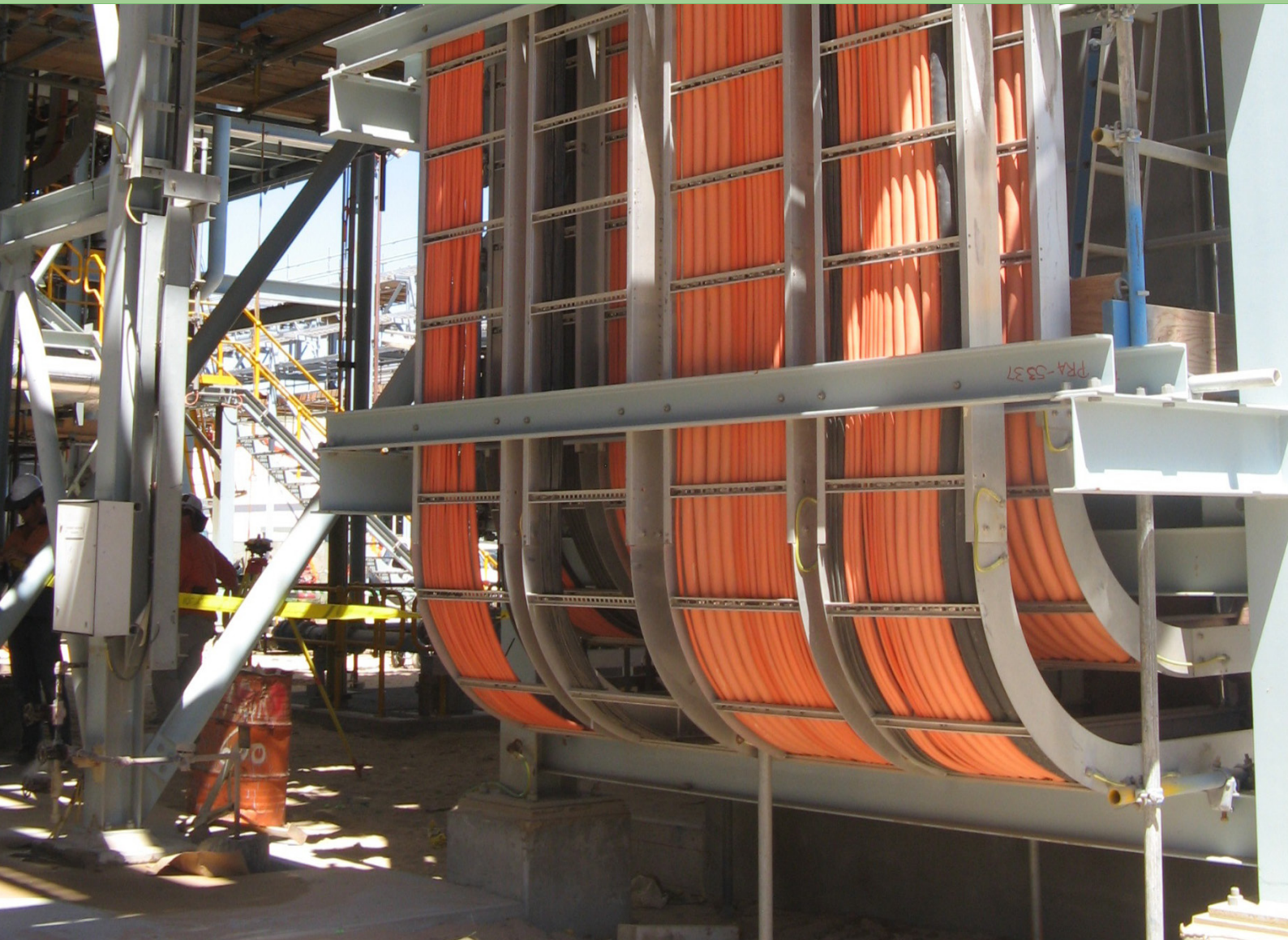


# Atkore Unistrut Catalogue

Electrical & Mechanical Support Systems



**Atkore**<sup>™</sup>  
**Unistrut**<sup>®</sup>

# ATKORE UNISTRUT

## The Original Metal Framing System

Unistrut is the original metal framing system, featuring a unique weldless connection. The Unistrut system eliminates welding and drilling, and is easily adjustable and reusable for infinite configurations. Since 1924, our brand has evolved from a simple connection concept to a comprehensive engineered building and support system featuring a robust line of channels, fittings, fasteners, hangers, pipe clamps cable trays and cable ladders. Backed by our worldwide network of engineering and distribution centres, we provide customers with total-resource capability, making Unistrut the brand everyone asks for by name.



Allied Tube & Conduit ▲ AFC Cable Systems ▲ Heritage Plastics ▲ Unistrut  
Unistrut Construction ▲ United Poly Systems ▲ Calbrite ▲ Calbond ▲ Cii ▲ US Tray  
Power-Strut ▲ Calconduit ▲ Razor Ribbon ▲ Calpipe Security ▲ Vergokan ▲ Marco  
Columbia-MBF ▲ Eastern Wire + Conduit ▲ ACS/Uni-Fab ▲ Sasco Strut ▲ Kaf-Tech  
Cope ▲ FRE Composites ▲ Queen City Plastics ▲ Four Star Industries ▲ Flexicon





# Introduction

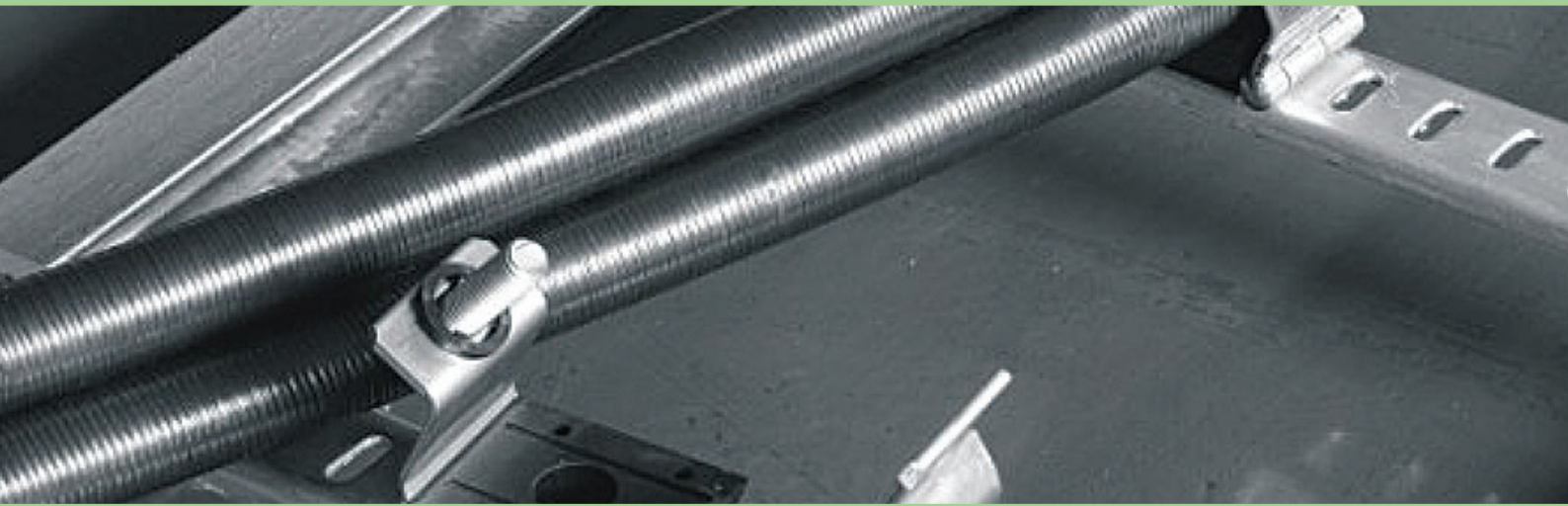


## **The Atkore Unistrut World of Support starts with our network of Unistrut Service Centers across the nation.**

Atkore Unistrut World of Support starts with our network of Unistrut Service Centres throughout New Zealand. They go far beyond providing local product inventories, by offering complete application solutions, based on experience gained from thousands of projects worldwide. It's the kind of knowledgeable assistance that can help save time and cost now, and simplify change in the future.

Technical help? No one knows the engineering side of Unistrut support systems like your local Atkore Unistrut team. If it's special fabrication, cutting or custom finishing you want, the pros at your local Unistrut Service Centre will make it happen - quickly, efficiently, economically. So when it's help you need, call your Unistrut Service Centre - the quickest way to unlock Atkore Unistrut's World of Support.





## **Atkore Unistrut New Zealand**

Atkore Unistrut has been the leading supplier of metal framing systems for over 45 years.

We specialise in Metal Framing, Cable Management and our products and services are synonymous with engineering excellence and reliability worldwide.

## **Over Ninety Years Of Innovation**

Unistrut began developing and manufacturing products during the 1920s, producing the original Unistrut<sup>®</sup> Metal Framing System. Our extensive product portfolio now includes a variety of cable management solutions and advanced metal framing systems.

## **Sharing our Experience, Knowledge and Expertise**

We continue to make investments in our people, products and services. Our ability to share our experience and knowledge with our customers is the key to our success in a wide range of industry sectors.

## **Proven Delivery Processes**

Atkore Unistrut has proven procedures that guarantee the delivery of orders.

## **Part of the Atkore<sup>®</sup> Family**

Atkore is a major manufacturer and innovator with a unique focus on steel frame, pipe and electrical products. As part of the Atkore family, we can draw on a variety of technologies, products and experience from Atkore companies throughout the world.





# Introduction

## Wide Range of Applications for Construction and Industry

Atkore Unistrut can supply a wide variety of standard structural fittings in zinc plated heavy duty galvanised, aluminium and 316 stainless steel. Atkore Unistrut engineers can also design specialised fittings for individual project needs.

With resources across the Asia Pacific region, including manufacturing sites in New Zealand and Asia totaling over 400,000m<sup>2</sup> in floor space accredited to ISO9001.

Atkore Unistrut facilities have automated welding, over 30 metal pressing machines, from 16 to over 300 tonnes, and roll forming machinery. Services from both our Atkore Unistrut fully owned operations and our JV partner facilities can fully label, pack and ship to your individual specifications. Marshalling and packaging is done in-house and from our manufacturing facility fully undercover.

## Projects in the Region Successfully Supplied Include

- Waterview Tunnel Project
- M2pp Bridge Services
- Mount Victoria Tunnel Services (Fire And Seismically Rated)
- Christchurch Hospital
- Kaimai Rail Tunnel Service Supports
- Pacific Island Standby Power Systems
- Darfield Dryers Service Support Systems
- City rail link
- Auckland Library Granite Cladding Support System

## Atkore Overview

- Revenue of \$1.8B
- 3,100+ employees
- 27 manufacturing and service locations in New Zealand, Asia Pacific, EMEA and North America
- Strong brands that are well known by customers and respected in the industry
- Purchase & process close to one million tonne of steel per year – approximately 50,000 truckloads
- Produce enough electrical cable each year to circle the earth 7 times
- Electrical Raceway and Mechanical Products solutions



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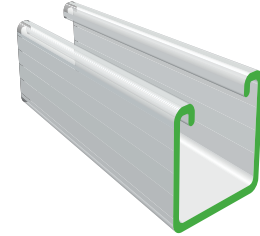




# Metal Framing System

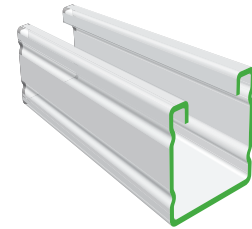
## **P1000**<sup>®</sup>

Strut SIZE: 41mm x 41mm  
MATERIAL THICKNESS: 2.5mm



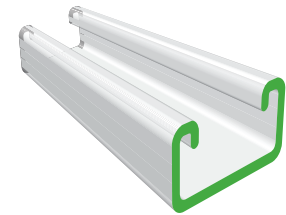
## **P2000**

Strut SIZE: 41mm x 41mm  
MATERIAL THICKNESS: 1.6mm



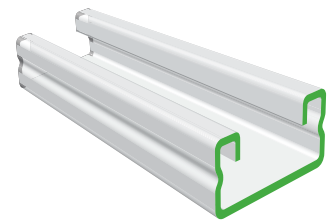
## **P3300**

Strut SIZE: 41mm x 22mm  
MATERIAL THICKNESS: 2.5mm



## **P4000**

Strut SIZE: 41mm x 22mm  
MATERIAL THICKNESS: 1.6mm



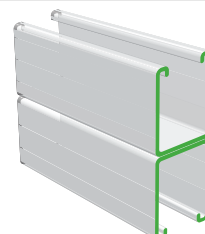
## **P5500**

Strut SIZE: 41mm x 62mm  
MATERIAL THICKNESS: 2.5mm



## **Combinations**

Strut SIZE: VARIES  
MATERIAL THICKNESS: 2.5 / 1.6mm



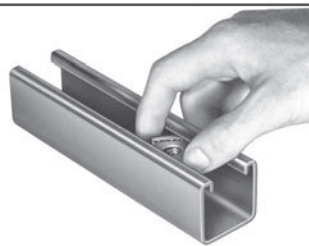


# The Original Strut System

**Adjustable, Demountable, Reusable**



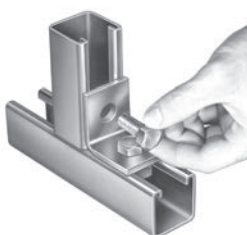
Spring nut is inserted anywhere along continuous slot. Rounded nut ends permit easy insertion.



A 90° turn positions the serrated grooves in the nut with the inturned edges of the Strut.



Fittings may be placed anywhere along Strut slot permitting complete freedom of adjustment. The need for drilling holes is eliminated.



The fitting makes the connection between any framing Strut or as means for other attachments.



A turn of a spanner locks the serrated teeth of the nut into the inturned edges of the Strut to make the strong, vice-like connection.

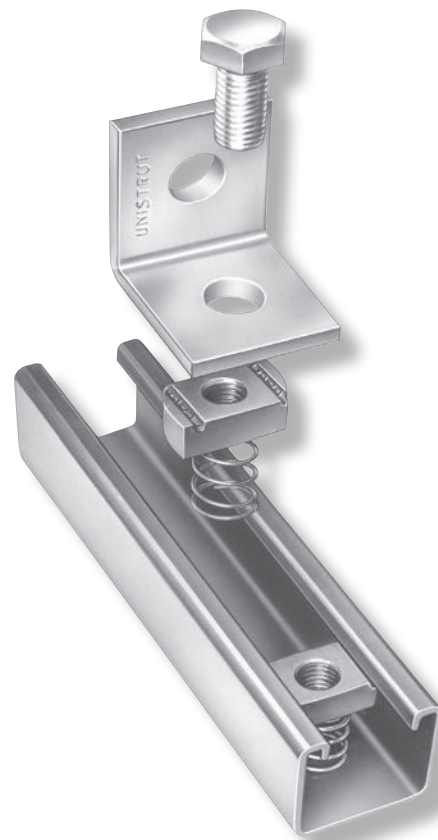
**Look for These Features:**

Large chamfer in the nut eases starting of bolt.

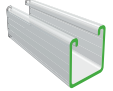
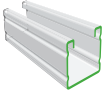
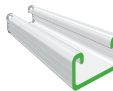
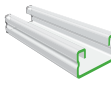
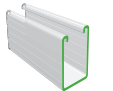
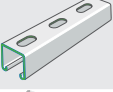
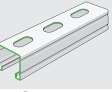
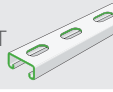
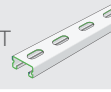
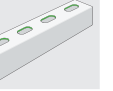


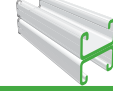
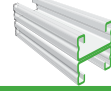






















































Special shaped inturned edges and tapered, serrated grooves produce strong vice-like grip between channel and nut.

Strut edges and nut's tapered grooves act as guides to provide positive alignment of connection.

- Nut teeth grip the Strut's inturned edges, tying the channel sides together in a "box" configuration for added strength.
- Longitudinal movement of nut is resisted as hardened teeth bite into the inturned edges.
- Spring allows precision placement anywhere along Strut length, then holds nut in position while connection is completed - the installer's "third hand".



# Strut Selection Chart

STRUT SIZE	41 X 41	41 X 41	41 X 22	41 X 21	41 X 62
MATERIAL THICKNESS	2.5mm	1.6mm	2.5mm	1.6mm	2.5mm
<b>Strut</b>	P1000® 	P2000 	P3300 	P4000 	P5500 
<b>Strut - SLOTTED</b>	P1000T 	P2000T 	P3300T 	P4000T 	P5500T 
<b>Strut - BACK TO BACK</b>	P1001 	P2001 	P3301 	P4001 	P5501 
<b>STRUT NUTS - WITH SPRING</b>	P1000®	P2000	P3300	P4000	P5500
<b>6mm</b>	P1006 	P1006 	P4006 	P4006 	
<b>8mm</b>	P1007 	P1007 	P4007 	P4007 	P5508 
<b>10mm</b>	P1008 	P1008 	P4008 	P4008 	P5508 
<b>12mm</b>	P1010 	P1010 	P4010 	P4010 	P5510 
<b>16mm</b>	P1012S 	P1012S 	P4012S 	P4012S 	
<b>STRUT NUTS - WITHOUT SPRING</b>	P1000®	P2000	P3300	P4000	P5500
<b>6mm</b>	P3016 	P3016 	P3016 	P3016 	P3016 
<b>6mm</b>	P3006 	P3006 	P3006 	P3006 	P3006 
<b>8mm</b>	P3007 	P3007 	P3007 	P3007 	P3007 
<b>10mm</b>	P3008 	P3008 	P3008 	P3008 	P3008 
<b>12mm</b>	P3010 	P3010 	P3010 	P3010 	P3010 
<b>16mm</b>	P4012 	P4012 	P4012 	P4012 	P4012 

Standard Strut Length: 6 metres Material Finishes: Strut: Plain, Heavy Duty Galvanised, Stainless Steel. Strut Nuts: Zinc Plated, Heavy Duty Galvanised, Stainless Steel



# Strut General Specifications

## Framing Members

Strut and continuous inserts are accurately and carefully cold formed to size from low carbon strip steel. The Strut has a continuous slot with inturned edges. Secure attachments may be made to the framing member with the use of hardened, toothed, grooved nuts which engage the inturned edges.

## Fittings

The fittings, unless noted otherwise, are punch press formed from low carbon steel plates or strip.

## Strut Nuts

The Unistrut® nuts are produced from steel bars and after all manufacturing operations are completed, zinc plated nuts are case hardened. They are rectangular with the ends so shaped as to permit a quarter turn crosswise in the framing member after inserting through the slotted opening in the Strut and to prevent any further turning of the nut. Two serrated grooves in the top of the nut engage the inturned edges of the Strut and after bolting operations are completed, will prevent any longitudinal movement of the bolt and nut within the framing member. All bolts and nuts have ISO metric coarse screw threads.

## Masses and Dimensions

Masses given for all material are approximate shipping weights. All dimensions subject to commercial tolerance variations.

## Material

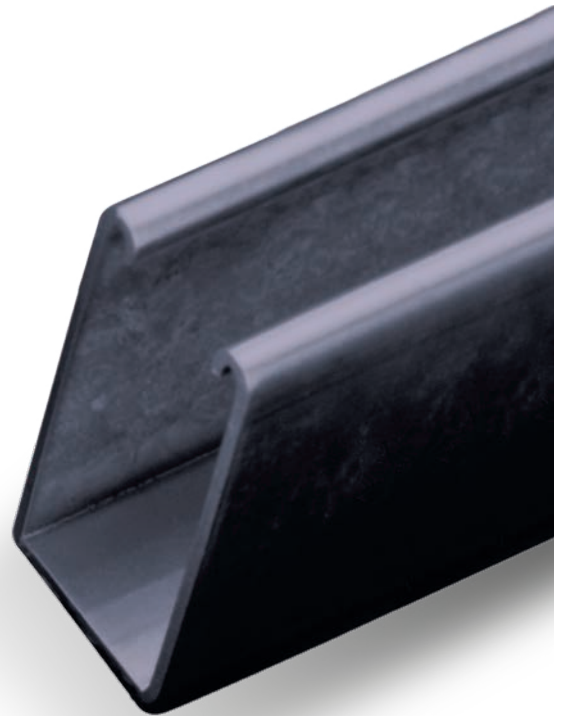
All single Unistrut® Strut members are accurately and carefully rolled from strip steel to AS/NZS1594 and AS/NZS1365. Spot-welded combination members are welded 100mm (maximum) on centre. Some members may require fillet welding.

## Standard Lengths

Standard lengths of the above Strut are 6m. Facilities are available to cut standard lengths into any special lengths for a small cutting charge. Custom lengths and custom products are non-returnable and non-refundable.

## Section Shape

The roll forming process used by Unistrut® produces a consistent Strut within the manufacturing tolerance allowed. The process includes stresses within the section itself which are released when the Strut is cut. This creates a common condition known as "Bellmouth" where the section deforms slightly for a small distance in from the end.





# Strut General Specifications

## Finishes

All Strut is available in Plain, Heavy Duty Galvanised, Galvabond and Polyester finishes.

**Plain** - Plain finish on Unistrut<sup>®</sup> Strut is an oiled finish that is applied to the raw material by the steel mill. The cold rolling process used to form Unistrut<sup>®</sup> Strut removes the excess of this oil and the residue provides a modicum of protection for the channel in storage. The plain finish on Unistrut<sup>®</sup> fittings is that of the commercial bar stock input material. No surface treatment is applied to plain finish fittings.

**Galvabond Strut** - Input material is supplied by the steel mill generally in accordance with AS/NZS1397 having a coating class of Z275. The material is slit to width and roll formed to shape.

**Powder Coated** - Strut and parts are carefully cleaned and phosphated. Immediately after phosphating, a uniform coat of thermosetting polyester powder is electrostatically applied then baked. Minimum coating thickness to exterior surfaces is 50 microns. The polyester coating is ultra-violet stabilised.

**Heavy Duty Galvanised** - Coatings are applied generally in accordance with AS/NZS4680. The thickness of the coating is dependent on the material thickness of the component being galvanised. It should be noted that due to the galvanising process, the thickness of the coating will vary over the surface and should be taken into account during component assembly. It may be necessary to remove excess build-up prior to use.

**Zinc Plated** - Fittings and components are electroplated generally in accordance with AS/NZS1789. Fasteners are electroplated generally in accordance with AS/NZS1897 Service Condition 1.

**Stainless Steel** - Unistrut<sup>®</sup> stainless steel Strut is manufactured from Grade 316 stainless steel. The material is slit to width and roll formed to shape. Grade 316 stainless steel has excellent corrosion resistance and has advantages over grade 304 stainless steel, such as:

- Resistance to pitting and crevice corrosion in chloride environments.
- Superior resistance to ordinary rusting in most applications.
- Regularly used in aggressive coastal and marine environments.
- Highly recommended for food processing environments where it can be easily cleaned and has a greater resistance to organic and inorganic chemical substances.

**Aluminium** - Unistrut<sup>®</sup> aluminium Struts are manufactured from high strength alloy 6106-T6 for all extruded components and 5005 for sheet or plate components. These alloys are suitable for marine applications and offer excellent all round corrosion resistance.

**Specific Coating** - When specific applications require other commercially available finishes, they can be supplied according to specification. Custom products are non-returnable and non-refundable.

# Strut - General Engineering Data



## Beams & Columns Loads

### Notes to Table

Note 1: Loads are governed by shear or web crippling.  
Note 2: For uniform beam working loads asymmetric sections are required to be adequately braced to prevent rotation and twist.

### Beam Loads

The loads and deflections shown are based on simply supported beams uniformly loaded.

## Notes on Derivation of Structural Data

### 1. Section Properties

Section properties have been derived from 'as formed' shapes and are based on nominal dimensions and nominal base steel thickness. Nominal masses are calculated from the tabulated areas based on a steel density of 7850 kg per cu.m. For dead load calculations the tabulated masses should be increased by 10% to allow for rolling tolerances, and the result multiplied by 0.0098 to give corresponding dead load (self weight) in kN per m. run of section. Also note the beam and column loads do not make allowance for self weight of the section. When designing a structure in which the section forms an integral part, the self weight should be determined using the method described above and subtracted from the tabulated load.

### 2. Beam and Column Load Tables

Ultimate load values have been calculated from the section properties as permitted by AS/NZS 4600 Cold Formed Steel Structures code. The guaranteed minimum yield stress  $F_y$  has been taken as 264 MPa for plain Struts, and the increase allowed resulting from cold forming has been determined in accordance with the code. The listed working loads have been derived from the ultimate load divided by 1.5.

### 2.1 Span or Column Length

Listed value is to be taken as the distance between centres of supports.

### 2.2 Beam Load at Maximum

#### Permissible Stresses

In order to establish the table of working loads that can be carried by the corresponding section, the ultimate limit state loads that could be permitted by the code were first determined. These were divided by 1.5 to provide 'conservative' working loads. The load is considered to be uniformly distributed along the span and orientated with respect to the section, as defined by the diagrams to cause bending about X-X axis only. The webs of the beams are assumed to be unstiffened and have been checked for end bearing in accordance with clause 3.3.6 of AS/NZS4600:2005. Where this is critical the working loads have been appropriately reduced. This assessment has been based on a rigid support with the beam bearing on each support for a length equal to at least the straight length of web-depth of the basic section.

### ABBREVIATIONS

A = Area of Section  
I = Moment of Inertia  
z = Section of Modulus  
r = Radius of Gyration

### MEASUREMENTS

m      Metre  
mm     Millimetre  
kg      Kilogram

### FINISHES

AL      Aluminium  
GB      Galvabond  
HG      Heavy Duty Galvanised  
MG      Mechanically Galvanised  
PL      Plain  
PVC     Plastic  
SS      Stainless Steel  
ZP      Zinc Plated  
ZA      Zinc Plated - Yellow Iridescence

## 2.3 Deflection

Deflections are calculated for the corresponding beam working load, using standard formulae. Deflections or uniformly distributed loads for conditions other than those tabulated may be calculated from the following:

- $\delta_2 = (W2 / W1) \times (L2 / L1)^3 \times \delta_1$
- W1 = tabulated load in kN
- $\delta_1$  = corresponding tabulated deflection in mm
- L1 = corresponding tabulated length in mm
- W2 = new load in kN
- L2 = new length in mm
- $\delta_2$  = deflection corresponding to new length and new load

It is recommended that beam deflections generally be limited to the smaller of span/180 or 10mm and loads restricted accordingly. These limitations are based on 'visual straightness' with the latter value subject to variation to suit particular visual or other physical requirements.



## 2.4 Maximum Column Load

Listed values of column load capacity are derived on the basis of a concentric axial load applied to the section, acting as a column with an effective length corresponding to the listed value, i.e. translational and torsional restraint available at the centres of supports.

For other conditions of loading and/or restraint, reference should be made to the appropriate sections of AS/NZS 4600 Cold Formed Steel Structures.

## 3. Recommended Bearing & Connection Loads

Listed values are based on extensive testing of components by Unistrut® using a factor of safety of 2.5 against failure of the connection.

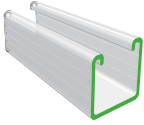
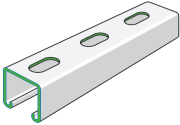
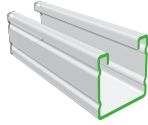
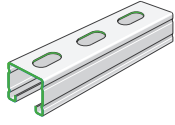
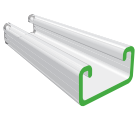
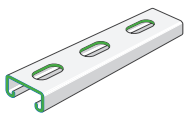
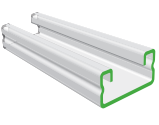
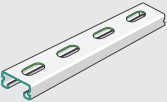
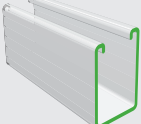
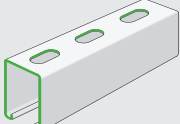
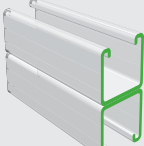
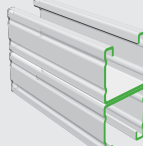
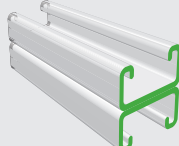
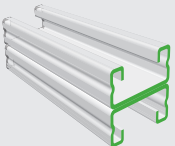
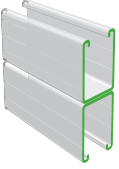

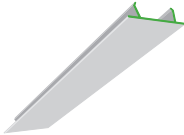
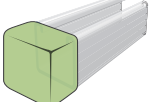
## 4. Point Loads

For point loads at midspan, the allowable loads are half the values shown in the tables. The deflection for the point load is obtained from:  $\delta_2 = 0.80 \delta_1$  where  $\delta_1$  is the deflection for a uniform load which is double the value of the point load.

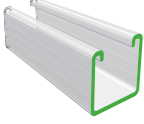

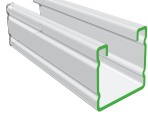
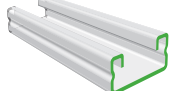
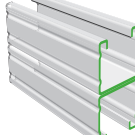
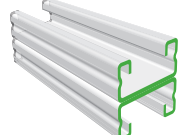


# Unistrut Pictorial Index

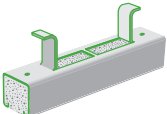
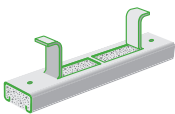
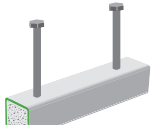
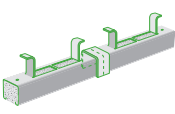
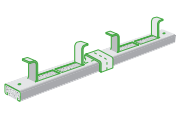
## Strut Systems - Strut

						
P1000® [PL/GB/HG] PG. 19	P1000T [PL/GB/HG] PG. 19	P2000 [PL/GB/HG] PG. 20	P2000T [PL/GB/HG] PG. 20	P3300 [PL/GB/HG] PG. 21	P3300T [PL/GB/HG] PG. 21	P4000 [PL/GB/HG] PG. 22
						
P4000T [PL/GB/HG] PG. 22	P5500 [PL/GB/HG] PG. 23	P5500T [PL/GB/HG] PG. 23	P1001 [PL/GB/HG] PG. 24	P2001 [PL/GB/HG] PG. 24	P3301 [PL/GB/HG] PG. 25	P4001 [PL/GB/HG] PG. 25
						
P5501 [PL/GB/HG] PG. 26	MP3.41.41 P1000-T3 PG. 123	P1184 PG. 26	P2860-10 - P2240, P4240, P5580 STRUT END CAPS - PLASTIC PG. 27			

## Strut Special Metals

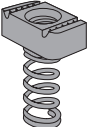





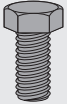
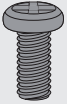
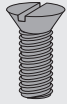

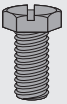




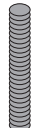


					
P1000-SS STAINLESS STEEL PG. 28	P3300-SS STAINLESS STEEL PG. 28	P2000-AL ALUMINUM PG. 28	P4000-AL ALUMINUM PG. 28	P2001-AL ALUMINUM PG. 28	P4001-AL ALUMINUM PG. 28

## Strut Concrete insert

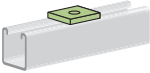

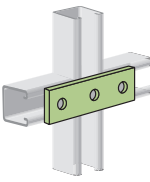
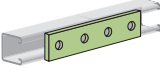
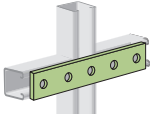
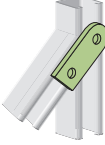
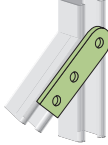
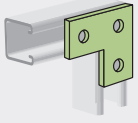
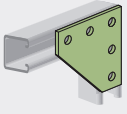
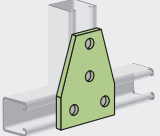
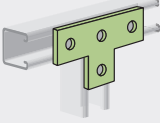
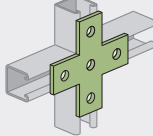
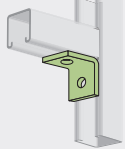
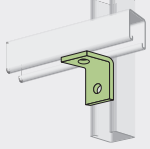
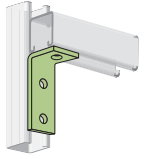
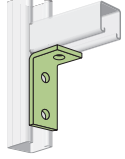
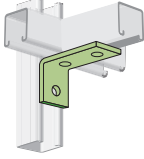
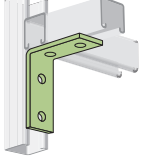
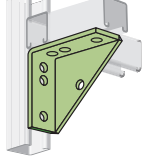
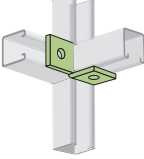
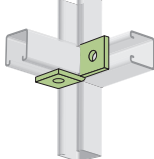
				
P1000CI PG. 35	P3300CI PG. 35	P3753 HEAVY DUTY INSERT PG. 35	P1663 CI JOINT COVER PG. 36	P4663 CI JOINT COVER PG. 36

# Unistrut Pictorial Index

## Strut Nuts and Hardware

						
FOR P1000 <sup>®</sup> & P2000 STRUT NUTS, W/ SPRINGS PG. 37	FOR P3300 & P4000 STRUT NUTS, WITH SPRINGS PG. 37	FOR P5500 STRUT NUTS, WITH SPRINGS PG. 37		FOR P1000 <sup>®</sup> & P2000 STRUT NUTS, NO SPRINGS PG. 38	FOR P3300 & P4000 STRUT NUTS, NO SPRINGS PG. 38	FOR P5500 STRUT NUTS, NO SPRINGS PG. 38
						
		HEX HEAD SET SCREWS PG. 35	PAN HEAD SCREWS PG. 39	COUNTERSUNK HEAD SCREW PG. 39	CONE POINT SET SCREW PG. 39	SLOTTED HEX HEAD SET SCREWS PG. 39
						
HEXAGON NUTS PG. 39	FLAT WASHERS PG. 39	SPRING WASHERS PG. 39	SHAKEPROOF LOCK WASHER PG. 39	UNIROD STEEL THREADED ROD PG. 39	ROD COUPLERS PG. 39	SWIVEL NUT PG. 39

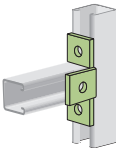
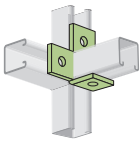
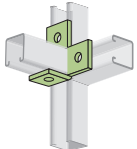
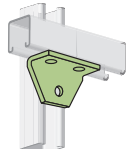
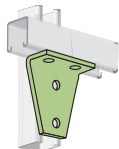
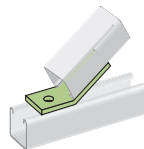
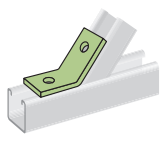
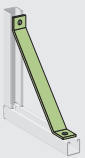
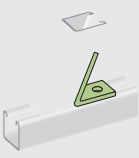
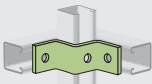
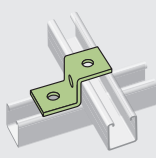
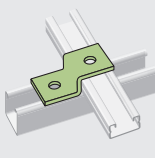
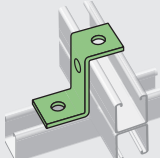
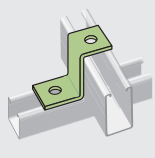
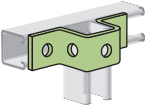
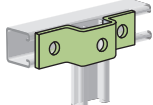
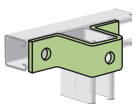
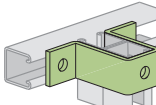
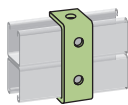
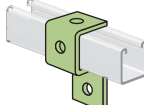
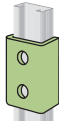
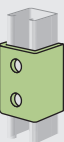
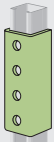
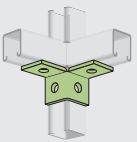
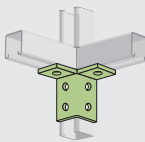
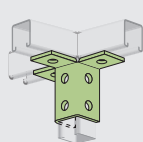
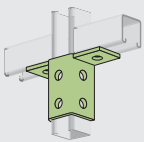
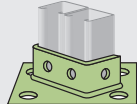
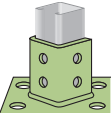
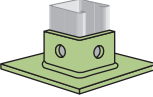
## Strut Fittings

						
P1062 - P1964 PG. 40	P1065 PG. 40	P1066 PG. 40	P1067 PG. 40	P1941 PG. 40	P2325 PG. 40	P2324 PG. 40
						
P1036 PG. 40	P1873 PG. 40	P1358 PG. 41	P1031 PG. 41	P1028 PG. 41	P1026 PG. 41	P1068 PG. 41
						
P1326 PG. 41	P1346 PG. 41	P1458 PG. 41	P1325 PG. 41	P2484 PG. 41	P1037 PG. 41	P1038 PG. 41

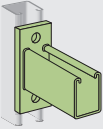
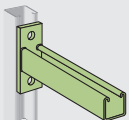
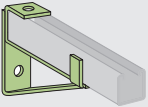
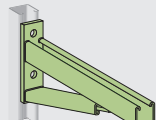
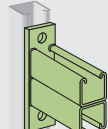
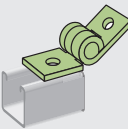
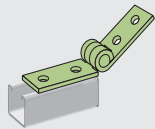





# Unistrut Pictorial Index

## Strut Fittings (Cont.)

						
P1033 PG. 42	P1034 PG. 42	P1035 PG. 42	P1357 PG. 42	P1359 PG. 42	P2101 & P2103 PG. 42	P1546, P2095, P2097 PG. 42
						
P2452 PG. 42	P1186, P2106, P2108 PG. 42	P1736 PG. 42	P1045 PG. 42	P4045 PG. 42	P1453 PG. 43	P5545 PG. 43
						
P1047 PG. 43	P4047 PG. 43	P5547 PG. 43	P1737 PG. 43	P1044 PG. 43	P1046 PG. 43	P4376 PG. 43
						
P1376 PG. 43	P1377 PG. 43	P2223 PG. 43	P2224 PG. 44	P2228 PG. 44	P2346 PG. 44	P2073 PG. 44
						
P2072A PG. 44	P2072S1 PG. 44					

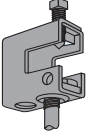

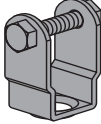
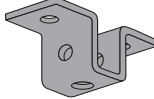
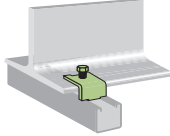
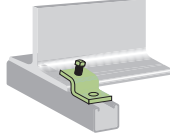
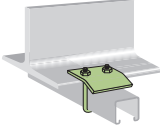
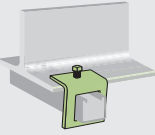
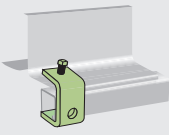
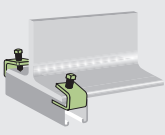
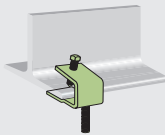
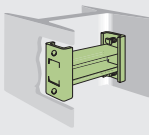
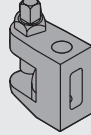
## Cantilever Brackets and Adjustable Braces

						
P5663-300 TO P5663-750 PG. 46	P2663-250 TO P2663-700 PG. 45	P1075-8 PG. 45	PCL150 TO PCL900 PG. 45	P2542 TO P2546 PG. 46	P1843W PG. 47	P1354W PG. 47
						
2266993 - UH10Z PG.47	LS 503 (ZP & HG) PG.47	LS 504 (ZP & HG) PG.47				


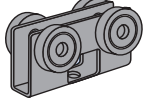
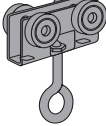
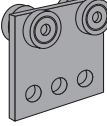
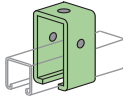
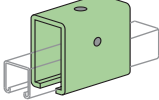


# Unistrut Pictorial Index

## Beam Clamps

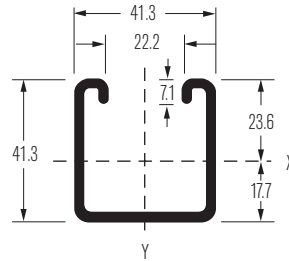
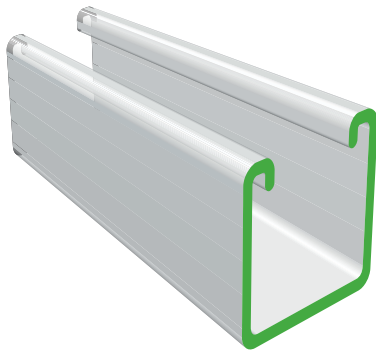
						
P2676 PG. 48	P2676 - SWIVEL NUT PG. 49	P2677 PG. 48	P2682 PG. 49	P1386 PG. 48	P1379 PG. 49	P2785 & P2786 PG. 49
						
P1796 PG. 50	P1271 PG. 50	P1272 PG. 50	P1270 PG. 50	P3087 PG.50	EF1600 Flange Clamp Pg 49	

## Trolley Assemblies

						
P2749 & P2749N PG. 51	P2750 / P2750N PG. 51	P2751 / P2751N PG. 51	P2950 PG. 51	P1834 - TROLLEY SUPPORT PG. 51	P1834A - TROLLEY SUPPORT PG. 51	



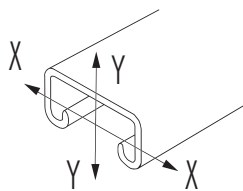
## P1000®



### P1000 - PL/GB/HG

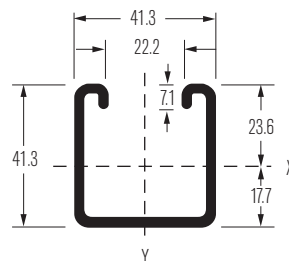
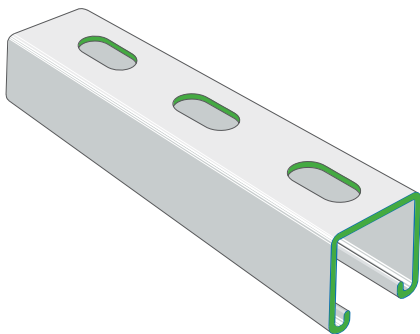
- Mass: 2.59kg/m
- See Note 2 Page 13

Part No.	Material Thickness	Length
P1000-PL	2.5mm	6m
P1000-GB	2.5mm	6m
P1000-HG	2.5mm	6m



A - 330mm<sup>2</sup>  
 kg/m - 2.59kg/m  
 I<sub>x-x</sub> = 0.069 10<sup>6</sup>mm<sup>4</sup>  
 Z<sub>x-x</sub> = 2.920 10<sup>3</sup>mm<sup>3</sup>  
 r<sub>x-x</sub> = 14.5mm  
 I<sub>y-y</sub> = 0.092 10<sup>6</sup>mm<sup>4</sup>  
 Z<sub>y-y</sub> = 4.451 10<sup>3</sup>mm<sup>3</sup>  
 r<sub>y-y</sub> = 16.7mm

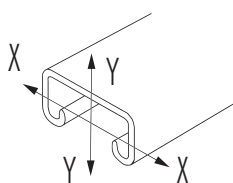
L(mm)	Fmax(kN)	fmax(mm)	F(kN)
250	14.83	0.22	45.51
500	7.42	0.87	36.84
750	4.94	1.97	28.22
1000	3.71	3.50	21.44
1250	2.97	5.46	16.42
1500	2.47	7.87	13.20
1750	2.12 (2)	10.71	11.00
2000	1.85 (2)	13.99	9.35
2250	1.65 (2)	17.70	8.05
2500	1.48 (2)	21.85	7.01
2750	1.35 (2)	26.44	6.14
3000	1.24 (2)	31.47	-



### P1000T - PL/GB/HG

- Slots: 14 wide x 28 long at 50 cm (approx.)
- Mass: 2.32kg/m
- See Note 2 Page 13

Part No.	Material Thickness	Length
P1000-PL	2.5mm	6m
P1000-GB	2.5mm	6m
P1000-HG	2.5mm	6m



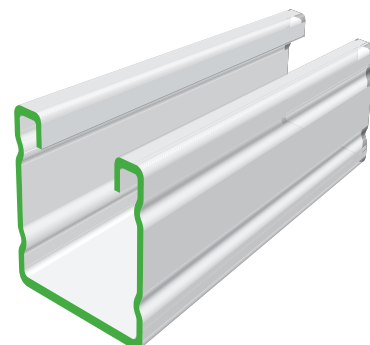
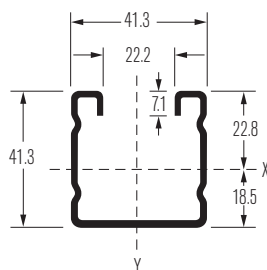
A - 295mm<sup>2</sup>  
 kg/m - 2.32kg/m  
 I<sub>x-x</sub> = 0.059 10<sup>6</sup>mm<sup>4</sup>  
 Z<sub>x-x</sub> = 2.698 10<sup>3</sup>mm<sup>3</sup>  
 r<sub>x-x</sub> = 14.1mm  
 I<sub>y-y</sub> = 0.091 10<sup>6</sup>mm<sup>4</sup>  
 Z<sub>y-y</sub> = 4.423 10<sup>3</sup>mm<sup>3</sup>  
 r<sub>y-y</sub> = 17.6mm

L(mm)	Fmax(kN)	fmax(mm)	F(kN)
250	13.35	0.20	40.96
500	6.68	0.78	33.16
750	4.49	1.77	25.40
1000	3.34	3.15	19.30
1250	2.67	4.91	14.78
1500	2.22	7.08	11.88
1750	1.91 (2)	9.64	9.90
2000	1.66 (2)	12.59	8.41
2250	1.48 (2)	15.93	7.24
2500	1.33 (2)	19.66	6.31
2750	1.21 (2)	23.80	5.53
3000	1.12 (2)	28.32	-

## P2000

### P2000 - PL/GB/HG

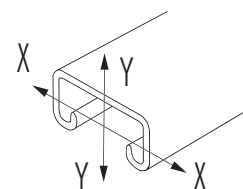
- Mass: 1.79kg/m
- (2) See Note 2 Page 13



L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	10.30		0.20	32.92
500	6.06		0.94	26.55
750	4.04		2.12	19.21
1000	3.03		3.77	12.91
1250	2.42		5.89	9.03
1500	2.02		8.48	6.89
1750	1.73 (2)		11.54	5.56
2000	1.27 (2)		8.41	5.46
2250	1.35 (2)		19.07	4.02
2500	1.21 (2)		23.55	3.53
2750	1.10 (2)		28.49	3.14
3000	1.01 (2)		33.91	2.82

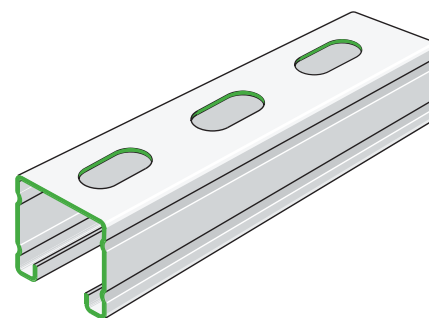
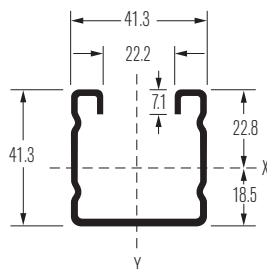
Part No.	Material Thickness	Length
P2000-PL	1.6mm	6m
P2000-GB	1.6mm	6m
P2000-HG	1.6mm	6m

A - 228mm<sup>2</sup>  
 kg/m - 1.79kg/m  
 I x-x = 0.052 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 2.297 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 15.2mm  
 I y-y = 0.065 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 3.143 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 16.9mm



### P2000T - PL/GB/HG

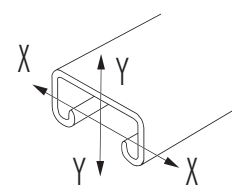
- Slots: 11 wide x 28 long at 50 cm (approx.)
- Mass: 1.62kg/m
- (2) See Note 2 Page 13



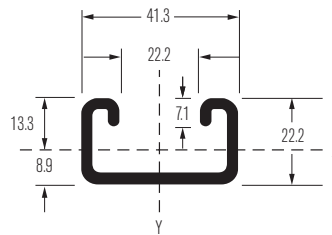
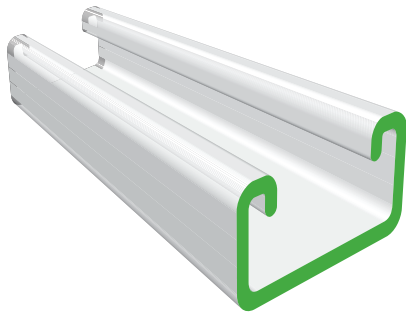
L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	9.27		0.18	29.63
500	5.45		0.85	23.90
750	3.64		1.91	17.29
1000	2.73		3.39	11.62
1250	2.18		5.30	8.13
1500	1.82		7.63	6.20
1750	1.56 (2)		10.39	5.00
2000	1.14 (2)		7.57	4.91
2250	1.22 (2)		17.16	3.62
2500	1.09 (2)		21.20	3.18
2750	0.99 (2)		25.64	2.83
3000	0.91 (2)		30.52	2.83

Part No.	Material Thickness	Length
P2000T-PL	1.6mm	6m
P2000T-GB	1.6mm	6m
P2000T-HG	1.6mm	6m

A - 206mm<sup>2</sup>  
 kg/m - 1.62kg/m  
 I x-x = 0.045 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 2.036 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 14.7mm  
 I y-y = 0.065 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 3.125 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 17.7mm



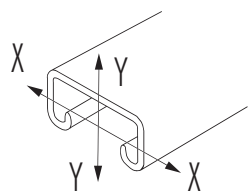
## P3300



### P3300 - PL/GB/HG

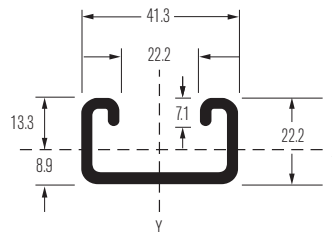
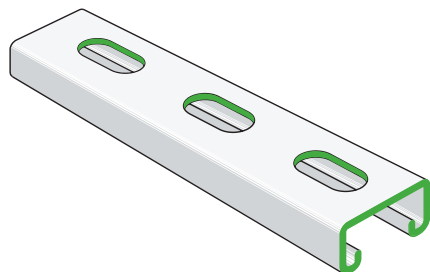
- Mass: 1.82kg/m
- (2) See Note 2 Page 13

Part No.	Material Thickness	Length
P3300-PL	2.5mm	6m
P3300-GB	2.5mm	6m
P3300-HG	2.5mm	6m



A - 232mm<sup>2</sup>  
 kg/m - 1.82kg/m  
 I x-x = 0.013 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 0.999 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 7.6mm  
 I y-y = 0.055 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 2.661 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 15.4mm

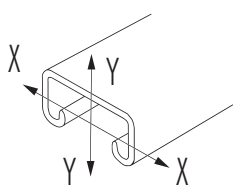
L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	5.52		0.42	34.88
500	2.76		1.68	27.76
750	1.84		3.79	19.42
1000	1.38		6.74	12.08
1250	1.10		10.53	7.90
1500	0.92		15.16	5.56
1750	0.79 (2)		20.63	
2000	0.69 (2)		26.95	
2250	0.61 (2)		34.11	
2500	0.55 (2)		42.11	
2750	0.50 (2)		50.95	
3000	0.46 (2)		60.63	



### P3300T - PL/GB/HG

- Slots: 14 wide x 28 long at 50 cm (approx.)
- Mass: 1.55kg/m
- (2) See Note 2 Page 13

Part No.	Material Thickness	Length
P3300T-PL	2.5mm	6m
P3300T-GB	2.5mm	6m
P3300T-HG	2.5mm	6m



A - 197mm<sup>2</sup>  
 kg/m - 1.55kg/m  
 I x-x = 0.011 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 0.912 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 7.5mm  
 I y-y = 0.054 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 2.634 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 16.6mm

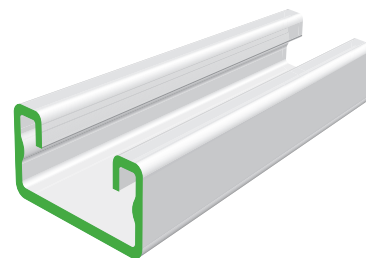
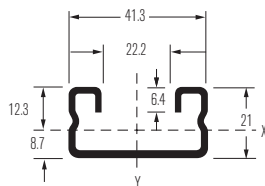
L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	4.97		0.38	31.39
500	2.48		1.51	24.98
750	1.66		3.41	17.48
1000	1.24		6.07	10.87
1250	0.99		9.48	7.11
1500	0.83		13.64	5.00
1750	0.71 (2)		18.57	
2000	0.62 (2)		24.26	
2250	0.55 (2)		30.70	
2500	0.50 (2)		37.90	
2750	0.45 (2)		45.86	
3000	0.41 (2)		54.57	-



## P4000

### P4000 - PL/GB/HG

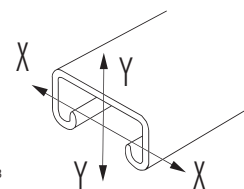
- Mass: 1.26kg/m
- (2) See Note 2 Page 13



L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	4.20		0.44	22.36
500	2.10		1.77	16.30
750	1.40		3.98	10.46
1000	1.05		7.08	6.54
1250	0.84		11.07	4.54
1500	0.70 (2)		15.94	3.35
1750	0.60 (2)		21.69	
2000	0.52 (2)		28.33	
2250	0.47 (2)		35.86	
2500	0.42 (2)		44.27	
2750	0.38 (2)		53.57	
3000	0.35 (2)		63.57	

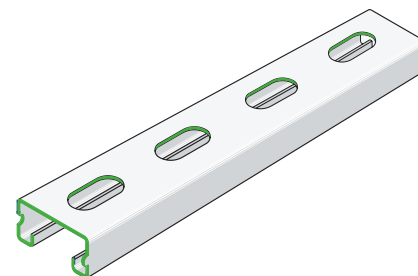
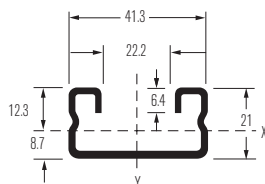
Part No.	Material Thickness	Length
P4000-PL	1.6mm	6m
P4000-GB	1.6mm	6m
P4000-HG	1.6mm	6m

A - 160mm<sup>2</sup>  
 kg/m - 1.26kg/m  
 I x-x = 0.010 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 0.786  
 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 7.8mm  
 I y-y = 0.039 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 1.880 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 15.6mm



### P4000T - PL/GB/HG

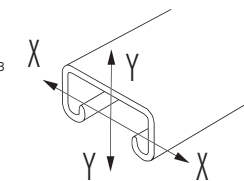
- Slots: 11 wide x 28 long at 50 cm (approx.)
- Mass: 1.08kg/m
- (2) See Note 2 Page 13



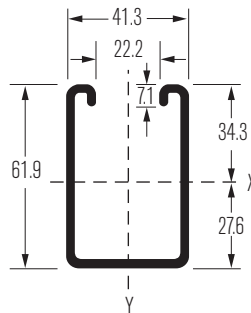
L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	3.78		0.40	20.12
500	1.89		1.59	14.67
750	1.26		3.58	9.41
1000	0.95		6.37	5.89
1250	0.76		9.96	4.09
1500	0.63 (2)		14.35	3.02
1750	0.54 (2)		19.52	
2000	0.47 (2)		25.50	
2250	0.42 (2)		32.27	
2500	0.38 (2)		39.84	
2750	0.34 (2)		48.21	
3000	0.32 (2)		57.21	

Part No.	Material Thickness	Length
P4000T-PL	1.6mm	6m
P4000T-GB	1.6mm	6m
P4000T-HG	1.6mm	6m

A - 138mm<sup>2</sup>  
 kg/m - 1.08kg/m  
 I x-x = 0.008 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 0.729 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 7.6mm  
 I y-y = 0.038 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 1.862 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 16.7mm



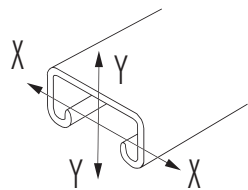
## P5500



### P5500 - PL/GB/HG

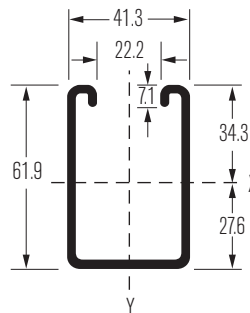
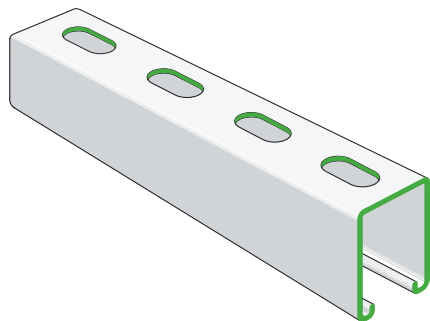
- Mass: 3.40kg/m
- (2) See Note 2 Page 13

Part No.	Material Thickness	Length
P5500-PL	2.5mm	6m
P5500-GB	2.5mm	6m
P5500-HG	2.5mm	6m



A - 433mm<sup>2</sup>  
 kg/m - 3.40kg/m  
 $I_{x-x} = 0.197 \cdot 10^6 \text{mm}^4$   
 $Z_{x-x} = 5.730 \cdot 10^3 \text{mm}^3$   
 $r_{x-x} = 21.3 \text{mm}$   
 $I_{y-y} = 0.131 \cdot 10^6 \text{mm}^4$   
 $Z_{y-y} = 6.328 \cdot 10^3 \text{mm}^3$   
 $r_{y-y} = 17.4 \text{mm}$

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	27.04		0.14	57.03
500	13.84		0.57	45.91
750	9.23		1.29	33.78
1000	6.92		2.29	23.85
1250	5.54		3.58	17.38
1500	4.61		5.15	13.76
1750	3.95 (2)		7.01	11.48
2000	3.46 (2)		9.16	9.98
2250	3.08 (2)		11.59	8.72
2500	2.77 (2)		14.31	7.81
2750	2.52 (2)		17.31	7.06
3000	2.31 (2)		20.61	6.43



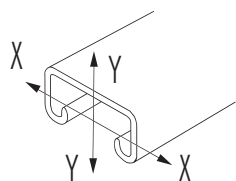
### P5500T - PL/GB/HG

- Slots: 14 wide x 28 long at 50 cm (approx.)
- Mass: 3.12kg/m
- (2) See Note 2 Page 13

\*Non Standard Stock.

