



FCBA N° 2019.175.2230
FCBA N° 2020.175.3290

Roots



HIDDEN FASTENERS FOR STANDARD DECKING BOARDS

Tropical wood and modified wood

EASY TO FIT, FROM THE FIRST
TO THE LAST BOARD



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* in compliance with DTU 51.4 requirements regarding fasteners

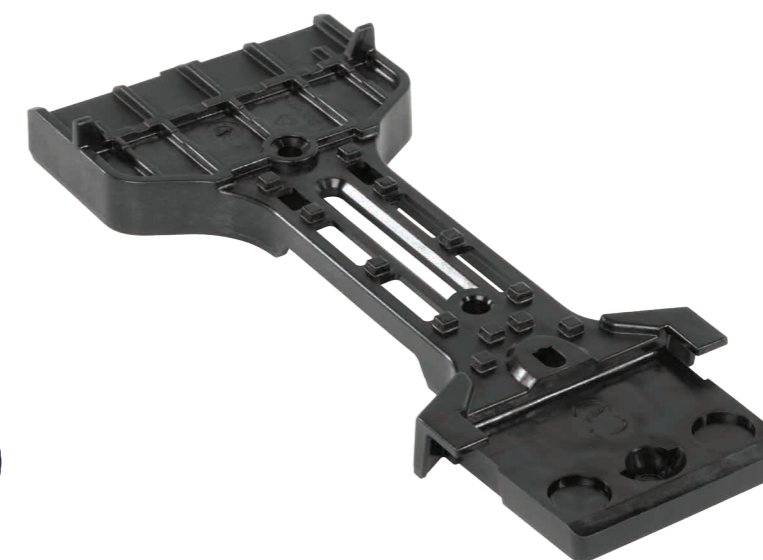
Roots



New!

FASTENERS FOR STANDARD DECKING BOARDS

Tropical wood and modified wood



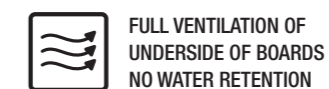
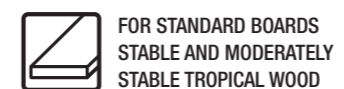
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The Roots hidden fastening system is a real innovation in the field of concealed fastenings for timber decking. The Roots fastening is installed under standard decking boards, with no specific profile.

The Roots fastening system is the result of a lengthy, rigorous process of developing, testing and finalisation, assisted by the FCBA engineers in Bordeaux.

Roots is the only underside, hidden fastening system designed for standard boards to have been assessed as compliant with the requirements of standard NF DTU 51.4 relating to fastenings for decking boards in stable and moderately stable tropical wood.

BENEFITS



HIDDEN FASTENERS FOR STANDARD BOARDS

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FLIP & FIX

BENEFITS



FOR STANDARD BOARDS
STABLE AND MODERATELY
STABLE TROPICAL WOOD



FULL VENTILATION OF
UNDERSIDE OF BOARDS
NO WATER RETENTION



VERY EASY TO INSTALL



EXTREME STABILITY
IN ALL WEATHERS



PROTECTION OF THE JOIST
WITH CAPPING



REUSABLE AFTER
DISMANTLING



EXCEPTIONAL MECHANICAL
STRENGTH



FASTENERS AND JOISTS
COMPLETELY INVISIBLE



UNCOMPROMISING QUALITY
AND PERFORMANCE

FLIP & FIX

The Roots fastenings are easy to install. They need only 2 successive, repeated operations, **flip & fix**.

The fastenings are screwed under the boards. They are then screwed onto the joist in the usual way, on one side of the fastening. The other side is held by a system similar to a "tongue-and-groove" process, with the adjacent fastening.



Flip & fix

Flip the board over so the underside is on top. Screwing the Roots fastening to the underside of the board.

Flip

Turn the board over and insert it into the adjacent fastening.

Fix

Screwing the Roots fastening in the normal way onto the joist.



Exclusive design

The original design of the fastening gives it very high mechanical strength and rigidity, while providing the maximum supporting surface for the board.

