

Getting Started

Careful planning of the finished deck layout will result in better looking finished projects. Failure to follow installation guidelines could void warranty.

1. Joist location plays an important role in the safety of the deck itself but may also affect the ease, method and price of your railing system.
2. Before starting, read the instructions of both the decking and railing systems planned for the project.
3. Dark colors will absorb more heat than lighter colors and as such will experience greater ranges in expansion/contraction.
4. Remember that prefabricated rail systems often assemble faster than wood railing but they are less flexible and do not assemble in the same way as wood rail systems. To enjoy the maximum benefit of prefabricated rail systems, it is important to construct the deck framing with the specific rail system in mind.
5. Thoroughly reading all instructions first will make for more profitable projects. Failure to do so may result in more difficult installation and may void warranty.

Joist Spacing

Joists used in deck frame construction should be 2"x 8" (5 cm x 20 cm) or larger (Figure 3).

When installing deck boards perpendicular to the joists in residential applications, spacing is 16" (41 cm) on center (Figure 1). For Professional Docking use 24" (61 cm) on center joist spacing. When the decking is to be laid diagonally (do not exceed 45°), reduce the on center joist spacing by 4" (10 cm) (Figure 2).

Residential Joist Spacing

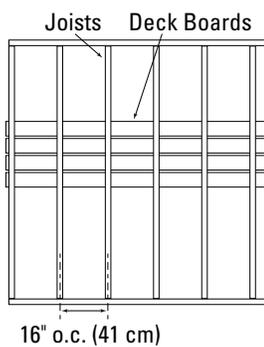


Figure 1

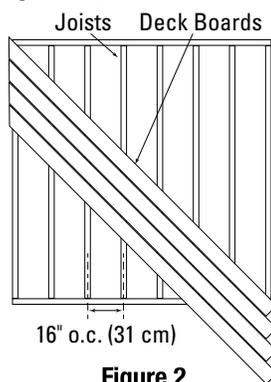


Figure 2

Stair Stringer Spacing

For stair treads, follow local approved building codes. For straight bottom decking stair stringers/joists spacing should be 12" (30 cm) on center, for scallop bottom decking stair stringers/joists spacing should be 9" (23 cm) on center. Allow 1/8" (3 mm) space between stair treads and risers. Leave 3/16" (5 mm) space between stair treads. For special situations, or when in doubt,

consult your local building inspection department.

When installing heavy loads on top of your decking project, a hot tub, for example, it is important to also understand the requirements of the manufacturer as they may have specific framing and support requirements for their warranty coverage.

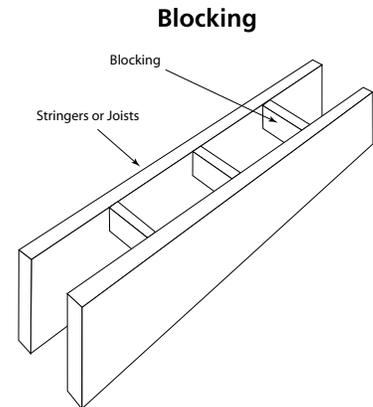


Figure 3

When installing blocking for more intricate decking patterns, remember that solid blocking (blocking laid on the flat) will inhibit water flow and result in buildup of organic materials over time, which will make cleaning more difficult. For best results when blocking is required, it should be installed ladder style (Figure 3).

Board Spacing

All decking materials, whether wood, composite or metal, undergo some degree of linear expansion with the changes of weather and the season. To compensate for the effects of contraction and expansion, the following installation standards must be maintained:

Side-To-Side Spacing

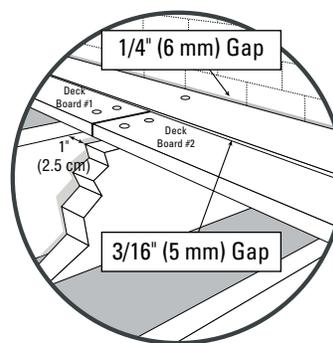


Figure 4

End Gapping

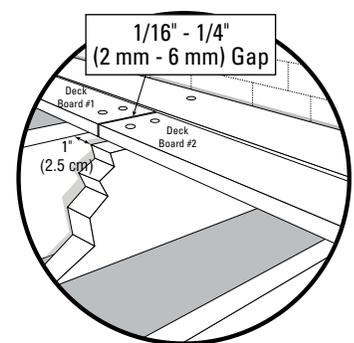


Figure 5

Note: Special consideration should be taken when working with dark colors as they will experience larger temperature swings during normal use. To help control end-to-end spacing, dark color decking should be kept at ambient temperature and shaded from direct sun prior to cutting and immediate securing.

For installation on runs of 40' (12 m) or more using hidden fasteners, install a 90° divider board every 40' (12 m), or secure with face screws into all joists every 16" (41 cm) on center.

