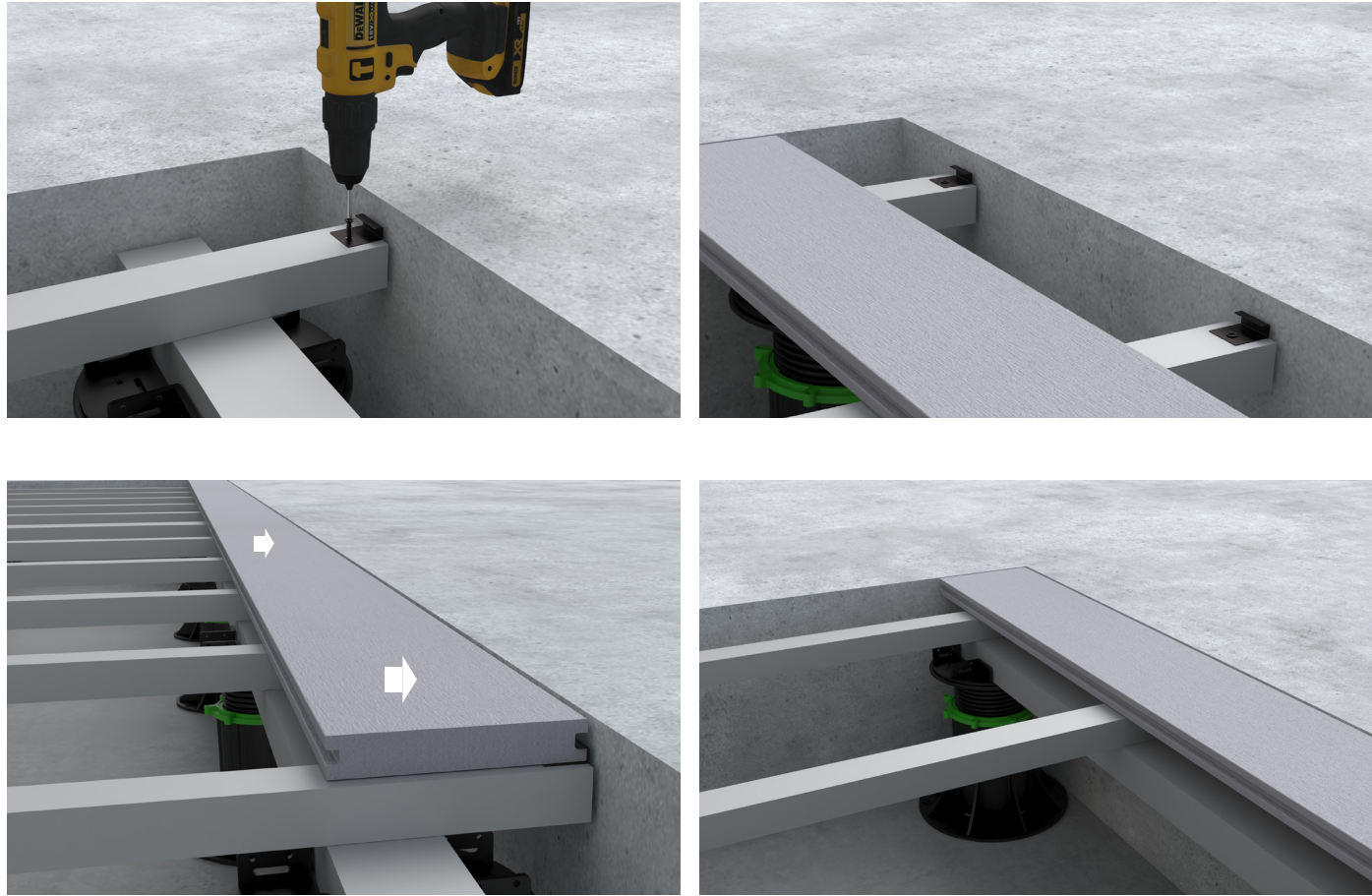


THE FIRST BOARD INSTALLATION WITH START CLIPS



1. Use a screw to fix the start clip on the middle of the joist. Ensure that each start clip is installed in a straight line.

2. Slide the decking board into the start clip.
Important: The first board MUST be straight and well secured.



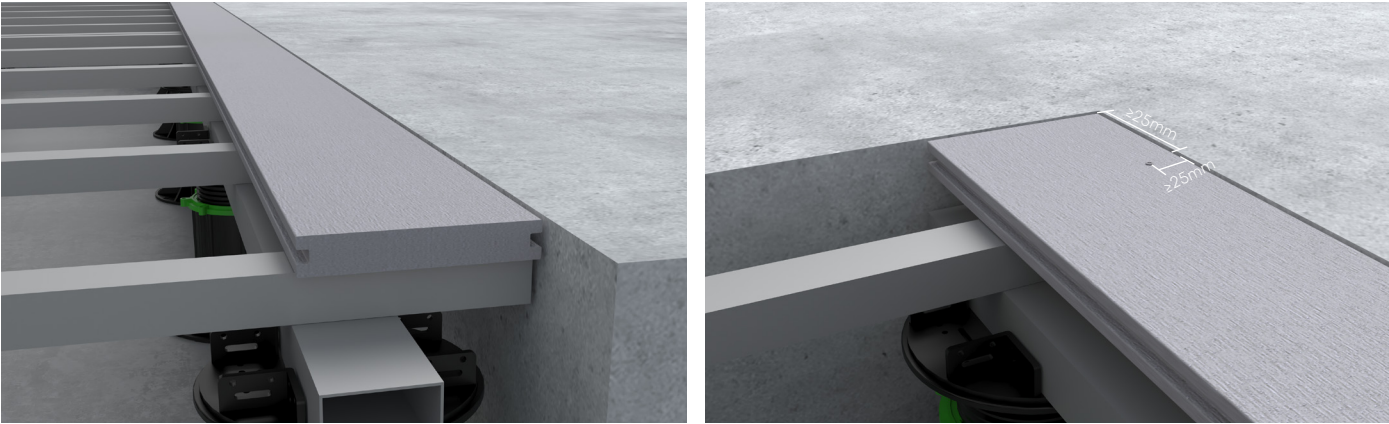
NOTE: Ensure that the screw is installed vertically in the middle of the joist, offset may affect the fixing stability.