Assembly tab

Designed to help guide the boards and fit them together.

Positioning stops

Ensure extremely fast, precise application of the fastening, to be screwed to the board.

Hole for screwing in the fastening

For screwing the fastening to the joist.

System for wood ventilation

A means to separate the boards, combined with plenty of cut-outs and openings in the fastening itself to ensure full ventilation of the underside of the boards and the upper surface of the joists.

Joist protective cover

Covers the entire joist at the spaces between boards, to protect it from water and conceal it.

Patent pending

Identification of parts

In order to make installation easier and avoid mistakes, each component is identified by an engraved number (1, 2, 3 and 4) and/or its role (START/END).

Screw shaft with guide

Designed for inserting and guiding the pre-drilling step drill bit (supplied). Chamfer for holding the screw head.

Durable, rugged reinforced material

Glass-fibre reinforced material to ensure rigidity and strength, as well as durability and UV-resistance. Discreet, anti-reflective black finish.

A2 AISI 304 stainless steel screw

SPAX® A2 stainless steel screws supplied in every kit.

Step drill bit for pre-drilling

Supplied in every pack. The step drill bit is specially designed to ensure the correct drilling depth, automatically, with no risk of drilling through the board.





USE

EASY TO FIT, FROM THE FIRST TO THE LAST BOARD

The Roots fastenings are supplied with accessories designed to make it easy to fit the boards, from the first to the last one. All the parts and fastenings are easy to identify by the large, clear markings engraved on the material.

With tropical species, pre-drilling is required, so a step drill bit with stop has been designed to avoid drilling through the board, while providing the pre-drilling needed for the length of the screw.



Start piece (START)

The starting piece, identifiable by the word **START** engraved on it, has a lateral overhang of 10 mm as required by the standard NF DTU 51.4. It is designed for holding the fastening for the first board.



Fastening the first board

Fixing the first board supplied in every pack, is designed to be completely embedded in the starting piece (**START**), thus ensuring it is in exactly the right position.



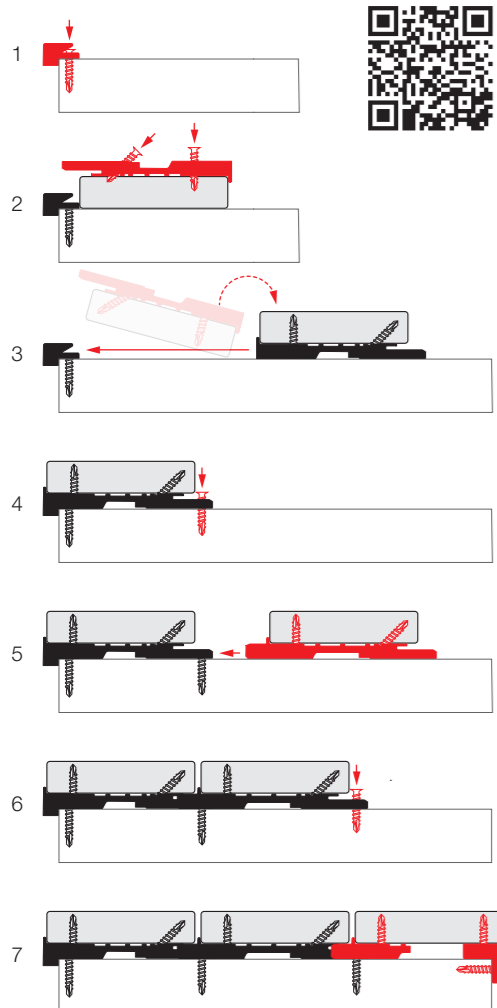
End piece (END)

The end piece, identifiable by the **4-END** engraved on it, allows the final board, up to 70 mm wide, to be fitted easily. It ensures a lateral overhang of 10 mm as required by the standard NF DTU 51.4.



Step drill bit with stop

The fixed stop, pre-drilling bit is specially designed to avoid drilling through the board, and ensure quick installation, compliant with requirements for pre-drilling boards. It is made of shaped, ground HS steel.

