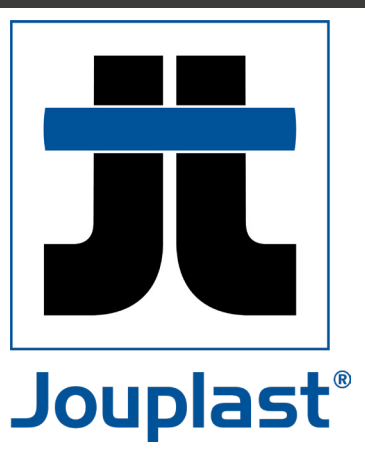




DIRECTIONS FOR USE

USING PROFILDECK® TO CREATE A HYBRID TIMBER AND PAVED TERRACE

ALUMINIUM JOIST - HEIGHT 27 MM



www.jouplast.com



PROFILDECK® RANGE

Aluminium joist - Height 27 mm :

One side for installing terrace paving and one side for installing wooden and composite decking. **To be used with paving and decking riser pedestals with the exception of the 8/20 mm paving riser pedestal.**

Profildeck® screw :

Self-drilling screw. Secures adapter directly into the aluminium joist.

Dimensions : 4.8 x 19 mm.

Slab spacer :

Creates a 3 mm drainage channel between paving elements.

Tabs can be split easily.

Adapter :

Secures the Profildeck® aluminium joist to the «Essential» and «Elevo» riser head and clips onto all Jouplast® riser heads. (Except paving riser HD 8/20). Use the adapter to link to 2 aluminium joists together with the 4 fixing points.

Raises the height of the riser by 5 mm.

Rubber tape :

Fixes the paving slabs to the aluminium joist, as well as reduces noise and resonance when walking on the terrace.

To be positioned on the support rails of the slab side of the aluminium joist.

Anti-condensation tape :

Prevents increased Profildeck® aluminium joist and terrace moisture content. To be positioned on the support rails of the decking side joist.

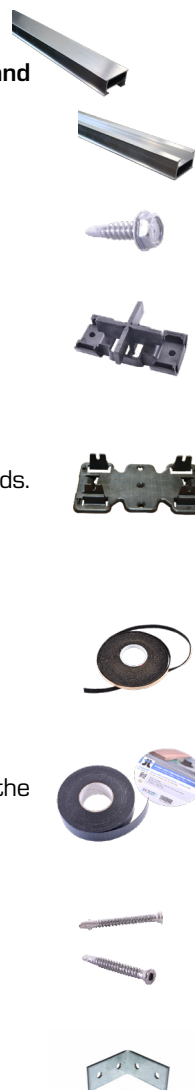
Decking board screw

Self-drilling screw. For fixing wooden decking boards to the joist.

Dimensions : 5.5 x 45 mm.

Horizontal junction angle bracket :

For reinforcing 90° joints. Pre-drilled for easy screwing.



TOOLS

MINIMAL TOOLS REQUIRED :

- › A tape measure.
- › A level.
- › A screwdriver.
- › A mitre saw or chop saw with a multicut or similar blade. Alternatively, an angle grinder with an aluminium or all-purpose disc (minimum diameter 125 mm) or a hacksaw.
- › A metal file for deburring cut ends.
- › Chalk or line marking spray.

Safety first ! Use protective glasses and safety gloves.



RECOMMENDATIONS

› FOR PAVING INSTALLATION

DIRECTION OF LAYING

From an aesthetic perspective, it is better to lay cut slabs against walls (whole slabs on the outside).

PLEASE NOTE:

Always follow paving manufacturer recommendations to ensure the suitability of paving products for use with riser pedestals and the number of risers per m² to use. Qualification of compulsory "SELF-SUPPORTING" slabs, of class T7, T11 according to standard EN 1339:2004-02.

› FOR DECKING INSTALLATION :

DIRECTION OF LAYING

Before you begin, decide in which direction you will lay the boards. From an aesthetic perspective, wooden boards should be positioned parallel to the access wall.

› CHOOSE THE RIGHT DECKING BOARDS :

Board slenderness ratio*

The slenderness coefficient is calculated as the ratio between the width (w) of the joist and its depth (d), i.e. $w \div d$. The higher the slenderness coefficient, the greater the risk of the joist warping*. We therefore recommend a slenderness coefficient of between 4 and 6, depending on the type of timber used.