Gapping:

- Side board spacing 3/16" (5 mm); between board and any permanent structure or post 1/4" (6 mm) (Figure 4)
- Between board ends: at temperatures up to 30°F (-1°C) space 1/4" (6 mm); at 50°F (10°C) space 3/16" (5 mm); at 70°F (21°C) space 1/8" (3 mm); at 90°F (32°C) space 1/16" (2 mm); at temps over 110°F (43°C) space 1/32" (1 mm) (Figure 5)

Adhering to these spacing parameters will:

- Promote proper drainage and ventilation
- Aid in the removal of organic debris
- Meet board spacing requirements for Fiberon warranty coverage

Surface Fasteners

The use of stainless steel composite deck screws is strongly recommended. Approved coated composite fasteners may also be used. Plain, galvanized surface fasteners are not recommended. Pre-drilling is recommended.

Screw heads must be flush with board surface.

Use caution to avoid over-tightening fasteners. Excess tightening may cause immediate or eventual cracking of the fastener locations.

Requirements

Do not surface fasten within 1-1/2" (4 cm) of the end of a board or 1" (3 cm) from the side of the board. It is necessary to pre-drill end of board screw holes to prevent

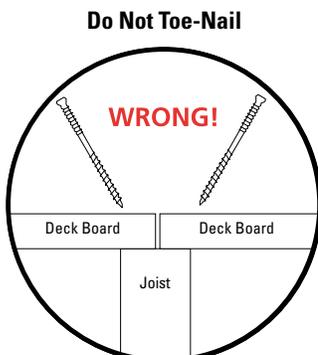


Figure 7

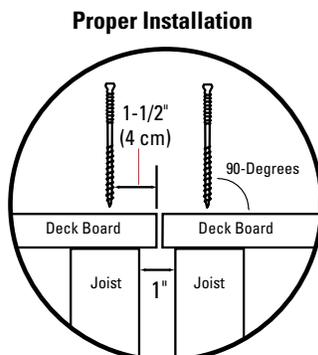


Figure 8

immediate or eventual end splitting (Figure 6). Pre-drilling all holes will result in better looking finished projects. DO NOT over-tighten fasteners. Over-tightening will induce cracking at board ends.

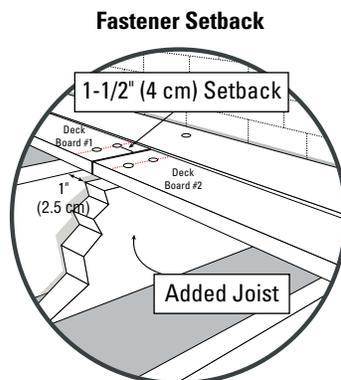


Figure 6

Surface fasteners should always be driven in at a 90° angle to the decking surface. Toe-nailing screws is not recommended (Figure 7). Instead, the placement of an additional joist, when needed, is recommended to allow perpendicular installation of surface fasteners at board ends (Figure 8). Pre-drilling is required in cold temperatures.

Clean, straight lines of fasteners look better than wobbly lines. Use white chalk, straight boards or string lines as templates for straight lines.

All brands of Fiberon decking may be surface fastened. Annual thread, ring shank and spiral shank nails, of sufficient length, have excellent holding power and produce good results.

Screws have superior holding power. Conventional bugle head decking screws produce solid connections but have a tendency to cause mushrooming.

For a cleaner look, stainless steel composite screws are recommended. These screws are engineered specifically to work with composite decking and prevent mushrooming, resulting in better looking finished projects.

Fastening Boards

Fiberon decking requires two fasteners at every joist location (Figure 9). While surface fastening is allowed on all Fiberon decking products, the use of Fiberon branded Phantom Hidden Fasteners are highly recommended with Fiberon grooved (GV) decking to create a smooth, unblemished, decking surface. Fiberon GV boards cannot be used as stair treads.



Figure 9

Hidden Fasteners

FASTENERS RECOMMENDED FOR USE WITH FIBERON GV DECKING include Phantom Hidden Fasteners and Phantom End Clip Hidden Fasteners.



Color and Wood Grain Patterns

Note that the variegated colors and wood grain patterns on Fiberon decking is directional. Different looks can be achieved by laying the decking in the same or alternating directions (Figure 10).

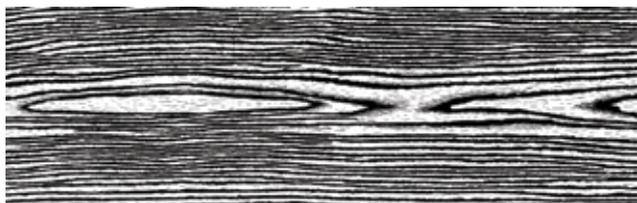
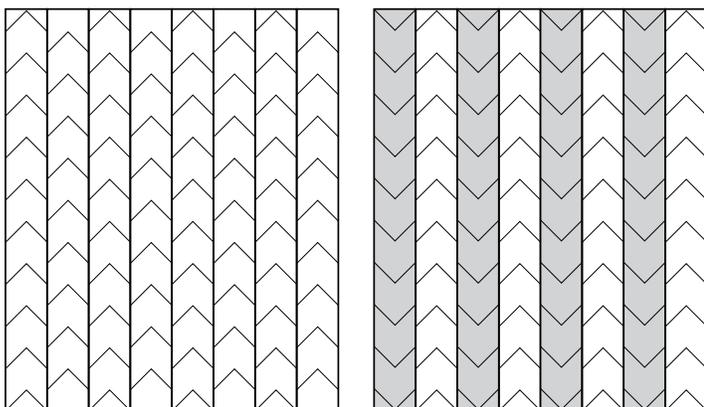


Figure 10

The graining pattern repeats approximately every 3' (1 mm) feet along the board length. Colors reflect every 9' (3 m). To ensure you orient the boards to achieve the desired effect, a directional label is noted on the side of each board showing grain direction. During the planning phase of any deck project, arrange decking before installation to achieve the desired effect (Figure 11).