Available to order on request

Part No.	Material Thickness	Length
P5500T-PL	2.5mm	6m
P5500T-GB	2.5mm	6m
P5500T-HG	2.5mm	6m



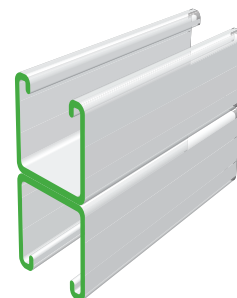
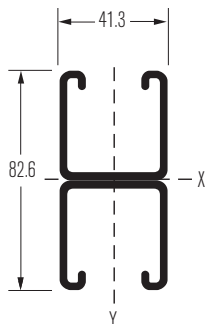
A - 398mm<sup>2</sup>  
 kg/m - 3.12kg/m  
 $I_{x-x} = 0.170 \cdot 10^6 \text{mm}^4$   
 $Z_{x-x} = 5.322 \cdot 10^3 \text{mm}^3$   
 $r_{x-x} = 20.7 \text{mm}$   
 $I_{y-y} = 0.130 \cdot 10^6 \text{mm}^4$   
 $Z_{y-y} = 6.300 \cdot 10^3 \text{mm}^3$   
 $r_{y-y} = 18.1 \text{mm}$

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	24.34		0.13	51.33
500	12.46		0.51	41.32
750	8.31		1.16	30.40
1000	6.23		2.06	21.47
1250	4.99		3.22	15.64
1500	4.15		4.64	12.38
1750	3.56 (2)		6.31	10.33
2000	3.11 (2)		8.24	8.90
2250	2.77 (2)		10.43	7.85
2500	2.49 (2)		12.88	7.03
2750	2.27 (2)		15.58	6.35
3000	2.08 (2)		18.55	5.79

## Combination Struts

### P1001 - PL/GB/HG

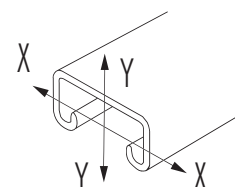
- Mass: 5.18kg/m
- \* Limited by weldshear
- (1) See Note 1 Page 13
- (2) See Note 2 Page 13



L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	25.64 (1)		0.08	97.71
500	19.58		0.50	94.09
750	13.06*		1.13	88.35
1000	9.79		2.00	80.90
1250	7.83		3.13	72.23
1500	6.53		4.50	62.89
1750	5.60 (2)		6.13	53.40
2000	4.90 (2)		8.01	44.21
2250	4.35 (2)		10.13	35.62
2500	3.92 (2)		12.51	28.85
2750	3.56 (2)		15.14	23.85
3000	3.26 (2)		18.02	20.04

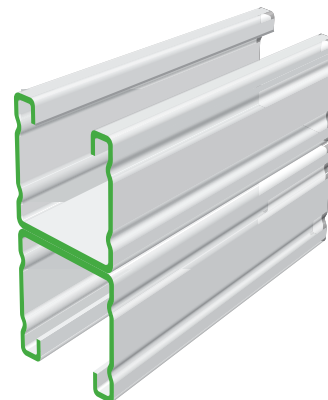
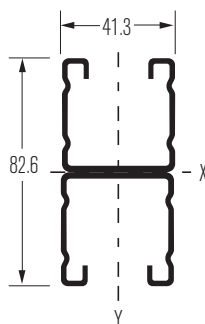
Part No.	Material Thickness	Length
P1001-PL	2.5mm	6m
P1001-GB	2.5mm	6m
P1001-HG	2.5mm	6m

A - 660mm<sup>2</sup>  
 kg/m - 5.18kg/m  
 I x-x = 0.318 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 7.711 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 22.0mm  
 I y-y = 0.184 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 8.902 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 16.7mm



### P2001 - PL/GB/HG

- Mass: 3.58kg/m
- (1) See Note 1 Page 13
- (2) See Note 2 Page 13



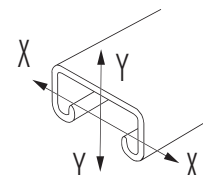
\*Non Standard Stock.

Available to order on request

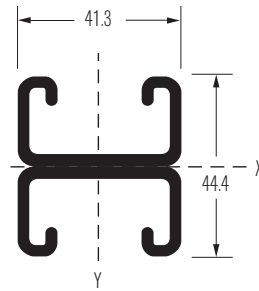
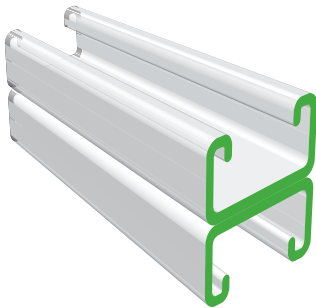
L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	11.78 (1)		0.05	70.84
500	11.78		0.37	68.18
750	11.09		1.17	63.96
1000	8.32		2.07	58.50
1250	6.65		3.24	52.15
1500	5.54		4.67	45.32
1750	4.75 (2)		6.35	38.39
2000	3.48 (2)		4.63	31.77
2250	3.70 (2)		10.50	25.48
2500	3.33 (2)		12.96	20.64
2750	3.02 (2)		15.68	17.06
3000	2.77 (2)		18.66	14.33

Part No.	Material Thickness	Length
P2001-PL	1.6mm	6m
P2001-GB	1.6mm	6m
P2001-HG	1.6mm	6m

A - 138mm<sup>2</sup>  
 kg/m - 3.58kg/m  
 I x-x = 0.008 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 0.729 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 7.6mm  
 I y-y = 0.038 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 1.862 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 16.7mm



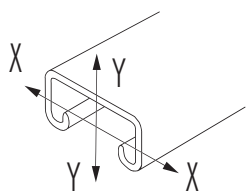
# Combination Struts



**P3301 - PL/GB/HG**

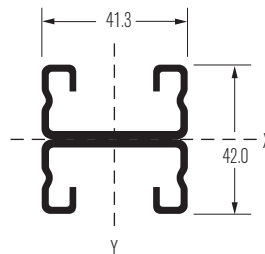
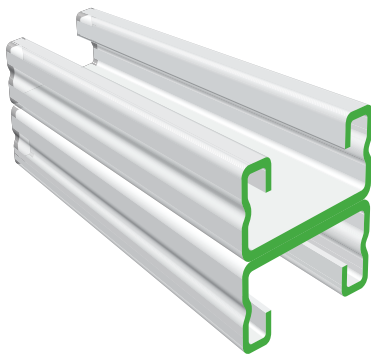
- Mass: 3.64kg/m
- (2) See Note 2 Page 13

Part No.	Material Thickness	Length
P3301-PL	2.5mm	6m
P3301-GB	2.5mm	6m
P3301-HG	2.5mm	6m



A - 465mm<sup>2</sup>  
 kg/m - 3.64kg/m  
 $I_{x-x} = 0.063 \cdot 10^6 \text{mm}^4$   
 $Z_{x-x} = 2.841 \cdot 10^3 \text{mm}^3$   
 $r_{x-x} = 11.6 \text{mm}$   
 $I_{y-y} = 0.110 \cdot 10^6 \text{mm}^4$   
 $Z_{y-y} = 5.329 \cdot 10^3 \text{mm}^3$   
 $r_{y-y} = 15.4 \text{mm}$

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	15.58		0.25	73.20
500	7.79		1.01	67.32
750	5.19		2.26	58.55
1000	3.90		4.02	48.16
1250	3.12		6.28	37.47
1500	2.60		9.05	27.50
1750	2.23 (2)		12.32	20.21
2000	1.95 (2)		16.09	15.47
2250	1.73 (2)		20.36	12.22
2500	1.56 (2)		25.13	
2750	1.42 (2)		30.41	
3000	1.30 (2)		36.19	

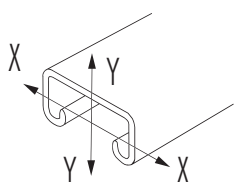


**P4001 - PL/GB/HG**

- Mass: 2.52kg/m
- (2) See Note 2 Page 13

\*Non Standard Stock.  
Available to order on request

Part No.	Material Thickness	Length
P4001-PL	1.6mm	6m
P4001-GB	1.6mm	6m
P4001-HG	1.6mm	6m



A - 320mm<sup>2</sup>  
 kg/m - 2.52kg/m  
 $I_{x-x} = 0.044 \cdot 10^6 \text{mm}^4$   
 $Z_{x-x} = 2.082 \cdot 10^3 \text{mm}^3$   
 $r_{x-x} = 11.7 \text{mm}$   
 $I_{y-y} = 0.078 \cdot 10^6 \text{mm}^4$   
 $Z_{y-y} = 3.764 \cdot 10^3 \text{mm}^3$   
 $r_{y-y} = 15.6 \text{mm}$

L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	10.39		0.24	49.05
500	5.55		1.03	45.24
750	3.70		2.33	39.54
1000	2.78		4.14	32.74
1250	2.22		6.46	25.69
1500	1.85 (2)		9.31	19.06
1750	1.59 (2)		12.67	14.00
2000	1.39 (2)		16.54	10.72
2250	1.23 (2)		20.94	8.47
2500	1.11 (2)		25.85	
2750	1.01 (2)		31.28	
3000	0.93 (2)		37.22	



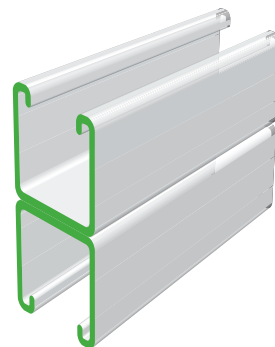
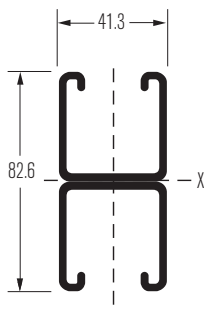
## Combination Struts

### P5501 - PL/GB/HG

- Mass: 6.80kg/m
- (1) See Note 1 Page 13
- (2) See Note 2 Page 13

\*Non Standard Stock.

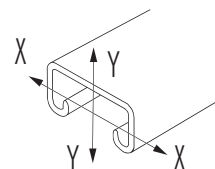
Available to order on request



L(mm)	Fmax(kN)	f	fmax(mm)	F(kN)
250	27.04 (1)		0.03	122.16
500	27.04 (1)		0.21	118.17
750	27.04		0.71	111.82
1000	20.50		1.27	103.50
1250	16.40		1.98	93.71
1500	13.67		2.86	82.98
1750	11.72		3.89	71.88
2000	10.25		5.08	60.91
2250	9.11 (2)		6.43	50.48
2500	8.20 (2)		7.93	41.04
2750	7.46 (2)		9.60	33.92
3000	6.83 (2)		11.42	28.50

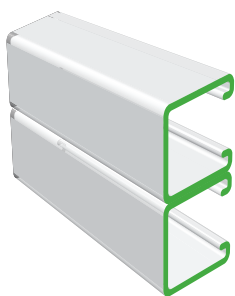
Part No.	Material Thickness	Length
P5501-PL	2.5mm	6m
P5501-GB	2.5mm	6m
P5501-HG	2.5mm	6m

A - 867mm<sup>2</sup>  
 kg/m - 6.80kg/m  
 I x-x = 1.052 10<sup>6</sup>mm<sup>4</sup>  
 Z x-x = 16.990 10<sup>3</sup>mm<sup>3</sup>  
 r x-x = 34.8mm  
 I y-y = 0.261 10<sup>6</sup>mm<sup>4</sup>  
 Z y-y = 12.662 10<sup>3</sup>mm<sup>3</sup>  
 r y-y = 17.4mm

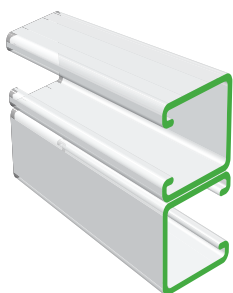


### Optional Combinations - Non Standard Stock. Available to order.

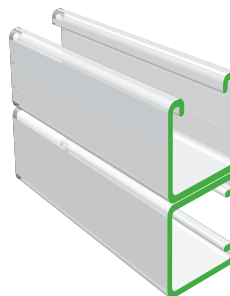
P1001A



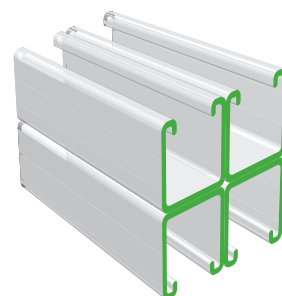
P1001B



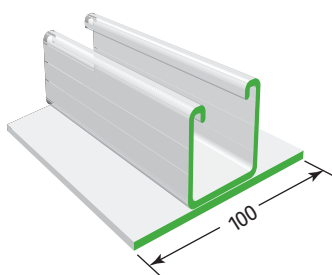
P1001C



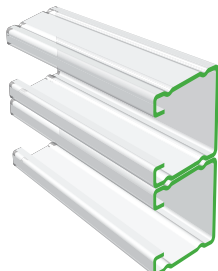
P1001C 41



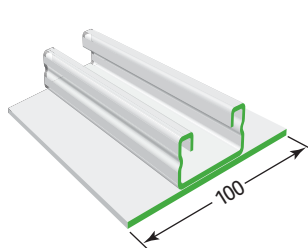
P1003



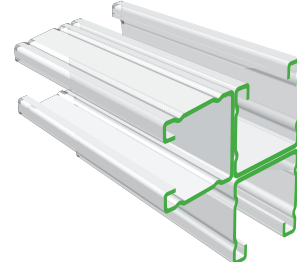
P2001A



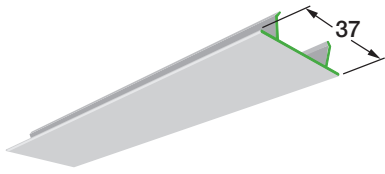
P4002-1



P2001C3

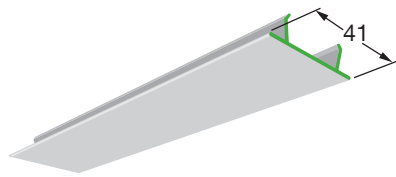
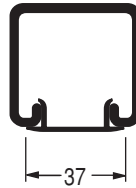


# Strut Accessories



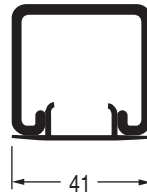
## P1184 - PLASTIC CLOSURE STRIP (UV STABILISED)

- Standard Length 3m
- Mass: 0.11 kg/m



## P1184A - ALUMINIUM CLOSURE STRIP

- Standard Length 3m
- Mass: 0.18 kg/m



## Strut End Caps - Plastic, Uv Stabilised



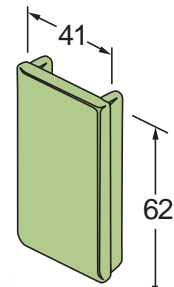
### P2240

- For P1000® & P2000 Strut
- Mass: 0.70 kg/100



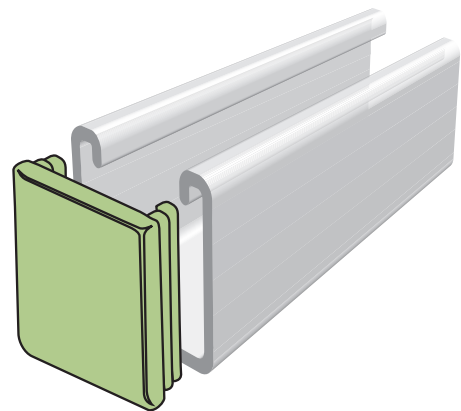
### P4240

- For P3300 & P4000 Strut
- Mass: 0.40 kg/100

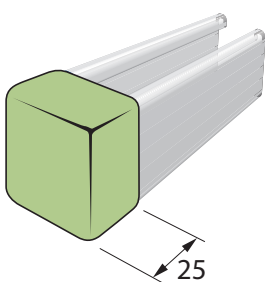


### P5580

- For P5500 Strut
- Mass: 1.2 kg/100



Typical Installation



## P2860-10 - STRUT END CAPS - PLASTIC

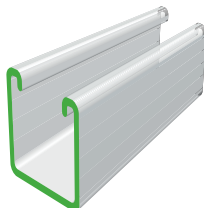
- Fits P1000@ & P2000 Strut
- Mass: 1.54kg/100
- Note: Caps struts provide a protective covering on protruding Struts to guard against personal injury or damage to clothing. They slip easily over the ends of strut.
- Available: White or black only.

## Struts - Special Metals

### Stainless 316 Strut

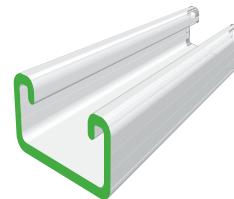
#### P1000-SS

- Mass: 2.76kg/m
- Material Length 6m
- Material Thickness 2.5mm
- 41.3 x 41.3



#### P3300-SS

- Mass: 1.96kg/m
- Material Length 6m
- Material Thickness 2.5mm
- 41.3 x 22.2

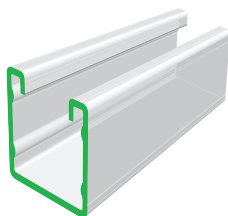


Note: P2000 and P4000 profiles available in stainless steel, made to order.

### Aluminum Strut

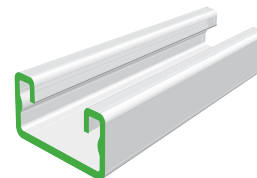
#### P2000-AL

- Mass: 0.77kg/m
- Material Length 6m
- 41.3 x 41.3



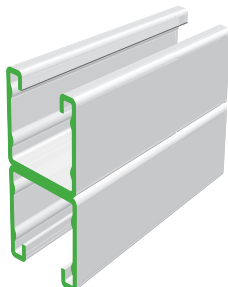
#### P4000-AL

- Mass: 0.58kg/m
- Material Length 6m
- 41.3 x 20.6



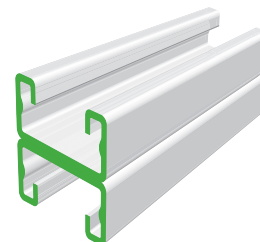
#### P2001-AL

- Material Length 6m
- 41.3 x 82.6



#### P4001-AL

- Material Length 6m
- 41.3 x 41.3



\*Non Standard Stock.  
Available to order on request

\*Non Standard Stock.  
Available to order on request

### Loading Data

Approximate beam load capacities for Strut sections may be obtained from the engineering data sections in this catalogue. Multiply data by the following percentages:

Material	Load Factor
Extruded Aluminum	33%

Nut pullout strength and resistance to slip for sections may be obtained from the engineering data sections in this catalogue. Multiply data by the following percentages:

Material	Slip Percentage Factor	Pullout Percentage Factor
Extruded Aluminum	75%	50%

UNISTRUT® FITTINGS: Some fittings, as shown in this catalogue can be supplied in aluminium on special order.

# Beam and Column Loads

## Notes to Table

Note 1: Loads are governed by shear or web crippling.

Note 2: For uniform beam working loads asymmetric sections are required to be adequately braced to prevent rotation and twist. The table should be read in conjunction with 'Notes on derivation of Structural Data' page 13, and 'How to use Load Tables' (pages 56-57).

## Beams & Columns - P1000® Strut & Combination

Beam Span or Column Unsupported Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN
250	P1000	14.83	0.22	45.51
	P1001	25.64 (1)	0.08	97.71
	P1001C41	25.64 (1)	0.04	195.70
	P1003	17.46	0.15	78.01
500	P1000	7.42	0.87	36.84
	P1001	19.58	0.50	94.09
	P1001C41	25.64	0.30	188.76
	P1003	8.73	0.59	74.48
750	P1000	4.94	1.97	28.22
	P1001	13.06	1.13	88.35
	P1001C41	25.64	1.02	178.34
	P1003	5.82	1.33	68.94
1000	P1000	3.71	3.50	21.44
	P1001	9.79	2.00	80.90
	P1001C41	21.16	2.00	165.65
	P1003	4.36	2.37	61.87
1250	P1000	2.97	5.46	16.42
	P1001	7.83	3.13	72.23
	P1001C41	16.93	3.13	151.78
	P1003	3.49	3.70	53.84
1500	P1000	2.47	7.87	13.20
	P1001	6.53	4.50	62.89
	P1001C41	14.11	4.50	137.52
	P1003	2.91	5.33	45.43

Beam Span or Column Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN
1750	P1000	2.12 (2)	10.71	11.00
	P1001	5.60 (2)	6.13	53.40
	P1001C41	12.09	6.13	123.36
	P1003	2.49	7.25	37.16
2000	P1000	1.85 (2)	13.99	9.35
	P1001	4.90 (2)	8.01	44.21
	P1001C41	10.58	8.01	109.59
	P1003	2.18	9.48	29.41
2250	P1000	1.65 (2)	17.70	8.05
	P1001	4.35 (2)	10.13	35.62
	P1001C41	9.41	10.13	96.41
	P1003	1.94	11.99	23.24
2500	P1000	1.48 (2)	21.85	7.01
	P1001	3.92 (2)	12.51	28.85
	P1001C41	8.47 (2)	12.51	83.93
	P1003	1.75	14.81	18.82
2750	P1000	1.35 (2)	26.44	6.14
	P1001	3.56 (2)	15.14	23.85
	P1001C41	7.70 (2)	15.13	72.11
	P1003	3.56	15.14	23.85
3000	P1000	1.24 (2)	31.47	0.00
	P1001	3.26 (2)	18.02	20.04
	P1001C41	7.05 (2)	18.01	62.18
	P1003	1.45 (2)	21.32	0.00

## Elements of Section - P1000® Strut & Combination

Part No.	Mass kg/m	Area of Section mm <sup>2</sup>	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm
P1000	2.59	330	0.069	2.920	14.5	0.092	4.451	16.7
P1001	5.18	660	0.318	7.711	22.0	0.184	8.902	16.7
P1001C41	10.36	1322	0.688	16.670	22.8	0.931	22.546	26.5
P1003	4.50	580	0.120	3.771	14.4	0.300	6.007	22.8

### Note:

I - Moment of Inertia

Z - Section Modulus

r - Radius of Gyration

For Slip and Pullout Performance details refer to this Tab Section (page 52)



# Beam and Column Loads

## Beams & Columns - P2000 Strut & Combination

Beam Span or Column Unsupported Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN	Beam Span or Column Unsupported Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN
250	P2000	10.30	0.20	32.92	1750	P2000	1.73 (2)	11.54	5.56
	P2001	11.78 (1)	0.05	70.84		P2001	4.75 (2)	6.35	38.39
	P2001C3	11.77 (1)	0.03	106.31		P2001C3	6.24 (2)	5.53	59.16
500	P2000	6.06	0.94	26.55	2000	P2000	1.27 (2)	8.41	4.66
	P2001	11.78	0.37	68.18		P2001	3.48 (2)	4.63	31.77
	P2001C3	11.77 (1)	0.24	101.69		P2001C3	4.01 (2)	3.97	58.18
750	P2000	4.04	2.12	19.21	2250	P2000	1.35 (2)	19.07	4.02
	P2001	11.09	1.17	63.96		P2001	3.70 (2)	10.50	25.48
	P2001C3	11.77 (2)	0.24	94.74		P2001C3	4.85 (2)	9.13	43.10
1000	P2000	3.03	3.77	12.91	2500	P2000	1.21 (2)	23.55	3.53
	P2001	8.32	2.07	58.50		P2001	3.33 (2)	12.96	20.64
	P2001C3	10.91	1.80	86.31		P2001C3	4.37 (2)	11.28	36.13
1250	P2000	2.42	5.89	9.03	2750	P2000	1.10 (2)	28.49	3.14
	P2001	6.65	3.24	52.15		P2001	3.02 (2)	15.68	17.06
	P2001C3	8.73 (2)	2.82	77.21		P2001C3	3.97 (2)	13.64	30.72
1500	P2000	2.02	8.48	6.89	3000	P2000	1.01 (2)	33.91	2.82
	P2001	5.54	4.67	45.32		P2001	2.77 (2)	18.66	14.33
	P2001C3	7.28 (2)	4.06	68.03		P2001C3	3.64 (2)	16.24	26.44

**Note:**

The table should be read in conjunction with 'Notes on Derivation of Structural Data' (page 13) and 'How to use Load Tables' (pages 56-57) in this Tab Section

## Elements of Section - P2000 Strut & Combination

Part No.	Mass kg/m	Area of Section mm <sup>2</sup>	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm
P2000	1.79	228	0.052	2.297	15.2	0.065	3.143	16.9
P2001	3.58	462	0.261	6.321	23.8	0.131	6.367	16.9
P2001C3	5.37	695	0.394	8.302	23.8	0.418	8.410	24.5

**Note:**

I - Moment of Inertia  
Z - Section Modulus  
r - Radius of Gyration

For Slip and Pullout Performance details refer to this Tab Section (page 52)



# Beam and Column Loads

## Beams & Columns - P3300 Strut & Combination

Beam Span or Column Unsupported Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN	Beam Span or Column Unsupported Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN
250	P3300	5.52	0.42	34.88	1750	P3300	0.79 (2)	20.63	0.00
	P3301	15.58	0.25	73.20		P3301	2.23 (2)	12.32	20.21
500	P3300	2.76	1.68	27.76	2000	P3300	0.69 (2)	26.95	0.00
	P3301	7.79	1.01	67.32		P3301	1.95 (2)	16.09	15.47
750	P3300	1.84	3.79	19.42	2250	P3300	0.61 (2)	34.11	0.00
	P3301	5.19	2.26	58.55		P3301	1.73 (2)	20.36	12.22
1000	P3300	1.38	6.74	12.08	2500	P3300	0.55 (2)	42.11	0.00
	P3301	3.90	4.02	48.16		P3301	1.56 (2)	25.13	0.00
1250	P3300	1.10	10.53	7.90	2750	P3300	0.50 (2)	50.95	0.00
	P3301	3.12	6.28	37.47		P3301	1.42 (2)	30.41	0.00
1500	P3300	0.92	15.16	5.56	3000	P3300	0.46 (2)	60.63	0.00
	P3301	2.60	9.05	27.50		P3301	1.30 (2)	36.19	0.00

**Note:**

The table should be read in conjunction with 'Notes on Derivation of Structural Data' (page 13) and 'How to use Load Tables' (pages 56-57) in this Tab Section

## Elements of Section - P3300 Strut & Combination

Part No.	Mass kg/m	Area of Section mm <sup>2</sup>	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm
P3300	1.82	232	0.013	0.999	7.6	0.055	2.661	15.4
P3301	3.64	465	0.063	2.841	11.6	0.110	5.329	15.4

**Note:**

I - Moment of Inertia  
Z - Section Modulus  
r - Radius of Gyration  
For Slip and Pullout Performance details refer to this Tab Section (page 52)

# Beam and Column Loads

## Beams & Columns - P4000 Strut & Combination

Beam Span or Column Unsupported Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN	Beam Span or Column Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN
250	P4000	4.20	0.44	22.36	1750	P4000	0.60 (2)	21.69	0.00
	P4001	10.39	0.24	49.05		P4001	1.59 (2)	12.67	14.00
	P4003	11.16 (1)	0.06	73.53		P4003	4.30 (2)	8.35	26.45
	P4002-1	4.71	0.25	51.41		P4002-1	0.67	12.10	0.00
500	P4000	2.10	1.77	16.30	2000	P4000	0.52 (2)	28.33	0.00
	P4001	5.55	1.03	45.24		P4001	1.39 (2)	16.54	10.72
	P4003	11.16	0.51	68.80		P4003	3.76 (2)	10.90	20.25
	P4002-1	2.35	0.99	42.12		P4002-1	0.59	15.81	0.00
750	P4000	1.40	3.98	10.46	2250	P4000	0.47 (2)	35.86	0.00
	P4001	3.70	2.33	39.54		P4001	1.23 (2)	20.94	8.47
	P4003	10.02	1.53	62.23		P4003	3.34 (2)	13.80	16.01
	P4002-1	2.35	0.99	42.12		P4002-1	0.52	20.01	0.00
1000	P4000	1.05	7.08	6.54	2500	P4000	0.42 (2)	44.27	0.00
	P4001	2.78	4.14	32.74		P4001	1.11 (2)	25.85	0.00
	P4003	7.52	2.73	53.62		P4003	3.01 (2)	17.04	12.97
	P4002-1	1.18	3.95	18.99		P4002-1	0.47	24.70	0.00
1250	P4000	0.84	11.07	4.54	2750	P4000	0.38 (2)	53.57	0.00
	P4001	2.22	6.46	25.69		P4001	1.01 (2)	31.28	0.00
	P4003	6.01	4.26	44.23		P4003	2.73 (2)	20.61	0.00
	P4002-1	0.94	6.18	12.16		P4002-1	0.43	29.89	0.00
1500	P4000	0.70 (2)	15.94	3.35	3000	P4000	0.35 (2)	63.57	0.00
	P4001	1.85 (2)	9.31	19.06		P4001	0.93 (2)	37.22	0.00
	P4003	5.01	6.13	34.96		P4003	2.51 (2)	24.53	0.00
	P4002-1	0.78	8.89	0.00		P4002-1	0.39	35.57	0.00

**Note:**

The table should be read in conjunction with 'Notes on Derivation of Structural Data' (page 13) and 'How to use Load Tables' (pages 56-57) in this Tab Section

## Elements of Section - P4000 Strut & Combination

Part No.	Mass kg/m	Area of Section mm <sup>2</sup>	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm
P4000	1.26	160	0.010	0.786	7.8	0.039	1.880	15.6
P4001	2.52	320	0.044	2.082	11.7	0.078	3.764	15.6
P4002-1	3.22	410	0.019	1.036	6.9	0.247	4.946	24.6
P4003	3.78	480	0.180	5.636	19.3	0.083	4.002	13.1

**Note:**

I - Moment of Inertia  
Z - Section Modulus  
r - Radius of Gyration  
For Slip and Pullout Performance details refer to this Tab Section (page 52)



# Beam and Column Loads

## Beams & Columns - P5500 Strut & Combination

Beam Span or Column Unsupported Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN	Beam Span or Column Unsupported Height mm	Section Number	Uniform Beam Working Load kN	Deflection at Uniform Working Load mm	Max. Loading of Column kN
250	P5500	27.04	0.14	57.03	2250	P5500	3.08 (2)	11.59	8.72
	P5501	27.04 (1)	0.03	122.16		P5501	9.11 (2)	6.43	50.48
500	P5500	13.84	0.57	45.91	2500	P5500	2.77 (2)	14.31	7.81
	P5501	27.04 (1)	0.21	118.17		P5501	8.20 (2)	7.93	41.04
750	P5500	9.23	1.29	33.78	2750	P5500	2.52 (2)	17.31	7.06
	P5501	27.04	0.71	111.82		P5501	7.46 (2)	9.60	33.92
1000	P5500	6.92	2.29	23.85	3000	P5500	2.31 (2)	20.61	6.43
	P5501	20.50	1.27	103.50		P5501	6.83 (2)	11.42	28.50
1250	P5500	5.54	3.58	17.38	3250	P5500	2.13 (2)	24.18	5.89
	P5501	16.40	1.98	93.71		P5501	6.31 (2)	13.41	24.28
1500	P5500	4.61	5.15	13.76	3500	P5500	1.98 (2)	28.05	0.00
	P5501	13.67	2.86	82.98		P5501	5.86 (2)	15.55	0.00
1750	P5500	3.95 (2)	7.01	11.48	3750	P5500	1.85 (2)	32.20	0.00
	P5501	11.72	3.89	71.88		P5501	5.47 (2)	17.85	0.00
2000	P5500	3.46 (2)	9.16	9.89	4000	P5500	1.73 (2)	36.63	0.00
	P5501	10.25	5.08	60.91		P5501	5.13 (2)	20.31	0.00

## Elements of Section - P5500 Strut & Combination

Part No.	Mass kg/m	Area of Section mm <sup>2</sup>	I 10 <sup>6</sup> mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm	I 106mm <sup>4</sup>	Axis XX Z 10 <sup>3</sup> mm <sup>3</sup>	r mm
P5500	3.43	232	0.197	5.730	21.3	0.131	2.661	17.4
P5501	6.86	465	1.052	16.990	34.8	0.261	5.329	17.4

**Note:**

I - Moment of Inertia  
Z - Section Modulus

r - Radius of Gyration

For Slip and Pullout Performance details refer to this Tab Section. (page 52)



## Concrete Inserts

Concrete Inserts are manufactured from standard Unistrut Strut sections. They may be installed in floors, walls or concealed for the support of all kinds of piping, conduit, cable and other industrial equipment. Unistrut nuts can be inserted anywhere along the insert providing a means of attaching fittings or hanger rods.

### Fixing Methods

Note: The lug protruding from the back of the insert are designed to provide positive anchorage in the concrete. Distortion of the lugs is not recommended as it will severely reduce the performance of the insert.

**Form Ply:** Unistrut P1000CI Concrete Inserts are placed face down on the form at the required location and fixed up using 2.8mm x 75mm long flat head nails through holes provided.

The point of the nail should be bent over to prevent lifting should the vibrator make contact.

Note: For P3300CI Concrete Insert, a 50mm long nail is recommended.

**Steel Forms:** Concrete Inserts are either tack welded or wired to reinforcement.

### Filler Methods

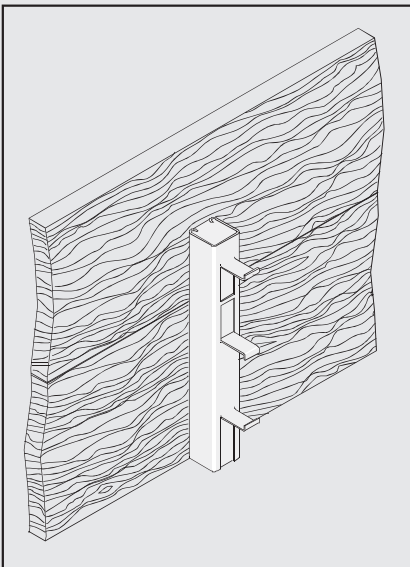
Unistrut Concrete Inserts are supplied foam filled to prevent the ingress of grout and cement.

### Finishes

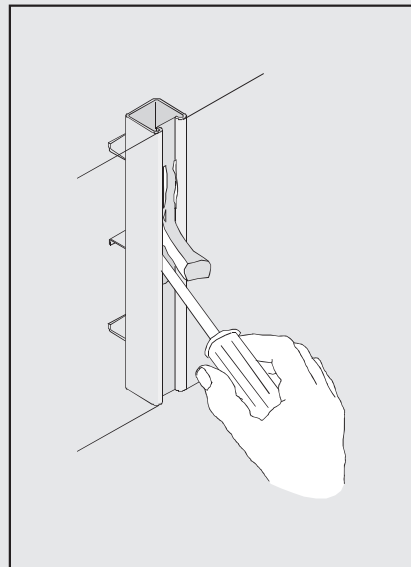
Unistrut Concrete Inserts are available in the following styles and finishes - P1000® & P3300 in Hot Dipped Galvanised.

Note: Test results are available on request

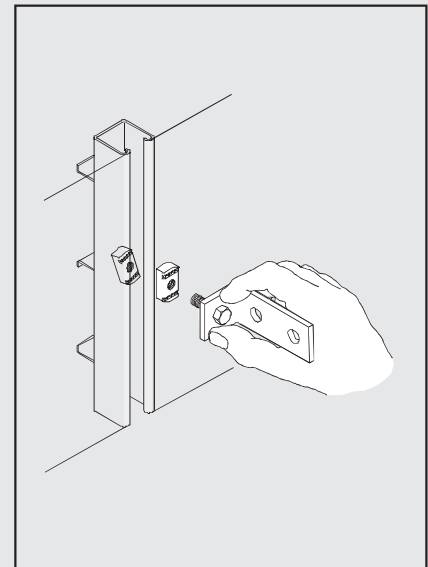
## Installing



1. Install concrete insert.



2. Scrape out filler

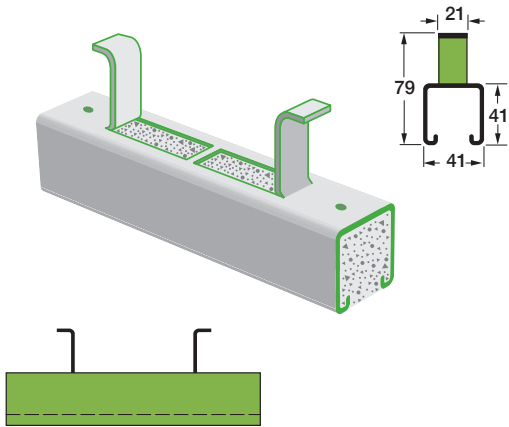


3. Insert strut nut & attach fitting

**Note:**

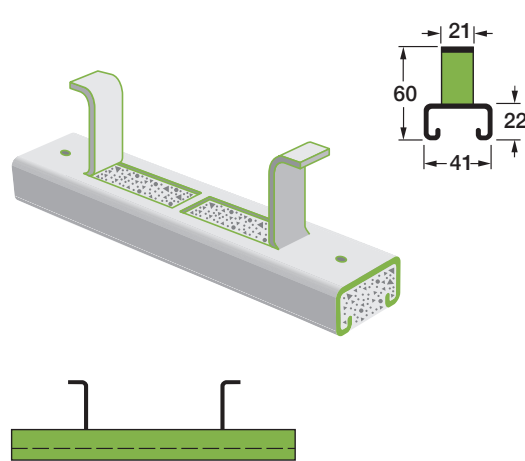
The Unistrut® concrete insert is firmly fixed to the concrete side of the form before pouring. When the forms are removed, the insert is ready for use. Brackets and other components can be attached at any point of the continuous entry Strut.

# Concrete Inserts



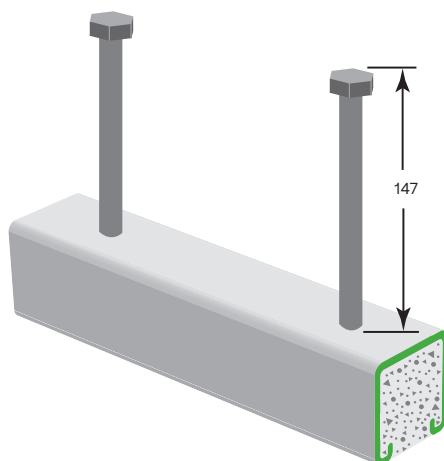
## P1000CI

- Standard Length: 3m or 6m
- Mass: 2.80kg/m
- Finish: Hot Dipped Galvanised.
- Loading Data: The support capacity of any concrete insert depends largely on the strength of the concrete used. Therefore, Atkore and Unistrut can not guarantee any particular load.
- Recommended Pullout Loading\*: Inserts 300mm and over 8.83kN per 300mm.
- Factor of Safety; Approximately 3 Design load based on 34mpa concrete
- **NOTE: Exercise care during installation - Do not bend lugs. Lugs at 100mm centres**



## P3300CI

- Standard Length: 3m or 6m
- Mass: 1.94kg/m
- Finish: Hot Dipped Galvanised.
- Loading Data: The support capacity of any concrete insert depends largely on the strength of the concrete used. Therefore, Atkore and Unistrut can not guarantee any particular load.
- Recommended Pullout Loading\*: Inserts 300mm and over 6.37kN per 300mm.
- Factor of Safety; Approximately 3 Design load based on 34mpa concrete
- **NOTE: Exercise care during installation - Do not bend lugs. Lugs at 100mm centres**



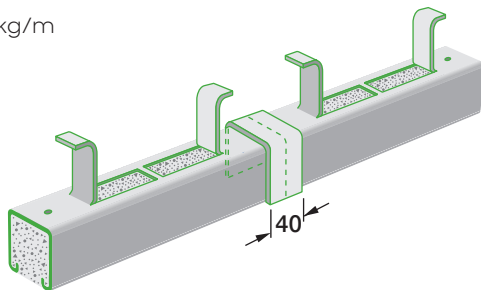
## P3753 Heavy Duty Insert

- Standard Length: 300mm
- Finish: Hot Dipped Galvanised.
- Loading Data: Because the support capacity of any Concrete Insert depends largely on the strength of the concrete used, Atkore and Unistrut® can not guarantee any particular load.
- Recommended Pullout Loading\*: 22kN per 300mm.  
Recommended Loading\*: The recommended design load is based on using two P1010 nuts at no less than 75mm C.C. and no closer than 50mm to either end of the insert. The distance between the insert centerline and the concrete edge must be a minimum of 75mm.

## Concrete Inserts

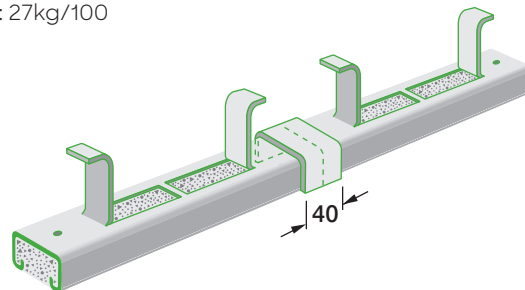
### P1663 CI Joint Cover

- Mass: 4.5kg/m



### P4663 CI Joint Cover

- Mass: 27kg/100

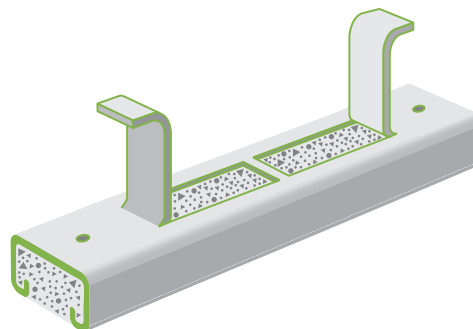
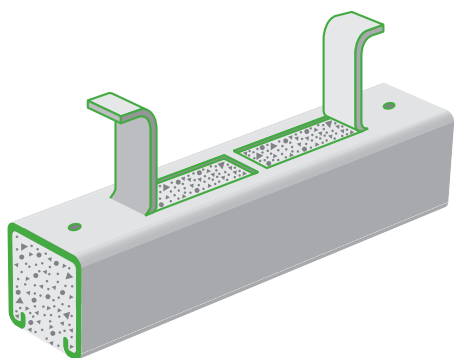


### P1000® Inserts 41mm x 41mm

Insert Length mm	Maximum Allowable Point Load kN	Minimum Spacing of Point Loads mm	Maximum Allowable Uniform Load kN
200	5.34	-	5.34
300	8.83	-	8.83
400	8.83	300	1766
500	8.83	300	1766
600	8.83	300	1766
800	8.83	300	1766
1000	8.83	300	3000kg/m
1100	8.83	300	3000kg/m
1200	8.83	300	3000kg/m
1300	8.83	300	3000kg/m
1400	8.83	300	3000kg/m
1500	8.83	300	3000kg/m
1600	8.83	300	3000kg/m
1700	8.83	300	3000kg/m
1800	8.83	300	3000kg/m
1900	8.83	300	3000kg/m
2000	8.83	300	3000kg/m
2400	8.83	300	3000kg/m
3000	8.83	300	3000kg/m
6000	8.83	300	3000kg/m

### P3300® Inserts 41mm x 22mm

Insert Length mm	Maximum Allowable Point Load kN	Minimum Spacing of Point Loads mm	Maximum Allowable Uniform Load kN
200	4.25	-	4.25
300	6.37	300-	6.37
400	6.37	300	12.74
500	6.37	300	12.74
600	6.37	300	12.74
700	6.37	300	12.74
800	6.37	300	2164.50kg/m
900	6.37	300	2164.50kg/m
1000	6.37	300	2164.50kg/m
1100	6.37	300	2164.50kg/m
1200	6.37	300	2164.50kg/m
1400	6.37	300	2164.50kg/m
1500	6.37	300	2164.50kg/m
1600	6.37	300	2164.50kg/m
2000	6.37	300	2164.50kg/m
2100	6.37	300	2164.50kg/m
2200	6.37	300	2164.50kg/m
3000	6.37	300	2164.50kg/m
6000	6.37	300	2164.50kg/m



# Strut Nuts

## MATERIAL

Unistrut spring nuts are manufactured from steel bars, and after machining operations are completed, zinc plated nuts are case hardened. Hardening assures positive biting action into the inturred edge of the Unistrut Strut.

Similar nuts without springs are also available. Strut nuts are manufactured

by welding studs to UNISTRUT nuts except for USB series which are drop forged. Nuts and bolts are manufactured to AS/NZS1111 & AS/NZS1112.

**Threads:** All threads on the nuts and bolts are metric coarse.

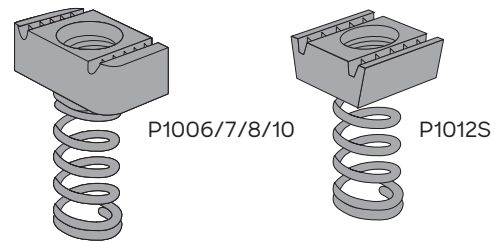
**Design Bolt Torque:** Refer to Engineering Data Page 52

**Finishes:** Nuts and bolts are zinc plated to Australian Standards AS/NZS1897, selected sizes also available in hot dipped galvanised to AS/NZS1214.

**Stainless Steel:** Grade 316 class 70

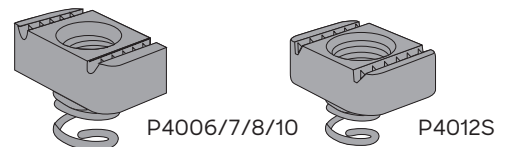
## P1000® & P2000 Strut Nuts, with Springs

Size	Part No. ZP	Part No. HG	Part No. SS	Mass Kg/100
M6	P1006	P1006H	P1006SS	3.2
M8	P1007	P1007H	P1007SS	3.2
M10	P1008	P1008H	P1008SS	4.5
M12	P1010	P1010H	P1013SS	5.4
M16	P1012S	P1012SH	P1012SS	9.5



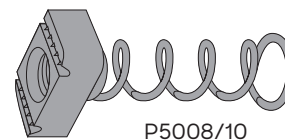
## P3300 & P4000 Strut Nuts, with Springs

Size	Part No. ZP	Part No. HG	Part No. SS	Mass Kg/100
M6	P4006	P4006H	P4006SS	3.2
M8	P4007	P4007H	P4007SS	2.7
M10	P4008	P4008H	P4008SS	4.1
M12	P4010	P4010H	P4013SS	3.6
M16	P4012S	P4012SH	P4012SS	5.1



## P5500 Strut Nuts, with Springs

Size	Part No. ZP	Part No. HG	Part No. SS	Mass Kg/100
M10	P5508	-	-	4.5
M12	P5510	-	-	5.4

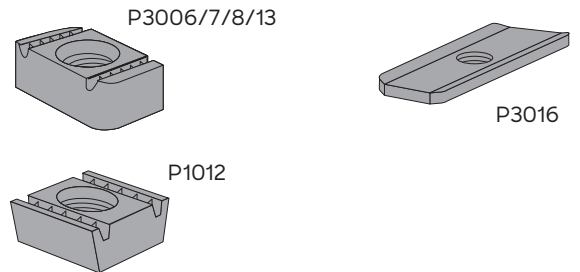




## Strut Nuts No Springs

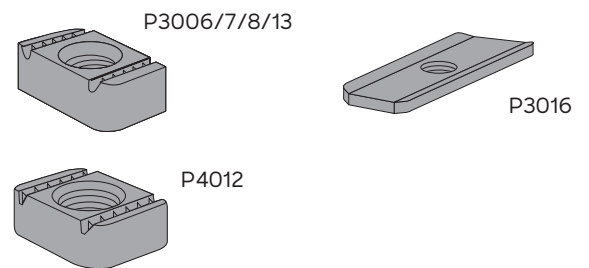
### P1000<sup>®</sup> & P2000 Strut Nuts, No Springs

Size	Part No. ZP	Part No. HG	Part No. SS	Mass Kg/100
M6	P3016	P3016MG	P3016SS	1
M6	P3006	P3006H	P3006SS	2.7
M8	P3007	P3007H	P3007SS	2.7
M10	P3008	P3008H	P3008SS	4.1
M12	P3010	P3010MG	P3013SS	5
M16	P1012	P1012H	-	9.1



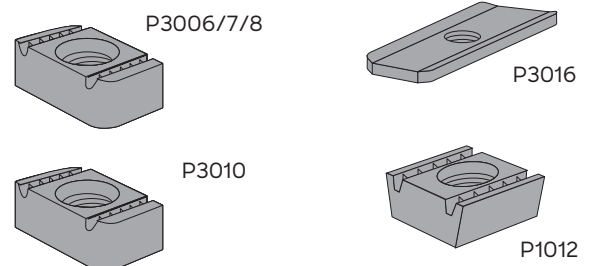
### P3300 & P4000 Strut Nuts, No Springs

Size	Part No. ZP	Part No. HG	Part No. SS	Mass Kg/100
M6	P3016	P3016MG	P3016SS	1
M6	P3006	P3006H	P3006SS	2.7
M8	P3007	P3007H	P3007SS	2.7
M10	P3008	P3008H	P3008SS	4.1
M12	P3013	P3013MG	P3013SS	3.6
M16	P4012	P4012H	P4012SS	5



### P5500 Strut Nuts, No Springs

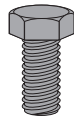
Size	Part No. ZP	Part No. HG	Part No. SS	Mass Kg/100
M6	P3016	P3016MG	P3016SS	1
M6	P3006	P3006H	P3006SS	2.7
M8	P3007	P3007H	P3007SS	2.7
M10	P3008	P3008H	P3008SS	4.1
M12	P3010	P3010MG	P3013SS	3.6
M16	P1012	P1012H	-	9.1



## Hardware

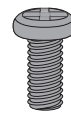
### Hex Head Set Screws

Part No.	Size	Mass kg/100
HHS0620	M6 x 20	0.6
HHS0625	M6 x 25	0.7
HHS0630	M6 x 30	0.8
HHS0820	M8 x 20	1.2
HHS0825	M8 x 25	1.4
HHS0830	M8 x 30	1.5
HHS0840	M8 x 40	1.8
HHS1020	M10 x 20	1.9
HHS1025	M10 x 25	2.1
HHS1030	M10 x 30	2.5
HHS1040	M10 x 40	3.0
HHS1225	M12 x 25	4.2
HHS1230	M12 x 30	4.5
HHS1240	M12 x 40	5.1
HHS1260	M12 x 60	7.5
HHS1640	M16 x 40	9.5



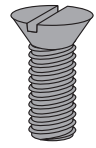
### Pan Head Screws

Part No.	Size	Mass kg/100
PHS0620	M6 x 20	0.6
PHS0625	M6 x 25	0.7
PHS0630	M6 x 30	0.8
PHS0825	M8 x 25	1.3



### Countersunk Head Screw

Part No.	Size	Mass kg/100
CKS0615	M6 x 15	0.3
CKS0620	M6 x 20	0.4
CKS0820	M8 x 20	0.8
CKS1020	M10 x 20	1.3



### Cone Point Set Screw

Part No.	Size	Mass kg/100
CPS1040	M10 x 40	2.3
CPS1240	M12 x 40	3.8
CPS1250	M12 x 50	4.4



### Hexagon Nuts

Part No.	Size	Mass kg/100
HN06	M6	0.2
HN08	M8	0.5
HN10	M10	0.8
HN12	M12	1.8
HN16	M16	3.3
HN20	M20	5.6



### Flat Washers

Part No.	Size	Mass kg/100
FW06	M6	0.1
FW08	M8	0.1
FW10	M10	0.3
FW12	M12	0.4
FW16	M16	0.8
FW20	M20	0.9



### Spring Washers

Part No.	Size	Mass kg/100
SW06	M6	0.1
SW08	M8	0.2
SW10	M10	0.3
SW12	M12	0.4
SW16	M16	0.6
SW20	M20	1.0



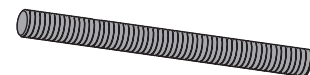
### Shakeproof Lock Washers

Part No.	Size	Mass kg/100
LW06	M6	0.05
LW08	M8	0.06
LW10	M10	0.08
LW12	M12	0.10
LW16	M16	0.13
LW20	M20	1.20



### Unirod Steel Threaded Rod

Part No.	Size	Max. Recommended Tensile Load (kN)	Mass kg/100
UR06	M6	3.22	0.06
UR08	M8	5.84	1.1
UR10*	M10	9.28	1.5
UR12*	M12	13.48	2.4
UR16*	M16	25.12	3.9
UR20*	M20	39.20	6.3



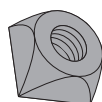
**Standard Finish:** Zinc Plated.  
\*Also available in Heavy Duty Galvanised.

