



Skingrain Collection PE joist Installation Guide



YARDCOM

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Tools and Equipment



Miter Saw

Decorative panels can be cut using standard woodworking tools, including miter saws, jigsaws, and hand saws.



Personal Protection

When handling the panels, it is recommended to wear long-sleeved clothing and protective gloves. When cutting the panels, it is recommended to wear a dust mask, hearing protection, and safety glasses.



Electric Drill

Used to install screws.



Spirit Level

Used to ensure that the surface remains level.



Tool Set

Standard carpentry tools are required for installation, including a tape measure, pencil, triangle ruler, plane, utility knife, and drill bit set.

Tools and Equipment



Level

Used to ensure that joists and decking boards remain level.



Hammer Drill

Used to drill holes in concrete to install expansion bolts.



Decking Straightening Tool

Used to straighten lengthwise bending in decking boards.



Caulking Gun

Used for the application of polyurethane adhesive.

Precautions

Key Points:

SKINGRAIN is a composite material primarily composed of rigid polyurethane foam. The core structure is formed through a molding and pouring process, reinforced with materials such as reinforcing fibers or profiles. The surface is covered with a scratch-resistant and weather-resistant polyurethane elastomer layer, finished with bonded color coatings to achieve a realistic, multi-tone wood appearance. It is a high-strength, lightweight board that combines an authentic wood-like texture with excellent weather resistance. To ensure safe, durable, and aesthetically pleasing performance, please read the following installation instructions carefully.

Notes:

This installation guide is for reference only. Any use of Yardcom profiles must refer to the relevant requirements specified herein. In case of non-compliance, the user shall bear all related risks and liabilities. Yardcom profiles are not designed for standalone use in load-bearing structures such as beams, columns, or similar applications. They must be used in conjunction with appropriate load-bearing components.

On-Site Construction Protection Measures:

- ① Yardcom profiles must be stacked on a flat, level, and hardened ground. Avoid direct contact with the ground and prolonged exposure to damp or water-prone areas to prevent deformation or other damage.
- ② During construction, use safety-certified construction equipment and wear appropriate protective gear.

Precautions

Construction Operation Foundation:

- ① The base surface of the construction area must be properly hardened. After completion, the surface must be clean and level, with a recommended flatness tolerance of no more than 5 mm per square meter.
- ② Adequate drainage measures must be implemented based on local rainfall conditions, including reserved drainage channels and drainage pits. The base should be sloped appropriately in the same direction as the joists to ensure effective water runoff.

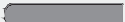
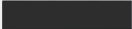
Precautions:

To ensure the cutting quality, make sure the board is placed flat on a level surface during cutting.

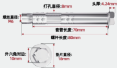
Natural Variations

The surface of SKINGRAIN is made of an elastomer material. A slight rebound occurs after fasteners are driven into the board, which helps secure the fasteners more firmly within the material. From an aesthetic perspective, the elastomer can create a tighter bond between the screw and the board, leaving no screw heads exposed. This feature is particularly important in applications where a realistic wood-like appearance is needed.

Profiles and Accessories

SKINGRAIN Installation Material List				
Name	Material	Diagram	Dimensions	Uses
HLSU-005U Decking	Polyurethane		200×25 mm	Floor covering
HLSU-006U Decking	Polyurethane		176×25 mm	Floor covering
HLBU-001U Side Edge Trim Board	Polyurethane		146×16 mm	Side decoration
HLBU-004U Straight Edge Trim Board	Polyurethane		150×25 mm	Platform edge trim board
HLBU-005U Curved Edge Trim Board	Polyurethane		50×25 mm	Rounded edge trim board for platform edges; suitable for ground and stair edges with a bending radius ≥ 1200 mm
HLFY-006 Joist	PE		50×50 mm	Floor joist
HLFY-007 Edge Joist	PE		25×115 mm	Edge joist (for curved platforms)
HLFP[B]-0016-A01 Star Head Wood Screw	Stainless Steel 304 Natural Color		M4.3×60 mm	For fixing floor and 25 mm thick PE joists
HLFP[B]-0026-A01 Star Head Wood Screw	Stainless Steel 304 Natural Color		M4.3×40 mm	For fixing 25 mm thick decking and 16 mm thick edge trim board
HLPK-0764 Star Head Wood Screw	Stainless Steel 304 Natural Color		M4.8×89 mm	Joist connection