Board quality

Any idiosyncrasies noted on the boards could have negative consequences. Check for buckled, warped or curled boards, or boards with an irregular pattern in the wood fibre.

Drying the boards

Ensure that the board drying techniques used meet the requirements for the selected species.

AD: Air drying for naturally stable wood (e.g. IPE exotic wood).

KD: Kiln drying for wood requiring a more controlled drying environment.

We also recommend that the moisture content of the timber decking boards should be between 18% and 22% at the time of installation, otherwise there is a risk that the installation will degrade.

THIS MUST BE VERIFIED WITH THE WOOD DISTRIBUTOR

BEFORE STARTING :

Before starting work, it's important - essential even - to prepare a joint layout plan* clearly showing:

- › the cuts.
- › the spacing between joist centrelines.
- › the quantity of accessories required : adapters, riser pedestal, etc...
- › the levels.
- › the joists connection joints. We do not recommend the use of joist lengths less than 500 mm. If, when you reach the end of the terrace, the length of joist is less than 500 mm, we recommend cutting the previous length of joist to 500 mm, so that the run to the end of the terrace can be finished with a longer section. The shorter cut section can then be used in the next run of joist.
- › Edge finishes must be considered and planned before the start of installation.
- › Ensure full decking board widths to avoid having to rip boards lengthways. We recommend you install only full boards.

* Joint layout plan: the plan to follow when laying your paving.

* slenderness ratio: Ratio between the thickness and width of the board.

1

PREPARING THE TERRACE INSTALLATION AREA

1.1. MARK OUT THE TERRACE INSTALLATION AREA

- › Mark out the location of the future terrace on the ground.

Prepare the ground in one of two ways:

Pro tip :

- › Make sure the area is clean and the ground is stable.

On uneven ground :

- › Remove about 15 cm of topsoil.
- › Lay a geotextile membrane.
- › Lay a base layer of 0/31.5 grade aggregate.
- › Compact with a vibrating plate compactor (wacker).

N.B.:

› Depending on the nature of the soil, a draining foundation layer can be laid upstream by depositing a layer of 30/60 or 40/80 crushed stone.

› If the resulting surface is still uneven, we recommend laying a bed of quarry sand or 0/4 crushed sand. This will make it easier to install low riser pedestals.

› We recommend using the vibrating plate compactor between each layer.

On a concrete support :

- › Remove any debris, stones, etc. that could make it more difficult to position and stabilise the riser pedestals.
- › Check that the levels are correct according to the layout plan and that there is at least 5.5 cm of clear space below the decking at the lowest point.

N.B.:

› Aluminium joist + adapter + the anti-condensation tape = 3.3 cm

› Aluminium joist + adapter + rubber tape = 3.5 cm

To which the height of the riser pedestal (min. 20 mm) should be added.
For a 20 mm ceramic slabs, the total height of the paved terrace is 7,5 cm.

1.2. MARK OUT THE POSITION OF THE JOISTS

- › Use a chalk line to clearly mark the position of each line of riser pedestals at right angles to the recommended joist centreline spacing.

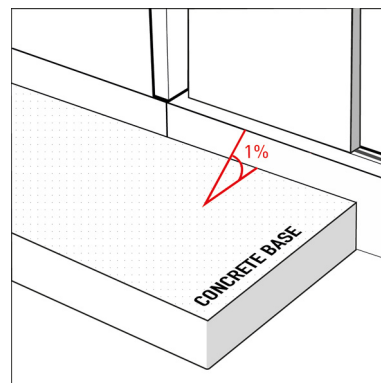
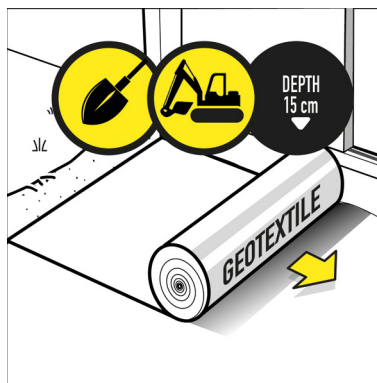
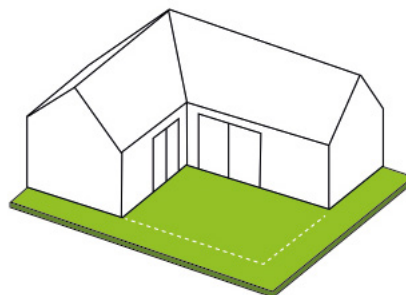
› For paved sections: the spacing between joist centrelines is dictated by the size of the paving tile and/or its manufacturer's recommendations.