**Standard Length:** 3m

**Unirod Load Data:** Maximum recommended tensile load is based on a safety factor of 2.5 using the appropriate stress area of thread and ultimate tensile strength of 430 MPa.

### P2676 - Swivel Nut

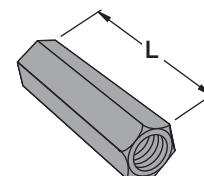
Part No.	Size	Mass kg/100
P267910	M10	1.7
P267912	M12	1.5



Note: Swivel nuts are used with P2676 and P2677. Order size as required.

### Rod Couplers

Part No.	Size	A Length	Mass kg/100
RC06	M6	20	1.2
RC08	M8	20	2.3
RC10*	M10	30	4.0
RC12*	M12	40	7.8
RC16*	M16	50	12.2
RC20*	M20	50	19.0



**Standard Finish:** Zinc Plated.  
\*Also available in Heavy Duty Galvanised.

## Fittings - Flat Plate

### MATERIAL

Unless otherwise noted, all fittings are punch press formed from plate or strip steel.

### FITTING APPLICATION

All product drawings illustrate only one application of each fitting. In most cases many other applications are possible.

The members shown in the illustrations are P1000®, 41mm square. Nuts and bolts are not included with the fitting and must be ordered separately.

### DESIGN LOAD DATA

Design load data, where shown, is based on the ultimate strength of the connection with a safety factor of 2.5.

### DESIGN BOLT TORQUE

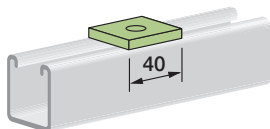
Refer to Engineering Data page 52.

### FINISHES

All fittings in this section are available in zinc plated finish to New Zealand's Standard AS/NZ1789 and Hot Dipped Galvanised to AS/NS4680.

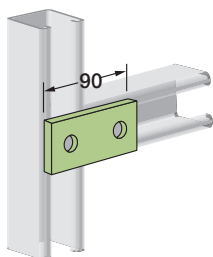
### P1062 - P1964

Part No.	Bolt Size	Hole Size	Mass kg/100
P1062	8	9	5.9
P1063	10	12	5.7
P1064	12	14	5.5
P1964	16	18	5.4



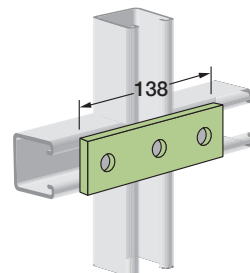
### P1065

- Mass: 13.4kg/100



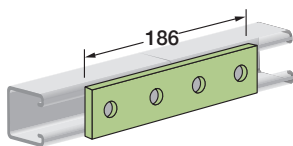
### P1066

- Mass: 20kg/100



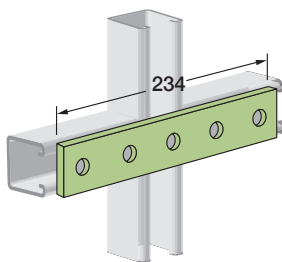
### P1067

- Mass: 26.7kg/100



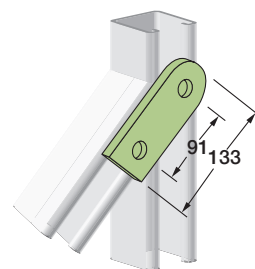
### P1941

- Mass: 34.2kg/100



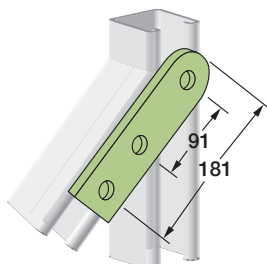
### P2325

- Mass: 19.2kg/100



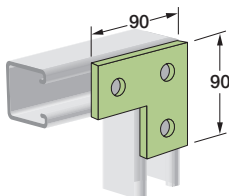
### P2324

- Mass: 25.9kg/100



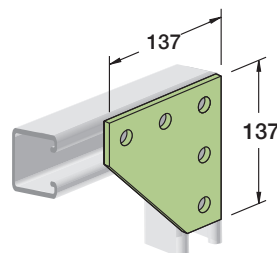
### P1036

- Mass: 20.9kg/100



### P1873

- Mass: 56.7kg/100

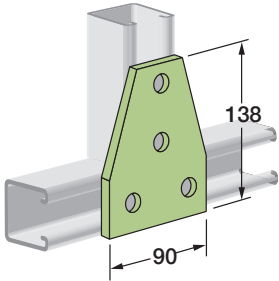


Standard Dimensions for 41mm width series Strut fittings (Unless Otherwise Shown on Drawing)  
Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Centre: 48mm; Width: 40mm

# Fittings - 90°, Angle

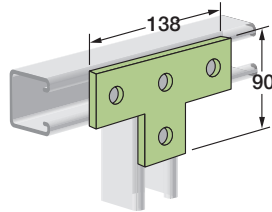
**P1358**

- Mass: 40kg/100



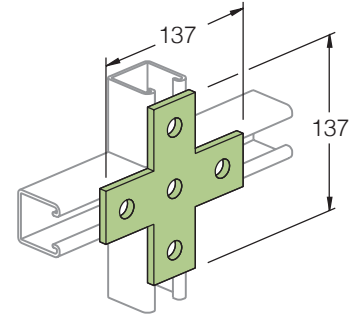
**P1031**

- Mass: 29.2 kg/100



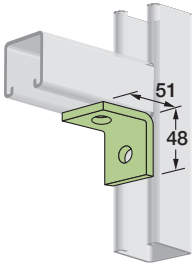
**P1028**

- Mass: 39.7kg/100



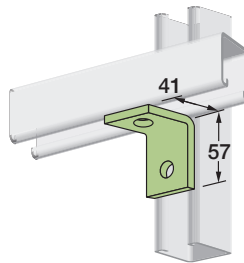
**P1026**

- Mass: 14.2kg/100



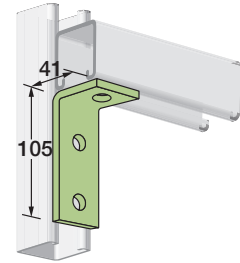
**P1068**

- Mass: 14.2kg/100



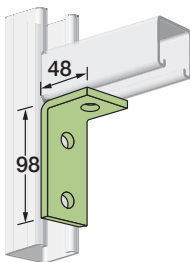
**P1326**

- Mass: 20kg/100



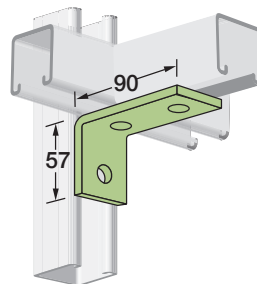
**P1346**

- Mass: 20kg/100



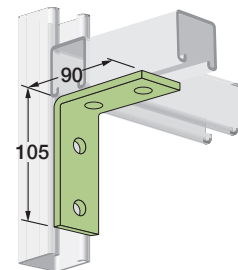
**P1458**

- Mass: 20kg/100



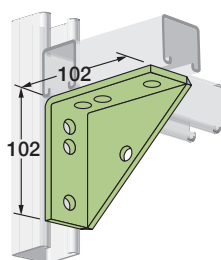
**P1325**

- Mass: 27.5kg/100



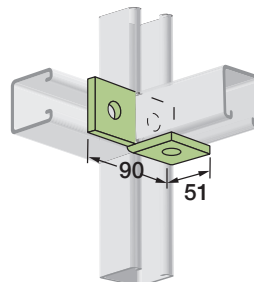
**P2484**

- Mass: 50.9kg/100



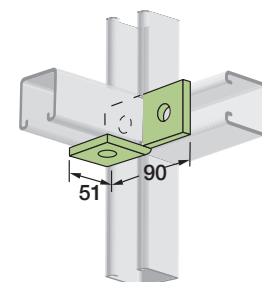
**P1037**

- Mass: 20.9kg/100



**P1038**

- Mass: 20.9kg/100

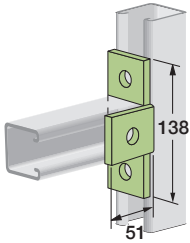


Standard Dimensions for 41mm width series Strut fittings (Unless Otherwise Shown on Drawing)  
Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Centre: 48mm; Width: 40mm

# Fittings - 90°, Angular & "Z" Shape

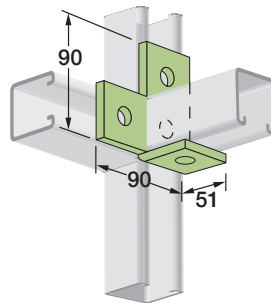
**P1033**

- Mass: 29.2kg/100



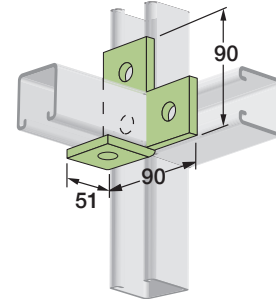
**P1034**

- Mass: 29.2kg/100



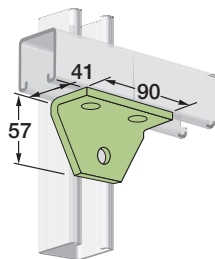
**P1035**

- Mass: 29.2kg/100



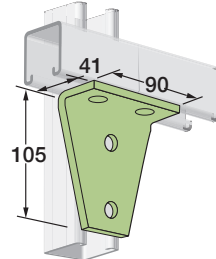
**P1357**

- Mass: 26.7kg/100



**P1359**

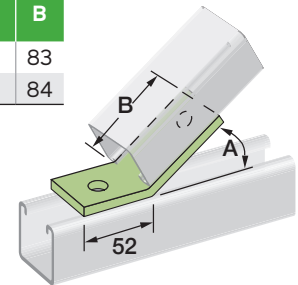
- Mass: 40kg/100



**P2101 & P2103**

- Mass: 21.7kg/100

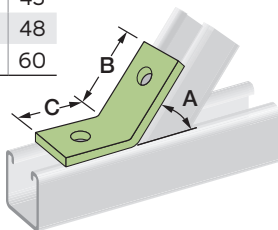
Part No.	A	B
P2101	30	83
P2103	15	84



**P1546, P2095, P2097**

- Mass: 21.7kg/100

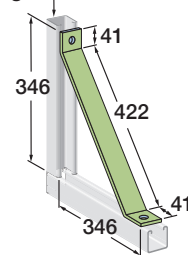
Part No.	A	B	C
P2095	75	91	43
P2097	60	86	48
P1546	45	76	60



**P2452**

- Mass: 85.9kg/100

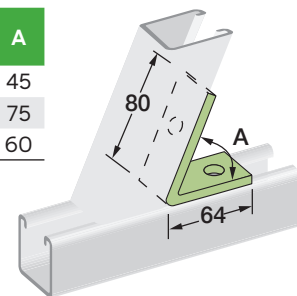
Design Axial Load - 5.36kN



**P1186, P2106, P2108**

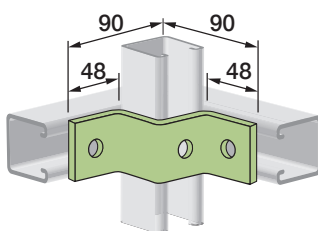
- Mass: 21.7kg/100

Part No.	A
P1186	45
P2106	75
P2108	60



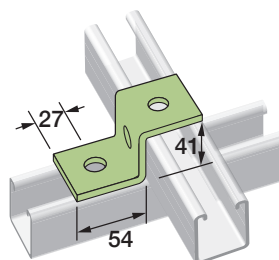
**P1736**

- Mass: 22.5kg/100



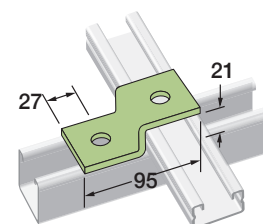
**P1045**

- Mass: 20kg/100



**P4045**

- Mass: 16.7kg/100



P4000 Shown

Standard Dimensions for 41mm width series Strut fittings (Unless Otherwise Shown on Drawing)  
Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Centre: 48mm; Width: 40mm

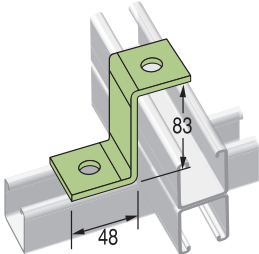




# Fittings - "Z", "U" and Wing Shape

**P1453**

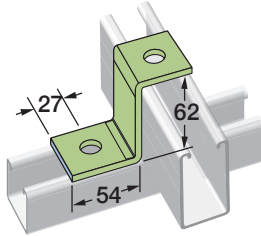
- Mass: 25kg/100



P1001 Shown

**P5545**

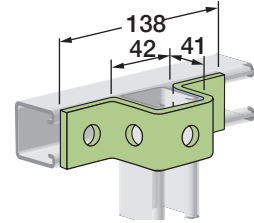
- Mass: 24.2kg/100



P1000® and P5500 Shown

**P1047**

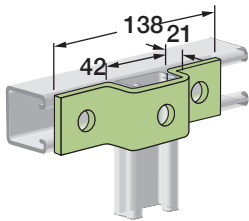
- Mass: 30.9kg/100



P1000® Shown

**P4047**

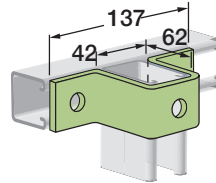
- Mass: 25kg/100



P1000® and P4000 Shown

**P5547**

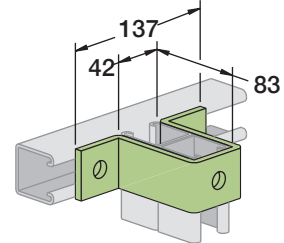
- Mass: 39.2kg/100



P1000® and P5500 Shown

**P1737**

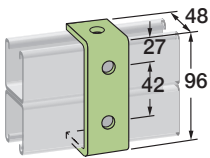
- Mass: 48.4kg/100



P1000® (shown), and P2001

**P1044**

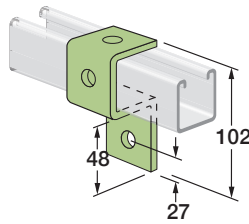
- Mass: 25kg/100



P1001 Shown

**P1046**

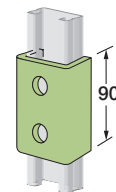
- Mass: 29.2kg/100



P1000® Shown

**P4376**

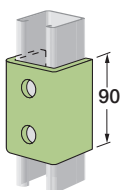
- Mass: 31.7kg/100



P4000 Shown

**P1376**

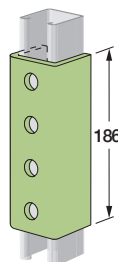
- Mass: 46.7kg/100



P1000® Shown

**P1377**

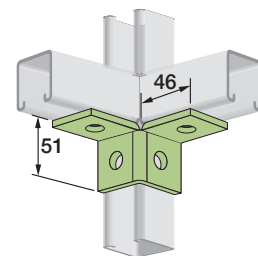
- Mass: 95.9kg/100



P1000® Shown

**P2223**

- Mass: 28.4kg/100



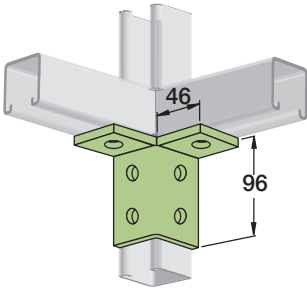
P1000® Shown

Standard Dimensions for 41mm width series Strut fittings (Unless Otherwise Shown on Drawing)  
Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Centre: 48mm; Width: 40mm

# Fittings Wing Shape & Post Bases

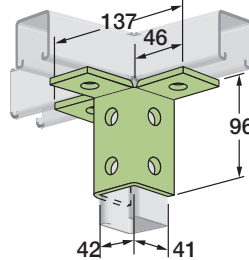
**P2224**

- Mass: 41.7kg/100



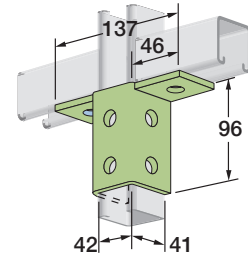
**P2228**

- Mass: 65kg/100



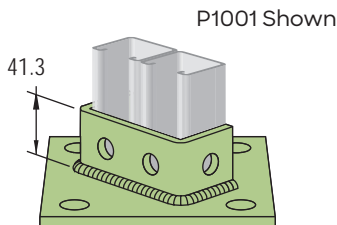
**P2346**

- Mass: 55kg/100

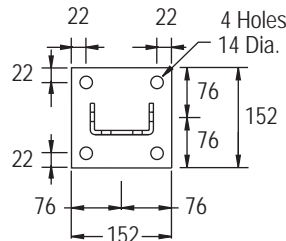


**P2073**

- Mass: 116.7kg/100



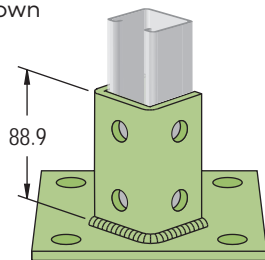
**P2073SQ**



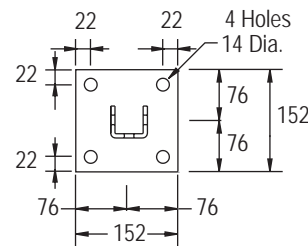
**P2072A**

- Mass: 136.7kg/100

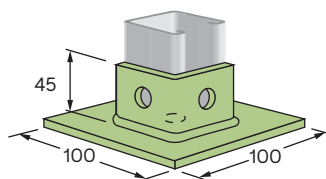
P1000® Shown



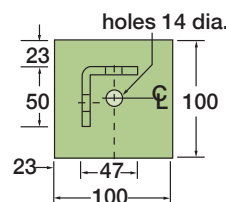
**P2072ASQ**



**P2072S1**



P1000® Shown



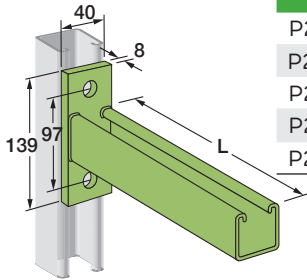
Standard Dimensions for 41mm width series Strut fittings (Unless Otherwise Shown on Drawing)  
Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Centre: 48mm; Width: 40mm



# Cantilever Brackets General Information

## P2663 - 250 to P2663 - 700

Brackets can be used inverted



Part No.	L	Design Uniform Load - kN	Mass kg/100
P2663-250	250	3.01	102
P2663-400	400	1.88	143
P2663-450	450	1.51	153
P2663-550	550	1.36	186
P2663-700	700	1.06	229

### Material

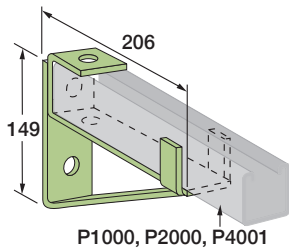
Unless otherwise noted, all fittings are punch press formed from plate or strip steel.

### Fitting Application

All product drawings illustrate only one application of each fitting. In most cases many other applications are possible.

The members shown in the illustrations are P1000®, 41mm square, except where noted otherwise. All 14mm diameter holes use M12 x 24 hex head set screws and M12 nuts - P1010, P4010 or P5510 - depending on the channel used. Nuts and bolts are not included with the fitting and must be ordered separately.

## P1075-4 to P1075-8



Part No.	Design Moment kN*	Mass kg/100
P1075-8	0.58	130

### Design Load Data

Loadings are as shown based on calculations in accordance with AS/NZS 4600 and AS 4100.

### Design Bolt Torque

Refer to Engineering Data (See Page 52).

### Finishes

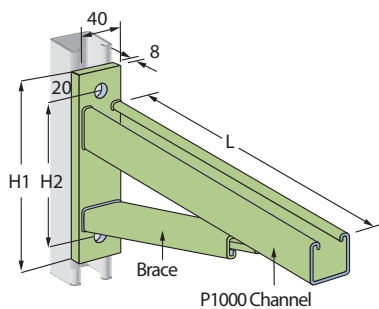
All fittings in this section are Heavy Duty Galvanised to AS/NZS4680 unless otherwise shown.

### Standard Dimensions

The following dimensions apply to all fittings except as noted on the individual part drawings:

- Hole Size - 14mm diameter
- Hole Spacing - 21mm from end
- Hole Spacing - 48mm on centre
- Width - 40mm

## PCL150 to PCL900

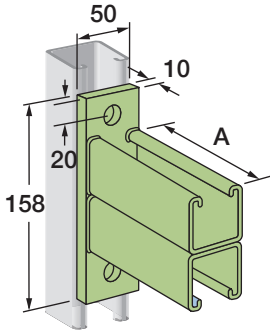


Part No.	L	H1	H2	Design Uniform Load kN	Mass kg/100
PCL150	320	200	160	3.98	170
PCL300	470	200	160	2.82	230
PCL450	635	235	195	2.75	340
PCL600	780	235	195	2.26	380
PCL750	930	300	260	3.83	550
PCL900	1080	300	260	3.58	510

\* Applies only to fittings and not to strength of Unistrut® arm. Designed for use with "Unistrut®" nuts, do not use through bolts.

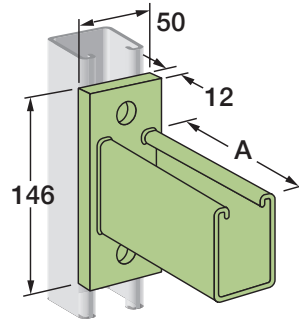
# Cantilever Brackets

**\*P2542 to P2546**



\*Non stock item.  
Made to order.

**\*P5663 - 300 to P5663 - 750**



\*Non stock item.  
Made to order.

Part No.	A	Design Uniform - Load kN	Mass kg/100
P2542	305	7.57	228
P2543	460	5.22	314
P2544	610	3.98	400
P2545	760	3.21	487
P2546	915	2.67	574

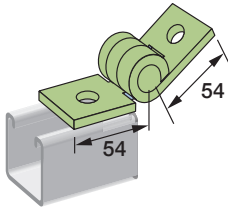
Part No.	A	Design Uniform - Load kN	Mass kg/100
P5663-300	300	6.93	173
P5663-450	450	4.78	224
P5663-600	600	3.62	276
P5663-750	750	2.91	327



# Adjustable Brace Fittings & Beam Clamps

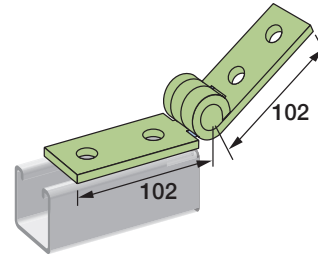
## P1843W

- Mass: 31kg/100



## P1354W

- Mass: 49kg/100



## Universal Hinge (UH10Z)

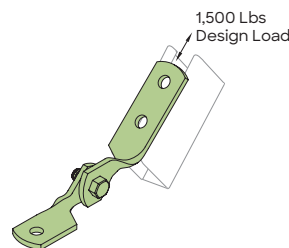
- Mass: 10.8kgs/100
- The ideal solution for suspending threaded rod vertically from an angled roof or ceiling
- Working load with a safety factor of 2 is 8.13kN or 828kg



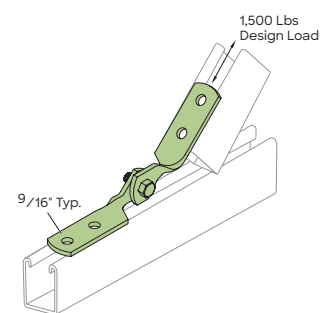
## SPF/LS Hinge

- Design loading of 6.67kN(1500lbs)
- LS503-for Rod Sizes 10mm,12mm.
- LS504 -All hole sizes 15mm

### LS 503



### LS 504



Notes:

LS 503 - For rod sizes 3/8", 1/2", 5/8" & 3/4"

LS504 - All hole sizes 9/16"

## SRC10

- Seismic Retrofit Bracket





## Beam Clamps

### Application

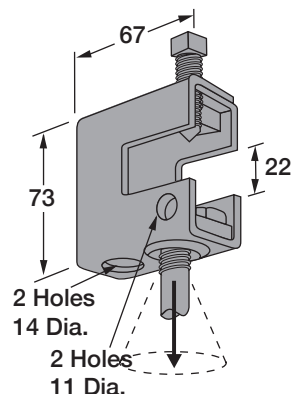
Beam Clamps are designed to provide a fast easy attachment to overhead structures. They alleviate the need for drilling and welding as well as being completely adjustable.

**Finishes** – Standard finishes as shown.

**Design Bolt Torque** – Refer to Engineering Data (page 52)

### P2676

- Mass: 31kg/100
- Beam Attachment Applications: Clamp P2676 provides a means of rod suspension, either fixed, or where a free swing of up to 15 degrees is required. Swivel nuts to be ordered separately.
- Clamp may also be used with P2677 as illustrated in application drawings.
- Available Finishes: Z.P, H.D.G. & S.S.
- M12 x 50 cone-pointed screw & nut included
- Clamp material 3mm thick
- Swivel nut and Lock nut not included
- Rod size up to M12
- Rod swivel 15° all directions



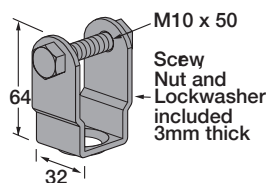
2.23 kN Load

### P2677/P2683

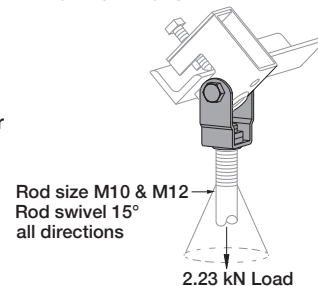
- Mass: 13.6kg/100
- P2677/P2683 clevis hanger to be used with P2677/P2683 to provide angle adjustment and 15 degree free swing for up to M12 rod suspension. Order P2679 series swivel nuts required.
- Standard Finishes: Z.P

\*P2677 Non Standard Stock. Made to order.

### P2677/P2683



### P2677 & P2679

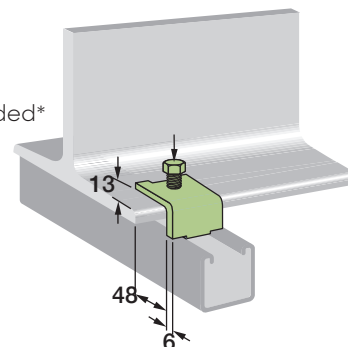


### P1386

- Mass: 12kg/100
- Design Load each: P1000® - 2.67kN P2000 - 2.00kN
- Standard Finishes: H.G

\*\*Use in pairs only

M12 x 40mm hexagon head screw and Unistrut M12 channel nut not included\*

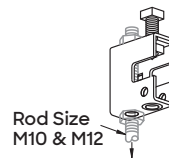
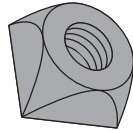


# Beam Clamps

## P2676 - SWIVEL NUT

Part No.	Size	Mass kg/100
P267910	M10	1.7
P267912	M12	1.5

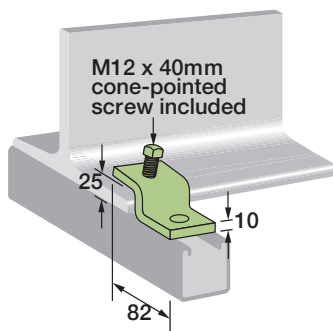
Note: Swivel nuts are used with P2676 and P2677. Order size as required.



Design Load  
1.33 kN



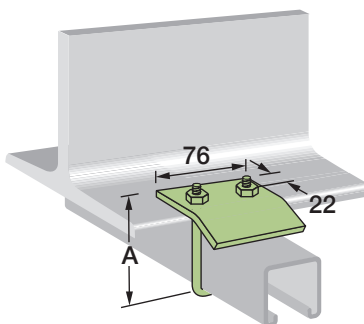
Design Load  
2.23 kN



### P1379

- Mass: 34kg/100
- Design Load each: P1000@ - 2.67kN P2000 - 2.00kN
- Standard Finishes: H.G
- Each clamp requires: M12 x 30 Hex Head Set Screw and M12 Channel Nut (not included)

\*\*Use in pairs only

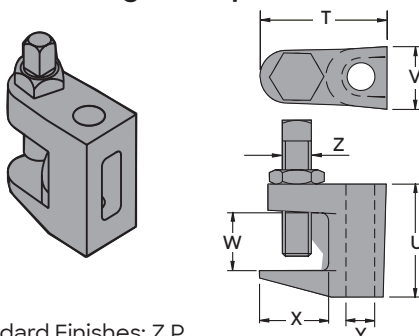


### P2785 & P2786

- P2785 accepts following channels: P1000@, P2000, P3300, P4000
- A = 86 Mass: 38kg/100
- For use with beams up to 19mm
- P2786 accepts following channels: P1001, P2001, P5500
- A = 127 Mass: 41kg/100
- For use with beams up to 19mm
- Design Load each: 4.45kN
- Standard Finishes: H.G

\*\*Use in pairs only

## EF1600 - Flange Clamp



Standard Finishes: Z.P

The simplest, quickest and most cost-effective method of suspending building services from steel beams and suitable for use with parallel or tapered flange beams, the EF1600 is supplied with the back hole drilled to accept a threaded rod. The EF1600 uses a grade 8.8 cup point setscrew to provide a maximum bite into steelwork and maximum load performance.

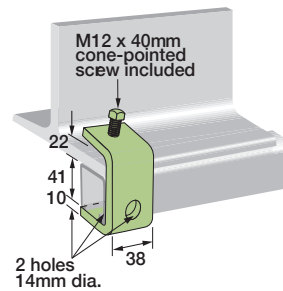
Product Code	Drop Rod	Tensile Loads Safe Working Load 4:1(kN)	Setscrew Torque (Nm)	Lockout Torque (Nm)	T	U	V	W	X	Y	Z
EF1600-10	M10	2.4	8	22	45	40	22	19	22	11	10
EF1600-12	M12	3.1	8	22	50	46	25	23	28	13	10

## Beam Clamps

### P1271

- Mass: 43kg/100
- Design Load each: 2.22kN
- Standard Finishes: H.G
- Requires P1010 Channel nut & bolt

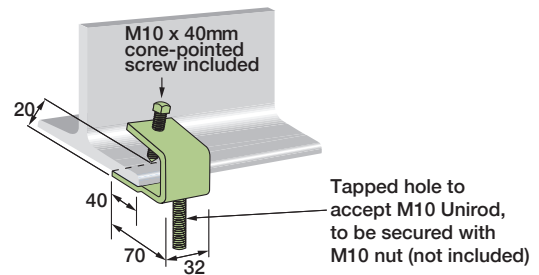
\*\*Use in pairs only



### P1270

- Mass: 29kg/100
- Design Load each: 0.38kN
- Standard Finishes: H.G

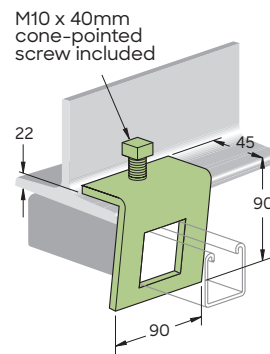
\*\*Use in pairs only



### P1796

- Mass: 49kg/100
- Suits P1000@ & P2000
- Design Load each: 2.22kN
- Standard Finishes: H.G

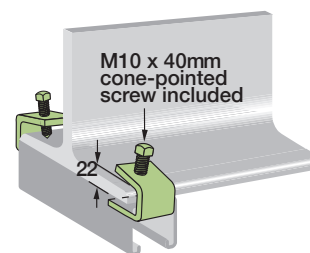
\*\*Use in pairs only



### P1272

- Mass: 18kg/100
- Design Load Per Pair: 2.00kN
- Standard Finishes: H.G

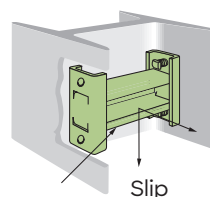
\*\*Use in pairs only



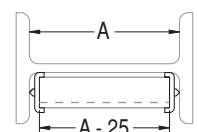
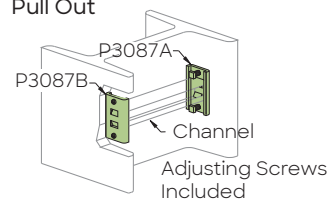
### P3087

- Mass: 124kg/100 (pair)
- Safety Factor: 3
- Standard Finishes: H.G

Channel Type	Design Pullout Load kN	Design Slip Load kN
P1000	4.45	3.56
P2000	2.22	1.33



Pull Out

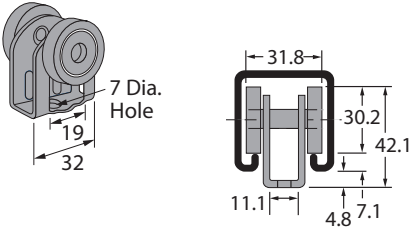


Unistrut® Channel not included  
Hardened cone-point adjusting screws included

# Trolley Assemblies

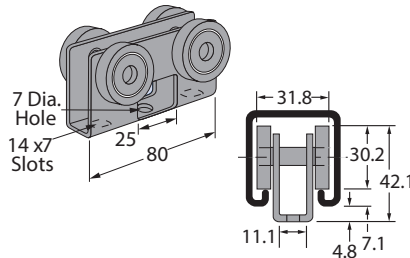
## P2749

- Mass: 10kg/100
- Clevis 2.5mm



## P2750

- Mass: 22kg/100



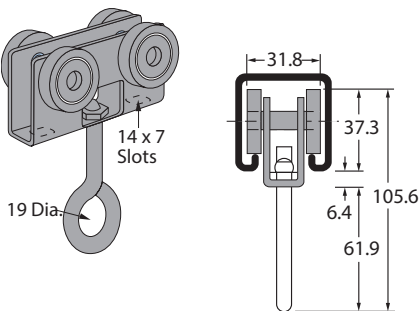
## LOADS (kN)

Part No.	Wheel - Steel Ball Bearing Approx. Design Load kN
P2749	0.22
P2750	0.45
P2751	0.45

Part No.	Wheel - Acetal Approx. Design Load kN
P2749N	0.04
P2750N	0.09
P2751N	0.09

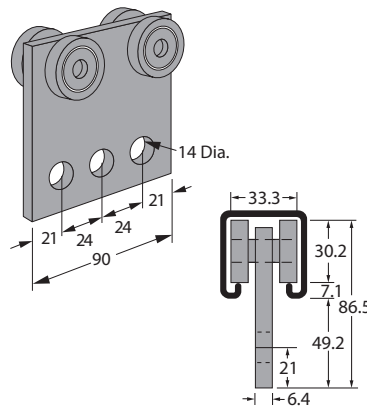
## P2751

- Mass: 26kg/100
- Clevis 2.5mm



## P2950

- Mass: 48kg/100

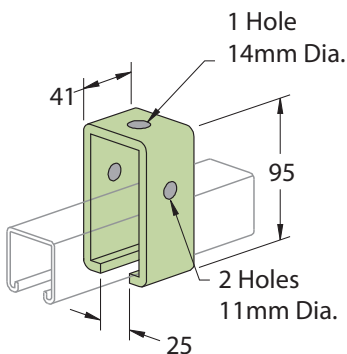


## P2950 LOADS (kN)

MPM	RPM	Design Load in P1000® kN
54	600	1.33
27	300	2.00
9	100	2.67

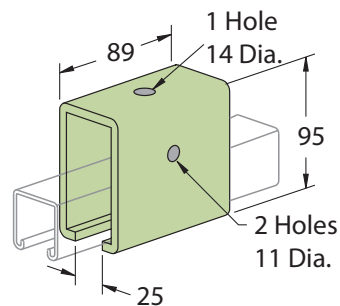
## P1834 - Trolley Support

- Mass: 99.8kg/100 Design Load: 5.34kN
- Requires M10 x 70 Bolt & Nut. Not Included.



## P1834a - Trolley Support

- Mass: 46kg/100 Design Load: 11.12kN
- Requires M10 x 70 Bolt & Nut. Not Included.



# Engineering Data Slip and Pullout

## Slip & Pullout Performance - Zinc Plated

Channel Type	Nut Type	Pullout (kN)	Slip (kN)	Torque (Nm)
P1000	P1006	2.67	1.33*	9
	P1007	3.56	2.22*	22
	P1008	4.45	3.56*	44
	P1010	8.9	6.67*	77
P2000	P1006	2.67	1.33*	9
	P1007	3.56	1.78*	22
	P1008	4.45	3.34*	37
	P1010	4.45	4.54*	37
P3300	P4006	2.67	1.33*	9
	P4007	3.56	2.22*	22
	P4008	4.45	3.56*	44
	P4010	6.67	6.67*	77
P4000	P4006	2.67	1.33*	9
	P4007	3.56	1.78*	22
	P4008	4.45	3.34*	37
	P4010	4.45	4.54*	37
P5500	P5508	4.45	3.56*	44
	P5510	8.9	6.67*	77

Load capacities have been calculated in accordance with the provisions of AS/NZS 4600:1996 "Cold-formed steel structures", and in particular, Section 6.2.2.7. The bolting system chosen using the data provided in the tables will perform as specified when design, fabrication and erection are carried out in accordance with Unistrut's recommendations and accepted building practice.

### Note

To simplify the table, channel nuts with springs only shown with the exception of P3016. Unistrut® nuts without springs will have identical performance.

Nut design loads include a minimum safety factor of 3.

Figures marked with (\*) in the table opposite were obtained using high strength (Grade 8.8) screws.

Figures not marked with (\*) were obtained using standard strength (Grade 4.6) screws. It should be noted that unless otherwise specified, standard strength screws (Grade 4.6) are supplied.

For Slip Loads using 4.6 Grade Commercial bolts and screws, Contact your local Unistrut® Service Centre.

## Slip & Pullout Performance - Stainless Steel

Channel Type	Nut Type	Pullout (kN)	Slip (kN)	Torque (Nm)
P1000	P1006SS	2.45	0.2	3.5
	P1007SS	4.41	0.3	8.5
	P1008SS	6.86	0.6	17.0
	P1013SS	6.86	0.6	30.0

### Heavy Duty Galvanised Channel Nuts

- Apply Pullout Loads as listed
- For Slip Loads - refer to your local Unistrut® Service Centre.

### Note

These figures are results obtained from a comprehensive series of tests carried out by a NATA registered laboratory.

For further technical information please contact your nearest Unistrut® Service Centre.

### Note

Stainless steel grade 316 screws, nuts and channel used to determine loads.

## Slip & Pullout Performance - Aluminium Load Data

Approximate beam load capacities for channel sections may be obtained from the engineering data sections in this catalogue. Multiply data by the percentage in the table below.

Nut pullout strength and resistance to slip for sections may be obtained from the engineering data sections in this catalogue. Multiply data by the percentages in the table below.

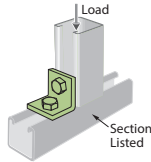
Material	Load Percentage Factor	Slip Percentage Factor	Pullout Percentage Factor
Extruded Aluminium	33%	75%	50%



# Engineering Data Bearing and Design Load

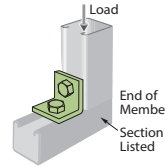
## Safety Factor: 2.5

Section	Recommended Load kN
P1000	29.8
P2000	11.2
P3300	30.25
P4000	11.57



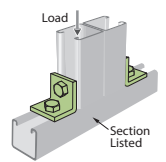
## Safety Factor: 2.5

Section	Recommended Load kN
P1000	13.79
P2000	5.34
P3300	14.23
P4000	5.34



## Safety Factor: 2.5

Section	Recommended Load kN
P1000	34.25
P2000	13.34
P3300	34.7
P4000	13.34

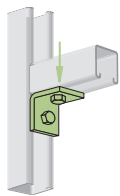


### Design Load Data - Typical Strut Connection

Safety Factor = 2.5 based on ultimate strength of connection. Load diagrams indicate up to two design loads, one for 2.5mm sections (listed as P1000), and one for 1.6mm sections (P2000). Loads are calculated using high tensile (Grade 8.8) screws.

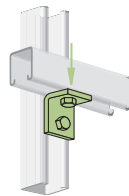
### Ninety Degree Fittings - (When used in Position Shown)

#### P1026



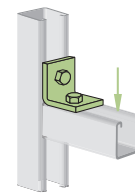
P1000®: 6.67kN  
P2000: 3.34kN  
Both Ends Supported

#### P1068



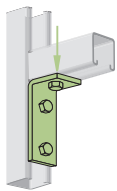
P1000®: 2.22kN  
P2000: 2.22kN

#### P1026



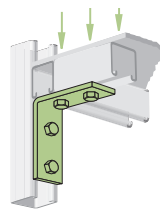
P1000®: 4.45kN  
P2000: 2.22kN  
Both Ends Supported

#### P1346



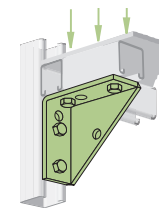
P1000®: 8.9kN  
P2000: 4.0kN  
Both Ends Supported

#### P1325



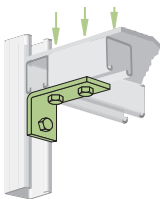
P1000®: 8.9kN  
P2000: 6.67kN  
Both Ends Supported

#### P2484



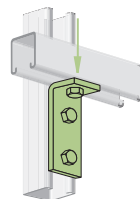
P1000®: 13.34kN  
P2000: 6.67kN  
Both Ends Supported

#### P1458



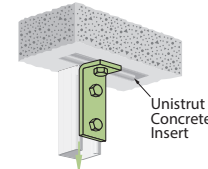
P1000®: 6.67kN  
P2000: 4.45kN  
Both Ends Supported

#### P1326



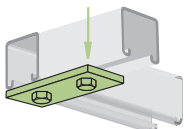
P1000®: 2.22kN  
P2000: 2.22kN

#### P1346



P1000®: 5.34kN  
P2000: 4.45kN

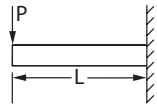
### FLAT PLATE FITTING - P1065



P1000®: 4.45kN  
P2000: 2.67kN  
Both Ends Supported

# Engineering Data Beam Formulae

## Cantilever Beams

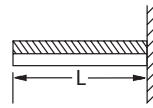


$$V \text{ max.} = P$$

$$M \text{ max.} = PL$$



$$\Delta \text{ max.} = \frac{PL^3}{3EI}$$

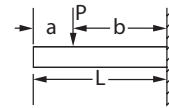


$$V \text{ max.} = W$$

$$M \text{ max.} = \frac{WL}{2}$$



$$\Delta \text{ max.} = \frac{WL^3}{8EI}$$



$$V \text{ max.} = P$$

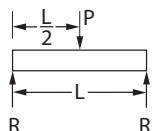
$$M \text{ max.} = Pb$$



$$\Delta \text{ max.} = \frac{Pb^2(3L-b)}{6EI}$$



## Simple Beams

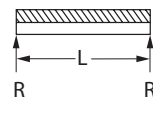
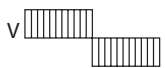


$$R = \frac{P}{2}$$

$$V \text{ max.} = \frac{P}{2}$$

$$M \text{ max.} = \frac{PL}{4}$$

$$\Delta \text{ max.} = \frac{PL^3}{48EI}$$

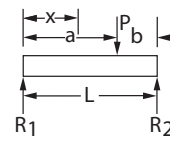


$$R = \frac{W}{2}$$

$$V \text{ max.} = \frac{W}{2}$$

$$M \text{ max.} = \frac{WL}{8}$$

$$\Delta \text{ max.} = \frac{5WL^3}{384EI}$$



$$R_1 = \frac{Pb}{L}$$

$$R_2 = \frac{Pa}{L}$$

$$V \text{ max.} = \frac{Pa}{L}$$

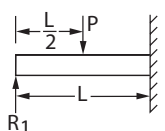
$$M \text{ max.} = \frac{Pab}{L}$$



$$\Delta \text{ max. at } x = \sqrt{\frac{a(a+2b)}{3}}$$

$$\Delta \text{ max.} = \frac{Pab(a+2b)\sqrt{3a(a+2b)}}{27 EIL}$$

## Beams Fixed One End, Supported at Other



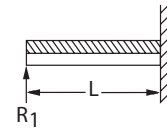
$$R_1 = \frac{5P}{16}$$

$$V \text{ max.} = \frac{11P}{16}$$

$$M \text{ max.} = \frac{3PL}{16}$$

$$\Delta \text{ max. at } x = 0.447L$$

$$\Delta \text{ max.} = 0.009317 \frac{PL^3}{EI}$$



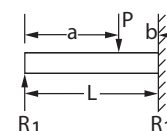
$$R_1 = \frac{3W}{8}$$

$$V \text{ max.} = \frac{5W}{8}$$

$$M \text{ max.} = \frac{WL}{8}$$

$$\Delta \text{ max. at } x = 0.4215L$$

$$\Delta \text{ max.} = \frac{WL^3}{185EI}$$

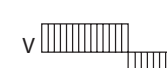


$$R_1 = \frac{Pb^2}{2L^3} (a + 2L)$$

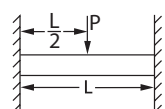
$$R_2 = \frac{Pa}{2L^3} (3L^2 - a^2)$$

$$M \text{ at point of load} = R_1 a$$

$$M \text{ at fixed end} = \frac{Pab}{2L^2} (a + L)$$



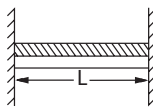
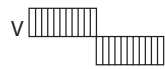
## Beams Fixed at Both Ends



$$V \text{ max.} = \frac{P}{2}$$

$$M \text{ max.} = \frac{PL}{8}$$

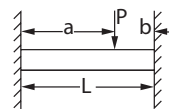
$$\Delta \text{ max.} = \frac{PL^3}{192EI}$$



$$V \text{ max.} = \frac{W}{2}$$

$$M \text{ max.} = \frac{WL}{12}$$

$$\Delta \text{ max.} = \frac{WL^3}{384EI}$$

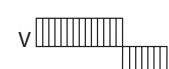


$$R_1 = \frac{Pb^2}{L^3} (3a + b)$$

$$R_2 = \frac{Pa^2}{L^3} (a + 3b)$$

$$M_1 = \frac{Pab^2}{L^2}$$

$$M_2 = \frac{Pa^2b}{L^2}$$



R - Reaction  
M - Moment(Nmm)  
P - Concentrated load (N)

W - Total uniform load (N)  
V - Shear  
L - Length (mm)

$\Delta$  - Deflector(mm)  
E - Modulus of Elasticity(MPa)  
I - Moment of Inertia (mm<sup>4</sup>)



# Engineering Data Conversion Factors

## Design Load Data - Typical Strut Connection

Load tables in this catalogue for 41mm Strut width series are for single span beams supported at the ends. These can be used in the majority of cases. There are times when it is necessary to know what happens with other loading and support conditions. Some common arrangements are shown in Table 1. Simply multiply the loads from the Beam Load Tables by the load factors given in Table 1. Similarly, multiply the deflections from the Beam Load Tables by the deflection factor given in Table 1.

**Table 1**

Load and Support Condition		Load Factor	Deflection Factor
1	Simple Beam - Uniform Load	1.00	1.00
2	Simple Beam Concentrated Load at Centre	0.50	0.80
3	Simple Beam - Two Equal Concentrated Loads at 1/4 Points	1.00	1.10
4	Beam Fixed at Both Ends - Uniform Load	1.50	0.30
5	Beam Fixed at Both Ends - Concentrated Load at Centre	1.00	0.40
6	Cantilever Beam - Uniform Load	0.25	2.40
7	Cantilever Beam - Concentrated Load at End	0.12	3.20
8	Continuous Beam - Two Equal Spans - Uniform Load on One Span	1.30	0.92
9	Continuous Beam - Two Equal Spans - Uniform Load on Both Ends	1.00	0.42
10	Continuous Beam - Two Equal Spans - Concentrated Load at Centre of One Span	0.62	0.71
11	Continuous Beam - Two Equal Spans - Concentrated Load at Centre of Both Spans	0.67	0.48




## Unistrut® Column Loading

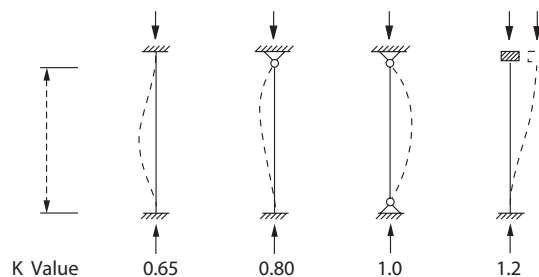
The strength of axially loaded columns or compression members is, in part, dependent on the end conditions, that is, the degree of end fixity or restraint. A column with both ends fixed will support more load than one with both ends free or pin-ended.

Column loads published for UNISTRUT® sections in this catalogue are offered as a guide and assume a partially fixed end condition as usually found in flat ended columns that are laterally tied and braced, i.e.  $K = 1.0$ .

Assumed K values (effective length factors) for columns with varying end restraints are as follows:

### End Condition Code

-  Rotation fixed and translation fixed
-  Rotation free and translation fixed
-  Rotation fixed and translation free



# Engineering Data Examples

## How To Use Load Tables

### Unistrut<sup>®</sup> Sections as Beams

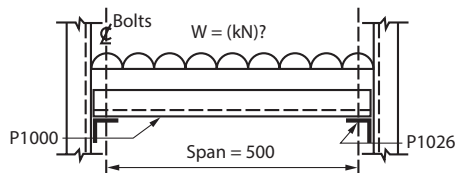
The load capacity of Unistrut<sup>®</sup> members acting as a horizontal beam, between two vertical Unistrut<sup>®</sup> members acting as columns, is governed by:

- The nature of the load.
- The particular section to be used.
- The span of the beam.
- The beam-load capacity of the section for a given span.
- The load capacity of the connectors used to support the beams on the columns.
- The load limitations, if any, resulting from special deflection considerations.

If items a), b) and c) are known, the load capacity is the smallest value of d), e), and f) as read or derived from the listed values in the appropriate tables.

### Example 1

What is the uniformly distributed load capacity of a P1000<sup>®</sup> section used as a beam to span 500mm if P1026 connectors are used to support the beam?



#### Step 1

- Find beam load at maximum permissible stress.
- From P1000<sup>®</sup> Beam and Column in load table page 29, 500mm and Section P1000<sup>®</sup>,  $W = 7.42\text{kN}$ .

#### Step 2

- Find load capacity of connectors.
- From Safe Bearing Loads in load table on page 53, for P1000 section supported on P1026 connectors; Support load = 6.67kN
- Beam load = 2 x support load =  $2 \times 6.67 = 13.34\text{kN}$ .

#### Step 3

- Check deflection limitations.
- No special deflection considerations apply.

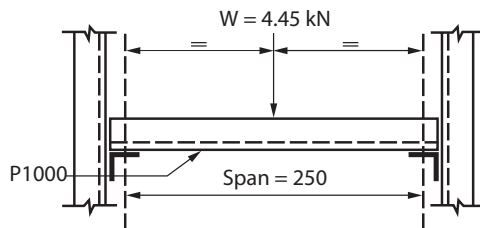
#### Step 4

- Select smallest load value from Step 1 to 3.
- Smallest value is 7.42kN.
- To convert to mass units divide by 0.0098, hence load capacity  $W = 7.42 / 0.0098 = 757\text{kg}$  uniformly distributed.

# Engineering Data Examples

## Example 2

A beam of 250mm span is to carry a central point load of 4.45kN. Check if P1000® section is a satisfactory beam and if so, what type of connector should be used for supports and what is the resultant central deflection?



### Step 1

- Convert point load to equivalent uniformly distributed load by multiplying by 2 (see note on point loads).
- Equivalent U.D.L. =  $4.45 \times 2 = 8.9\text{kN}$ .

### Step 2

- Compare with beam load capacity for P1000® section spanning 250mm. From P1000® Beam and Columns in this Tab Section. Tabulated value = 14.83kN.
- Since this is greater than load to be applied, the P1000® section is satisfactory.

### Step 3

- Determine support loads, which are each half the applied load. Support load = 2.23kN.

### Step 4

- Select appropriate connector from Safe Bearing Loads in this Tab Section.
- Recommended load for P1026 supporting P1000® = 6.67kN.
- As the P1026 connectors exceed the required support load of 2.23kN, use P1026 connectors at each end.

### Step 5

- Calculate central Deflection of beam from
- $\delta_2 = (W_2 / W_1) \times (L_2 / L_1)^3 \times \delta_1$
- (See P1000® Elements of Section, Page 29)
- From Beam load table for P1000 section with  $L_1 = 250\text{mm}$ ,  $W_1 = 14.83\text{kN}$  and  $\delta_1 = 0.22\text{mm}$
- From example data and step 1 above  $W_2 = 8.9\text{kN}$ ,  $L_2 = 250\text{mm}$
- Substituting values in formula
- $\delta_2 = (8.9/14.83) \times (250/250)^3 \times 0.22 = 0.14\text{mm}$
- As this is the value for the equivalent uniformly applied load a correction is necessary to account for a central point load. This is done by multiplying the uniform load deflection by 0.8 (see Notes to Tables). Hence deflection under applied point load:
- $= 0.14 \times 0.8 = 0.11\text{mm}$ .