Profiles and Accessories

SKINGRAIN Installation Material List				
Name	Material	Diagram	Dimensions	Uses
HLPK-0765 Pan Head Wood Screw	Stainless Steel 304 Natural Color		M4.2×25 mm	For fixing angle brackets
HLPM-0140 (B) L-shaped Bracket	Stainless Steel 304 Black Plated		46×73×50 mm 3 mm thick	For fixing joists to the ground
HLPK-0766 L-shaped Bracket	Steel 304 Natural Color		65×65×20 mm 3 mm thick	Joist connection
HLPK-0813 Flat Head Hexagon Anchor Bolt	Steel Steel 304 Natural		M8×80 mm	For fixing L-shaped bracket to the ground

Profiles and Accessories

SKINGRAIN Installation Tools List

Name	Material	Diagram	Dimensions	Uses
HLPK-0427 Screw Lubricant	/		400 ml	Spray on screws for lubrication and rust prevention
HLUZ-10 Polyurethane Adhesive	Single-component Polyurethane Adhesive HR-819/2		150 ml	For bonding the cut ends of edge boards (Customers purchase independently based on recommended instructions)
HLPK-0770 Sika Polyurethane Sealant	Polyurethane Black		11FC [600 ml]	For fixing 50x25 PU edge boards (Customers purchase independently based on recommended instructions)
HLPK-0768 Spacer Block	Nylon Black		80x30 mm, thickness 1-8 mm	Used for leveling battens on uneven ground by shimming (Only for height differences within 10 mm)
HLPK-0812 H13 Hexagon Socket	Carbon Steel Natural Finish		H13-65 mm	For installing M8x80 mm external hex anchor bolts
HLPK-0769 Star Screwdriver Bit T15	S2 Alloy Steel Natural Finish		T15	For installing M4.3x60 mm and M4.3x40 mm Star-head wood screws
HLPK-105 (V) Star Screwdriver Bit T25	S2 Alloy Steel Natural Finish		T25	For installing M4.8x89 mm star-head wood screws
HLPK-041 (V) Cross Screwdriver Bit PH2	S2 Alloy Steel Natural Finish		PH2	For installing pan-head screw
HLPK-0429 Cross Spacer Clip	Plastic Red		2 mm	For controlling floor gap spacing
HLPK-0475 V2 Nail Positioner	Aluminum Alloy 6063-T5 Black Powder Coated		82x50x43.5 mm	For controlling the nailing distance from the edge
HLPK-0430 Screw Depth Positioner	High Carbon Steel Natural Finish		φ15x65 mm	For controlling the nailing depth (Bit not included)

Profiles and Accessories

SKINGRAIN Installation Tools List				
Name	Material	Diagram	Dimensions	Uses
HLPK-0609 Nylon Soft-Bristle Brush	Nylon Natural Finish		28x35x5 mm	For paint touch-ups
SJ-020 Hardener	/		50 g per can	For paint touch-ups
SJ-031 Modern Black Paint	Modern Black		500 g per can	For Modern Black SKINGRAIN boards
SJ-002 Modern Brown Paintt	Modern Brown		500 g per can	For Modern Brown SKINGRAIN boards
SJ-003 Ivory White Paint	Ivory White		500 g per can	For Ivory White SKINGRAIN boards
SJ-034 Teak Integrated Color Paint	Teak		500 g per can	For Teak SKINGRAIN boards
SJ-039 Earl Grey Integrated Color Paint	Earl Grey		500 g per can	For Earl Grey SKINGRAIN boards

I. Storage and Handling

Notes:

① Decking boards must be stored on a flat surface or on horizontal supports. The spacing between horizontal supports should be $\leq 400\text{ mm}$, as shown in Figure 1-1.

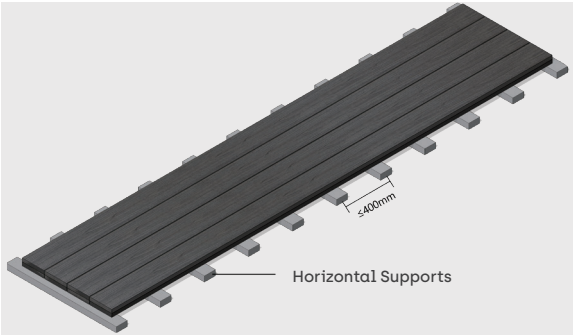


Figure 1-1

② Boards should be stacked face-to-face or back-to-back. Do not stack them face to back. As shown in Figure 1-2.

