



Installation Guide

LEKA Xi

Base and walls





Base and Walls Installation Guide

NOTE IF YOU ARE NOT USING THE LEKA BASE SYSTEM AND JUST THE WALLS, PLEASE GO STRAIGHT TO SECTION 3.

The Leka System 'Base and Wall' systems have been designed to allow a streamlined build process for installation companies and customers who require a project to be completed in small timescales.

Each Leka system base or wall is manufactured at one of our regional fabricators and can be designed in a completely bespoke manner every time.

Not only does the Leka modular base system offer itself as a complete single storey extension, but it can also be offered as a free standing building for use as an Annex or garden room.

It is the sole responsibility of the installer/installation company to ensure that the concrete pads that the system shall be installed upon are of sufficient depth, width and structurally sound.



1). Ground Works

1a

The Leka base system is recommended to be installed upon 'Concrete Pads'. This is an 800mm square x 400mm deep requirement. **This pad specification is only a guide and all ground must be checked for stability by building control or equivalent. In some circumstances concrete pads may not be sufficient.**

Concrete pads should be installed at a maximum spacing of every 2 meters or below around your perimeter, and including each corner area i.e every bay angle or 90 degree corner. Concrete pads should also be installed at every 2 meter intervals across your floor/base as this provides support for your floor and prevents it from bouncing under load.



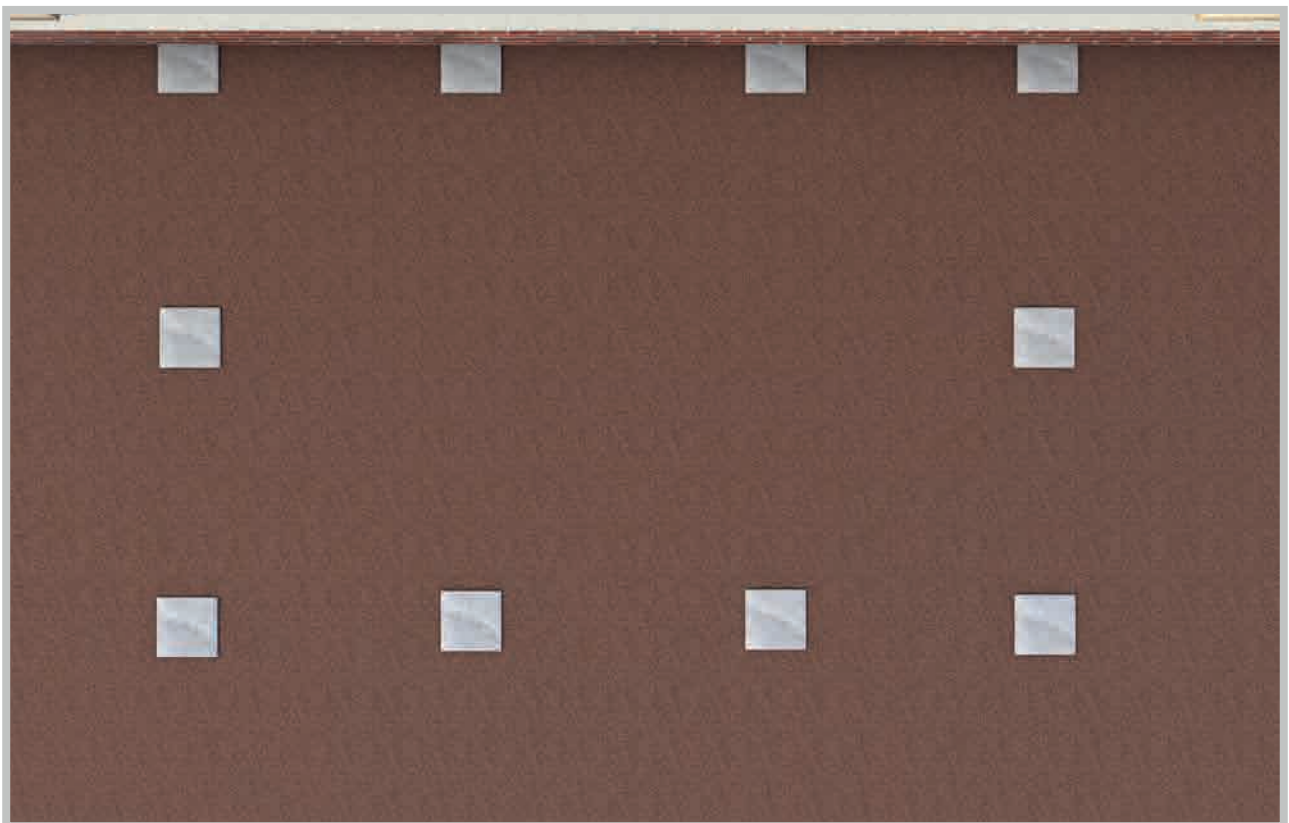
When installing your concrete pads you must ensure that you have made allowance for finished floor levels to prevent breaching the main properties floor level for example.

Any obstructions such as pipework or electrics could affect your floor levels.

Upon confirming the order with your Leka fabricator you can request a base plan that will indicate where to place your concrete pads for accuracy.

Important Note: the minimum height allowance for your Leka base feet is 200mm from the top of your concrete pad to the underside of your Leka Base joist, as shown.

This then creates an overall minimum height from top of concrete pad, to top of Leka base (excluding any floor covering such as tiles, carpet etc) of 322mm.

