

DIRECTIONS FOR USE
USING PROFILDECK® TO CREATE A
PAVED TERRACE
ALUMINIUM JOIST - HEIGHT 55 MM



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PROFILDECK® RANGE

Aluminium joist / height 55 mm

One side for installing terrace paving and one side for installing wooden and composite decking. The Profildeck® aluminium joist can be used with all the Jouplast® riser pedestal except 8/20 reference.

Profildeck® screw

Self-drilling screw. Secures brackets, adapter directly into the joist. Dimensions : 4.8 x 19 mm.

Horizontal junction angle bracket

For reinforcing 90° joints.

Slotted holes for accurate setting.

Vertical junction angle bracket

To create step or a second terrace level. Slotted holes for accurate setting.

Slab spacer

Creates a 3 mm drainage channel between paving elements. Tabs can be split easily.

Adapter

Secures the Profildeck® 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 joists together with the 4 fixing points.

Raises the height of the riser by 5 mm.

Rubber tape

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

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

For terrace edge finishing:

Edge finishing T-Piece

Supports the edge slabs or tiles, and provides a fixing point for the edge upstand tiles of a Profildeck® terrace. Glue trap system.

Lateral riser support

Creates a support for a plinth and aligns perfectly with the spaces between slabs. Glue trap system.



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.



VIDEO

Click on the QR CODE or scan it, you will be redirected to the «Product» video



PROFILDECK®

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).

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 : brackets, adapters, riser pedestal, etc...
 - › the levels.
 - › the joists connection joints. We do not recommend the use of joist lengths less than 800 mm. If, when you reach the end of the terrace, the length of joist is less than 800 mm, we recommend cutting the previous length of joist to 800 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 : allow for the recess required to achieve a neat finish.

When finishing the long edge of the terrace, reduce the spacing between the centrelines of the peripheral joists to leave room for the edge finishing T-piece and the thickness of the tile (see paragraph 3).

Also check that the height beneath the paved surface is not less than 8.3 cm at any point (Riser pedestal (mini. 20 mm + aluminium joist + adapter + rubber tape = 8.3 cm).

For a 20 mm ceramic slabs, the total height of the paved terrace is 10.3 cm.

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

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:

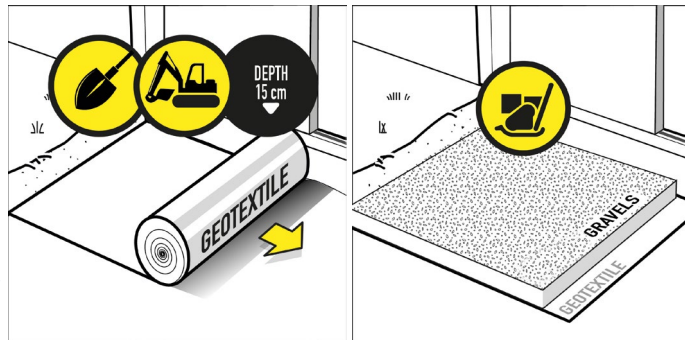
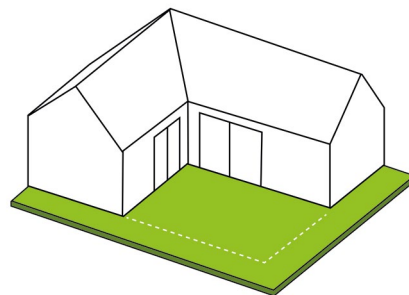
- › *Make sure the area is clean and the ground is stable.*

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.

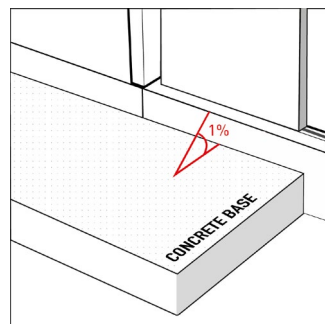


On a concrete support :

- › 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 8.5 cm of clear space below the paving at the lowest point.

NB :

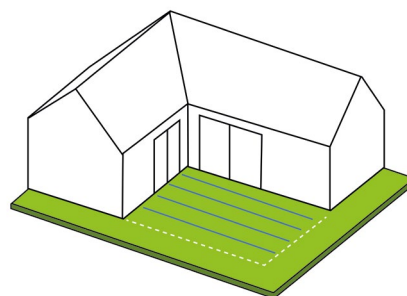
- › Riser pedestal (mini. 20 mm) + aluminium joist + adapter + rubber tape = 8.3 cm.
- › For a 20 mm ceramic slabs, the total height of the paved terrace is 10.3 cm.



Minimum slope percentage 1%.

