


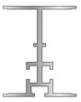
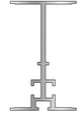


Aluminium I-Plus Beams - Technical Datasheet



Wallbarn Aluminium I-Plus Beams are made from high grade extruded aluminium. They were designed by Wallbarn and made here in the United Kingdom. They are suited to both paving and decking applications and work seamlessly with our plastic and non-combustible pedestals.

PHYSICAL AND CHEMICAL PROPERTIES

| | 50mm | 75mm | 100mm |
|---------------------|---|---|---|
| Profile |  |  |  |
| Material | Aluminium 6063 T6 | Aluminium 6063 T6 | Aluminium 6063 T6 |
| Weight | 1.61kg/m | 1.92kg/m | 2.19kg/m |
| Height | 50mm | 75mm | 100mm |
| Width | 60mm | 60mm | 60mm |
| Length | 3,600mm | 3,600mm | 3,600mm |
| Fire Classification | Class A1 BS EN 13501-1 2018 | | |

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IMS.T.1012.v2

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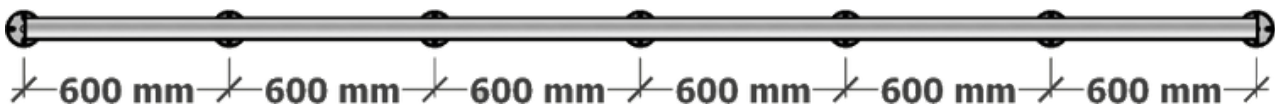
Recommended Pedestal Placement - I-Plus Rail

Wallbarn Aluminium I-Plus Rails/Joists are capable of longer spans. These products were independently tested for weight tolerance by testing organisation, Specialist Technical Services (U.K) Limited. See Test Certificate : Appendix A

The testing was conducted in accordance with BS 8579:2020, using the test standard method BS 8527:2020, targeting a load resulting in a 5mm deflection. The recommended spacings provided ensure even distribution of the pedestals along the chosen rail, effectively distributing the weight and reducing point loading.

| Rail/Joist Height | Recommended maximum distance between pedestals | Tested maximum distance between pedestals |
|-------------------|--|---|
| 50mm | 600mm | 600mm |
| 75mm | 1,200mm | 1,200mm |
| 100mm | 1,800mm | 2,200mm |

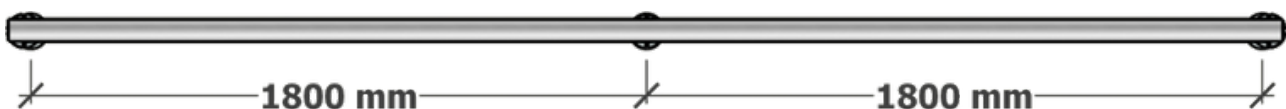
50mm I-Plus Rail/Joist



75mm I-Plus Rail/Joist



100mm I-Plus Rail/Joist





Load Testing - I-Plus Rail

Wallbarn Aluminium I-Plus Rails/Joists have been independently tested by Specialist Technical Services (U.K) Limited to determine destructive load possible. 2 metre lengths of each rail were clamped on each end and a vertical compressive load was applied to the centre. See Test : Appendix B

The table below displays the force applied and the corresponding deflection achieved prior to failure.

| Test Product | STS UK Test - Load Obtained (kN) | STS UK Test - Maximum Displacement (mm) |
|--------------|----------------------------------|---|
| 50mm | 4.08 (Approx. 415Kg) | 44.96 |
| 75mm | 6.58 (Approx. 670Kg) | 32.65 |
| 100mm | 8.10 (Approx. 825Kg) | 27.86 |

** 1 Kilonewton (kN) is equal to 101.9716213 kilograms

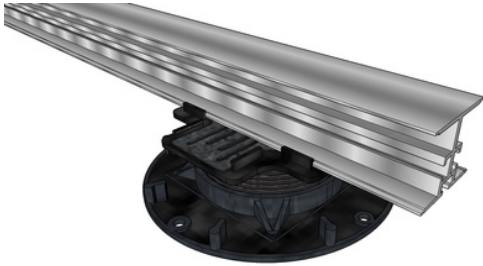




Wallbarn - Technical Datasheet

Compatible Pedestals & Components

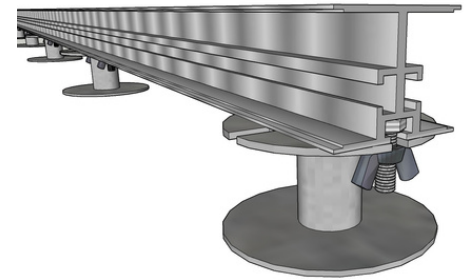
[Mega Balance Non-Fire Rated Pedestal](#)



[Class A Joist Holder](#)



[Class A MetalPad Ex Pedestal](#)



Connecting Brackets

[Stainless Steel Straight Brackets](#)

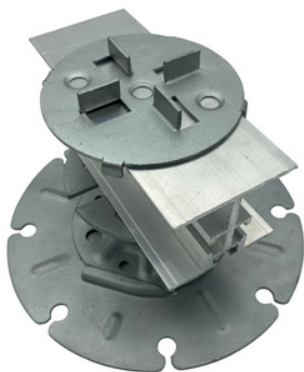


[Stainless Steel Right Angle Brackets](#)



Headpieces

[Paving Headpiece](#)



[Rail to Rail Headpiece](#)



Appendix A

TEST CERTIFICATE LOAD TESTING IN ACCORDANCE WITH BS 8579:2020



On Wallbarn Limited,
3 Hagley Court North, The Waterfront, Dudley, West Midlands, DY5 1XF

PROOF LOAD TESTING STS LABORATORY

TEST DESCRIPTION: A weight tolerance test was conducted on various aluminium rails fitted to steel pedestals, increasing in 100mm spans from the centre of the rail. Testing was completed using a jack to apply a vertical compressive load centre to the product, to confirm structural performance. Loading results obtained were recorded at the limit of 5mm deflection. All testing was carried out in accordance with the client's specification.

