

INSTALLATION GUIDE







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DECKING PEDESTAL OVERVIEW

MESA Support pedestals are the most robust, intelligent and sustainable supports in the market. They can support loads of up to 1000 kg and come with a 20 year limited warranty. With adjustable heights ranging from 10 mm-740 mm they give you complete control of the height of the area



Joist Cradle

- Diameter: 160 mm
- Thickness: 4 mm
- 90% recycled PP and PE
- Clips into pedestal head
- Auto-adjusts to accommodate slopes up to 1%

Pedestal Head

Head diameter: 140 mm

- 90% recycled PP and PE
- Can be used by itself or with the attachable joist cradle

Extender Ring & Coupler

 Used when height of pedestal exceeds 175 mm

Fixing Collar Ring

- Locks height adjustment against vibration or shock movement
- 90% recycled PP and PE

Pedestal Base

- Base diameter: 200 mm
- Placed or fixed to foundations
- 90% recycled PP and PE

Protective Rubber Mat

- Base diameter: 200 mm
- Ideal for roof terraces
- 85% recycled rubber





To determine how many MESA decking pedestals you will require, you can either use detailed plans or follow the method below. Alternatively, contact us by calling 0203 912 6898.



1 Firstly calculate the amount of joist runs that require supporting (**fig. 1**). The range of decking you use will determine the joist centres used for the project.

The following example will use a decking area that is:

- 3 m wide x 6 m long
- Using 4 m decking boards laid lengthways
- Using 50 x 150 mm joists for the substructure

Divide the length of the deck by the maximum support span of the joists.

6 m deck length / 0.3 m max. joist centres = 20 spacings

2 Add 1 (one) to the above total for the amount of joist runs required

20 + 1 = 21 joist runs (3 m joist lengths required for deck width)



3 The dimensions of the bearer you plan to use will determine how often they need to be supported.

In this example the deck is supported by 50 x 150 mm joists. Divide the width of the deck by the maximum support span

3 m / 1.5 m = 2 spacings

4 Add 1 (one) to the above total for the amount of pedestals per joist required

2 + 1 = 3 pedestals per joist run

5 Multiply the amount of joist runs by the calculated pedestals per joist

3 pedestals per joist x 21 joist runs = 63 total decking pedestals required

Calculation Recommendations

- It is recommended to add 5% overage to the total amount of material for unforeseen circumstances
- A drawing to scale may help you determine how many materials you will need
- Always round **up** the number of pedestals required
- For multiple decking areas, follow the steps for each above and sum the quantities together
- Ensure not to overload the pedestals.
- If the deck frame is planned to sit onto of a flat roof, it will also be important to have the correct amount of protective rubber mats for each support in order not to damage the roof membrane



Laying The Pedestals

- 1 Once your foundation area is free from all debris, lay out the pedestals from the deck edge, adjusting them to your required height (**fig. 2**)
 - The joist size will affect the pedestal spacing
 - In corners or along edges where the top of the pedestal cannot fully support the joist, you can simply turn the pedestal upside down
- **2** For roof terraces it is recommended to use the rubber base mats to provide an extra layer of protection to the roof membrane
- **3** Use a spirit level to check the level of the pedestals
- 4 To take account of a slope in the foundations, joist cradles can be used that can correct for the incline

Laying The Joists

- **5** After laying out the pedestals (**fig. 2**), starting from the edge of your sub-frame, place the bearers on top of the pedestal centres
- 6 Ensure that each bearer/joist is supported in a min. of 3 places, to their max. recommended support span. The decking range used will also determine the joist centres
- If you have a joist butt joint, joists can be laid end to end when supported on a pedestal. Ensure to leave a 20 mm expansion gap between joists ends (fig. 3)
- 8 A full joist width must be used under each deck board end, thus you must ensure to have a double joist structure for deck board butt joints **(fig. 4)**













10-40 mm Adjustable Decking Risers

- The 10 40 mm Decking Risers can be adjusted by turning the outer ring in an anti-clockwise motion (fig. 5). This will increase the height of the joist cradle.
- The Decking Risers also have a built in rubber base which makes them safe to install onto roof and other