1.2. MARK OUT THE POSITION OF THE JOISTS

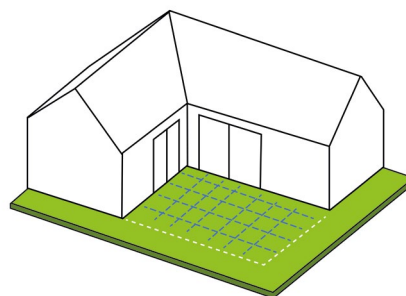
- › Use a chalk line to clearly mark the spacing between joist centrelines* shown on the layout plan.
- › The spacing between joist centrelines is dictated by the size of the paving tile and/or its manufacturer's recommendations.



1.3. MARK OUT THE RISER PEDESTAL POSITION ON THE GROUND

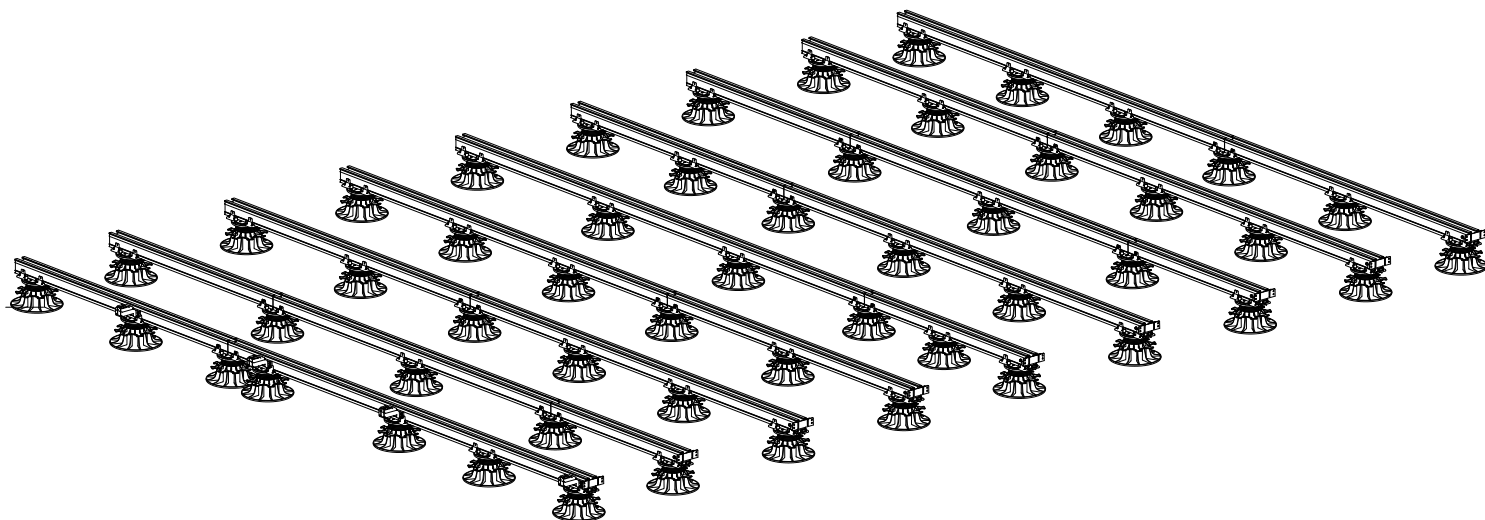
- › Use a chalk line to clearly mark the position of each line of riser pedestals at right angles to the recommended joist centreline spacing.
- › The recommended spacing distance for riser pedestals is 80 cm.

For terraces with public access, the recommended distance varies from 50 cm to 65 cm.



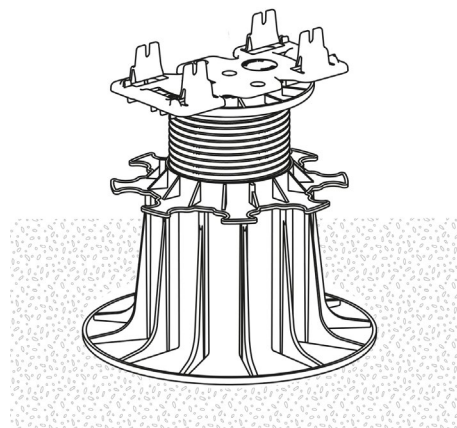
* Spacing between joist centrelines: the distance between the centrelines of two joists.