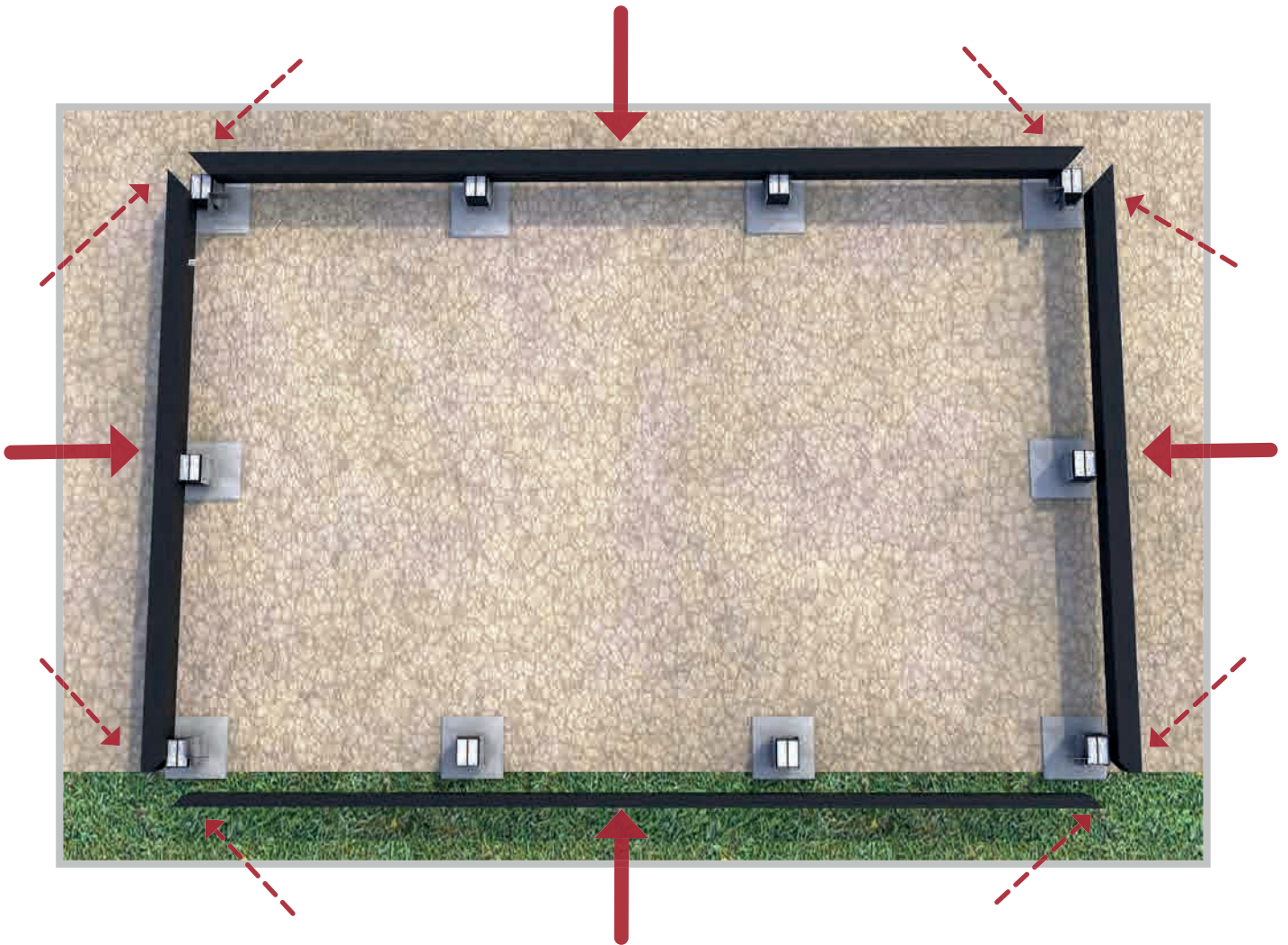


2). Leka Base

2a

Once your concrete pads are installed it is time to install your Leka base perimeter beams and supporting feet.

Locate your Leka base perimeter beams and lay out on the ground, ensuring each beam is in the correct position. Offer up the corners/joints and make sure that your feet supports are in the position of your concrete pads.



2b

Your Leka base wall plate should be the first beam to fix into position.

Prior to fixing this wall plate, ensure that all levels are correct and location is at the correct point. You must consider your finished floor height at this stage to ensure your wall plate is not positioned too high or low.

Once positioned accurately, pre-drill holes in your wall plate into the house/property masonry, ready for your fixings. Fixing screws can either be 132 AMO fixings or suitable chemical bolts dependant on wall material. Fixings should be placed every 400mm across house wall plate.

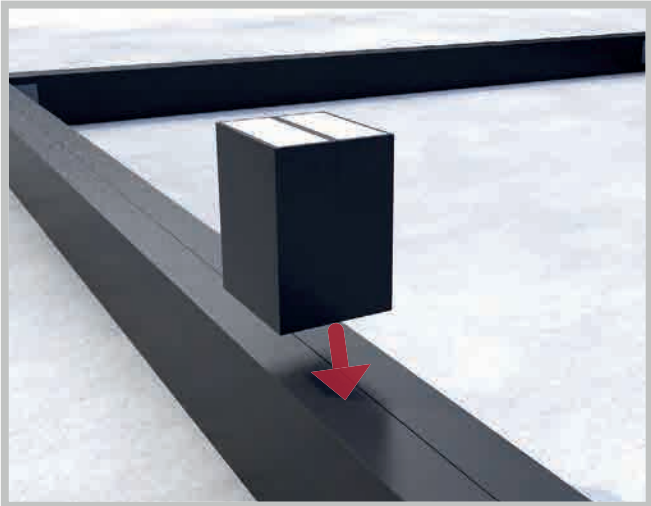
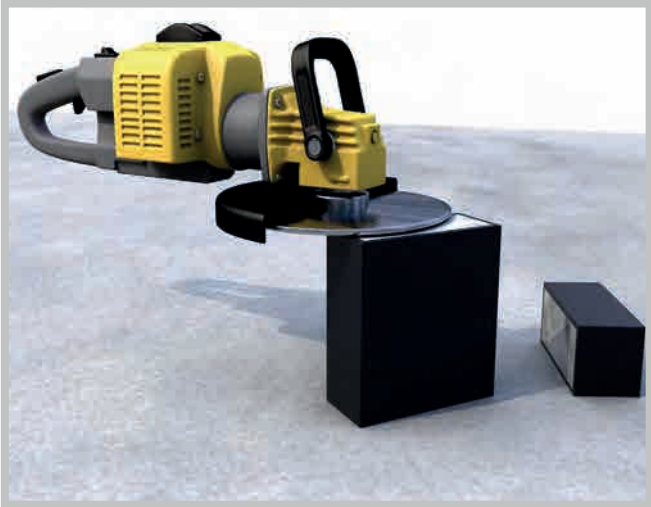


2c

NOTE 1: IF YOUR DESIRED HEIGHT AT ANY SPECIFIC AREA OF YOUR PERIMETER BEAM IS NOT HIGHER THAN 150MM FROM CONCRETE PAD TO UNDERSIDE OF THIS BEAM THEN YOU WILL ONLY REQUIRE FIXING OF THE SUPPLIED ADJUSTABLE FOOT TO YOUR PERIMETER BEAM AND NOT GRP LEG. IT IS ADVISED TO FLIP YOUR PERIMETER BEAM UPSIDE DOWN TO FIX YOUR ADJUSTABLE FOOT IN PLACE, USING 4 X 80MM AMO SCREWS AND ASSOCIATED WASHERS. THE SMALLEST FACE SHOULD BE FIXED TO YOUR BEAM AND THE LARGEST FACE TO THE CONCRETE PAD.

ONCE ALL ADJUSTABLE FEET ARE FIXED YOU CAN TURN YOUR BEAM AROUND AND OFFER THIS UP TO YOUR CONCRETE PAD. TO GAIN YOUR LEVELS, SIMPLY ADJUST YOUR FEET BY ROTATING THE LOWER SECTION.

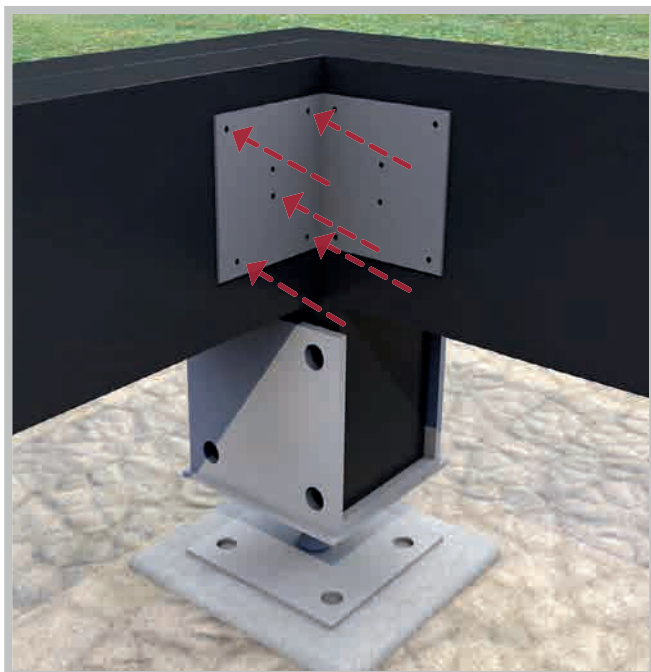
NOTE 2: YOUR BASE FEET WOULD HAVE BEEN MANUFACTURED TO THE LOWEST GROUND LEVEL POINT REQUESTED AT ORDER STAGE. IF THE LEVEL IS LOWER THAN 150mm OF THE UNDERSIDE OF THE PERIMETER BEAM YOU WOULD HAVE BEEN SUPPLIED WITH GRP LEGS THAT SLOT INTO THE SUPPLIED U SHAPED BRACKET OF THE ADJUSTABLE FOOT. IN THIS CASE YOU SHOULD USE A LEVEL AND MEASURING TAPE TO WORK OUT EXACTLY WHAT LENGTH YOU REQUIRE YOUR BASE FEET TO MEET YOUR ADJUSTABLE FOOT (ADDITIONAL PACKING MAY BE REQUIRED LATER). ONCE YOUR PREFERRED HEIGHT HAS BEEN MARKED, YOU WILL NEED TO TRIM YOUR BASE FEET TO THIS HEIGHT USING AN ANGLE GRINDER OR EQUIVALENT. YOUR ADJUSTABLE FEET OFFER 50mm OF TOLERANCE TO HELP YOU GAIN YOUR LEVELS.



