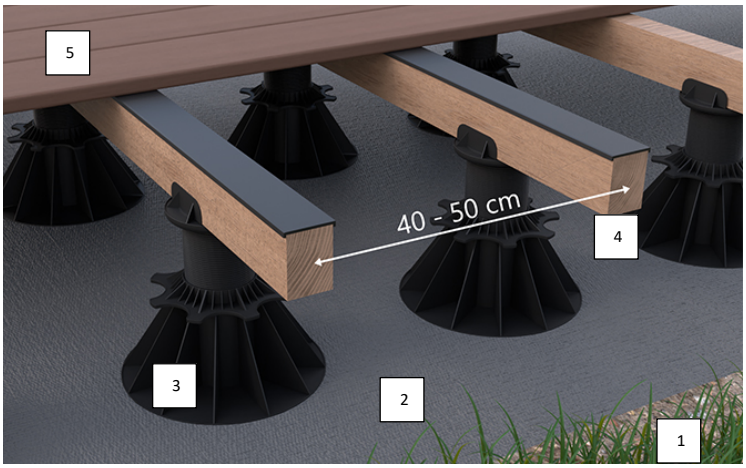
Installation instruction
Wooden deck structure

The stability and durability of the structure is particularly important to achieve a high quality deck. Do you want to enjoy your deck longer? Please follow our advice and read our technical data sheet carefully.

Construction diagram

You will obtain an optimal result when building your terrace by respecting the following rules:



1) Soil
2) Weed control
3) Wedges / Pedestal
4) Joist
5) Decking

What does your ground look like?

Tiles / concrete
- Smoothing inequalities
- Place the rubber wedges / pedestals at a suitable distance (see installation of the joists) for better water drainage.

Sand / gravel / compacted soil
In any case, unroll a geotextile felt to prevent weeds from growing back between the deck boards.
- The soil is hard, compact and flat. As in the previous case, above, position wedges at an appropriate distance (see installation of joists) for better water drainage.
- On uneven ground: laying height-adjustable studs

Soil / grass / uncompacted sand
In any case, unroll a geotextile felt to prevent weeds from growing back between the deck boards.
- The ground is irregular, but it is stable (e.g. lawn more than 2 years old): install height-adjustable pedestals.

- The ground is irregular but it is not stabilised, or you have doubts about the stability, you must, use ground foundation screws and wooden beams to achieve a stable anchorage.

Which joists to choose?

For each type of joists offered, you will find a summary table with the span between 2 supports. A slight slope (2%) in the longitudinal direction of the boards is required to avoid standing water on the decking. For more information, see the table on the last page.

Maximum recommended span per joist type :

- Solid hardwood 45x70mm: 60 cm
- Tropical glued laminated wood 45x70mm: 50 cm
- Thermo-heated pine 45x70 mm 40 cm
- Autoclave-treated pine Class 4 50x75mm: 50 cm
- Autoclave-treated pine Class 4 75x50mm: 75 cm
- Aluminium profile 24x40mm : 50 cm
- Aluminium profile 30x50mm: 50 cm
- StructurAL aluminium profile 40x60mm: 75cm.

1 - Wooden joists
We recommend covering wooden joists (especially pine joists and glued laminated joists) with Bitudeck bituminous flashing tape to protect the wood from water infiltration at the point of contact of the screws. This protection is even more important for glued laminated joists at the glued joints.

