



GRAVITY DECK INFORMATION, CARE, MAINTENANCE & INSTALLATION GUIDE

Overview

Wood Plastic Composite (WPC) decking, branded as GRAVITY Deck, is a versatile and durable material designed for outdoor use. Combining the natural appearance of wood with the resilience of plastic, GRAVITY Deck offers an eco-friendly, low-maintenance alternative to traditional timber. This information sheet provides comprehensive guidelines on product care, installation, and maintenance to help you get the most out of your GRAVITY Deck.

- GRAVITY Decking Series is a semi-porous product that can stain, especially if not cleaned regularly.
- This guide gives basic principles to help maintain the natural beauty of your GRAVITY Decking Series.
- Cleaning requirements vary depending on product use and weather exposure.

Description

GRAVITY Deck is crafted from a blend of wood fibers and plastic, providing the look of wood with enhanced durability. It is resistant to moisture, UV radiation, and termites, making it ideal for outdoor environments. GRAVITY Deck is available in various colors and finishes to suit different aesthetic preferences.

Key Features

- Durability
- Eco-Friendly
- Low Maintenance
- Slip Resistance
- Aesthetics
- Installation Ease

Applications

- Residential and commercial decking
- Poolside and garden pathways
- Patios and balconies

Do's and Don'ts

Do's:

- Regular Cleaning
- Use Proper Tools
- Protect from Heavy Impact
- Allow Proper Drainage
- Use Non-Abrasive Cleaners

Don'ts:

- Avoid Harsh Chemicals
- No Direct Contact with Heat
- Don't Use High-Pressure Washers
- Avoid Metal Tools
- No Standing Water

Dirt Marks

Dirt marks can accumulate over time, especially in high-traffic areas.

- Sweep the deck to remove loose dirt and debris.
- Wash the surface with water and mild soap, scrubbing gently with a soft brush.
- For tougher dirt, use a non-abrasive cleaner specifically designed for composite decking.

Maintenance Guidelines

Routine Cleaning

- Sweep and wash the deck regularly.
- Clean spills immediately to avoid stains.

Stain Removal

- Use mild detergents for oil, grease, wine, and food stains.

Seasonal Maintenance

- Inspect and maintain decking, especially after extreme weather.
- Trim surrounding vegetation.

Mold and Mildew Prevention

- Ensure proper airflow around the deck.
- Clean mold with water and white vinegar.

Winter Care

- Use plastic shovels for snow removal.
- Apply calcium chloride-based ice melt if needed.

Mold and Algae Information

GRAVITY Deck, while resistant to moisture, can still develop mold and algae, especially in shaded or damp areas. Regular cleaning and proper drainage can minimize the risk.

Prevention Tips:

- Clean regularly with water and mild soap to remove organic debris.
- Ensure adequate ventilation around and under the decking to reduce moisture buildup.
- Use a mold inhibitor if the decking is installed in a highly humid area.

Removal:

- If mold or algae appear, scrub the affected area with a soft brush and a solution of water and white vinegar. Rinse thoroughly with water.

Surface Protection

To maintain the aesthetic appeal and prolong the life of your DECK, consider surface protection tips:

- Furniture Pads: Place protective pads under heavy furniture to prevent dents and scratches.
- Outdoor Rugs: Use UV-resistant outdoor rugs or mats in high-traffic areas.
- Shade Structures: Install pergolas or awnings to protect the decking from direct sunlight, reducing fading and heat buildup.

Scratches & Marks

GRAVITY Deck is designed to resist scratches, but light marks may occur due to heavy use or dragging objects across the surface.

Handling Scratches:

- For light scratches, use a soft brush to gently buff the area.
- Apply a decking oil or a specialized composite repair kit to blend the scratch with the surrounding area.
- For deeper scratches, you may need to sand the area lightly sand with fine-grit sandpaper and apply a matching finish.

Water Marks & Tannins

Water marks and tannin stains can occur, especially with new GRAVITY Deck, as the natural wood fibers release tannins when exposed to moisture.