# Engineering Data Examples

## How to use Load Tables

### Unistrut<sup>®</sup> Sections as Columns

The load capacity of Unistrut<sup>®</sup> Sections acting as columns depends on:

- a. the particular section used.
- b. the actual height of the column, measured between centres of connections to horizontal members.
- c. the location of the resultant axial load with respect to the centre of gravity, CG, of the section (i.e. the intersection of the XX and YY axes as shown on the section diagrams).
- d. the restraint to various kinds of movements of the column offered by the connections to horizontal members at various levels.

If a) and b) are known and if c) and d), for the case being considered, match the conditions in Structural Data Notes then the load capacity of the section can be read directly from the tables under 'maximum column load'.

It is emphasised that, for tabulated values to be used directly, the resultant load must be concentric (i.e. act through the C.G.) and connections at each end of a free column height must restrain those ends from both horizontal and torsional movement. If these conditions do not apply, reference should be made to the appropriate sections of AS/NZS 4600 since it is most likely that a smaller value than the listed one should be used.

### Example 3

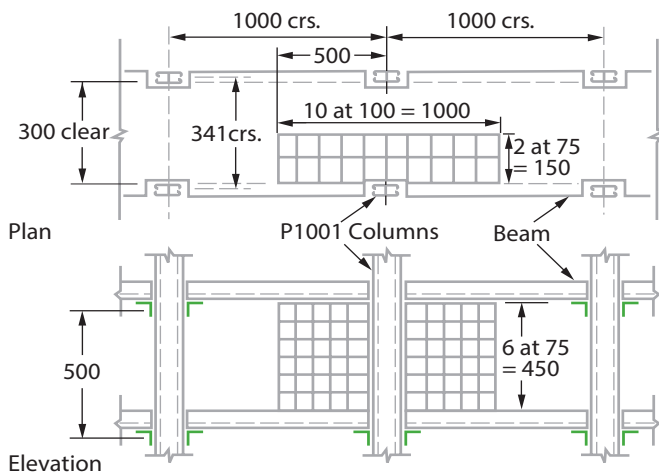
Island-type storage shelving is to be constructed using P1001 main posts (columns) at 1000 x 341mm centres. Shelves are to be at 500mm vertical spacing starting from the floor and connected to the posts so that concentric loading and translational and torsional restraint are provided at each level under full load conditions.

If the shelves are to carry packages of bolts stacked six high per shelf and the packages measure 75 x 75 x 100mm with a mass of 6.5kg each, what is the maximum height (number) of shelving that can be used?





# Engineering Data Examples



**Note**

If the bottoms of the columns bear onto P1000® bearers, which in turn are fixed to the ground, the load capacity of the column would be determined by the Recommended Bearing Load, (refer to Safe Bearing Loads in this Tab Section) of 34.25 kN.

The number of shelves would then be given by:  $34.25 / 7.64 = 4.48$  i.e. 4 shelves, totalling 2.0 metres high.

**Step 1**

- Determine Concentric load for shelf.
- Plan area supported by each main column =  $1000 \times 150 = 150,000\text{mm}^2$
- This area can be packed with 20 packages
- 75 x 100mm in plan i.e. 120 packages per shelf.
  - Hence mass per shelf =  $6.5 \times 120\text{kg}$
  - and load per shelf =  $6.5 \times 120 \times 0.0098$
  - = 7.64kN per column.

**Step 2**

- Determine load capacity of P1001 section.
- From P1001 Beams and Columns Table on page 29 for P1001 with height 500mm.
- Maximum column load = 94.09kN.

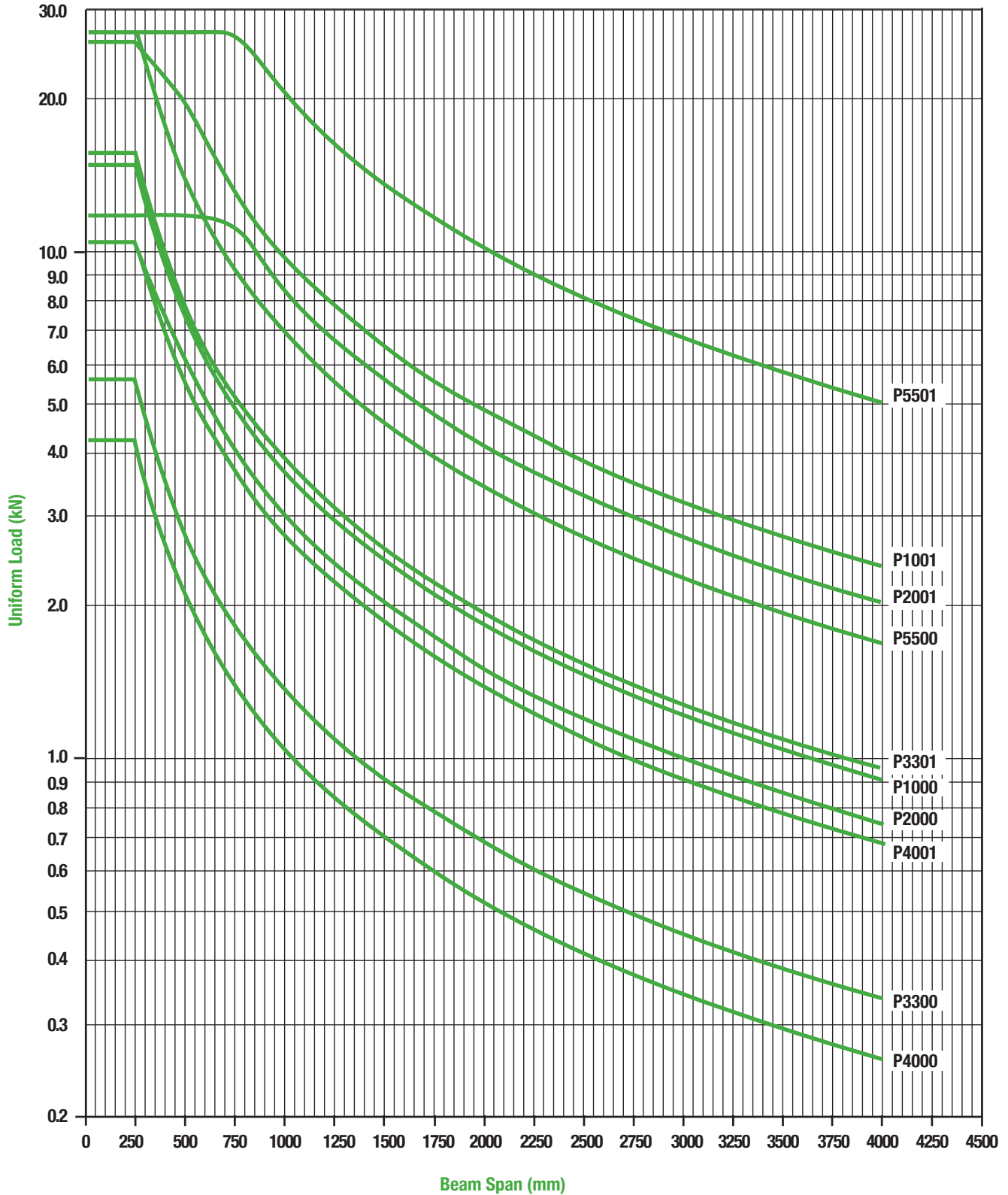
**Step 3**

- Determine number of shelves.
- Divide column load capacity by the load per shelf. i.e. Number of shelves =  $94.09 / 7.64 = 12.31$
- Hence maximum number of shelves = 12
- i.e. max. height of shelving =  $12 \times 0.5 = 6.0$  metres.



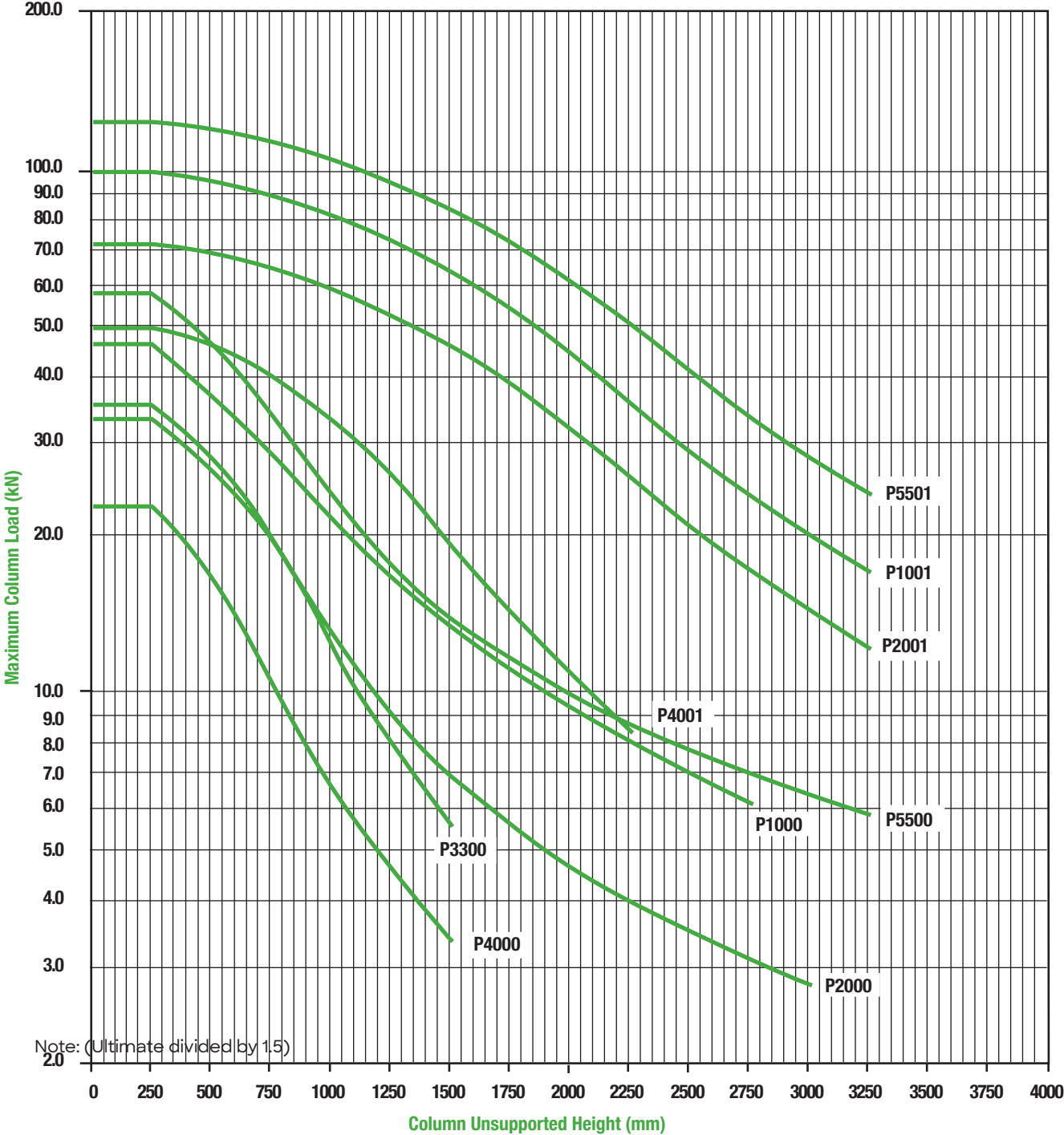
# Engineering Data Load Chart

## UNIFORM WORKING LOAD FOR SIMPLY SUPPORTED BEAMS



# Engineering Data Load Chart

UNIFORM WORKING COLUMN LOADS







# NEMA Cable Ladder



**Atkore**<sup>™</sup>  
**Unistrut**<sup>®</sup>



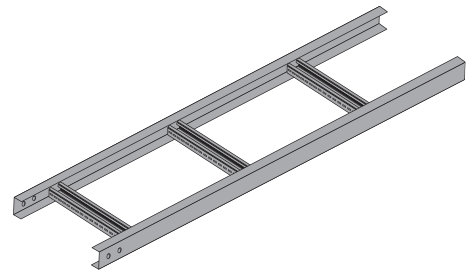
# NEMA Cable Ladder General Information

Unistrut<sup>®</sup> also manufactures and markets the largest range of cable ladder systems for the Australasian Electrical Industry. This extensive range of cable ladder support systems includes a comprehensive range of steel and aluminium cable ladders load rated to NEMA Standard VE1. Steel cable ladders can be manufactured to side-rail in or side-rail out configuration depending on the project requirements.

In cases where extremely high corrosion resistance is required, stainless steel cable ladder systems are available by special order. All Unistrut<sup>®</sup> Cable Ladder systems are complemented with a complete range of accessories: Horizontal Bends, Internal and External Risers, Tees, Crosses, Reducers, Hinged Horizontal and Vertical Splices, Adjustable Risers, Covers, Divider Strip, Adjustable Cantilever Support Brackets and Cable Clamps.

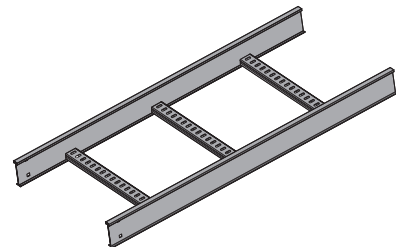
## NEMA AL8A CABLE LADDER

- Length: 6m
- Width: 150, 300, 450, 600, 750, 900mm
- Cable Laying Depth: 30 mm



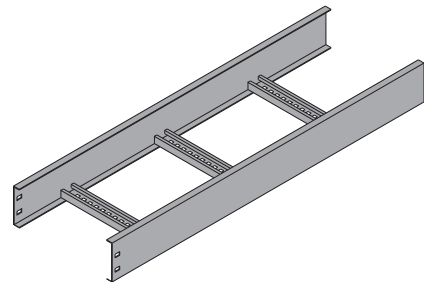
## NEMA AL12 CABLE Ladder

- Length: 6m
- Width: 150, 300, 450, 600, 750, 900mm
- Cable Laying Depth: 70mm



## NEMA AL12B CABLE Ladder

- Length: 6m
- Width: 150, 300, 450, 600, 750, 900mm
- Cable Laying Depth: 88mm

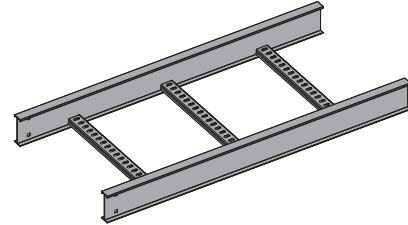




# NEMA Cable Ladder General Information

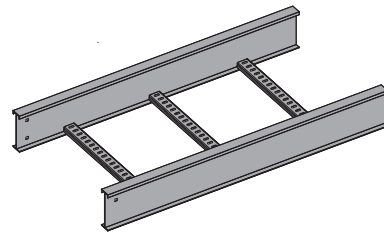
## NEMA AL16 CABLE LADDER

- Length: 6m
- Width: 150, 300, 450, 600, 750, 900mm
- Cable Laying Depth: 80mm



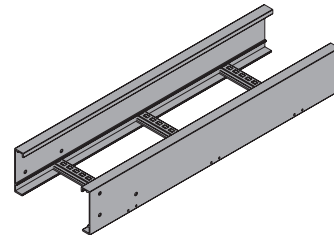
## NEMA AL20 CABLE LADDER

- Length: 6m
- Width: 150, 300, 450, 600, 750, 900mm
- Cable Laying Depth: 100mm



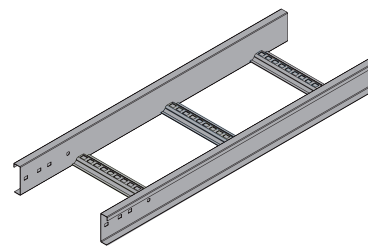
## NEMA AL20C CABLE LADDER

- Length: 6m
- Width: 150, 300, 450, 600, 750, 900mm
- Cable Laying Depth: 125mm



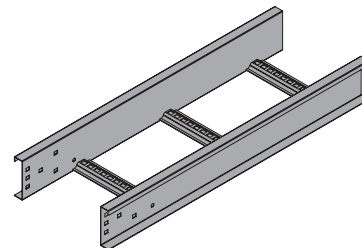
## NEMA 16A CABLE LADDER - STEEL

- Length: 6m
- Width: 150, 300, 450, 600, 750, 900mm
- Cable Laying Depth: 72mm



## NEMA 20B CABLE LADDER - STEEL

- Length: 6m
- Width: 150, 300, 450, 600, 750 & 900mm
- Cable Laying Depth: 109mm



## NEMA CABLE LADDER

The following notes are presented in order to assist users to achieve maximum economy and convenience with the installation of cable support systems. As each application will have its own particular conditions and requirements, it is recommended that the services of Unistrut® sales personnel and engineering team be engaged, especially in the early stages of any major project, so that the best overall result can be achieved.

### Standard Sizes

Standard ladder widths are 150mm, 300mm, 450mm, 600mm, 750mm and 900mm being the inside dimension between side-rails and is the maximum width available for carrying cables. Straight lengths are 6m long. Standard rung spacing on all systems is 300mm nominal.

Each of the UniStrut Systems includes a full range of standard accessories, with a nominal radius of 300mm. Non-standard ladder widths and accessory radii can be manufactured by special order. Non-standard products are non-returnable and non-refundable.

### Load Capacity

- a. Cable Load – Because the cable density remains fairly constant in a total installation, the widest ladders carry the most load, and each smaller width carries proportionately less load. However, the load carrying capacity of any class of ladder is independent of the width.
- b. For details on how safe working loads are determined, refer to the NEMA VE 1 Standard and to the published load graphs for allowable loads of each ladder type.
- c. Fixed Ladder Spans – It is commonly found that the building structure supporting the cable ladders will dictate the span, but it is still possible to exercise some choice. Where the cabling is heaviest, and this is not usually extensive, it is possible to use two 300mm wide ladders side by side instead of one 600mm wide, in order to select a lighter category of ladder for the total project. It is often inconvenient to use more than one ladder category in the same installation.
- d. Varying the Spans – Where the structure does not dictate the ladder span, the heaviest cable runs could be supported more frequently, again enabling a lighter category of ladder to be chosen.

### Cable Laying Depth

Each of the Unistrut Cable Ladder has a different cable laying depth. It is a general rule that the shallower the ladder, the lower the cost per metre and the more frequently it needs support. It is sometimes found that the lightest, most economical ladders are excluded from consideration solely because a particular minimum cable laying depth is required and has been specified accordingly.

### Deflection

Cable ladders are essentially structural members designed to strength requirements only and are required to support pliable load elements. Therefore, the control of deflection is not necessary for durability or stability reasons and can probably only be justified on purely aesthetic grounds. If normally accepted deflection limits such as  $\frac{1}{360}$ th of span are imposed, the resultant cable ladder will be grossly oversized and correspondingly expensive.

There may still be locations where the designer wishes to limit visual deflection. For example, prestige areas which may be open to public view or where the ladder is installed at eye level and deflection is accentuated. If these conditions exist, it is recommended that closer support spacings be used only in those important locations (to control visual deflection) and normal support spacings elsewhere (for economy). A maximum of  $\frac{1}{180}$ th of span, when deflection is determined from the graphs published in this catalogue, should prove a satisfactory limit for visual deflection.

Otherwise, wherever overall economy is the principal consideration, no limits should be placed on deflection. This does not mean that deflection will be excessive but simply that a typically acceptable installation will result and optimum economy will be attained.



# General Information



## Material Selection

Often the most difficult decision to be made is the selection of material, because it involves the most cost-sensitive of compromises. Material choice is directly related to service life and the longer the required life, the more expensive will be the materials. The cost of these materials also must be considered as an equation of initial investment versus maintenance costs and eventual replacement.

Because service conditions for cable ladders can vary over an enormously wide range, even within a single installation, it is impossible to write down any hard and fast rules on the subject of corrosion and expected lifespan. The following may be considered a guide as to what can be expected from the various materials and finishes currently available for cable support systems.

**Aluminium** – Aluminium is also a popular choice of material for cable ladders. Most frequently it is selected because of its excellent performance

- For any given load class or capacity, aluminium cable ladders are more expensive than their galvanised steel counterparts. Aluminium ladders can also be expected to have a greater deflection than an equivalent steel system. On the other hand, they are lighter, more readily handled and are easy to work with, resulting in faster installation and therefore lower installation cost.
- Aluminium cable ladders can be expected to have a lifespan well in excess of twenty years in most industrial or marine applications. The exception would be in the case of a local concentration of chemicals which are detrimental to aluminium.
- Alkaline compounds or fumes is a common example but if any doubt exists, the advice of aluminium suppliers should be sought.

**Galvanised Steel** – Hot-dipped galvanised steel (after fabrication) is a common selection, as it is economical to purchase and suitable for most conditions of outdoor exposure. For indoor applications, or anywhere that is essentially free from moisture, galvanised ladders can be considered to have an indefinite life. That is, they should last as long as the plant, building, cabling or equipment which they service.

- On a typical industrial or processing plant installation, exposed to weather, moisture and airborne industrial pollution, a basic life of approximately ten years can be expected. This is not to say that the ladder will be completely corroded in that time, but it is the probable life of the corrosion protection finish. Beyond that time, rapid decay can be expected and maintenance costs will increase substantially in order to keep the ladders serviceable.
- The ten year life quoted here should be adjusted up or down depending on the circumstances. For example, if installed near the coast, the effect of salt laden air may shorten the expected life. Also galvanising is sensitive to some

## General Information

### Powder Coating or Paint Systems:

1. Coating on bare steel.
  - Painting over bare steel is not generally recommended for cable ladders. This comment applies to virtually all types of 'organic' or non-metallic coatings such as powder coatings, polyesters, PVC or nylon. Although these coatings are resistant to a wide variety of chemicals, their effectiveness on cable ladders can be limited. The non-sacrificial nature of paint films means that anywhere the coating is broken, corrosion is permitted to obtain a foot-hold. It is then able to spread rapidly underneath the paint, lifting it off and allowing corrosion to progress even further.
  - If it is decided to use a paint or powder coating on bare steel, then before commissioning, a compatible repair paint should be used to make good any places on the ladder installation that may have been damaged during erection.
2. Coating over galvanised Steel or Aluminium
  - Application of paint systems over either of the above materials is obviously a more expensive approach, but in some circumstances it is the only answer. If ladders are installed in close proximity to acid tanks, process vats, steam pipes or similar situations, there may be no metallic finish capable of giving satisfactory service life. This can be overcome by the application of a suitable paint or powder coating over galvanised or aluminium base materials. Naturally, in order to contain costs, the additional finish need only be applied to those sections of the work which are effectively exposed to the corrosive fumes.

### Stainless Steel

- Stainless Steel is sometimes considered as a material for cable ladders, usually where extremely high corrosion resistance, coupled with difficulty of servicing after installation and a high degree of reliability are essential requirements. An off-shore oil drilling platform may be one example where these conditions exist.





# General Information

## The NEMA Standards

NEMA STANDARD VE 1 is published by the National Electrical Manufacturers Association in the U.S.A. The Standard provides for the technical requirements of construction, performance and testing of cable ladder tray systems. It is regularly revised by the Association in order to keep pace with technology and the ever-changing requirements of the manufacturers, contractors, consultants and other users throughout the electrical industry.

There is presently no Australasian Standard governing cable support systems. Despite the existence of other versions from places such as Canada and Europe, the NEMA VE 1 is by far the most widely accepted and the best known Standard for cable supports in Australia and New Zealand.

In recognition of this situation, and in order to produce cable ladders of known quality and load capacity, Unistrut® has adopted a policy of constructing and rating its cable support products in accordance with the VE 1 Standard wherever possible. This policy is reflected in the name and various class designation numbers now used by Unistrut® which are drawn directly from the Standard.

For example NEMA Class 12B, 16A or 20B. Please note that in most cases Unistrut® ladders exceed the minimum strength requirements of each ladder class and therefore the published load graphs should be consulted in order to find the actual safe load capacity for each ladder type.

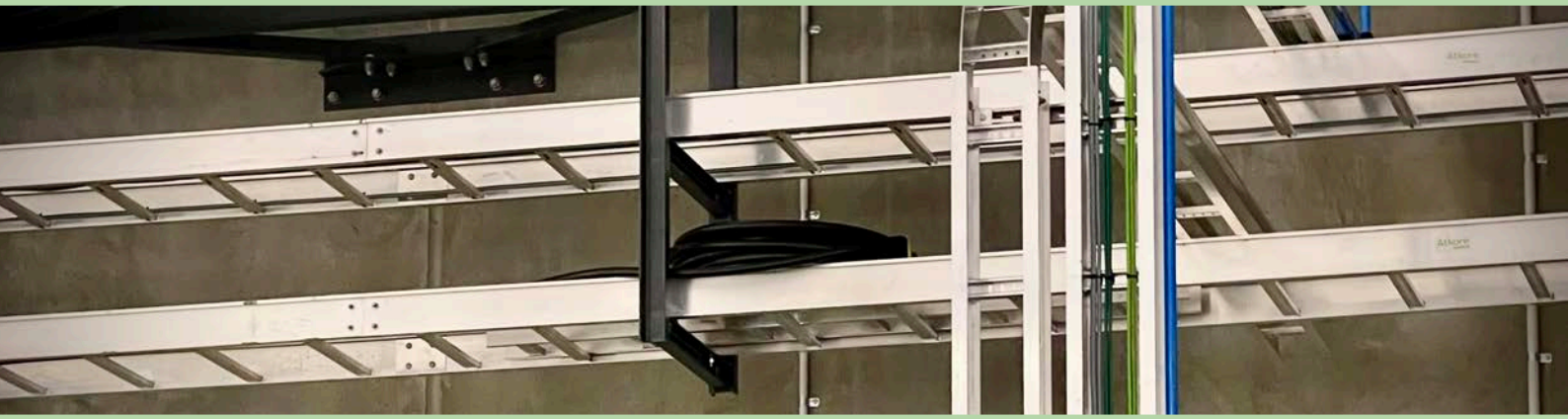
The more important aspects of the NEMA Standard VE 1 which are relevant to Unistrut products are described as follows:

### 1. Load Capacity and Safety Factor

Safe working loads are required to be determined as a result of testing a series of sample ladders. Tests must be conducted as simple spans (i.e. the worst case for loading) and over various span lengths with a safety factor of 1.5 against the collapse load of the ladder. In this way, loads are based on average performance of a number of samples and not just a single test or some calculations.

The Standard does not permit working loads to be determined by calculation because it has proven to be too unreliable. Cable ladders are specialist products which are unconventional in the structural sense. That is, they have an unusual combination of slenderness, local buckling of thin material and overall lateral restraint elements which are not satisfactorily interpreted by normal design methods.





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### 2. Deflection

The NEMA Standard VE 1 does not specify any limitation on the deflection of cable support members. To do so, would inevitably result in an over-designed (and hence uneconomical) system. For further information on deflection please refer to notes under Guidelines for Ladder Selection.

### 3. Electrical Continuity

The electrical resistance of connections is limited to a maximum of 330 micro-ohms. Representative samples of Unistrut® splice joints (both steel and aluminium) as well as the run to side-rail joint in aluminium ladders have been tested by an Independent Electrical Laboratory, and in all cases were found to comply with the NEMA Standard VE 1 specification.





# General Information



2. The letter indicates the working load category

- A = 50lbs/lin.ft (75kg/m)
- B = 75lbs/lin.ft (112kg/m)
- C = 100lbs/lin.ft (149kg/m)

Example: A 20B class ladder requires a minimum safe working load of 75lb/ft. over a 20ft. span. (ie. 112kg/m over a 6.0m span)

Explanation of NEMA VE 1 load/span class designations

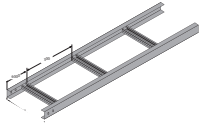
The NEMA VE 1 rating method is based on the Imperial system of measurement, as follows:

1. The numerals indicate the ladder span in feet

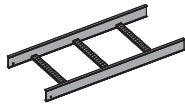
- 8 = 8ft (2.4m)
- 12 = 12ft (3.6m)
- 16 = 16ft (4.8m)
- 20 = 20ft (6.0m)



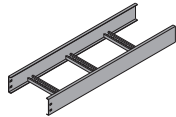
## Aluminium Cable Ladder



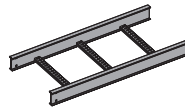
NEMA AL8A  
CABLE LADDER  
PG. 75



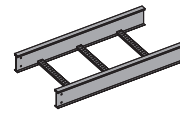
NEMA AL12  
CABLE LADDER  
PG. 76



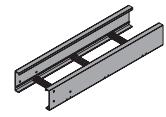
NEMA AL12B  
CABLE LADDER  
PG. 77



NEMA AL16  
CABLE LADDER  
PG. 78

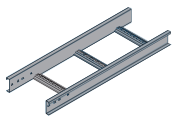


NEMA AL20  
CABLE LADDER  
PG. 79

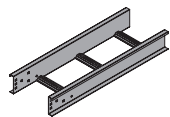


NEMA AL20C  
CABLE LADDER  
PG. 80

## Steel Cable Ladder

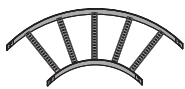


NEMA 16A  
CABLE LADDER -  
STEEL  
PG. 83

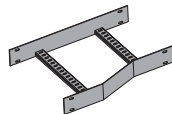


NEMA 20B  
CABLE LADDER -  
STEEL  
PG. 84

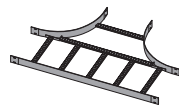
## NEMA Cable Ladder Accessories



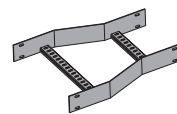
HORIZONTAL  
BEND  
PG. 85



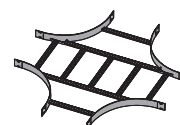
REDUCERS  
PG. 85



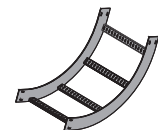
HORIZONTAL  
TEES  
PG. 85



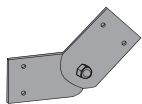
CONCENTRIC  
REDUCER  
PG. 85



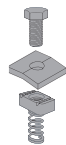
HORIZONTAL  
CROSSES  
PG. 85



VERTICAL RISER/  
DROPPER  
PG. 85



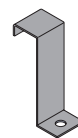
LADDER  
VERTICAL HINGE  
PG. 85



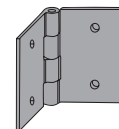
LADDER SQ  
WASHER HOLD  
DOWN BRACKET  
PG. 85



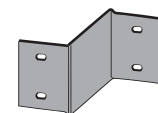
LADDER SPLICE  
PLATE  
PG. 85



LADDER Z HOLD  
DOWN BRACKET  
PG. 85

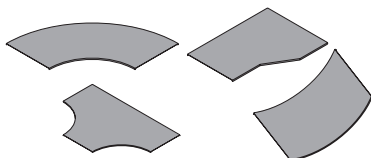


HORIZONTAL  
HINGE  
PG. 85

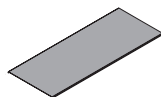


REDUCING  
SPLICE PLATE  
PG. 85

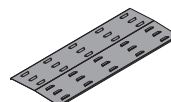
## Cable Ladder and Cable Tray Covers



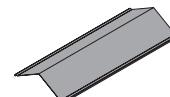
ACCESSORY COVERS  
PG. 86



FLAT COVERS  
PG. 87



VENTILATED  
COVERS  
PG. 87



PEAKED COVERS  
PG. 87

# NEMA Cable Ladder - Aluminum

## Aluminium Cable Ladder (ACL)

Wherever severe corrosion conditions are present, or a long maintenance free life is required, Unistrut aluminium cable ladder systems are the obvious choice.

Unistrut manufactures a complete range of Aluminium cable ladder systems that conform to NEMA VE1. These systems provide a wide range of load and span combinations to suit the requirements of almost any installation.

Most frequently, aluminium cable ladders are selected because of their excellent performance in marine environments where salt spray or salt laden atmosphere is present. Applications such as wharves, coal loader conveyors or similar port facilities as well as coal mines, smelters, chemical processing plants and refineries are all typical users of aluminium cable ladders.

## Splice Plates

The unique Unistrut aluminium system splice plate is close fitting so that it is retained neatly and firmly on the cable ladder side rail. The splice design also permits up to 10mm of expansion and contraction movement at each joint - an important consideration with aluminium cable ladders - eliminates the need to place special expansion splices at predetermined intervals. The installation procedure for the splice connection is fast and simple.

Notes: To attain maximum working load of the system, the following recommendations should be adopted:

- Do not splice single spans of ladder.
- Avoid splice joints in the vicinity of the end supports on continuous runs.
- Avoid splice joints directly over intermediate supports on continuous runs.
- Locate splice joints at the quarter span point between supports on continuous runs.
- If in doubt, please consult your Unistrut Service Centre.

## Accessories

All aluminium cable ladder systems are complemented by a full range of standardised fabricated accessories and fittings which are readily available.

## Built-in Splice

The principal feature of all Unistrut cable ladder accessories is the 'built-in' plate. An extension of the accessory side-rail permits direct connection to the straight ladder, eliminating the need for a separate splice component.

The advantages of this method are:

- Minimised fixing hardware and components.
- When joining to a cut ladder, the accessory end acts as a convenient drill template for bolt holes.
- Simplified pre-planning, quantity take-offs and ordering.
- No left-over components.
- Strong and rigid joint.
- Faster installation.

Accessories are attached with the same fasteners as used for straight splice plates.

Elongated slots allow easier fit-up and permit adjustments in alignment to be absorbed.



# NEMA Cable Ladder - Aluminum

## Aluminium Cable Ladder (ACL)

### Hold-Down Brackets

The general purpose hold-down bracket can be positioned at any point along ladder length, even in the situation where a rung and support member coincide. The bracket provides a large bearing area for the side-rail and permits free expansion movement to occur.

For side mounted ladders, or where rigid fixing of ladder is required, the rigid clamping bracket can be used.

### Construction

Unistrut aluminium cable ladder systems are manufactured from high strength alloy 6063-T6 for all extruded components to AS / NZS1866 and 5005 for sheet or plate components to AS / NZS1734. These alloys are suitable for marine applications and offer excellent all round corrosion resistance. For marine and corrosive environments, all fasteners are made from 300 series grade of stainless steel for optimum corrosion resistance. Other applications utilise either HDG galvanised, or Zinc plate fastenings.

The rungs are fillet welded to the side rails, which further improves the overall stability as well as strength of finished product.

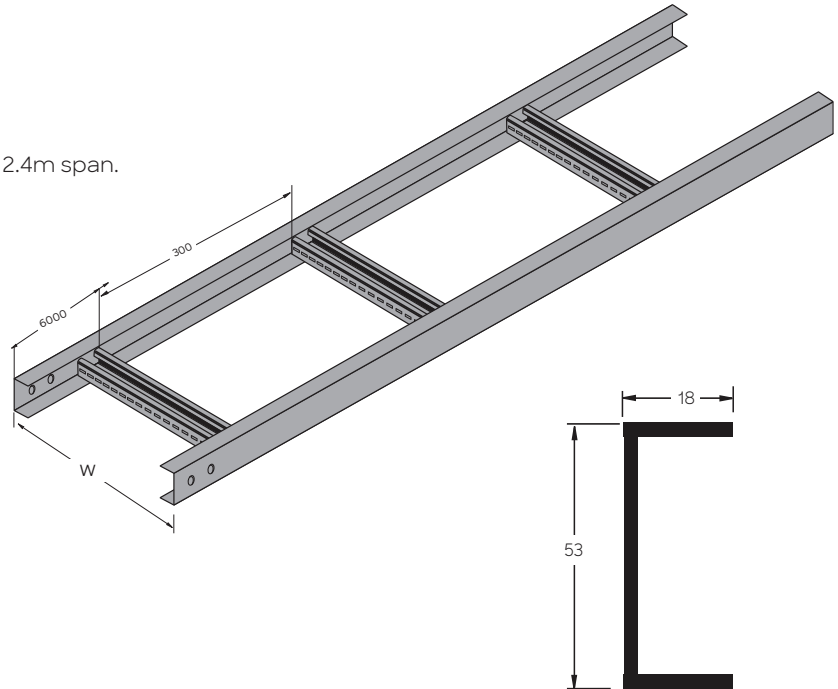


# NEMA Cable Ladder

## NEMA AL8A Cable Ladder

### Technical Data

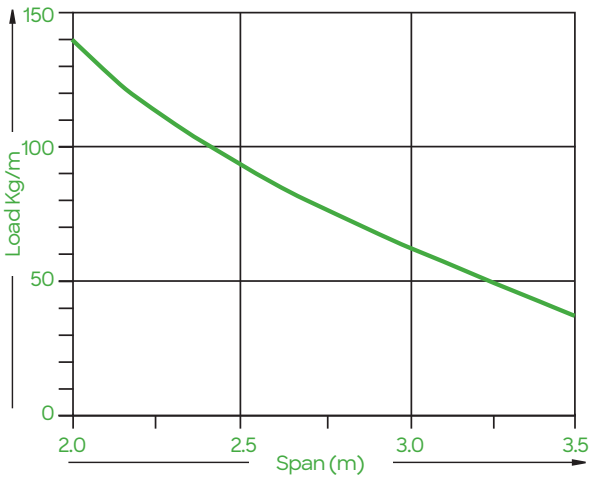
- Cable Depth: 30mm
- Loading Data:  
Basic Load Capacity = 96kgs/lin.m on 2.4m span.
- Length: 6m
- Rung Spacing: 300mm nominal



### Parts List

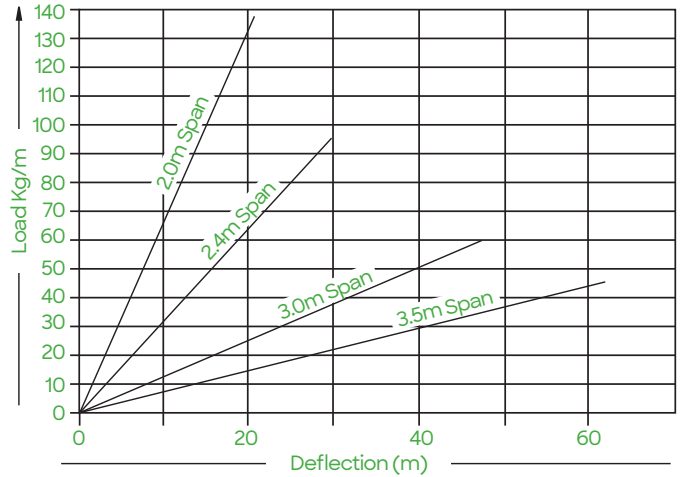
Dim "W"	Type	Part No.
150	8	AL8A 150
300	8	AL8A 300
450	8	AL8A 450
600	8	AL8A 600
750	8	AL8A 750
900	8	AL8A 900

### Allowable Load Graph



Allowable loads are determined generally in accordance with NEMA standard VE 1 and verified by testing. Safety factor = 1.5 on collapse load for single span.

### Deflection Graph



Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.

# NEMA Cable Ladder

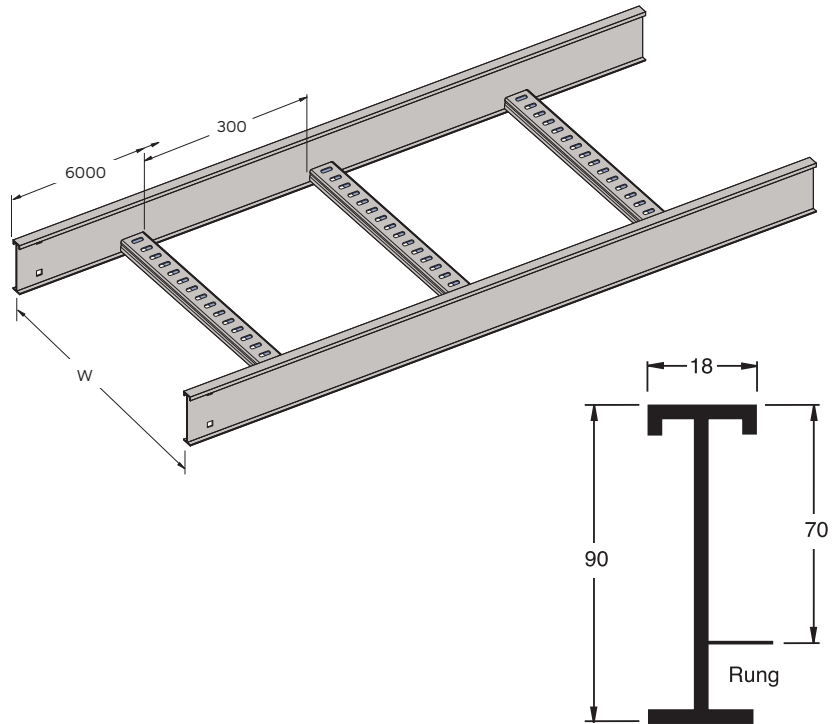
## NEMA AL12 Cable Ladder

### Technical Data

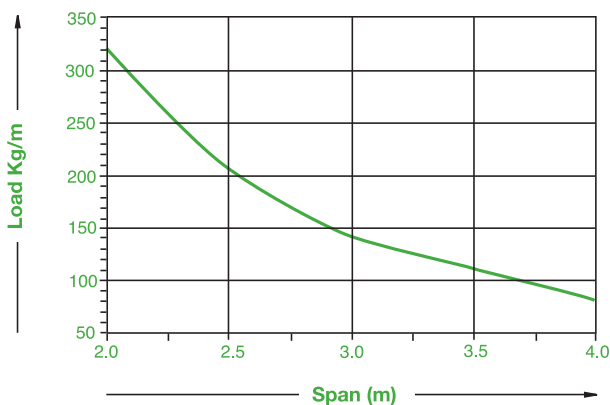
- Cable Depth: 70mm
- Loading Data:  
Basic Load Capacity = 140kgs/lin.m on 3 m span.
- Length: 6m
- Rung Spacing: 300mm nominal

### Parts List

Dim "W"	Type	Part No.
150	12	AL12 150
300	12	AL12 300
450	12	AL12 450
600	12	AL12 600
750	12	AL12 750
900	12	AL12 900

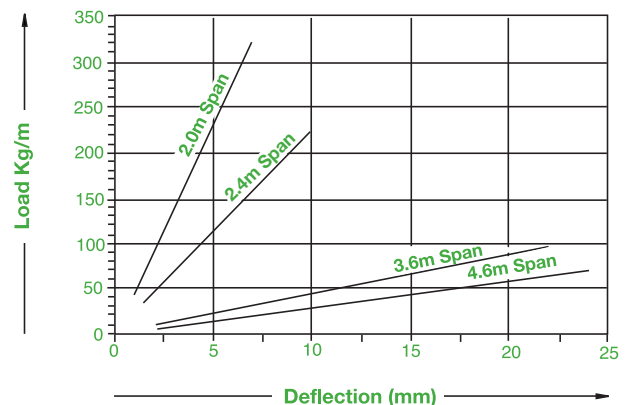


### Allowable Load Graph



Allowable loads are determined generally in accordance with NEMA standard VE 1 and verified by testing. Safety factor = 1.5 on collapse load for single span.

### Deflection Graph



Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.





# NEMA Cable Ladder

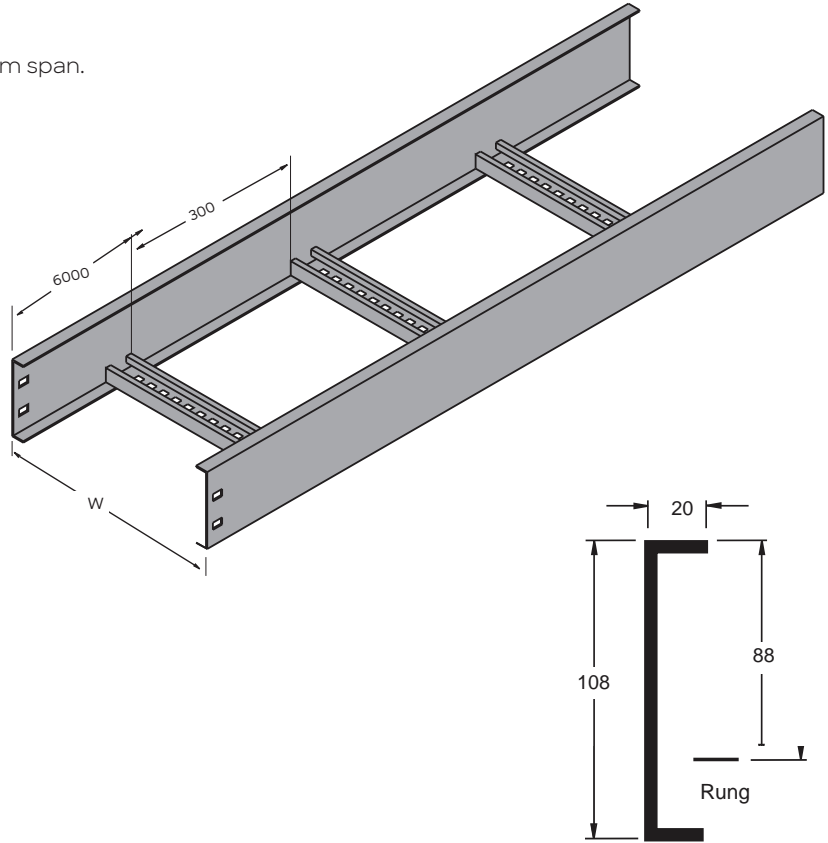
## NEMA AL12B Cable Ladder

### Technical Data

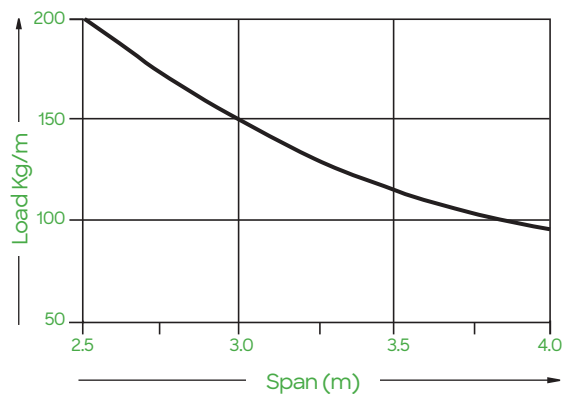
- Cable Depth: 88mm
- Loading Data:  
Basic Load Capacity = 150kgs/lin.m on 3 m span.
- Length: 6m
- Rung Spacing: 300mm nominal

### Parts List

Dim "W"	Type	Part No.
150	12B	AL12B 150
300	12B	AL12B 300
450	12B	AL12B 450
600	12B	AL12B 600
750	12B	AL12B 750
900	12B	AL12B 900

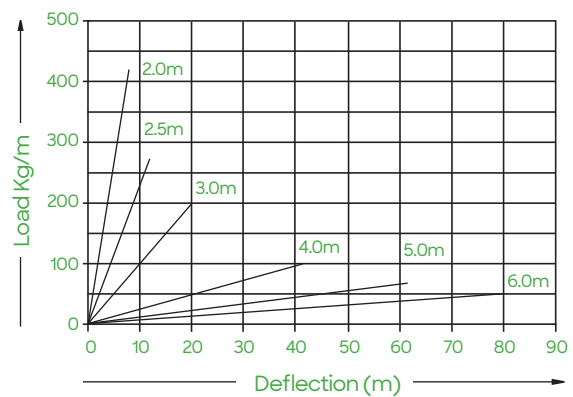


### Allowable Load Graph



Allowable loads are determined generally in accordance with NEMA standard VE 1 and verified by testing. Safety factor = 1.5 on collapse load for single span.

### Deflection Graph



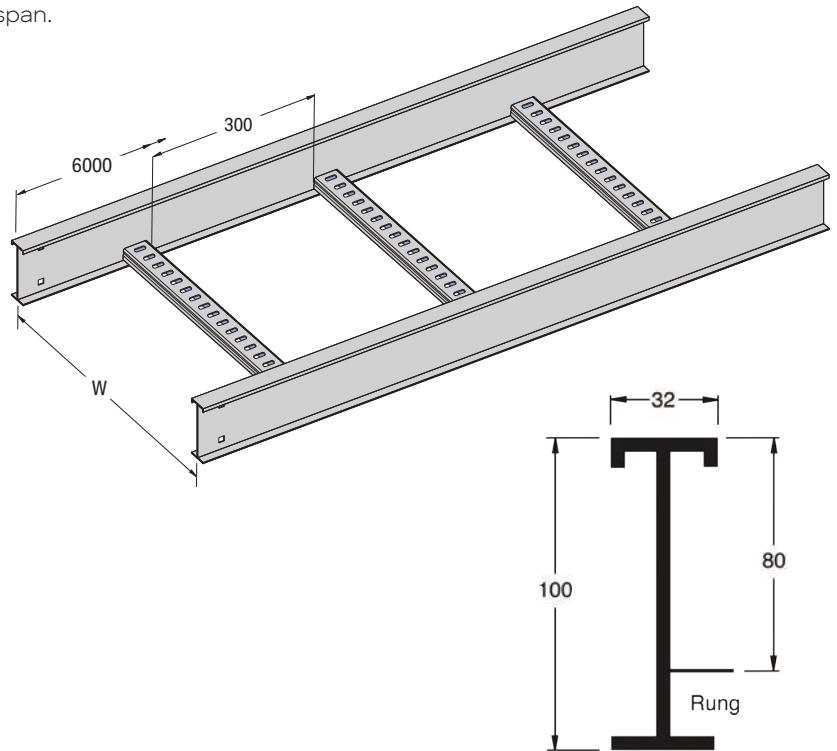
Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.

# NEMA Cable Ladder

## NEMA AL16 Cable Ladder

### Technical Data

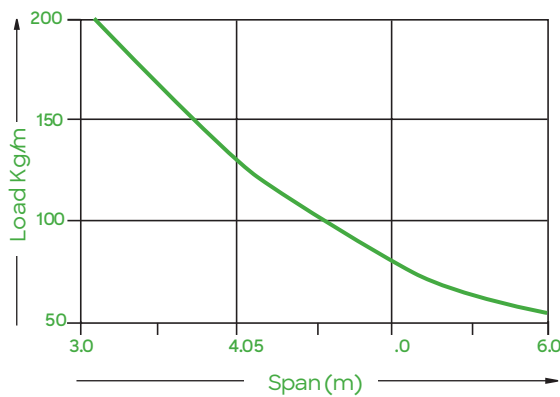
- Cable Depth: 80mm
- Loading Data:  
Basic Load Capacity = 225kgs/lin.m on 3 m span.
- Length: 6m
- Rung Spacing: 300mm nominal



### Parts List

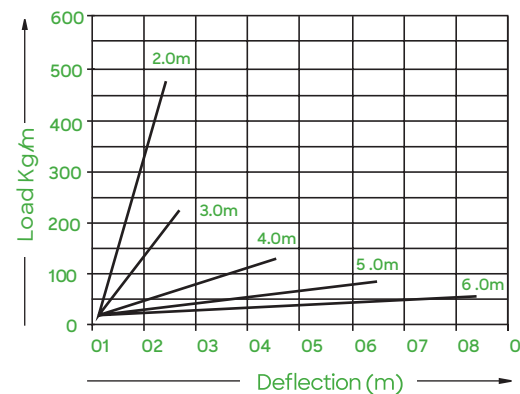
Dim "W"	Type	Part No.
150	16	AL16 150
300	16	AL16 300
450	16	AL16 450
600	16	AL16 600
750	16	AL16 750
900	16	AL16 900

### Allowable Load Graph



Allowable loads are determined generally in accordance with NEMA standard VE 1 and verified by testing. Safety factor = 1.5 on collapse load for single span.

### Deflection Graph



Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.

# NEMA Cable Ladder

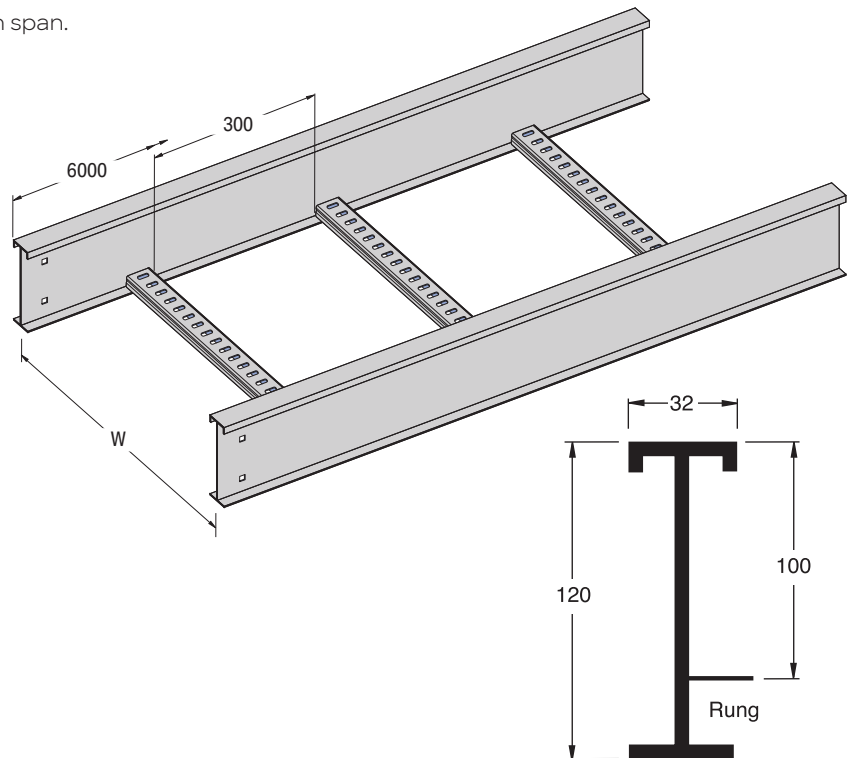
## NEMA AL20 Cable Ladder

### Technical Data

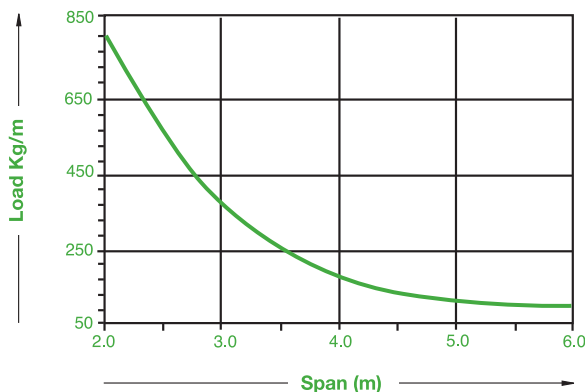
- Cable Depth: 100mm
- Loading Data:  
Basic Load Capacity = 370kgs/lin.m on 3 m span.
- Length: 6m
- Rung Spacing: 300 mm nominal
- Standard Finish: Aluminum, Mill Finish

### Parts List

Dim "W"	Type	Part No.
150	20	AL20 150
300	20	AL20 300
450	20	AL20 450
600	20	AL20 600
750	20	AL20 750
900	20	AL20 900

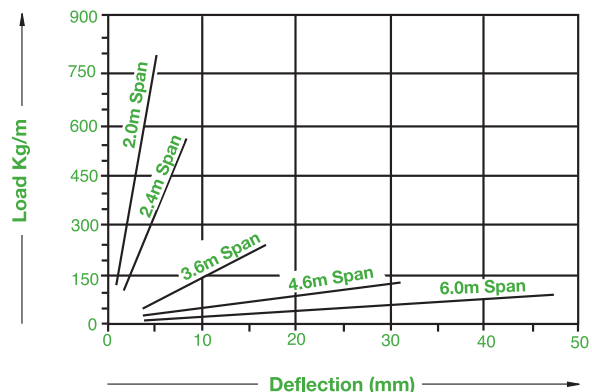


### Allowable Load Graph



Allowable loads are determined generally in accordance with NEMA standard VE 1 and verified by testing. Safety factor = 1.5 on collapse load for single span.

