



# **OPERATIONS & MAINTENANCE MANUAL**

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**20mm ALUMINIUM BEARER RAIL  
with MINIPAD or MEGAPAD PEDESTALS**

**Date: 1 May 2020**

## PRODUCT DESCRIPTION

### 20mm RAIL SYSTEM

#### 20mm ALUMINIUM BEARER RAIL with MINIPAD or MEGAPAD PEDESTALS

Full system for use with suspended tiling and decking systems. Rail will increase lateral stability across tiled or decked area but not increase horizontal weight tolerance.

#### RAIL

Aluminium rail 20mm x 60mm x 2,000mm.

Extruded aluminium profile beam 2mm thick in double box junction formation with central column and inset groove designed to hold a decking screw.

Four shelf / wings located on outer corners attach to fastening clips on pedestals for secure fitting without need for mechanical fixings.



#### MINIPAD PEDESTAL

10-40mm in height injection moulded support pedestals made from virgin fibre Polypropylene (PP) with no fillers.

Adjustable telescopic stem. Integrated clip fastening on headpiece to hold aluminium rail in place without mechanical fixings.

Packed into boxes of 20 units each.

Weight tolerance per unit = 683kg.



#### MEGAPAD PEDESTAL

35 to 1,020mm in height – injection moulded support pedestals made from virgin fibre Polypropylene (PP) with no fillers.

Adjustable telescopic stem. Integrated clip fastening on headpiece to hold aluminium rail in place without mechanical fixings.

Packed into boxes of 20 units each.

Weight tolerance per unit = 1,560kg.



## **RAIL HEADPIECE**

Injection moulded headpiece made from virgin fibre Polypropylene (PP) with no fillers.

Integrated (yellow) anti-slip shim clipped into the headpiece.

Attaches to aluminium rail and holds tiles in position between lugs.



## **APPLICATION**

### **FOR TILING**

Three part suspension system for laying porcelain tiles. Creates lateral stability for self-supporting tiles manufactured for the purpose of elevated paving and tiling applications.

Pedestals should be positioned a maximum of 600mm apart and specially designed aluminium bearer / rail clipped into place onto the headpiece by way of four shelves / wings which click into the clips on the headpiece without the need for mechanical fixings or drilling into metal rail.

A further headpiece is attached to the rail to hold the porcelain tile in place between positioning lugs moulded into the design. Anti-slip shims are integrated into the headpiece to improve placement of the tiles.

Installers should always ensure the tiles being installed are specifically designed for the purposes of elevated tiled applications and manufactures should be contacted to confirm tiles can span 600mm distance unsupported.

### **FOR DECKING**

Two part suspension system for laying decking. Aluminium rail becomes the bearer / joist for decking boards. Creates ultra low height profile for decking applications through low height joist.

Pedestals should be positioned a maximum of 400mm apart and specially designed aluminium bearer / joist clipped into place onto the headpiece by way of four shelves / wings which click into the clips on the headpiece without the need for mechanical fixings or drilling into metal rail.

Decking boards are mechanically fixed to the aluminium bearer / joist.

## PHYSICAL AND CHEMICAL PROPERTIES

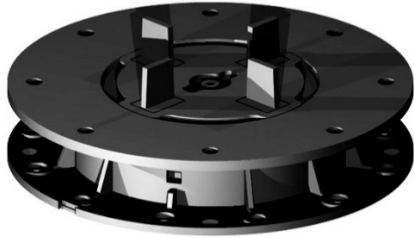
### RAIL

<b>Grade of Metal</b>	
<b>Compatible for Structural Applications</b>	In compliance with Standard BS EN 1991-1-1, ed. 2002
<b>Dimensions</b>	20 x 60 x 2000mm
<b>Thickness</b>	2mm
<b>Design</b>	Double box profile
<b>Weight</b>	0.90kg per m <sup>2</sup>
<b>Concentrated Imposed Load [kN]</b>	3.6
<b>Max span [cm] Tiling</b>	60cm
<b>Max span [cm] Decking</b>	40cm
<b>Maximum Deflection</b>	< 5 mm