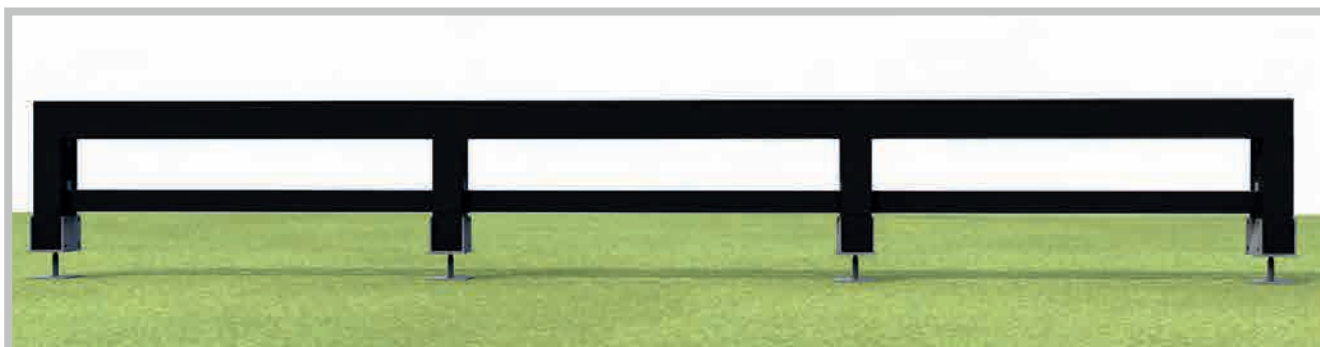
2d

Ensuring your corner joints are in place correctly, proceed to connect your heavy duty brackets to the 'INSIDE' corners of your perimeter beams, attaching all beams together. These should be connected with 8 x 80mm AMO screws and washers.

For Victorian facets you will be provided with a variable angle bracket for both internal and external fixing of the perimeter beams which should be fixed with your 42mm screws.



NOTE: IF YOU HAVE A RUN AWAY GROUND LEVEL YOUR FEET MAY BE LONGER ONE END THAN THE OTHER AND SO YOU WOULD BE PROVIDED WITH A CROSS MEMBER TO JOIN TWO FEET SECTIONS AT CERTAIN HEIGHT POINTS.



2e

Once your base beams are fully connected it is time to secure your Leka base adjustable foot to the concrete pads. Fixed with 4x80mm AMO screws and washers.

Previously you would have trimmed your Leka base feet to the required heights to suit your adjustable feet if needed

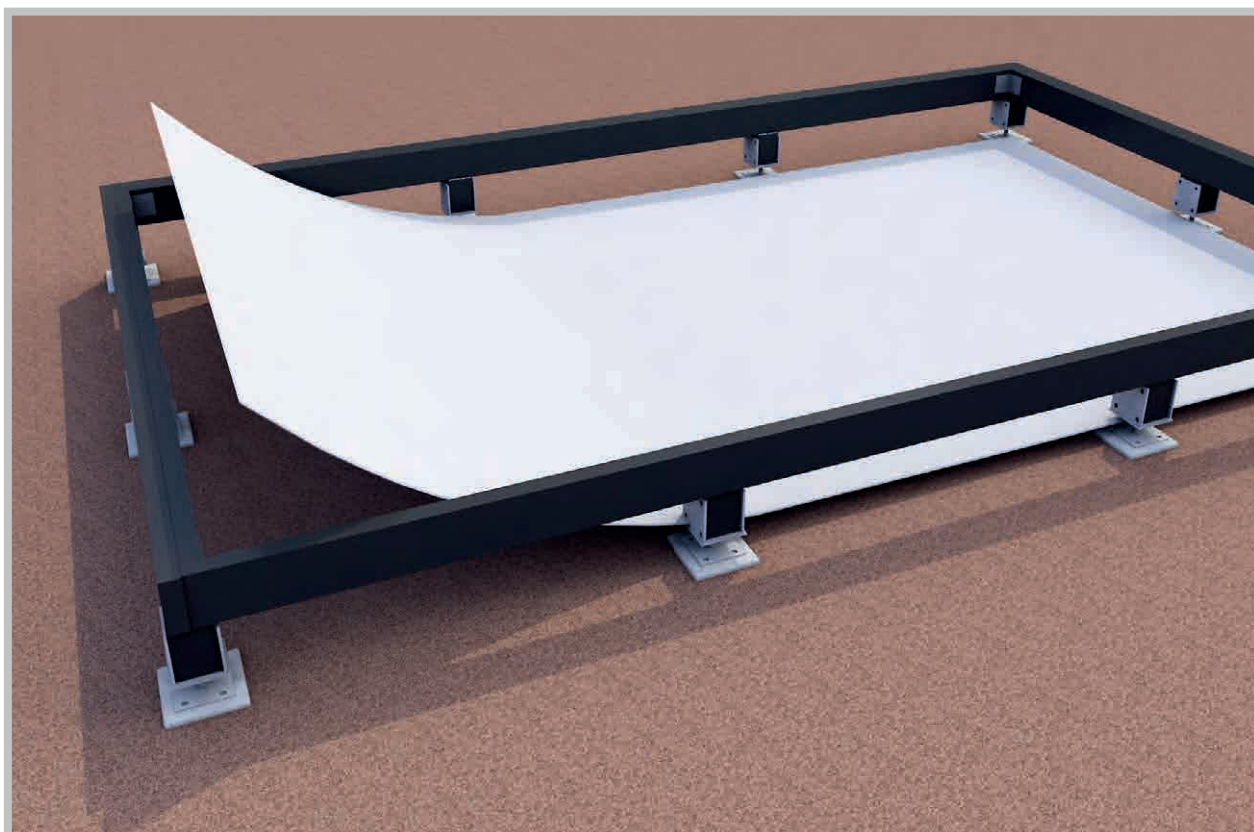
Once Level, pre drill your concrete pad through the adjustable bracket holes at the appropriate size to take your 80mm AMO screws.

Once drilled, insert your 4x80mm AMO screws and washers to secure in place.



