

Atria® & Farrino®

Installation Guide on the Raaft® joist system



Scan the QR code to watch a video of the RAAFT® system installation.



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HANDLING AND HAZARDS



HEAVY SEGMENTS

Requires two persons to lift each segment or mechanical lifting device.



HEAVY ITEMS

Wear steel toe protection.

TOOLS REQUIRED

- ✓ Rubber mallet
- ✓ Cutting equipment
- ✓ Spirit level
- ✓ Tape measure
- ✓ String line





BE SAFE

Wear high visibility clothing, hard hats, and any other PPE required on site.



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General information

These instructions are designed to help you install Atria® tiles and Farrino® decking properly, safely and economically.

CUTTING ATRIA® AND FARRINO®

Porcelain tiles and decking can be cut using a diamond blade wet tile cutter. Any tool safety guide must be adhered to at all times with the correct PPE that is required for the application.

STORAGE AND HANDLING

Atria® and Farrino® are securely packed onto specific pallets to reduce movement in transit.

PACKAGING AND WEIGHTS

TILE SIZE	PALLET SIZE	WEIGHT
600 x 600mm (23.6 x 23.6in)	1200 x 800mm (47.2 x 31.4in)	934kg (1.02 US ton)
600 x 1200mm	1200 x 950mm	1202kg
(23.6 x 47.2in)	(47.2 x 37.4in)	(1.32 US ton)
450 x 900mm (17.7 x 35.4in)	1200 x 950mm (47.2 x 37.4in)	1027kg (1.13 US ton)
900 x 600mm	1200 x 800mm	1182kg
(35.4 x 23.6in)	(47.2 x 31.4in)	(1.30 US ton)
900 x 900mm (35.4 x 35.4in)	1200 x 800mm (47.2 x 31.4in)	700kg (0.77 US ton)
300 x 600mm (11.8 x 23.6in)	1200 x 800mm (47.2 x 31.4in)	976kg (1.07 US ton)
1200 x 1200mm (47.2 x 47.2in)	1430 x 1230mm (56.2 x 48.4in)	1377kg (1.51 US ton)
1200 x 2400mm	2680 x 1360mm	1302kg
(47.2 x 94.4in)	(105.5 x 53.5in)	(1.43 US ton)
1200 x 200mm	1200 x 1200mm	1200kg
(47.2 x 7.87in)	(47.2 x 47.2in)	(1.31 US ton)
1200 x 300mm	1200 x 800mm	1203kg
(47.2 x 11.81in)	(47.2 x 31.4in)	(1.32 US ton)
1200 x 400mm	1200 x 800mm	1058kg
(47.2 x 15.74in)	(47.2 x 31.4in)	(1.16 US ton)
1600 x 300mm	1600 x 950mm	1056kg
(62.99 x 11.81in)	(62.99 x 37.4in)	(1.16 US ton)

DISPOSAL

Waste material could be disposed of with commercial waste. Larger quantities could be disposed of with bulk waste or taken directly to an appropriate waste disposal site. If in doubt, please contact your city and/or municipal administration to discuss appropriate methods of disposal.

CLEANING AND CARE

Atria® and Farrino® are easy to clean and resistant to most chemicals. They are UV stable and have a porosity of 0.01%.

We recommend that porcelain tile products should have a cleaning program in place to ensure the product keeps a relatively clean facial appearance. We would suggest this takes place once or twice a year although this can vary depending on the severity of the environment concerned.

Cleaning can be carried out using a high pressure cleaner with a fan-shaped beam at a distance of at least 20cm, in a lengthwise profile direction. Alternatively, tiles could be scrubbed using mild all-purpose cleaner and water.

To keep tiled areas clean on a day-to-day basis we recommend regular sweeping followed by rinsing and brushing with water, a soft brush and a mild all-purpose cleaner or suds.

SUPPORTING DOCUMENTS

More information on Atria® and Farrino® can be found at raaft.co in the Resource Centre. In particular look for the CAD drawings, data sheet and Terrace Book.

DISCLAIMER

These instructions are for guidance only and the installer is responsible to use their discretion to install the products in the best possible way for their respective application. Raaft® will not be held liable for product failure or poor performance as a result of poor quality installation. If any errors are found in this guide please email us at enquiries@raaft.co



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Important information

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A ceramic tile could fracture on impact if a heavy object falls on it from any significant height. Therefore we recommend you check the specific intended use before starting the installation and in certain conditions reinforcing must be applied to the back of the tiles.

Failure to comply with these recommendations could lead to improper use of the product and could cause serious damage or injury. Raaft® Limited does not accept any liability caused by improper use or defective installation.

Warning: Not having a Raaft® anti wind uplift solution can cause loose-laid porcelain tiles to lift and move, under certain wind loads.

All roofs are subjected to the effects of wind uplift as the wind moves across them. The effects of this will depend upon a number of factors including location, height, size, roof shape and relationship to the surrounding area. In extreme cases 2cm (0.7in) thick porcelain tiles have been lifted and propelled over a balustrade. It is therefore critical that a roof is analysed by a certified wind consultant and any concerns addressed with the necessary wind resistant solutions. For more information, please contact our technical advisers.