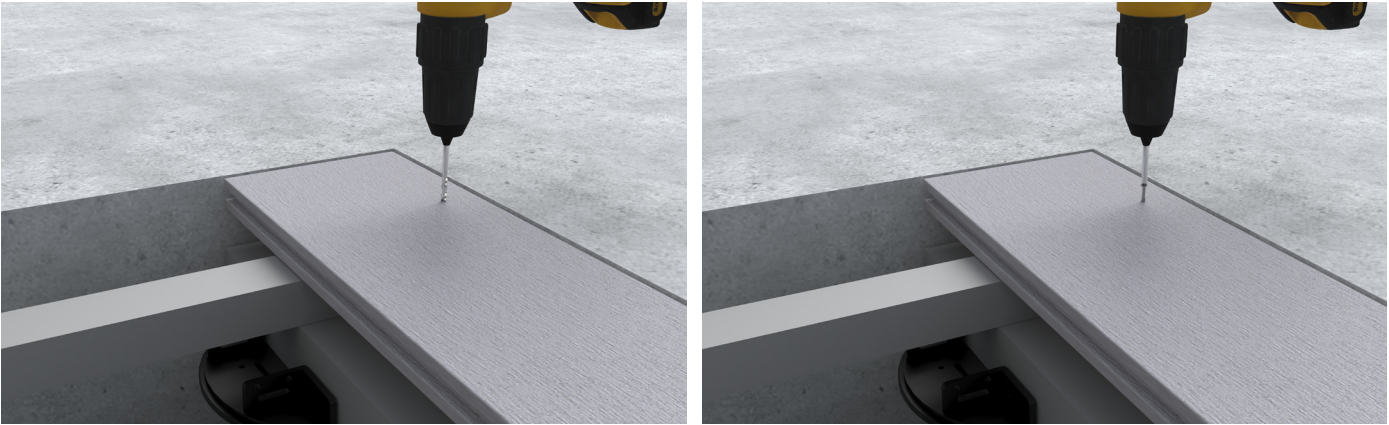
THE FIRST BOARD INSTALLATION WITH COLOUR-MATCHED SCREWS



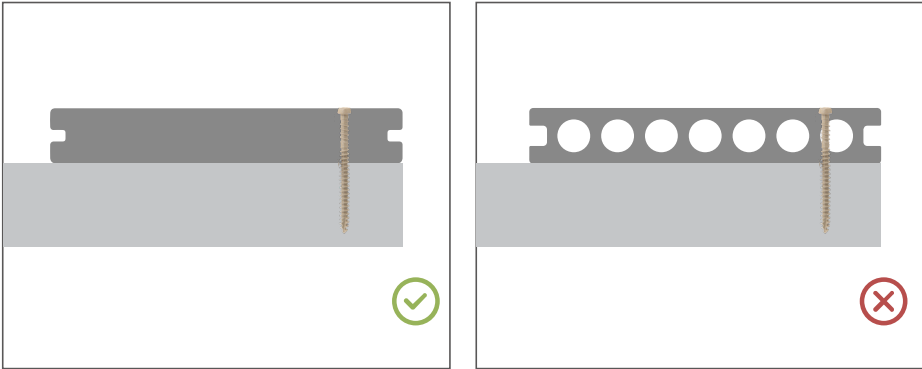
1. Place the first board on the joists and fix it with colour-matched screws. Keep screws at least 25mm away from board ends and edges to prevent splitting.



Note: Always pre-drill a pilot hole before fixing the screw to avoid damage to WPC products.



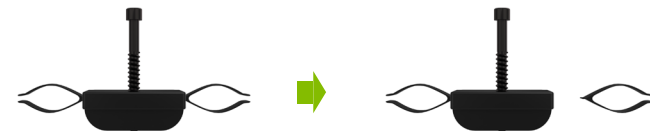
NOTE: Solid boards can be face-fixed with screws. Circular hollow boards must be installed with clips and should not be directly



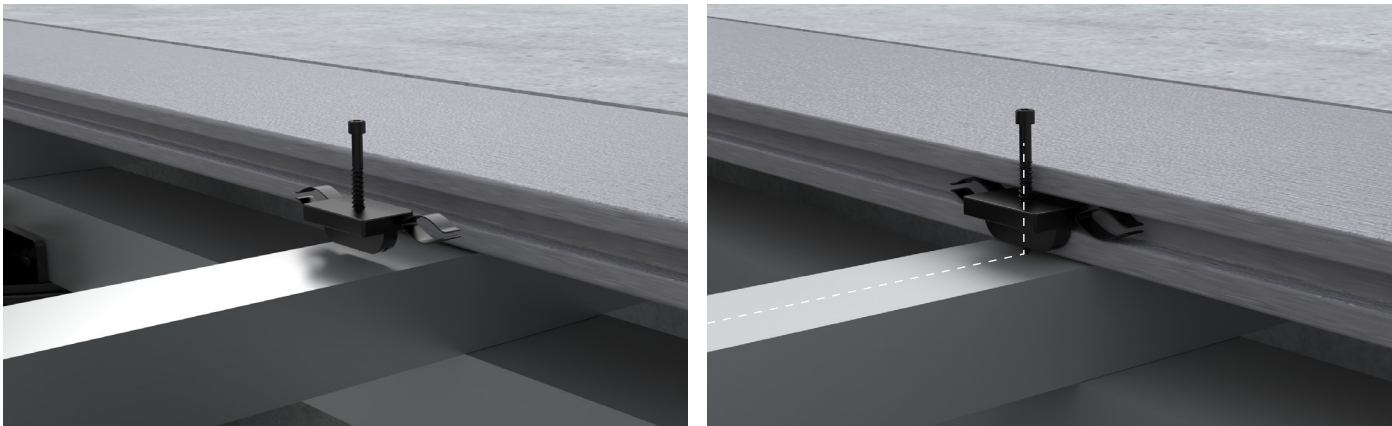
PLASTIC FIXINGS INSTALLATION



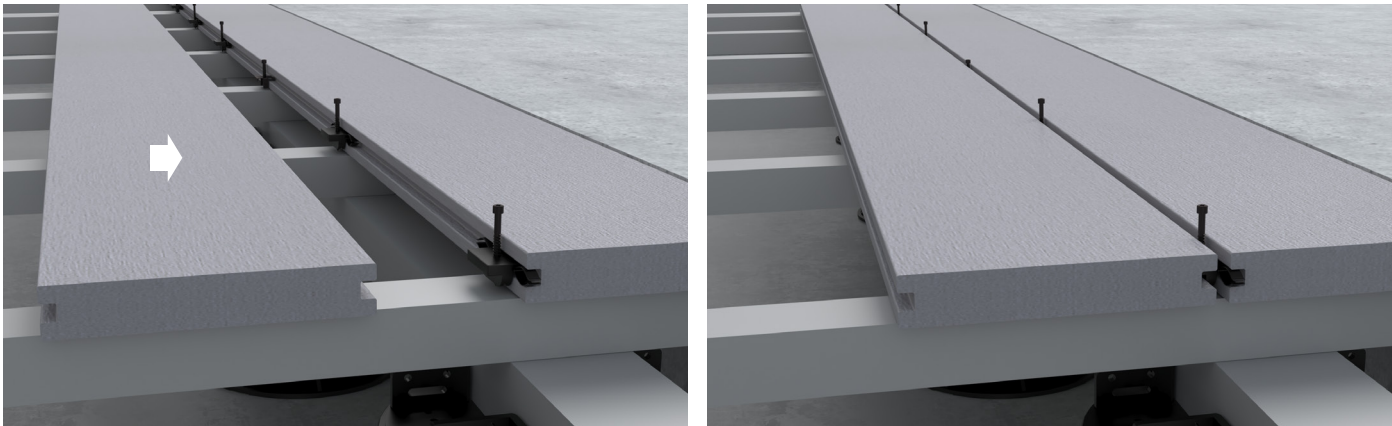
NOTE: The innovative "wing" extension enhances support during installation, preventing Fixings tilting for greater accuracy and stability. One or both wings can be snapped off for flexible use.



1. Squeeze the wings of the fixings and place them into the grooves of the decking boards one by one. Gently push and slide into position the Fixings, each of which is located at the center of its joist.



2. Put the next row of decking boards into place, gently push and slide into position the fixings, each of which is located on top of its joist.