2f

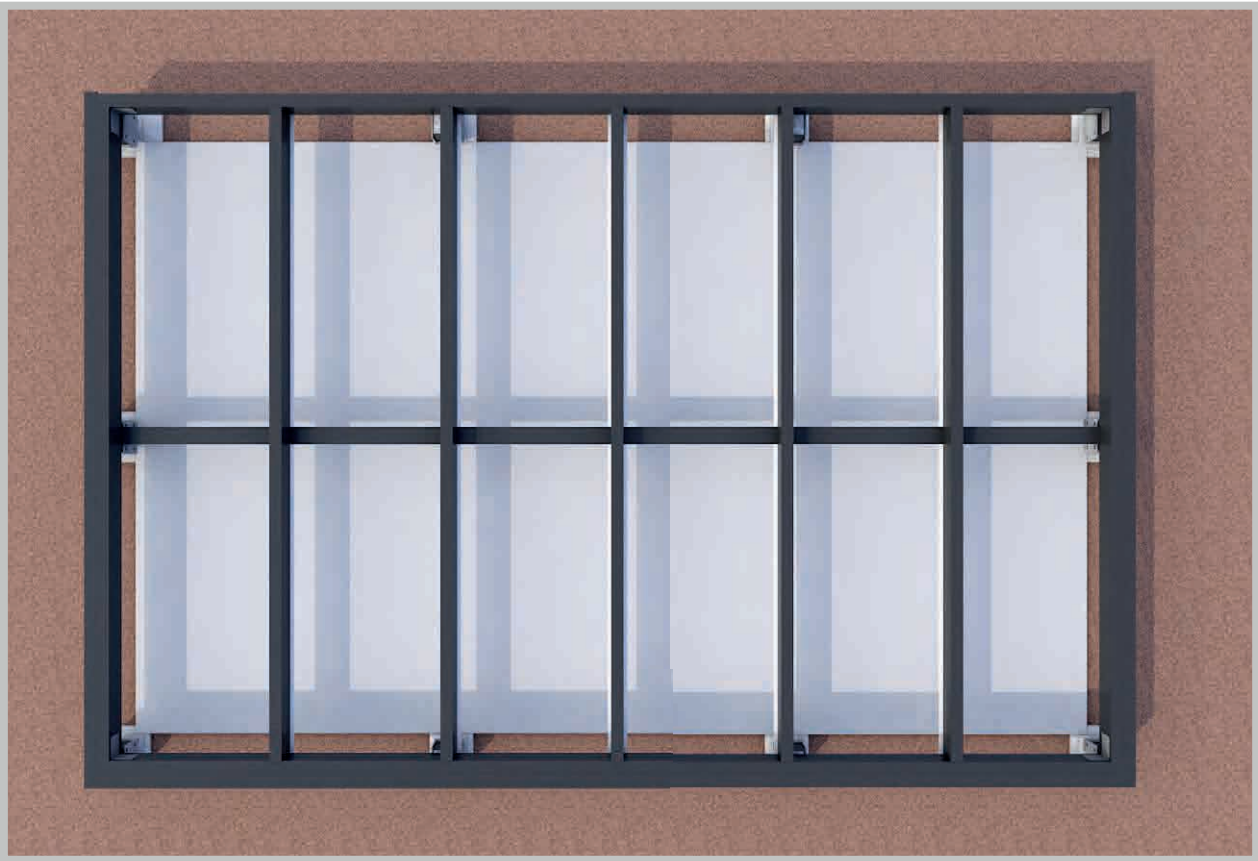
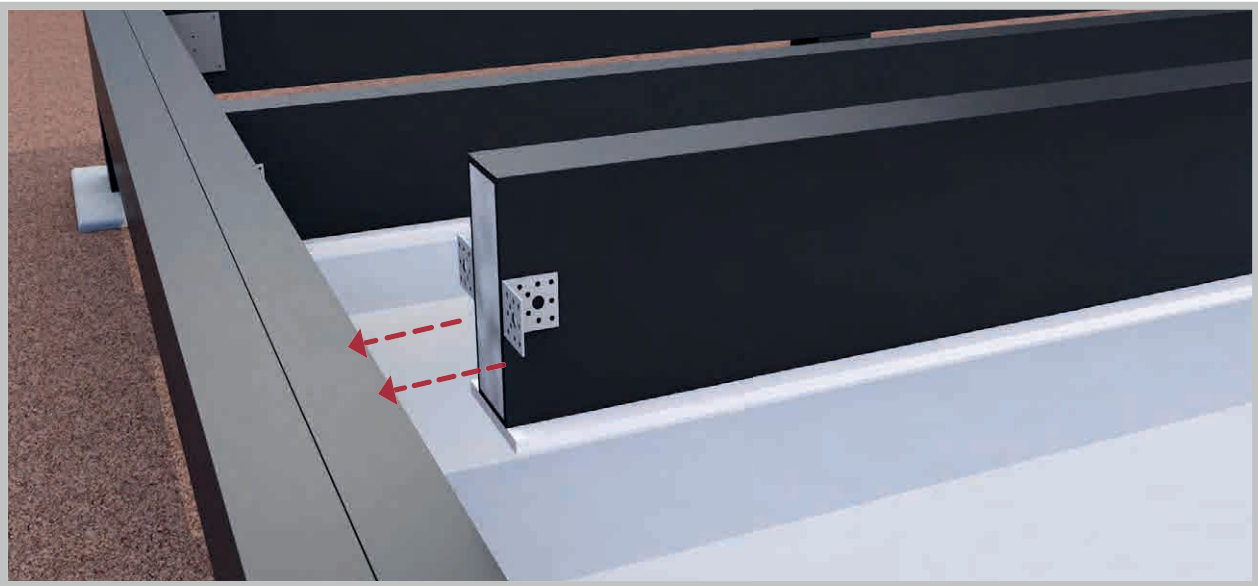
It is recommended at this stage to lay a suitable membrane across the ground area within the base perimeter to prevent growth and minimise vapour.



2g

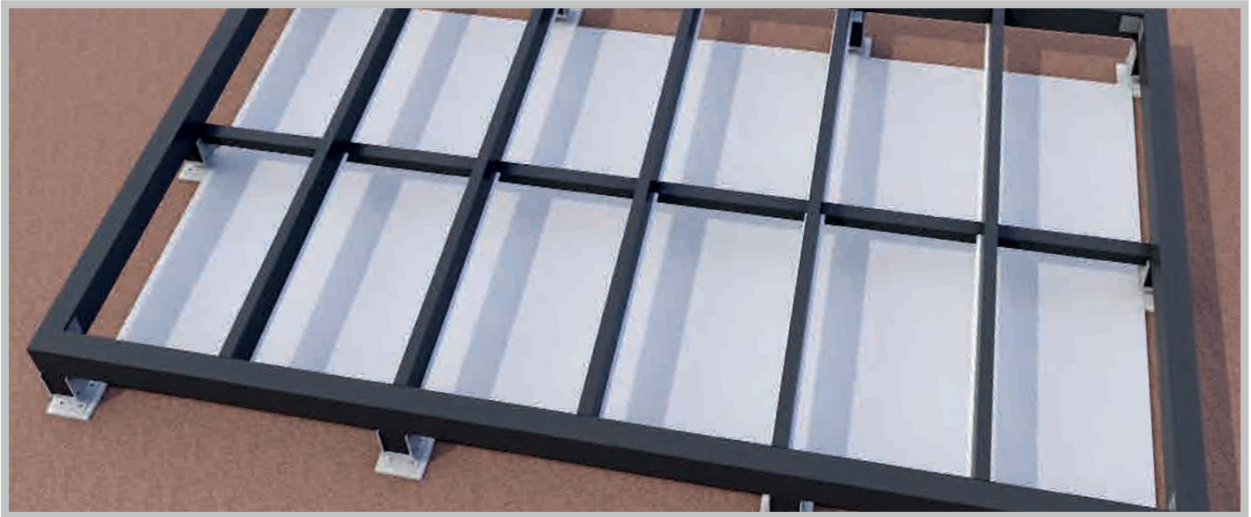
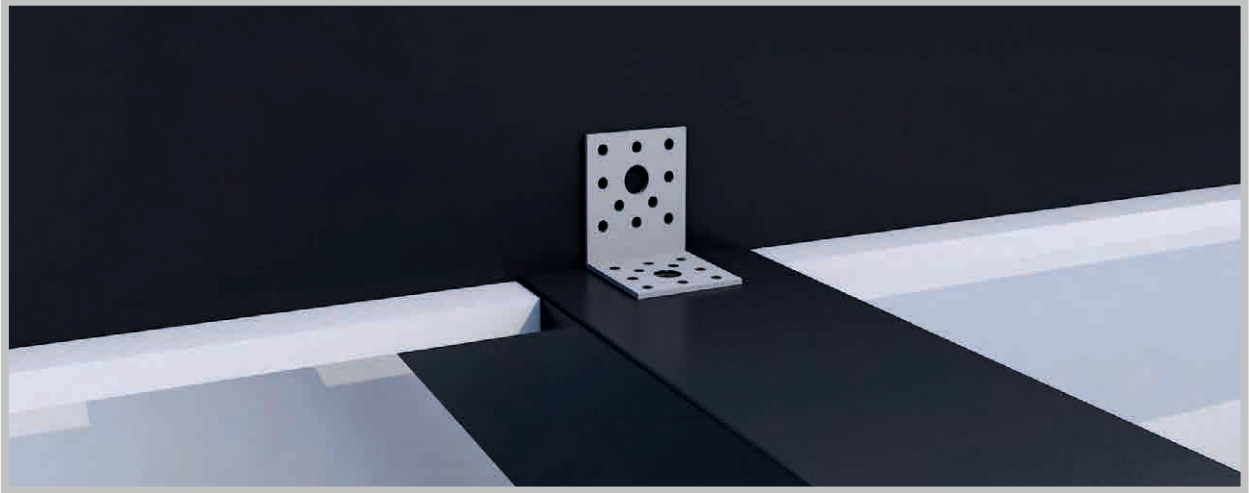
With your base now fixed into position you will need to locate your floor base joists.