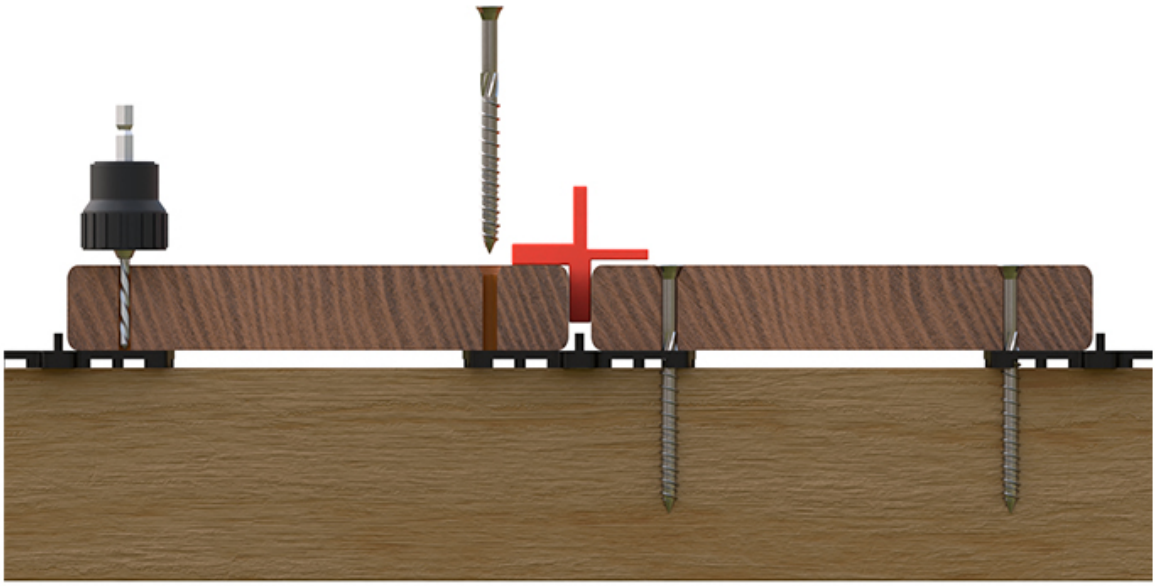
2 - Aluminium joists
Aluminium lasts forever and does not warp.
Most wooden deck boards shrink and swell when humidity changes. Aluminium, on the other hand, is sensitive to temperature differences. Its dimensions can vary significantly. Therefore, the following points should be taken into account when installing on aluminium joists :

Fixing the planks to wooden joists

Spacings between the decking boards should be kept between 5 and 7mm (taking into account a wood moisture content of 14-16% at delivery). Use board spacers during installation.

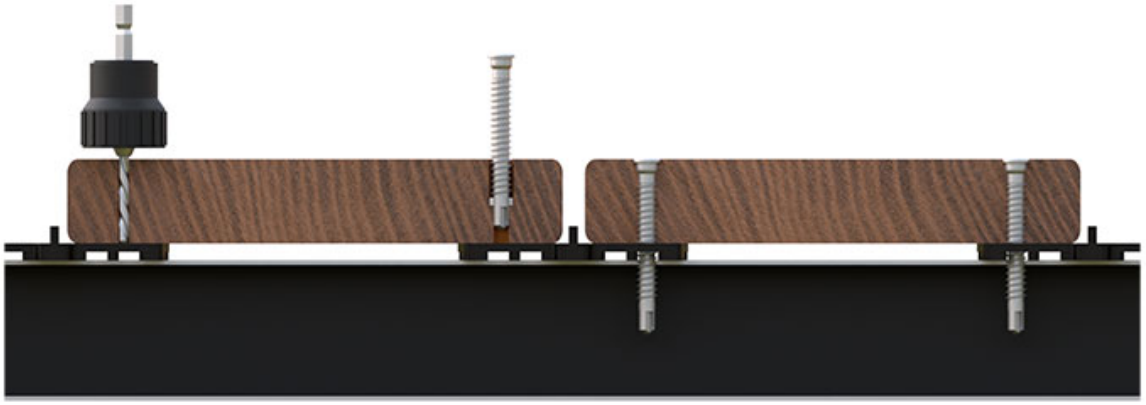
Decking hulidity %	from 12 to 17%	from 18 to 22%	> 23% to H > PSF
Deck spacer thickness	8 or 7 mm	5 or 4 mm	3 or 2mm

To avoid water trapping between the slats and the joist, we recommend the use of a ventilation wedge of the Airspacer type. The air circulation under the boards prevents any moisture.