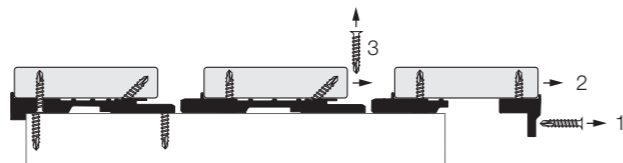


USE*	TROPICAL WOOD	ACCOYA®	KEBONY®	HEAT-TREATED ASH	BAMBOO
Minimum permitted thickness of boards	21 mm	20 mm	20 mm	20 mm	20 mm
Residential	✓	✓	✓	✓	✓
Public / Commercial	✓	✓	✓	✗	✓
Coastal	✓	✓	✓	✓	✓
Decking	✓	✓	✓	✓	✓
Pool beaches	✓	✓	✓	✓	✓

* Comply strictly with the conclusions and recommendations of FCBA product evaluation folders (see COMPLIANCE), as well as the requirements for the chosen species (NF B 54-040), the requirements of current standards and regulations (especially NF DTU 51.4), fitting instructions supplied, professional standards and good practice. For more information, contact your dealer or timber merchant, or write to us at info@novlek.com.

EASY DISMANTLING AND REASSEMBLY

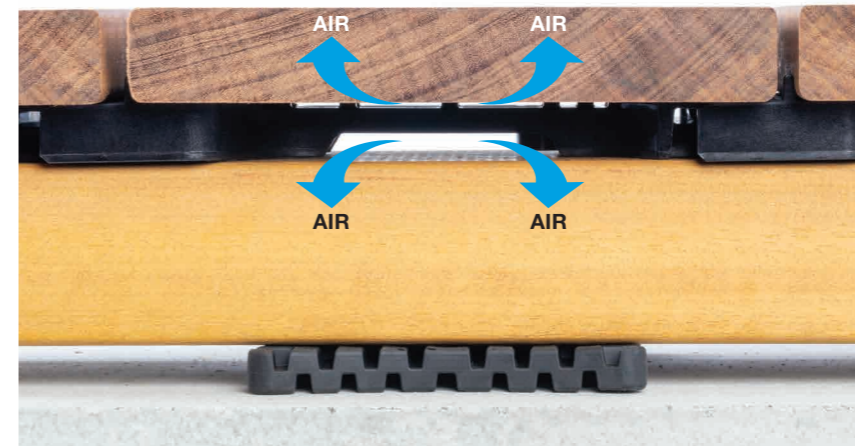
If necessary, the decking is easy to dismantle and refit. The fastenings can be recovered for re-use, or to install further boards.



EASY REPLACEMENT OF A BOARD AFTER INSTALLATION

It is very easy to replace one or more boards locally without having to dismantle all the boards in order to do so. The installation instructions supplied in every pack provide a detailed description of each stage, from removing the board to be replaced up to installing the new board.

PROTECTION



INTEGRATED SYSTEM FOR VENTILATING THE BOARDS

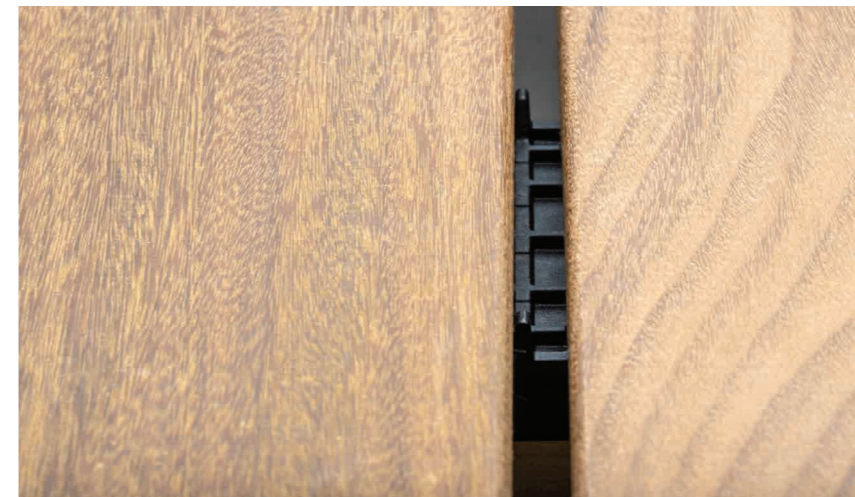
The Roots fastenings provide an effective solution for detaching the boards from their supports and ventilating their underside.