GROUND AND SUB-BASE SUITABILITY

The ground must be stable and properly compacted. If the ground is not sufficiently stable, this could lead to instability and potential damages to the construction and persons or property thereon.

It is recommended that the ground and sub-base is laid to a 2° fall which includes the Raaft® system, to allow for sufficient water run off.

PERMISSIBLE LOADS

Atria® and Farrino® have a breaking strength of >1500N and a breaking load class of U11 and T11. Further information can be found in the Atria® and Farrino® Data Sheets. Misapplication could lead to damage to property or person. Please consult with an authorized stress analyst to check suitability of proposed application.

Installation of Atria® and Farrino® should be completed in compliance with all Health and Safety regulations pertaining to the application.

TECHNICAL QUESTIONS?

These installation instructions are designed for standard applications. Due to an unlimited variety of design options it is impossible to discuss all details feasible. If further questions or additional technical details are required please contact us by email at technical@raaft.co or by phone on +44 (0)20 3146 7879.

VALIDITY

Our installation instructions are drawn up on the basis of current knowledge and could be adapted at any time and without prior notice. Please check if you have the most currently released version or if an update is available at raaft.co in the Resource Centre.

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Support structure components



4MM 4-WAY SPACER TAB FOR JOISTS

SKU 302017

Raaft® 4mm (0.15in) 4-way spacer tabs are designed to lock into the top of a joist creating a consistent 4mm (0.15in) gap between tiles, that are loose laid onto the Raaft® system. Please refer to the tile layout illustrations as to when and where this component is used.



ACCESS WIND UPLIFT H-CLIP

SKU 421014

Raaft®'s quick release wind uplift clips are designed to lock into the top of the joist system, similar to the spacer tabs. Once the clip is locked into position it will provide the necessary protection against wind loads across a roof terrace. These clips are designed to work alongside a grooved tile supplied by Raaft®. Please refer to the tile layout illustrations as to when and where this component is used.



30MM AND 50MM JOIST WING SUPPORTS

SKU 302028 (30mm, 1.18in) SKU 302018 (50mm, 1.96in)

The Aluminum wing supports are designed to lock in the side of the Raaft® joists system, providing support to the perimeter, where cantilevered tiles are present. They are delivered 2.4m (7.87ft) in length but can be cut to suit when required.



2-WAY METAL TILE SPACER

SKU 343010

2 way tile spacers are used when the tiles meet the edge of the building and a 4 way tile spacer cannot be used. This will alow the pedestal to be offset from the building but keep aconsistant 4mm spacing



TILE WALL SPACER FOR PEDESTALS

SKU 343013

Wall tile spacers are to be used when butting tiles against the edge of the building to avoid slipping of tiles and keeping a consistent 10mm (0.39in) gap around the perimeter.



4MM 2-WAY SPACER TAB FOR JOISTS

SKU 302016

Raaft® 4mm (0.15in) 2-way spacer tabs are designed to lock into the top of a joist creating a consistent 4mm (0.15in) gap between tiles, that are loose laid onto the Raaft® system. Please refer to the tile layout illustrations as to when and where this component is used.



ACCESS WIND UPLIFT T-CLIP

SKU 421015

Raaft®'s quick release wind uplift clips are designed to lock into the top of the joist system, similar to the spacer tabs. Once the clip is locked into position it will provide the necessary protection against wind loads across a roof terrace. These clips are designed to work alongside a grooved tile supplied by Raaft®. Please refer to the tile layout illustrations as to when and where this component is used.



PREVENTA 4MM SPACER TAB. 4-WAY

SKU 342011

The metal spacer tabs are designed to lock into the top of Raaft[®]'s Preventa pedestals. This components is to be ustlised where the Raaft[®] joists system cannot be used. These provide a consistent 4mm (0.15in) gap similar to the Raaft[®] spacer tabs.



TILE SPACER ACOUSTIC PAD

SKU 343012

The acoustic pad is crafted from durable rubber, providing a stable base for the tiles. This effectively minimizes noise transmission between the tile and the metal pedestal, while also preventing slipping of the tiles.



TILE WALL SPACER FOR JOISTS

SKU 303013

Wall tile spacers are to be used when butting tiles against the edge of the building to avoid slipping of tiles and keeping a consistent 10mm (0.39in) gap around the perimeter.

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Installation of 4 way spacer



4 way tile spacer to be used with square tiles.



Insert the tile spacer into the upper groove of the joist, rotate to lock tile spacer in to place.



Slide tile spacer towards the edge of the tile.



Slide the next tile into the tile spacer to create a consistent spacing.



Install remaining tiles.



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Breaking off 4 way spacer

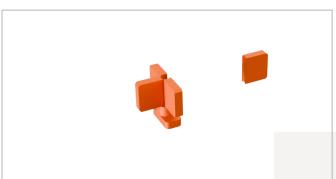
Where necessary 4 way tile spacers can be broken off to accommodate any orientation of tile pattern. Any of the 4 tabs can be removed as per the below detail.



4 way tile spacer in isolation.