Preventing water Marks:

- Regularly clean the deck to remove dirt and debris that can trap moisture.
- Ensure proper drainage and avoid water pooling on the surface.

Removing Tannin Stains:

- Clean tannin stains with mild soap and water.
- For stubborn stains, use a specialized tannin remover or diluted bleach solution (1:10 ratio), followed by thorough rinsing.

Disclaimers and Additional Information

Color Variation:

- Explanation: GRAVITY Deck is made from a combination of natural wood fibers and plastic. Due to the presence of wood fibers, there may be slight colour variations between decking boards, even within the same batch. Over time, exposure to sunlight and weather conditions can cause some fading or changes in colour. This variation is natural and does not indicate a defect product.
- Disclaimer: Please note that colour variation is a characteristic of WPC decking and is not covered under warranty. It is recommended to install boards from multiple packs to blend any colour differences

Thermal Expansion:

- Explanation: WPC decking expands and contracts with temperature changes. This is due to the plastic content in the material, which is sensitive to heat. During hot weather, the decking may expand slightly, and in cooler weather, it may contract. This expansion and contraction are normal and should be accounted for during installation
- Disclaimer: Ensure proper spacing between boards during installation to allow for thermal expansion. Failure to do so may result in buckling or warping, which is not covered under warranty.

Installation Recommendations:

- Explanation: Proper installation is crucial to the performance and longevity of GRAVITY Deck. Following the manufacturer's guidelines ensures that the decking is installed correctly, reducing the risk of issues such as buckling, wrapping or water pooling.
- Disclaimer: Always follow the GRAVITY Deck installation instructions. Improper installation may void the product warranty. If in doubt, consult a professional installer.

Chemical Sensitivity:

- Explanation: While GRAVITY Deck is designed to be low maintenance, it can be sensitive to certain chemicals. Harsh chemicals, including bleach or strong solvents, can damage the decking surface, leading to discoloration, etching or weakening of the material
- Disclaimer: Use only recommended cleaning products and avoid harsh chemicals. Damage caused by chemical exposure is not covered under the product warranty.

Warranty Information:

- Explanation: GRAVITY Deck typically comes with a 10 years limited warranty that covers manufacturing defects. This warranty may include protection against structural failures, severe fading, or termite resistance for a specified period, typically ranging from 10 to 25 years.
- Disclaimer: The warranty does not cover damage resulting from improper installation, misuse, accidents, or normal wear and tear. Please refer to the specific warranty documentation provided with your purchase for full details.

Environmental Factors:

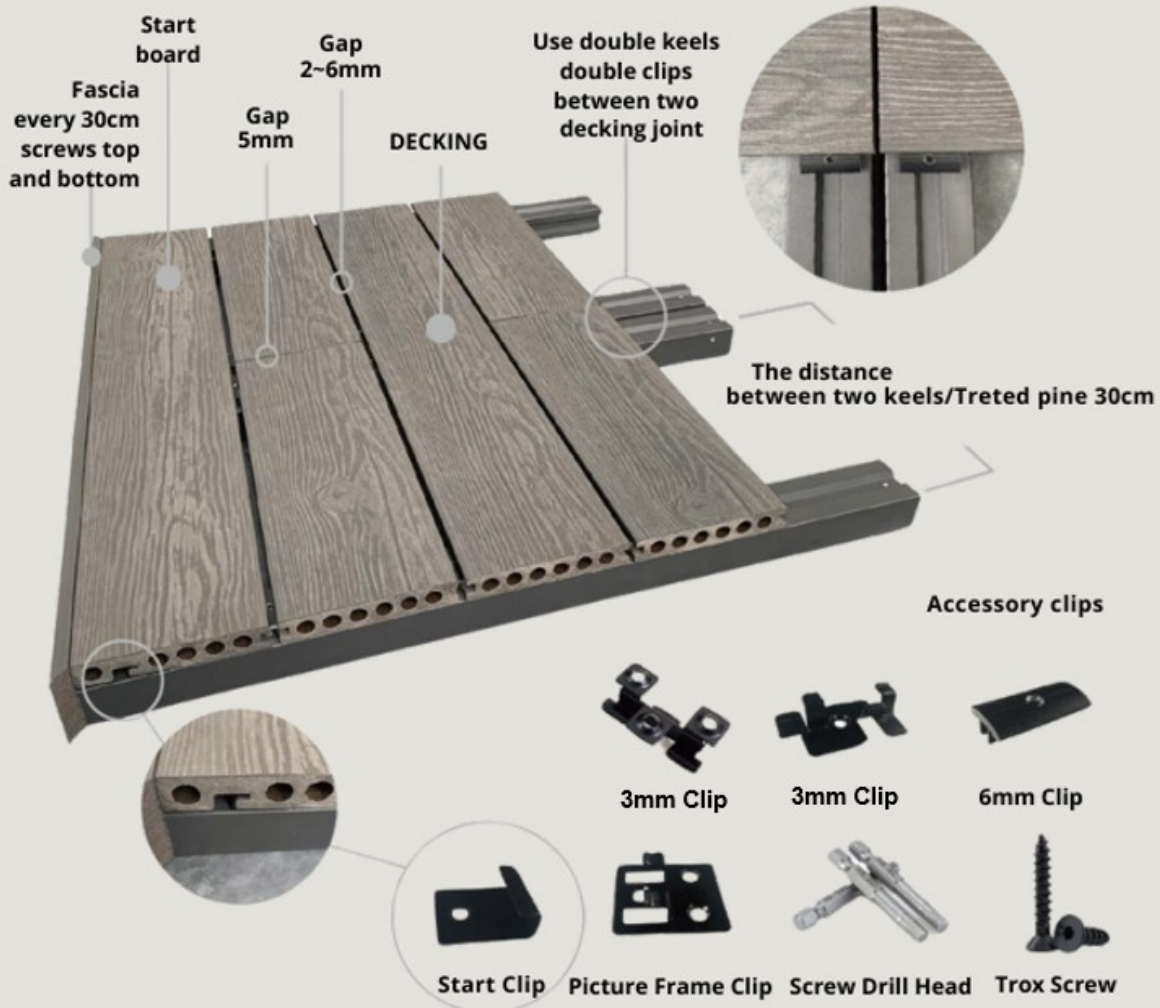
- Explanation: GRAVITY Deck is designed to withstand various environmental conditions, but extreme environments can still affect the decking's performance. For example, prolonged exposure to direct sunlight can cause fading, while high humidity can increase the risk of Mold or mildew growth.
- Disclaimer: While GRAVITY Deck is built to last in most conditions, extreme environmental exposure may lead to accelerated aging or other issues that are not covered under warranty. Regular maintenance and proper installation can help mitigate these effects.

Temperature Sensitivity:

- Explanation: WPC decking can absorb heat from direct sunlight, making the surface hot to the touch. This is particularly noticeable during summer or in areas with strong sunlight. The plastic content in WPC decking contributes to this heat retention, which may cause discomfort when walking barefoot.
- Disclaimer: Be aware of the potential for the decking to become hot under direct sunlight. Use shading options, such as pergolas or outdoor rugs, to mitigate heat buildup. Heat retention is a characteristic of the material and not considered a defect

INSTALLATION GUIDELINES:

INSTALLATION GUIDE SIMILAR PICTURE AS BELOW:



Warning tips

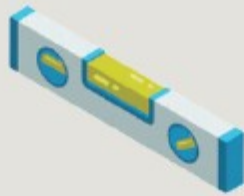
Before construction, please wear and use safety-approved protective equipment, such as gloves, goggles, and dust masks. Safety protection measures for workers are essential. Workers must wear protective glasses, dust masks, and gloves



General tools and material



Measure tape



Level instrument



Hammer



Drill & Impact driver



Pen or Marker



Impact drill



Drop saw



Saw



General accessories



Timbers

GRAVITY accessories for decking



Picture-frame clips



Starter clips



Decking screws



Bits



6mm clips



3mm clips



3mm clips

Product Application Structure

GRAVITY DECKING products cannot be used alone for beams, columns, or other load-bearing structures; they must be combined with suitable load-bearing structure products.