› For timber sections: the centreline spacing distance depends on the thickness and type of timber chosen (50 cm on average).

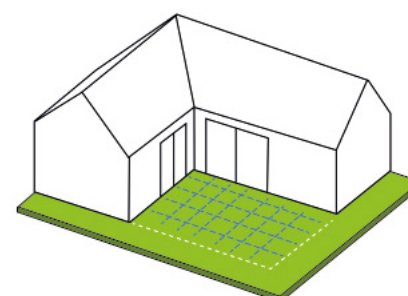
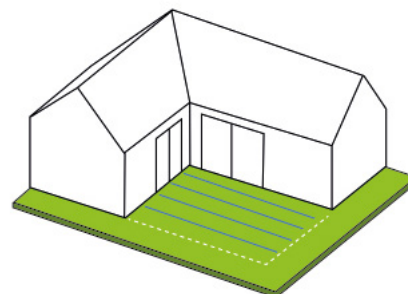
1.3. MARK OUT THE RISER PEDESTAL POSITIONS ON THE GROUND

- › Use a chalk line to clearly mark the position of each line of riser pedestals at right angles to the recommended joist centreline spacing.
- › The recommended spacing distance for riser pedestals is 48 cm. (i.e. 6 riser pedestal per joist, including the ends.)

* Spacing between joist : the distance between the centrelines of two joists.

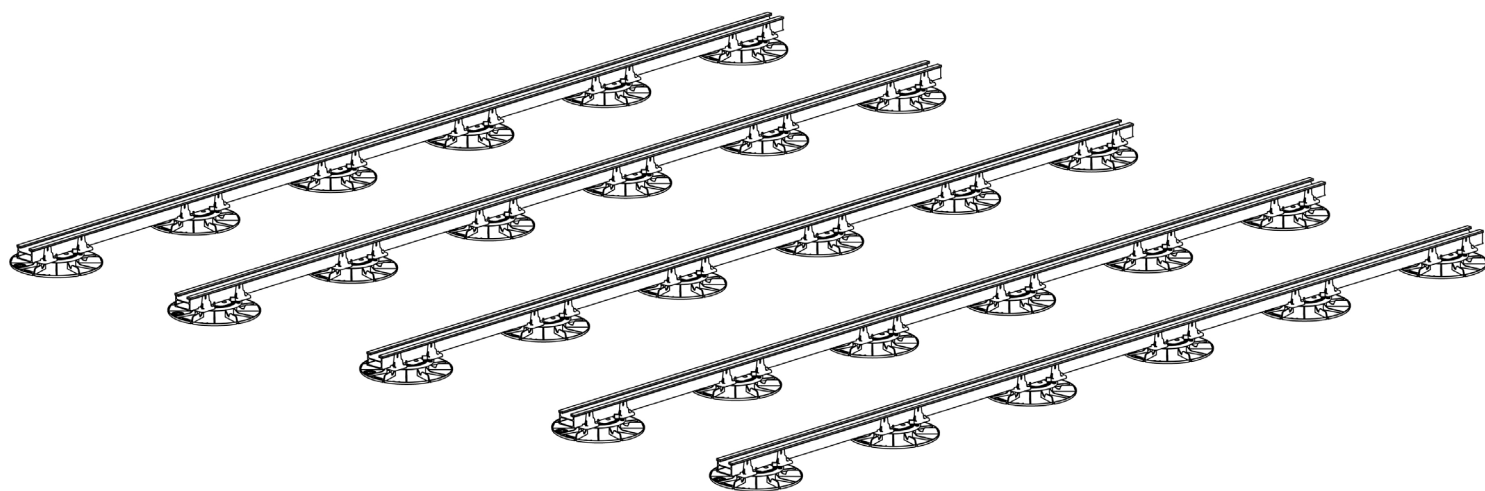


Minimum slope percentage 1%.