Utilize a set of pliers to grasp the spacer that requires removal, then snap it off carefully, ensuring a clean break to prevent any potential clashes with the tile.



This is the appearance of the tile spacer. Make sure to break off the correct spacer and take note of the orientation in which the locking section needs to be before the break.



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Installation of 3 way spacer

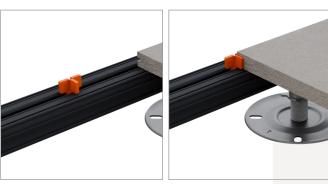
Please refer to page 17 onwards for installation locations.



3 way tile spacer (post snapping).



2 Insert the tile spacer into the upper groove of the joist and rotate 90 degrees.



? Slide tile spacer up to the tile



Slide remaining tiles into place.



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Installation of 2 way spacer

Where necessary, 2 way spacers are to be used when installing rectangular tiles against the shortest edge. Please refer to page no. 17 onwards.



2 way spacer for rectangular tiles.



2 Insert the 2 way spacer into the upper groove of the joist and rotate 90 degrees.



Slide tile spacer up to the tile.



✓ Slide to the center of the rectangular tile.



Illustration using a broken-out section of the tile to display the spacer in its proper position.



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Wind uplift

Raaft recommends that when wind uplift is present, all tiles should be supported by a minimum of 2 wind uplift clips when the need for grooving on site is required.

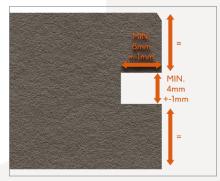
As standard, Raaft® will supply both types of wind uplift clips to assist in allowing the pre cut grooves to be supported by a rail in both directions.

However in situations where a groove is cut away on site, to accomodate a bespoke cut on site, regrooving a tile will be required.

The newly cut groove needs to be localised to where the clip is required. Please see below the dimensions and positioning of the groove to be cut.







Groove dimensions



H-Clip locked



T-Clip locked



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Installation of H-Clip

Please refer to page 17 onwards for installation locations.



H clip for porcelain tiles.



7 Place H clip into top joist section.



3 Slide H clip into the centre of the tile and rotate 90 degees.



Clip in correct position for locking tile.



5 Illustration of a installed clip featuring a broken-out tile for reference.



Use a 2.5mm Allen key to disengage and remove the clip.



Rotate the clip 90 degrees until it aligns parallel with the tile joint.



A broken tile demonstrating the installation of a clip.



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Installation of T-Clip

Please refer to page 17 onwards for installation locations.



T wind uplift clip.



Place T clip into top joist section.



Slide T clip into the centre of the tile and rotate 90 degrees.



Clip in correct position for locking tile.



Illustration of a installed clip featuring a broken-out tile for reference.



Use a 2.5mm Allen key to disengage and remove the clip.



Rotate the Allen key 90 degrees to align the clip parallel to the tile, leaving the clip in an unlocked position.



After unlocking the clip, the tile can be lifted for removal. Make sure to lift the tile vertically to prevent any damage or chipping.



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Installation wing support



Joist profile before wing support installation.



The wing support effortlessly attaches to the side profile of the joist, achieving a level finish with the top face of the joist, eliminating the need for mechanical fixings.



Sectional view showing installed wing support



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Installing spacer tabs



Pedestal, tile spacer & neoprene acoustic pad.



Ensure spacer tab is free from debris prior to installing acoustic pad.



Place neoprene pad over tile spacer tabs to sit flat upon spacer tab.



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Tile wall spacers



Wall tile spacers are to be used when butting tiles against the edge of the building to avoid slipping of tiles. This keeps a consistent 10mm gap (0.39in) around the perimeter.









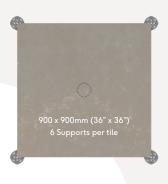


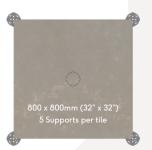
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Pedestal supports per tile













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KEY



Snapped 4mm tile spacer (4-way)



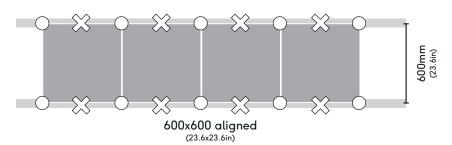
4mm tile spacer (4-way)

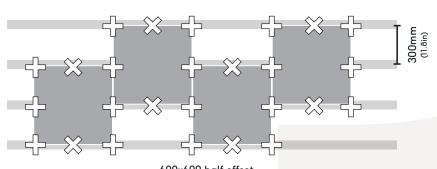




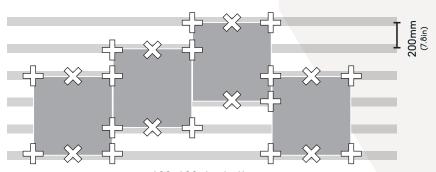


TILE SIZE: 600x600mm





 $600x600\ half\ offset$ (23.6x23.6in) Note: Every corner must be clipped and there must be 2 wind uplift clips per tile.