OPTION 1 - SIMPLE STRUCTURE



2.1. POSITION THE PROFILDECK® ALUMINIUM JOISTS AND RISER PEDESTALS

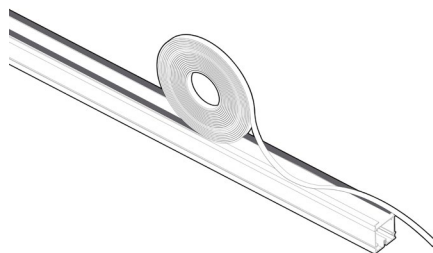
- › Choose your starting point from your layout plan.
- › Place the first [Profildeck® joist](#) in the location shown on the plan.
- › Clip the [adapters](#) onto the riser pedestals.
- › Clip the joist to the riser pedestal at each end by pushing the joist until it clicks into place then set the level using the nut.
- › Then clip the 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 Profildeck® joist installed as your reference, and repeat the operation for all other 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

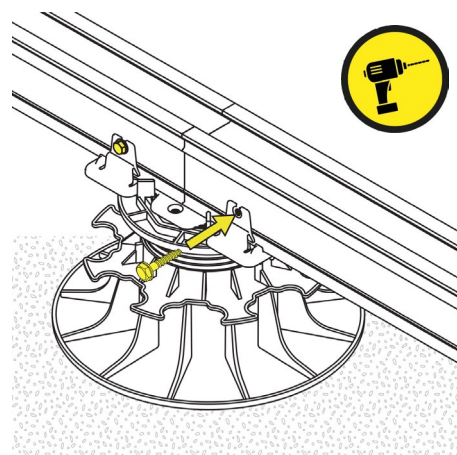
- › As you progress, and ensuring that the joist is clean and dry, apply the [self-adhesive rubber tape](#) to the face on which the paving will be laid.



2.3. JOINING ALUMINIUM JOISTS

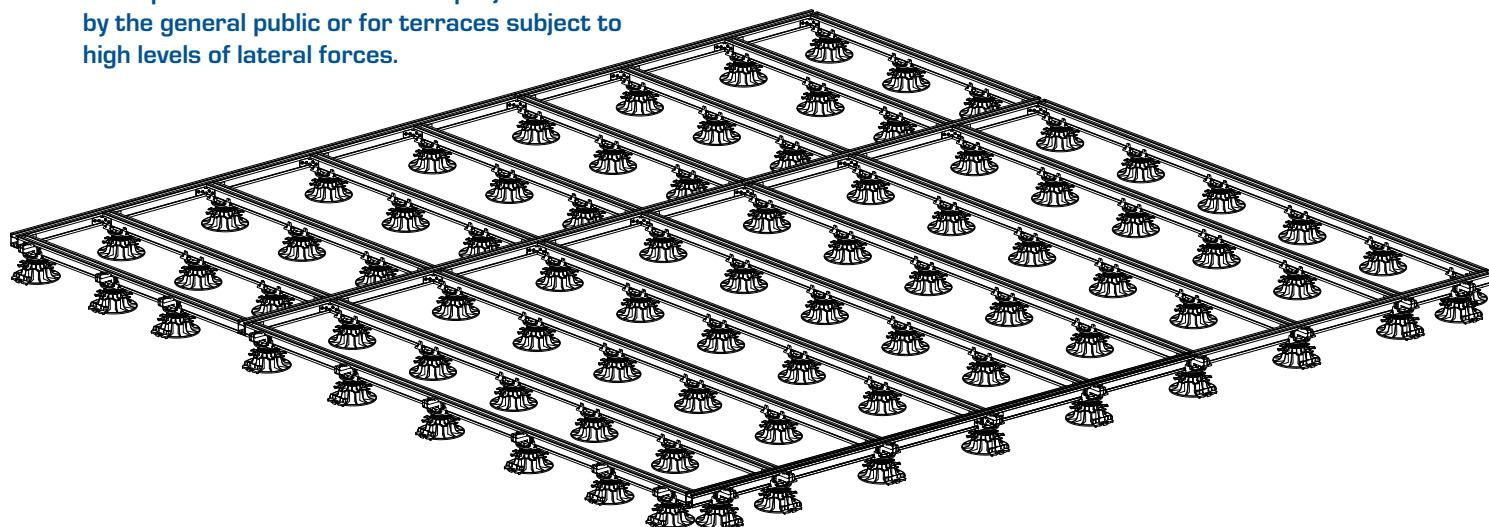
- › Joists lengths greater than 2.40 metres should be connected using the adapters.
 - › Position a riser pedestal fitted with an [adapter](#) beneath each joint.
 - › Screw the adapter to the joist at all 4 fixing points using self-drilling Profildeck® screws.
- We recommend leaving a gap of 2 mm between joists to allow for expansion.
- › Repeat for each joist joint.