Wood Grain Orientation During Installation



Same Direction

Alternating Direction

Figure 11

Ventilation

Do not install decking directly to a solid surface. Make sure there is adequate and unobstructed air flow under the deck to prevent excessive water absorption. Improve drainage or grade flat areas where standing water may gather. Allow a minimum of 6" (15 cm) between the bottom of the deck substructure/joists and the ground. The deck design must allow unrestricted airflow under at least 50% of its perimeter to permit adequate ventilation.

Fascia Installation

Fascia is intended as a non-structural covering for rim joists, risers and stringers. Screws should be installed at a maximum 12" (30 cm) interval, with three screws across the face at each interval (Figure 12). Do not over-tighten screws as buckling and cracking may result. Install with 1/8" (3 mm) spacing between the edges and ends in temperatures above 50° F (10° C). Leave 3/16" (5 mm) space between edges and ends in temperatures below 50° F (10° C).

Fire and Unusual Heat Sources Proper Fascia Installation

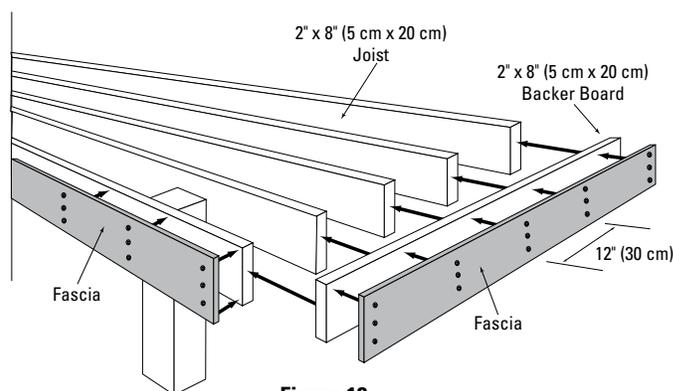


Figure 12

Composite decking will retain heat when exposed to direct or reflective sunlight. Exercise caution if walking barefoot as footwear may be required. Fire and unusual sources of heat and heat build-up can possibly damage Fiberon decking surfaces. Examples would include fire, reflected light from different types of glass (ex. low-e glass), fire features and under-deck waterproofing installations that do not provide the 6" (15 cm) of unobstructed net free ventilation.

- **Low-E Glass/Reflected Heat**

Low-emissivity glass is designed to prevent heat gain inside the house by reflecting sunlight outward. This reflective property can result in excessive heat built on the surface of Fiberon decking. The properties that Low-E glass employs to prevent passive heat gain within a structure can result in unusual heat build-up on exterior surfaces.

When the sunlight is reflected and concentrated it can harm a range of building materials that include doors, windows, siding, trim and decking. Damage caused to these products can include melting, sagging, warping, discoloration, increased expansion and contraction and accelerated weathering.

If you have questions on how to reduce this risk, contact the manufacturer of the product which

contains the Low-E glass for suggestions on how to reduce or eliminate the reflected heat.

- **Under-deck waterproofing systems**

Under-deck waterproofing systems, properly installed, can provide additional living or storage space. Improper installations are those that restrict air flow and result in build-up of heat and/or humidity which can result in unwanted consequences.

Contact the manufacturer of the specific under-deck waterproofing system for installation instructions to ensure required 6" (15 cm) of un-obstructed net-free ventilation is achieved for Fiberon decking. If already installed, seek methods to achieve the ventilation requirement.

- **Fire Features/Fire Pits**

Fire features and fire pits are increasingly popular in outdoor living environments. Fire can damage many building products including Fiberon decking. Improperly installed, fire features and fire pits can cause damage to the surface of Fiberon decking via direct exposure to the flame or excessive radiated heat.

Proper caution should be taken when designing, installing and using these features to ensure damage does not result.

Static

Dry or windy environments may create a temporary condition of static electricity, which will vary depending on climate and site condition.

Important Ladder Usage Safety Instructions

When using a ladder on composite decking, it is mandatory to lay down a sheet of plywood over the deck surface to disperse the load of the ladder's feet to nearby underlying joists. Drill fasteners downward through the top of the plywood sheet to keep it from slipping. Position fasteners so they adequately protrude and rest firmly in the gaps between the deck boards and into the joists. This will avoid leaving holes in your decking once the plywood sheet is removed. Be sure to always follow the ladder manufacturer's instructions and safety tips.