Installing 10-40 mm Decking Risers

- 1 Once your foundation area is free from all debris, lay out the pedestals from the deck edge, adjusting them to your required height (**fig. 5**).
 - The 10-40s should only be used with joists that have a width of 50 mm.
 - 10-40s should be placed a maximum distance of 500 mm apart along the length of the joist (fig. 8).
- 2 After laying out the pedestals (**fig. 6**), starting from the edge of your sub-frame, place the bearers on top of the pedestal centres.
- 3 Ensure that each bearer/joist is supported in a min. of 3 places, to their max. recommended support span. The decking range used will also determine the joist centres (**fig. 6**)
- If you have a joist butt joint, joists can be laid end to end. Each end should be supported by pedestal.
 Ensure to leave a 20 mm expansion gap between joists ends (fig. 7)











fig. 7



ALUMINIUM JOIST OVERVIEW

Aluminium substructures offer a wide range of benefits over traditional joist substructures and are compatible for use with any width of decking board, along with cladding and paving projects too. The three sizes of aluminium joists will cater for any support requirements.





- Will never rot or warp
- Perfectly straight, providing a level structure
- Lightweight material for roof structures
- Stronger than traditional joists
- Come in a variety of sizes for your requirements
- Maintenance free, does not need treating





Laying The Pedestals

- 1 Once your foundation area is free from all debris, lay out the pedestals from the deck edge, adjusting them to your required height (**fig. 8**)
 - In corners or along edges where the top of the pedestal cannot fully support the joist, you can simply turn the pedestal upside down

Joist Dimensions							
	20x50 mm	40x50 mm	80x50 mm				
Support Every:	400 mm	600 mm	1,200 mm				

- 2 For roof terraces it is recommended to use the rubber base mats to provide an extra layer of protection to the roof membrane
- **3** Use a spirit level to check the level of the pedestals
- 4 To take account of a slope in the foundations, joist cradles can be used that can correct for the incline

Laying The Joists

- **5** After laying out the pedestals **(fig. 8)**, starting from the edge of your sub-frame, place the joists on top of the pedestal centres
- 6 Ensure that each bearer/joist is supported in a min. of 3 places, to their max. recommended support span. The decking or paving range used will also determine the joist centres
- 7 Ensure to leave a 5 mm gap between joists at T junctions (fig. 9)
- 8 To fix the joist, use a pan head tek screw through the wide gap on the pedestal's joist cradle (**fig. 10**)



fig. 8









Decking

Lay the main joists perpendicular to the direction of the decking, spacing them according to:

- First and last joist spaces: 250 mm centres.
- General joist spacing: space as specified by decking manufacturer.
- At butt joints: 30 mm between joists (fig. 11).

Paving

Joist spacing here will depend on the dimensions of the paving used, install joist centres in accordance with the paving manufacturer's guidance.

Cross members can be cut to size and used to strengthen the sub-frame and reduce movement **(fig. 12)**.

Cladding

Pre-drill the points at which you are going to fix the joist to the wall.

- Fix joists at max. 600 mm intervals.
- Fix to the wall using countersunk screws, ensuring the screw head sits within the central channel and does not protrude.

Install additional wall battening around windows and doors. At cladding board butt joints, you must install a double batten structure, securing each board end to an individual batten (**fig. 13**).



fig. 11









MESA pedestals are the most robust, intelligent and sustainable supports in the market. They can support loads of up to 1000 kg and come with a 20 year limited warranty. With adjustable heights ranging from 10 mm – 740 mm they give you complete control of the height of your decking.

Rubber Shim

- Rubber spacing shims for fine tune levelling
- 1 or 2 mm thickness
- Improved noise dampening
- 100% recycled rubber





Paving Spacer & Spacer Tabs

- Individual tiling spacer tabs for polygon tiling. See p.7
- 2 mm, 3.5 mm and 5 mm spacing options
- Easy clip in system
- 90% recycled PP and PE
- Quick & simple to install, saving you time over traditional supports

Extender Ring & Coupler

 Used when the height of the pedestal exceeds 175 mm

Pedestal Base

- Base diameter: 200 mm
- Placed or fixed to the foundations
- 90% recycled PP and PE

Pedestal Head

- Head diameter: 140 mm
- 90% recycled PP and PE

Fixing Collar Ring

- Locks the height adjustment against vibration or shock movement
- 90% recycled PP and PE

Rubber Mat

- Base diameter: 200 mm
- Ideal for roof terraces
- 85% recycled rubber





To determine how MESA paving pedestals you will require, you can either use detailed plans or follow the method below. Alternatively, call one of our technical experts for assistance by calling 0203 912 6898.