Product Environment Adaptation

Before installation, store the product in the local environment for 48 hours to stabilize thermal expansion and contraction. This step helps avoid inaccuracies during installation caused by significant temperature differences between locations.

Product Storage Environment

Products must be stacked on a flat, hardened surface and should avoid direct ground contact and long-term wet or ponding areas to reduce deformation.

Preparing Before Installation

1. Construction and Installation Drawing

Prepare drawings according to the site to ensure reasonable product layout and dimensional accuracy, and to reduce unnecessary material loss and construction delays.

2. Foundation Operation Before Construction

The ground should be firm, clean, flat by hardening treatment and has drainage measures. Drainage measures shall be taken for the foundation (determined according to the local rainfall): 1. Reserved drainage channels, 2. Reserved drainage well, 3. Find the slope base (parallel to the keel direction), etc. Ensure that the foundation drainage is smooth, and the distance between the ponding place and the floor bottom is not less than 80 mm. Avoid the part of the product without protective layer from swelling and cracking due to long term soaking water.

Keel Center Distance

The keel layout direction is perpendicular to the later floor pavement. If there is a slope, use the keel center distance in the floor length direction as the standard.

Keel maximum center distance form VIGA

Because the keel layout direction is perpendicular to the later floor pavement, if there is a slope, please take the keel center distance in the floor length direction as the standard.

Mould	Model	Civil Floor (mm)	Commercial Floor (mm)
	Classic Range	350-400	350
	Hi-Tech Range	350-400	350

Note: where more than one floor occurs in the floor length direction, double keel must be used at the floor joint. The guide also states the keel distance should not be less than 20 cm (to prevent water) and the floor should not be more than 20 mm higher than the keel.

Reserved Expansion Gap

When installing GRAVITY DECKING products, it is essential to consider the influence of temperature on the product's thermal expansion and contraction. The product must have an appropriate expansion gap to prevent deformation and warping. The size of the expansion gap depends on the length of the product and the surface temperature during installation. The surface temperature and thermal expansion coefficient of wood-plastic profiles, as well as the guiding parameters for product length and expansion gaps, are shown below:

Temperature of the product surface during installation (if the ambient temperature is used, the flooring temperature should be between -10°C and 60°C).

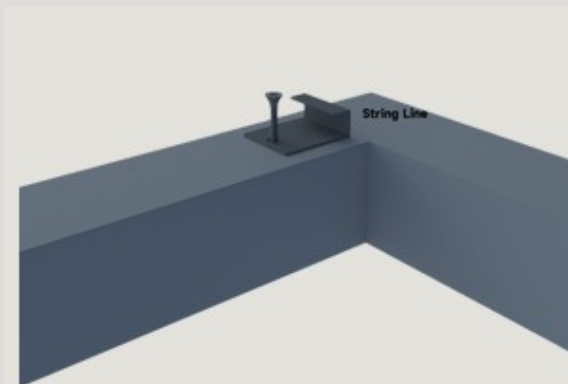
Product length in Mtr	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
0.5	1.8	1.6	1.5	1.5	1.4	1.3	1.1	1.0	0.9	0.8	0.6	0.5	0.4	0.1	0
1	3.5	3.3	3.0	2.8	2.5	2.3	2.0	1.8	1.5	1.3	1.0	0.8	0.5	0.3	0
1.5	5.3	4.9	4.5	4.1	3.8	3.4	3.0	2.6	2.3	1.9	1.5	1.1	0.8	0.4	0
2	7	6.5	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5	0
2.5	8.8	8.1	7.5	6.9	6.3	5.6	5.0	4.4	3.8	3.1	2.5	1.9	1.3	0.6	0
3	10.5	9.8	9.0	8.3	7.5	6.8	6.0	5.3	4.5	3.8	3.0	2.3	1.5	0.8	0
3.5	12.3	11.4	10.5	9.6	8.8	7.9	7.0	6.1	5.3	4.4	3.5	2.6	1.8	0.9	0
4	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
4.5	15.8	14.6	13.5	12.4	11.3	10.1	9	7.9	6.8	5.6	4.5	3.4	2.3	1.1	0
5	17.5	16.3	15	13.8	12.5	11.3	10	8.8	7.5	6.3	5	3.8	2.5	1.3	0
5.5	19.3	17.9	16.5	15.1	13.8	12.4	11	9.6	8.3	6.9	5.5	4.1	2.8	1.4	0
6	21	19.5	18	16.5	15	13.5	12	10.5	9	7.5	6	4.5	3	1.5	0

