www.neular.com

Installation guide for Neular Deck

neular

the future of green

Technical Data

Neular Decking is an economical and eco-friendly method of decking. It has been created as an alternative to wood where humidity tolerances, durability and a long lifetime are required.

Our Decks will last a lifetime, without fading or cracking. There is minimal maintenance and virtually limitless options when it comes to textures and colours.

Key Features

Maintenance-free
Weathertight – highly durable; UV resistant
Safe – does not splinter
Watertight – does not absorb moisture
Nonslippery even in wet conditions (level R10)
Density 0,75 g/cm³
Non-toxic

Core Composition

LDPE (Low Density Polyethylene) / HDPE (High Density Polyethylene) / PP (Polypropylene) / PS (Polystyrene)

Film Composition

Substrate printed decor film
Impregnation Transparent EB-curable resins **Coating** Transparent UV stable EB-curable resins **All used resins are solvent- and formaldehyde free**
Release film PP-film. Temperature stable <120° C

Storing of Neular Boards

Make sure that Neular boards are not stored in direct sunlight (to avoid strong warming up).
Please read more in relevant section "Working with Neular" (Section 3) about thermal expansion.

Neular boards are watertight and there is no need to protect them from water.

To avoid deformaties, the boards must be stacked horizontally. The distance between the bearing woods must not exceed one meter.

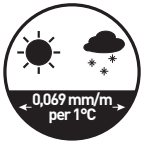
Installation

Avoid cutting in freezing or hot conditions. Let the boards acclimatise to reach the homogeneous temperature after removing them from packaging. During planning take into account the specifics of the polymer tolerances (Neular material has max 5% tolerance).

Working with Neular

Neular boards can be cut and drilled like timber. It is recommended that all Neular boards are cut and installed at the same temperature.

Before cutting make sure that the temperature of the boards are the same. An infrared thermometer must be used to measure the surface temperature.
The Neular boards expand or contract when temperature changes occur. Temperature change of 1°C changes the longitudinal dimension of the Neular profiles by 0,069 mm per 1 m.



Distances to fixed components (e.g. house wall, fascia board etc.) must be adhered to. Mounting distances depend on the temperature of the air and boards.

A rough guideline is a distance of 4 mm by 3 m boards and 5 mm by 3,6 m boards if these are laid at air temperatures of less than or equal to 20°C (if the surface temperature of the plank is ≤ 20°C). At temperatures higher than 20°C (board temperature> 40°C), the gap can be smaller or no gap is needed, as the boards will contract on cooling.