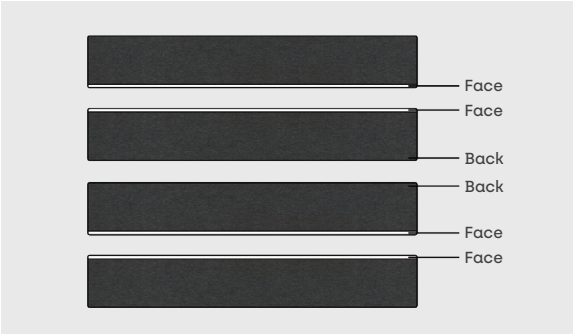


Figure 1-2

③ Do not drag decking boards off the pallet, as this may cause surface abrasion or marks that affect appearance.

II. Joist Installation

To ensure proper drainage and ventilation between the decking and the substrate, the thickness of the joist shall not be less than 40 mm. This installation guide uses 50×50 mm PE joists as an example. The reference application is shown in Figure 2-1.

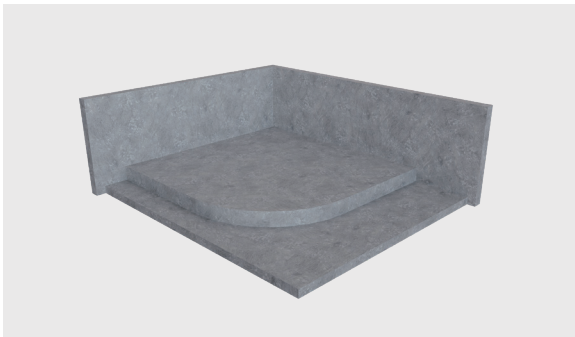


Figure 2-1

1. Install 50×50 mm PE main joists. For 25 mm thick decking boards, the center-to-center spacing of the joists should be 300 mm. Cross bracing shall be installed between joists at intervals of 1,400–1,600 mm, as shown in Figure 2-2.

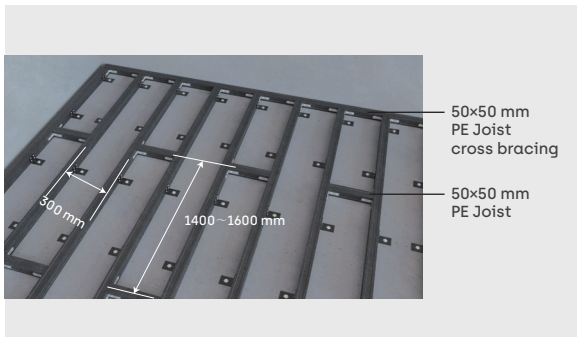


Figure 2-2

II. Joist Installation

2. Secure the joists with 46×73×50 mm L-shaped brackets, with a brackets spacing of ≤ 500 mm. End brackets should be placed no more than 100 mm from the joist ends, as shown in Figures 2-3 and 2-4.

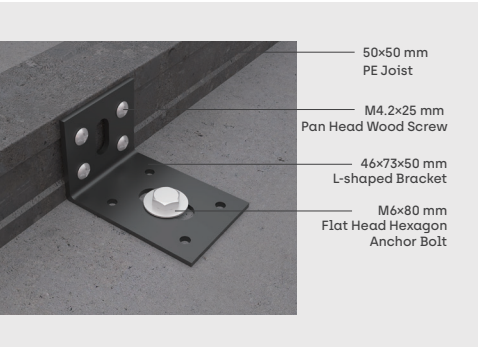


Figure 2-3

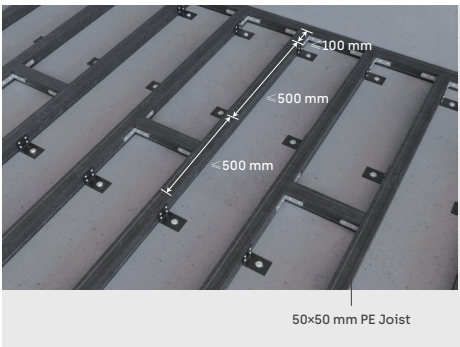


Figure 2-4

3. Connect the 50×50 mm PE joists with 65×65×20 mm L-shaped brackets and M4.8×89 mm Star Head Wood Screws, as shown in Figures 2-5 and 2-6; Secure the 25×115 mm edge joists with M4.3×60 mm Star Head Wood Screws, as shown in Figure 2-7. When there are joints along the length of the joists, a 10 mm expansion gap must be reserved between adjacent joist ends to accommodate material expansion and contraction.