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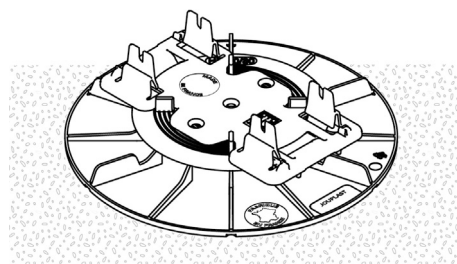
ASSEMBLE THE STRUCTURE



2.1. POSITION THE ALUMINIUM JOISTS AND RISER PEDESTALS

- › Choose your starting point from your layout plan.
- › Place the first aluminium joist in the location shown on the plan.
- › Clip the adapters onto the riser pedestals.
- › Clip the aluminium joist to the riser pedestal at each end by pushing the aluminium joist until it clicks into place - then set the level using the nut.
- › Then clip the aluminium joist into the intermediate riser pedestals and adjust the height to your desired level.
- › Maintain the centreline spacing between riser pedestals as recommended in § 1.3.
- › Set the levels and position string lines, stakes or other markers using the first aluminium joist installed as your reference, and repeat the operation for all other aluminium joists.

N.B.: remember to take account of features like inspection covers, junction boxes, skimmer inlets, door thresholds, etc.



2.2. APPLY THE SELF-ADHESIVE RUBBER TAPE

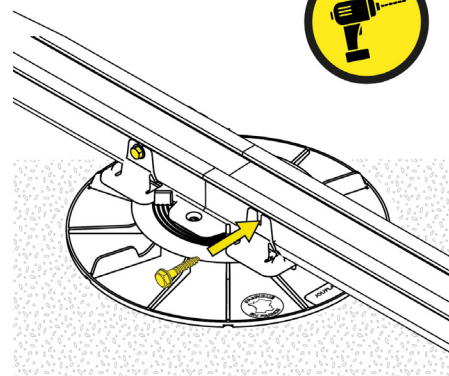
- › As you progress, and ensuring that the aluminium joist is clean and dry, apply the self-adhesive rubber tape to the face on which the paving will be laid.



2.3. JOINING ALUMINIUM JOISTS

- › Position a riser pedestal fitted with an adapter beneath each joint.
 - › Screw the adapter to the aluminium joists at all 4 fixing points using self-drilling Profildeck® screws.
- We recommend leaving a gap of 2 mm between joists to allow for expansion.
- › Repeat for each joist joint.

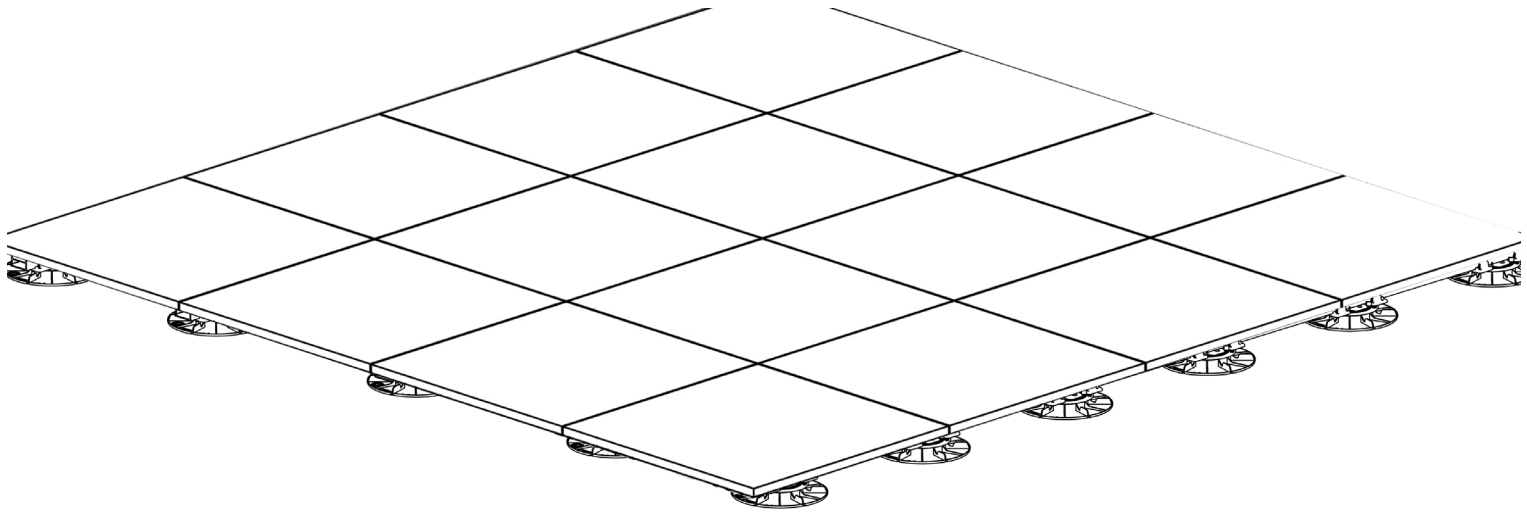
N.B.: the torque rating for our structural screws is 2.5 Nm $\pm$ 0.5. As a guide, a torque rating of 2.5 Nm normally corresponds to position 8 on the adjuster of a 20-position 18-volt drill/driver.*