For any assistance, consult Neular distributor or info@neular.com

01 | Material, Decking

Decking Boards

138x32 mm

Neular Craft

142x32 mm

Neular Natural

95x20 mm

Fascia board

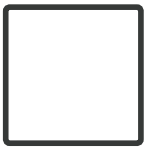
Construction Beams

95x50 mm

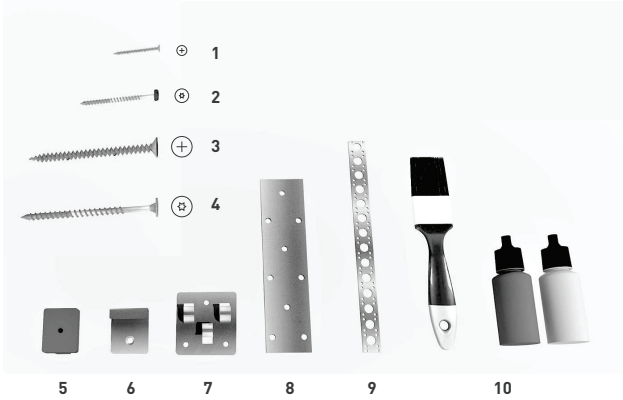
95x32 mm

140x50 mm

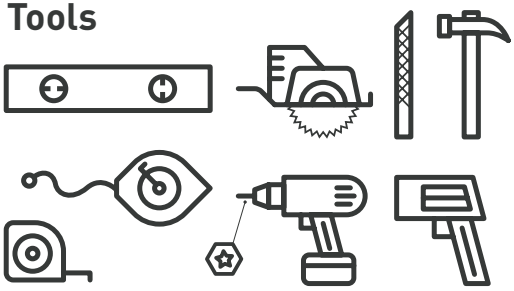
95x95 mm



02 | Accessories



Tools



1 Clip and metal plate screws 3.5x25 mm (for 6,7,8,9)

2 Plastic clip screws 3.5x25 mm

3 Facia board screws

4 Fixing screws 3.5x25 mm (for section 5)

5 Plastic clip

6 End / start clip

7 Metal clip

8 Stainless steel plate 120x30 mm for extending the decking length of Neular Natural decking board

9 Perforated stainless steel tape 12x0.75 mm for extending the decking length of Neular Craft decking board

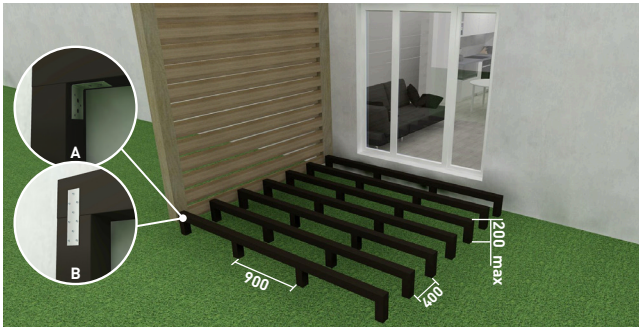
10 Two component laquer

03 | Expansion Gap

Neular boards have the characteristic of changing length based on temperature. When building the deck it is necessary to leave an expansion gap at one end (**A**).

A temperature change of one degree changes the longitudinal dimension of the decking by 0.069 mm per 1 metre.

04 | Base Structure



Neular decking must be placed on Neular joists. The sample used in this installation guide is a 95x95 mm polymer joist.

The ground area of the deck must be even and stable to avoid sagging or an uneven tension (load) distribution.

The maximum distance between the joists is 400 mm.

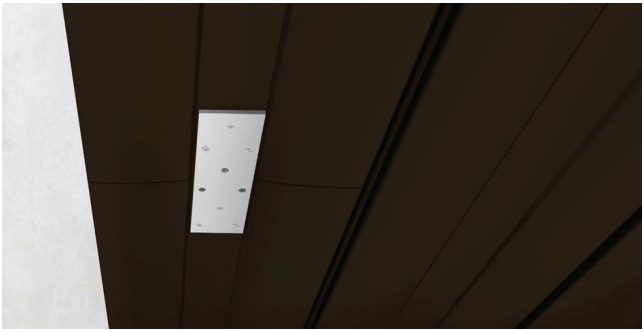
The maximum span between the posts is 900 mm.

Joists should be at least 50 mm wide.

To build the joist structure strength calculations must be made to ensure the construction can support the weight of the decking: 1m = 3.5 kg and 1m² = 23 kg

* Optional way of building a higher terrace.

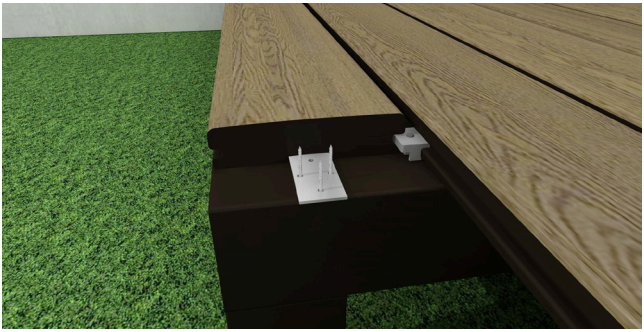
05 | Extending the Decking



A1 connecting Neular Natural Decking Boards

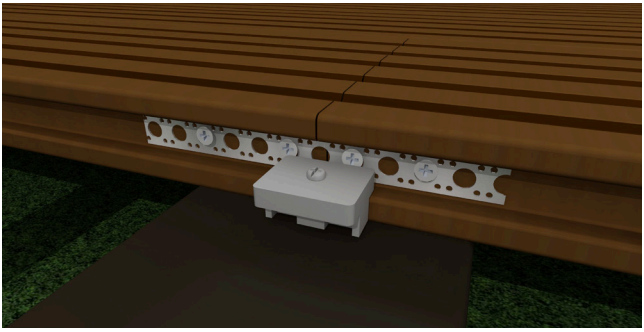
To connect Neular Natural decking boards it is necessary to use the stainless steel plate and screws intended for this purpose. They should be placed on the underside of the decking.

The stainless steel plate requires at least 6 screws (2 x 3 screws).