Figure 2-5

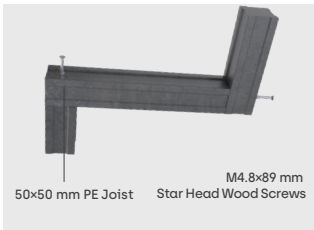


Figure 2-6

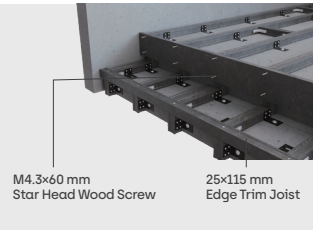


Figure 2-7

II. Joist Installation

4. The completed joist installation is shown in Figure 2-8. The curved platform edge finishing requires two layers of edge joists. The first layer supports the ends of the decking, while the second layer supports the 50×25 mm edge trim boards, which is installed after the decking boards have been cut to the required curved profile.

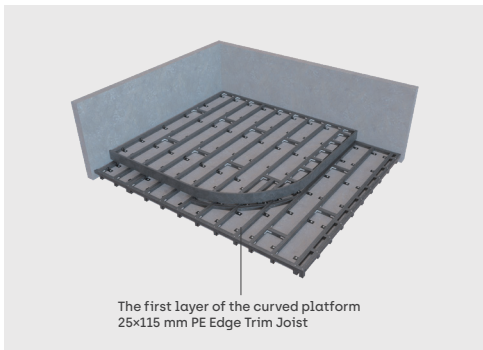


Figure 2-8

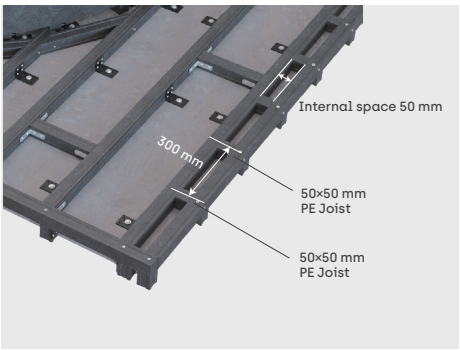


Figure 2-9

III. Decking Installation

1. Install the first-layer platform with 150 x 25 mm straight edge trim boards and 146 x 16 mm side edge trims, as shown in Figures 3-1 and 3-2.

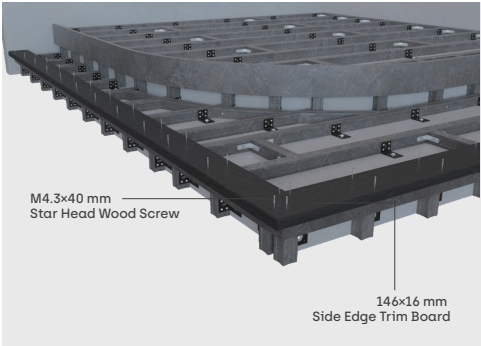


Figure 3-1

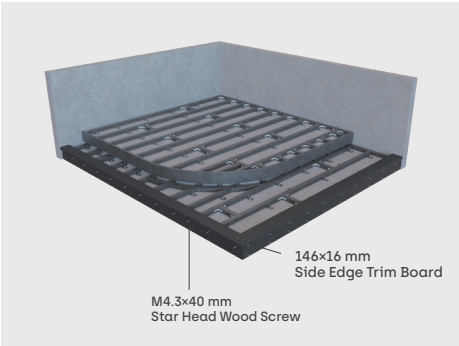


Figure 3-2

- 2. Install the first-layer decking, as shown in Figure 3-3.
- 3. Install the second-layer curved decking, as shown in Figure 3-4.

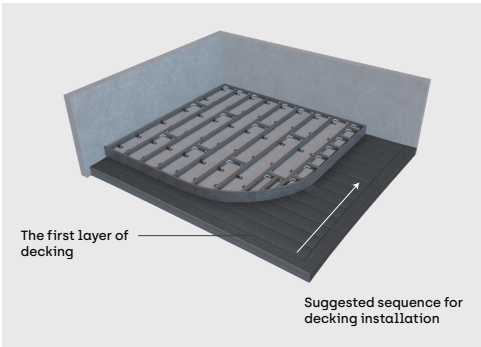


Figure 3-3

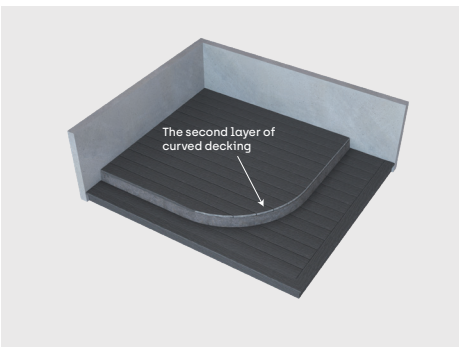


Figure 3-4

III. Decking Installation

- 4. Install the second-layer 25×115 mm curved edge joist to support the 50×25 mm curved edge trim boards, as shown in Figure 3-5.
- 5. Install the second-layer curved platform with 146×16 mm side edge trim boards, as shown in Figure 3-6.