The built-in separation system which acts as a ventilation shim reduces the risk of water being trapped, and also of the boards warping.

Moreover, all the screws are made of A2 stainless steel, fully isolated and protected from aggressive, corrosive environments.

This is supplemented by a system for capping the joist where the boards are spaced apart.

This same system completely conceals the joist.



With these features, the Roots fastenings significantly improve the long-term durability and stability of the decking, and reduce any risk of the boards warping.

Protection for the joist provided by capping formed by the interlocking system of two adjacent fastenings, which completely covers the joist where the boards are spaced apart.

COMPLIANCE - STABLE AND MODERATELY STABLE TROPICAL BOARDS

DTU 51.4 Fastening requirements for decking boards

The Roots hidden fastening system has had a technical evaluation by the FCBA confirming its compliance with the requirements of the standards NF DTU 51.4 and NF B54-040 regarding decking board fastenings.

Resistance to tearing: FCBA-2019.175.2230
Stability performance: FCBA-2020.175.3290

Roots fastenings fully comply with the various acceptability thresholds and criteria specified in NF DTU 51.4 and NF B54-040 for use with stable and moderately stable tropical boards.

Improved design according to standard NF DTU 51.4

The Roots fastenings meet two of the improved design criteria specified in standard NF DTU 51.4:

- insertion of a shim, at least 3 mm thick, between the decking board and the joist
- systematic use of double joists at the join between the ends of boards laid end-to-end.





CHARACTERISTICS

Acceptable board width	140-145 mm
Fastener thickness	13,50 mm
Material	Polypropylene and fibre glass
Colour	Black, anti-reflection
UV resistance	Yes
Resistance to high and low temperatures	Excellent
Screws supplied	SPAX® Stainless steel A2 AISI 304
Accessories supplied	Start piece, end piece, first board fastener, step drill bit with stop, torx-bit

SPECIES ACCEPTABLE FOR THE ROOTS FASTENING SYSTEM

The tearing resistance and stability tests performed by the FCBA on several decking configurations combining boards and joists, tropical woods, with the Roots fastening system, made it possible to establish a list of acceptable species whose use with Roots fixings meets the criteria and requirements of the two reference standards for construction of exterior decking, the NF DTU 51.4 and NF BS 54-040.

Tropical species acceptable for use with the Roots fasteners**				
Species (without sapwood)	Drying	Stability	Acceptable board width	Minimum accepted thickness for a board width of 145 mm ***
Bangkirai	KD	MS	140 - 145 mm	min. 21 mm*
Cumaru	KD	MS		min. 21 mm
Doussié	AD/KD	S		min. 21 mm
Ipe	AD/KD	S		min. 21 mm
Itauba	AD/KD	MS		min. 21 mm*
Kapur	AD/KD	MS		min. 24 mm
Merbau	AD/KD	S		min. 21 mm
Moabi	AD/KD	MS		min. 24 mm
Padouk	AD/KD	S		min. 21 mm
Teck	AD/KD	S		min. 21 mm