A2 connecting Neular Natural Decking Boards

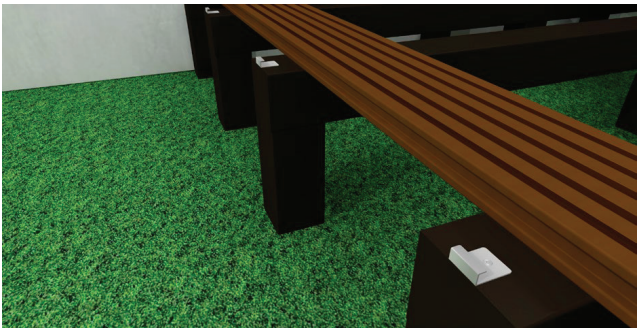
The end of each board must be supported and placed on a sub-structure.



B connecting Neular Craft Decking Boards

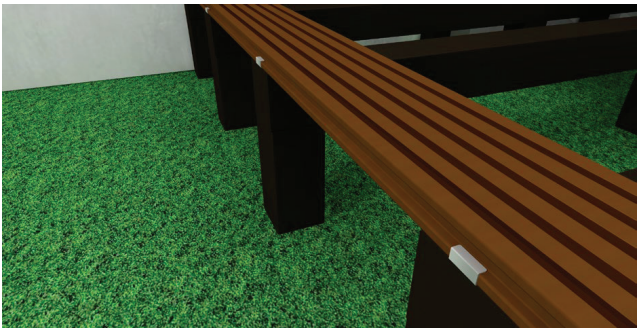
Connecting Neular Craft Decking Boards is necessary. This is done by using a perforated stainless steel tape (12x0,75 Zn mm) on both sides of the grooves of the decking board. The recommended minimum length of the perforated tape is 200 mm fixed with at least 4 screws of (3,5x25 mm).

06 | Fitting Start Clip

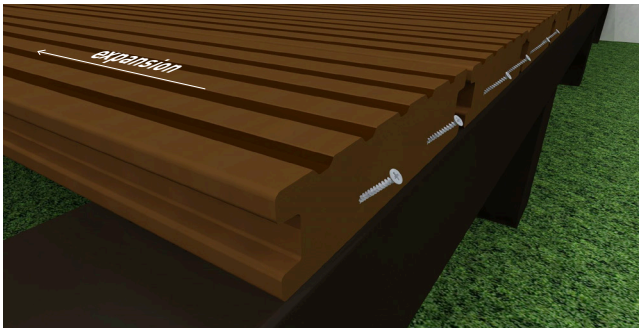


An edge clip is screwed to one end of the joist before installing the decking.

The first deck board is placed against the edge of the clip.



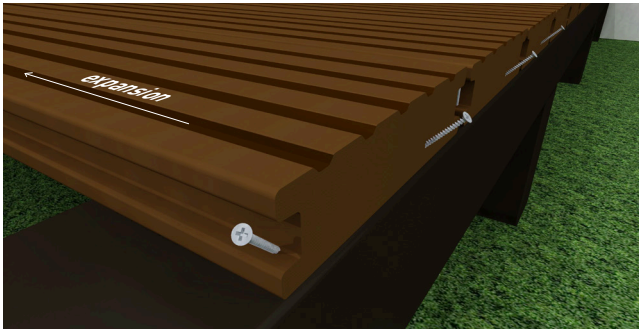
07 | Fixing the Boards and Linear Expansion



A

Fix only one end of the decking board to allow for expansion and shrinkage because of temperature changes.

NEVER FIX BOTH SIDES!

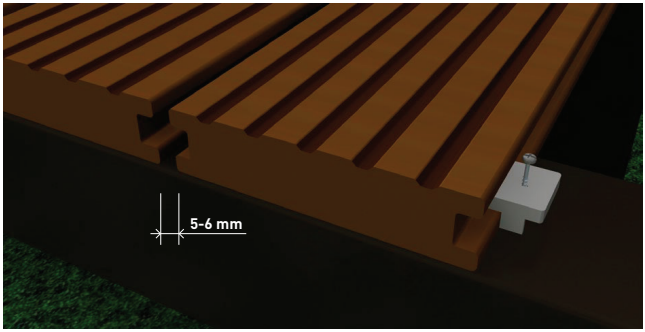


B

C

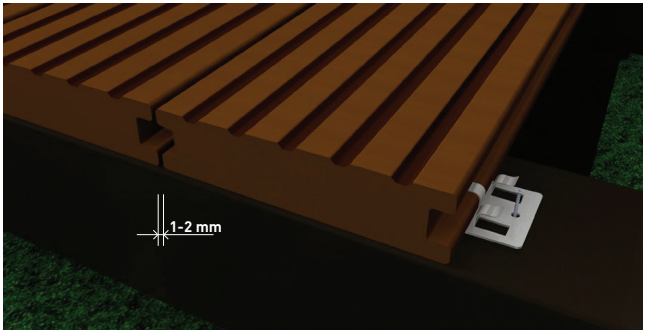
If you wish to leave extension gaps to both ends,then fix the boards in the middle only.