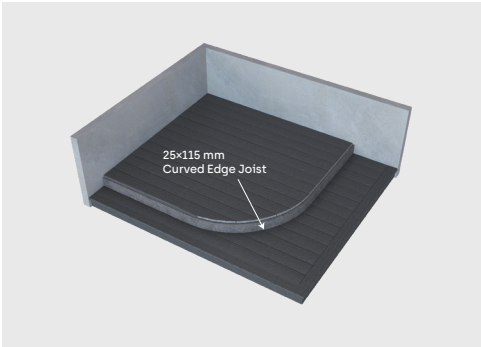


Figure 3-5

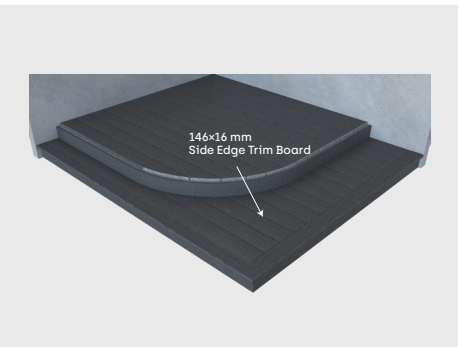


Figure 3-6

- 6. Install the second-layer curved platform with 50×25 mm curved edge trim boards. Before installing the edge trim boards, apply a bead of polyurethane sealant along the inner corner at the top of the supporting joist (recommended bead diameter ≤5 mm to prevent overflow and staining) to enhance the stability of the edge trim boards. As shown in Figures 3-7 and 3-8.

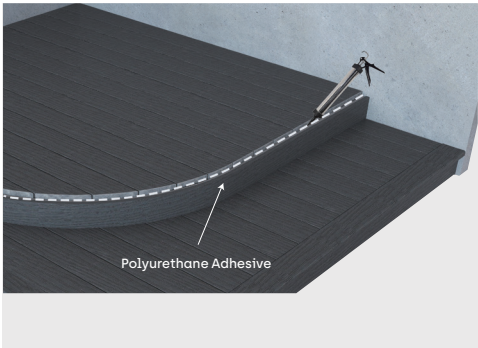


Figure 3-7

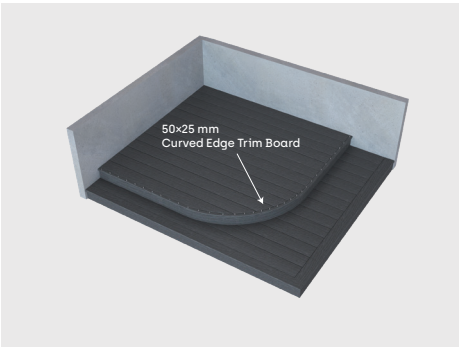


Figure 3-8

IV. Decking Screw Guidelines

1. Before use, screws should be fully sprayed with a layer of screw lubricant, as shown in Figure 4-1.



Figure 4-1

2. Before installing the decking, identify the fiberglass reinforcement positions within the core material and avoid driving screws directly into these areas. A nail positioner can be used to control screw placement, as shown in Figure 4-2.

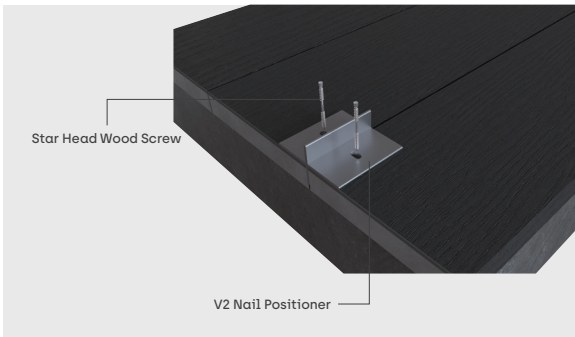


Figure 4-2

IV. Decking Screw Guidelines

3. The elastomer surface layer of SKINGRAIN decking is capable of self-recovery after dedicated screws are driven to the appropriate depth. The screw head must be controlled to sit 5–8 mm below the board surface to conceal the screws heads. A screw depth positioner may be used to ensure accurate depth control. During installation, firmly press the board down to prevent the screw from spinning on the surface, which could damage the surface. As shown in Figure 4-3.