Using your 42mm coated screws fix your joists into the marked positions. You should insert 6 screws per face and 12 screws per bracket.



2h

With your joists now fixed in place you must now fix your floor connection profile in place to tie your joists together. This is fixed to each floor joist using your small L shape brackets and 42mm coated screws as shown.



2i

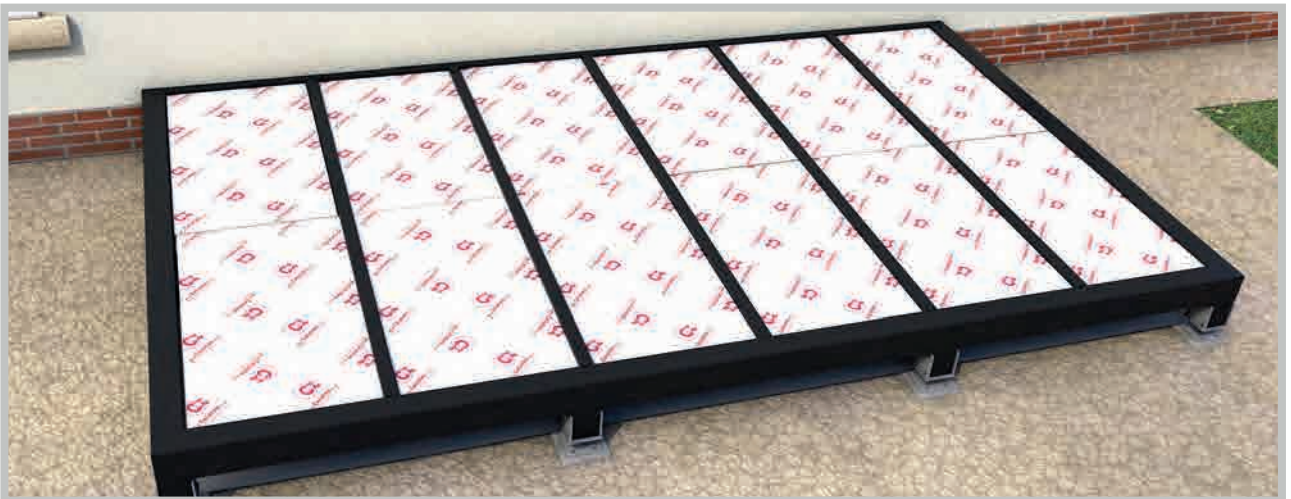
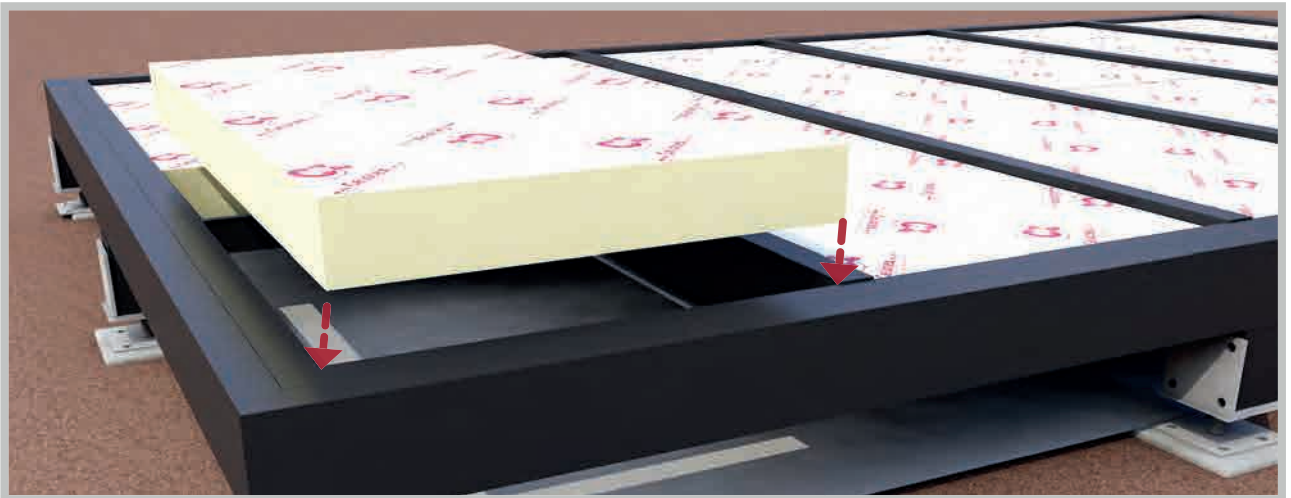
To support your floor from any bouncing you will simply need to support your floor joists every 2 meters or below using your adjustable feet.

NOTE: IF GRP LEGS ARE REQUIRED TO FIT INTO YOUR ADJUSTABLE FEET THESE MAY NEED TO BE TRIMMED TO APPROPRIATE HEIGHT USING AN ANGLE FINDER OR APPROPRIATE CUTTING TOOL. YOUR FEET AT THIS STAGE/AREA DO NOT NEED TO BE FIXED DOWN TO YOUR CONCRETE PAD BUT SHOULD BE A TIGHT FITTING CONNECTION BETWEEN GROUND AND LEKA BASE WITH NO DOWNWARD MOVEMENT POSSIBLE.



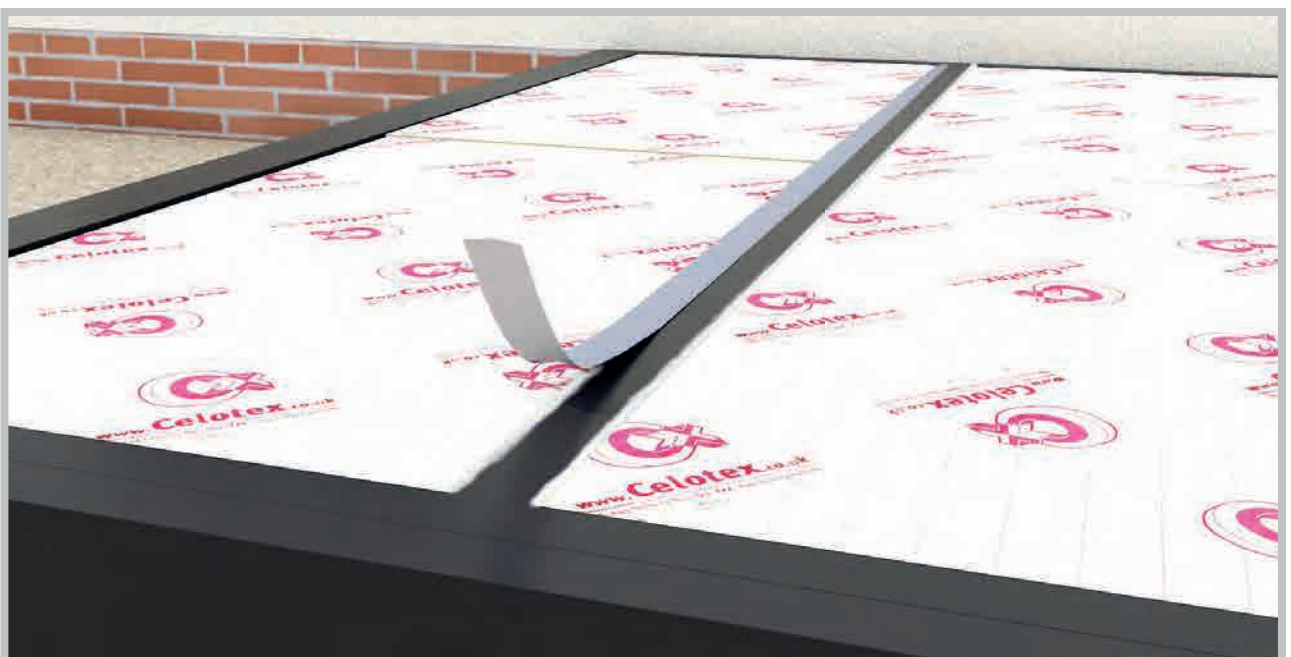
2j

Take your pre-cut foiled back insulation and insert in-between your floor joists as per plan from your manufacture.