N.B.: the torque rating for our structural screws is 2.5 Nm ±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.*



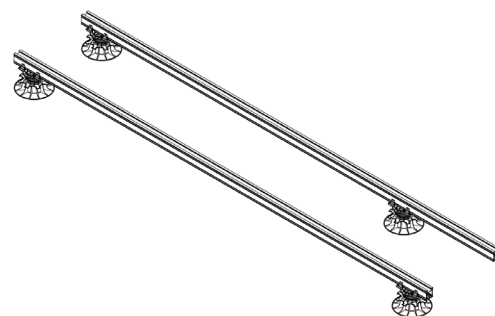
OPTION 2 - REINFORCED STRUCTURE

This option is recommended for projects intended for use by the general public or for terraces subject to high levels of lateral forces.



2.1. POSITION THE PROFILDECK® ALUMINIUM JOISTS AND RISER PEDESTALS

- › Choose your starting point from your layout plan.
- › Place the [Profildeck® joist](#) in the location shown on the plan.
- › Clip the [adapters](#) onto the riser pedestals.
- › Clip the joist to the riser pedestal at each end by pushing the joist until it clicks into place - then set the level using the hand adjuster.
- › Position the second joist in the same way, respecting the centreline spacing distance shown on the layout plan, and continue until your structure looks like the one in the diagram.

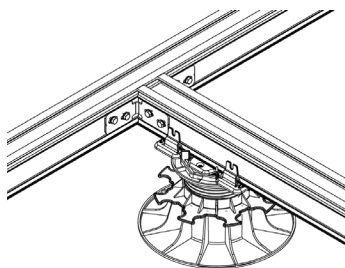
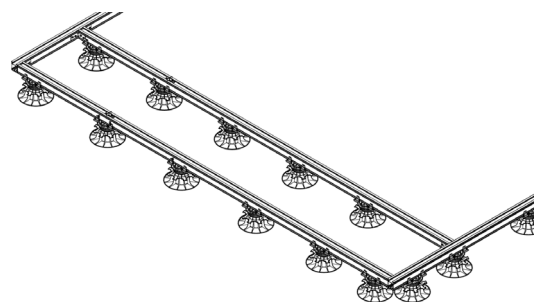


N.B.: remember to take account of features like inspection covers, junction boxes, skimmer inlets, door thresholds, etc.

2.2. ATTACH THE REINFORCEMENTS

- › To reinforce the structure, we recommend installing 1 reinforcement with the [horizontal bracket](#) every 2.40 metres.
- When attaching the reinforcement, we recommend leaving an expansion gap of 2 mm between joists.

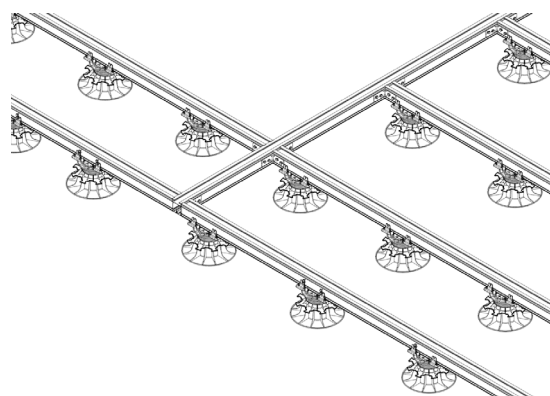
N.B.: the torque rating for our Profildeck® screws is 2.5 Nm \pm 0.5. As a guide, a torque rating of 2.5 Nm normally corresponds to position 8 on the adjuster of a 20-position 18-volt drill/driver.