### RAIL FIRE CLASSIFICATION

<b>Fire classification</b>	Aluminium Rail is classified as "EUROCLASS A1" according to EN 13501-1:2009
<b>Appearance</b>	Black injection moulded pedestal
<b>Odour</b>	None
<b>pH</b>	n/a
<b>Boiling point</b>	n/a
<b>Softening point</b>	> 600°C
<b>Flash point</b>	n/a
<b>Fire classification</b>	EuroClass A1
<b>Toxicity</b>	These products are not classified as toxic

# MINIPADS

<b>Description</b>	<b>Ultra-low Height Adjustable Pedestals for paving and decking</b>			
<b>Height</b>	<b>Weight Tolerance</b>			
10-20mm 10-25mm 22-30mm 28-40mm	<b>Maximum Load:</b> 11,493 N = 1,171kg  <b>End of Linear Behaviour:</b> 6,700N = 683kg  <b>CATAS Test Score</b> 179112 / 1			
<b>Material</b>	Polypropylene			
<b>Diameter of Head Piece</b>	150mm			
<b>Diameter of Base</b>	150mm			
	<b>Score</b>	<b>Test Method</b>		
Melt Flow rate	14-16 Gr / 10'	ASTM D 1238		
Weight / density	0.99-1.04 Gr / cm <sup>3</sup>	ASTM D 792 Method A		
Softening point with load of 5kg (VICAT test)	>75 °C	ASTM D 1525		
Heat Deflection Test with load of 1820 kPa	> 90 °C	ASTM D 648		
Coefficient of elasticity	1600 Mpa	ASTM D 790		
Impact resistance (Izod test - <b>at 23°C</b> )	>40 J/m	ASTM D 256		
Impact resistance (Izod test - <b>at minus 20°C</b> )	>20 J/m	ASTM D 256		
Max Weight Tolerance <b>at minus 40°C</b>	27.830 N	<b>CATAS 179112 / 1</b>		
<b>Fire classification</b>	All MINIPADS supports are classified as "EUROCLASS E" according to EN 13501-1:2009 Special CLASS B1 (EN 13501-1:2009) rated pedestals can be manufactured upon request			

# MEGAPADS

<b>Description</b>	<b>Extra-large and extended thread Adjustable Pedestals with optional slope correctors</b>		
<b>Height</b>	<b>Weight Tolerance</b>		
35-50mm 50-75mm 75-120mm 115-220mm 215-320mm 315-420mm 415-520mm 515-620mm 615-720mm 715-820mm 815-920mm 915-1020mm	<b>Maximum Load:</b> 20,713 N = 2,057kg  <b>End of Linear Behaviour:</b> 15,300N = 1,560kg  <b>CATAS Test Score</b> 179112 / 1		
Slope correctors	1% 2% 3%		
Material	Polypropylene		
Diameter of Head Piece	150mm		
Diameter of Base	200mm		
			
		<b>Score</b>	<b>Test Method</b>
Melt Flow rate	14-16 Gr / 10'	ASTM D 1238	
Weight / density	0.99-1.04 Gr / cm <sup>3</sup>	ASTM D 792 Method A	
Softening point with load of 5kg (VICAT test)	>75 °C	ASTM D 1525	
Heat Deflection Test with load of 1820 kPa	> 90 °C	ASTM D 648	
Coefficient of elasticity	1600 Mpa	ASTM D 790	
Impact resistance (Izod test - <b>at 23°C</b> )	>40 J/m	ASTM D 256	
Impact resistance (Izod test - <b>at minus 20°C</b> )	>20 J/m	ASTM D 256	
Max Weight Tolerance <b>at minus 40°C</b>	27.830 N	<b>CATAS 179112 / 1</b>	
<b>Fire classification</b>	All MEGAPADS supports are classified as "EUROCLASS E" according to EN 13501-1:2009 Special CLASS B1 (EN 13501-1:2009) rated pedestals can be manufactured upon request.		