600x600 third offset

(23.6x23.6in)

Note: Every corner must be clipped and there must be 2 wind uplift clips per tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)



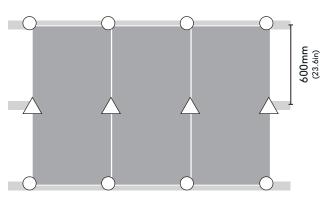




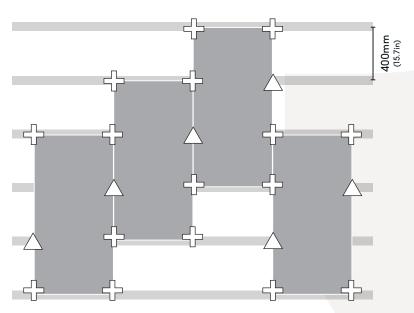


Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 1200x600mm



1200x600 aligned (47.2x23.6in)



1200x600 third offset

(47.2x23.6in)

Note: There must be a minimum 2 wind uplift clips per tile and a 2-way 4mm tile spacer at each end of tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)

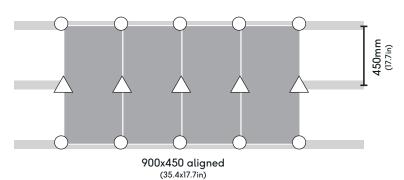


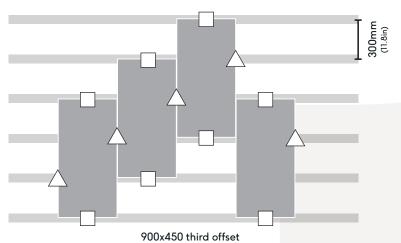




Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 900x450mm





(35.4x17.7in)

Note: There must be a minimum 2 wind uplift clips per tile and a 2-way 4mm tile spacer at each end of tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)



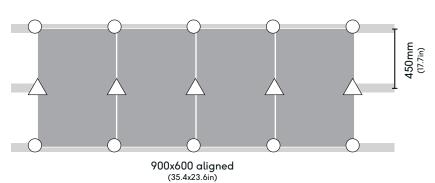
2mm tile spacer (2-way)

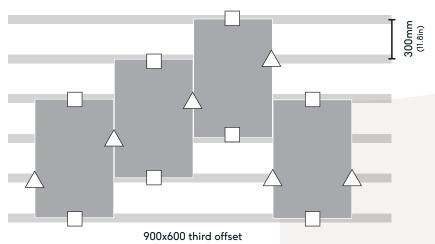




Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 900x600mm





(35.4x23.6in)

Note: There must be a minimum 2 wind uplift clips per tile and a 2-way 4mm tile spacer at each end of tile.

KEY



Snapped 4mm tile spacer (4-way)



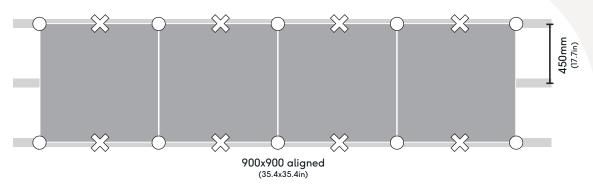
4mm tile spacer (4-way)

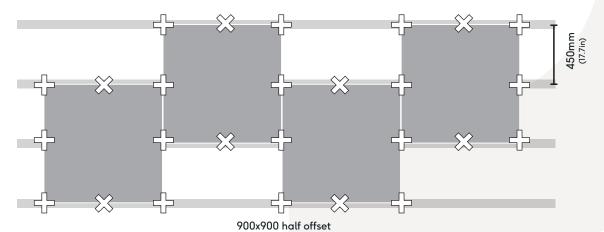




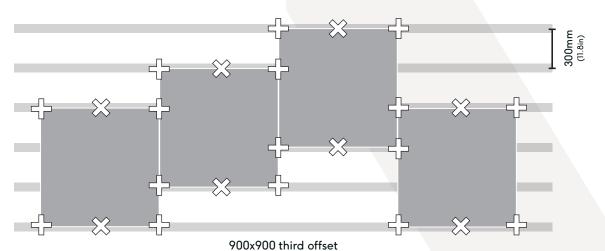


TILE SIZE: 900x900mm





(35.4x35.4in) Note: Every corner must be clipped and there must be 2 wind uplift clips per tile.



(35.4x35.4in) Note: Every corner must be clipped and there must be 2 wind uplift clips per tile.

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KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)

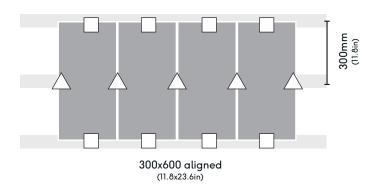


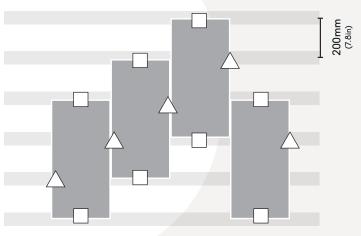
2mm tile spacer (2-way)





TILE SIZE: 300x600mm





300x600 third offset (11.8x23.6in)

Note: There must be a minimum 2 wind uplift clips per tile and a 2-way 4mm tile spacer at each end of tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)