Note: The profile has a thermal expansion coefficient.

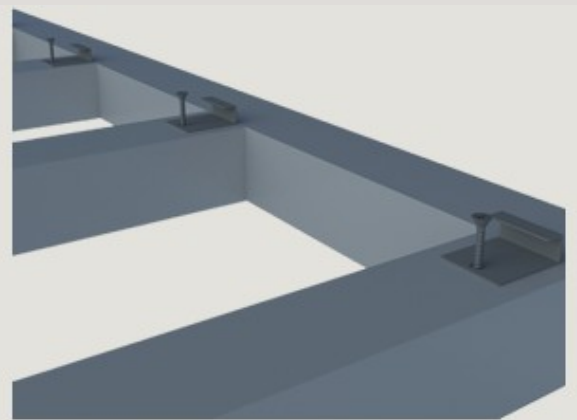
1. If the product is fixed with screws, pre-drilling must be carried out before the screws are installed. The drill diameter should be approximately 80% of the screw diameter. For example, for a 4 mm screw: $4 \text{ mm} \times 80\% = 3.2 \text{ mm}$, Therefore, the recommended drill diameter is approximately **3.2 mm**.
2. Only one floor can be fixed on both sides of one clip, not more than one.

Step 1. Install Starter Clips

- Begin by installing starter clips on both ends of the first deck board.
- Run a chalk line to ensure alignment, then mark the locations for additional starter clips along the length of the board, spacing them 400-450mm apart.
- Install all starter clips before positioning your first deck board or bullnose board to start the decking installation.



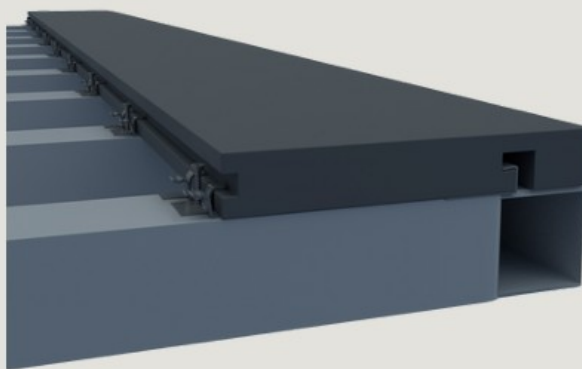
Install starter clips both end



Run chalk line and add more starter clips

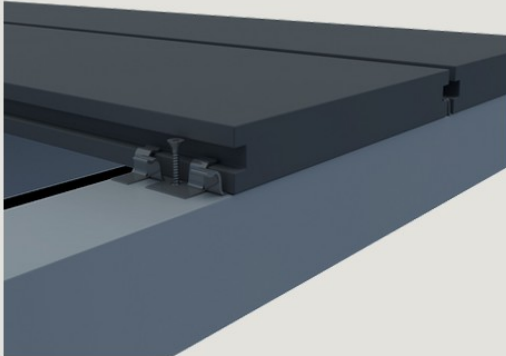
Step 2: Install the First Decking Board or Bullnose

- After securing the starter clips, install your first GRAVITY decking board or bullnose as shown in the provided photo.
- To continue installing additional decking boards, use GRAVITY clips (available in 3mm or 6mm sizes). Attach these clips to each joist.
- It's essential to use GRAVITY supplied clips to maintain your warranty and to allow the WPC boards to expand or contract with changing weather conditions.
- Note: We do not recommend screwing the boards directly to the joists, as this may prevent proper expansion and contraction of the WPC boards.