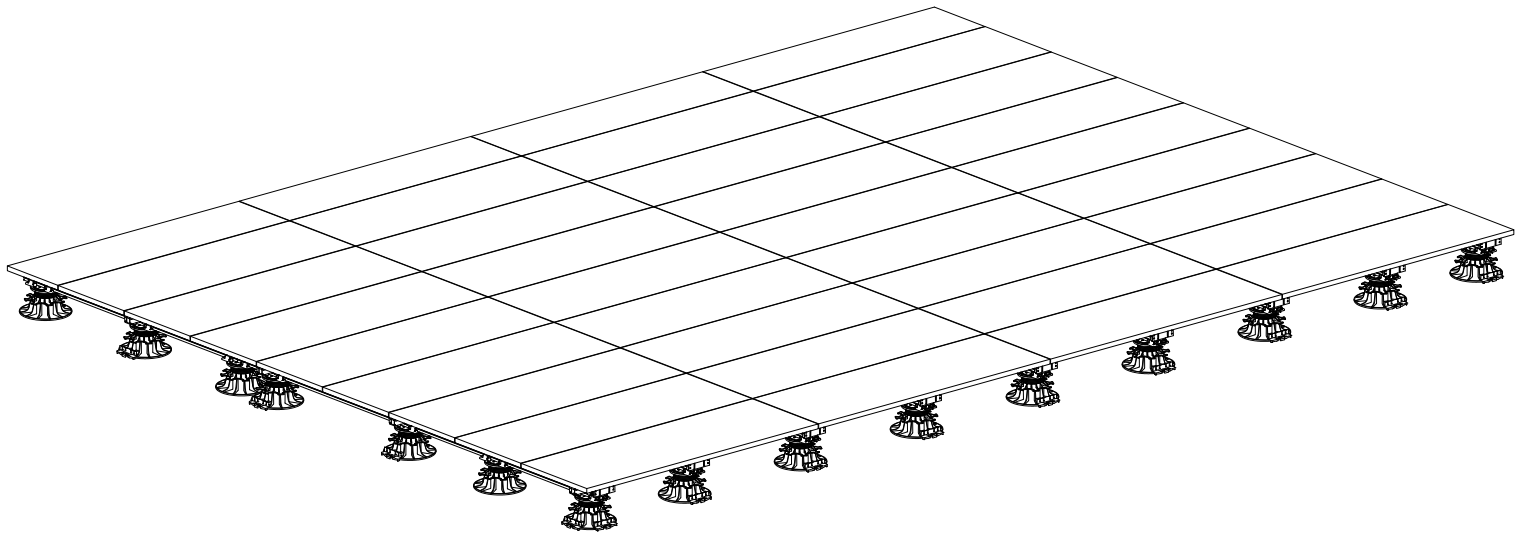


- › Then clip the joist into the intermediate riser pedestals and adjust the height to your desired level.
- › Repeat the process with the remaining joists.

2.3 APPLY THE SELF-ADHESIVE RUBBER TAPE

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



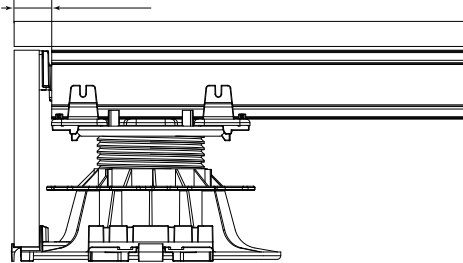


3.1. USE THE SPACER

› Lay the paving, starting at the corner of the layout plan.
If you intend to finish the edges, remember to offset the paving tiles to accommodate the thickness of the plinth tiles that will finish the edges of your terrace.

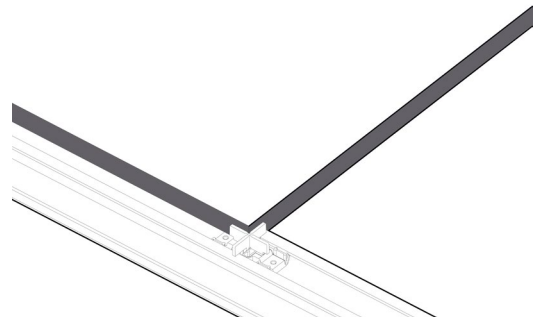
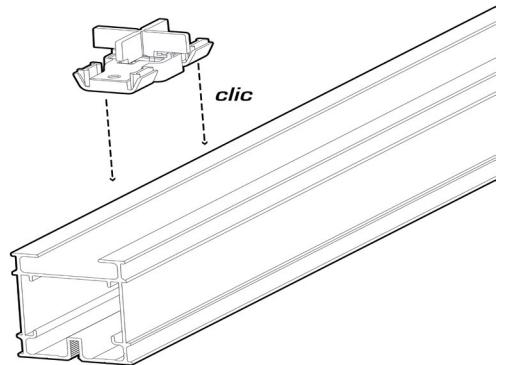
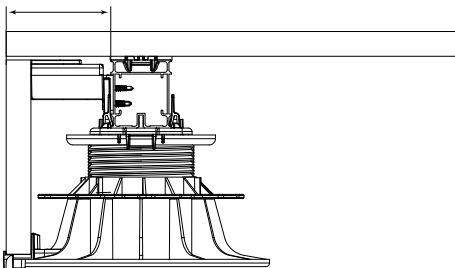
Offset

At the end:



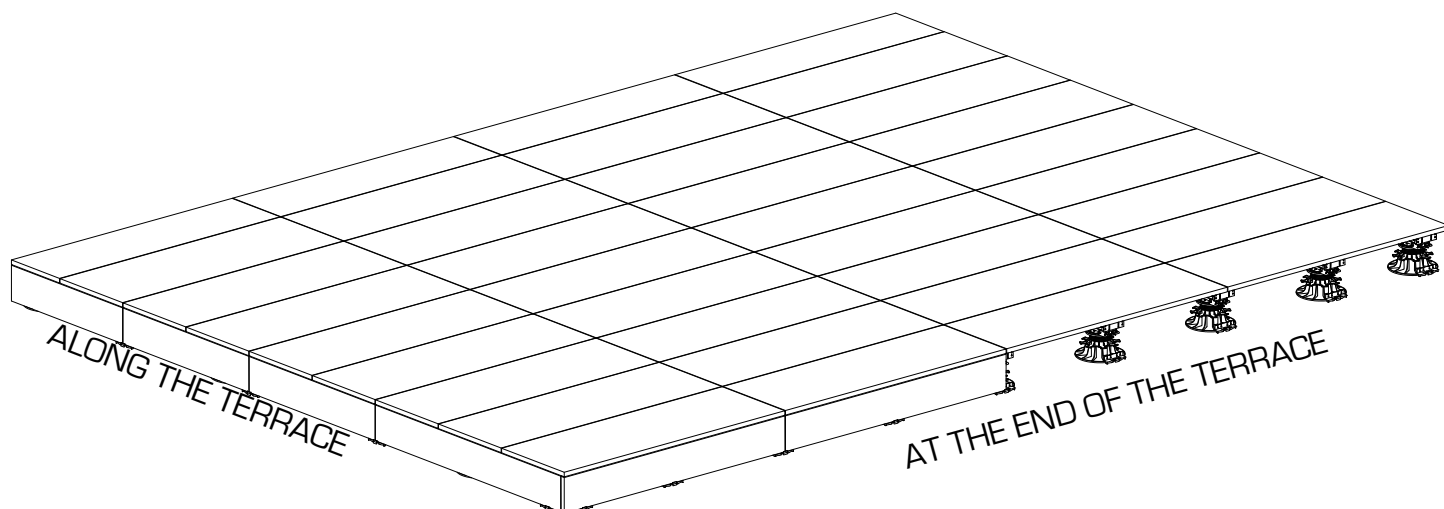
Along:

Offset



- › As you progress, click the [spacers](#) into the central rail of the Profildeck® joist.
- › 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.

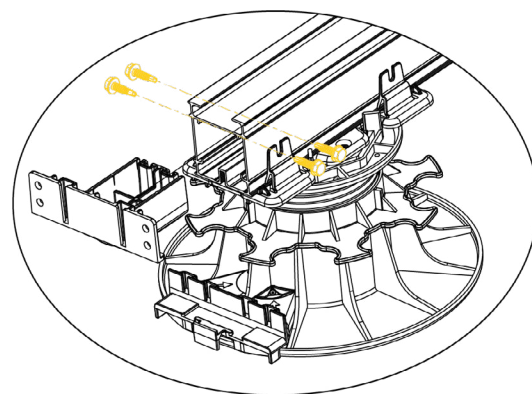
N.B.: for reinforced structures, we recommend laying paving as you progress to avoid any risk of offsetting the centreline spacing distance.



4.1. FINISHING AT THE END OF THE ALUMINIUM JOIST

- › Insert the finishing [T-piece](#) into the end of the joist, with the hollow side facing upwards.
- › Secure the T-piece and [adapter](#) in place using [structural screws](#) tightened to a torque setting of 2.5 Nm.
- › Fit one lateral riser support to each riser pedestal.
- › Apply PU adhesive to the glue traps on the lateral riser support and to the 2 slots in the T-piece.
- › Locate the plinth tile on the lateral riser support installed on the riser pedestal base, and press the plinth tile against the adhesive previously applied to the T-piece. Hold firmly in place for a few seconds. As the glue cures, it provides the level of mechanical grip required to hold the plinth tile permanently in place.

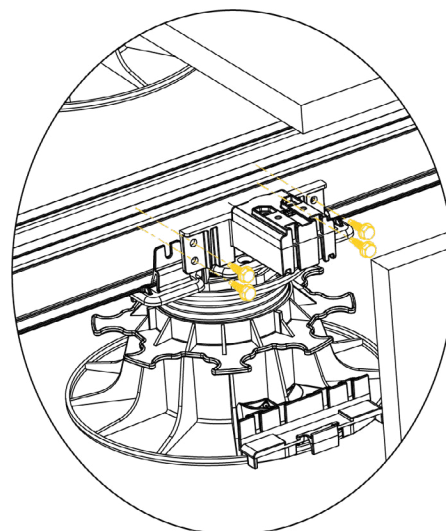
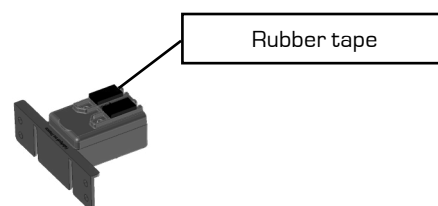
N.B.: where necessary, the paving tiles at the end of the joist can also be bonded in the same way (see the 'special applications' paragraph).