### Deflection Graph



Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.

# NEMA Cable Ladder

## NEMA AL20C Cable Ladder

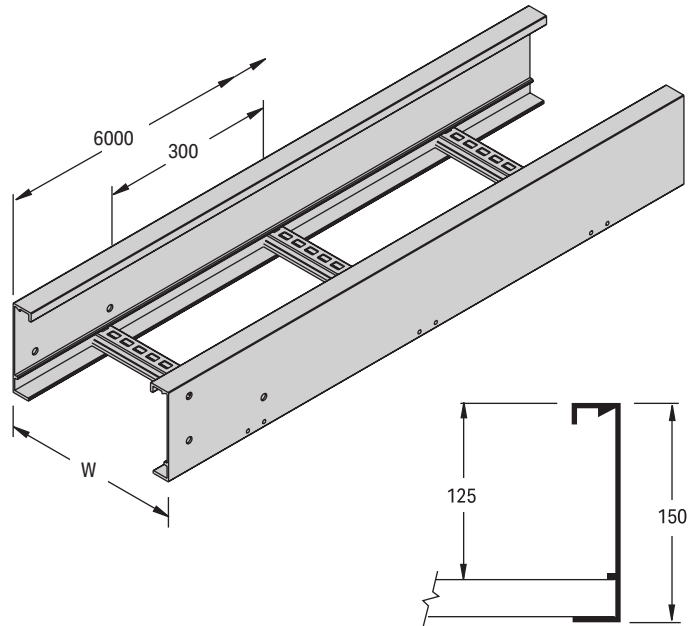
Non standard stock. Made to order.

### Technical Data

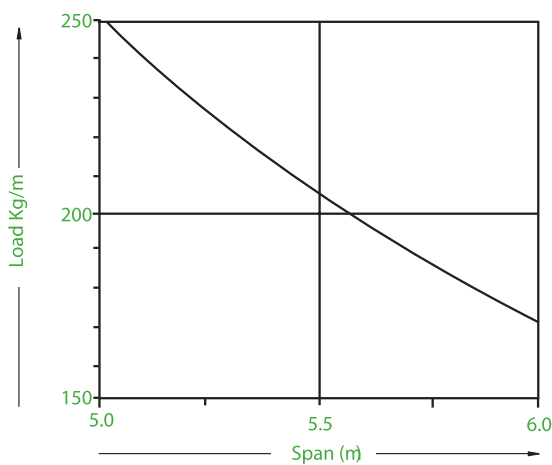
- Cable Depth: 125mm
- Loading Data:  
Basic Load Capacity = 175kgs/lin m on 6m span.
- Length: 6m
- Rung Spacing: 300mm nominal
- Standard Finish: Aluminum, Mill Finish

### Parts List

Dim "W"	Type	Part No.
150	20C	AL20C 150
300	20C	AL20C 300
450	20C	AL20C 450
600	20C	AL20C 600
750	20C	AL20C 750
900	20C	AL20C 900

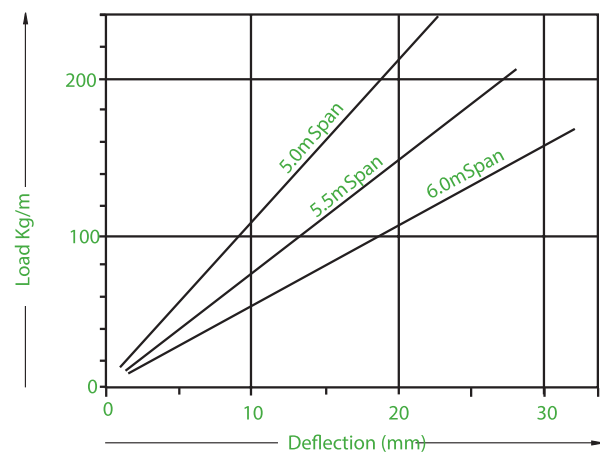


### Allowable Load Graph



Allowable loads are determined generally in accordance with NEMA standard VE 1 and verified by testing. Safety factor = 1.5 on collapse load for single span.

### Deflection Graph



Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.



# NEMA Cable Ladder - Steel

## Steel Cable Ladder (SCL)

Galvanised steel cable ladders are a recognised format for cable support systems as they afford a good combination of cost, strength and service life. Unistrut® manufactures a complete range of NEMA Steel Cable Ladder systems. These systems provide a wide range of load and span combinations to suit the requirement of almost any installations.

Side-Rail Alternative - All Steel ladder systems are available with the side-rails turned outward (as standard), or inward to meet varying client specifications.

All ladder systems are load rated to NEMA Standard VE 1.

Stainless Steel - In cases where extremely high corrosion resistance is required, stainless steel cable ladder may be the only solution. All steel cable ladder systems are available in stainless steel on special order only. For load and deflection calculations, contact your local Unistrut® Service Centre.

## Splice Plates

**16A and 20B Systems** - Unistrut steel splice plates are of a robust and practical design. The neat fitting flanges and bolted configuration of Unistrut® splices also reduce deflection at joints as the ladder is loaded. Unsightly dips or discontinuities along the ladder run are therefore avoided. Bolt holes in splice plates and ladder side-rails are elongated so that site misalignments as well as thermal expansion and contraction are catered for.

### Notes

Electrical resistance across splice joints is less than the 330 micro-ohms limit specified by NEMA Standard VE 1. To attain maximum working load of the system, the following recommendations should be adopted.

- Do not splice single spans of ladder.
- Avoid splice joints in the vicinity of the end supports on continuous runs.
- Avoid splice joints directly over intermediate supports on continuous runs.
- Locate splice joints at the quarter span point between supports on continuous runs.





# NEMA Cable Ladder - Steel

## Accessories

All Unistrut<sup>®</sup> steel cable ladder systems are complemented by a full range of standardised fabricated accessories and fittings which are readily available. All are of a welded construction.

**Built-in Splice** The principal feature of all Unistrut cable ladder accessories is the 'built-in' splice plate. A shaped extension of the accessory side-rail permits direct connection to the straight ladder eliminating the need for a separate splice component.

### The advantages of this method are:

- Minimised fixing hardware and components.
- When joining to a cut ladder, the accessory end acts as a convenient drill template for bolt holes.
- Simplifies pre-planning, quantity take-offs and ordering.
- No left-over components.
- Strong and rigid joint.
- Faster installation.

Accessories are attached with the same fasteners as used for straight splice plates. Threaded fasteners are hot-dipped galvanised. Elongated slots allow easier fit-up and permit adjustments in alignment to be absorbed.

## Construction

Unistrut steel cable ladders are manufactured from steel to AS/NZS1594 "Hot-Rolled Steel Flat Products," which are cold roll formed to the desired shape. The roll forming process improves the mechanical properties of the metal whilst the special lipped strut section is designed to give the best possible combination of strength-to-weight, lateral rigidity and low deflection. The rungs are fillet welded to the side-rails which further improves the overall stability as well as strength of the finished product. The rung joint is so designed that galvanising can be effected to all areas.

Ladders, accessories and other galvanised components are heavy duty galvanised to AS/NZS 4680 / BS EN ISO 1461 after fabrication.





# NEMA Cable Ladder

## NEMA 16A Cable Ladder - Steel

### Technical Data

Cable Laying Depth: 72mm

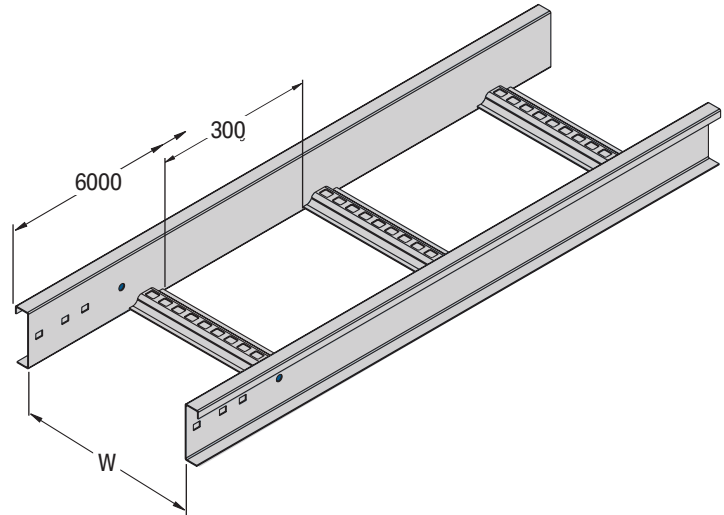
#### Loading Data:

Basic Load Capacity  
64kg/lin.m on 6m span  
90kg/lin.m on 4.8m span  
230kg/lin.m on 3m span

Length: 6m

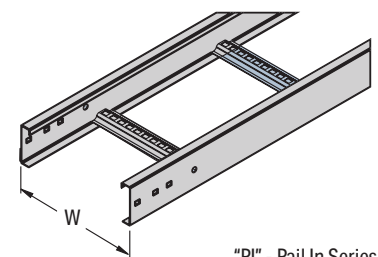
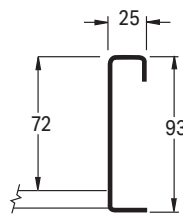
Rung Spacing: 300mm nominal

Standard Finish: Heavy Duty Galvanised  
Also available in Stainless Steel Grade 316



### Parts List

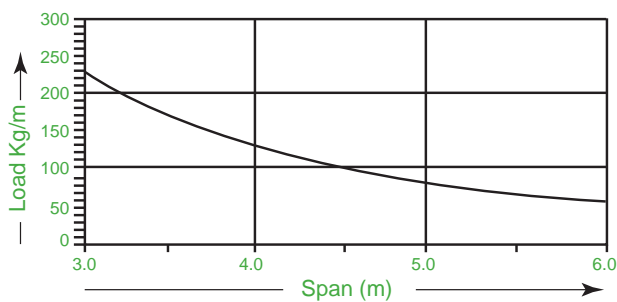
Dim "W"	Type	Part No.
150	16	16A150
300	16	16A300
450	16	16A450
600	16	16A600
750	16	16A750
900	16	16A900



"RI" - Rail In Series

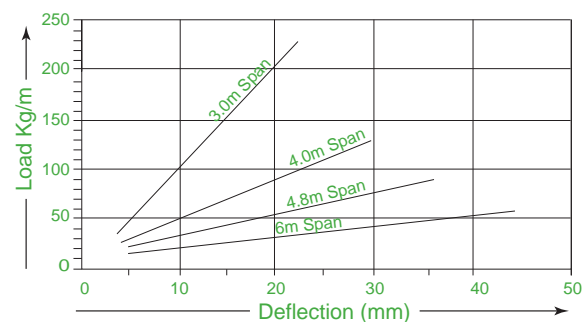
Please specify RI or RO when ordering  
\* Splice plate & fixing screws are not included (order separately).

### Allowable Load Graph



Allowable loads are determined generally in accordance with NEMA Standard VE1 and verified by testing. Safety Factor = 1.5 on collapse load for single span.

### Deflection Graph



Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.

## NEMA Cable Ladder

### NEMA 20B Cable Ladder - Steel

#### Technical Data

Cable Laying Depth: 109mm

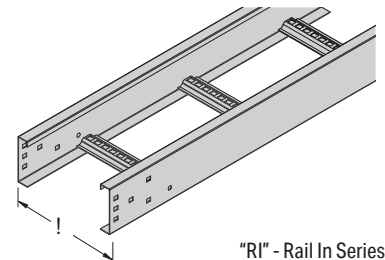
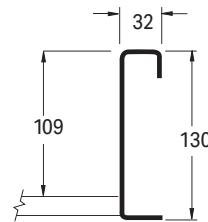
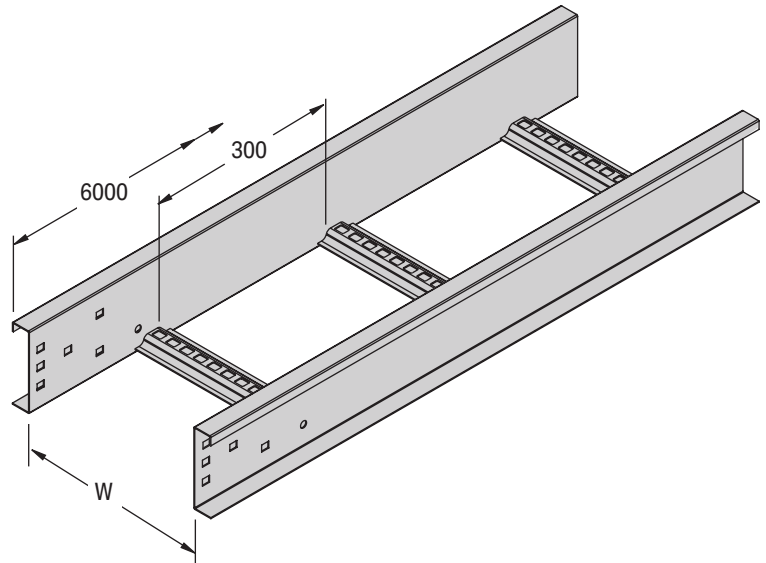
#### Loading Data:

Basic Load Capacity  
136kg/lin.m on 6m span  
544kg/lin.m on 4.8m span

Length: 6m

Rung Spacing: 300mm nominal

Standard Finish: Heavy Duty Galvanised  
Also available in Stainless Steel Grade 316



"RI" - Rail In Series

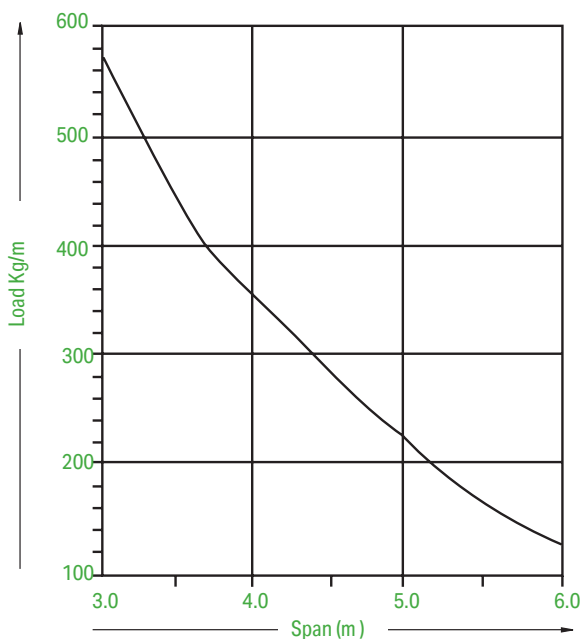
#### Parts List

Dim "W"	Type	Part No.
150	20B	20B150
300	20B	20B300
450	20B	20B450
600	20B	20B600
750	20B	20B750
900	20B	20B900

Please specify RI or RO when ordering

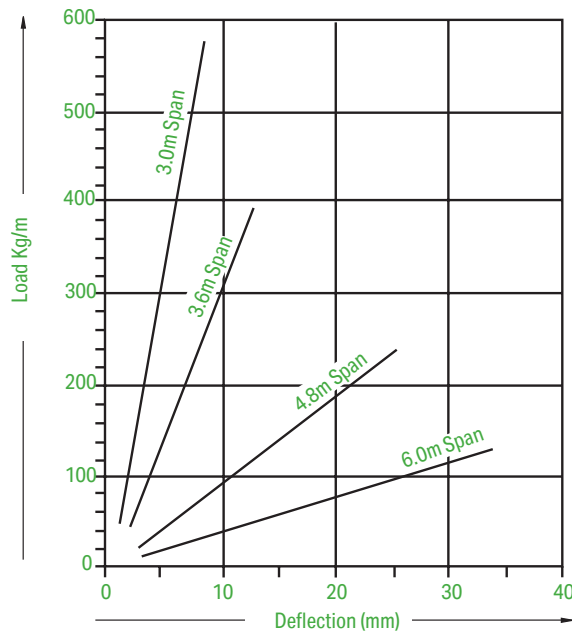
\* Splice plate & fixing screws are not included (order separately).

#### Allowable Load Graph



Allowable loads are determined generally in accordance with NEMA Standard VE1 and verified by testing. Safety Factor = 1.5 on collapse load for single span.

#### Deflection Graph

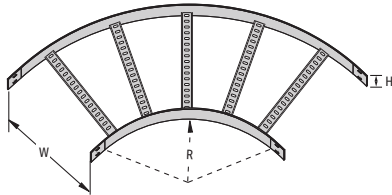


Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.

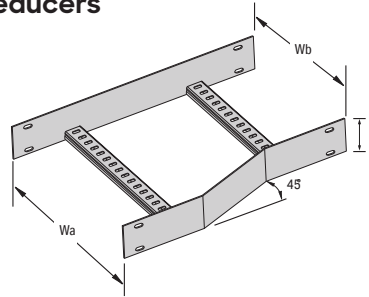
# NEMA Cable Ladder Accessories

Standard Radius - 300mm

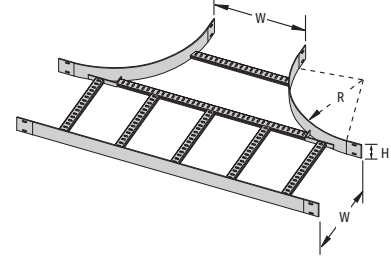
## Horizontal Bend



## Reducers

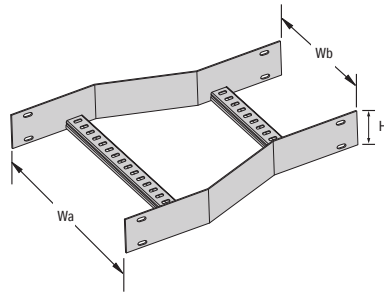


## Horizontal Tees

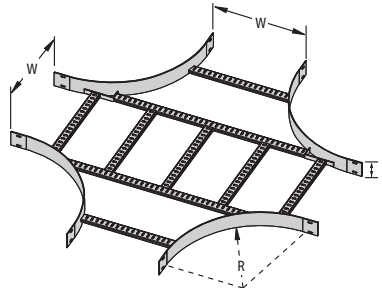


Note: Left or Right Hand (L/H shown)

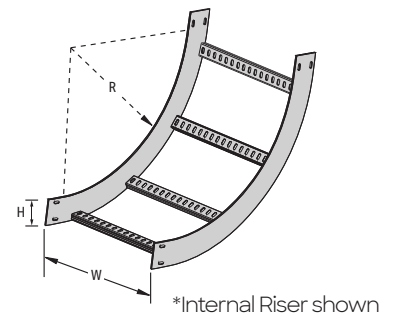
## Concentric Reducer



## Horizontal Crosses

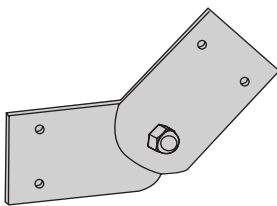


## Vertical Riser/Dropper

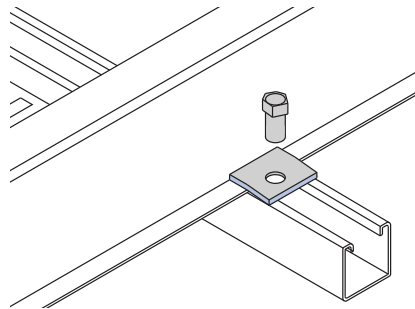


## Ladder Vertical Hinge

Note: Supplied in pairs

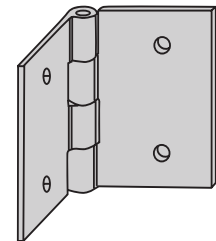


## Ladder Sq Washer Hold Down Bracket

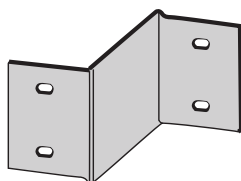


## Ladder Horizontal Hinge

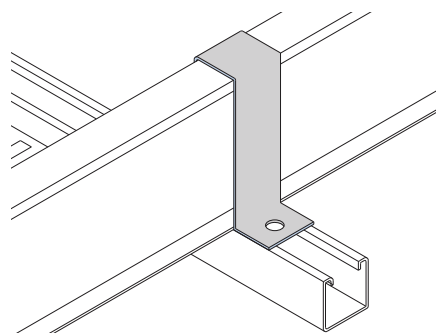
Note: Supplied in pairs



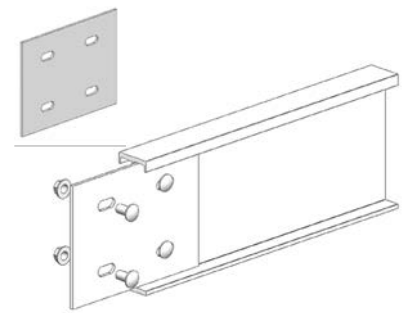
## Reducing Splice Plate



## Ladder Z Hold Down Bracket



## Ladder Splice Plate



## Cable Ladder And Cable Tray Covers

### Ladder and Tray Covers

Covers are normally specified where protection is required:

1. To safeguard against damage to cable and insulation from falling objects—dropped tools, discarded cigarettes, sparks or solid materials.
2. Covers protect cable insulation and fixings (plastic ties etc.) from harmful effects of ultra-violet light and/or weathering deterioration.
3. In areas where high levels of airborne particles are present, covers prevent accumulation of dust or other debris on cables, which may cause heat build up, fire hazards or absorb moisture, which may shorten life of installation.

### Availability

Covers are available for all Unistrut® cable ladder systems. All our Covers are Non Standard Stock and available to order. Standard length is 3 meters. Flat, peaked or ventilated covers are also available by special order.

### MATERIAL

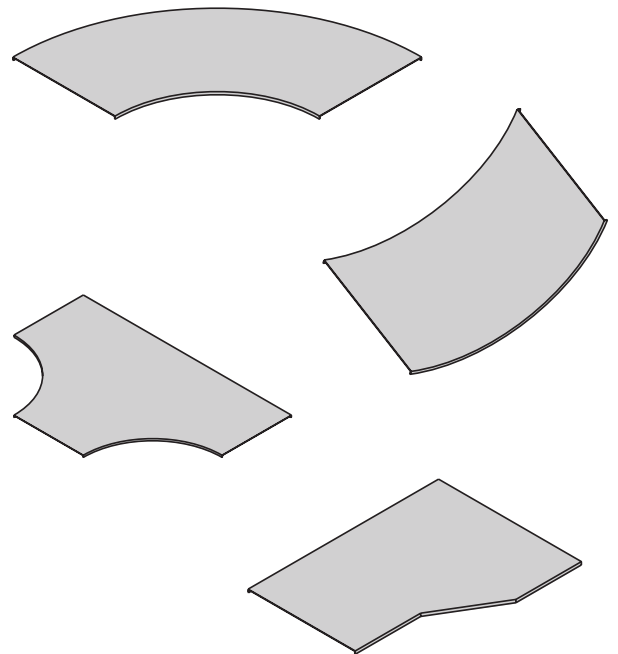
Aluminium Systems: Aluminium alloy 5005. Suitable for marine applications and compatible with the 6106-T6 alloy used in ladders.

Steel Systems: Galvabond, Heavy Duty Galvanised steel sheet to AS 1397.

### Accessory Covers

- Flat covers are available to match shaped accessories of all Unistrut Cable Ladder Systems, in both steel and aluminium.
- Materials are the same as for straight covers.

Note: Accessory covers are identical for all steel and aluminium cable ladder systems. When ordering, please specify width and radius.

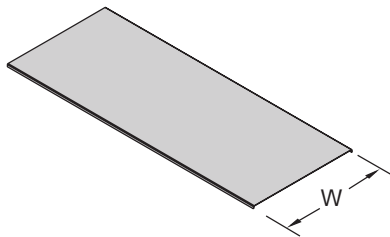


# NEMA Cable Ladder Accessories

## Cable Ladders & Cable Tray Covers

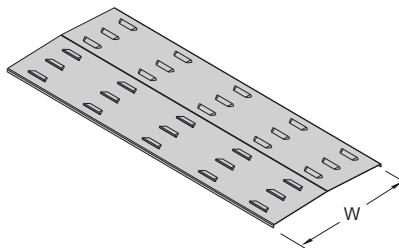
Non Standard Stock. Available to order.

### Flat Covers



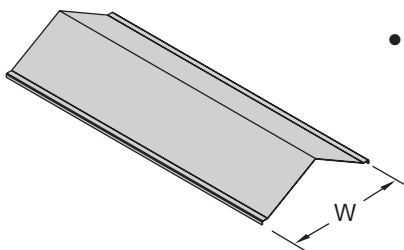
- Most commonly used where there is space restrictions and the use of standard and peaked covers is not practical.

### Ventilated Covers



- Should be used wherever reasonable protection for cables is required and where there is also a primary requirement to allow the escape of heat generated by cable.

### Peaked Covers



- Used in very dusty situations where the self cleaning effect of sloping sides prevents excessive dust accumulations.
- The large air-space above the cables also assists with the dissipation of heat.



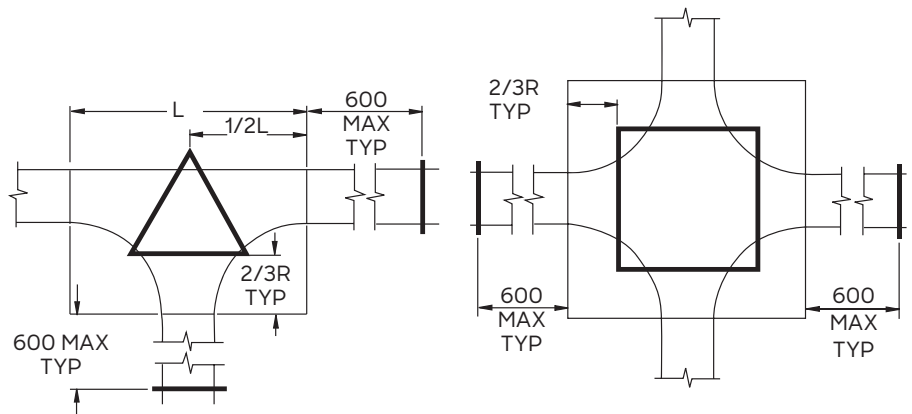
# NEMA Cable Ladder Accessories Supports

Accessories for all Unistrut® cable ladder systems are available in the following standard widths - 150, 300, 450, 600, 750 or 900mm. SCL (Steel Cable Ladder) and ACL (Aluminium Cable Ladder).

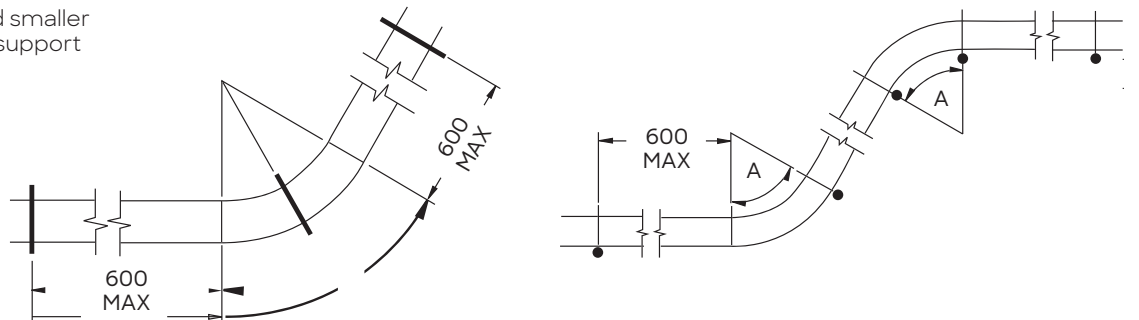
Steel Cable Ladder		Aluminium Cable Ladder	
Ladder System	Standard Radius	Ladder System	Standard Radius
NEMA 16A, NEMA 20B	300mm	AL8, AL12, AL12B, AL16, AL20, AL20C	300mm

Fixed bends and Internal or External Risers are readily available with a 90° angle. Other angles (30°, 45° or 60°) and other radii (300, 450, 600 or 900mm) can be supplied on special request. The radii also applies to Tees and Crosses. All support locations below are in accordance with NEMA standard VE2.

For smaller radius accessories and /or lightly loaded ladders, the support methods shown may be reduced or even eliminated. This is best determined at the point of installation or consult your local Unistrut Service Centre.



For narrower ladders and smaller angles, the bend centre support may be deleted.

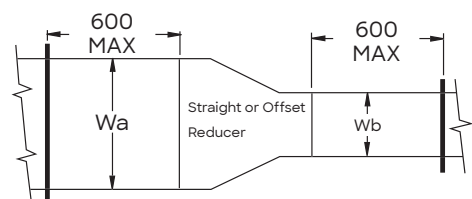


Straight Reducer plus left and right hand offset reducers are available for all Unistrut Cable Ladder systems.

**Major Width:** Wa 300, 450, 600, 450, 600, 600

**Minor Width:** Wb 150, 150, 150, 300, 300, 450

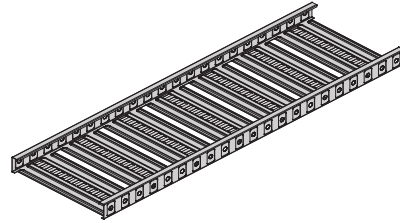
Reducer splice plates are also available for all ladder systems.



# UNI-TRAY®, Rolled Edge, ACROFIL®, Cable Trunking Steel & Vergokan

## UNI-TRAY®

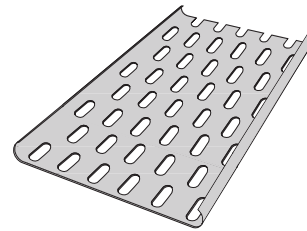
The UNI-TRAY® systems offers the contractor the ability to site manufacture all required junctions, thereby reducing the installation cost over traditional cable trays and ladders.



UNI-TRAY®

## Rolled Edge Cable Tray

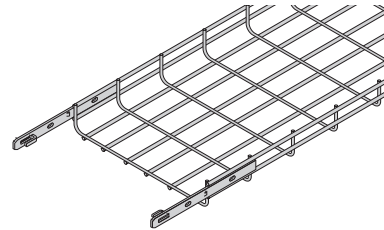
A simple and cost effective support system for communications and power cable distribution. Slots running down the length of the trays enable easy installation of cable ties. The joggled end for joining lengths and accessories eliminates the requirements for separate joiners.



ROLLED EDGE

## ACROFIL® Wire Baskets

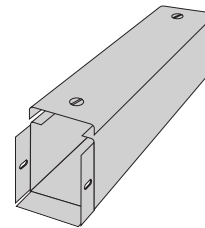
Ideal for a variety of applications, our wire baskets feature a self-splicing system designed to be simple to assemble and proven to be 80% faster in mounting time than standard splicing - eliminating the need for nut and bolt connections.



ACROFIL®

## Cable Trunking Steel

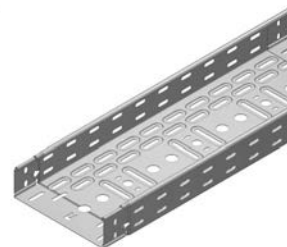
The cable duct system is designed to be quick and simple to assemble, providing real time saving as well as remaining a reliable product throughout its natural life cycle.



CABLE TRUNKING STEEL

## VERGOKAN CABLE TRAY SYSTEM


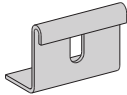
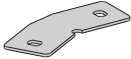
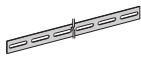


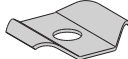
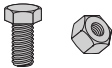
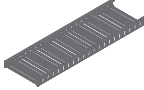
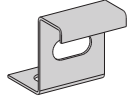

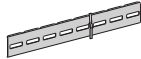
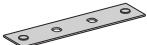
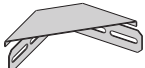


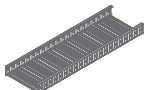
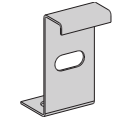
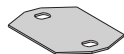
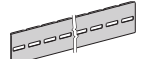
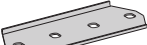
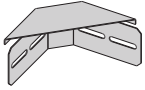
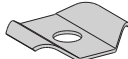

The new generation KBSCL Fusion cable tray system incorporates a patented "click" joiner, obviating the need for separate splice plates and associated fixing hardware. The clickable joining method makes assembly ultra-fast, user-friendly, and offers a significant installation cost saving without sacrificing quality.







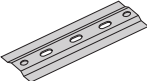
VERGOKAN CABLE TRAY SYSTEM

# Cable Tray and Support Systems - Pictorial Index



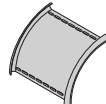

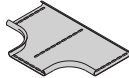
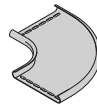
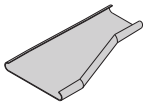
## UNI-TRAY<sup>®</sup> & Accessories

 UT1 - UNI-TRAY <sup>®</sup> PG. 94	 HOLD DOWN BRACKET PG. 95	 LINK PLATE PG. 95	 RADIUS PLATE PG. 95	 SPLICE PLATE PG. 95	 GUSSET PG. 95	 CENTRE HOLD DOWN CLAMP PG. 95	 HARDWARE PG. 95
 UT3 - UNI-TRAY <sup>®</sup> PG. 96	 HOLD DOWN BRACKET PG. 97	 LINK PLATE PG. 97	 RADIUS PLATE PG. 97	 SPLICE PLATE PG. 97	 GUSSET PG. 97	 CENTRE HOLD DOWN CLAMP PG. 97	 HARDWARE PG. 97
 UT5 - UNI-TRAY <sup>®</sup> PG. 98	 HOLD DOWN BRACKET PG. 99	 LINK PLATE PG. 99	 RADIUS PLATE PG. 99	 SPLICE PLATE PG. 99	 GUSSET PG. 99	 CENTRE HOLD DOWN CLAMP PG. 99	 HARDWARE PG. 99

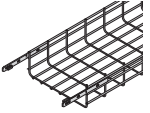
## UNI-TRAY<sup>®</sup>

 UNI-TRAY <sup>®</sup> BEND PG. 100	 UNI-TRAY <sup>®</sup> T-X BRACKET PG. 100	 UNI-TRAY <sup>®</sup> EXTERNAL RISER PG. 100	 UNI-TRAY <sup>®</sup> INTERNAL RISER PG. 100	 TB - LIGHT DUTY TRAPEZE BRACKET PG. 101			
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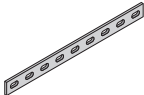
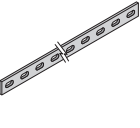
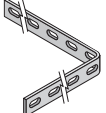
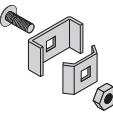
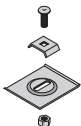
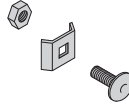
## ROLLED EDGE CABLE TRAY & Accessories

 ROLLED EDGE CABLE TRAY PG. 126	 FLAT CROSS PG. 126	 EXTERNAL RISER PG. 127	 INTERNAL RISER PG. 127	 TEE EQUAL PG. 127	 BEND 90° PG. 127	 REDUCER PG. 127	
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## ACROFIL<sup>®</sup> - Wire Mesh Cable Tray

 DOUBLE ROD REINFORCED TRAY [AF50 - (W)] PG. 132	 TRIPLE ROD REINFORCED TRAY [AF100 - (W)] PG. 133						
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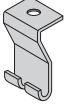
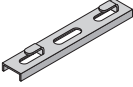
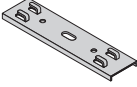
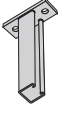
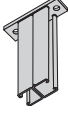

## ACROFIL<sup>®</sup> Joiners and Hardware

 AF-SPLICE PG. 135	 BEND & INTERSECTION BARS (550MM OR 1100MM LONG) PG. 135	 BEND & INTERSECTION BARS PG. 136	 CONNECTOR KIT (AF-KITCH1) PG. 136	 CONNECTOR KIT (AF-KITCH2) PG. 136	 CONNECTOR KIT (AF-KITCH3) PG. 137		
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# Cable Tray and Support Systems - Pictorial Index

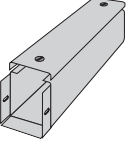
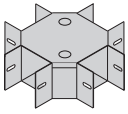
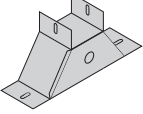
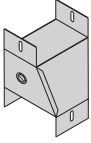
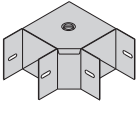
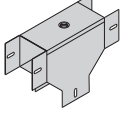
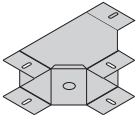
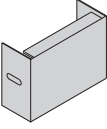
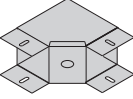
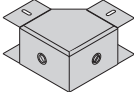
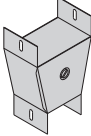
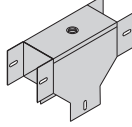
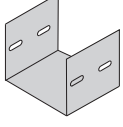
## ACROFIL® Supports

					
DROP ROD CLIP [AF-SIDECLIP] PG. 138	DROP ROD CLIP [AF-RODCLIP1] PG. 138	DROP ROD CLIP [AF-RODCLIP2] PG. 138	SINGLE CHANNEL PENDANT [P2663-(L)] PG. 139	BACK-TO-BACK CHANNEL PENDANT [P2542 TO P2546] PG. 139	TRAY DIVIDERS [AF-DIV50] & [AFDIV100] PG. 140


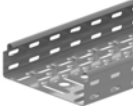
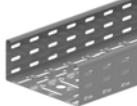

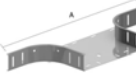

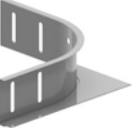
## ACROFIL® Fittings Overview

						
AF-CUTTOOL PG. 119	90° LONG RADIUS BEND PG. 140	90° SHORT RADIUS BEND PG. 140	TEE & CROSS PG. 140	RISERS PG. 140		

## Cable Trunking Steel

						
TRUNKING STRAIGHT LENGTH PG. 142	4 WAY HORIZONTAL PG. 142	FLANGE ADAPTOR PG. 142	TWIST ADAPTOR PG. 143	90° HORIZONTAL BEND PG. 143	TEE LID OUTSIDE PG. 143	TEE LID INSIDE PG. 143
						
END CAP PG. 144	90° LID INSIDE PG. 144	90° LID OUTSIDE PG. 144	REDUCER PG. 145	TEE HORIZONTAL PG. 145	JOINERS PG. 144	

## Vergokan Cable Tray

						
KBSCL PG.106	KBSI60 PG.108	KBS85 PG.109	KBS110 PG.110	B90 HORIZONTAL BEND. PG. 111	AS TEE/CROSS ADAPTOR PG. 112	DS HINGED JOINER PG. 113
						
AZH UNIVERSAL COUPLING PG. 114	SLOS BOLT ON PARTITION PG. 115					

# Cable Trunking and Support Systems - Pictorial Index

## ELECTRICAL - EXTRUDED ALUMINIUM SKIRTING TRUNKING



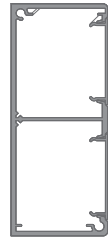
ALSKM  
PG. 146



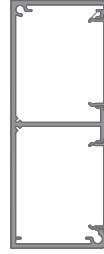
TD135  
PG. 146



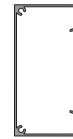
TD152  
PG. 146



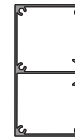
TD155 CAT 6  
PG. 146



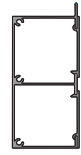
TD180 CAT 6  
PG. 146



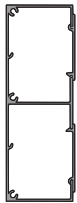
SD100  
PG. 147



TD100  
PG. 147



TD110  
PG. 147



TD145  
PG. 147

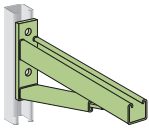


TD200  
PG. 147

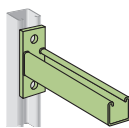


UNIDUCT  
PG. 147

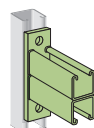
## SUPPORT BRACKETS



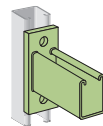
PCL150 TO  
PCL900  
PG. 148



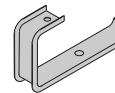
P2663-250 TO  
P2663-700  
PG. 148



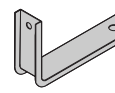
P2542 TO  
P2546  
PG. 148



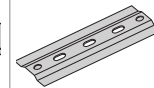
P5663-300 TO  
P5663-750  
PG. 149



CABLE TRAY  
HANGER  
BRACKET-UA  
PG. 149



CABLE TRAY  
WALL BRACKET-  
UA  
PG. 149



TB150 - 600  
LIGHT  
DUTY TRAPEZE  
BRACKET  
PG. 101





# UNI-TRAY® Cable Tray

## UT1 UNI-TRAY

UT1 is available in differing finishes with 30mm side height, 3 metres in length and a variety of widths to meet all your application needs.

### Finishes

#### Galvabond (GB)

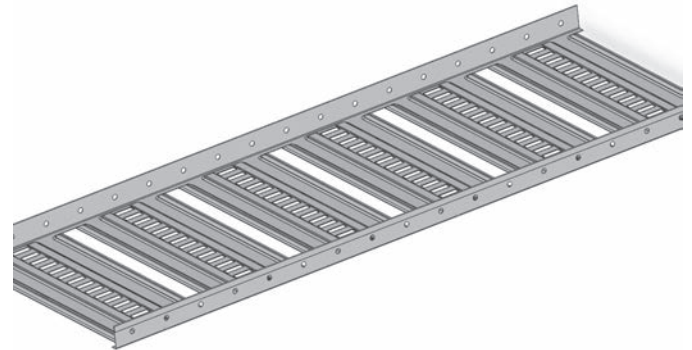
- Base material is supplied ex the Steel Mill in pre-galvanised finish, in accordance with AS/NZS 1397, with a coating class of Z275. The material is slit to width, punched, and formed in the UNI-TRAY profile.

#### Heavy Duty Galvanised (HG)

- Coatings are applied generally in accordance with AS/NZS 4680. The thickness of the coating is dependent on the material thickness of the component being galvanised. It should be noted that due to the galvanising process, the thickness of the coating will vary over the surface and should be taken into account during component assembly. It may be necessary to remove excess build-up prior to use.

#### Other - Powder Coated (PC), Pre-Galv (PG), Plain (PL)

- When specific applications require other commercially available finishes, they can be supplied according to specification.

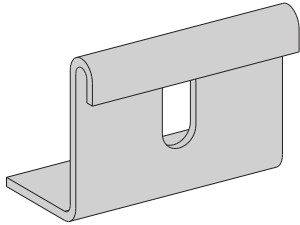


GB Code	Overall Width mm "W"	Cable Laying Depth mm	Length mm	Overall Height mm
UT1-100	100	25	3000	30
UT1-125	125	25	3000	30
UT1-175	175	25	3000	30
UT1-250	250	25	3000	30
UT1-325	325	25	3000	30

Basic Load 20kgs/Linea Meter on 1.5 meter span.

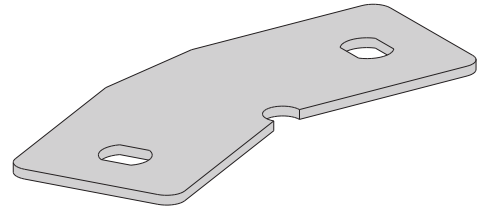
# UT1 Accessories

## Hold Down Bracket



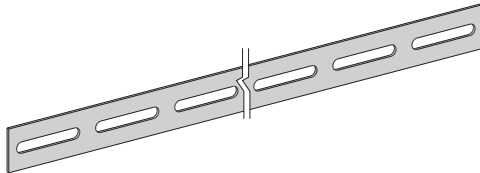
Description	Finish	Part No.	Finish	Part No.
Hold Down Bracket	GB	UT1HDB	HG	UT1HDBH

## Link Plate



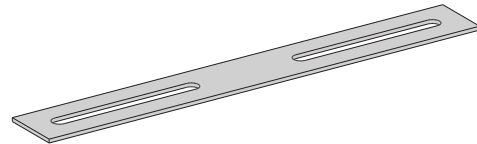
Description	Finish	Part No.	Finish	Part No.
Link Plate	GB	UT1LP	HG	UT1LPH

## Radius Plate



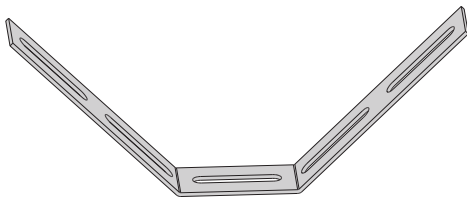
Description	Finish	Part No.	Finish	Part No.
Radius Plate 1200mm	GB	UT1RP	HG	UT1RPH

## Splice Plate



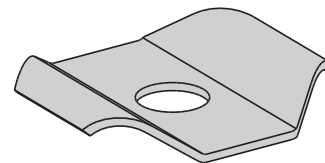
Description	Finish	Part No.	Finish	Part No.
Splice Plate	GB	UT1SP	HG	UT1SPH

## Gusset



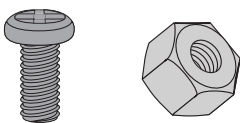
Description	Finish	Part No.	Finish	Part No.
Tray Gusset	GB	UT1AG	HG	UT1AGH

## Centre Hold Down Clamp



Description	Finish	Part No.	Finish	Part No.
Centre Down Clamp	GB	UTCHD	HG	UTCHDH

## Hardware

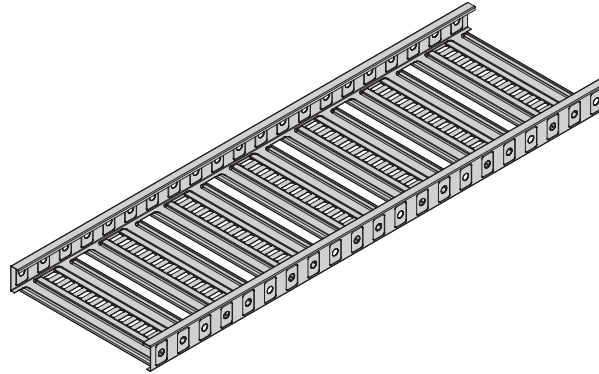


Description	Finish	Part No.
Gutter Bolt M6x12	ZP	GB0612Z
Hex Nut M6	ZP	HN06

# UNI-TRAY® Cable Tray

## UT3 UNI-TRAY

UT3 is available in differing finishes with 50mm side height, 3 metres in length and a variety of widths to meet all your application needs.



### Finishes

#### Galvabond (GB)

- Base material is supplied ex the Steel Mill in pre-galvanised finish, in accordance with AS/NZS 1397, with a coating class of Z275. The material is slit to width, punched, and formed in the UNI-TRAY® profile.

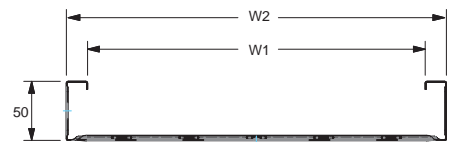
#### Heavy Duty Galvanised (HG)

- Coatings are applied generally in accordance with AS/NZS 4680. The thickness of the coating is dependent on the material thickness of the component being galvanised. It should be noted that due to the galvanising process, the thickness of the coating will vary over the surface and should be taken into account during component assembly. It may be necessary to remove excess build-up prior to use.

#### Other - Powder Coated (PC)

- When specific applications require other commercially available finishes, they can be supplied according to specification.

GB Code	Cable Laying Width mm "W1"	Overall Width mm "W2"	Cable Laying Depth (mm)	Length (mm)	Overall Height (mm)
UT3-150	150	172	45	3000	50
UT3-300	300	322	45	3000	50
UT3-450	450	472	45	3000	50
UT3-600	600	622	45	3000	50



Basic Load 125kgs/Linea Meter on 1.5 meter span.

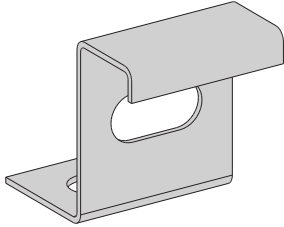
Deflections mm	10mm	20mm	25mm	35mm
Span 1.5 meters				
Span 2.0 meters				
Span 2.4 meters				
Span 3.0 meters				
<b>Allowable Load</b>	125kg/m	75kg/m	50kg/m	35kg/m

Note: The deflections have been provided as a guide based on CONTINUOUS spans.



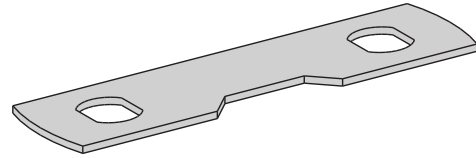
# UT3 Accessories

## Hold Down Bracket



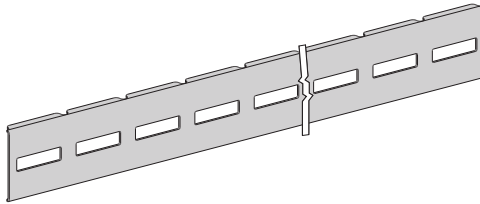
Description	Finish	Part No.	Finish	Part No.
Hold Down Bracket	GB	UT3HDB	HG	UT3HDBH

## Link Plate



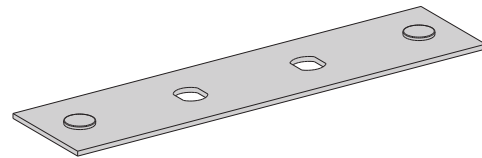
Description	Finish	Part No.	Finish	Part No.
Link Plate	GB	UT3LP	HG	UT3LPH

## Radius Plate



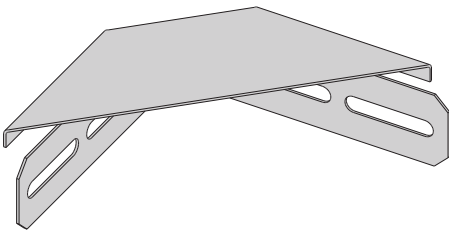
Description	Finish	Part No.	Finish	Part No.
Radius Plate 3000mm	GB	UT3RP3	HG	UT3RPH

## Splice Plate



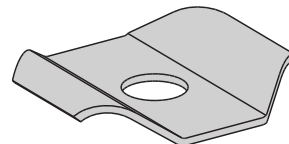
Description	Finish	Part No.	Finish	Part No.
Splice Plate	GB	UT3SP	HG	UT3SPH

## Gusset



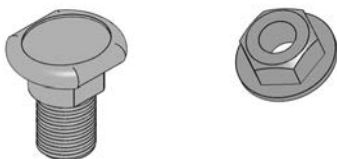
Description	Finish	Part No.
Tray Gusset	HG	UT3AGH

## Centre Hold Down Clamp



Description	Finish	Part No.	Finish	Part No.
Centre Down Clamp	GB	UTCHD	HG	UTCHDH

## Hardware



Description	Finish	Part No.	Finish	Part No.
UNITRAY NUT & BOLT	ZP	UTB/UTN	HG	UT940MG

# UNI-TRAY® Cable Tray

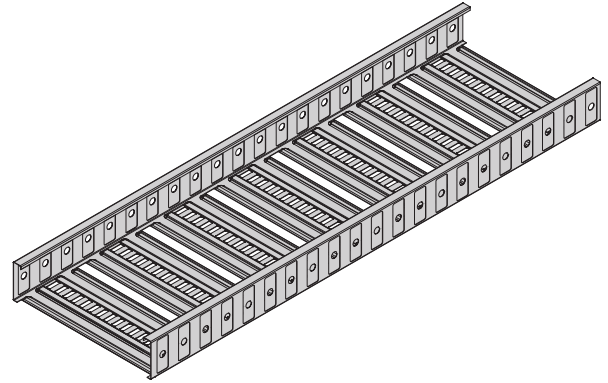
## UT5 UNI-TRAY

UT5 is available in differing finishes with 85mm side height, 3 metres in length and a variety of widths to meet all your application needs.

### Finishes

#### Galvabond (GB)

- Base material is supplied ex the Steel Mill in pre-galvanised finish, in accordance with AS/NZS 1397, with a coating class of Z275. The material is slit to width, punched, and formed in the UNI-TRAY profile.



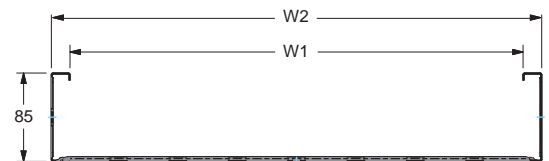
#### Heavy Duty Galvanised (HG)

- Coatings are applied generally in accordance with AS/NZS 4680. The thickness of the coating is dependent on the material thickness of the component being galvanised. It should be noted that due to the galvanising process, the thickness of the coating will vary over the surface and should be taken into account during component assembly. It may be necessary to remove excess build-up prior to use.

#### Other - Powder Coated (PC)

- When specific applications require other commercially available finishes, they can be supplied according to specification.

GB Code	Cable Laying Width mm "W1"	Overall Width mm "W2"	Cable Laying Depth (mm)	Length (mm)	Overall Height (mm)
UT5-150	150	172	80	3000	85
UT5-300	300	322	80	3000	85
UT5-450	450	472	80	3000	85
UT5-600	600	622	80	3000	85



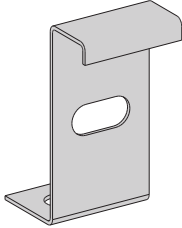
Basic Load 75kgs/Linea Meter on 3.0 meter span.

Deflections mm	8mm	10mm	15mm	22mm
Span 1.5 meters				
Span 2.0 meters				
Span 2.4 meters				
Span 3.0 meters				
<b>Allowable Load</b>	220kg/m	130kg/m	100kg/m	75kg/m

Note: The deflections have been provided as a guide based on CONTINUOUS spans.