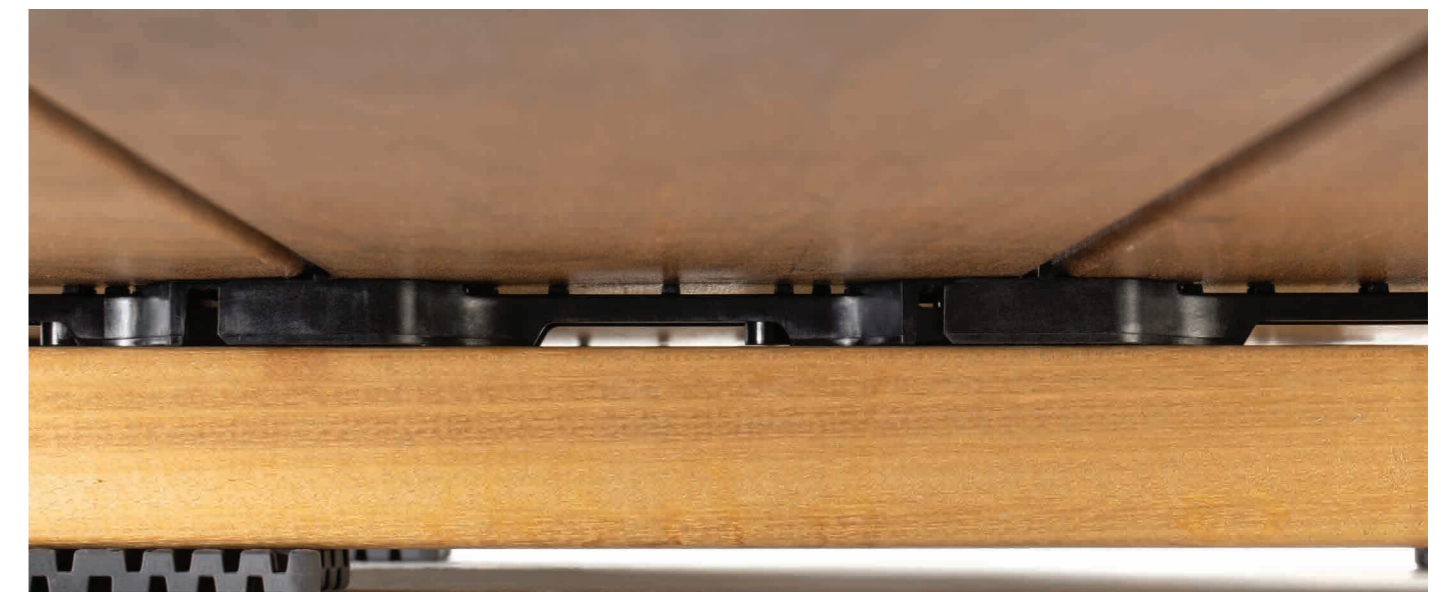
S = Stable / MS = Moderately Stable

The requirements of standard NF DTU 51.4 and NF B54-040 must be respected.

* Good demonstrable performance in stability tests carried out by the FCBA (FCBA No. 2020.175.3290).

** Only stable and moderately stable species, as stated in NF B 54-040 are permitted, with the specified overhangs, except for Bangkirai and Itauba (see * above). The Roots fastening system is not suitable for use with less stable species.

*** Thickness measured at the target humidity level of 20%, according to NF B54-040.

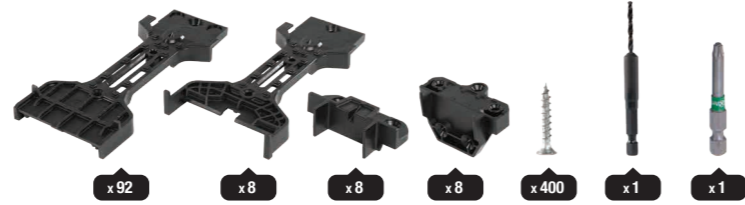


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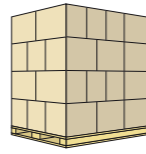
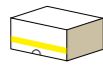
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140-145 mm boards | ± 6 m²

Estimate based on board width of 140 mm and joists centre to centre distance of 45 cm



Model	Article code	EAN code	Kit		Pallet 50 Kits/Pallet	
			Dimensions (mm)	Weight	Dimensions (mm)	Weight
140-145	RTS-0145-100-01	5425 03355 080 6	510 x 360 x 175	6,40 kg	1200 x 1000 x 1900	345 kg



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SOLUTIONS FOR TIMBER DECKING AND CLADDING