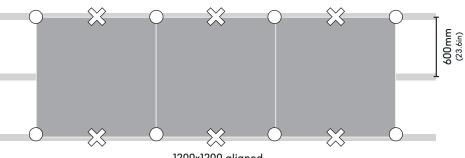




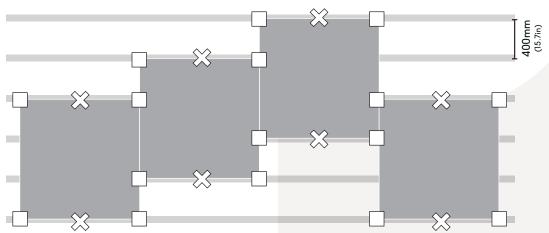


Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 1200x1200mm

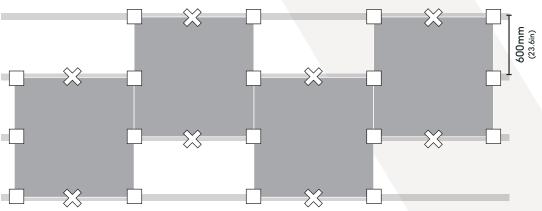


1200x1200 aligned (47.2x47.2in)



1200x1200 third offset

(47.2x47.2in) Note: Every corner must be clipped and there must be 2 wind uplift clips per tile.



1200x1200 half offset

(47.2x47.2in)

Note: Every corner must be clipped and there must be 2 wind uplift clips per tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)



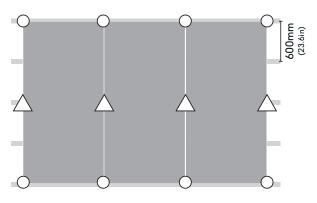




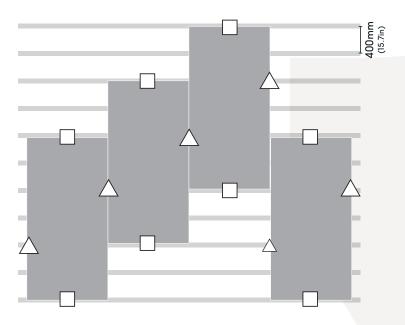


Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 1200x2400mm



1200x2400 aligned (47.2x94.8in)



1200x2400 third offset

(47.2x94.8in)

Note: There must be a minimum 2 wind uplift clips per tile and a 2-way 4mm tile spacer at each end of tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)



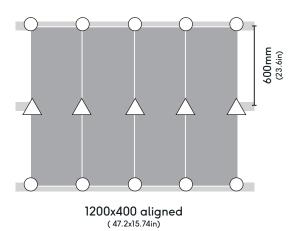
2mm tile spacer

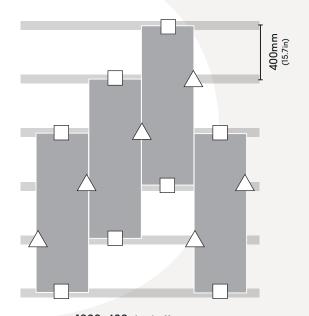




Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 1200x400mm





1200x400 third offset (47.2x15.74in) Note: There must be a minimum 2 wind uplift clips per tile and a 2-way 4mm tile spacer at each end of tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)

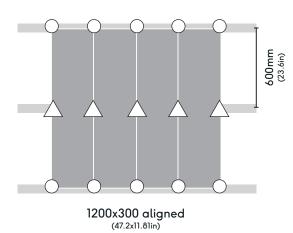


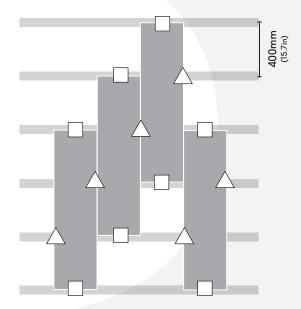




Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 1200x300mm





1200x300 third offset
(47.2x11.81in)

Note: There must be a minimum 2 wind uplift clips per tile and a
2-way 4mm tile spacer at each end of tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)



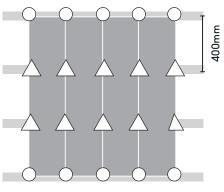




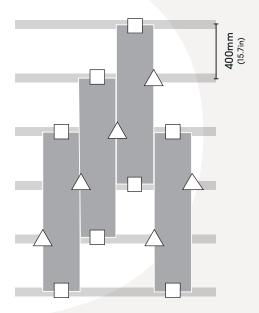


Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 1200x200mm



1200x200 aligned (47.2x7.87in)



1200x200 third offset
(47.2x7.87in)

Note: There must be a minimum 2 wind uplift clips per tile and a 2-way 4mm tile spacer at each end of tile.