## RAIL HEADPIECE

<b>MATERIAL</b>	Virgin fibre injection moulded polypropylene
<b>MAX TEMPERATURE</b>	Plus 75 ° C
<b>MIN TEMPERATURE</b>	Minus 40 °C
<b>HEADPIECE DIAMETER</b>	120mm
<b>LUG WIDTH</b>	2mm, 4mm or 6mm
<b>LUG HEIGHT</b>	10mm or 20mm

## PEDESTALS FIRE CLASSIFICATION

<b>Fire classification</b>	All Adjustable Pedestals are classified as "EUROCLASS E" according to EN 13501-1:2009  Special Class B pedestals can be manufactured by special request
<b>Appearance</b>	Black injection moulded pedestal
<b>Odour</b>	None
<b>pH</b>	n/a
<b>Boiling point</b>	n/a
<b>Softening point</b>	>75°C
<b>Flash point</b>	n/a
<b>Fire classification</b>	EuroClass E
<b>Toxicity</b>	These products are not classified as toxic

## PRODUCT CODES

CODE	DESCRIPTION / SIZE
SP-RAIL-RAIL-Z	2 mtr Length of Aluminium Rail 60x20x2000mm for RAIL SYSTEM
SP-MEG-010-025-Z	Minipad - PAVING - 10-25mm (with 2 plates)
SP-MEG-010-Z	Minipad - PAVING - 10-20mm (with 1 plate)
SP-MEG-022-Z	Minipad - PAVING - 22-30mm
SP-MEG-028-Z	Minipad - PAVING - 28-40mm
SP-MEG-035-Z	Megapad - PAVING - 35-50mm
SP-MEG-050-Z	Megapad - PAVING - 50-75mm
SP-MEG-075-Z	Megapad - PAVING - 75-120mm
SP-MEG-115-Z	Megapad - PAVING - 115-220mm
SP-MEG-215-Z	Megapad - PAVING - 215-320mm (with 1 Tower)
SP-MEG-315-Z	Megapad - PAVING - 315-420mm (with 2 Towers)
SP-MEG-415-Z	Megapad - PAVING - 415-520mm (with 3 Towers)
SP-MEG-515-Z	Megapad - PAVING - 515-620mm (with 4 Towers)
SP-MEG-615-Z	Megapad - PAVING - 615-720mm (with 5 Towers)
SP-MEG-715-Z	Megapad - PAVING - 715-820mm (with 6 Towers)
SP-MEG-815-Z	Megapad - PAVING - 815-920mm (with 7 Towers)
SP-MEG-915-Z	Megapad - PAVING - 915-1020mm (with 8 Towers)
SP-RAIL-CLIP-Z	RAIL SYSTEM CLIP Headpiece for Megapads
SP-RAIL-HEAD-002-Z	2mm wide 10mm high Headpiece for RAIL SYSTEM



## **PRODUCT LITERATURE**

Included as Appendix A

## **PRODUCT INSTALLATION**

To be used on predominantly flat decks. Units to be placed onto structural decks, sufficiently strong to tolerate the weight of the system. System should not be installed on bare earth or ground coverings which have not been adequately strengthened. Waterproofing membranes to be adequately protected before installation of units to prevent point loading and / or puncturing of membrane.

Pedestals are loose-laid without mechanical fixings or adhesive. Paving slabs, tiles or decking joists are placed onto headpieces and telescopic stems are twisted to alter the height of the pedestals so that the tiles / slabs / decking boards are flat and level in height.

For Tiling Applications Pedestals to be placed a maximum of 600mm apart.

For Decking Applications Pedestals to be placed a maximum of 400mm apart.