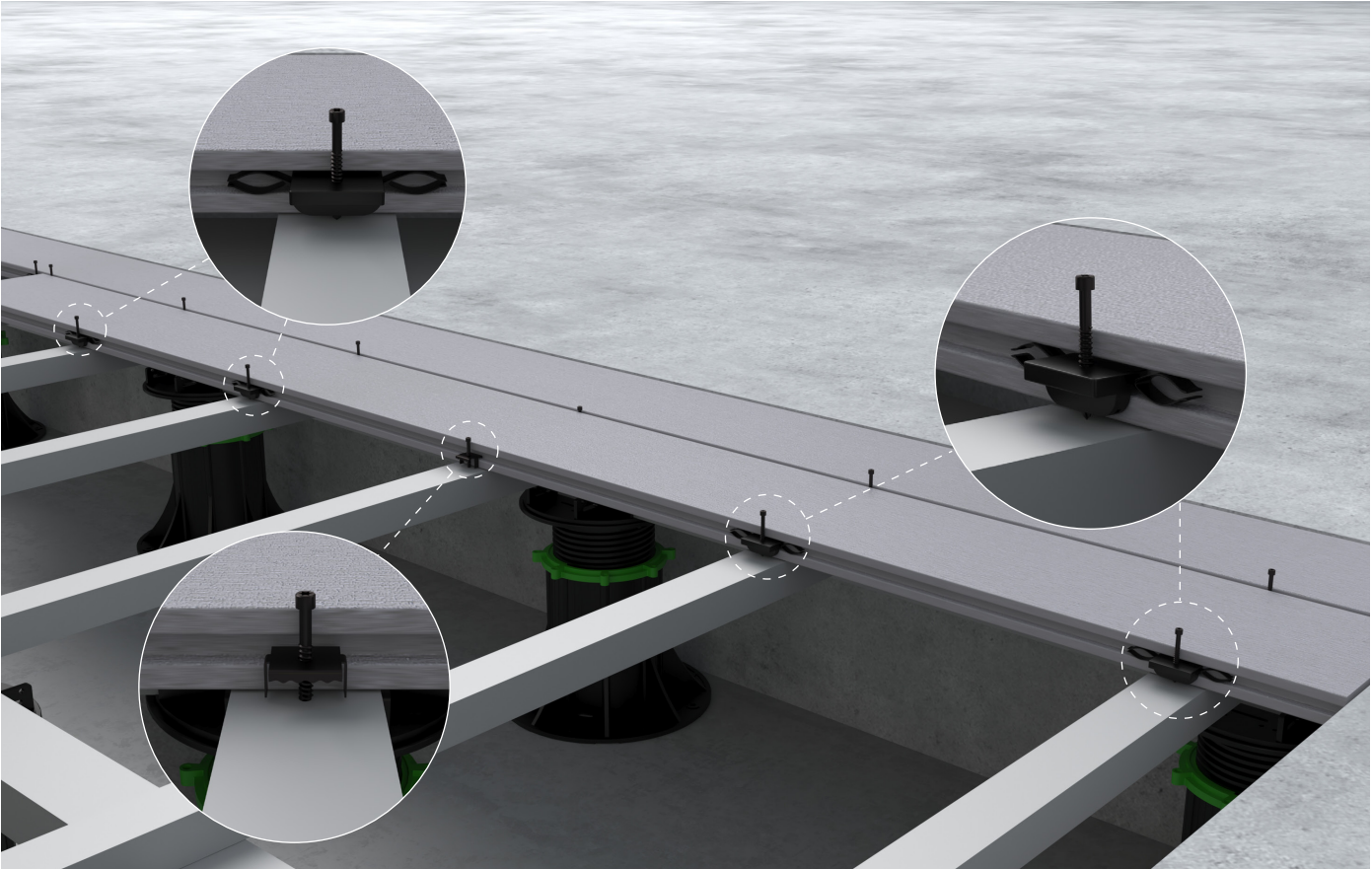
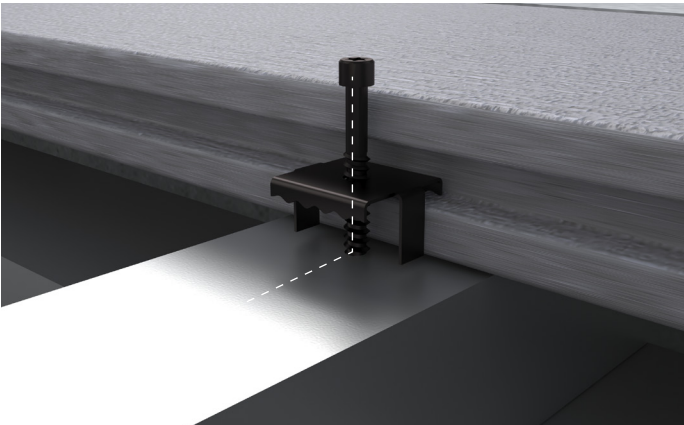


LOCKING CLIP INSTALLATION

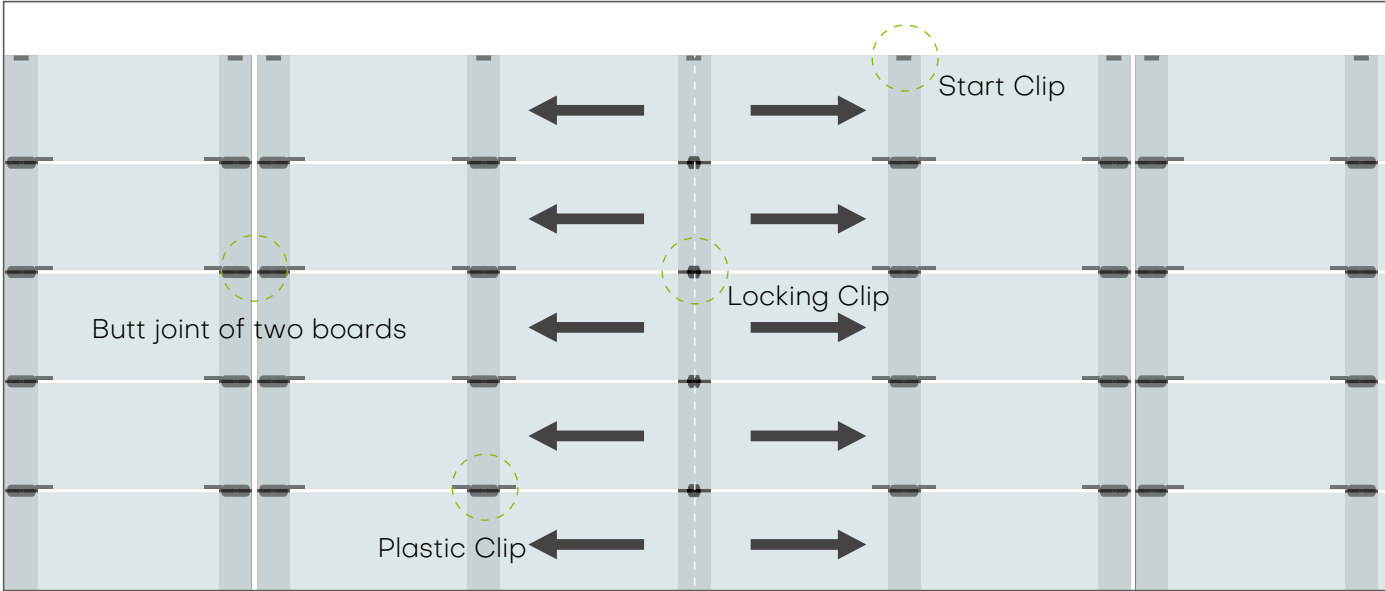


3. In the middle of the board, the locking clip must be half-fix on the center of the joist, then continue to install the next row of decking boards. Secure it when fixing the plastic connectors.

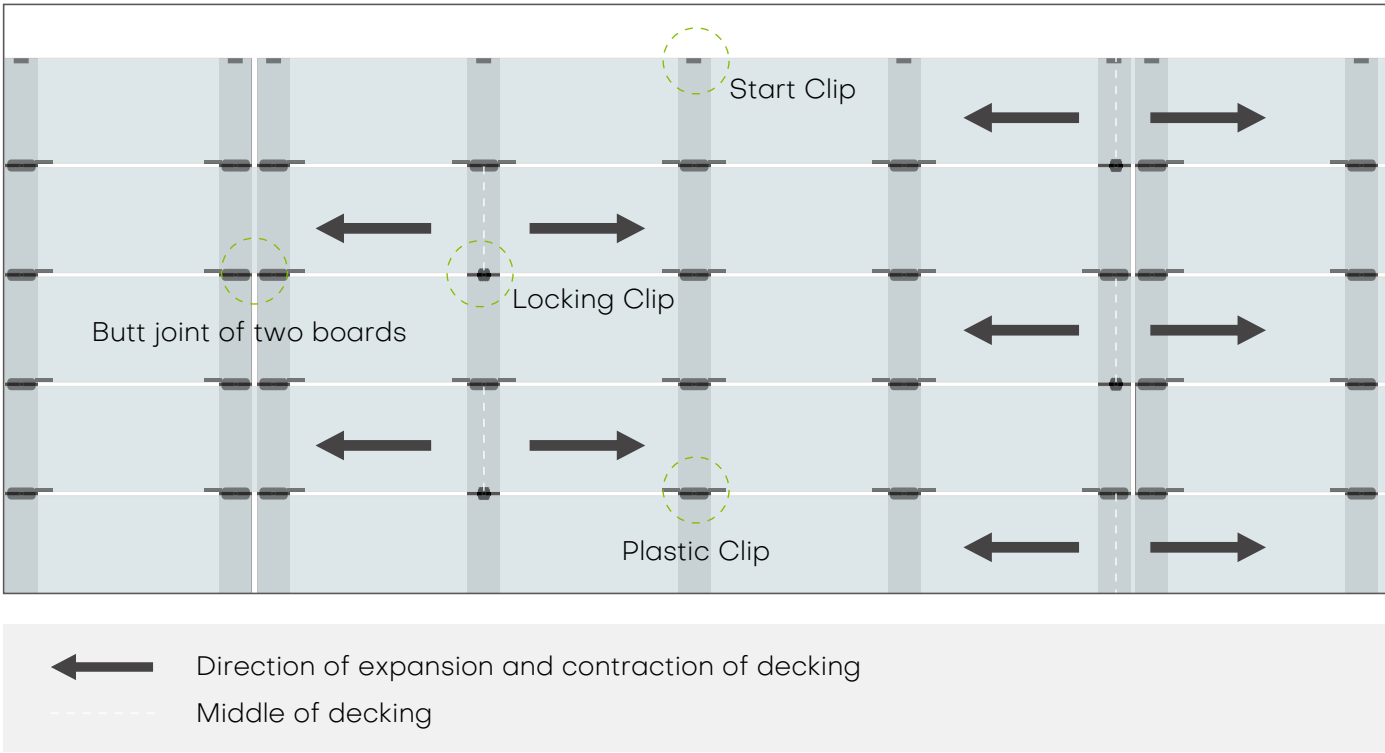
NOTE: Only one piece of locking clip on one side of the decking is required, make sure that the locking clip is in the middle of each decking.