* Torque rating: the parameter used to measure the rotational force of a screwdriver.

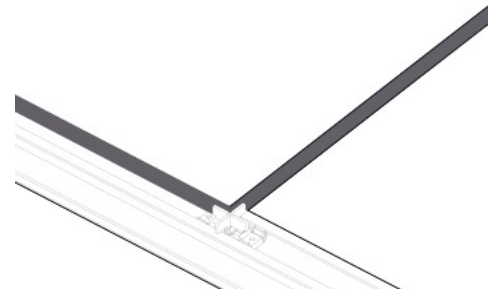
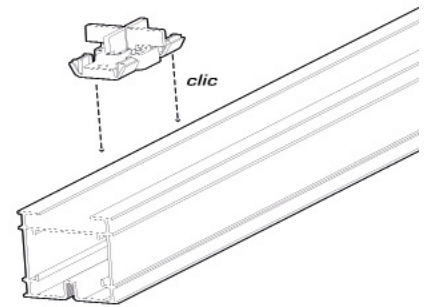
3

LAY THE PAVING



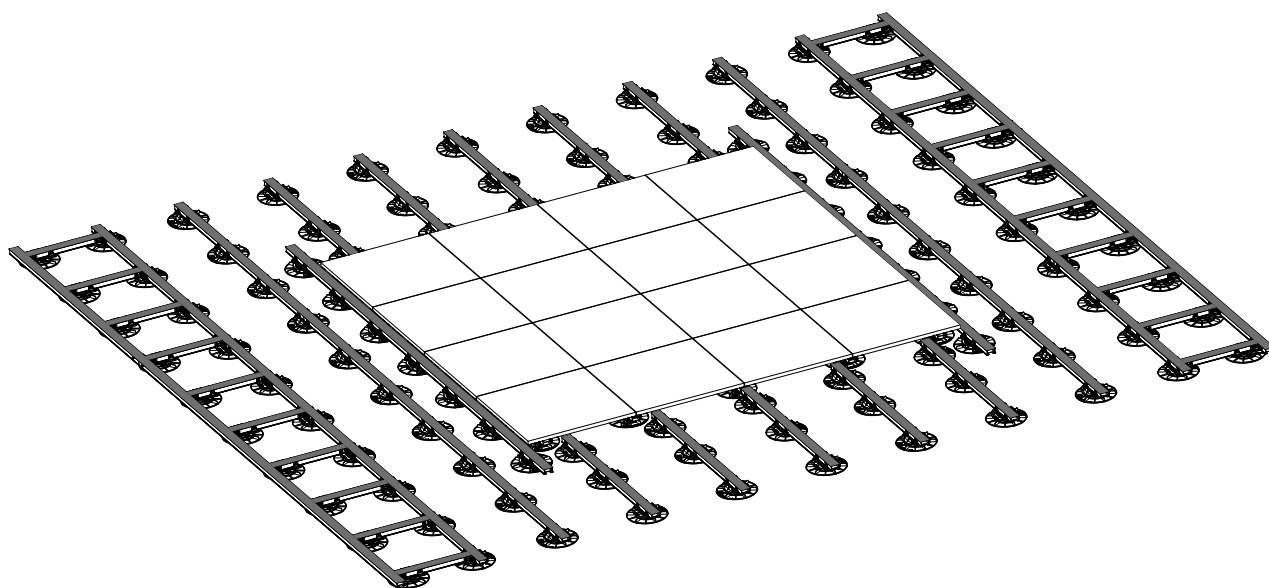
3.1. USE THE SPACERS

- › Lay the paving, starting at the corner of the layout plan.
- › As you progress, click the spacers into the central rail of the aluminium joist (Spacers are supplied in 2 parts to be assembled – use pliers to ensure optimal interlocking).
- › If you are laying your paving in a staggered pattern, break off any tabs that are not required.
- › Readjust the centreline spacing distance and level as you progress.