Install your first deck or bullnose

Step 3: Continue Installing Decking Boards



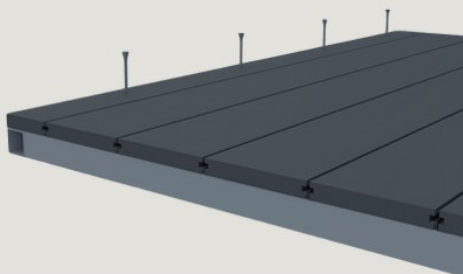
Ensure all joist are clipped with boards

- As shown in the photos, continue the installation by securing the remaining decking boards using clips on each joist.
- Ensure each board is properly aligned and securely fastened to maintain a consistent gap and smooth surface across the deck.



Continue the same process until the end

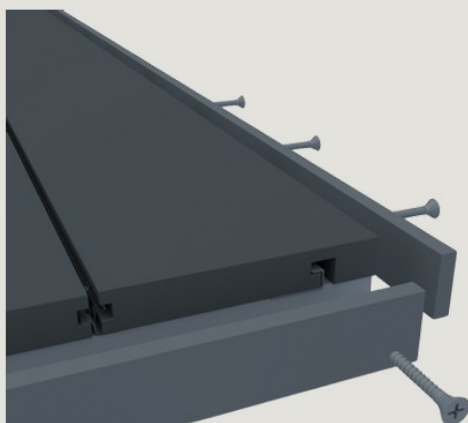
Step 4: Finishing the Installation with the Last Board



Pre-drill and use screw OR use adhesive

- When installing the last board, especially if it's against a brick wall or fencing where tools may not reach, you can pre-drill and screw the board into place.
- If you prefer a screwless cosmetic finish, we recommend using a suitable outdoor adhesive, such as contact glue or liquid nails.
- To achieve a flush finish when cutting the last board, we recommend using a table saw for precision.

Step 5: Install Fascia Boards



Pre-drill & screw it 350mm top & bottom

- Fascia boards are essential for covering the side framework of the deck, providing a clean and finished appearance.
- Pre-drill and screw fascia boards every 300-350mm along the top and bottom edges to prevent warping.
- To enhance stability, use adhesive to maintain surface contact and prevent bloating.
- If using a bullnose instead of 12mm fascia, install it with clips or screws in the same manner.

Butt joints:

If you need to connect two decking boards at a butt joint, we recommend adding a joist for additional support at the joint. Always leave room for expansion in WPC decking.



Leave a safe gap for expansion

Board length	Gap
1M	2mm
2M	3mm
3M	5mm
4.5M	7mm
5.4M	10mm

Tips

- **Joist Support:** Ensure that butt joints are placed over a double joist or an additional joist is added to provide solid support.
- **Consistency:** Use spacers or a gap gauge to maintain uniform gaps across all joints for a consistent finish.
- **Gaps for Decking Boards:** The recommended gaps in the table apply to the entire butt joint. For example, if you're installing a 5.4m board, you can distribute the 10mm gap evenly by leaving 5mm at each end.

Explanation

- **1.0m - 2.0m Length:** A smaller gap (2-3mm) is sufficient for shorter boards to accommodate expansion and contraction.
- **3.0m Length:** A 4-5mm gap is recommended for boards of this length.
- **4.0-4.5m Length:** For 4- 4.5 meter boards, a 5-7mm gap is necessary for thermal movement.
- **5.4m Length:** The longest boards should have a 10mm gap to ensure proper expansion.

Breaker boards

A breaker board is a strategically placed board, often perpendicular to the main decking boards, that serves several purposes. Its primary function is to act as a buffer or expansion zone, preventing large gaps from forming between the decking boards due to thermal expansion and contraction.



Advantages

- Expansion Management
- Aesthetic Continuity
- Structural Integrity
- Simplifies Installation

Tips

Use our THQ specialized fixture picture frame clips to securely install breaker boards or picture frame decking without direct screwing, ensuring a clean finish