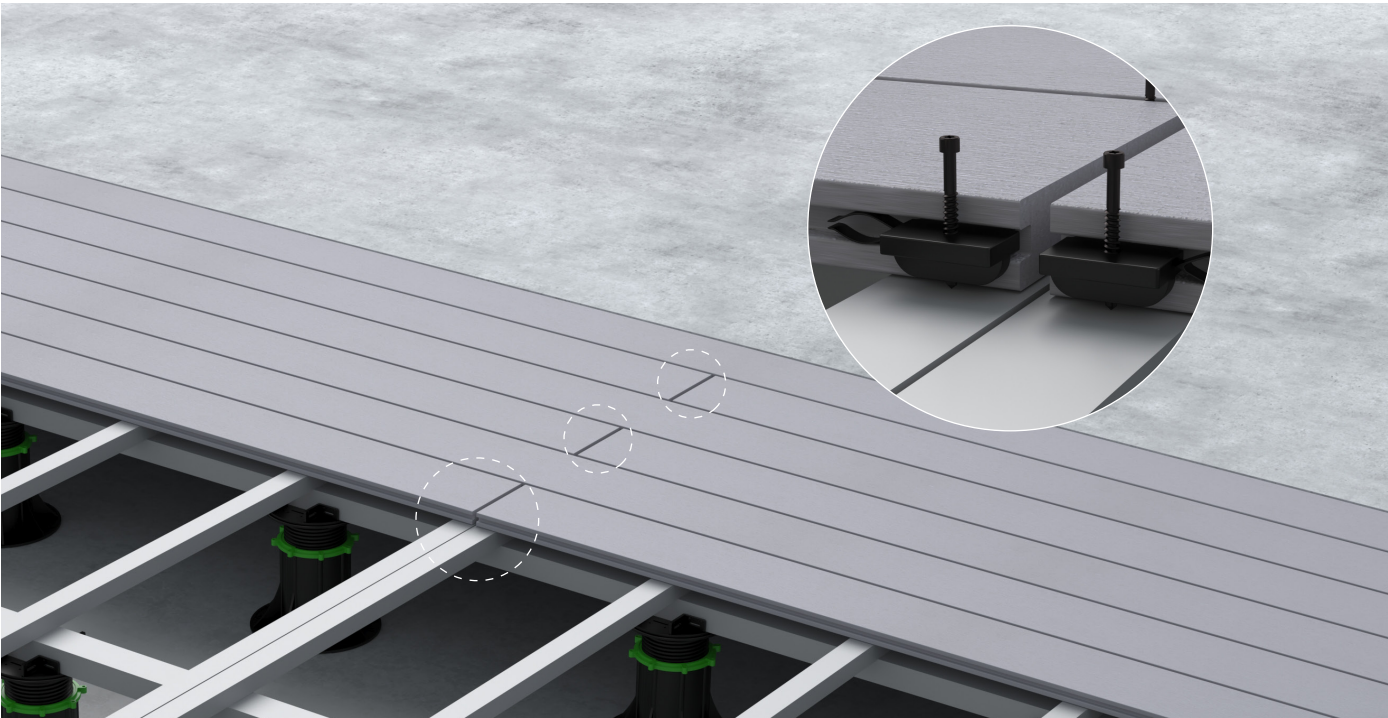
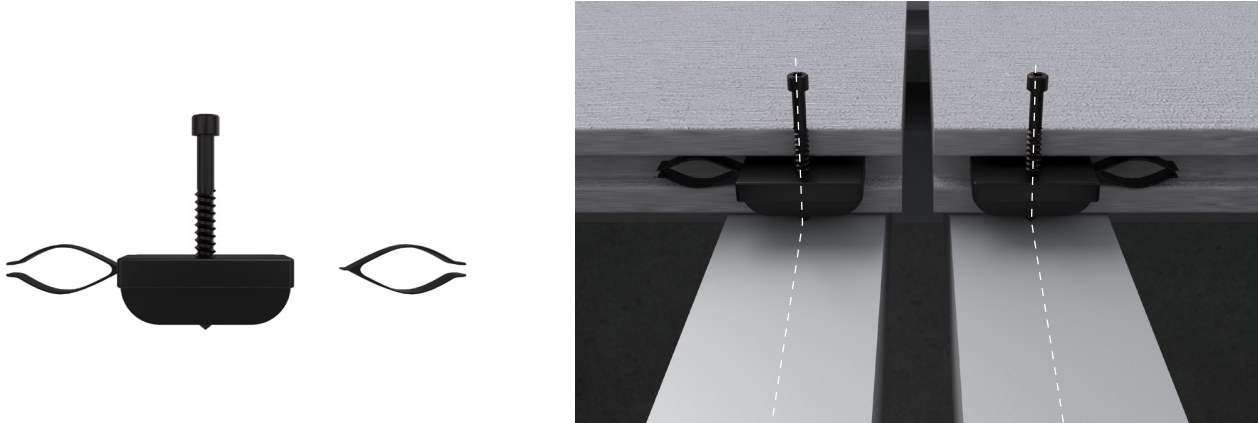
Normal Installation:



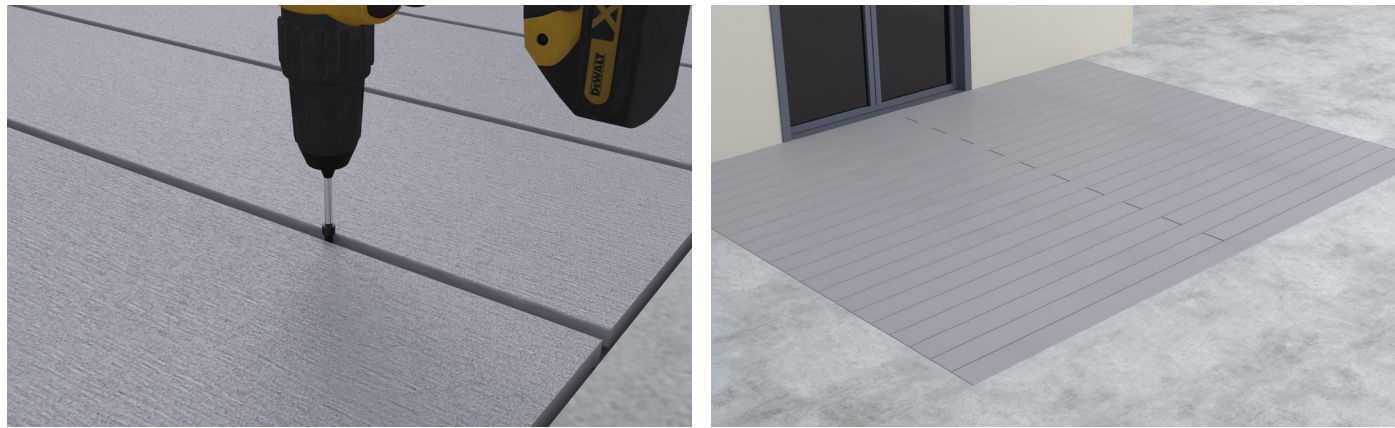
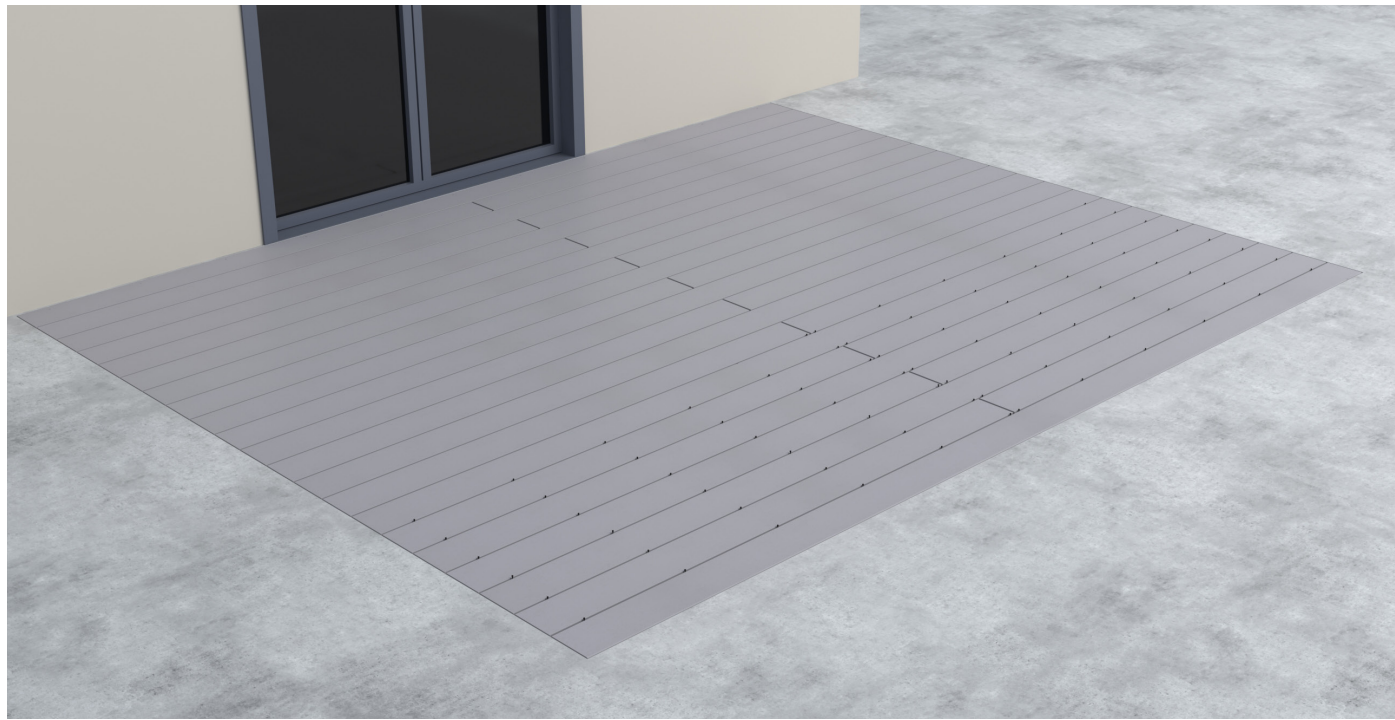
Decking Splicing Installation:



4. At deck joints, double fixings must be used to ensure that each deck board has its own fixing. This is to ensure that the board will not slide off the joist, otherwise the warranty will be invalid. When double fixings are required at deck joints, one or both wings can be easily snapped off for flexible installation.



5. With all decking boards and clips in position, drive the screws into place using a power drill with the torque set to 6. Simultaneously secure the locking clips in place.

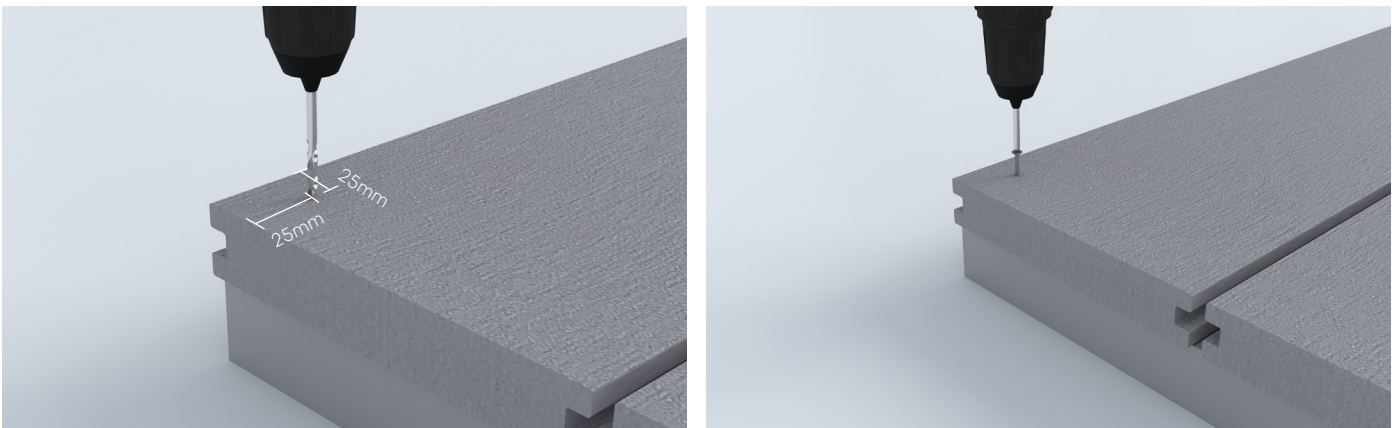


NOTE: Excessive torque may damage the clips. When using self-drilling screws on wood joists, the maximum torque should not exceed 23 inches per pound(2.60 N·m) (settings 4-6 normally, depending on the power drill model). Use a low speed setting. When using self-drilling screws on metal joists, use a high-speed setting.

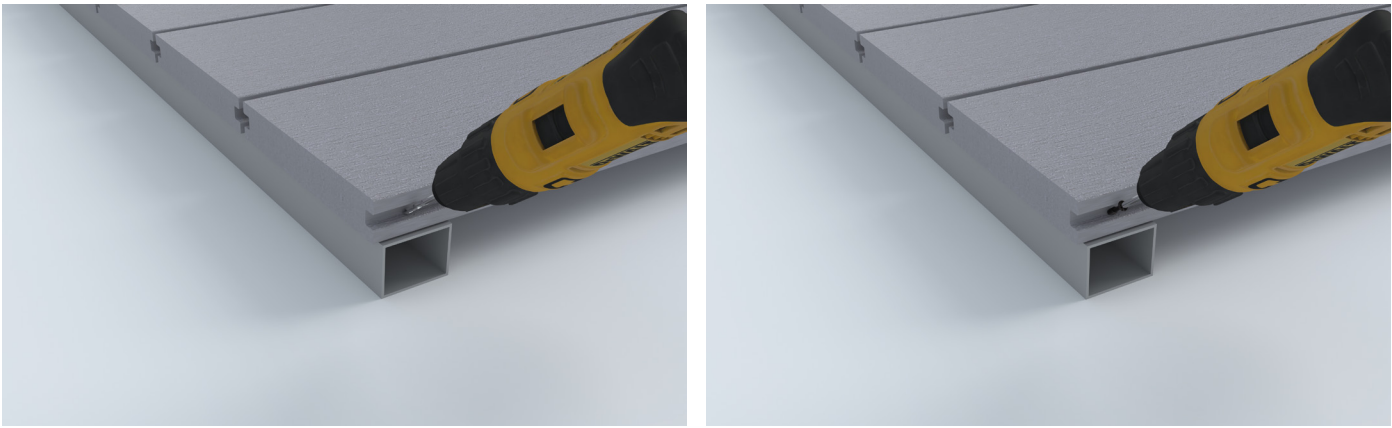
DECKING EDGE FINISHING AND INSTALLATION

1. At board ends on the deck's edge, you can install screws placed perpendicularly at there commended distance,at minimum of 25mm from the board end and edge, without splitting the board, recommends using Color Screw for matching screw color to decking color.