4

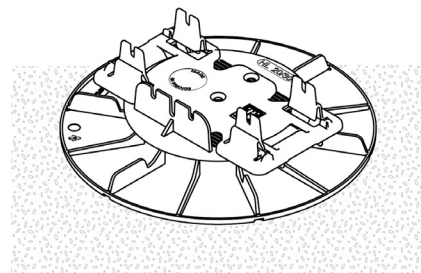
BUILDING THE DECKING SECTION



4.1 POSITION THE RISER PEDESTALS

- › Use the timber face of the aluminium joists to build a second structure around the paved section.
- › Choose your starting point from your layout plan.
- › Then position the joists and riser pedestals as explained in section 2.1.

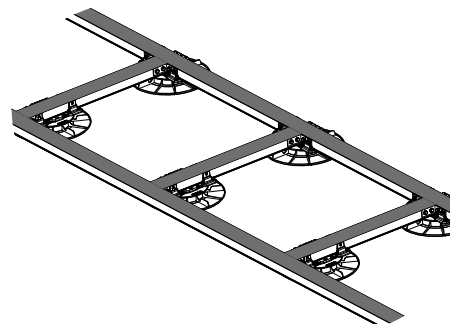
N.B.: When drawing your installation plan, make sure that you use only full decking board widths to avoid having to rip boards lengthways. We recommend you install only full boards.



4.2. CREATING 'LADDER' EDGE STRUCTURE

- › We recommend that 'ladder' structures are installed at terrace edges.
- › To do this, use horizontal brackets to attach braces* (approx. 50 cm long) between the edge joist and the adjacent internal joist.
- › Step the riser pedestals supporting the edge joist slightly back to ensure that they are not visible once the terrace is complete.

We recommend leaving a gap of 2 mm between joists to allow for expansion.



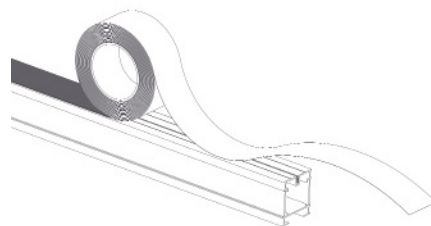
N.B.: the torque rating for our structural screws is 2.5 Nm $\pm$ 0.5. As a guide, a torque rating of 2.5 Nm normally corresponds to position 8 on the adjuster of a 20-position 18-volt drill/driver.*

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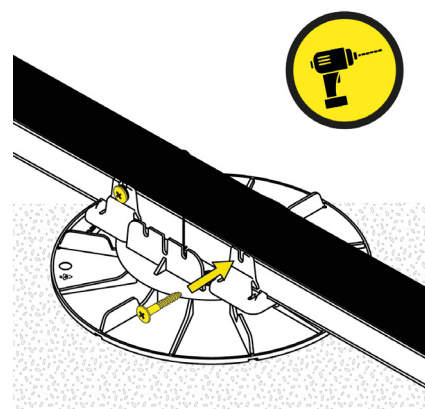
BUILDING THE DECKING SECTION

4.2. APPLY THE SELF-ADHESIVE ANTI-CONDENSATION TAPE

› As you progress, and ensuring that the joist is clean and dry, apply the self-adhesive anti-condensation tape to the face on which the timber will be laid.