## **MAINTENANCE DETAILS**

Products are designed to be covered and not disturbed in the long-term. Cavities between the structural deck and the tiles / timber should be inspected at occasional intervals to ensure drainage channels do not become blocked and flammable material does not collect. Jets of water should be used to remove limited amounts of debris, taking care not to block up or damage drainage outlets. For large or compacted debris build-up, removal of the tiles / slabs / decking boards and removing the debris by hand or machine may be required.

## **HAZARDS IDENTIFICATION**

The major hazards identified for these products are physical and include manual handling. Sparks may be generated from cutting processes.

Sufficient PPE should be worn at all times.

## **FIRST-AID MEASURES**

In event of cuts and damage from dropped tiles, timber or sharp edges from aluminium rail, wash out wound with plenty of clean water. Seek medical attention

## **FIRE-FIGHTING MEASURES**

These products do not constitute a fire hazard. Use extinguishing media appropriate to the surrounding fire conditions.

## **ACCIDENTAL RELEASE MEASURES**

Aluminium and Polypropylene products are recyclable.

Damaged product can be taken up and disposed of to landfill as inert waste if necessary; however recycling is the preferred method of disposal. As supplied, the products are not classified as hazardous.

## **HANDLING AND STORAGE**

When handling product, due regard should be paid to the risks outlined in the Manual Handling Operations Regulations 1992, appropriate PPE for work with metal should be used.

When cutting the aluminium rail with a saw, appropriate measures to control shrapnel and sharp particles should be used. The product should be stored in a safe and stable manner.

## **PERSONAL PROTECTIVE EQUIPMENT:**

Wear suitable protective clothing e.g. overalls, gloves and safety boots to reduce the chances of physical injury while using this product.

Local Exhaust Ventilation, goggles and a dust mask to the relevant European standard (EN149) may be required if a cutting method that liberates dust is used.

## **ECOLOGICAL INFORMATION**

Subsequent to manufacture, this is a stable product with no known adverse environmental effects.

Wallbarn recommends that products are recycled after their lifespan on the construction project.

## **DISPOSAL CONSIDERATIONS**

Dispose of this product at any approved solid waste disposal site. Disposal of the product should be in accordance with any local or national regulations although recycling is preferred.

## **WARRANTIES**

The RAIL & PEDESTAL SYSTEM carries a warranty of 15 years. This warranty is a Limited Warranty in the following ways:

- The products are installed in the correct manner and for the proper purpose of the system only.
- The products will comply with the test data as laid out earlier in document.
- Warranty is limited to replacement of products which have been Warranty is limited to the value of the cost price of the materials only, not replacement costs or any other labour cost.

## **TRANSPORT INFORMATION**

Classification for conveyance: - None required.

## **KEY CONTACTS**

Wallbarn Ltd.

Unit 16 Capital Business Centre, 22 Carlton Road, South Croydon CR2 0BS

Tel: +44 (0)208 916 2222 Fax: +44 (0)208 916 2223

Email: [sales@wallbarn.com](mailto:sales@wallbarn.com)

Web: [www.wallbarn.com](http://www.wallbarn.com)

## APPENDIX A: WALLBARN PRODUCT BROCHURE

The following table summarizes the documents referenced in this document.

Document Name	Location
MEGAPADS FOR PAVING AND DECKING BROCHURE	<a href="https://www.wallbarn.com/pedestals-2/heavy-duty/">https://www.wallbarn.com/pedestals-2/heavy-duty/</a>
RAIL SUSPENSION SYSTEM FOR LAYING PORCELAIN TILES AND DECKING	<a href="https://www.wallbarn.com/pedestals-2/rail-system/">https://www.wallbarn.com/pedestals-2/rail-system/</a>
Wallbarn Ltd Terms & Conditions	<a href="https://www.wallbarn.com/terms-conditions-of-supply/">https://www.wallbarn.com/terms-conditions-of-supply/</a>