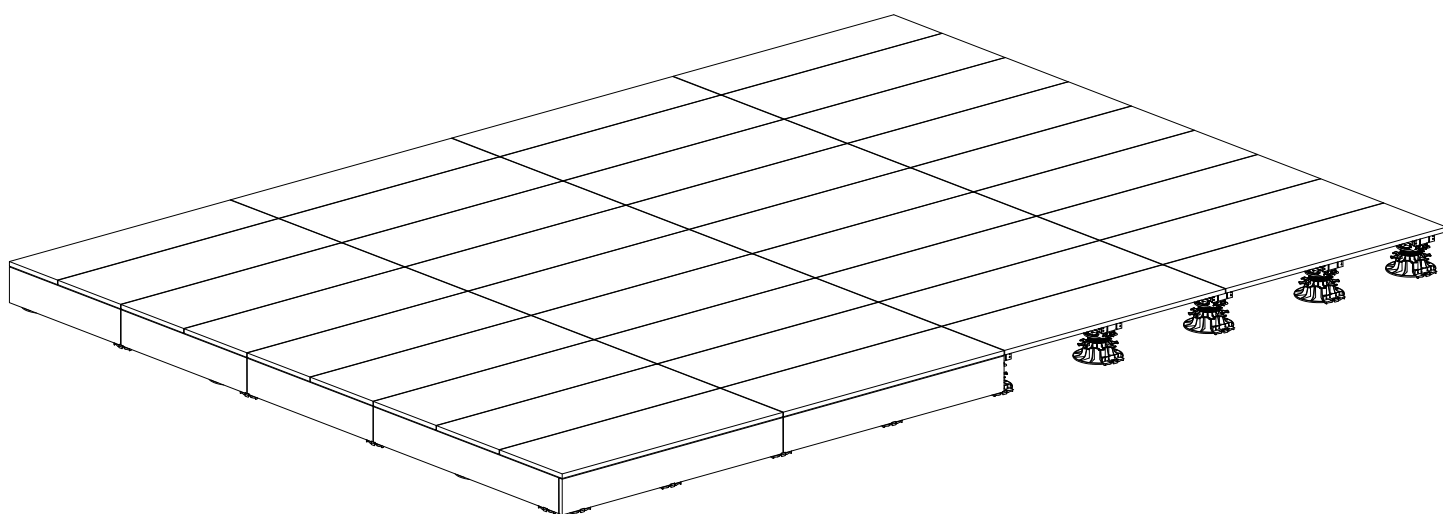


4.2. ALONG THE ALUMINIUM JOIST

- › With the solid side facing upwards, locate the finishing [T-piece](#) against the joist guides, then apply 2 small lengths of the [self-adhesive rubber tape](#) to the top of the T-piece.
- › Secure the T-piece and [adapter](#) in place using Profildeck® screws tightened to a torque setting of 2.5 Nm.
- › Fit one [lateral riser support](#) to each riser pedestal.
- › Apply PU adhesive to the glue traps on the lateral riser support and to the 2 slots in the T-piece.
- › Locate the plinth tile on the lateral riser support installed on the riser pedestal base, and press the plinth tile against the adhesive previously applied to the T-piece. Hold firmly in place for a few seconds. As the glue cures, it provides the level of mechanical grip required to hold the plinth tile permanently in place.

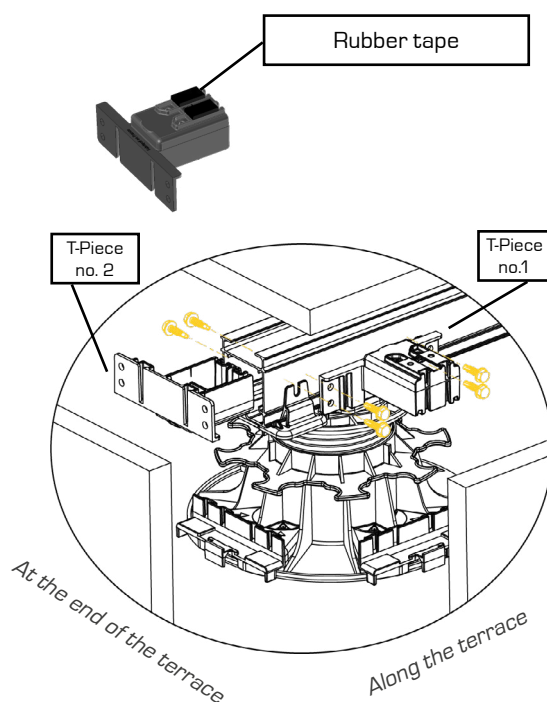
Where 2 plinths join, each must be bonded to a glue trap of the T-piece and the lateral riser support.