KEY



Snapped 4mm tile spacer (4-way)



4mm tile spacer (4-way)



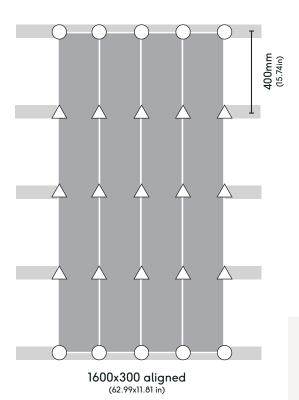






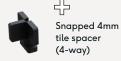
Wind uplift clip (Atria®) for rectangular tiles

TILE SIZE: 1600x300mm



FOR NON-WIND UPLIFT

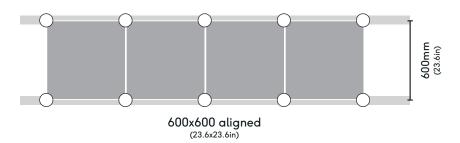
KEY

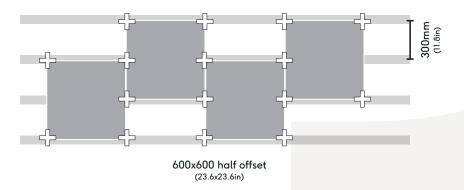


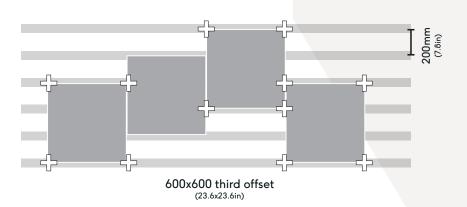




TILE SIZE: 600x600mm







FOR NON-WIND UPLIFT

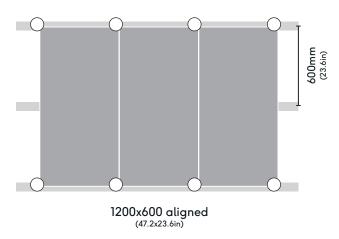
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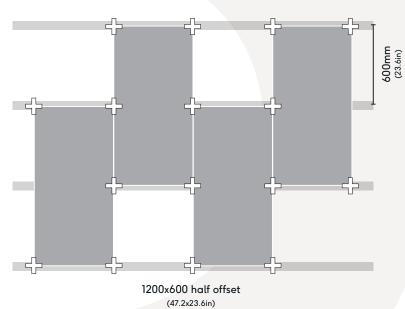