REF NO.: DR-5744 **DATE TESTED:** 15th May 2024
JOB NO.: P10259 **CERTIFICATE DATE:** 24th May 2024
CERTIFICATE NO.: IC11716 **SUPPLIER/SOURCE:** Client

TEST DETAILS:
Product Tested: Aluminium Rail with Steel Pedestal **Item Condition:** New
Target Loads: 5mm Deflection **Ambient Temperature:** 18°C
Test Location: STS Laboratory **Procedure or Method:** BS 8527:2020

TEST RESULTS:

| Test Product | Load Achieved (kN) | | | | | | | | | | | |
|--------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
| | 100mm from Centre | 200mm from Centre | 300mm from Centre | 400mm from Centre | 500mm from Centre | 600mm from Centre | 700mm from Centre | 800mm from Centre | 900mm from Centre | 1000mm from Centre | 1100mm from Centre | 1200mm from Centre |
| 15mm Rail | 2.04 | 2.08 | 2.01 | 1.13 | | | | | | | | |
| 20mm Rail | 2.02 | | 2.03 | 1.98 | | | | | | | | |
| 50mm Rail | | | 2.10 | 1.54 | 1.43 | 1.40 | 1.28 | | | | | |
| 75mm Rail | | | 2.26 | 2.03 | 2.01 | 1.97 | 1.90 | 1.88 | 1.78 | 1.28 | | |
| 100mm Rail | | | 2.02 | 2.05 | 2.05 | 2.05 | 2.05 | 2.02 | 2.00 | 2.05 | 2.02 | 1.90 |

ANALYSIS:

Testing was completed with each individual rail obtaining various loads before reaching 5mm deflection. The 15mm & 20mm rail reached a 400mm span before the maximum deflection was obtained, with the 100mm rail reaching a span of 1200mm from the centre, before obtaining maximum permissible deflection. All testing was completed within the BS 8572:2020.

| | | | |
|--|--------------------|--|---|
| For Specialist Technical Services (U.K) Limited | | | The results found on this Certificate relate only to the product[s] tested as described above This Test Certificate shall <u>not</u> be reproduced except in full QC: TC001 – Test Certificate – v4.0 Page 1 of 1 |
| Approved By: | Andrew Gore | | |
| Position: | Technical Director | | |
| Signature: | | | |

END OF PAGE



Appendix B

TEST CERTIFICATE LOAD TESTING IN ACCORDANCE WITH THE CLIENT'S SPECIFICATION



On Wallbarn Limited,
3 Hagley Court North, The Waterfront, Dudley, West Midlands, DY5 1XF

PROOF LOAD TESTING STS LABORATORY

TEST DESCRIPTION: A weight tolerance test was conducted on various aluminium rails to determine the destructive load obtainable. Testing was completed using a jack to apply a vertical compressive load centre to the product, to confirm structural performance and determine load failure limit. All testing was carried out in accordance with the client's specification.

| | | | |
|-------------------------|---------|--------------------------|---------------------------|
| REF NO.: | DR-5744 | DATE TESTED: | 15 th May 2024 |
| JOB NO.: | P10259 | CERTIFICATE DATE: | 24 th May 2024 |
| CERTIFICATE NO.: | IC11717 | SUPPLIER/SOURCE: | Client |


| | | | |
|------------------------|----------------|-----------------------------|------------------------|
| TEST DETAILS: | | | |
| Product Tested: | Aluminium Rail | Item Condition: | New |
| Target Loads: | Failure | Ambient Temperature: | 18°C |
| Test Location: | STS Laboratory | Procedure or Method: | Client's Specification |

TEST RESULTS:

| Test Product | Load Obtained (kN) | Maximum Displacement (mm) |
|--------------|--------------------|---------------------------|
| 15mm Rail | 1.05 | 68.77 |
| 20mm Rail | 1.06 | 65.87 |
| 25mm Rail | 1.58 | 64.63 |
| 50mm Rail | 4.08 | 44.96 |
| 75mm Rail | 6.58 | 32.65 |
| 100mm Rail | 8.10 | 27.86 |

ANALYSIS:

Testing was completed with each individual rail obtaining various loads before reaching failure. The 15mm rail obtained the lowest load (1.05kN) along with the highest displacement (68.77mm), with the 100mm obtaining the highest loading (8.10kN) along with the lowest recorded displacement (27.86mm). All testing was completed within the client's specification.

| | | | |
|--|--------------------|---|--|
| For Specialist Technical Services (U.K) Limited | |  | The results found on this Certificate relate only to the product[s] tested as described above This Test Certificate shall <u>not</u> be reproduced except in full |
| Approved By: | Andrew Gore | | |
| Position: | Technical Director | | |
| Signature: | | | QC: TC001 – Test Certificate – v4.0 Page 1 of 1 |

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