5.1. AT THE TERRACE CORNER

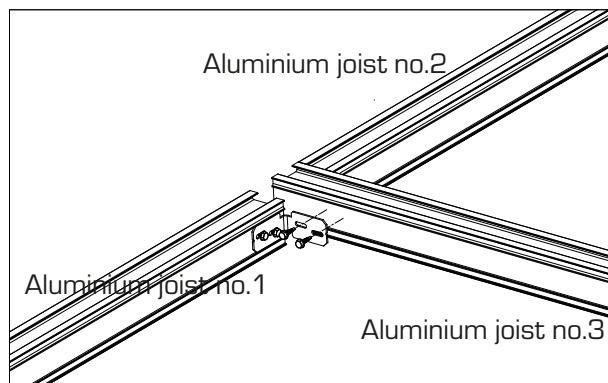
- › At corners, use 2 lateral riser supports.
 - › Fit one finishing [T-piece](#) at the end of the [joist](#) and another on the side of the joist, as shown.
 - › Attach 2 short lengths of the [self-adhesive rubber tape](#) to the top of the finishing T-piece attached to the side of the joist.
 - › Secure the T-pieces in place using 4 [Profildeck® screws](#). Fitting the T-piece to the side of the joist (no. 1) allows you to fit the other (no. 2) to the end of the joist. See diagram
 - › Apply PU adhesive to the glue traps on the lateral riser support and to the 2 slots in the T-piece
 - › Locate the plinth tile on the lateral riser support installed on the riser pedestal base, and press the plinth tile against the adhesive previously applied to the T-piece.
- Hold firmly in place for a few seconds. As the glue cures, it provides the level of mechanical grip required to hold the plinth tile permanently in place.



BUTT JOINTING OF ALUMINIUM JOISTS

If it is not possible to join 2 joists using an adapter, the joint can be made using [horizontal brackets](#), e.g.: against a wall (see diagram).

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



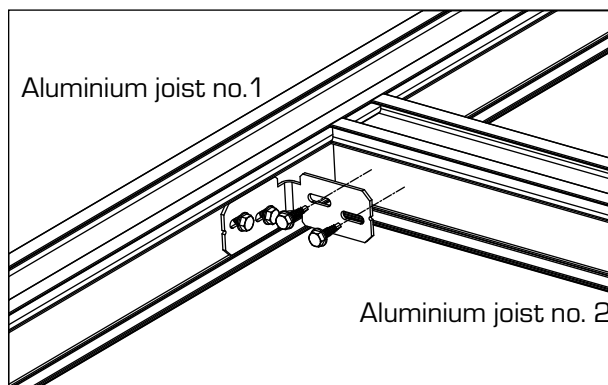
Special application : Butt jointing of joists with horizontal brackets

USING HORIZONTAL BRACKET

- › To connect 2 joists at 90° to each other.
- › To attach braces* (for reinforced structures).
- › To create L-shaped terraces.
- › To create U-shaped terraces.
- › Locate the horizontal bracket between the outer rails of joist no. 1.
- › Use 2 Profildeck® screws to attach the [horizontal bracket](#) to the joist through the slotted holes, but do not tighten at this stage.
- › Locate joist no. 2 against the horizontal bracket and secure using 2 Profildeck® screws.
- › Adjust the position of the joists and tighten all 4 structural screws.

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

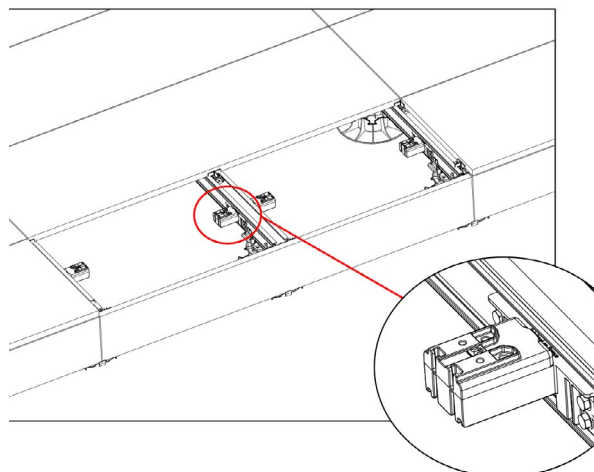
Tighten Profildeck® screws to a torque rating of 2.5 Nm. As a guide, set the adjuster of a 20-position 18-volt drill/driver to position 8.



Horizontal bracket use

BLOCING TILES AT THE EDGE OF THE TERRACE

- › Where necessary, the paving tiles at the end of the terrace can be bonded in position. To do this, use the finishing T-piece as shown in the diagram
- › Apply PU adhesive to the top of the T-piece. Locate the paving tiles and press firmly into the adhesive.



* Brace : A piece of joist placed between the joists to strengthen the frame.