2k

Provide a line of high grade sealant/silicone across all joints in the insulation and then finally lay the provided foil insulation tape across all joints



3). Leka Walls

Regardless of external cladding choice or finish your Leka walls will be manufactured in the same way and located in the same places.

NOTE: ALL OF YOUR WALL SECTIONS SHOULD BE SAT EXACTLY 20MM EXTERNALLY OVERHANGING YOUR FLOOR PERIMETER BEAMS.

3a

The Leka wall system is pre-manufactured into modular sections. The first section to install will be your house wall side, either left or right.

Your wall side profile should be fitted with appropriate fixings such as either 132 AMO screws or chemical bolts dependant on masonry of wall. The wall profile should be pre- drilled to take your appropriate fixing.



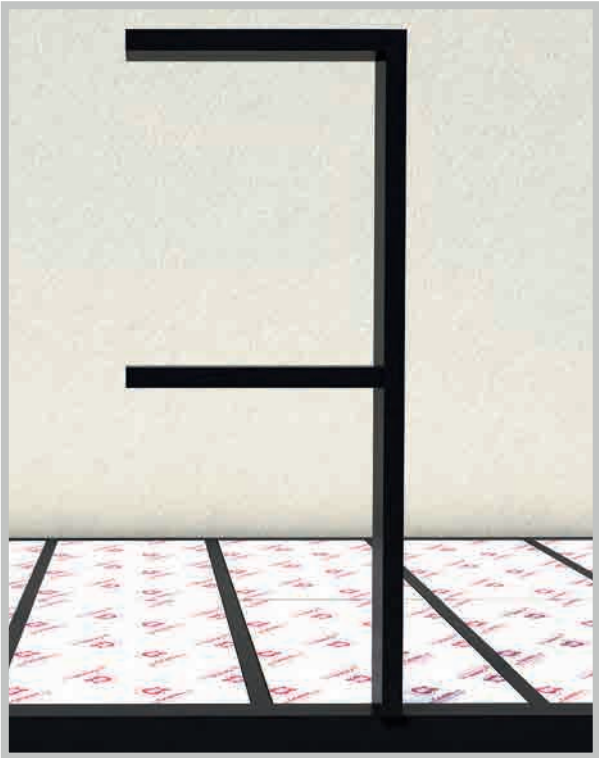
This is the 20mm overhang

3b

All of your modular frames should be fixed to both each other and your perimeter floor beams using the small L shaped brackets. These brackets should be fixed using your 42mm coated screws.



A-frame



F-frame



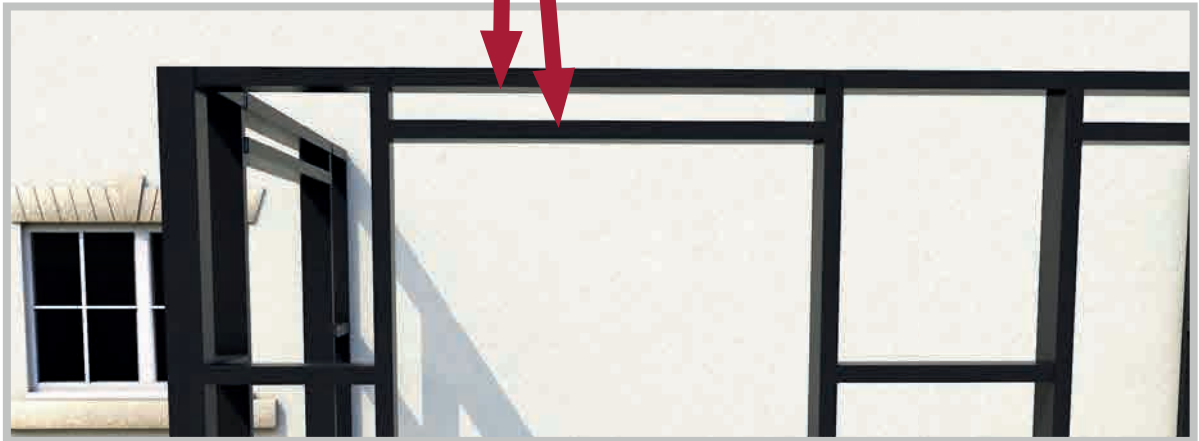
Pillar



Dwarf Wall

3c

You may have singular profiles such as this example which create a head above your window or door frame work. These are installed by connected the small L shaped brackets with 42mm coated screw either end.



3d

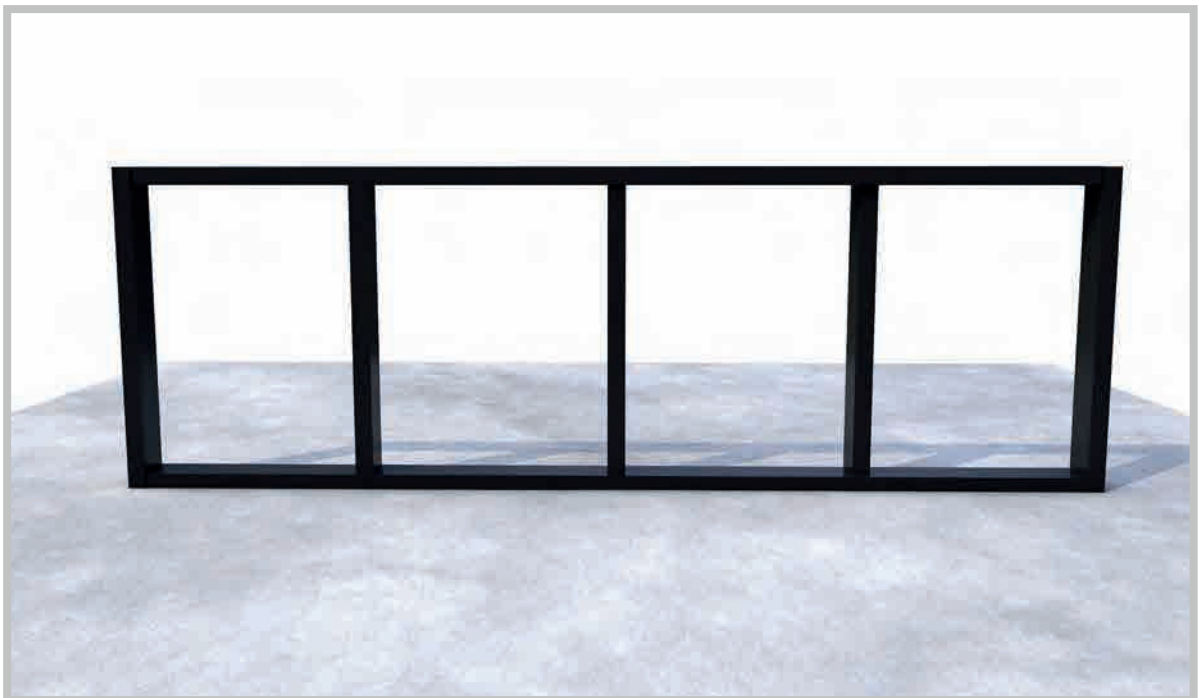
At this stage it is advised to consider running any power cables or pipework. This can be done by drilling holes through your profile to run these cables or surface mounting after the full wall installation is completed.