08 | Fitting Clips



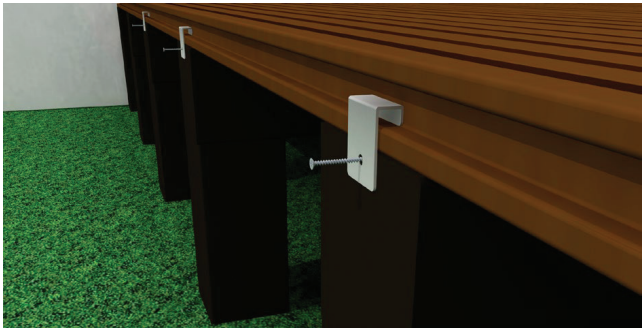
A / Plastic Clip (gap between decking boards 5-6 mm)

Decking clips allow for longitudinal movement of the decking.

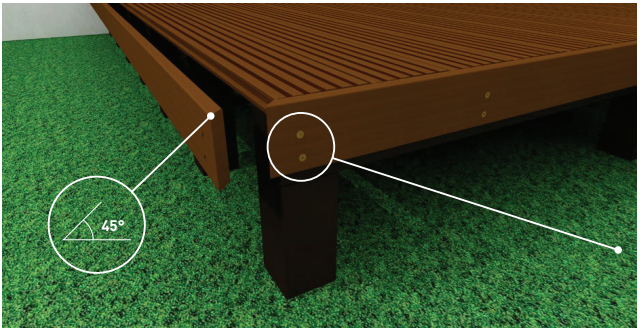


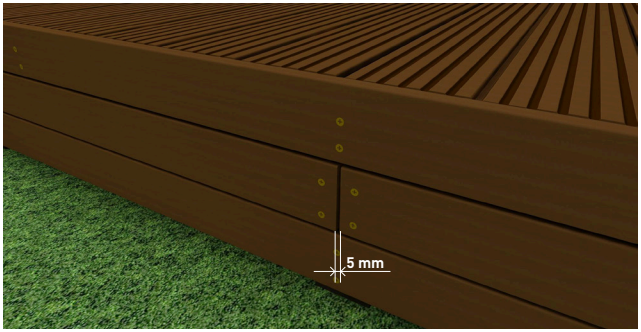
B / Metal Clip (gap between decking boards 1-2 mm)

09 | Fitting End Clip



10 | Fitting Fascia Board





Fascia boards need to have predrilled holes (2 mm larger then the screw).
The screw head must cover the hole. Larger holes provide necessary expansion space.

Fascia boards are attached on each sub-structure beam (not on decking board).

Fascia boards are always fitted with 2 screws.

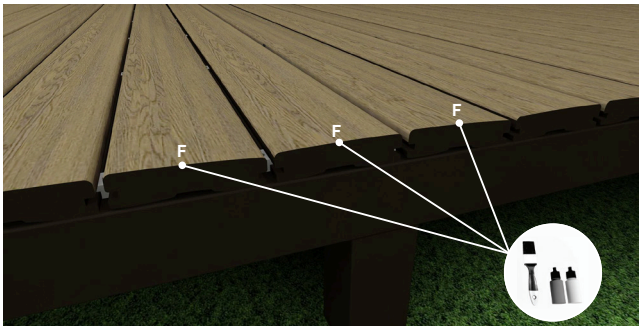
The corners of the fascia board must be cut at a 45-degree angle.

The fascia boards are extended leaving a gap of 5 mm between two boards to allow for expansion.

Care and Maintenance

Neular Decking does not need additional protective treatment. Cleaning can be done using common household products (usually water and a brush are sufficient). Abrasive cleaners may damage the surface of Neular Decking.

Cross-Sectional Protective Treatment



Cross-sectional areas of decking boards require the use of two-component lacquer to protect the cross-sectional and joint surfaces.

1 Add fastener to lacquer bottle

2 Shake the lacquer bottle for 2 minutes

3 Apply the lacquer with a fine brush on upper surfaces of decking boards (F).

4 Repeat this action again after 15-20 minutes

More information

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