Below is a calculation to help estimate the amount of paving pedestals you will need for your project. The number of supports will vary according to:

- The size and weight of slabs heavier slabs may require an additional central pedestal per slab
- The total number of slabs used
- The shape of the area to be covered more complex designs may require more supports
- 1 Start off by measuring the width and length of your proposed paving area(s)

The following example will use a paving area of 3m wide x 6m long using 300 x 300 mm slabs

2 Divide the width of the area by the width of the slab, then add 1 (one) to this figure

6 m / 0.3 m (width of one slab) = 20 Paving slabs wide

20 + 1 = 21 Paving pedestals (required for the width)

3 Divide the length of the area by the length of the slab, add 1 (one) to this figure

3 m / 0.3 m (length of one slab) = 10 Paving slabs wide

10 + 1 = 11 Paving pedestals (required for the length)

4 Multiply the two numbers together

21 x 11 = 231 Total paving pedestals required



Calculation Recommendations

- It is recommended to add 5% overage to the total amount of material for unforeseen circumstances
- A drawing to scale may help you determine how many materials you will need
- Always round **up** the number of pedestals required
- For multiple paving areas, follow the steps for each above and sum the quantities together
- Ensure not to overload the pedestals.
- If your paving is planned to sit onto of a flat roof, it will be important to have the correct amount of protective rubber mats for each support in order not to damage the waterproof membrane

Spacers and Spacing Tabs

- For more complex paving designs you may need to calculate the amount of pedestals spacer tabs required.
 Regular rectangular or square paving designs you require 1 (one) 4 notch spacer per pedestal (fig. 15)
- Independent 2 mm and 5 mm spacer tabs (fig. 16) can alternatively be plugged into the head of the pedestals to allow you to create a number of designs (fig. 17).
 Spacer tabs come in packs of 4.



fig. 15



fig. 16



















Laying The Pedestals

- Once your foundation area is free from all debris, lay out pedestals along 1 edge of the paving area, adjusting to the required height (fig. 14)
 - In corners or along edges where the top of the pedestal cannot fully support the joist, you can simply turn the pedestal upside down
 - For roof terraces it is recommended to lay the pedestals on 3 mm rubber matts to provide an extra layer of protection to the roof membrane
- 2 Clip the appropriate paving spacers into the pedestal head (**p.8**)
 - Spacing tabs may not work in corners and edges
- 3 Place one pedestal down on the second row (fig. 18)

Laying The Paving Slabs

- 4 Taking the first paving slab, lay the slab onto the corner 3 pedestals (fig. 19)
- 5 Using a spirit level ensure the paving slab is at the desired gradient on the 3 pedestals
- 6 Once level, gently slide the 4th pedestal underneath the final corner (**fig. 20**)
- **7** Rotate the head of the 4th pedestal, winding up the pedestal up until it supports the slab
- 8 Ensure that you do not overload the maximum weight of the pedestal. The maximum loading weight can be found on p.11





USING SLOPE CORRECTORS

The MESA Self Levelling Slope Corrector is the perfect accompaniment to MESA Support Pedestals for tackling sloping surfaces. Fix on top of pedestals to correct slopes up to 5%.

Requires minimum paver weight of 15 kg.

An Easy Solution

- Decking and Paving pedestal options
- 2 and 5 mm paving spacing options
- Self corrects slopes up to 5%
- Easy clip in system
- 90% recycled PP and PE
- 100% recyclable
- Quick to install, saving you time over traditional supports
- 1 per pedestal









Pedestals between 10 – 77 mm will arrive pre-assembled. Pedestals 78 mm and above will need to be assembled upon delivery. A full list of components per pedestal can be found in the table below.



Head & Fixing Collar



Fixing Collar



Base

SKU	HEIGHT RANGE (MM)	COMPONENTS FOR ASSEMBLY					
		78 mm Head + Fixing Collar	123 mm Head + Fixing Collar	179 mm Head + Fixing Collar	Extender and Fixing Collar	65 mm Base	149 mm Base
DA-SP-80	80 - 130	1	-	-	-	1	-
DA-SP-130	130 - 175	-	1	-	-	1	-
DA-SP-160	160 - 260	-	1	-	-	-	1
DA-SP-255	255 - 350	1	-	-	1	-	1
DA-SP-350	350 - 460	-	-	1	1	-	1
DA-SP-450	450 - 610	-	-	1	2	-	1
DA-SP-500	500 - 740	-	-	1	3	-	1





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