Note: Always pre-drill a pilot hole before fixing the screw to avoid damage to WPC products.



2. When installing the final deck board, cut the board to the appropriate width, pre-drill holes for the screws, and drive the screws at an angle (using the same screws as those used for hidden fixings) to secure the board to the center of the joist.



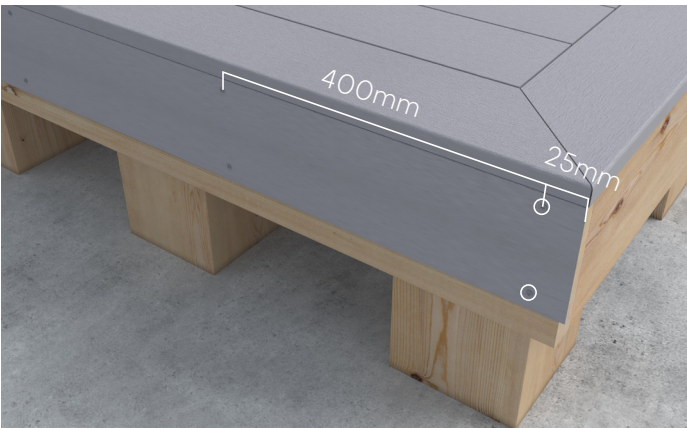
FASCIA BOARD INSTALLATION



1. First, pre-drill the holes for the fascia board. The fascia boards must then be fixed using our colour screws. The fascia board will be installed into the block wood and through the joist.



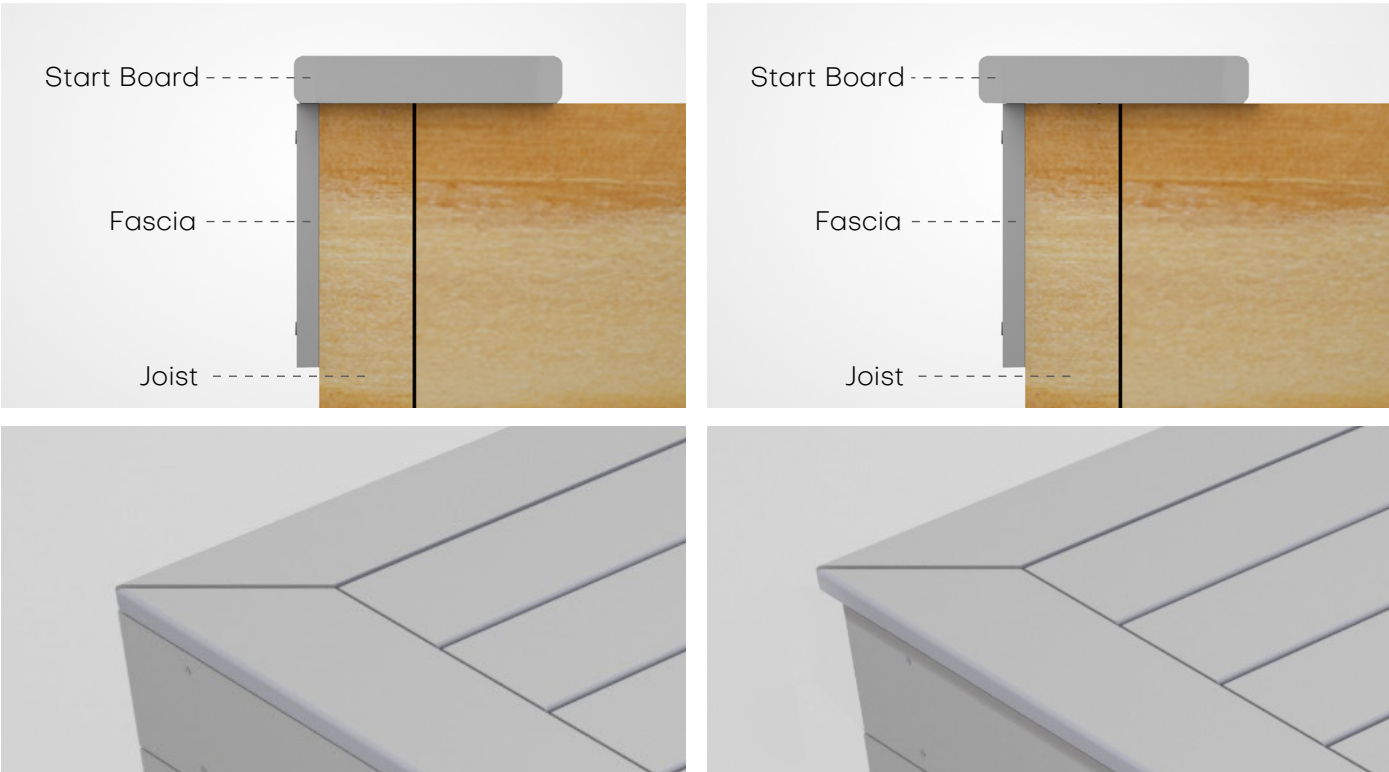
2. Fascia boards need to be installed on 400mm on centers to prevent warping or buckling. Fascia boards with a thickness greater than 10mm can be installed on 405mm on centers. All fascias need to use two screws 25mm away from the ends.



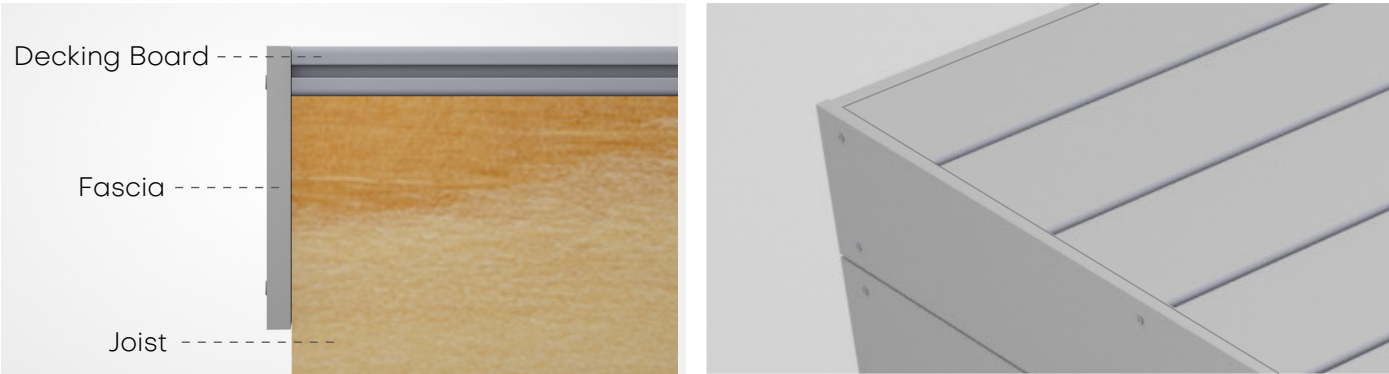
140 mm wide fascia boards require two screws for fastening, placed 25 mm away from the ends.

NOTE: NEVER install the fascia by drilling into the decking ALWAYS install the fascia into the joist and ALWAYS pre-drill the fascia board.

Method 1: Fascia Under Decking
Install fascia UNDER decking edges/ends. This will optimize the aesthetics of the installation.