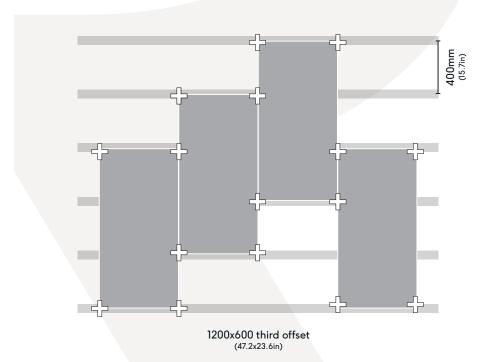




TILE SIZE: 1200x600mm







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FOR NON-WIND UPLIFT

KEY

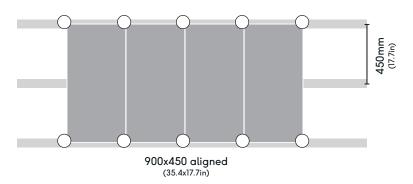


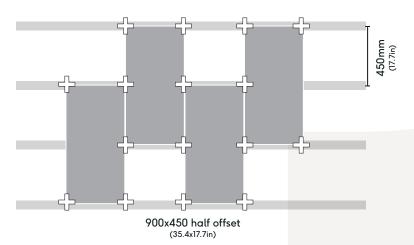


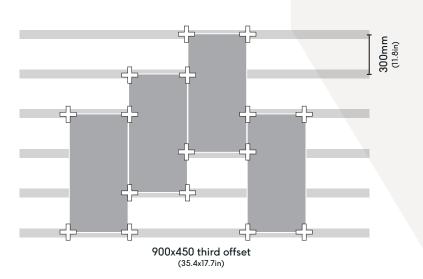




TILE SIZE: 900x450mm







FOR NON-WIND UPLIFT

KEY

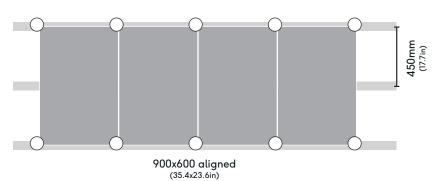


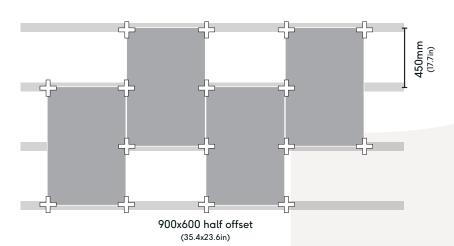


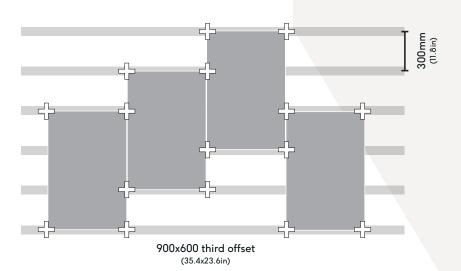




TILE SIZE: 900x600mm







FOR NON-WIND UPLIFT

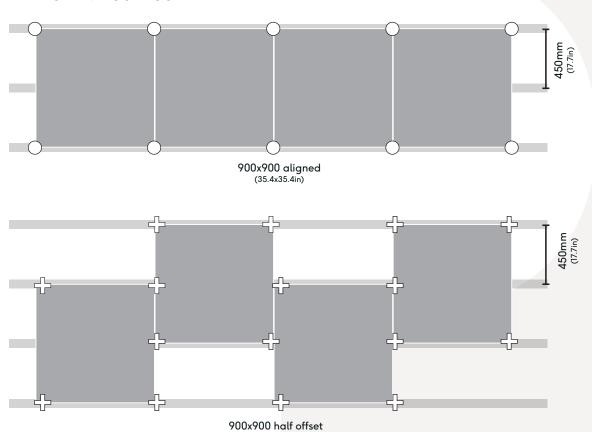
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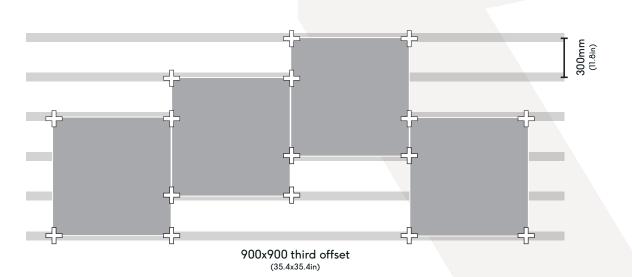






TILE SIZE: 900x900mm





(35.4x35.4in)

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FOR NON-WIND UPLIFT

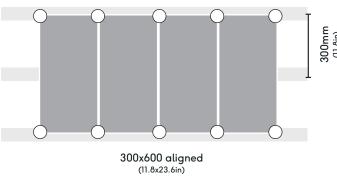
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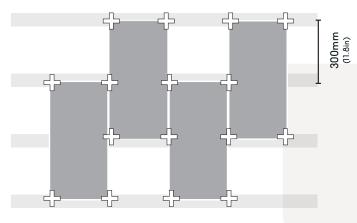




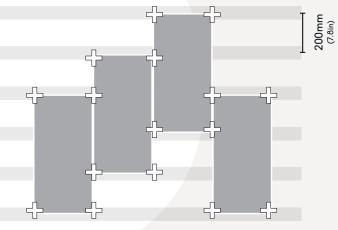


TILE SIZE: 300x600mm





300x600 half offset (11.8x23.6in)



300x600 third offset (11.8x23.6in)

FOR NON-WIND UPLIFT

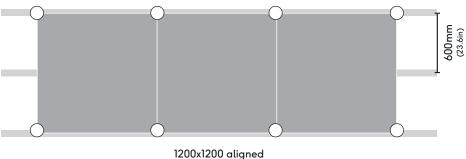
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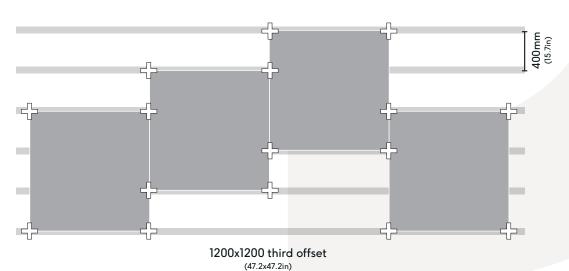


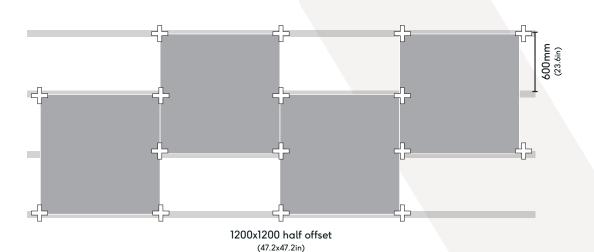


TILE SIZE: 1200x1200mm



1200x1200 aligned (47.2x47.2in)





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FOR NON-WIND UPLIFT

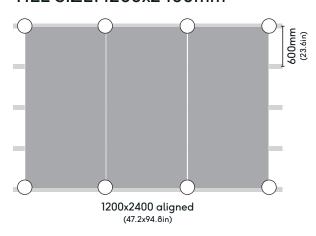
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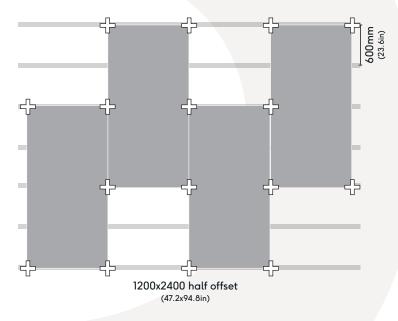