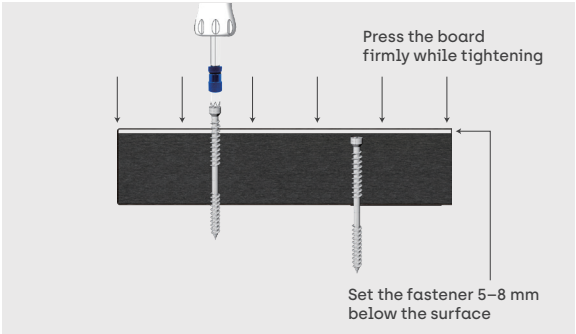


Figure 4-3

4. When the board width is 200 mm, use three screws at each board end and two screws in the intermediate areas. As shown in Figure 4-4. When the board width is less than 200 mm, use two screws throughout. When installing 50 mm edge trim boards, the screw spacing should be set at 150 mm, as shown in Figure 4-5.

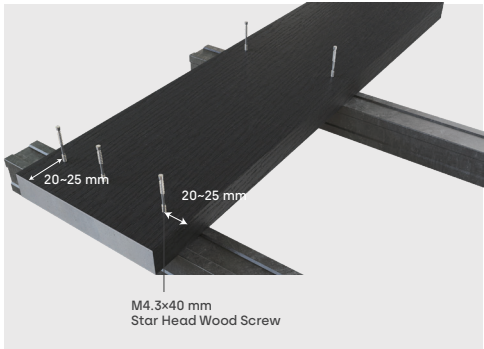


Figure 4-4

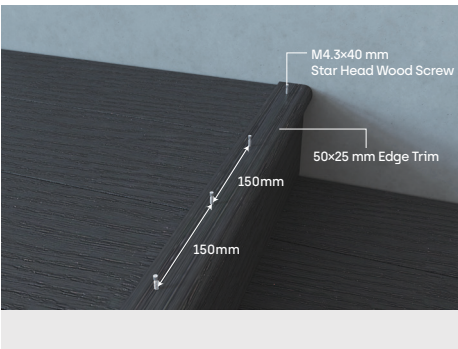


Figure 4-5

V. Decking Gap Guidelines

1. Maintain a gap between decking boards using 2 mm thick cross spacer clips. If side bowing occurs, a decking straightening tool should be used during installation. Due to manufacturing tolerances in board width, a joint gap of 2–4 mm is considered normal.

2. Double joists shall be used at decking butt joints. A 1 mm gap must be left at each joint. Before securing, any cut ends shall be repaired with Yardcom touch-up paint (matching the decking color). The maximum allowable overhang at board ends is 50 mm, as shown in Figure 5-1. A 10 mm gap is recommended between the decking board ends and adjacent walls, as shown in Figure 5-2.

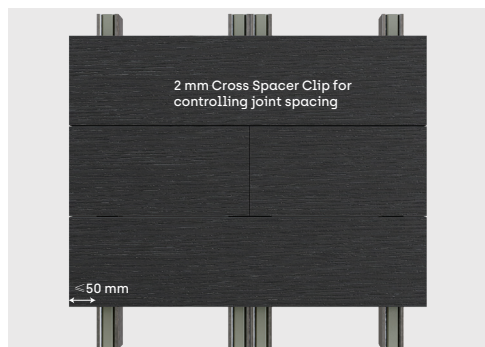


Figure 5-1

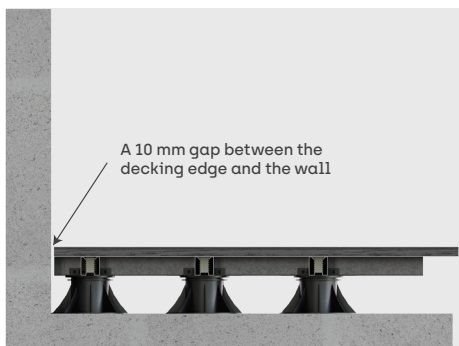


Figure 5-2

VI. Edge Trim Installation

1. SKINGRAIN straight edge trim board is a rigid products with a width of 150 mm and rounded edges, typically used for edge finishing on non-curved platforms, decking areas, and steps. Miter joints are recommended at corners, as shown in Figure 6-1.