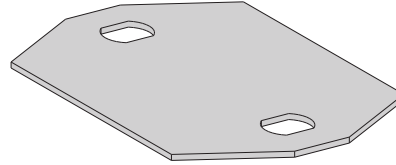
# UT5 Accessories

## Hold Down Bracket



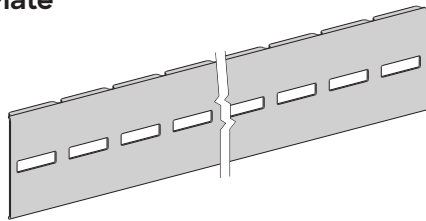
Description	Finish	Part No.	Finish	Part No.
Hold Down Bracket	GB	UT5HDB	HG	UT5HDBH

## Link Plate



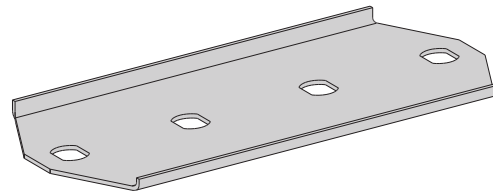
Description	Finish	Part No.	Finish	Part No.
Link Plate	GB	UT5LP	HG	UT5LPH

## Radius Plate



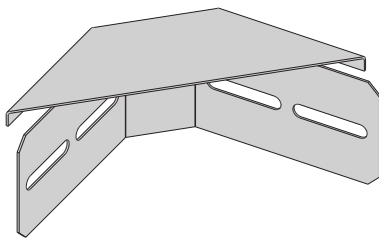
Description	Finish	Part No.	Finish	Part No.
Radius Plate 3000mm	GB	UT5RP3	HG	UT5RPH

## Splice Plate



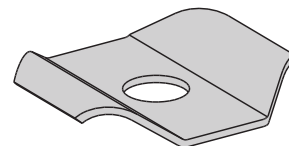
Description	Finish	Part No.	Finish	Part No.
Splice Plate	GB	UT5SP	HG	UT5SPH

## Gusset



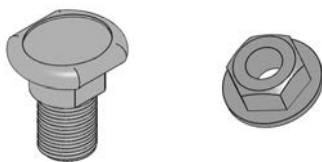
Description	Finish	Part No.
Tray Gusset	HG	UT5AG-H

## Center Hold Down Clamp



Description	Finish	Part No.	Finish	Part No.
Centre Down Clamp	GB	UTCHD	HG	UTCHDH

## Hardware

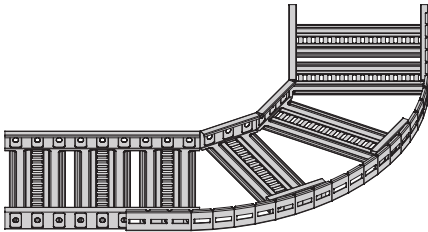


Description	Finish	Part No.	Finish	Part No.
UNITRAY NUT & BOLT	ZP	UTB/UTN	HG	UT940MG



## UNI-TRAY<sup>®</sup> – Rapid On-Site Fabrication Assemblies

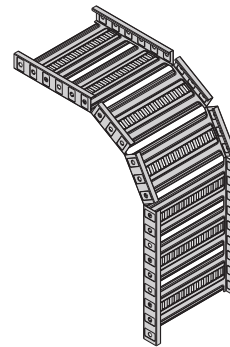
### UNI-TRAY<sup>®</sup> Bend



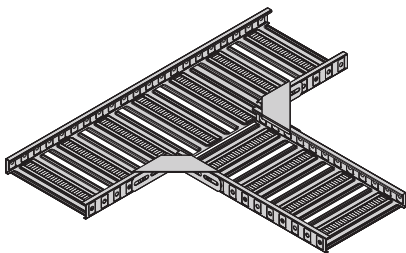
- Cut outside rails right through (3 full cuts make 90° bend).
- Form Radius Plate to suit and cut to length before fixing to tray with standard joining hardware.
- Cut inside rails at top and bottom flanges only.

### UNI-TRAY<sup>®</sup> External Riser

- Cut both side rails down to bottom face.
- Bend tray along bottom face and secure with link plates and joining hardware.
- 3 cuts in each rail make a 90° riser.



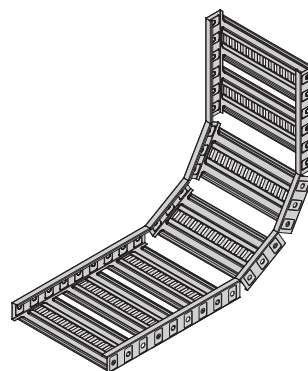
### UNI-TRAY<sup>®</sup> T-X Bracket



- Note: Cross is same procedure repeated on the other side.
- Cut side rail to bottom face in 2 places to suit tray width (flatten side down or cut off with snips).
- Fix 2 T-X brackets to both trays using joining hardware.

### UNI-TRAY<sup>®</sup> Internal Riser

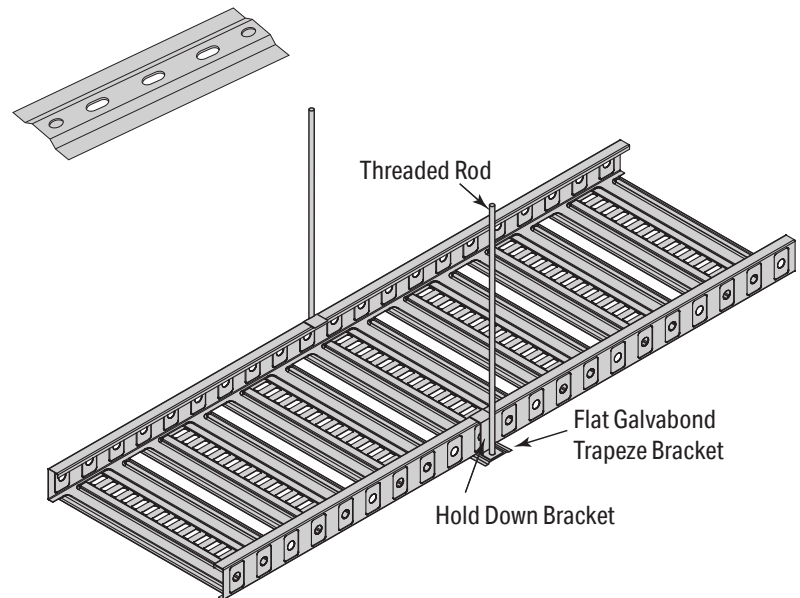
- Cut both side rails down to top face.
- Bend tray along bottom face and secure with link plates and joining hardware.
- 3 cuts in each rail make a 90° riser.



# UNI-TRAY® - Rapid On-Site Fabrication Assemblies

## TB - Light Duty Trapeze Bracket

Part No.	Designation	Actual Size
TB150	Trapeze Bracket for UNI-TRAY® 150mm	250mm
TB300	Trapeze Bracket for UNI-TRAY® 300mm	400mm
TB450	Trapeze Bracket for UNI-TRAY® 450mm	550mm
TB600	Trapeze Bracket for UNI-TRAY® 600mm	700mm







# KBSCCL Cable Tray

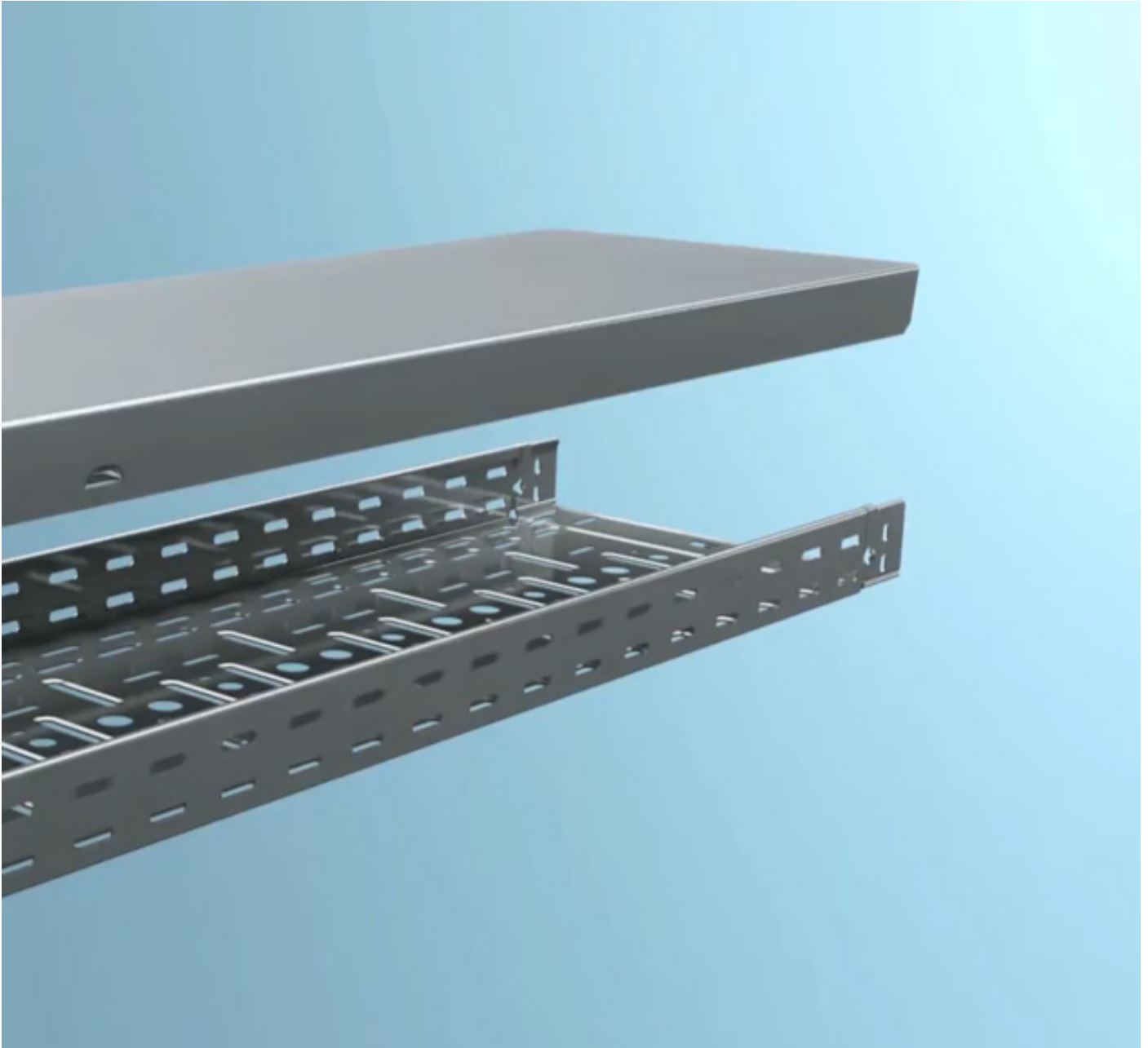
Quick Install Solutions



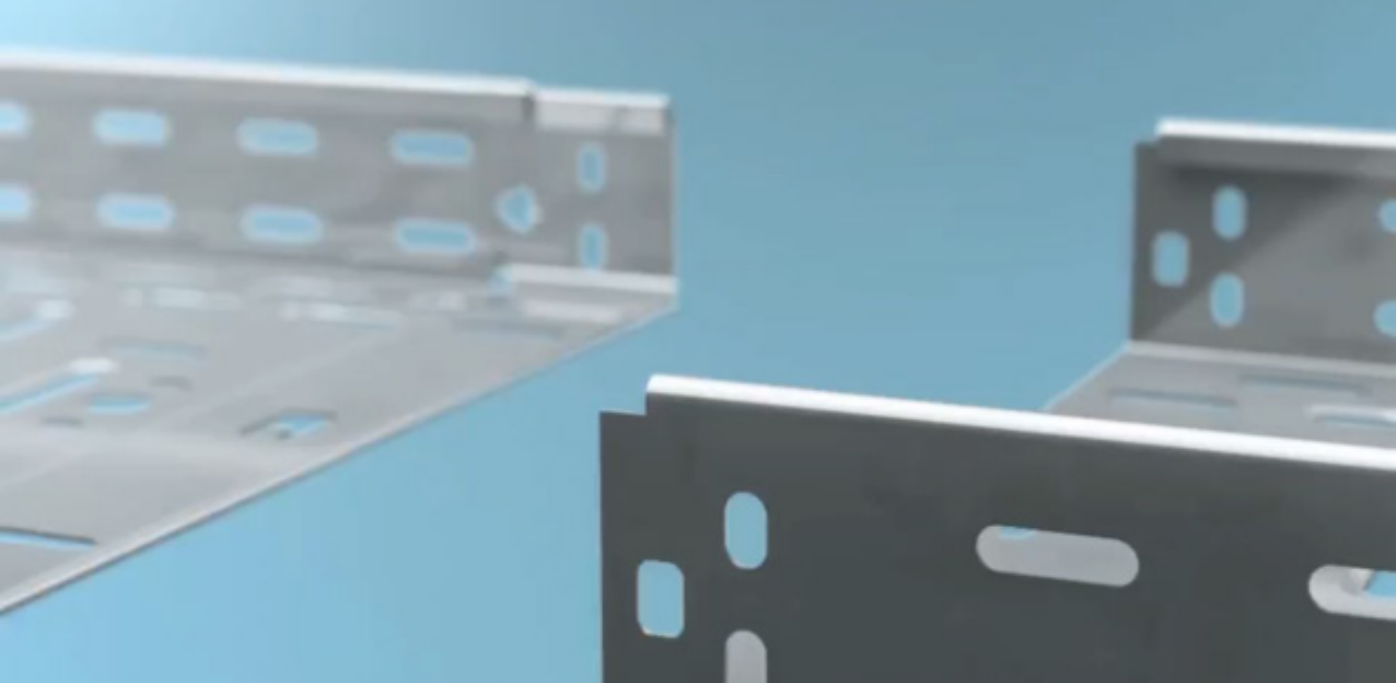
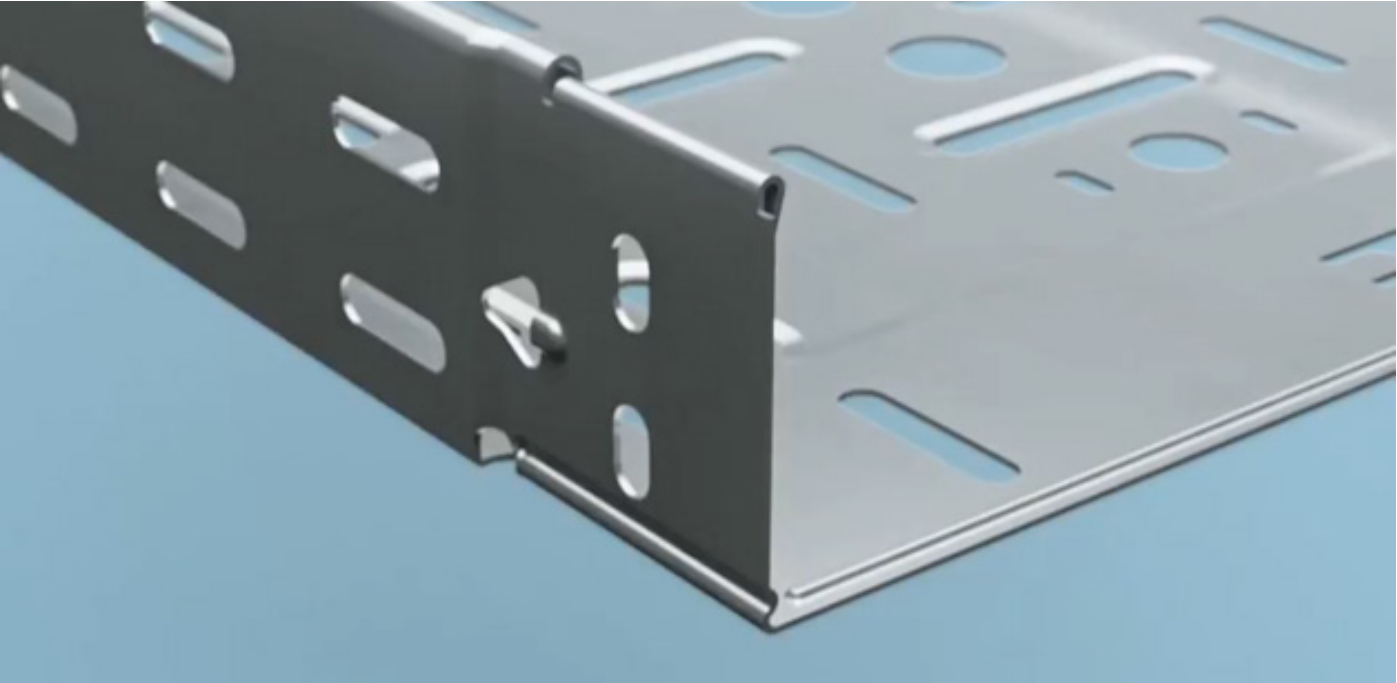
**Atkore**<sup>™</sup>  
Vergokan



## KBSCCL Cable Tray



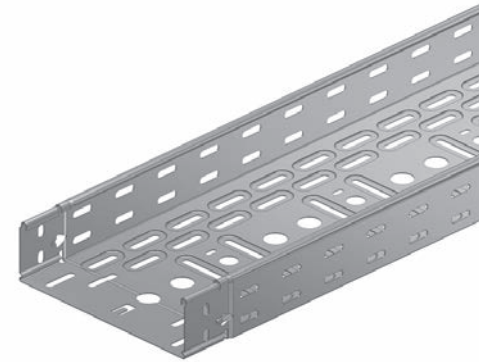
# KBSCCL Cable Tray





**CLICKABLE CABLE TRAY**

- Standard finish - PG
- Optional finish - Zinc Magnesium
- Powder coated options also available



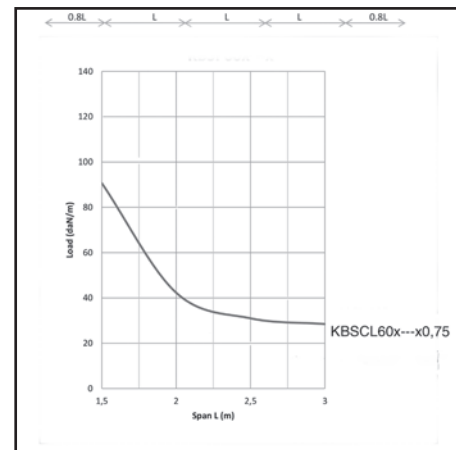
**KBSC60**

ZM	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/m
ZM	KBSC60.100.075	60	100	0.75	3000	1.200
ZM	KBSC60.150.075	60	150	0.75	3000	1.462
ZM	KBSC60.200.075	60	200	0.75	3000	1.723
ZM	KBSC60.300.075	60	300	0.75	3000	2.234
ZM	KBSC60.400.100	60	400	1.00	3000	3.545

**LOAD Diagram**

This diagram illustrates the permissible uniformly distributed loads applied to multiple supports. They comply with IEC 61537 with connection in the centre of the span and the end span = 0,8 x the span.

F = max. admissible load (daN/m)  
L = support distance (m)  
Max. deflection (m) = L/100



# KBSCCL60

## CLICKABLE CABLE TRAY

### New

Our KBSCCL cable tray is now also available in zinc magnesium (ZM) to order. Thanks to its unique chemical composition zinc magnesium offers a resistance against corrosion that is at least equivalent to standard hot-dipped steel.

For widths 500 and 600: see KBSI.

Other lengths upon request: min. 1.95 m / max. 6 m in 150 mm steps.

## FEATURES

- Clickable.
- The simplest jointing system, with a single movement.
- Rapid - Just click and ready for the next joint. Immediate alignment at the same time.
- Strong - As strong as a bolted joint.
- Reliable - Maximum load with snap-fit joint. Multiple jointing options available.
- Cost-effective - Working faster results in immediate time and cost savings.
- High standard - Wide and complete range of accessories available.

Etched perforations for:

- better stability
- extra load-bearing capacity
- better cooling

Longitudinal and transverse perforations for:

- better fixing to the support
- convenient cable bundling

Additional equipotential bonding available by 1. snap-fit joint, 2. bolted joint, 3. push-through lip in the bottom and 4. lateral fitting lip for earth conductor.

## TECHNICAL INFORMATION

Perforation pattern varies according to width.

Transverse perforation as from 200 mm width.

16 mm dia. and 20.4 mm dia. openings to be provided for fitting a gland.

SLIS60 snap-in partition to suit width as from 75 mm every 50 mm in the width direction.

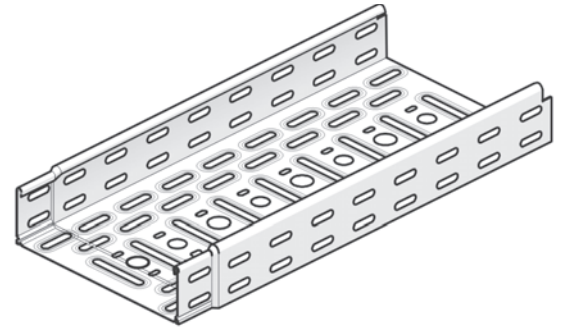
Can be secured with VM6.10 or KBVCL as an option.



**INTERLOCK CABLE TRAY**

**Non Standard Stock. Available to order**

- Standard finish - PG
- Optional finish - HG
- Powder coated options also available



**KBSI60**

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/m
HD	KBSI60.500.100	60	500	1.25	3000	5.210
HD	KBSI60.600.100	60	600	1.25	3000	6.030

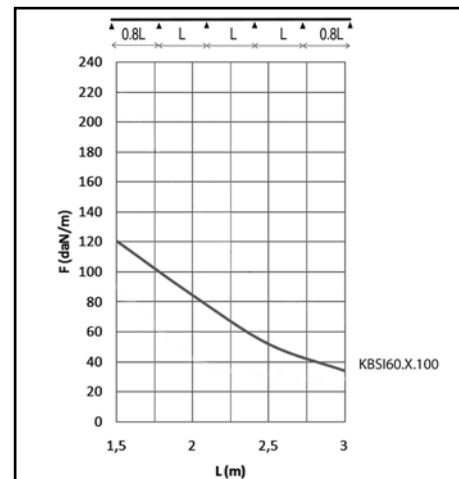
**LOAD DIAGRAM**

This diagram illustrates the permissible uniformly distributed loads applied to multiple supports. They comply with IEC 61537 with connection in the centre of the span and the end span = 0,8 x the span. For widths of 300 and up, it is advised to use a stiffening plate.

F = max. admissible load (daN/m)

L = support distance (m)

Max. deflection (m) = L/100

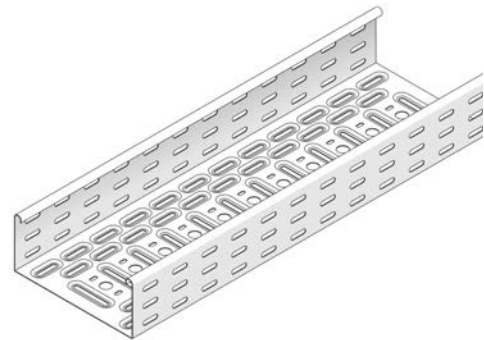


# KBS85

## PERFORATED CABLE TRAY

Non Standard Stock. Available to order

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available



### KBS85

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/m
HD	KBS85.100.100	85	100	1.00	3000	1.890
HD	KBS85.150.100	85	150	1.00	3000	2.220
HD	KBS85.200.100	85	200	1.00	3000	2.540
HD	KBS85.300.100	85	300	1.00	3000	3.190
HD	KBS85.400.100	85	400	1.00	3000	3.840
HD	KBS85.500.125	85	500	1.25	3000	5.620
HD	KBS85.600.125	85	600	1.25	3000	6.430

#### Fix with:

HD	V85.200	75	200	-	-	0.130
-	V85	77	180	-	-	0.130
HD	VMK6.10	-	-	M6	-	0.008

### LOAD DIAGRAM

This diagram illustrates the permissible uniformly distributed loads applied to multiple supports. They comply with IEC 61537 with connection in the centre of the span and the end span = 0,8 x the span. For widths of 300 and up, it is advised to use a stiffening plate.

F = max. admissible load (daN/m)

L = support distance (m)

Max. deflection (m) = L/100

### CHARACTERISTICS

Embedded perforations for:

- extra load capacity
- better aeration
- better stability
- better condensation drainage

Alternative perforations for:

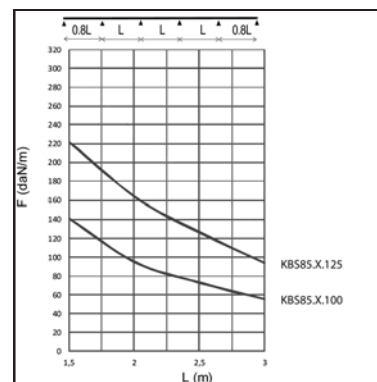
- better fixing to supports
- very useful for attaching cables

### TECHNICAL INFORMATION

The perforation scheme differs according to the width.

Alternative perforation beginning at 200 mm.

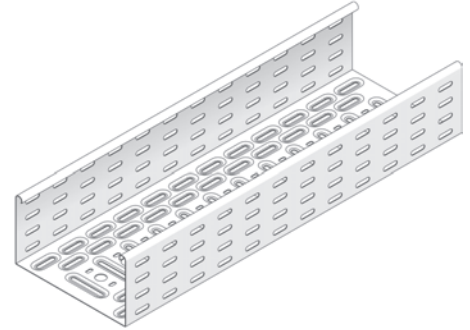
Round holes of Ø 16 mm and Ø 19.5 mm provided as opening for the fitting of a gland.



**PERFORATED CABLE TRAY**

**Non Standard Stock. Available to order**

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available



**KBS110**

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/m
HD	KBS110.150.125	110	150	1.25	3000	3.180
HD	KBS110.200.125	110	200	1.25	3000	3.580
HD	KBS110.300.125	110	300	1.25	3000	4.400
HD	KBS110.400.125	110	400	1.25	3000	5.210
HD	KBS110.500.125	110	500	1.25	3000	6.030
HD	KBS110.600.125	110	600	1.25	3000	6.840

**Fix with:**

HD	V110.200	100	200	-	-	0.170
HD	VMK6.10	-	-	M6	10	0.008
HD	KPW	115	400	-	-	0.590

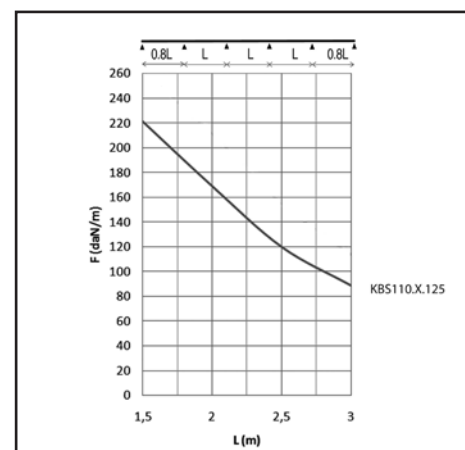
**LOAD DIAGRAM**

This diagram illustrates the permissible uniformly distributed loads applied to multiple supports. They comply with IEC 61537 with connection in the centre of the span and the end span = 0,8 x the span. For widths of 300 and up, it is advised to use a stiffening plate.

F = max. admissible load (daN/m)

L = support distance (m)

Max. deflection (m) = L/100

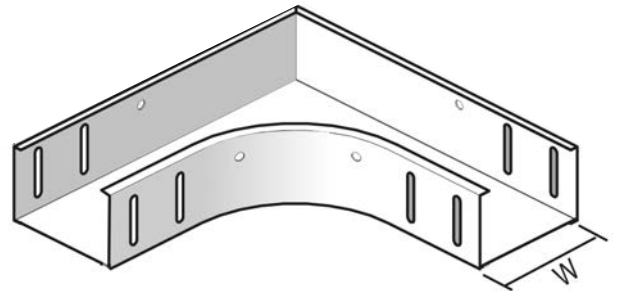


# B90

## 90° Horizontal Bend

Non Standard Stock. Available to order

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available
- Radius 100mm



## B90

HD	Part Number	Sidewall Height (mm)	Width (W) (mm)	Thickness (mm)	Length (mm)	kg/m
HD	B90.60.100	60	100		-	0.738
HD	B90.60.150	60	150		-	0.822
HD	B90.60.200	60	200		-	1.374
HD	B90.60.300	60	300		-	2.292
HD	B90.60.400	60	400		-	2.958
HD	B90.60.500	60	500		-	5.424
HD	B90.60.600	60	600		-	6.690

### Fix with:

HD	VMK6.10	-	-	M6	-	0.008
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\*Minimum number bolts and nuts 8 pieces.

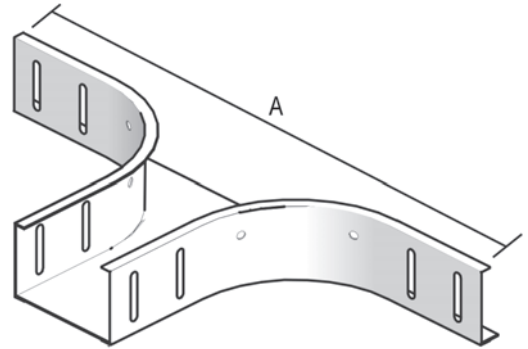




**90° Horizontal Adaptor**

**Non Standard Stock. Available to order**

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available
- Radius 100mm



**AS**

HD	Part Number	Sidewall Height (mm)	Width (A) (mm)	Thickness (mm)	Length (mm)	kg/m
HD	AS60.100	60	100		-	0.570
HD	AS60.150	60	150		-	0.650
HD	AS60.200	60	200		-	0.730
HD	AS60.300	60	300		-	0.880
HD	AS60.400	60	400		-	0.103
HD	AS60.500	60	500		-	1.524
HD	AS60.600	60	600		-	1.740

**Fix with:**

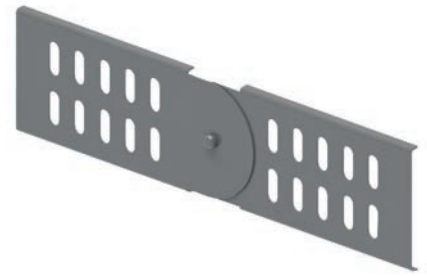
HD	VMK6.10	-	-	M6	-	0.008
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\*Minimum number bolts and nuts 8 pieces.

# DS

## Hinged Joiner

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available



## DS

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	DS60	60	-	-	-	0.130
HD	DS85	85	-	-	-	0.340
HD	DS110	110	600	-	-	0.390

### Fix with:

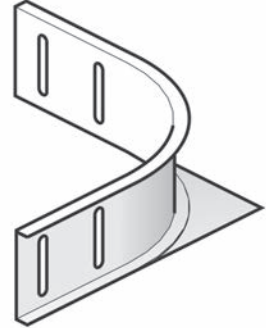
HD	VMK6.10	-	-	M6	-	0.008
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\*Minimum number bolts and nuts 8 pieces.



**90° Universal Coupling**

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available



**AZH**

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	AZH60	60	-	-	-	0.390
HD	AZH85	85	-	-	-	0.750
HD	AZH110	110	-	-	-	0.900

**Fix with:**

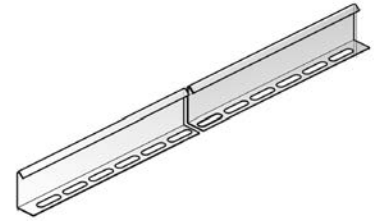
HD	VMK6.10	-	-	M6	-	0.008
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\*Minimum number bolts and nuts 8 pieces.

# SLOS

## Bolt-in Partition

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available



## SLOS

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	SLOS60	53	-		3000	0.511
HD	SLOS85	78	-		3000	0.680
HD	SLOS110	103	-		3000	0.820

### Fix with:

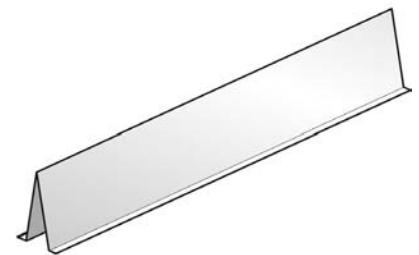
HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	VMK6.10	-	-	M6	-	0.008

Fixing set: 1 per meter.

# SLIS

## Snap-in Partition

- Standard finish - PG

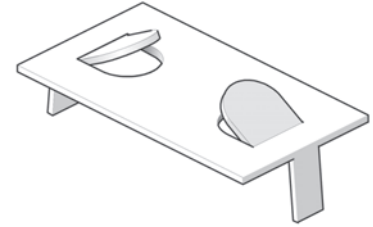


## SLIS

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
-	SLIS60	60	-		3000	0.440

**Clips for SLIS**

- Standard finish - PG

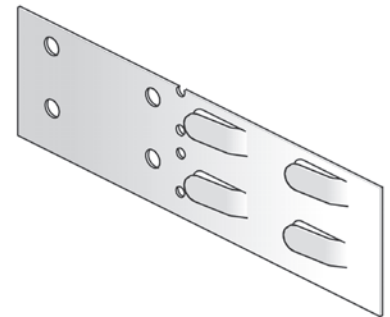


**CL**

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
-	CL	-	-	-	-	0.005

**Joiner for Fast Mounting**

- Standard finish - PG
- Powder coated options also available



**V60**

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
-	V60	52	180	-	-	0.090

**Fix with:**

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
-	VMK6.10	-	-	M6	-	0.008

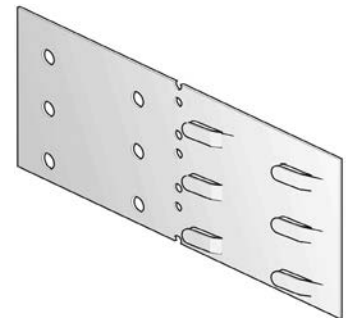
Minimum number bolts and nuts: 2 pieces.

## V85

### Joiner for Fast Mounting

Non Standard Stock. Available to order

- Standard finish - PG



### V85

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	V85	110	-		3000	0.820

#### Fix with:

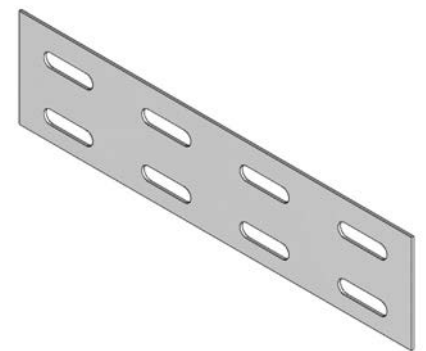
HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	VMK6.10	-	-	M6	-	0.008

Minimum number bolts and nuts: 2 pieces.

## V60.200

### Joining Plate

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available



### V60.200

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	V60.200	50	200		3000	0.440

#### Fix with:

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	VMK6.10	-	-	M6	-	0.008

Minimum number bolts and nuts: 4 pieces.

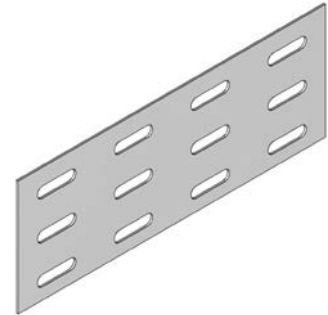


## V85.200

### Joining Plate

#### Non Standard Stock. Available to order

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available



#### V85.200

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	V85.200	75	200	-	-	0.130

#### Fix with:

HD	VMK6.10	-	-	M6	-	0.008
----	---------	---	---	----	---	-------

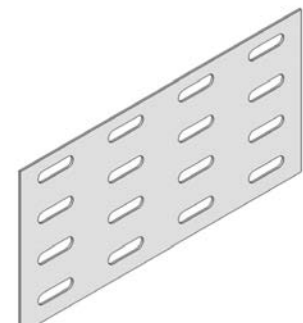
Minimum number bolts and nuts: 4 pieces.

## V110.200

### Joining Plate

#### Non Standard Stock. Available to order

- Standard finish - PG
- Optional finish - HDG
- Powder coated options also available



#### V110.200

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	V110.200	100	200	-	-	0.170

#### Fix with:

HD	VMK6.10	-	-	M6	-	0.008
----	---------	---	---	----	---	-------

Minimum number bolts and nuts: 8 pieces.

## KBV

### Fast Locking for KBSI

- Standard finish - Stainless Steel



#### KBV

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
-	KBV	-	-	-	-	0.001

To order per full packaging of 100.

## KBVCL

### Locking Clips for KBSCL

- Standard finish - Stainless Steel

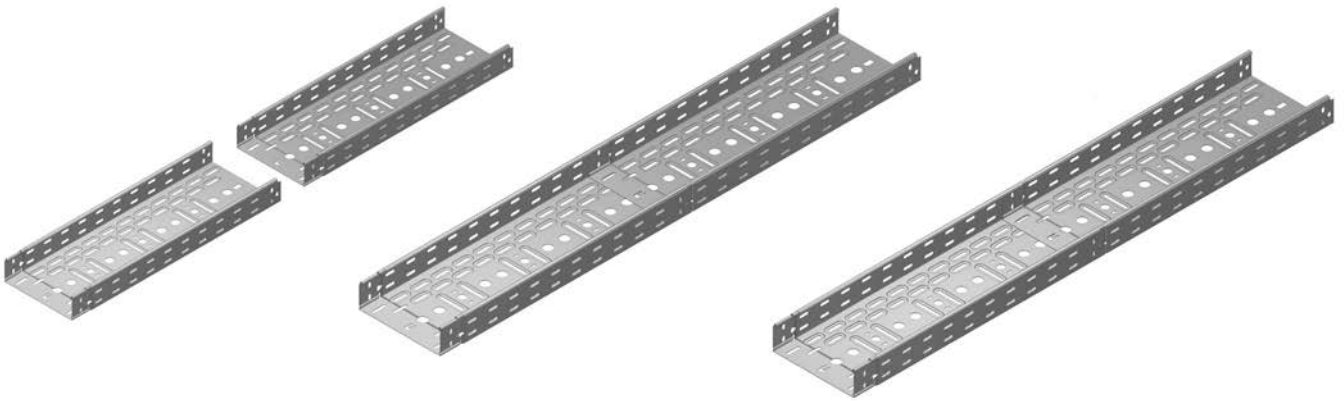


#### KBVCL

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
-	KBVCL	-	-	-	-	0.001

To order per full packaging of 100.

## Installation Guide



### How do you install?

It's very simple!

1. Slide two lengths into each other until you hear a click.
2. Optional: Snap in KBVCL clips or VMK6.10 for extra stability and safe locking.
3. Finished!

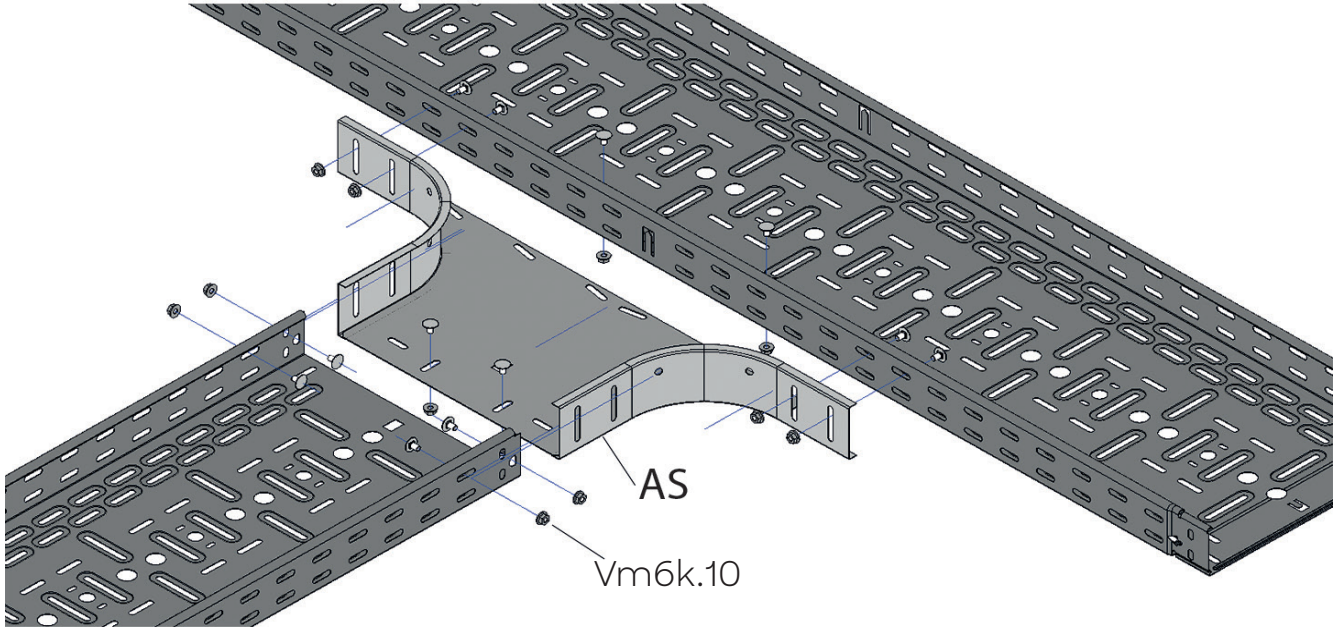
This system offers you various advantages :

1. Lower installed price.
2. Faster mounting just by clicking.
3. No bolts and nuts required.
4. Fixing with clips.
5. Certified earth continuity .
6. Easier fixing thanks to alternative perforations.
7. Better stability thanks to embedded perforations.
8. Better aeration of the cables thanks to embedded perforations.
9. Integrated cable protection thanks to overlapping ends.
10. Smooth finishing touch.
11. No protruding nuts / bolts / joiners



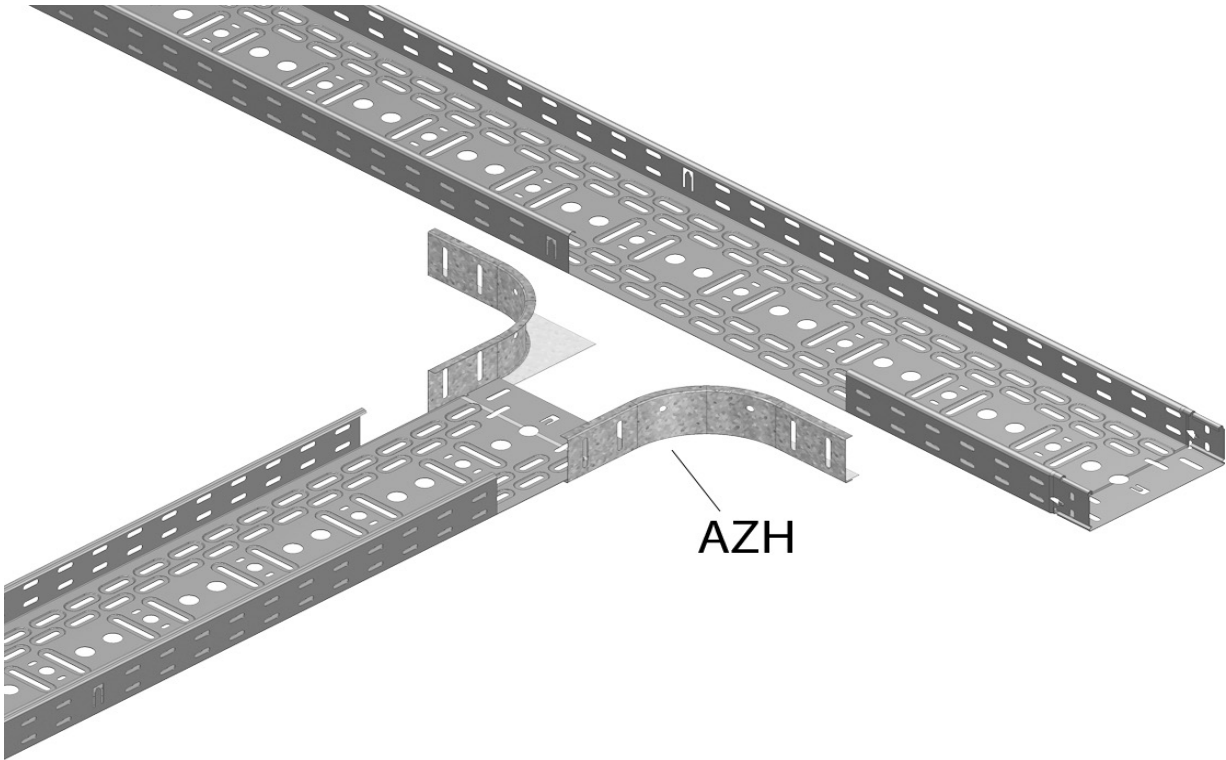
# AS

## Technical Information



# AZH

## Technical Information





The KBSCCL has been tested to 11.1.2 of IEC 61537 for Electrical Continuity.

An Electrical Continuity Declaration Certificate is available from [www.atkore.com/vergokan](http://www.atkore.com/vergokan)



		VERGOKAN NV Meersbloem Melden 16, 9700 Oudenaarde - Belgium T : + 32 55 31 83 35, F : + 32 55 31 43 88 <a href="http://www.vergokan.com">www.vergokan.com</a>
<b>ELECTRICAL CONTINUITY DECLARATION</b>		
Producer:	VERGOKAN NV	
Reportname:	KBSCCL60-...-...	
Product description:	Cable tray clickable	
Devices under test : (Productreferences)	KBSCCL60.075.075 KBSCCL60.200.075 KBSCCL60.300.100 KBSCCL60.400.100 VM6.10 KBVCL	
Test according to:	§ 11.1.2 of the IEC 61537	
Description of testmethode:	A current of 25 A ± 1 A A.C. having a frequency of 50 Hz to 60 Hz supplied by a source with a no-load voltage not exceeding 12 V shall be passed through the length of the samples. The voltage drop shall be measured between two points 50 mm each side of the coupler or integral coupling and again between two points 500 mm apart on one side of the joint. The impedances shall not exceed 50 mΩ across the joint and 5 mΩ per meter without the joint.	
Manufactured by:	VERGOKAN N.V.	
Test device:	HYAMP III 3130	
Calibration certificate number:	130624-3130_9352036	
[Declaration] : We declare that above mentioned products are tested by VERGOKAN according to § 11.1.2 of the IEC 61537.		
 Georges Xhauflaire Inspector		RF 7.3.9, Rev 1, dd 18.10.13

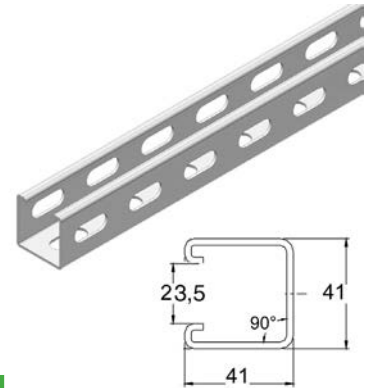




## MP3 41x41 (P1000-T3)

### Assembly Profile Perforation on 3 Sides

- Profile opening 23.5mm
- Standard finish - PG
- Optional finish - HDG



#### MP3.41.41

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HD	MP3.41.41.200.3	41	41	2.5	3000	8.1

## HDHSMU50

### Ceiling Profile Medium / Heavy

200mm stock item. Other sizes

#### Non Standard Stock.

- Standard finish - HDG
- Max. load - 2100 daN



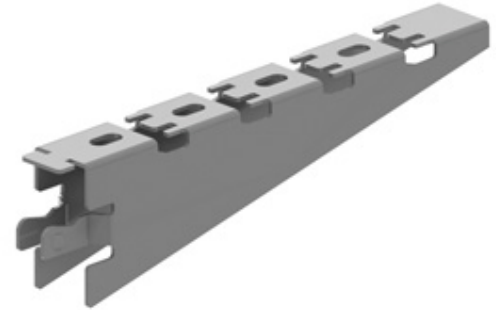
#### HDHSMU50

Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece
HDHSMU50.200	-	-	-	200	0.940
HDHSMU50.300	-	-	-	300	1.160
HDHSMU50.400	-	-	-	400	1.380
HDHSMU50.500	-	-	-	500	1.610
HDHSMU50.600	-	-	-	600	1.830
HDHSMU50.800	-	-	-	800	2.270
HDHSMU50.1000	-	-	-	1000	2.710
HDHSMU50.1200	-	-	-	1200	3.150
HDHSMU50.1500	-	-	-	1500	3.820



**Snap-in Bracket for MP-profile**

- Standard finish - PG
- Optional finish - HDG
- Ideal in combination with ceiling profile
- HDHSMU50.200 and perforated MP3.41.41-profile



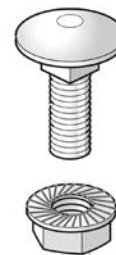
**WKCL**

HD	Part Number	Sidewall Height (mm)	Width (mm)	Thickness (mm)	Length (mm)	kg/piece	Max. load (daN) HSLE3
HD	WKCL100	65	100	-	-	0.229	190
HD	WKCL150	65	150	-	-	0.294	190
HD	WKCL200	65	200	-	-	0.334	160
HD	WKCL300	65	300	-	-	0.464	125
HD	WKCL400	65	400	-	-	0.604	90
HD	WKCL500	65	500	-	-	0.744	70

Max. load (in daN): uniformly distributed over complete width of cantilever brackets

**Toothed Round Head Bolt / Flange Nut**

- Standard finish - EZP
- Optional finish - HDG



**VM**

HD	Part Number	Sidewall Height (mm)	Width (mm)	Size	Length (mm)	kg/piece
HD	VMK6.10	-	-	M6.	-	0.008

To order per full packaging of 100.  
According to DIN 50 961



# Rolled Edge Cable Tray & Accessories

**Standard Finish:**

Galvabond. Also available in: Heavy Duty Galvanised, Powder Coated, Aluminium and 304 & 316 Stainless Steel.

**Standard Length:**

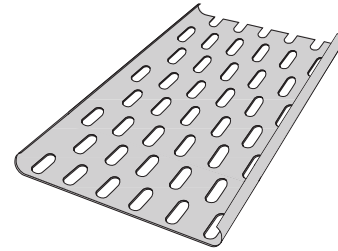
3 metres in Galvabond, Heavy Duty Galvanised and Powder Coated. 2.4 metres in Aluminium and Stainless Steel.

**Nominal Standard Widths:**

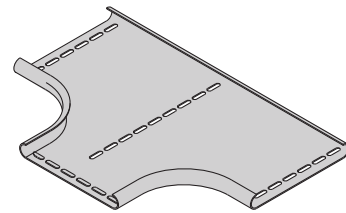
50, 100, 150, 200, 300, 450

Note: When ordering please specify the type of metal finish preferred.

**Rolled Edge Cable Tray**

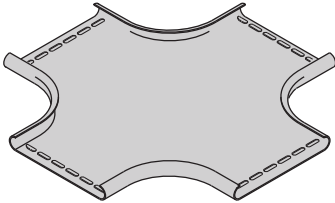


**Tee-Equal**

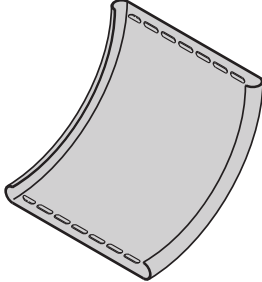


# Rolled Edge Cable Tray & Accessories

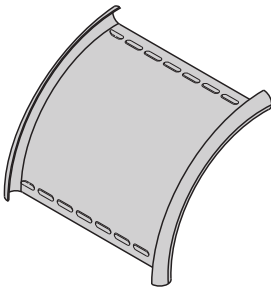
**Flat Cross**



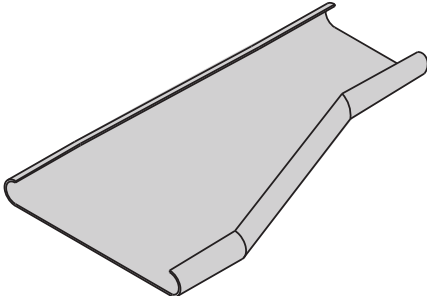
**Internal Riser**



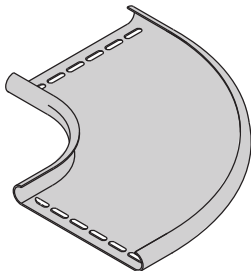
**External Riser**



**Reducer**



**BEND 90°**



# ACROFIL<sup>®</sup> - Wire Mesh Cable Tray



## ACROFIL Overview

ACROFIL is a welded wire mesh cable management system produced from high strength steel wires. ACROFIL is produced by first welding a net, forming the Strut, and then finishing. The 50mmX100mm wire spacing permits continuous airflow to help prevent heat build-up. In addition this unique open design prevents the build-up of dust, contaminants and bacterial proliferation.

ACROFIL is produced in standard 3m lengths and is supplied in 2 standard depths: 50 and 100mm.

ACROFIL is offered in seven different widths: 100mm, 150mm, 200mm, 300mm, 400mm, 500mm, 600mm. Special sizes are available to meet your unique requirements.

### Zinc Plated (ZP) - (AS 1789)

Strut, fittings and components are electroplated generally in accordance with AS/NZS 1789. Fasteners are electroplated generally in accordance with AS/NZS 1789.

### Hot-dipped Galvanised (HG) - (AS/NZS 4680)

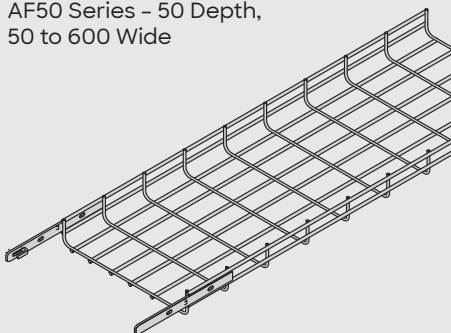
Coatings are applied generally in accordance with AS/NZS 1789. The thickness of the coating is dependent on the material thickness of the component being galvanised. It should be noted that due to the galvanising process, the thickness of the coating will vary over the surface and should be taken into account during component assembly. It may be necessary to remove excess build-up prior to use.

### 316 Type Stainless Steel (SS)

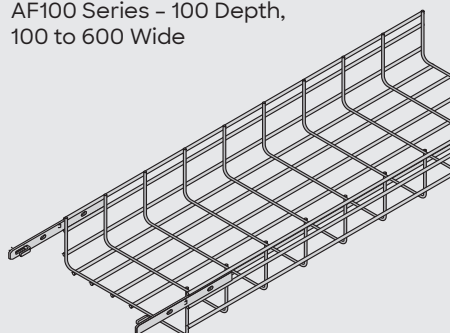
Corrosive resistant stainless steel with no additional surface treatment. This material option provides the best corrosion resistance available. Stainless steel is used primarily in marine environments or food processing facilities.