It is also a necessity to install any roof system/product at this stage. Failure to do this will mean a fixing location wont be available for connecting your roof.

3e

NOTE IF YOU ARE SUPPLYING YOUR OWN CONCRETE BASE OR THE LEKA WALL SYSTEM IS BEING USED AS A SINGULAR WALL FOR A GARAGE ENTRANCE FOR EXAMPLE, YOUR FRAMEWORK WILL LOOK LIKE THIS. An additional profile added here.

Using your provided 80mm AMO screws and washers, proceed to fixed down through your base profile into your concrete base/block/brick at every 300mm centres.



3f

Once your complete wall frame is constructed and secured you can commence installation of your 100mm thick, white polystyrene boards by inserting these in-between your GRP profiles. Any gaps that are produced should be sealed appropriately, using either foam or sealant.



NOTE: IF WEATHER PERMITS THE 22MM WEIGHROCK FLOOR CAN BE LAID AND FIXED TO ALLOW A WORKABLE FLOOR AREA TO BE PROVIDED.

NOTE: YOUR WINDOW/DOOR FRAMES CAN ALSO BE INSTALLED AT THIS STAGE.

YOUR WINDOW/DOOR FRAME SHOULD BE FIXED WITH THE BACK OF THE FRAME BEING FLUSH WITH THE BACK OF THE GRP PROFILE.

Before fixing any internal plasterboards or internal cill boards, please secure your L shaped pvc 90 degree angle trim to your GRP framework. This should be fixed using 42mm coated screws and the angle trim should face inwards. Later on in the guide when fitting your 62.5mm plasterboards these will finish underneath this angle strip. The purposes of this strip is to provide a bed to bond any internal cills too at the window side when completing your buildings finishing touches.

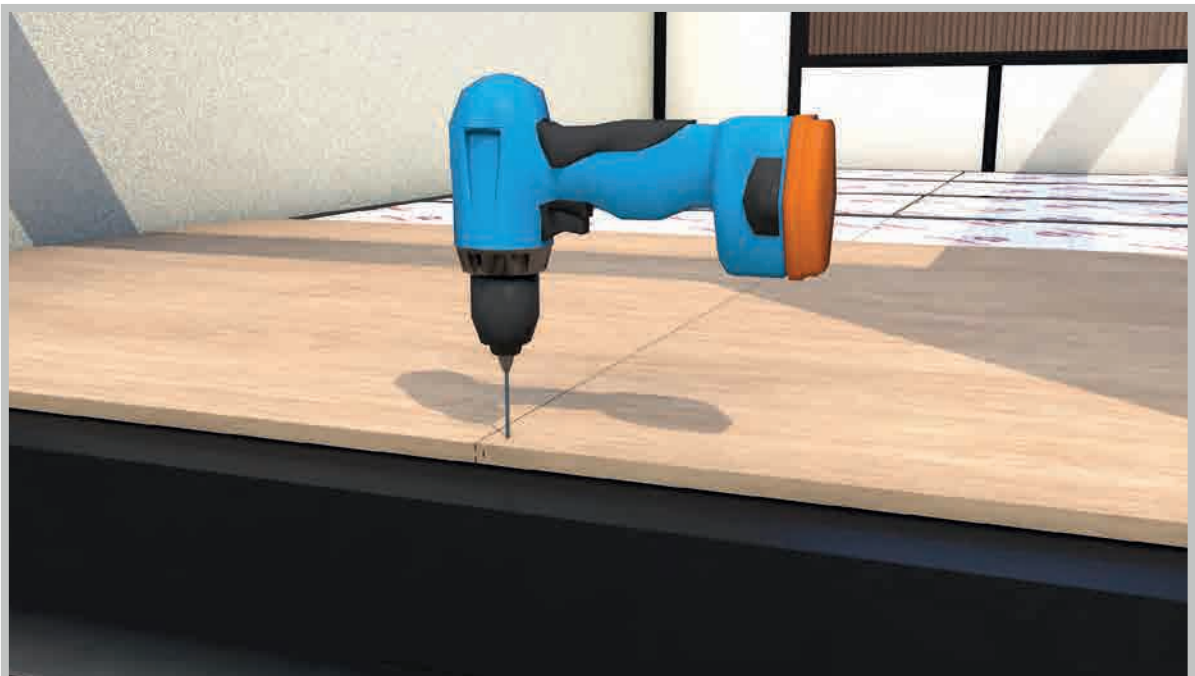


3g

The 22mm weighrock floor boards should be installed at this stage using the provided 42mm coated screws at every 300mm centres.

NOTE: IF WEATHER PERMITS THESE CAN BE LAID AND FIXED EARLIER TO ALLOW A WORKABLE FLOOR AREA TO BE PROVIDED.

We advise to use the provided weighrock floor glue at the joints to minimise the floor from creaking sounds.



3h

Following your roof and floor being installed it is advisable to install your insulated plasterboards to the internal walls.

These insulated plasterboards should be fixed with 75mm screws at 300mm centres.

NOTE: it is advisable to mark your GRP profile locations on your plasterboard to allow you to locate them later on for purposes of installing heavy fixtures/furnishings which require strong location points.

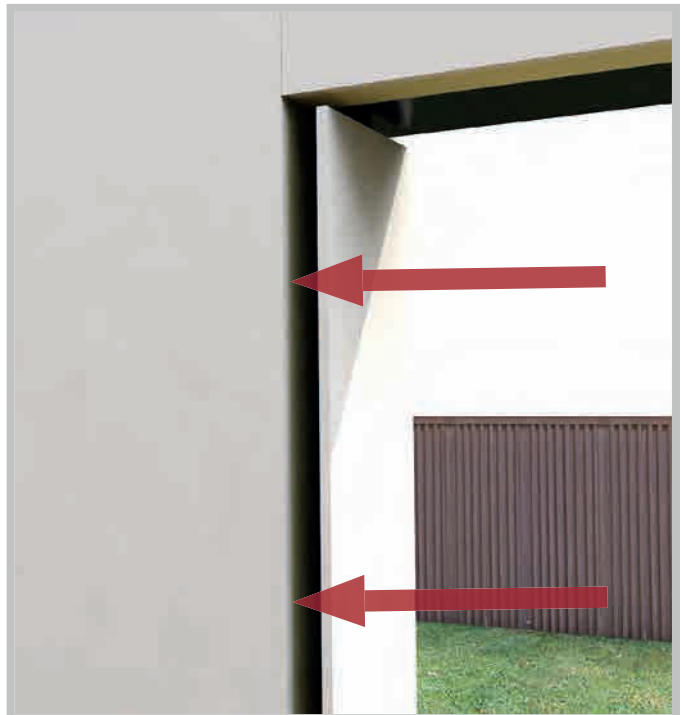
NOTE: Drill hole through boards for power cables and pipework previously pulled in and pull through board ready for final fix stages



3i

Coming to the window/door reveals on your internal wall, these must be completed with standard 12.5mm plasterboard. These should be adhered to the sides of your insulated plasterboards using appropriate adhesive. We recommend high grade super glue with activator.

Following completion of your boarding the room is now ready for plastering.



4). GRP Brick External Cladding

GRP Timber cladding applies here also.

4a

NOTE ON WALL OPTIONS ONLY, I.E WITH A LEKA BASE, THERE MAY BE A REQUIREMENT TO TRIM THE BASE OF THE GRP CLADDING TO SUIT YOUR LEVELS.