**4.3. JOINING ALUMINIUM JOISTS**

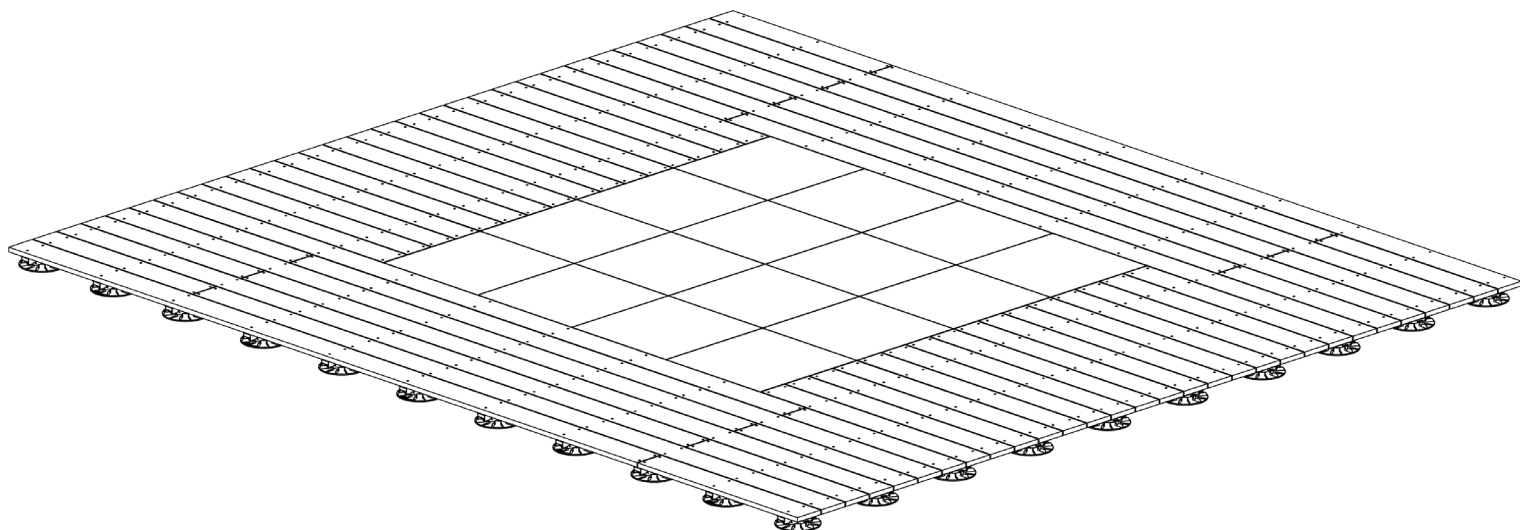
› See § 2.3



5

LAY THE DECKING BOARDS

OPTION 1 - SCREW FIXING OF DECKING BOARDS



5.1. USING PROFILDECK® SCREWS TO FIX TIMBER DECKING BOARDS

- › Lay the timber decking* boards leaving a regular and consistent space between boards (using spacers).
- › Screw through each board using the special Profildeck® screws.

Pro tip:

The torque rating for these fixing screws is 7 Nm. As a guide, set the adjuster of a 20-position 18-volt drill/driver to position 18.

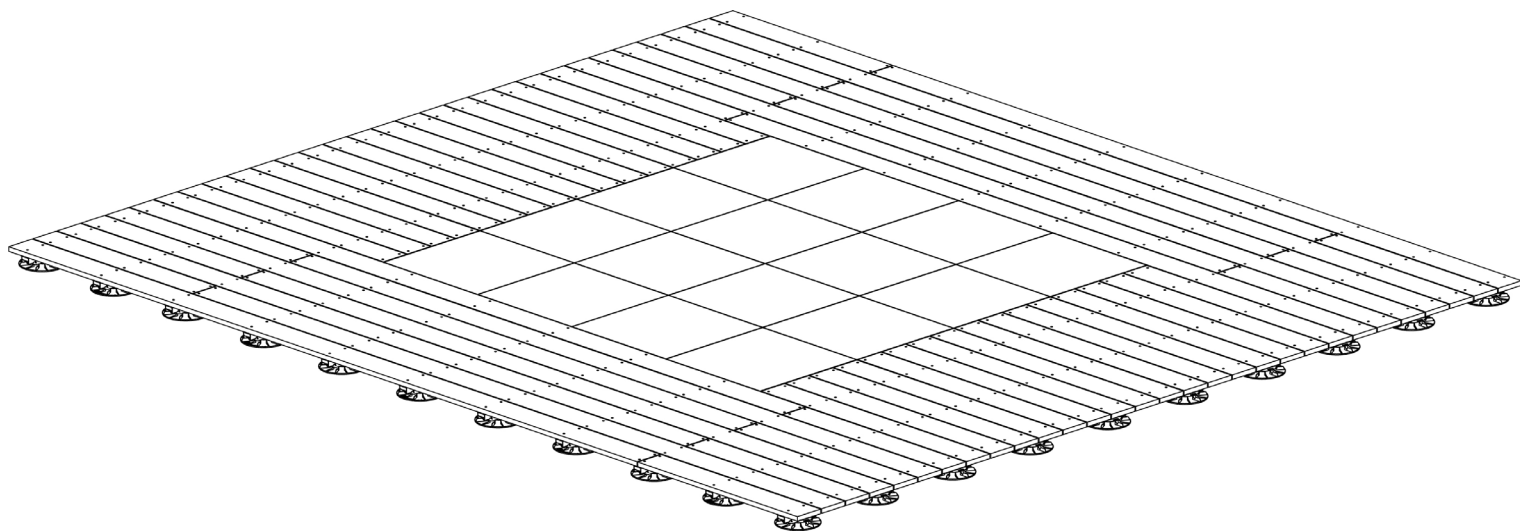
When laying composite decking boards, use the fixings recommended by the manufacturer, checking that the screws concerned are suitable for use with aluminium joists. Screws must be threaded for their full length. Minimum screw length: 15 mm.