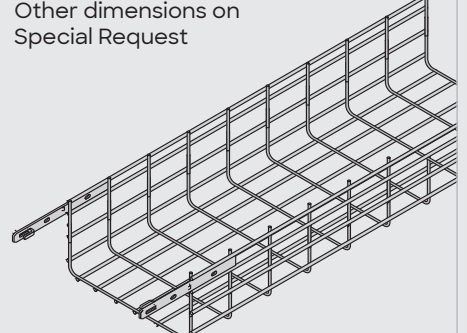
AF50 Series - 50 Depth,  
50 to 600 Wide



AF100 Series - 100 Depth,  
100 to 600 Wide



Other dimensions on  
Special Request



# ACROFIL® – Wire Mesh Cable Tray

## Other Finishes – Powder Coated (PC), Pre Galvanised (PG), Plain (PL) and Grade 304 Stainless Steel (SS304).

When specific applications require other commercially available finishes, they can be supplied according to specification.

## How To Order

Part numbers shown in the catalogue are for the standard zinc plated finish. For special order finishes, add the finish code as a suffix.

## Example

AF50-300 is zinc plated  
AF50-300-SS is stainless steel type 316

## Masses and Dimensions

Masses given for all material are approximate shipping weights. All dimensions subject to commercial tolerance variations.

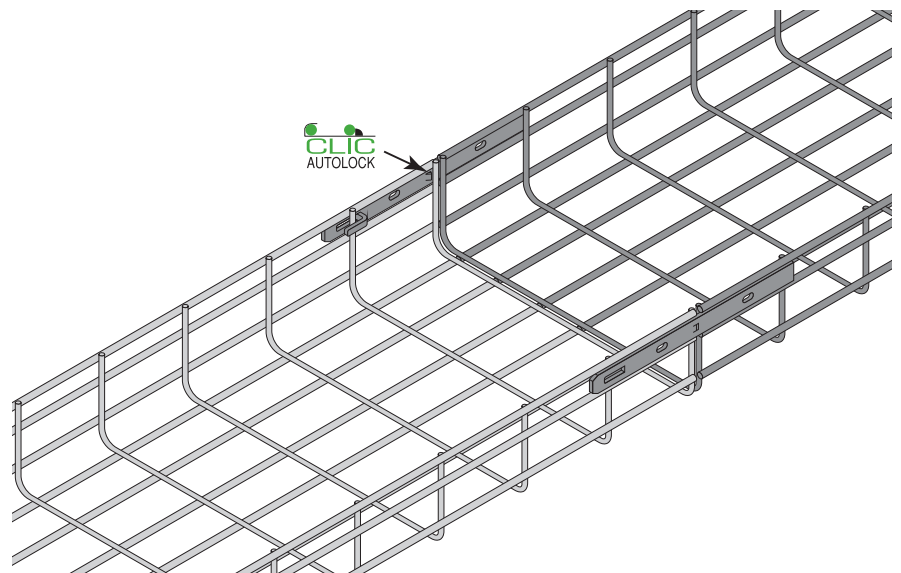
## ACROFIL System

UNISTRUT The premier name in electrical and metal infrastructure solutions has been designing and manufacturing products in Australia and New Zealand for over 50 years delivering superior performance in design, engineering excellence, distribution, and customer service.

As part of global company Atkore, Unistrut is able to provide the ACROFIL range of wire-mesh cable tray, which features unique Autolock system and welded splices. Autolock and welded splices make connecting tray fast and simple and in turn eliminate the need for nut and bolt connection.

The addition of ACROFIL to our range reinforces Unistrut's commitment to being the one-stop supplier for all your cable management solutions.

Visit [www.atkore.com/unistrut](http://www.atkore.com/unistrut)



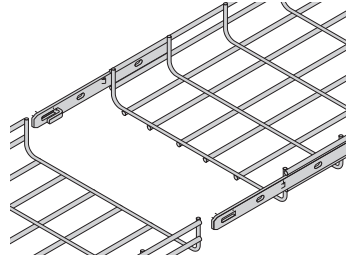
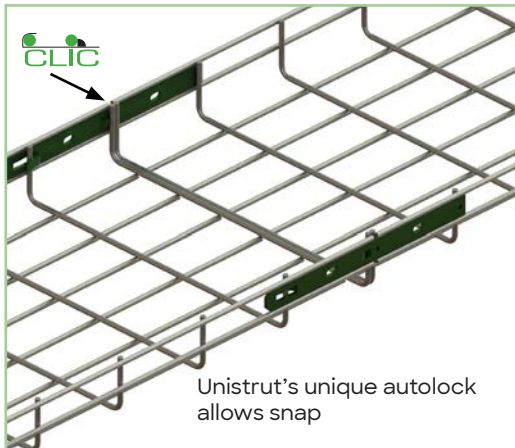


# ACROFIL<sup>®</sup> - Wire Mesh Cable Tray

## ACROFIL System

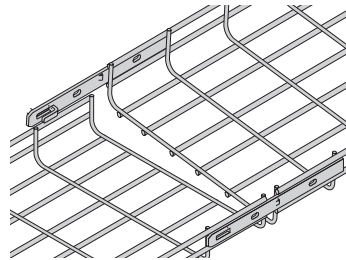
### Self-Splicing Straight Lengths

ACROFIL's exclusive autolock splicing system makes connecting ACROFIL fast and simple. The Autolock, or self splicing bars which come pre-installed on ACROFIL systems, eliminates the need for a typical nut and bolt type connection.



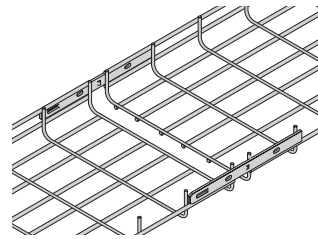
### Step 1

Align the trays as shown



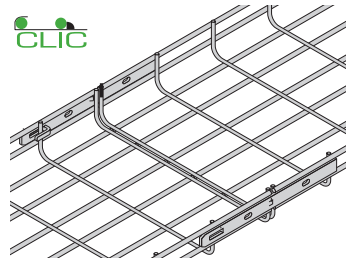
### Step 2

While raising the rear edge of the male connection, slide the tray forward, but do not engage the locking clip.



### Step 3

Push the rear locking clip over the back edge of the tray.



### Step 4

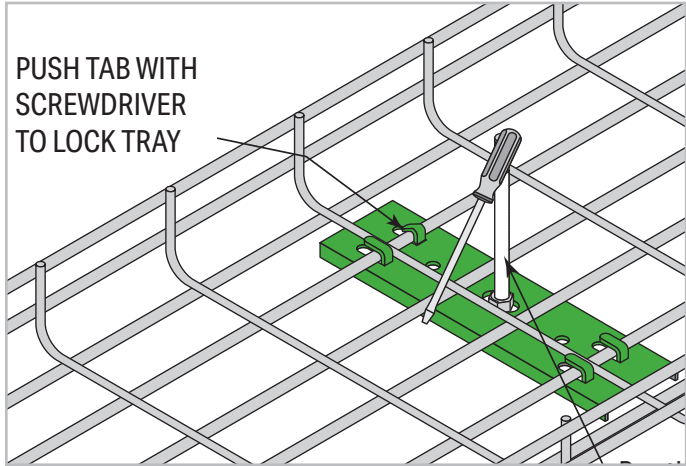
Slide the tray forward to engage both front and rear locking clips.

Splice straight lengths for field cuts with zero hardware

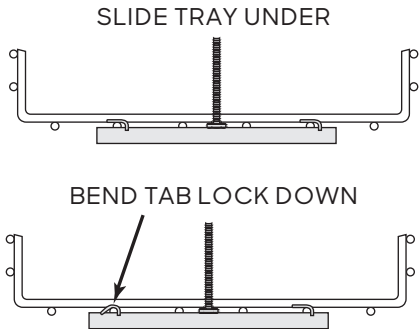


# ACROFIL® - Wire Mesh Cable Tray

### Accessory Assembly



For accessories which use the tab lock, the tray is secured by using a screw driver to gently bend one of the tabs down over the tray.

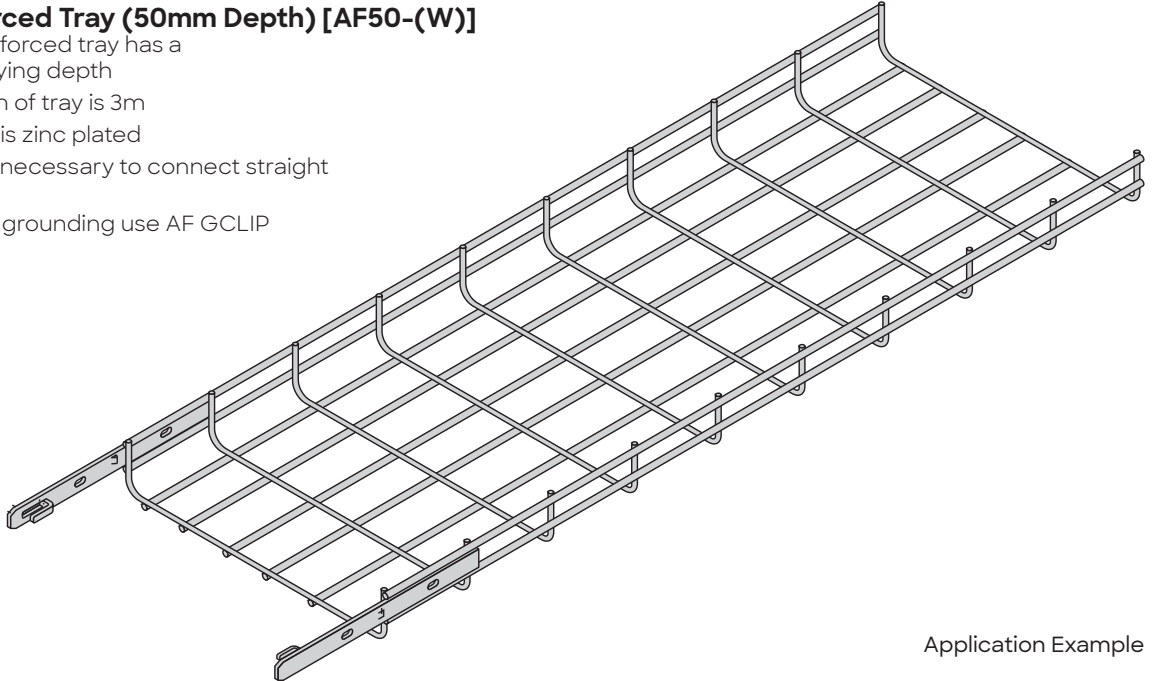


# ACROFIL® - Wire Mesh Cable Tray

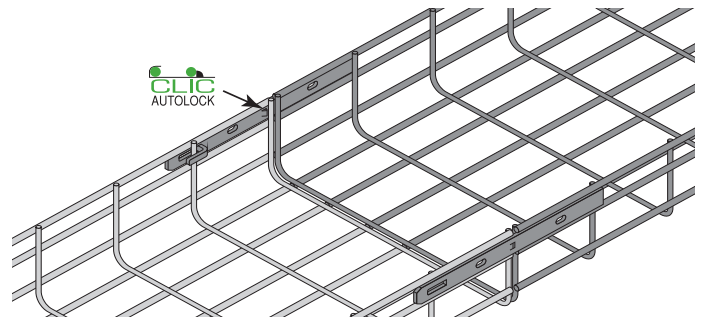
## ACROFIL System




### Double Rod Reinforced Tray (50mm Depth) [AF50-(W)]

- Double rod reinforced tray has a 50mm cable laying depth
- Standard length of tray is 3m
- Standard finish is zinc plated
- No hardware is necessary to connect straight sections
- For continuous grounding use AF GCLIP



Application Example



Part Description		Width (Nominal)	Depth (mm)	Weight (kg) (piece)	Loading (kg/m)		
					1.5m Span	2.0m Span	2.5m Span
	*AF50-50	50	50	1.9	25.1	17.8	13.1
	AF50-100	100	50	2.6	34.2	23.3	17.2
	AF50-150	150	50	3.6	56.3	36.6	27.8
	AF50-200	200	50	4.2	58.7	39.2	29.8
	AF50-300	300	50	5.5	64.0	39.3	29.0
	AF50-400	400	50	8.1	89.4	49.4	36.5
	AF50-500	500	50	9.5	105.4	63.0	46.5
	*AF50-600	600	50	10.8	114.9	68.7	50.7

Load Values are determined by IEC61537 testing. Copies of load tests available upon request. Safety Factor 1.7

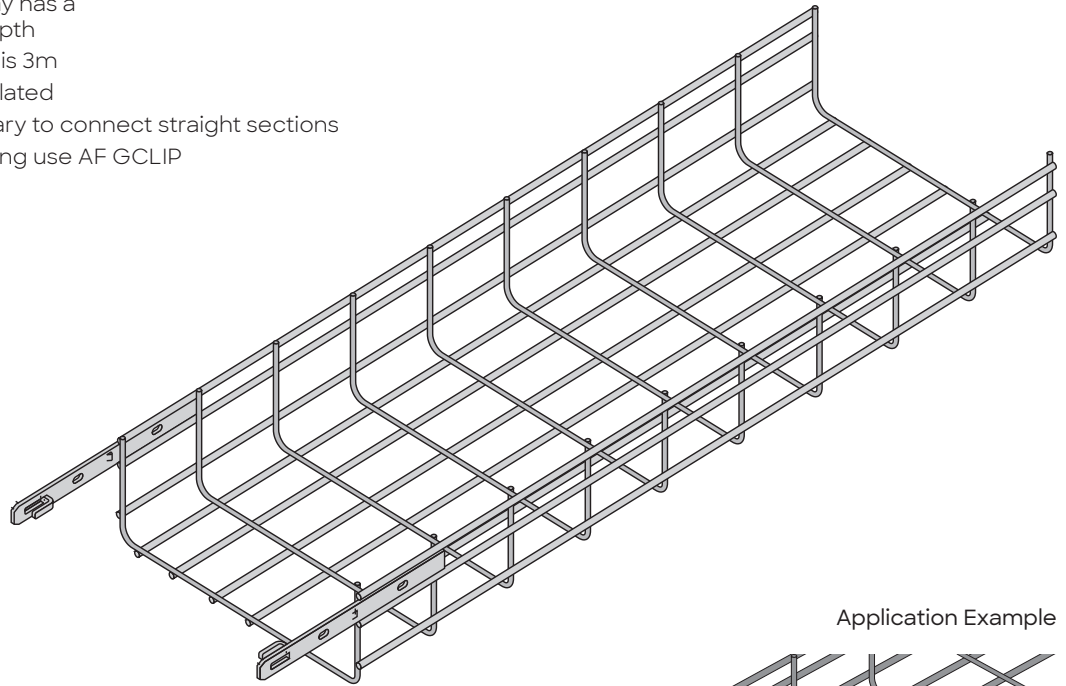
\*Non stock item. Made to order.

# ACROFIL® - Wire Mesh Cable Tray

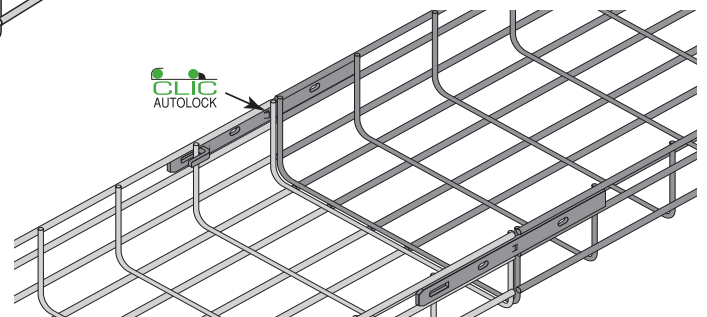
## ACROFIL System

### Triple Rod Reinforced Tray (100mm Depth) [AF100-(W)]

- Triple rod reinforced tray has a 100mm cable laying depth
- Standard length of tray is 3m
- Standard finish is zinc plated
- No hardware is necessary to connect straight sections
- For continuous grounding use AF GCLIP



Application Example



Part Description		Width (Nominal)	Depth (mm)	Weight (kg) (piece)	Loading (kg/m)		
					2.0m Span	2.5m Span	3.0m Span
	AF100-100	100	100	4.2	69.6	54.2	41.2
	AF100-200	200	100	5.5	78.4	58.4	46.4
	AF100-300	300	100	8.1	109.9	85.0	67.4
	AF100-400	400	100	9.5	129.3	96.1	76.3
	AF100-500	500	100	10.8	151.0	119.7	95.0
	AF100-600	600	100	17.6	164.6	130.5	103.6

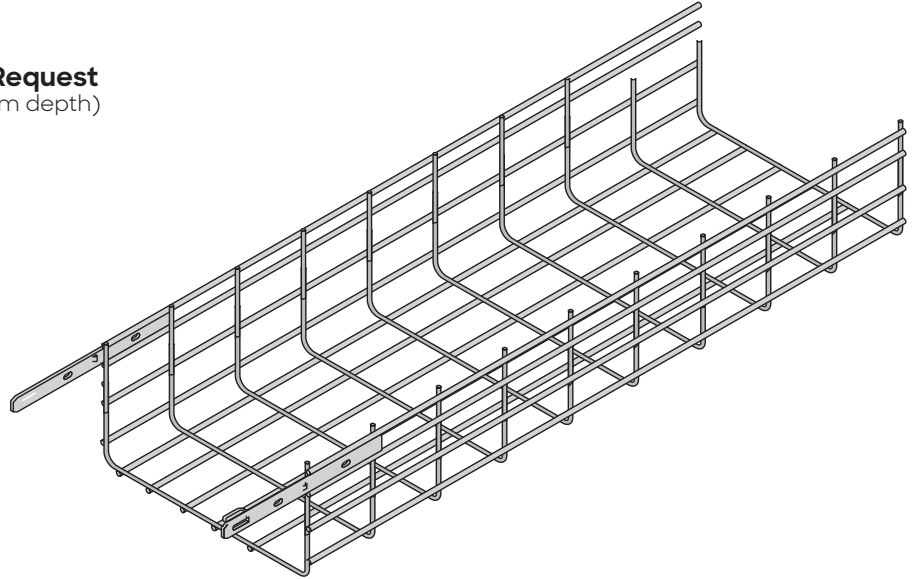
Load Values are determined by IEC61537 testing. Copies of load tests available upon request.  
Safety Factor 1.7

# ACROFIL<sup>®</sup> - Wire Mesh Cable Tray

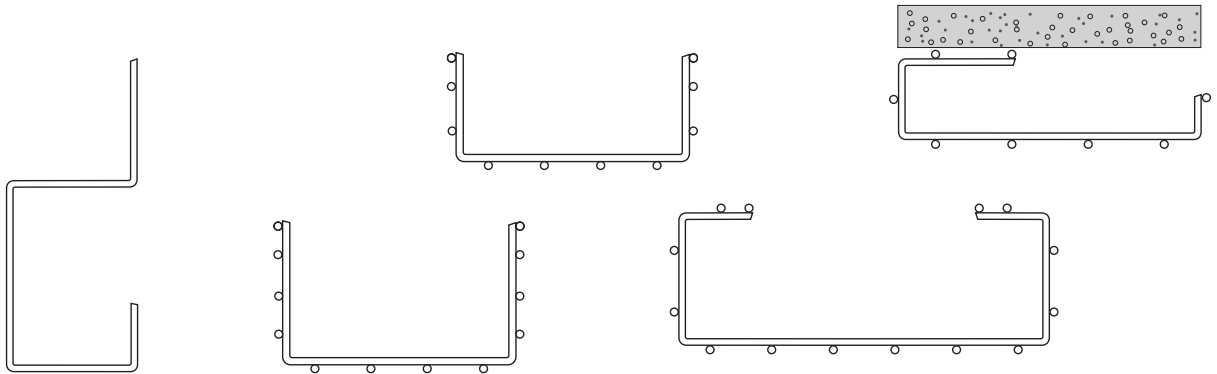
## ACROFIL System

### Other Products Available at Special Request

- Quadruple rod reinforced tray (150mm depth)
- Heavy duty cable tray



## Custom Made Tray Examples





# ACROFIL® – Bar Connectors

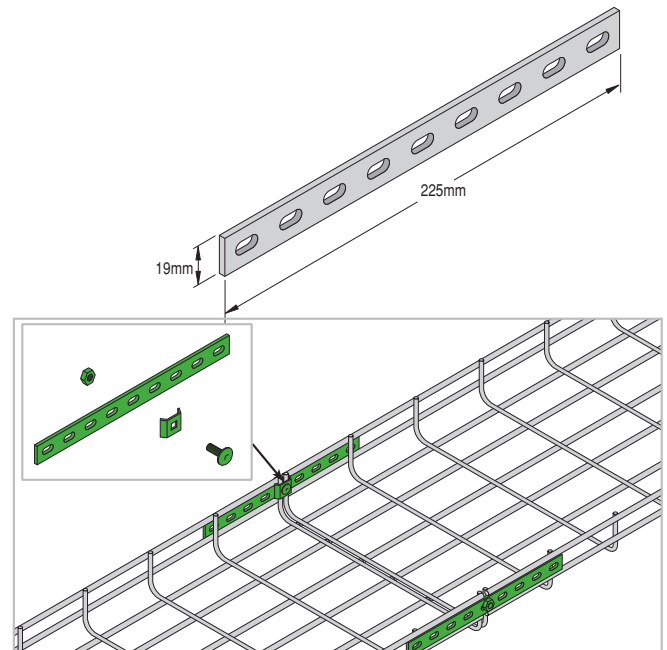
## AF-Splice

Weight: 0.13kg/each

- Splice bar connector is 19mm x 225mm long
- Standard finish is zinc plated
- Connect using AF-KITCH3 (sold separately)
- Bend 90° for use as an angle connector

## NOTES:

1. Always place nut on outside of tray
2. For use with AF50, AF100 & AF150 tray
3. The splice connector is used to connect remnant sections of tray cut from standard lengths and to field fabricate fittings



## Bend & Intersection Bars

### AF-TBAR1100

Weight: 0.65kg/each

- AF-TBAR1100 connector is 19mm x 1100mm long
- Connect using AF-KITCH3 (sold separately)
- Bend 90° for use as an angle connector

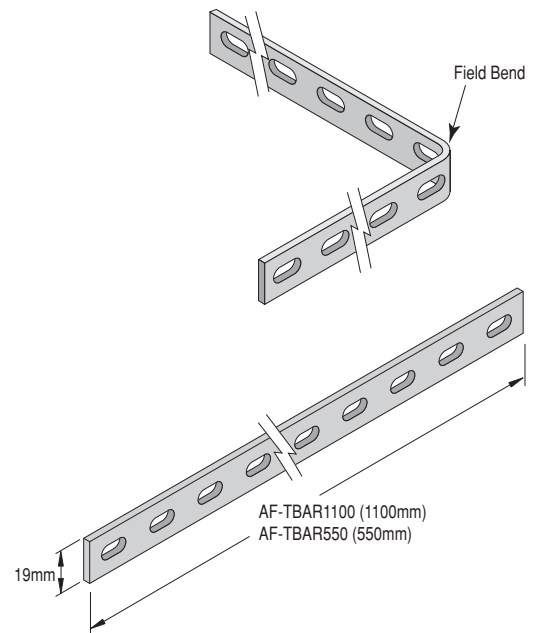
### AF-TBAR550

Weight: 0.32kg/each

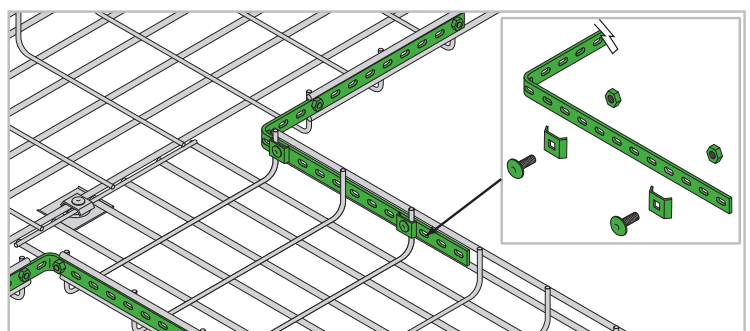
- AF-TBAR550 connector is 19mm x 550mm long
- Connect using AF-KITCH3 (sold separately)

## NOTES:

1. Always place nut on outside of tray
2. For use with AF50, AF100 & AF150 tray
3. Used for tees that require a heavier support
4. These bars are normally cut to appropriate length



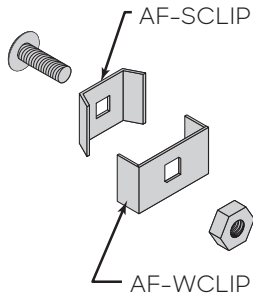
Application Example



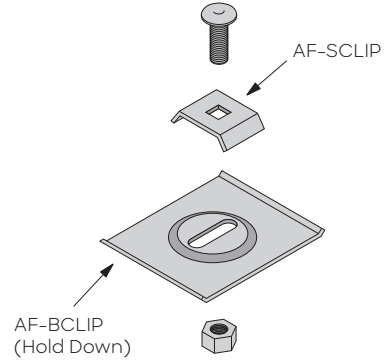


# ACROFIL® - Connector Hardware

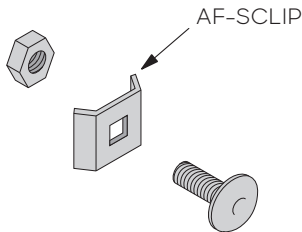
## AF-KITCH1



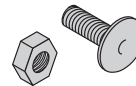
## AF-KITCH2



## AF-KITCH3



## AF-EG-CBN



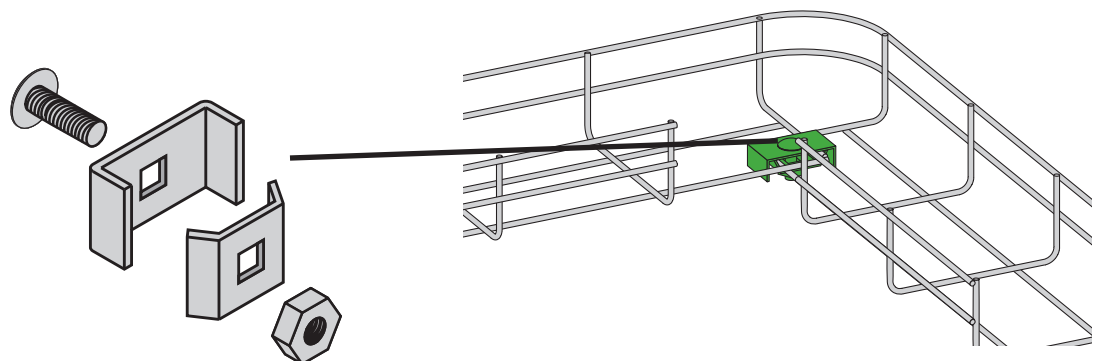
Part Kit	Weight (kg)	NO./ PKG
AF-KITCH1	0.32	10
AF-KITCH2	0.53	10
AF-KITCH3	0.20	10
AF-EG-CBN	0.09	10

Single Part	Weight (kg)	NO./ PKG
AF-SCLIP	0.20	10
AF-WCLIP	0.31	10
AF-BCLIP	0.92	10

### Connector Kit [AF-KITCH1]

- Standard bar connector is 30mm x 18mm
- Standard finish is zinc plated
- Sold in packs of 10  
(AF-EG-CBN connector hardware included)

**NOTE:** Always place nut on outside of tray

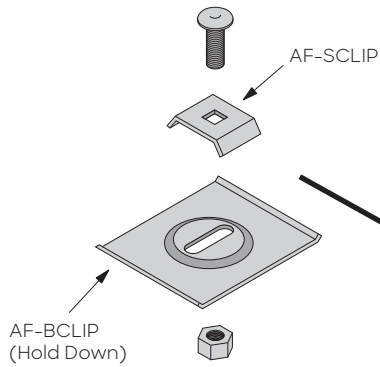


Application Example

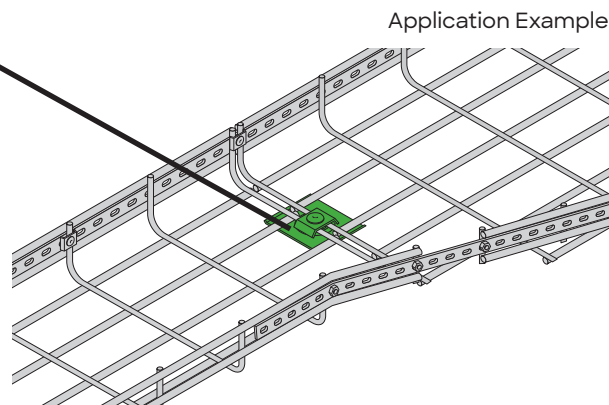
# ACROFIL® - Connector Hardware

## Connector Kit [AF-KITCH2]

- Bottom connector is 50mm x 60mm
- Standard finish is zinc plated
- Sold in packs of 10  
(AF-EG-CBN connector hardware included)

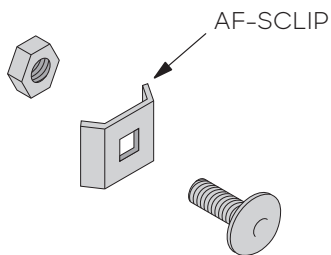


**NOTE:** Always place nut on outside of tray

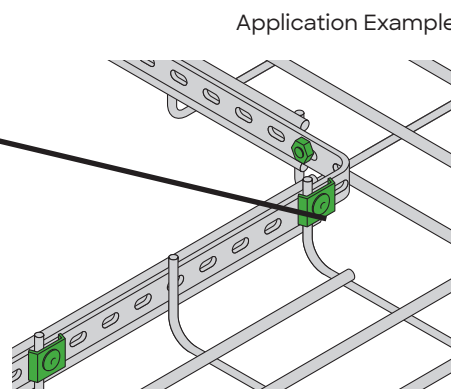


## Connector Kit [AF-KITCH3]

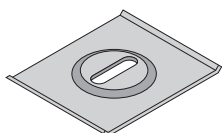
- Universal connector is 18mm x 24mm
- Standard finish is zinc plated
- Sold in packs of 10  
(AF-EG-CBN connector hardware included)



**NOTE:** Always place nut on outside of tray



## Connector Hardware [AF-B Clip]



- M6 x 20 Carriage bolt
- M6 Hex nut
- Standard finish is zinc plated
- Sold in packs of 10 each

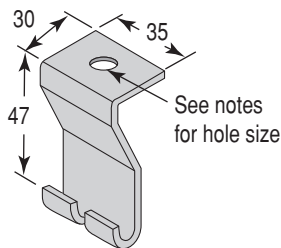
**NOTE:** Always place nut on outside of tray

# ACROFIL<sup>®</sup> - Drop Rod Clips

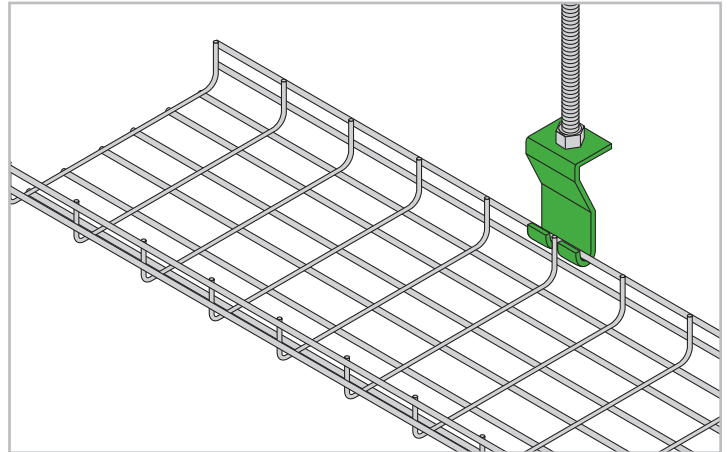
## Drop Rod Clip (AF-Sideclip)

Weight: 0.06kg/each

- Standard finish zinc plated
- 2mm Bracket thickness
- For all widths of tray
- Use AF-SIDECLIPM8 for 8mm Rod  
Use AF-SIDECLIPM10 for 10mm Rod



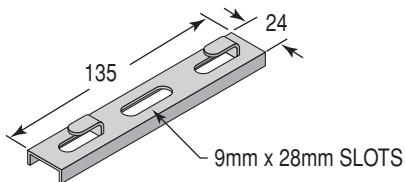
Application Example



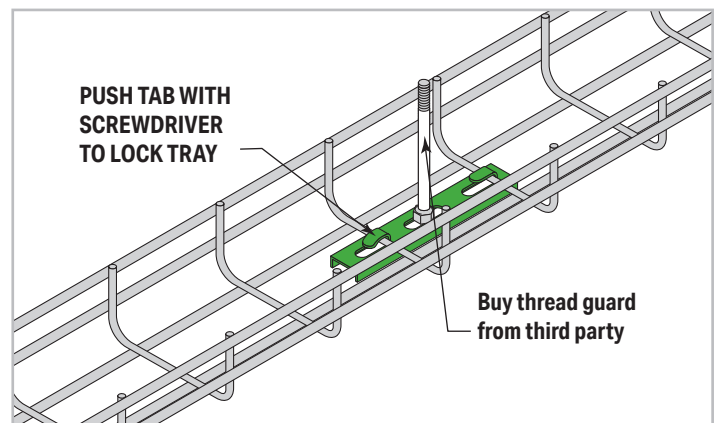
## Drop Rod Clip (Af-Rodclip1)

Weight: 0.05kg/each

- Standard finish zinc plated
- 2mm Bracket thickness
- For all 100mm wide & 150mm wide tray



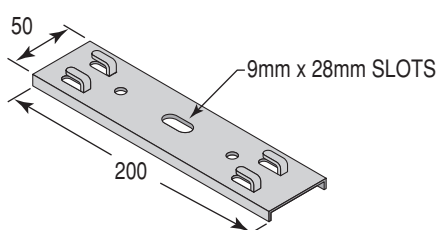
Application Example



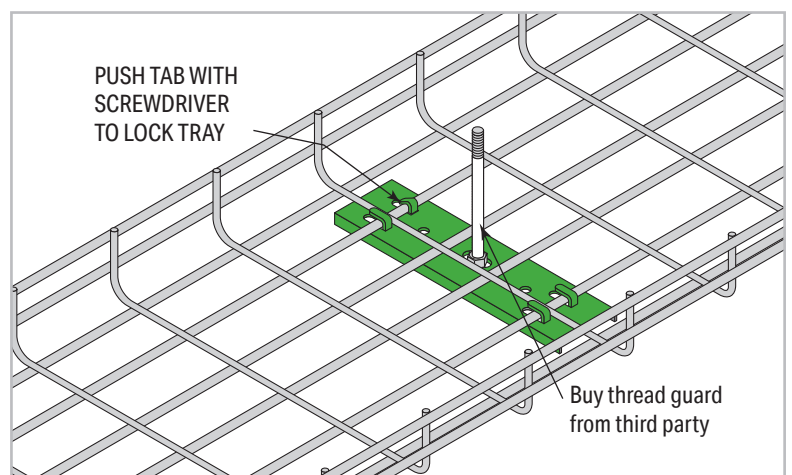
## Drop Rod Clip [Af-Rodclip2]

Weight: 0.18kg/each

- Standard finish zinc plated
- 2mm Bracket thickness
- For all 200mm wide & 300mm wide tray



Application Example

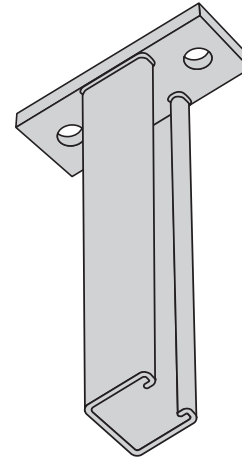


# ACROFIL® - Hanging Brackets and Pendants

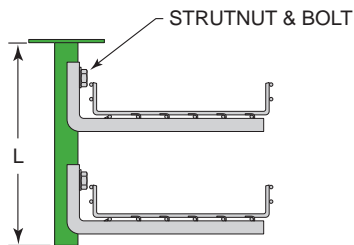
## Single Channel Pendant [P2663-(L)]

- Standard finish is Heavy Duty Galvanised

Part No.	Length (L) (mm)	Design Uniform Load (kN)	Weight (kg)
P2663-250	250	3.01	1.02
P2663-400	400	1.88	1.43
P2663-450	450	1.51	1.53
P2663-550	550	1.36	1.86
P2663-700	700	1.06	2.29



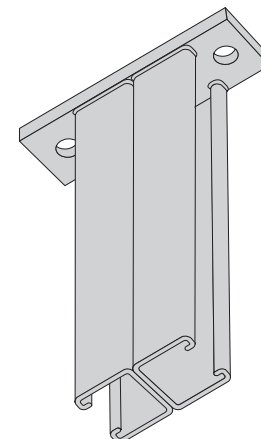
### Application Example



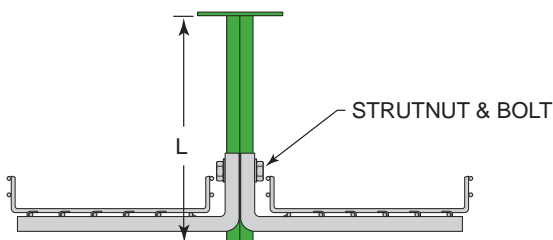
## Back-to-Back Channel Pendant [P2542 thru P2546]

- Standard finish is Heavy Duty Galvanised

Part No.	Length (L) (mm)	Design Uniform Load (kN)	Weight (kg)
P2542	305	7.57	2.28
P2543	460	5.22	3.14
P2544	610	3.98	4.00
P2545	760	3.21	4.87
P2546	915	2.67	5.74



### Application Example

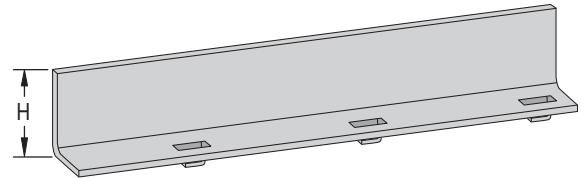


**NOTE:** Non stock item made to order.

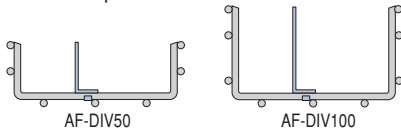
## Tray Dividers [AF-DIV50] & [AF-DIV100]

- Standard finish is Galvabond Z275
- Locks into tray with auto-lock tabs (no hardware required)
- Cut "V" notches into bottom flange to make barriers for flat fittings

**NOTE:** Non stock item made to order.



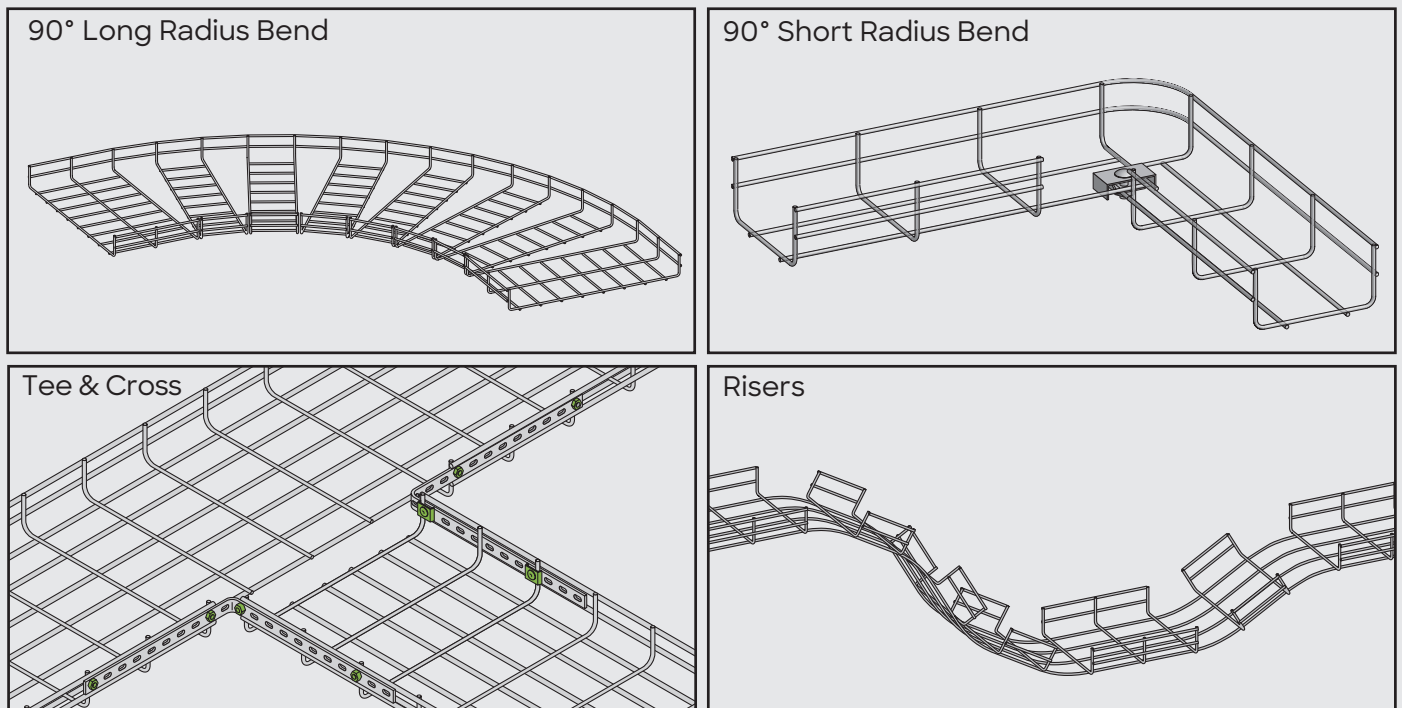
### Application Example



Part	Height (H) (mm)	Weight (kg)
AF-DIV-50	50	2.4
AF-DIV-100	100	3.6

## Fittings Overview / Assembly

Fittings are typically fabricated on the job. To determine the fitting hardware required to create a set of fittings, see the following pictures.



# ACROFIL® - Specification



## 1.0 Acceptable Manufactures

Provide “ACROFIL” Wire Basket type of cable management system as manufactured by Unistrut or engineered approved equal.

All cable trays shall be installed in a neat uniform fashion. Installing contractor shall field modify tray system to accommodate the exact routing requirements.

## 2.0 Material/Finishes

Wire basket tray to be fabricated from high strength steel wires.

### 2.1 Acceptable finishes

- 2.1.a Standard Finish: Zinc Plated Steel in accordance with AS/NZS 1789
- 2.1.b Other Finishes: Hot-dipped Galvanised – Steel in accordance with AS/NZS 4680
- Pregalvanised Galvabond – AS/NZ 1397 with a coating class of Z275.
- SS – AISI 316L stainless steel.

## 3.0 - Straight Sections

Straight sections shall be manufactured from high strength steel wires forming 50mm X 100mm openings and shall conform to the following dimensions.

- 3.1 Length: Straight sections shall be supplied in 3m lengths.
- 3.2 Width: Widths shall be 100, 150, 200, 300, 400, 500, or 600 as called out on drawings. (mm)
- 3.3 - Load depths: The load depths shall include 50mm & 100mm as required.

## 4.0 Splices

All straight sections shall be supplied with pre-installed, auto-locking, splices plates, where possible, as per Unistrut® “ACROFIL®”. Trays design shall allow for a snap together type connection and shall require no nut and bolt assembly.

## 5.0 Fittings

All fittings shall be fabricated in the field as required, per manufacturer’s recommendations. Radius of the fittings shall be based on the “minimum bending” radius of the cables being installed.

## 6.0 Accessories

Accessories such as blind ends, dropouts, and barriers, etc... shall be installed as specified on drawings.

## 7.0 Supports

Supports shall include, but are not limited to, centre type, trapeze type, wall supports, and floor supports.

- 7.1 Auto Locking: All supports shall be supplied with an Auto locking feature, requiring no special tools for attachment of the trays.
- 7.2 Finish: All supports, including threaded rod and associated hardware shall be zinc plated coated to AS 1789.



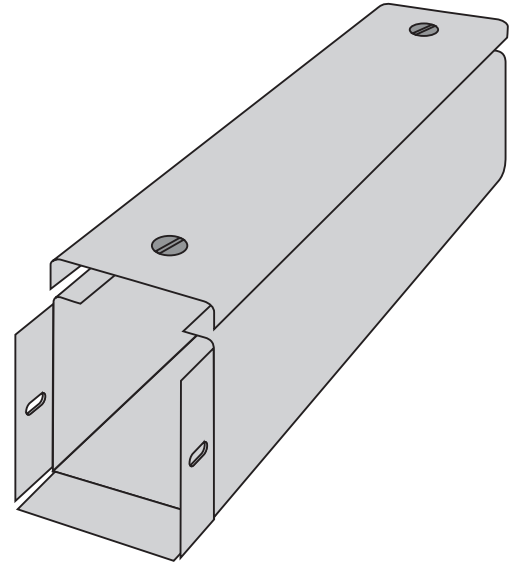
# Cable Trunking Steel

## TRUNKING Straight Length

Manufactured in a variety of sizes this product features plastic quick fix buttons plus locking cams for the simple removal and replacement of lids.

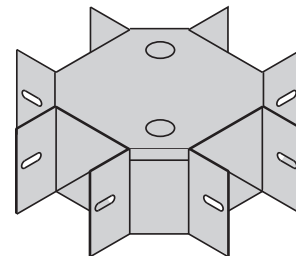
- Trunking supplied in 3 metre lengths.
- Bodies complete with lid and joiner
- All fastenings integral with parts and accessories.
- Available in any colour on request.
- Standard Finish: Galvabond  
Also available to order in  
Stainless Steel or Aluminium.  
Supplied in 2.4m length.

Width	Height
50mm	50mm
75mm	50mm
75mm	75mm
100mm	50mm
100mm	75mm
100mm	100mm
150mm	50mm
150mm	100mm



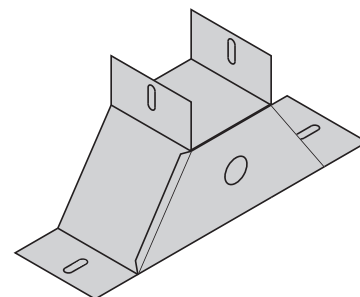
## 4 Way Horizontal

Part No.	Width	Height
HC5050/G	50mm	50mm
HC7550/G	75mm	50mm
HC7575/G	75mm	75mm
HC10050/G	100mm	50mm
HC10075/G	100mm	75mm
HC100100/G	100mm	100mm
HC150100/G	150mm	100mm



## Flange Adaptor

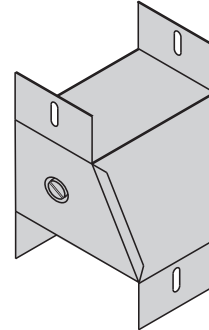
Part No.	Width	Height
FA/5050/G	50mm	50mm
FA/7550/G	75mm	50mm
FA/7575/G	75mm	75mm
FA/10050/G	100mm	50mm
FA/10075/G	100mm	75mm
FA/100100/G	100mm	100mm
FA/150100/G	150mm	100mm



# Cable Trunking Steel

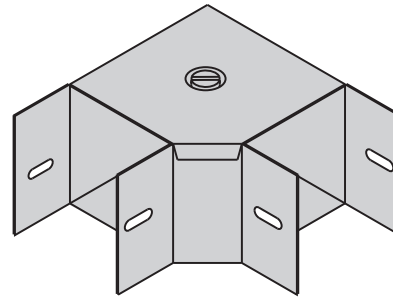
## Twist Adaptor

Part No.	Width	Height
TA/5050/G	50mm	50mm
TA/7550/G	75mm	50mm
TA/7575/G	75mm	75mm
TA/10050/G	100mm	50mm
TA/10075/G	100mm	75mm
TA/100100/G	100mm	100mm
TA/150100/G	150mm	100mm



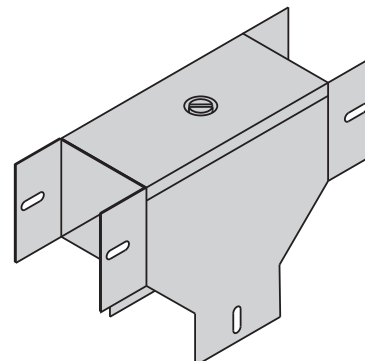
## 90° Horizontal Bend

Part No.	Width	Height
HB/5050/G	50mm	50mm
HB/7550/G	75mm	50mm
HB/7575/G	75mm	75mm
HB/10050/G	100mm	50mm
HB/10075/G	100mm	75mm
HB/100100/G	100mm	100mm
HB/150100/G	150mm	100mm



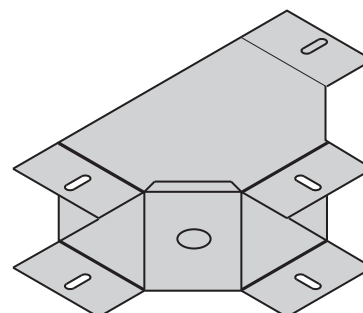
## Tee Lid Outside

Part No.	Width	Height
TLO/5050/G	50mm	50mm
TLO/7550/G	75mm	50mm
TLO/7575/G	75mm	75mm
TLO/10050/G	100mm	50mm
TLO/10075/G	100mm	75mm
TLO/100100/G	100mm	100mm
TLO/150100/G	150mm	100mm



## Tee Lid Inside

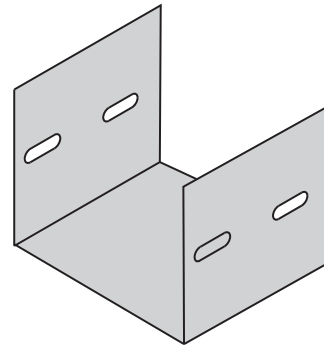
Part No.	Width	Height
TLI/5050/G	50mm	50mm
TLI/7550/G	75mm	50mm
TLI/7575/G	75mm	75mm
TLI/10050/G	100mm	50mm
TLI/10075/G	100mm	75mm
TLI/100100/G	100mm	100mm
TLI/150100/G	150mm	100mm



# Cable Trunking Steel

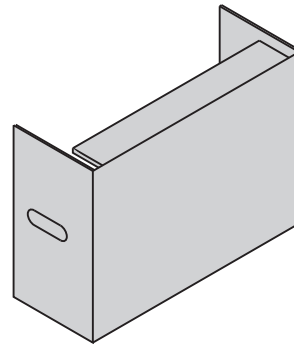
## Joiners

Part No.	Width	Height
SJ/5050/G	50mm	50mm
SJ/7550/G	75mm	50mm
SJ/7575/G	75mm	75mm
SJ/10050/G	100mm	50mm
SJ/10075/G	100mm	75mm
SJ/100100/G	100mm	100mm
SJ/150100/G	150mm	100mm



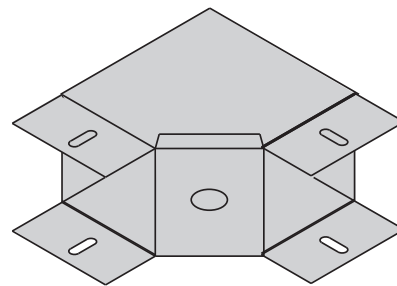
## End Cap

Part No.	Width	Height
C/5050/G	50mm	50mm
C/7550/G	75mm	50mm
C/7575/G	75mm	75mm
C/10050/G	100mm	50mm
C/10075/G	100mm	75mm
C/100100/G	100mm	100mm
C/150100/G	150mm	100mm



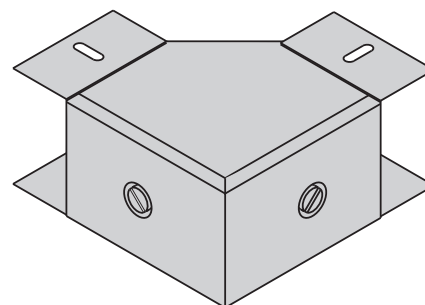
## 90° Lid Inside

Part No.	Width	Height
HBLI/5050/G	50mm	50mm
HBLI/7550/G	75mm	50mm
HBLI/7575/G	75mm	75mm
HBLI/10050/G	100mm	50mm
HBLI/10075/G	100mm	75mm
HBLI/100100/G	100mm	100mm
HBLI/150100/G	150mm	100mm



## 90° Lid Outside

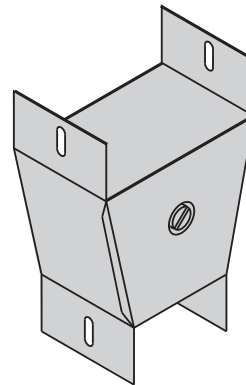
Part No.	Width	Height
HBLO/5050/G	50mm	50mm
HBLO/7550/G	75mm	50mm
HBLO/7575/G	75mm	75mm
HBLO/10050/G	100mm	50mm
HBLO/10075/G	100mm	75mm
HBLO/100100/G	100mm	100mm
HBLO/150100/G	150mm	100mm



# Cable Trunking Steel

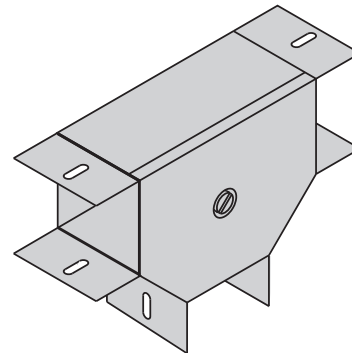
## Reducer

Part No.	Width	Height
R/5050/G	50mm	50mm
R/7550/G	75mm	50mm
R/7575/G	75mm	75mm
R/10050/G	100mm	50mm
R/10075/G	100mm	75mm
R/100100/G	100mm	100mm
R/150100/G	150mm	100mm



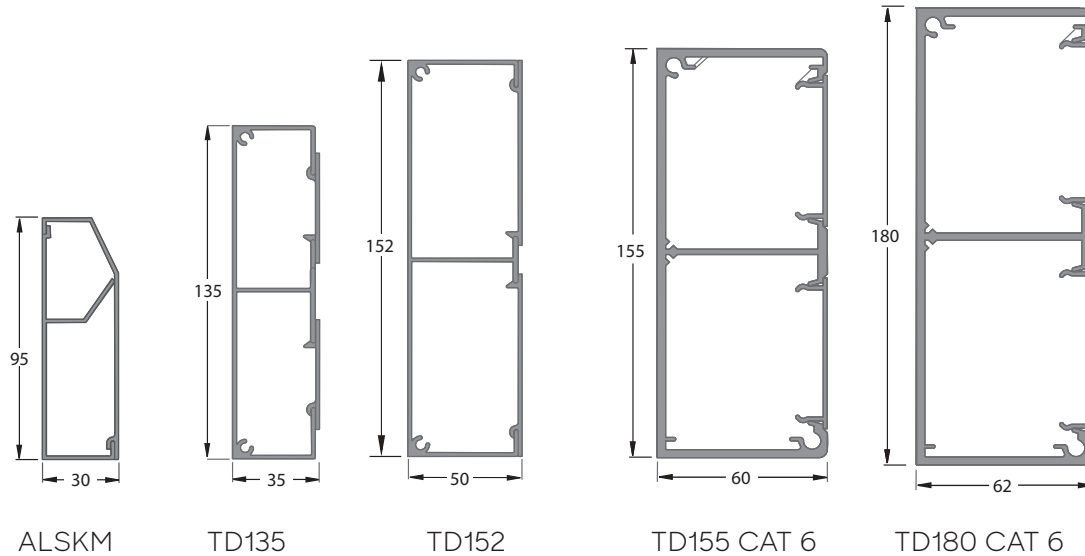
## Tee Horizontal

Part No.	Width	Height
TH/5050/G	50mm	50mm
TH/7550/G	75mm	50mm
TH/7575/G	75mm	75mm
TH/10050/G	100mm	50mm
TH/10075/G	100mm	75mm
TH/100100/G	100mm	100mm
TH/150100/G	150mm	100mm



# Electrical - Extruded Aluminium Skirting Trunking

## Common Profiles



Part No.	Compartments	Finish
ALSKM*	2	AL/E
TD135*	2	AL/E
TD152*	2	AL/E
TD155 CAT 6	2	AL/E
TD180 CAT 6	2	AL/E

### NOTES:

Material: Aluminium 6063-T5

Standard length: 3 metres

Types of Finish: AL = Mill Finish

E = Epoxy Powder Coat.