Screw fixing on the aluminium joists

Apply a compressible EPDM strip 5 to 8 mm thick between the aluminium and the deck boards. The deck boards must be pre-drilled and countersunk so that the screw (minimum 5 mm in diameter) can slide freely. The aluminium joist does not need to be pre-drilled.



Fastening with BFix clip

EPDM tape must also be used here. We recommend using 2 EPDM strips under the clip (not under the screw hole). Use the special aluminium BFix screw. The supplied screw used for wood is not suitable for aluminium.

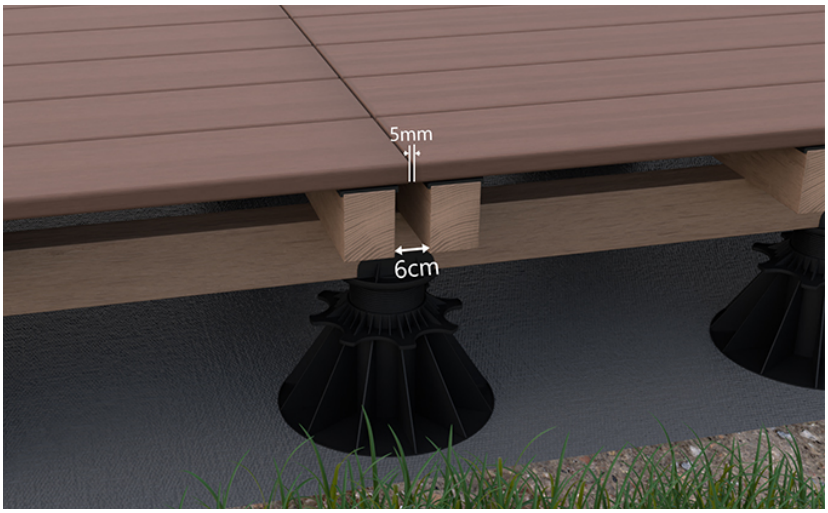
Fixing with Cobra 20 and Cobra 24 :
Use 5x10 mm compressible EPDM strip, we also recommend using 2 EPDM strips per joist under the clips. The standard screw supplied can only be used for wood and is not suitable for aluminium! Use the 4.2x16 mm clip screw specially developed for Cobra clips.

Errors to avoid when building your deck

Deck at ground level (joists below ground level): when the surface of the deck is at the same level as the ground, you must bear in mind that the drainage and ventilation conditions are not optimal. Make sure that water can drain freely and that air can circulate, for example through ventilation grids place.

Direction of the deck boards: deck boards are often laid parallel to the house. The direction of the boards at right angles to the direction of travel reduces slippage. The direction of the boards is often not taken into account for aesthetic reasons, apart from the fact that the boards must be laid for aesthetic reasons.

Joining of the boards: We recommend doubling the joists at each point where the boards are joined together. In this way, the ends of the boards are free and you ensure better water drainage. The clips can also be doubled for greater safety and better support.



Reinforcement of the structure
With heavy objects (such as flower pots, etc.), you must tighten the centre-to-centre distance between the joists to strengthen the structure.

Joists span and number of fixings/sq.m.

Wood Specie	section	Span cm	nb Screws SS	Clips	Hardwood joist	TMT joist	Alu joist
Hardwood	19x145mm	30	38		OK	NO	with EPDM
Hardwood	21x145mm	40	35		OK	NO	with EPDM
Hardwood	25x145mm	45	33		OK	NO	with EPDM
Hardwood	28x145mm	50	31		OK	NO	with EPDM
Hardwood	35x145mm	60	28		OK	NO	with EPDM
Hardwood	45x145mm	70	23		OK	NO	with EPDM
Hardwood	Bfix 21x145mm	40		18-22 (Bfix)	OK	NO	with EPDM
Thermo ash	21x130mm	40	40	20 (Nova)	OK	YES	with EPDM
	25x130mm	50	34	17 (Cobra24)	OK	YES	with EPDM
Thermo pine	26x115mm	40	46		OK	YES	with EPDM
	26x145mm	40	35	20	OK	YES	with EPDM