If you are supplied with the brick cladding option these will be issued in pre-cut sheet format. There will also be a numbering and location plan provided in your kit.

The mortar joints of the brick sheets, overlap horizontally, creating a flush finish as shown below and should be fixed to the Leka wall system using 42mm stainless steel screws. Screw fixings should locate the main walls GRP profile to ensure a secure and stable fixing.



The overlap joint should have a line of adhesive to ensure one sheet join bonds to another.

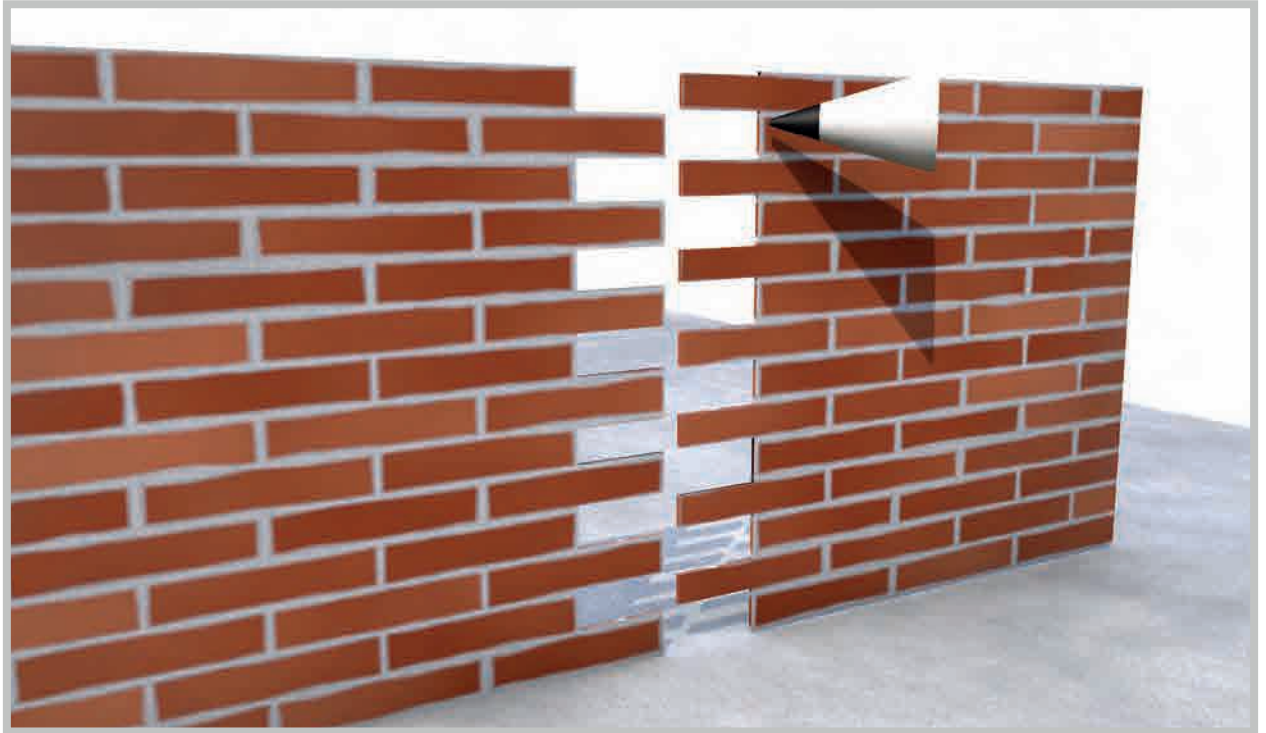


screws should be counter sunk on the mortar lines only.

4b

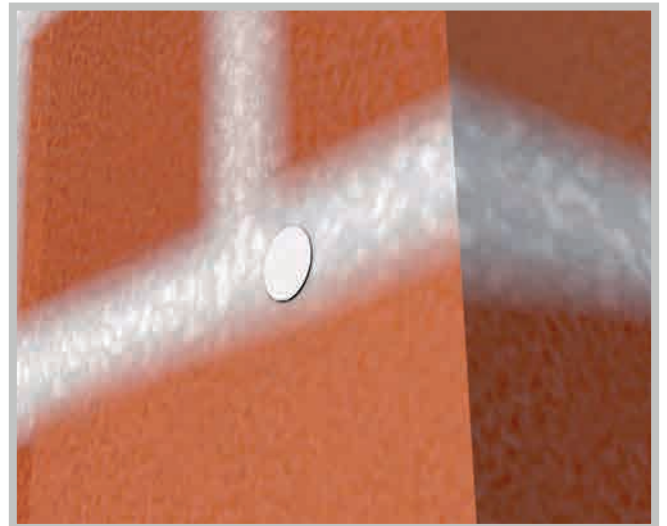
Over certain distances across horizontal lengths, there is a requirement to insert a GRP mortar joint to provide a structured join.

There is a castellation effect running down the join. When these are fixed and screwed the mortar supplied needs to be mixed as per instructions in your kit and applied around the bricks where they join.



4c

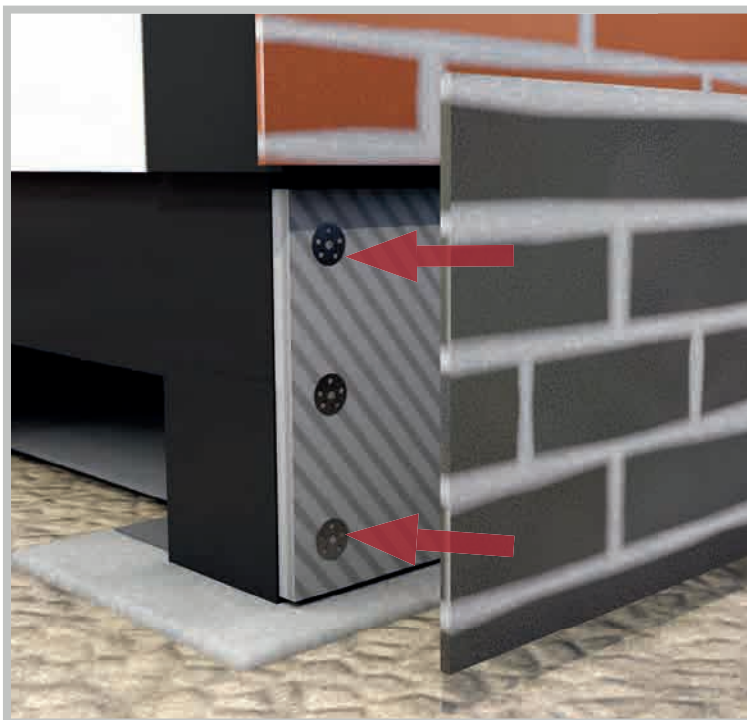
Visible screw heads should be covered using the provided mortar paste.



4c

NOTE: On any building that has GRP cladding options or render options, there is a requirement to fix your 20mm Pre-cut Leka Boards to the area below floor level (below DPC). This is fixed using 42mm stainless steel screws and washers.

This leka board is used to act as a packing section for your GRP cladding to be fixed against, allowing your cladding to be flush with the cladding above floor line (DPC line).



4d

Once your brick cladding has all been completed, locate your strip of DPC (Dampcourse) and slide in-between the DPC line (divide between above floor clad and below). Finally run a line of clear sealant to the underside of the DPC strip to hold in place.



4e

Finally provide sealant/silicone (colour of your choice) neatly across down any reveals where the cladding meets the window/door frame and also house wall side.



5). Wet Render Option

5a

If wet render is to be supplied to the Leka building, you will be supplied with the 12.5mm Leka boards. These may be pre-cut and will need screwing to the GRP Wall profiles, using 42mm stainless steel screws, along with the supplied washers. Screw fixings should be placed every 300mm as shown.



5b

Once installed you can apply your wet render finish.





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