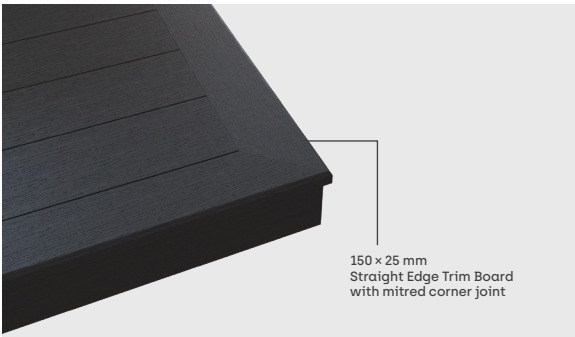


Figure 6-1

2. When joining two SKINGRAIN straight edge trim boards, a 22.5° miter cut shall be used. The upward-facing cut surface must be repaired with Yardcom touch-up paint (matching the decking color) before fixing. As shown in Figure 6-2 .

Repair Procedure:

- ①Cut-End Preparation: Ensure the cut end is clean, dry, smooth, and free from oil, dust, or loose particles. Light sanding may be applied if necessary.
- ②Paint Preparation: Stir the paint thoroughly using an electric mixer or manually for 3-5 minutes. If evaporation has occurred, add an appropriate amount to adjust consistency. Mix the prepared paint with S.J-020 hardener at a weight ratio of 10:1, stir evenly, and use within 3 hours. It is recommended to prepare the mixture in small batches according to actual needs. The recommended paint consumption is approximately 1.2 g per cut end.
- ③Application: Using a nylon soft-bristle brush (as shown), evenly apply the mixed paint to the cut end. Apply in multiple thin coats; each layer should not be too thick to avoid sagging.
- ④Drying and Curing: Allow the paint to air-dry at room temperature. The curing time is generally 24–48 hours. Avoid any external impact on the coating before it is fully cured.

Note: If surface damage occurs during installation, the above steps can also be used for repair.



Figure 6-2

VI. Edge Trim Installation

3. The maximum overhang for the SKINGRAIN straight edge trim board is 24 mm. A groove for LED strips may be reserved beneath the overhang. The maximum cross-sectional size of the groove is 12 mm (W) × 9 mm (H), with a minimum distance of 10 mm from the outer edge to the groove cut, as shown in Figure 6-3.

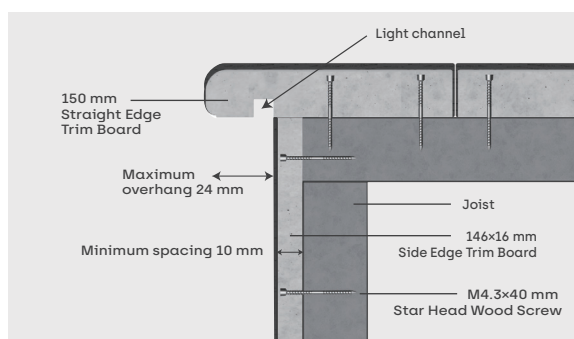


Figure 6-3

4. SKINGRAIN side edge trim board is a flexible product designed for decorative finishing on the sides of platforms and steps. The minimum bending radius is ≥ 1200 mm (at 20°C/68°F). It should be fixed to the vertical joists using two symmetrically positioned screws. During bending, ensure the trim board is securely fastened to the joists and maintains a T-shaped perpendicular alignment with the edge trim. Thermal expansion gaps must be reserved at the ends.

5. SKINGRAIN curved edge trim board is a 50 mm-wide flexible product with rounded edges. It is designed for finishing curved or irregular platforms and step edges. With a minimum bending radius of ≥ 1200 mm (at 20°C), the board must have a minimum of 25 mm of its width securely fastened to the joist, and the maximum allowable overhang from the end of the trim board is 9 mm. As shown in Figures 6-4 and 6-5. The detailed information of the cured edge trim board refer to the PE joist installation guide.