* Timber decking: exterior structure covered with boards laid on joists fixed to stable base structures (riser pedestals, packers, beams, etc.).

5

LAY THE DECKING BOARDS

OPTION 2 - SECRET SCREW FIXING OF DECKING BOARDS WITH THE FIXEGO® SYSTEM



5.2. USING THE FIXEGO® FIXING SYSTEM

To lay decking boards with no visible fixings, use the FIXEGO® system (see installation instructions):

› Attach a cleat at the end of each aluminium joist. N.B.: the cleat must be centred on the longitudinal axis of the joist, and 5 mm from the end of the joist (a vertical cleat can be used as a template for this distance).

› Pre-drill with a 3 mm diameter metal bit.

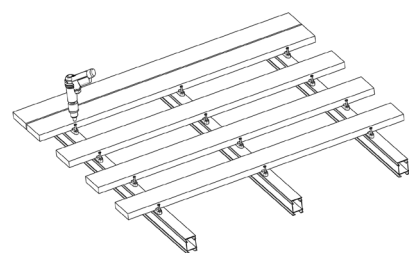
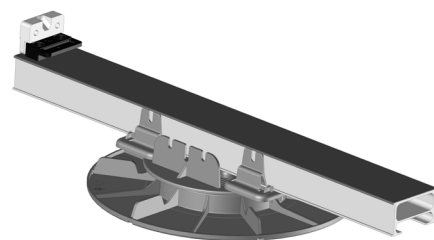
› Screw in the cleat (using screw 4 x 25 mm screws).

N.B.: cleats are used only to start and finish the deck. Follow the FIXEGO® installation instructions and recommendations.

Pro tip:

When securing cleats to joists, set the adjuster of a 20-position 18-volt drill/driver to position 20.

› Before using the FIXEGO®, we recommend pre-drilling the Profildeck® joists with a 4 mm diameter metal drill.



Where decking boards are butt-jointed end-to-end, we recommend installing twin joists: one joist to support the end of the first board and a second, parallel to the first, to support the end of the next board (see diagram).

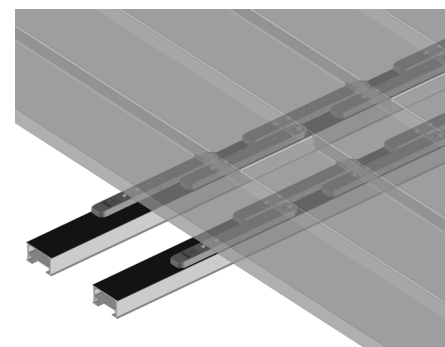
We also recommend offsetting the riser pedestals beneath the joists.

› 6 x 30 mm FIXEGO® system screws are included in the kit.

› Pre-drill with a 4 mm diameter metal bit.

Pro tip:

For driving FIXEGO® system screws, set the adjuster of a 20-position 18-volt drill/driver to position 15.



Twin joists