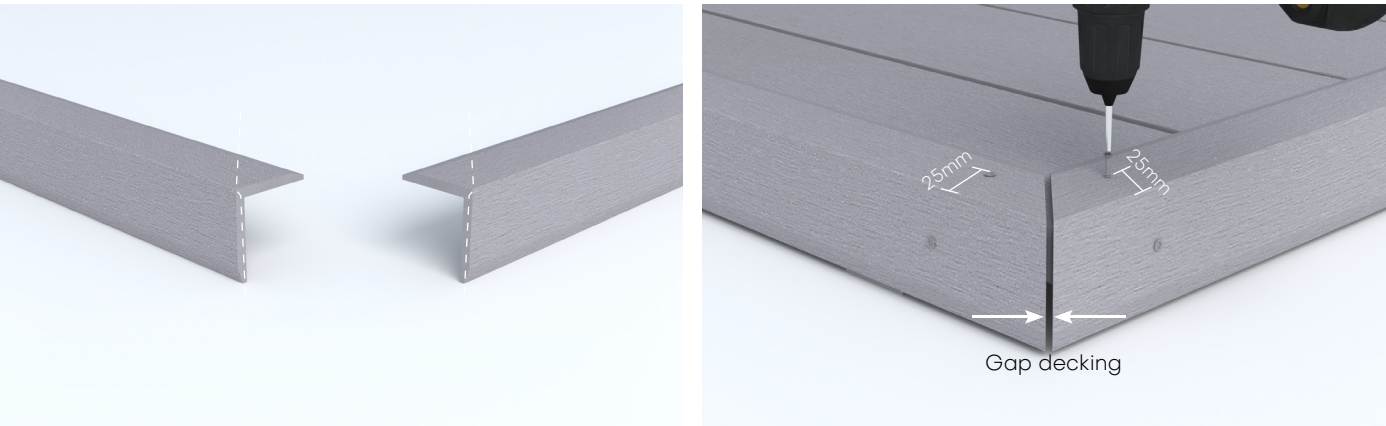
Method 2: Fascia Beside Decking
You can install fascia beside of the decking without using a starter board to ensure a neat and attractive appearance.



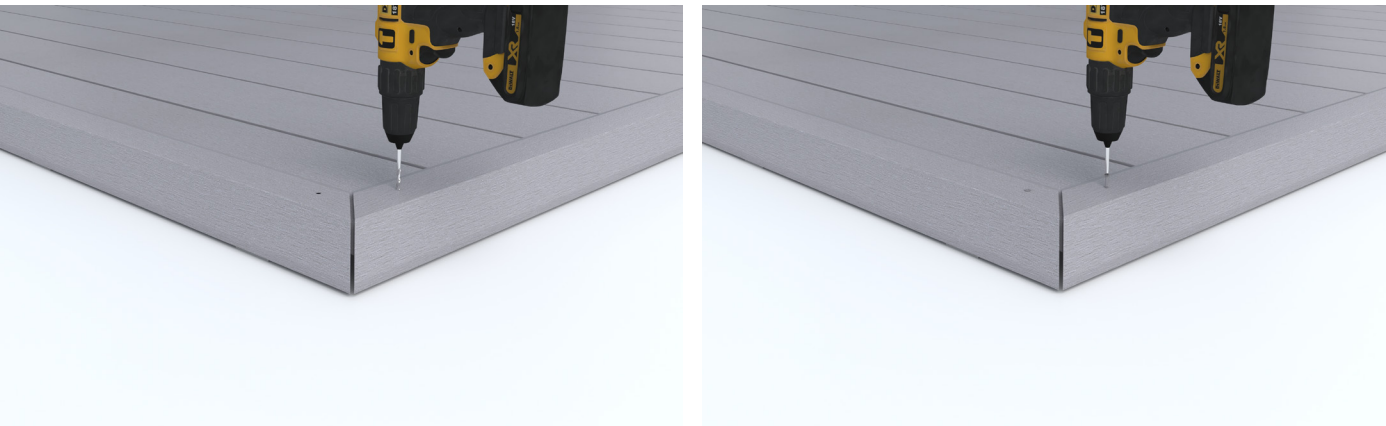
NOTE: Fascia utilised around the perimeter of a deck must be gapped with the same requirements as decking to allow for expansion/contraction of the fascia.

L-CORNER TRIM INSTALLATION

1. Trim the L corner at a suitable angle, fix the colour-match screw at the angle of 90° to the L corner. The distance between the screw and the side ends should be at least 25 mm. Ensure that the screws on the front and side are installed in a staggered manner to prevent vertical alignment, which could weaken the fixing strength.

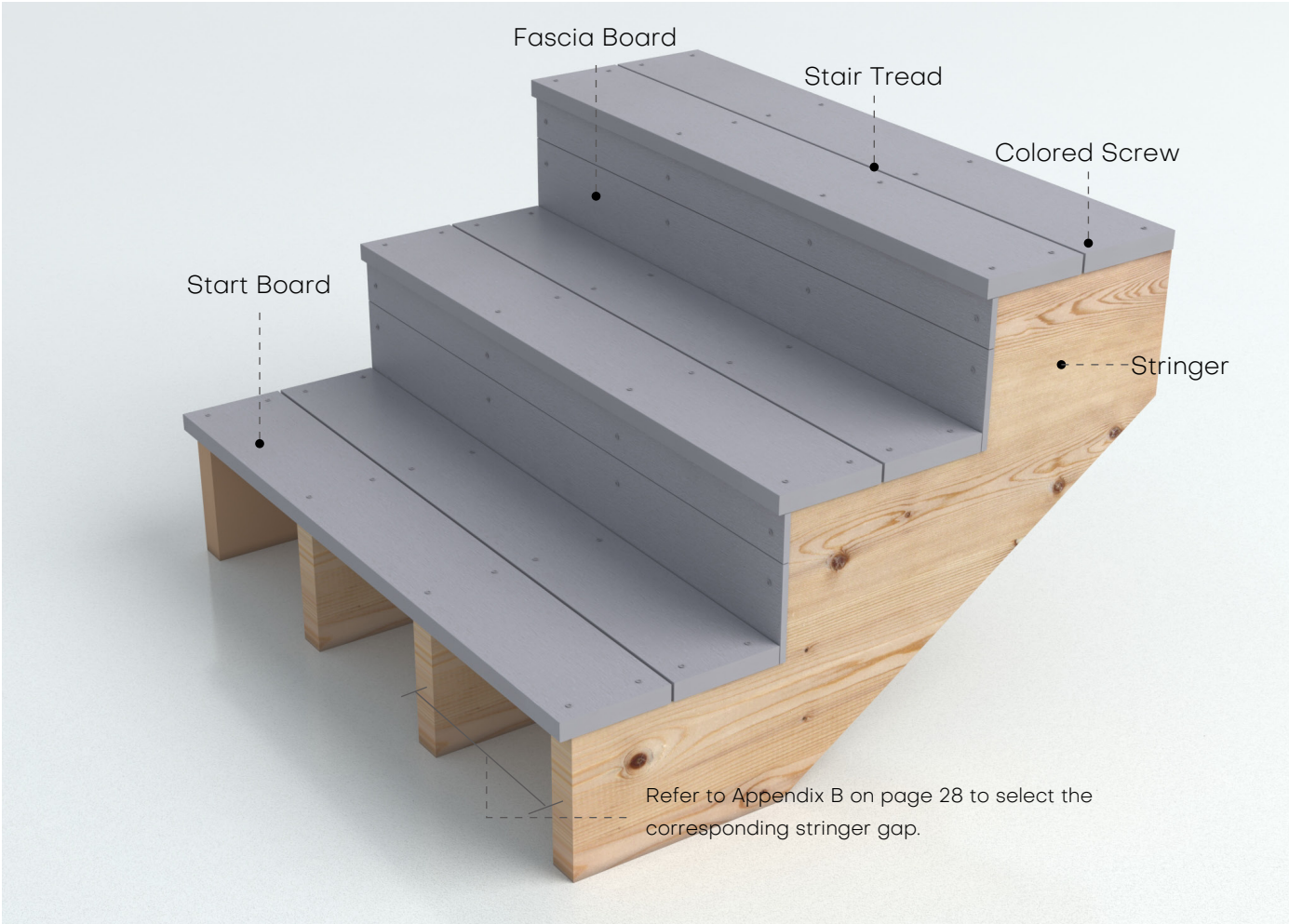


NOTE: Always pre-drill a pilot hole before fixing the screw to avoid damage to WPC products.