VI. Edge Trim Installation

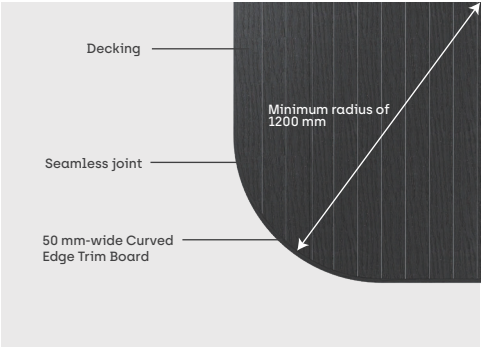


Figure 6-4

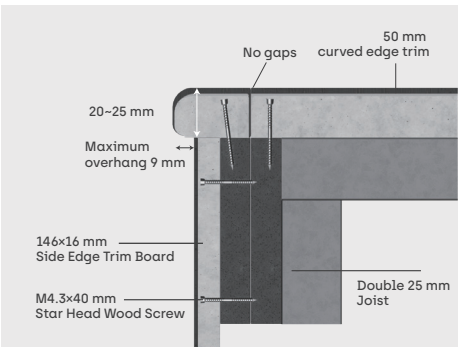


Figure 6-5

6. When jointing SKINGRAIN curved edge trim boards (preferably on straight sections whenever possible), a 45° miter joint may be used. Apply Yardcom-specified adhesive to the upward-facing joint surface for bonding, as shown in Figure 6-6.

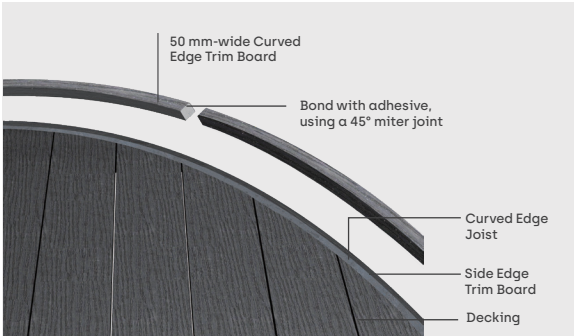


Figure 6-6

VII. Paint Touch-Up

During the installation of SKINGRAIN products, any exposed cut surfaces must be sealed using YARDCOM dedicated paint. This paint is specifically designed for on-site end-grain application to enhance sealing performance, waterproofing, and long-term durability, while protecting exposed ends against environmental factors.

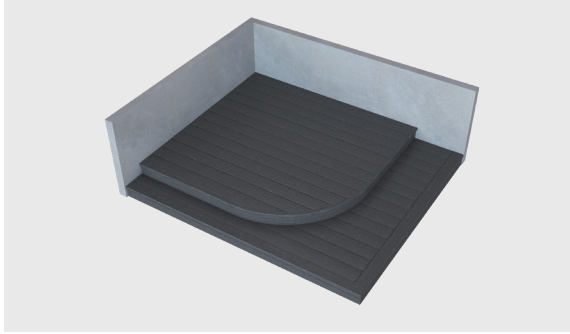
1. Tool Preparation

- ① Sandpaper / Sander: Used to remove old paint or smooth rough edges (Recommended grit: 80–120 for initial sanding; 220 for fine finishing).
- ② Scraper / Putty Knife: For removing loose paint and filling minor gaps.
- ③ Cleaning Tools: Use a wire brush for stubborn stains or mildew, and a soft brush, compressed air, or damp cloth to remove surface dust.
- ④ Nylon Soft-Bristle Brush: Suitable for edge and detail work (recommended width: 50–100 mm).

2. Painting Application Requirements

- ① Environmental Conditions: A temperature range of 5–35°C is recommended. Avoid direct sunlight, extreme heat, or cold and damp conditions. Ambient humidity must be below 85%. Do not apply paint within 24 hours before or after rainfall. Ensure proper ventilation while avoiding strong winds that may carry dust.
- ② Cut-End Preparation: Ensure the cut ends are clean, dry, smooth, and free from oil, dust, loose particles. Sanding is recommended if necessary.
- ③ Application Technique: Use a nylon soft-bristle brush to apply the mixed paint evenly to the cut end. Apply in multiple thin coats rather than one thick layer to avoid sagging or runs. The surface is typically dry in 2–4 hours and fully cured within 24 hours.
- ④ Post-Application Care: Within 48 hours after application, avoid any impact or water exposure before the painting has fully cured.

VIII. Installation Showcase



IX. Important Notes

1. Please keep children and non-construction personnel away from the construction area during installation. Always wear protective gloves and safety goggles, and operate power tools with caution.
2. Avoid installation during rainy weather or extreme heat to maintain material stability.
3. The finished deck height must be lower than the threshold to prevent the backflow of rainwater.
4. Before installation, carefully inspect all components to ensure they are complete and in good condition and capable of performing as intended. Do not use this product together with damaged or worn components.



If you encounter any specific issues during use that cannot be resolved, please contact YARDCOM for official support.

Contact Information

Telephone: 400-994-6188

Email: Marketing@yardcom.net

We are committed to providing you with dedicated assistance.

www.yardcom.net