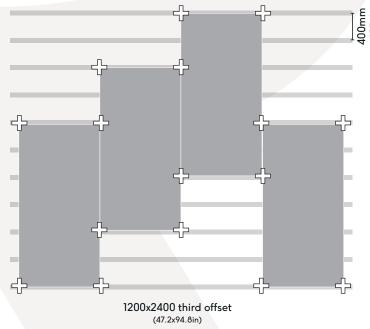




TILE SIZE: 1200x2400mm







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FOR NON-WIND UPLIFT

KEY

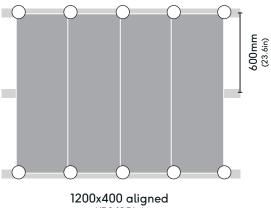


Snapped 4mm tile spacer (4-way)

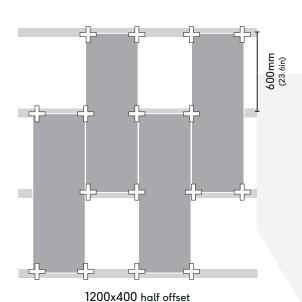




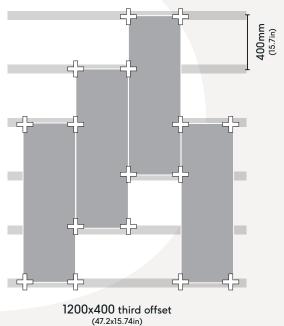
TILE SIZE: 1200x400mm



1200x400 aligned (47.2x15.74in)



(47.2x15.74in)
Note: Every corner must be clipped.



1200x400 third offset (47.2x15.74in) Note: Every corner must be clipped.

FOR NON-WIND UPLIFT

KEY

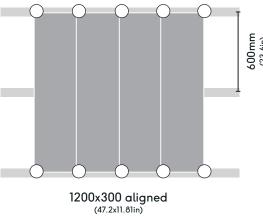


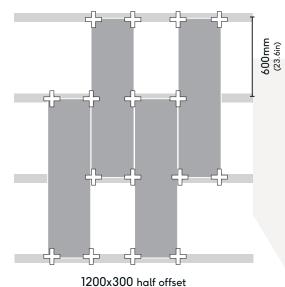
Snapped 4mm tile spacer (4-way)



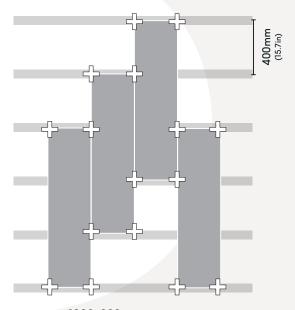


TILE SIZE: 1200x300mm





(47.2x11.81in)
Note: Every corner must be clipped.



1200x300 third offset (47.2x11.81in) Note: Every corner must be clipped.

FOR NON-WIND UPLIFT

KEY

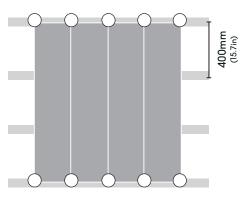


Snapped 4mm tile spacer (4-way)

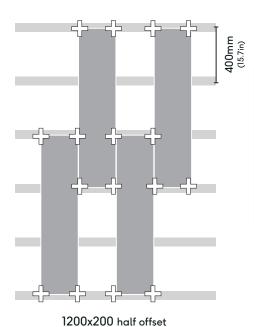




TILE SIZE: 1200x200mm

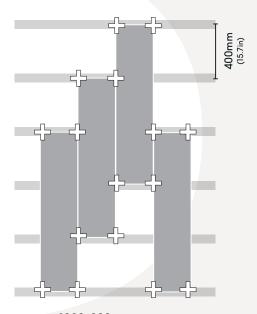


1200x200 aligned (47.2x7.87in)



(47.2x7.87in)

Note: Every corner must be clipped.

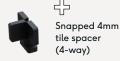


1200x200 third offset (47.2x7.87in) Note: Every corner must be clipped.

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FOR NON-WIND UPLIFT

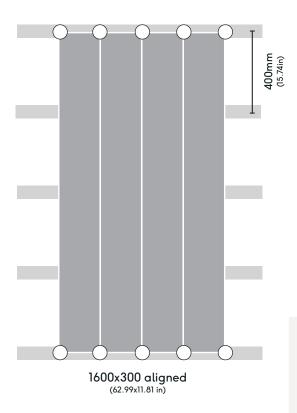
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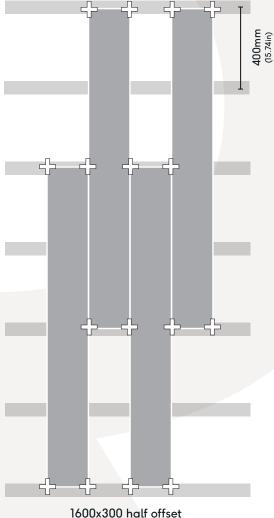






TILE SIZE: 1600x300mm





1600x300 half offset (62.99x11.81 in)



Supporting guides



CorTen Steel Technical Guide



Atria® Installation Guide



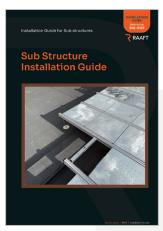
Planterline Straight



SpiraPave and Versijack installation guide



Raaft® Care and Maintenance Manual



Sub Structure Installation Guide



Terrafina Composite Decking Installation Guide