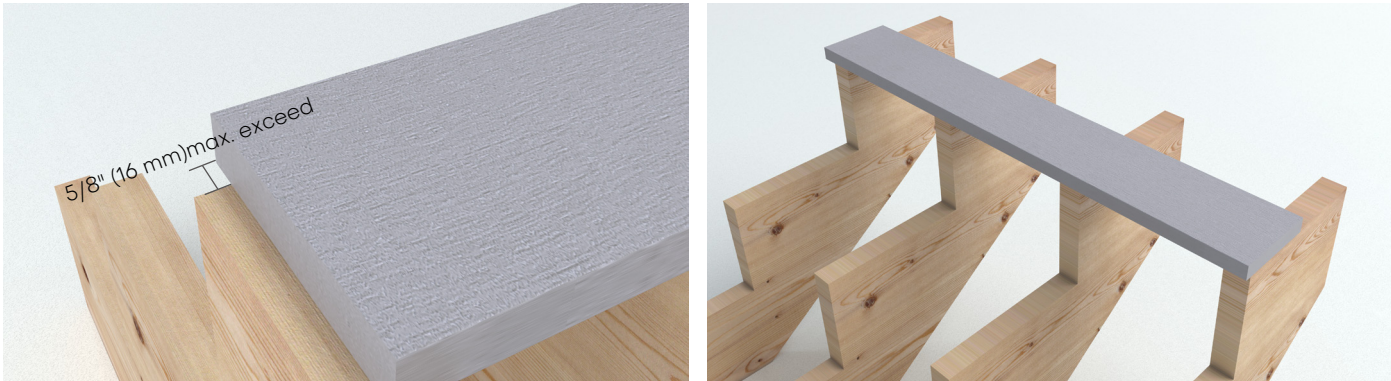
STAIR TREAD INSTALLATION

Stair treads built with composite decking must meet building regulations and standards. Properly adjust the stringer spacing, which should be determined depending on specific situations (Refer to Appendix B on page 28 for details).

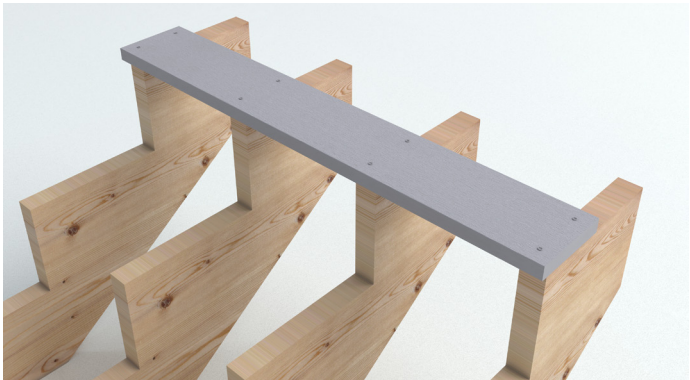


NOTE: Stair treads should only be installed using solid profiles. Using any type of hollow decking for stair treads will not be warrantied.

1. Fix the start board on the stringer (Refer to start board installation— Start Board on page 14 for detailed steps). Ensure that the overhang of the start board is not to exceed 16 mm.



2. Secure the decking board directly to the stair tread using color-matched screws. (Refer to start board installation on page 14 for detailed steps).



3. Pre-drill pilot holes and fix the other side of the stair tread with color screws.



4. Pre-drill pilot holes and use color screws to fix the fascia board.



5. The finished effect of the staircase is shown in the diagram below.



APPENDIX A
JOIST SPAN (ON CENTER) UNDER ANGLED DECKING INSTALLATION

ANGLE WITH DECKING		SPAN
90°		350mm
45°		254mm

APPENDIX B
MAXIMUM JOIST/STRINGER SPACING ON CENTER*

Thickness of Board	Residential	Commercial	Stairs
≥23mm	400mm	350mm	250mm

CARE AND CLEANING GUIDE

All exterior building materials require cleaning. Generally, soap and water is all that is required to clean all Decking products. Some cleaning agents or chemicals such as solvents, acids or plasticiser can damage the surface of decking. Examples may include insect repellents, sunscreen products, or degreasing cleaning agents. Always refer to manufacturing labels as well as contact our customer care to determine if a specific product is safe to use. Many products will contain warning information regarding damage to plastic and these such products should never be used on decking.

Problem	Solution
Dirt and Debris	The affected area should be sprayed off with a hose to remove surface debris. Use warm WPC cleaner and a soft bristle brush to remove dirt and debris from the embossing pattern.
Issues with Concrete, Cement, Mortar, or Stucco Dust	When working with cement, concrete, mortar, or stucco, protect the decking as much as possible in order to not get dust particles on the decking surface. These particles, once they get hot or wet, can cause a reaction on the decking surface and are very difficult to remove. If particles get on the decking surface, recommends using Concrete Dissolver . BE SURE TO FOLLOW MANUFACTURER'S INSTRUCTIONS.
Rubber Mats	Use caution when using rubber-backed mats i.e., welcome mats, etc. as these may contain substances that can sometimes discolor or lighten the decking surface.
Chalk Lines	Most colored chalks are permanent and may discolor the surface. Use only Irwin Strait-Line Dust-Off Marking Chalk (purple), DeWalt® Blue Chalk, or DeWalt® Orange High Visibility Chalk.
Tannins Due to Debris	Remove all debris from the deck using a hose or broom. Once the deck surface is dry, apply a deck "brightener"* to the deck as directed by the manufacturer. Deck Brighteners contain oxalic acid, which will also remove tannins.
Oil, Grease, and Food	All food spills should be removed as soon as possible. The surface must be cleaned within seven days to maintain the stain warranty. To remove, spray off with a hose and use warm, soapy water and a soft bristle brush (do not use a wire brush) to remove spills from the embossing pattern.

Problem	Solution
Mold and Mildew	If debris such as pollen and dirt is allowed to remain on the deck surface, mold can feed on the biofilm. Using a hose and warm, soapy water with a soft bristle brush (do not use a wirebrush) is recommended to remove the food source and mold.
Static Electricity	While this is not common, static electricity can occur on walking surfaces in dry climates or in areas where dry winds and dust-borne particles lay on the decking surfaces. Static electricity can build up on occupants walking across any composite decking surface, then produce a small static shock if they touch a grounded metal surface such as railing, door, etc. This condition can be decreased greatly with the use of Staticide topicals. Apply full strength, using a mop on a dry decking surface, and allow to dry; no rinsing or diluting needed.
Storage	Store decking on a flat level surface and ALWAYS use proper supports (dunnage). DO NOT store directly on the ground. Please contact us for additional details.
Tannins Due to Debris	Remove all debris from the deck using a hose or broom. Once the deck surface is dry, apply a deck "brightener"* to the deck as directed by the manufacturer. Deck Brighteners contain oxalic acid, which will also remove tannins.
Ice and Snow	A plastic shovel may be used to remove snow from the deck. Use table salt to melt the snow and ice from the deck surface.
Hard Water Staining	Hard water is water with high amounts of mineral deposits like lime, silica and calcium. When the water dries, deposits are left behind, leaving unsightly spots on surfaces. This is not a defect of our products but an issue with the water itself. Generally, these deposits can be cleaned with white vinegar on decking surfaces. Rinsing is required, so care should be taken to not use hard water for this purpose. If hard water must be used, dry with a cloth or use a blower to dry surfaces. In some cases a deck brightener product may also be used to help clean hard water stains.

For more details



01978 667840



enquiries@ecodek.co.uk



ecodek.co.uk

Making outdoors, yours

The ecodek logo, featuring a green stylized 'E' icon followed by the word 'ecodek' in a bold, sans-serif font, with a registered trademark symbol (®) to the upper right.