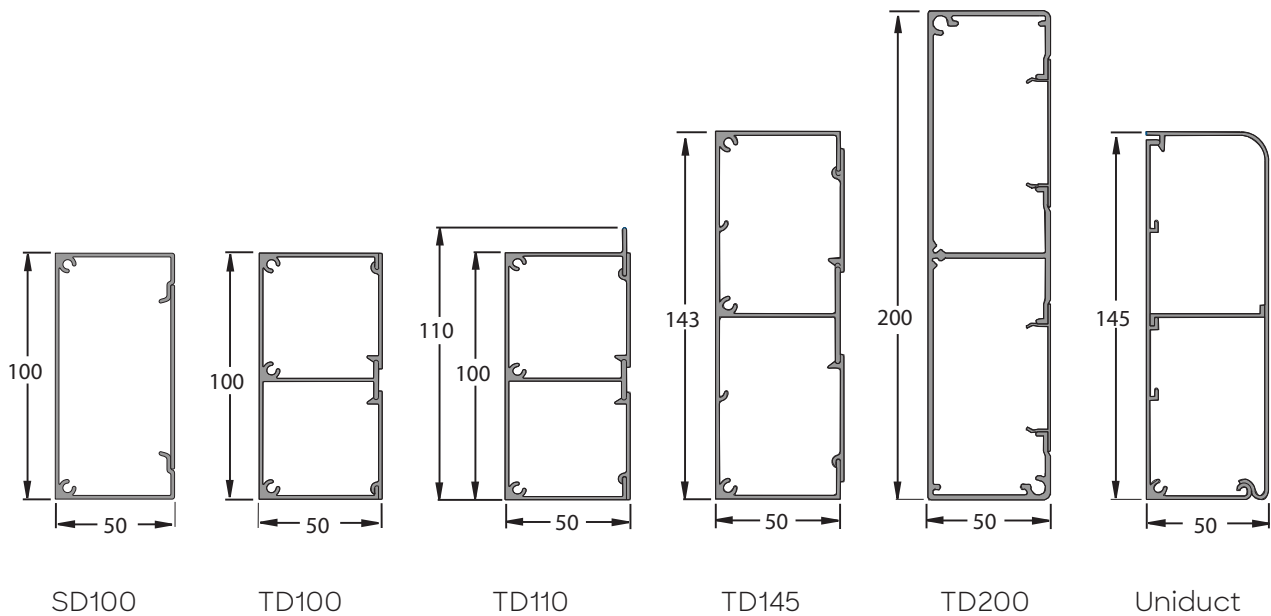
An = Anodised

\* Specify clearly top or bottom lid. Ask for details of available punched hole shapes for outlet sw/skts.

**\*Non Stock Items.Available to order**

# Electrical - Extruded Aluminium Skirting Trunking

## Common Profiles



Part No.	Compartments	Finish
SD100	1	AL/E
TD100	2	AL/E
TD110	2	AL/E
TD145	2, 3, 4 (with divider strip)	AL/E
TD200	2 (with divider strip)	AL/E
Uniduct	2, 3, 4 (with divider strip)	AL/E

### NOTES:

Material: Aluminium 6063-T5  
 Standard length: 3 metres  
 Types of Finish: AL = Mill Finish  
 E = Epoxy Powder Coat  
 An = Anodised

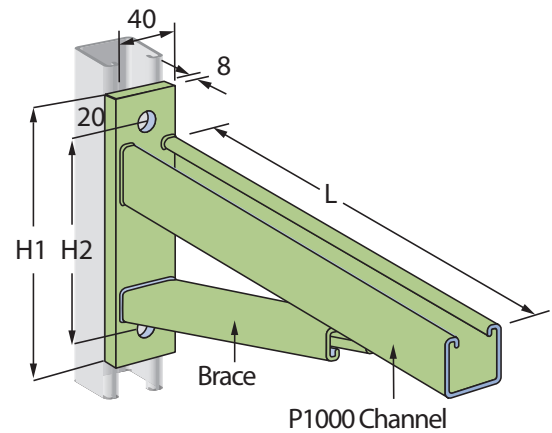
**\*Non Stock Items.Available to order.**



# Support Brackets

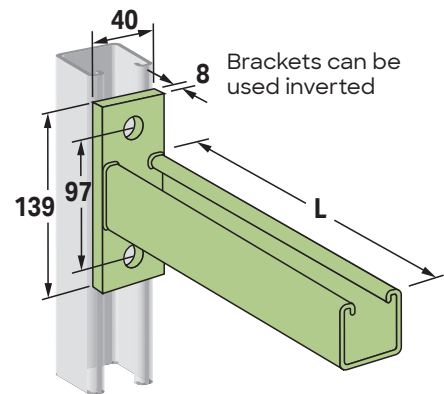
## PCL150 to PCL900

Part No.	L	H1	H2	Design Uniform Load kN	Mass kg/100
PCL150	320	200	160	3.98	170
PCL300	470	200	160	2.82	230
PCL450	635	235	195	2.35	340
PCL600	780	235	195	2.26	380
PCL750	930	300	260	3.83	470
PCL900	1080	300	260	3.58	510



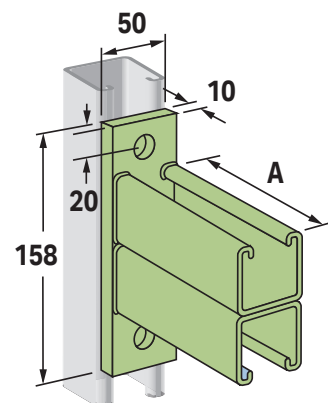
## P2663 - 250 to P2663 - 700

Part No.	L	Design Uniform Load - kN	Mass kg/100
P2663-250	250	3.01	102
P2663-400	400	1.88	143
P2663-450	450	1.51	153
P2663-550	550	1.36	186
P2663-700	700	1.06	229



## \*P2542 TO P2546

Part No.	A	Design Uniform - Load kN	Mass kg/100
P2542	305	7.57	228
P2543	460	5.22	314
P2544	610	3.98	400
P2545	760	3.21	487
P2546	915	2.67	574



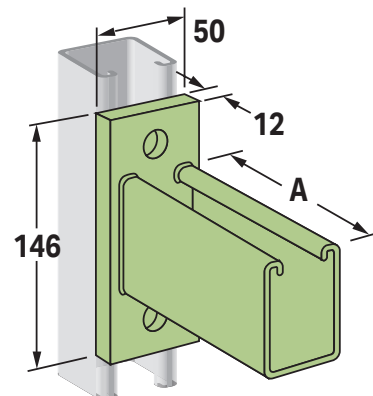
\*Non stock item. Made to order.

# Support Brackets

\*P5663 - 300 to P5663 - 750

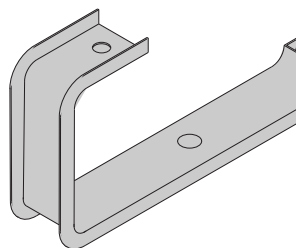
Part No.	A	Design Uniform - Load kN	Mass kg/100
P5663-300	300	6.93	173
P5663-450	450	4.78	224
P5663-600	600	3.62	276
P5663-750	750	2.91	327

\*Non stock item. Made to order.



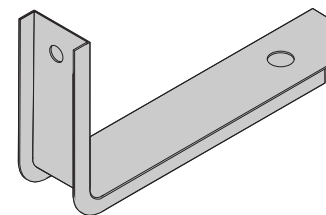
## Cable Tray Hanger Bracket - UA

Part No.
CTHB50G
CTHB75G
CTHB100G
CTHB150G
CTHB225G
CTHB250G
CTHB300G



## Cable Tray Wall Bracket - UA

Part No.
CTWB50G
CTWB75G
CTWB100G
CTWB150G
CTWB225G
CTWB250G
CTWB300G

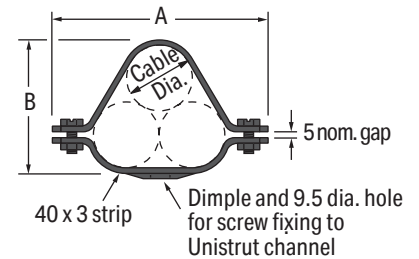
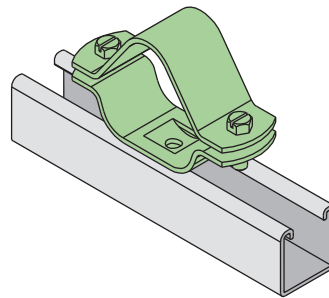


# Cable Clamps

## TF Series - Trefoil [ZP - or Aluminium Made to Order]

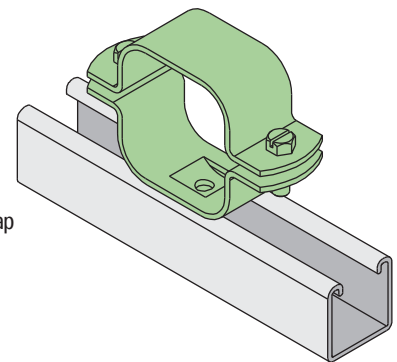
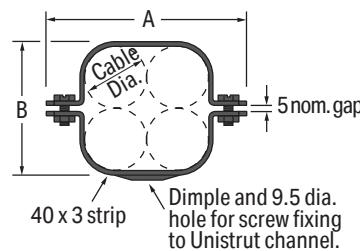
Specifically designed for fixing directly to Unistrut® channels.

Cable Dia.	Dim. A	Dim. B	Part No.
20	92	43	TF20
22	96	47	TF22
24	100	51	TF24
27	106	56	TF27
30	112	62	TF30
33	118	68	TF33
37	126	75	TF37
41	134	83	TF41
45	142	90	TF45



## QF Series Quadfoil [ZP - or Aluminium Made to Order]

Cable Dia.	Dim. A	Dim. B	Part No.
20	92	46	QF20
22	96	50	QF22
24	100	54	QF24
27	106	60	QF27
30	112	66	QF30
33	118	72	QF33
37	126	80	QF37
41	134	88	QF41
45	142	96	QF45

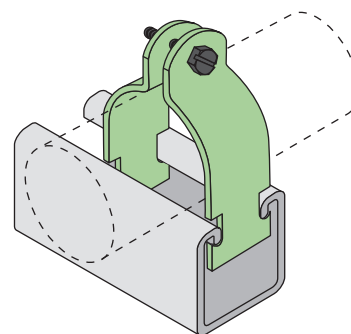


Specifically designed for fixing directly to Unistrut® channels.

Slotted hex head screws included

## Conduit Clamp

Part No	Conduit Nom. Size	Conduit Actual Size	Mass Kg/100
P2027	16	15.8	4.5
P2028	20	19.8	5.0
P2030	25	24.8	6.4
P2032	32	31.8	7.3
P2034	40	39.8	8.2
P2037	50	49.8	12.7
P2042	63	62.8	15.9
P2046	65	75.3	18.6
P2050	80	88.9	21.3
P2058	100	114.3	30.4
P2070-62	150	160.2	44.5



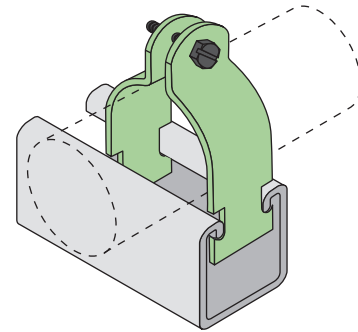
Slotted hex head screw and nut included

# Cable Clamps

## Sheathed Cable Clamp

Part No	Sheathed Cable O.D	Mass Kg/100
P2024	8	3.6
P2025	11	3.6
P2026	14	4.1
P2027	17	4.5
P2028	19	5.0
P2029	22	5.4
P2030	25	6.4
P2031	29	6.8
P2032	32	7.3
P2033	35	7.7
P2034	38	8.2
P2035	43	8.6
P2036	44	10.6
P2037	49	12.7

Part No.	Sheathed Cable O.D	Mass Kg/100
P2038	51	14.1
P2039	54	14.5
P2040	57	15.0
P2041	60	15.4
P2042	64	15.9
P2043	67	16.8
P2044	70	17.2
P2046	76	18.6
P2047	79	19.5
P2048	83	20.4
P2049	86	20.9
P2052	95	26.3
P2055	105	28.1

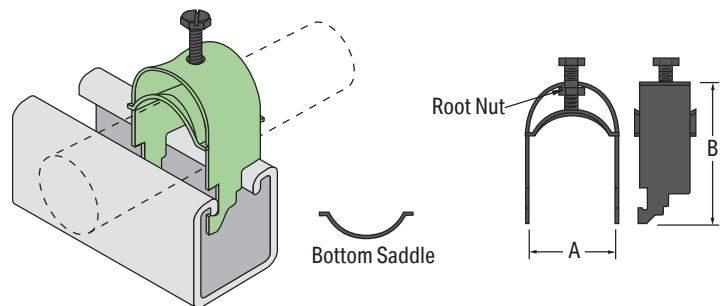


Slotted hex head screw and nut included

## KS2026-1 Series - Single Cable Clamp

Part No.	Cable Dia.	Dim. A	Dim. B	Mass Kg/100
KS2026-1	13	16	50	5.1
KS2028-1	19	22	58	6.2
KS2030-1	25	29	66	6.8
KS2032-1	32	35	71	8.0
KS2034-1	38	44	78	14.1
KS2036-1	44	51	86	16.0
KS2038-1	51	57	92	17.2
KS2040-1	57	64	98	19.0
KS2042-1	64	70	105	20.8
KS2044-1	70	76	113	22.8
KS2046-1	76	83	122	24.0

Non Stock Item.  
Available to Order

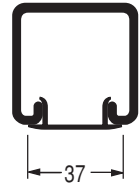
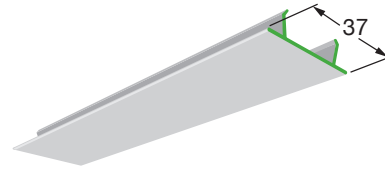


**NOTE:** Bottom Saddle if required can be ordered separately

## STRUT Accessories

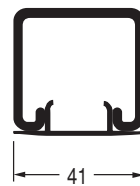
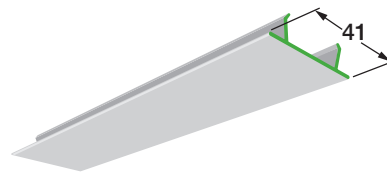
### P1184 - Plastic Closure Strip (UV Stabilised)

- Standard Length: 3m
- Mass: 0.11kg/m



### P1184A - Aluminum Closure Strip

- Standard Length: 3m
- Mass: 0.18kg/m



### Strut End Caps - Plastic, UV Stabilised

#### P2240

- For P1000 & P2000 Strut
- Mass: 0.70kg/100



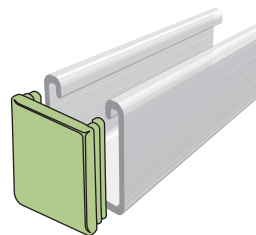
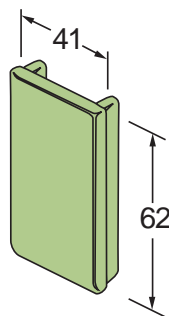
#### P4240

- For P3300 & P4000 Strut
- Mass: 0.40kg/100



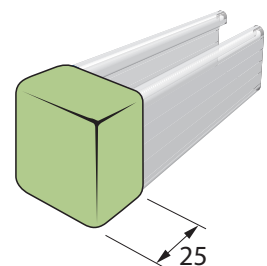
#### P5580

- Typical Installation
- For P5500 Strut
- Mass: 1.2kg/100



### P2860-10 - Strut End Caps - Plastic

- Fits P1000 & P2000 Strut
- Mass: 1.54kg/100
- Note: Caps struts provide a protective covering on protruding Struts to guard against personal injury or damage to clothing. They slip easily over the ends of strut.
- Available in white only



# Pipe Supports - Pictorial Index

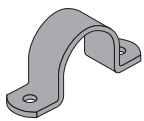
## Pipe Supports

The Unistrut® pipe support systems covers an extensive range of hangers, pipe clips, pipe clamps ferrules and cushioning, hanger fittings, beam clamps, beam attachments, and support brackets. The range covers from small bore tubing through to pipes in excess of 600mm diameter.

## Sprinkler Pipe Supports

In addition to our standard range of pipe supports for general industry, mechanical services and others, the Unistrut® range also includes pipe supports specifically designed for the fire protection industry.

### Pipe Supports - Light Duty



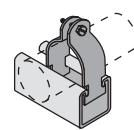
UN4  
LIGHT DUTY PIPE  
CLAMPS  
PG. 154



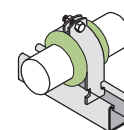
UN6  
LIGHT DUTY  
TWO-PIECE  
PIPE CLAMPS  
PG. 154



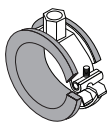
UN8  
LIGHT DUTY  
TWO-PIECE  
PIPE CLAMPS  
PG. 155



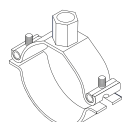
P2024  
PIPE SUPPORTS  
PG. 156



P2600  
UNI-CUSHION  
PG. 156



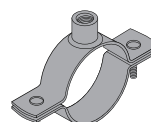
WOPF STANDARD  
SINGLE BOLT CLIP  
(INSULATED)  
PG. 154



WOPF PERFECT  
2 BOLT CLIP  
PG. 157

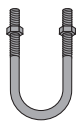


WOPF STANDARD  
2 BOLT CLIP  
(INSULATED)  
PG. 157

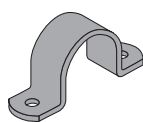


SPLIT CLIPS  
PG. 158

### Pipe Supports - Medium Duty



UN14  
"U" BOLTS  
PG. 159



UN15  
MEDIUM DUTY  
SADDLE CLAMP  
PG. 159



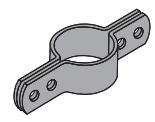
UN16  
MEDIUM DUTY  
TWO-PIECE  
PIPE CLAMPS  
PG. 160



UN18  
MEDIUM DUTY  
TWO-PIECE  
PIPE CLAMP  
PG. 161

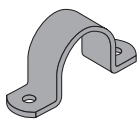


UN20  
MEDIUM DUTY  
THREE BOLT  
PIPE CLAMP  
PG. 161



UN21  
MEDIUM DUTY  
VERTICAL PIPE CLAMP  
PG. 161

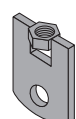
### Pipe Supports - Heavy Duty And Accessories



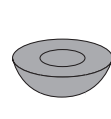
UN30  
HEAVY DUTY  
SADDLE CLAMP  
PG. 162



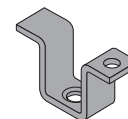
UN31  
HEAVY DUTY  
TWO-PIECE PIPE CLAMP  
PG. 162



UN35  
EYE NUTS [HG]  
PG. 162

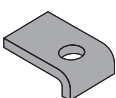


UN37  
SPHERICAL WASHER  
FOR UN38 [M]  
PG. 163

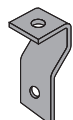


UN38  
SWIVEL CAGE [HG]  
PG. 163

### Accessories And Beam Attachments



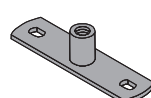
UN44  
BEAM CLIP  
PG. 164



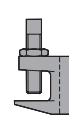
UNCL  
CLEVIS HANGER  
[HG]  
PG. 164



UNPL  
LINK PLATE [HG]  
PG. 164



EF1200  
ROD HANGER  
MOUNTING PLATES  
PG. 165



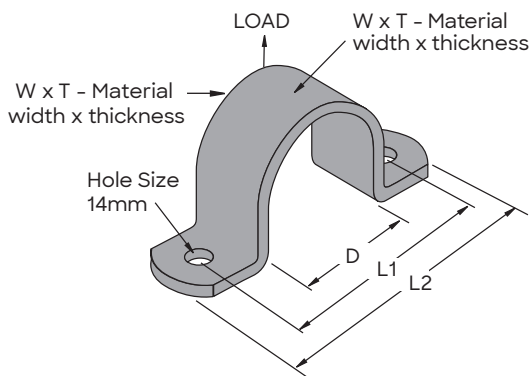
EF1600  
FLANGE CLAMP  
PG. 165



# Pipe Supports – Light Duty

## UN4 – Light Duty Pipe Clamps

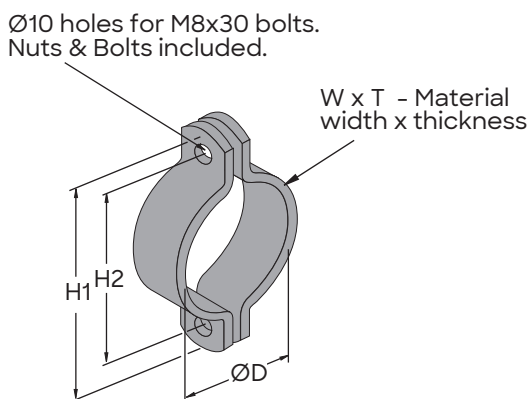
- Working Load: 0.75 kN
- Safety Factor: 2.5
- Standard Finish: Heavy Duty Galvanised



Part No.	D	W x T	L1 mm	L2 mm	kg
UN4-016	16	25x3	56	80	0.04
UN4-019	19	25x3	59	83	0.04
UN4-021	21	25x3	61	85	0.05
UN4-025	25	25x3	65	89	0.06
UN4-027	27	25x3	67	91	0.07
UN4-032	32	25x3	72	96	0.07
UN4-034	34	25x3	74	98	0.08
UN4-038	38	25x3	78	102	0.08
UN4-043	43	25x3	83	107	0.08
UN4-048	48	25x3	88	112	0.09
UN4-051	51	25x3	91	115	0.09
UN4-060	60	25x3	100	124	0.12
UN4-064	64	25x3	104	128	0.12
UN4-073	73	25x3	113	137	0.12
UN4-076	76	25x3	116	140	0.14
UN4-089	89	25x3	129	153	0.16
UN4-095	95	25x3	135	159	0.17
UN4-102	102	25x3	142	166	0.18
UN4-114	114	25x3	154	178	0.18

## UN6 – Light Duty Two-Piece Pipe Clamps

- Working Load: 2.88 kN
- Safety Factor: 2.5
- Standard Finish: Heavy Duty Galvanised

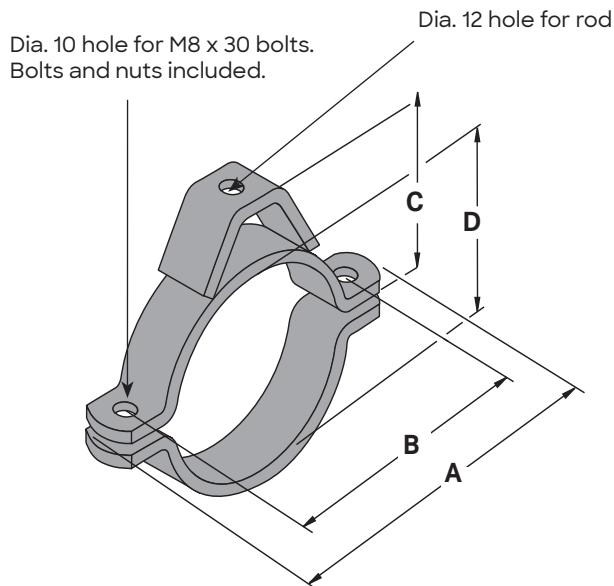


Part No.	ØD	W x T	H1 mm	H2 mm	kg
UN6-019	19	25x3	83	59	0.10
UN6-021	21	25x3	85	61	0.10
UN6-025	25	25x3	89	65	0.11
UN6-027	27	25x3	91	67	0.11
UN6-032	32	25x3	96	72	0.14
UN6-034	34	25x3	98	74	0.14
UN6-038	38	25x3	102	78	0.15
UN6-043	43	25x3	107	83	0.15
UN6-048	48	25x3	112	88	0.15
UN6-051	51	25x3	115	91	0.15
UN6-060	60	25x3	124	100	0.15
UN6-064	64	25x3	128	104	0.19
UN6-073	73	25x3	137	113	0.19
UN6-076	76	25x3	140	116	0.19
UN6-089	89	25x3	153	129	0.21
UN6-102	102	25x3	166	142	0.23
UN6-114	114	25x3	178	154	0.26
UN6-127	127	25x3	191	167	0.28
UN6-140	140	25x3	204	180	0.31
UN6-152	152	25x3	216	192	0.33
UN6-165	165	25x3	229	205	0.37

# Pipe Supports – Light Duty

## UN8 – Light Duty Two-Piece Pipe Clamps



- Material: 20 x 3
- Working Load: 1.32 kN
- Safety Factor: 2.5
- Standard Finish: Heavy Duty Galvanised



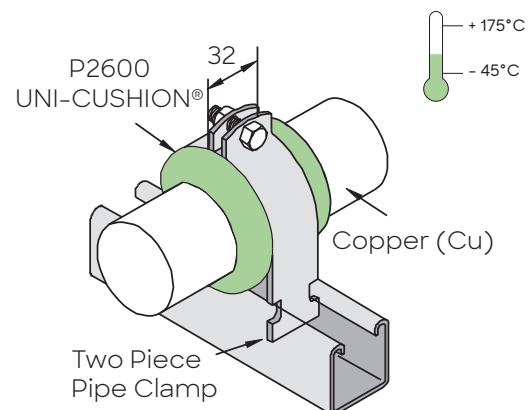
Part No.	Dimensions				Kg
	D	A	B	C	
UN8-019	19	83	59	47	0.17
UN8-021	21	85	61	47	0.17
UN8-025	25	89	65	47	0.19
UN8-027	27	91	67	47	0.19
UN8-032	32	96	72	52	0.19
UN8-034	34	98	74	54	0.20
UN8-038	38	102	78	56	0.21
UN8-043	43	107	83	60	0.21
UN8-048	48	112	88	63	0.21
UN8-051	51	115	91	65	0.21
UN8-060	60	124	100	70	0.21
UN8-064	64	128	104	72	0.26
UN8-073	73	137	113	77	0.27
UN8-076	76	140	116	79	0.28
UN8-089	89	153	129	86	0.30
UN8-102	102	166	142	93	0.31
UN8-114	114	178	154	99	0.34
UN8-127	127	191	167	105	0.37
UN8-140	140	204	180	112	0.38
UN8-152	152	216	192	118	0.41
UN8-165	165	229	203	125	0.41

## P2600 Uni-Cushion

- Shock absorption
- Protection from corrosion and abrasion
- Allowance for expansion and contraction
- Sound and vibration isolation
- Stability in use from -45oC to +175oC
- Flexible elastomer material
- Packaged in handy 7.6m dispenser pack

Part No.	W mm	T mm		
P2600	32	2.0	7.6m	1.7

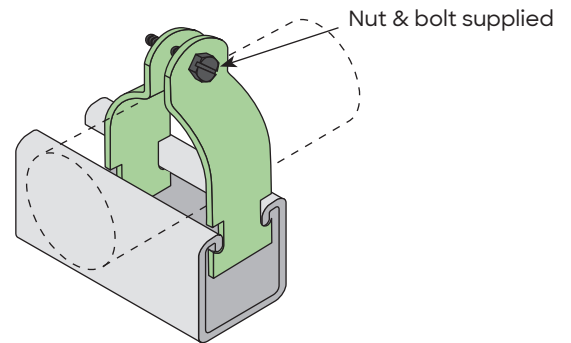
See page 156 for cutting guide



# Pipe Supports – Light Duty

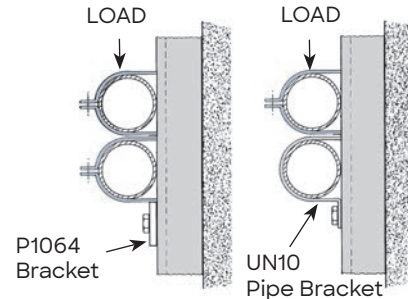
## P2024 Pipe Supports

Part No	D mm	Kg	Part No	D mm	Kg
P2024	8	0.04	P2051	92	0.25
P2025	11	0.04	P2052	95	0.26
P2026	14	0.04	P2053	98	0.27
P2027	17	0.05	P2054	102	0.28
P2028	19	0.05	P2055	105	0.28
P2029	22	0.05	P2056	108	0.29
P2030	25	0.06	P2057	111	0.30
P2031	29	0.07	P2058	114	0.30
P2032	32	0.07	P2059	117	0.32
P2033	35	0.08	P2060	121	0.33
P2034	38	0.08	P2062	127	0.34
P2035	43	0.09	P2064	133	0.35
P2036	44	0.11	P2066	140	0.36
P2037	49	0.13	P2068	146	0.41
P2038	51	0.14	P2070	152	0.43
P2039	54	0.15	P2070-62	159	0.45
P2040	57	0.15	P2070-64	165	0.46
P2041	60	0.15	P2070-66	171	0.47
P2042	64	0.16	P2070-70	178	0.49
P2043	67	0.17	P2070-74	191	0.53
P2044	70	0.17	P2070-80	203	0.56
P2045	73	0.18	P2070-84	216	0.59
P2046	76	0.19	P2070-225	225	0.62
P2047	79	0.20	P2070-230	230	0.63
P2048	83	0.21	P2070-240	240	0.65
P2049	86	0.21	P2070-250	250	0.68
P2050	90	0.21	P2070-260	260	0.71



Nut & bolt supplied

Also available in Heavy Duty Galvanised Finish.



**NOTE:** When used in the application illustrated, it is recommended that the lower clamp be supported against possible slippage. Where P2024 series clamps are restraining pipework subject to vibration, the use of P2600 UNI-CUSHION® is recommended.

**Standard Finish:** Galvanised

## P2600 Uni-Cushion® And Cutting Guide

- Shock absorption
- Protection from corrosion and abrasion
- Allowance for expansion and contraction
- Sound and vibration isolation
- Stability in use from -45°C to +175°C
- Flexible elastomer material
- Packaged in handy 7.6m dispenser pack

O.D. Size mm	Use with Clamp	UNI-CUSHION® Length mm	O.D. Size mm	Use with Clamp	UNI-CUSHION® Length in mm	O.D. Size mm	Use with Clamp	UNI-CUSHION® Length mm
6.4	P2025	22.2	69.9	P2045	222.3	133.4	P2065	412.8
9.5	P2026	27	73	P2046	235	136.5	P2066	419.1
12.7	P2027	38.1	76.2	P2047	241.3	139.7	P2067	431.8
15.9	P2028	54	79.4	P2048	254	142.9	P2068	444.5
19.1	P2029	57.2	82.6	P2049	266.7	146.1	P2069	450.9
22.2	P2030	76.2	85.7	P2050	273.1	149.2	P2070	463.6
25.4	P2031	82.6	88.9	P2051	279.4	155.6	P2070-62	482.6
28.6	P2032	92.1	92.1	P2052	285.8	161.9	P2070-64	501.7
31.8	P2033	101.6	95.3	P2053	292.1	168.3	P2070-66	520.7
34.9	P2034	114.3	98.4	P2054	298.5	174.6	P2070-70	539.8
38.1	P2035	123.8	101.6	P2055	304.8	187.3	P2070-74	577.9
41.3	P2036	133.4	104.8	P2056	317.5	190.5	P2070-80	590.6
44.5	P2037	139.7	108	P2057	330.2	193.7	P2070-84	596.9
47.6	P2038	152.4	111.1	P2058	342.9	196.9	P2070-225	609.6
50.8	P2039	165.1	114.3	P2059	355.6	200	P2070-230	622.3
54	P2040	171.5	117.5	P2060	362	203.2	P2070-240	628.7
57.2	P2041	184.2	120.7	P2061	374.7	206.4	P2070-250	635
60.3	P2042	190.5	123.8	P2062	381	209.6	P2070-260	647.7
63.5	P2043	203.2	127	P2063	393.7	212.7	P2083	660.4
66.7	P2044	209.6	130.2	P2064	406.4	215.9	P2084	666.8



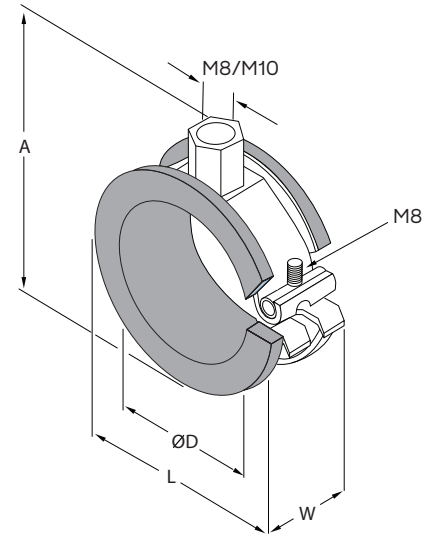
# Pipe Clamps - Light Duty

## WOPF Standard Single Bolt Clip (Insulated)

Part No.	Dimensions				Working Load	kg
	ØD	A	L	W X T		
WOPFI	15 - 16	44	43	20 x 1.00	0.8kN	0.04
WOPFI	21 - 22	51	50	20 x 1.00	0.8kN	0.04
WOPFI	27 - 28	56	56	20 x 1.00	0.8kN	0.05
WOPFI	34 - 35	63	64	20 x 1.25	1.1kN	0.06
WOPFI	40 - 41	69	69	20 x 1.25	1.1kN	0.06
WOPFI	42 - 43	70	71	20 x 1.25	1.1kN	0.07
WOPFI	48 - 49	77	77	20 x 1.25	1.1kN	0.07
WOPFI	54 - 55	83	83	20 x 1.25	1.1kN	0.08
WOPFI	57 - 58	88	86	20 x 1.25	1.1kN	0.08
WOPFI	60 - 61	99	99	20 x 1.25	1.1kN	0.08

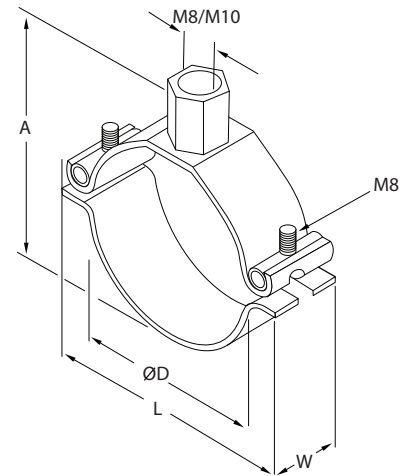
**NOTE:**

EPDM is rated from minus 50°C to 110°C  
Sound insulation value on average 22db(A)



## WOPF Perfect 2 Bolt Clip

Part No.	Dimensions				Working Load	kg
	ØD	A	L	W X T		
WOPF 21-25	21 - 25	42	46	20 x 2.00	0.8kN	0.08
WOPF 27-32	27 - 32	47	56	20 x 2.00	0.8kN	0.08
WOPF 33-38	33.5 - 38	55	61	20 x 2.00	0.8kN	0.09
WOPF 42-46	42.5 - 46	64	68	20 x 2.00	0.8kN	0.10
WOPF 48-53	48.5 - 53	70	77	20 x 2.00	0.8kN	0.10
WOPF 60-65	60.5 - 65	82	89	20 x 2.00	0.8kN	0.12
WOPF 73-77	73 - 77	103	107	25 x 2.50	1.9kN	0.18
WOPF 84-90	84 - 90	105	121	25 x 2.50	1.9kN	0.20
WOPF 109-114	109 - 114	140	145	25 x 2.50	1.9kN	0.23

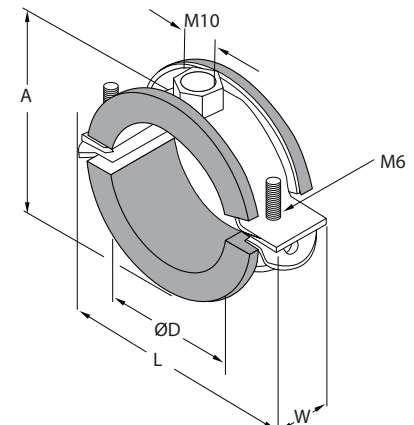


## WOPF Standard 2 Bolt Clip (Insulated)

Part No.	Dimensions				Working Load	kg
	ØD	A	L	W X T		
WOPFI	67 - 72	94	116	25 x 1.50	1.9kN	0.15
WOPFI	72 - 78	100	123	25 x 1.50	1.9kN	0.16
WOPFI	84 - 89	108	134	25 x 2.00	2.3kN	0.20
WOPFI	109 - 114	136	162	25 x 2.00	2.3kN	0.24

**NOTE:**

EPDM is rated from minus 50°C to 110°C  
Sound insulation value on average 22db(A)



## Pipe Supports - Light Duty



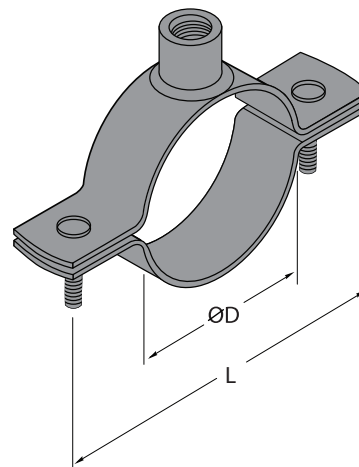
### Split Clips

Part No.	Dimensions			kg
	ØD	L	W X T	
SC15Z	21	74	20 x 3.00	0.10
SC20Z	27	83	20 x 3.00	0.11
SC25Z	33.5	90	20 x 3.00	0.12
SC32Z	42.5	100	20 x 3.00	0.13
SC40Z	48.5	105	20 x 3.00	0.14
SC50Z	60.5	118	20 x 3.00	0.15
SC65Z	76	136	20 x 3.00	0.18
SC80Z	89	160	20 x 3.00	0.19
SC100Z	114	178	25 x 3.00	0.29
SC150Z	165	230	25 x 3.00	0.39

Welded 10mm Threaded Boss standard

Part No.	Dimensions			kg
	ØD	L	W X T	
SC65SP - Z	76	136	25 x 4.00	0.23
SC80SP - Z	89	160	25 x 4.00	0.25
SC100SP - Z	115	178	25 x 4.00	0.50

Welded 12mm Threaded Boss

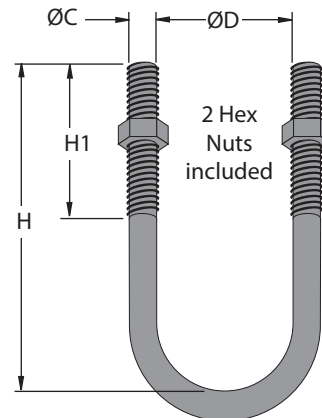


# Pipe Supports – Medium Duty

## UN14 – “U” Bolts

Standard Finish: Galvanised

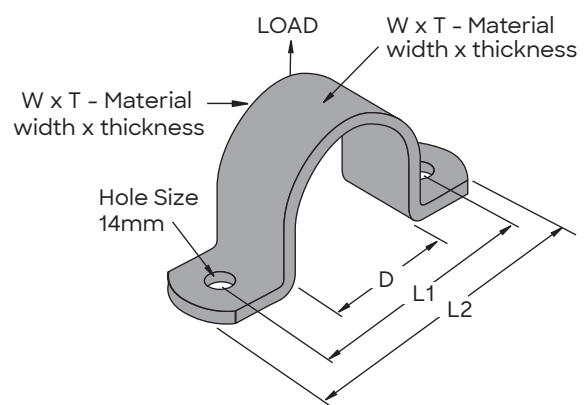
Part No	ØD	H mm	H1 mm	ØC mm	kg
UN14-021	21	65	50	10	0.09
UN14-027	27	77	50	10	0.10
UN14-034	34	85	50	10	0.12
UN14-043	43	93	50	10	0.13
UN14-048	48	100	50	10	0.14
UN14-051	51	103	50	10	0.14
UN14-060	60	110	50	10	0.16
UN14-076	76	127	50	12	0.28
UN14-089	89	140	50	12	0.30
UN14-102	102	152	50	12	0.35
UN14-114	114	165	50	12	0.38
UN14-140	140	190	50	12	0.40
UN14-165	165	215	50	12	0.44
UN14-168	168	220	50	12	0.48
UN14-219	219	295	75	16	1.13
UN14-273	273	370	100	20	2.20
UN14-324	324	420	100	20	2.52
UN14-356	356	455	100	20	2.74
UN14-406	406	505	100	20	3.05
UN14-457	457	555	100	24	4.87
UN14-508	508	605	100	24	5.32
UN14-610	610	710	100	24	6.28



## UN15 – Medium Duty Saddle Clamp

- Safety Factor: 2.5
- Standard Finish: Galvanised

Part No.	D	L1	L2	WxT	Working Load	kg
UN15-021	21	75	115	40x5	2.46kN	0.14
UN15-027	27	81	121	40x5	2.46kN	0.20
UN15-034	34	88	128	40x5	2.46kN	0.28
UN15-043	43	97	137	40x5	2.46kN	0.34
UN15-048	48	102	142	40x5	2.46kN	0.34
UN15-051	51	105	145	40x5	2.46kN	0.34
UN15-060	60	114	154	40x5	2.46kN	0.40
UN15-076	76	130	170	40x5	2.46kN	0.46
UN15-089	89	143	183	40x5	2.46kN	0.54
UN15-102	102	156	196	40x5	2.46kN	0.58
UN15-114	114	170	210	40x6	3.57kN	0.65
UN15-140	140	196	236	40x6	3.57kN	0.75
UN15-152	152	208	248	50x6	4.44kN	1.17
UN15-165	165	221	261	50x6	4.44kN	1.25
UN15-168	168	224	264	50x6	4.44kN	1.27
UN15-203	203	259	299	50x6	4.44kN	1.48
UN15-219	219	275	315	50x6	4.44kN	1.58

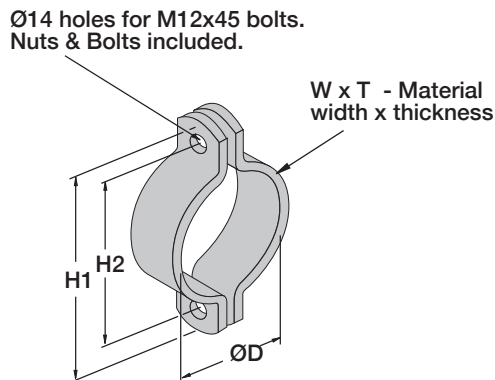




# Pipe Supports - Medium Duty

## UN16 - Medium Duty Two-Piece Pipe Clamp

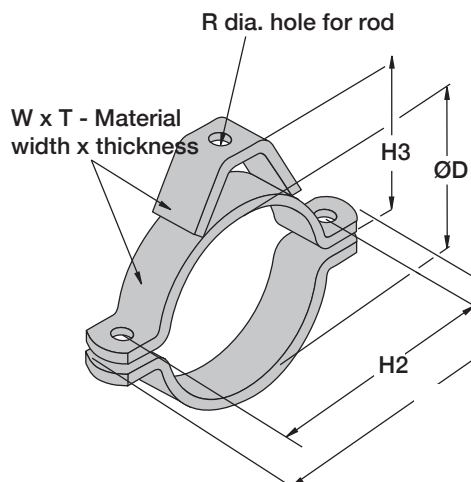
- Working Load: 7.20 kN
- Safety Factor: 2.5
- Standard Finish: Galvanised



Part No.	ØD	H1	H2	WxT	Kg
UN16-060	60	154	114	40x5	0.72
UN16-076	76	170	130	40x5	0.84
UN16-089	89	183	143	40x5	1.02
UN16-102	102	196	156	40x5	1.12
UN16-114	114	210	170	40x6	1.17
UN16-127	127	221	181	40x6	1.25
UN16-140	140	234	194	40x6	1.31
UN16-152	152	246	206	40x6	1.38
UN16-165	165	259	219	40x6	1.46
UN16-178	178	272	232	40x6	1.54
UN16-190	190	284	244	40x6	1.64
UN16-203	203	297	257	40x6	1.69
UN16-219	219	313	273	40x6	1.78
UN16-230	230	324	284	40x6	1.84
UN16-240	240	334	294	40x6	1.92
UN16-250	250	344	304	40x6	2.00
UN16-273	273	367	327	40x6	2.18
UN16-324	324	418	378	40x6	2.59

## UN18 - Medium Duty Two-Piece Pipe Clamp

- Safety Factor: 2.5
- Standard Finish: Galvanised



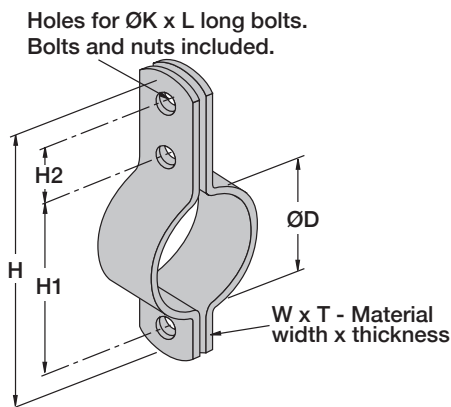
Part No.	ØD	H1	H2	H3	R	WxT	Working Load	Kg
UN18-060	60	154	114	75	14	40x5	1.77kN	0.72
UN18-076	76	170	130	88	14	40x5	3.53kN	0.84
UN18-089	89	183	143	99	14	40x5	3.53kN	1.02
UN18-102	102	196	156	108	14	40x5	3.53kN	1.12
UN18-114	114	210	170	116	14	40x6	3.53kN	1.17
UN18-127	127	221	181	124	14	40x6	4.51kN	1.25
UN18-140	140	234	194	132	14	40x6	4.51kN	1.31
UN18-152	152	246	206	139	14	40x6	4.51kN	1.38
UN18-165	165	259	219	146	14	40x6	4.51kN	1.46
UN18-178	178	272	232	153	14	40x6	4.51kN	1.54
UN18-203	203	297	257	167	14	40x6	4.51kN	1.69
UN18-219	219	313	273	175	14	40x6	4.51kN	1.78
UN18-230	230	324	284	181	14	40x6	4.51kN	1.84

All sizes have a 14mm dia. hole to suit M12 x 45 bolts. Nuts and bolts included.

# Pipe Supports - Medium Duty

## UN20 - Medium Duty Three Bolt Pipe Clamp

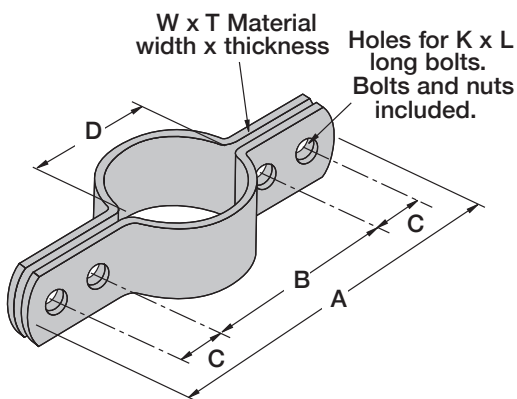
- Safety Factor: 2.5
- Standard Finish: Galvanised



Part No	ØD	H	H1	H2	W x T	ØK x L	Working Load	kg
UN20-021	21	159	71	48	25x5	M10x30	5.02kN	0.34
UN20-027	27	165	77	48	25x5	M10x30	5.02kN	0.36
UN20-034	34	176	88	48	40x6	M12x45	7.24kN	0.58
UN20-043	43	185	97	48	40x6	M12x45	7.24kN	0.62
UN20-048	48	190	102	48	40x6	M12x45	7.24kN	0.64
UN20-060	60	210	122	48	50x6	M16x50	11.52kN	1.57
UN20-076	76	226	138	48	50x6	M16x50	11.52kN	1.69
UN20-089	89	239	151	48	50x6	M16x50	11.52kN	1.79
UN20-114	114	339	200	75	75x10	M20x60	20.10kN	5.17
UN20-140	140	365	226	75	75x10	M20x60	20.10kN	5.65
UN20-165	165	390	251	75	75x10	M20x60	20.10kN	6.13
UN20-219	219	444	305	75	75x10	M24x60	28.80kN	7.83
UN20-273	273	498	359	75	75x10	M24x60	28.80kN	8.83
UN20-324	324	549	410	75	75x10	M24x60	28.80kN	9.77
UN20-356	356	628	464	100	75x16	M30x80	45.18kN	17.04
UN20-406	406	678	514	100	75x16	M30x80	45.18kN	18.5
UN20-457	457	763	587	100	75x20	M36x100	45.18kN	24.95
UN20-508	508	814	638	100	75x20	M36x100	45.18kN	26.83
UN20-610	610	916	740	100	75x20	M36x100	45.18kN	30.61

## UN21 - Medium Duty Vertical Pipe Clamp

- Safety Factor: 2.5
- Standard Finish: Galvanised

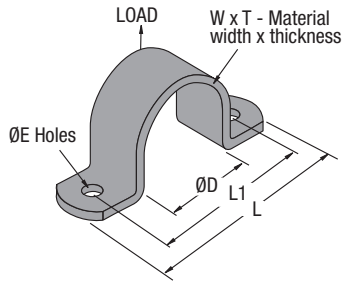


Part No.	Dimensions						Load Capacity	Mass kg
	D	A	B	C	W x T	K x L		
UN21-21	21	207	71	48	32 x 5	M10 x 35	1.11kN	0.75
UN21-27	27	213	77	48	32 x 5	M10 x 35	1.11kN	0.77
UN21-34	34	220	84	48	32 x 5	M10 x 35	1.11kN	0.80
UN21-43	43	229	93	48	32 x 5	M10 x 35	1.11kN	0.84
UN21-48	48	238	102	48	40 x 6	M12 x 40	1.80kN	1.19
UN21-60	60	250	114	48	40 x 6	M12 x 40	1.80kN	1.26
UN21-76	76	266	130	48	50 x 6	M12 x 40	2.22kN	1.63
UN21-89	89	278	143	48	50 x 6	M12 x 40	2.22kN	1.73
UN21-114	114	304	168	48	50 x 6	M12 x 40	2.22kN	1.91
UN21-140	140	330	194	48	50 x 6	M12 x 40	2.22kN	2.11
UN21-165	165	468	254	75	75 x 10	M16 x 60	9.71kN	6.72
UN21-219	219	519	305	75	75 x 10	M16 x 60	9.71kN	7.65
UN21-273	273	573	359	75	75 x 10	M16 x 60	9.71kN	8.65
UN21-324	324	624	410	75	75 x 10	M16 x 60	10.79kN	9.83
UN21-356	356	662	448	75	75 x 10	M16 x 60	10.79kN	10.17
UN21-406	406	712	498	75	90 x 12	M20 x 75	11.77kN	15.87
UN21-457	457	779	565	75	90 x 12	M20 x 75	11.77kN	17.23
UN21-508	508	830	616	75	90 x 12	M20 x 75	11.77kN	18.58

# Pipe Supports – Heavy Duty and Accessories

## UN30 – Heavy Duty Saddle Clamp

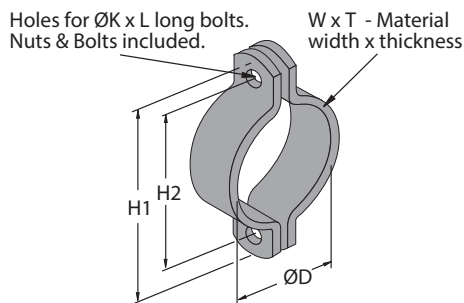
- Safety Factor: 2.5
- Standard Finish: Galvanised



Part No	ØD	L1	L	ØE	W x T	Working Load	kg
UN30-168	168	260	324	22	75x10	10.87kN	3.22
UN30-219	219	310	375	22	75x10	10.87kN	4.21
UN30-273	273	364	428	22	75x10	10.87kN	4.81
UN30-324	324	415	479	22	75x10	10.87kN	5.80
UN30-356	356	447	511	22	75x10	10.87kN	6.10
UN30-406	406	497	561	26	90x12	18.78kN	9.90
UN30-457	457	548	612	26	90x12	18.78kN	11.00
UN30-508	508	600	663	26	90x12	18.78kN	12.12

## UN31 – Heavy Duty Two-Piece Pipe Clamp

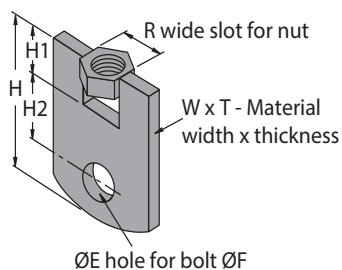
- Safety Factor: 2.5
- Standard Finish: Galvanised



Part No	ØD	H1	H2	W x T	ØK x L	Working Load	kg
UN31-168	168	318	254	75x10	M20 x 60	20.10kN	5.00
UN31-219	219	369	305	75x10	M20 x 60	20.10kN	6.00
UN31-273	273	423	359	75x10	M20 x 60	20.10kN	7.00
UN31-324	324	474	410	75x10	M20 x 60	20.10kN	8.00
UN31-356	356	512	448	75x12	M24 x 75	28.93kN	11.00
UN31-406	406	562	498	75x12	M24 x 75	28.93kN	12.00
UN31-457	457	629	565	75x16	M30 x 90	45.18kN	19.00
UN31-508	508	680	616	75x16	M30 x 90	45.18kN	20.00
UN31-610	610	782	718	75x16	M30 x 90	45.18kN	23.00

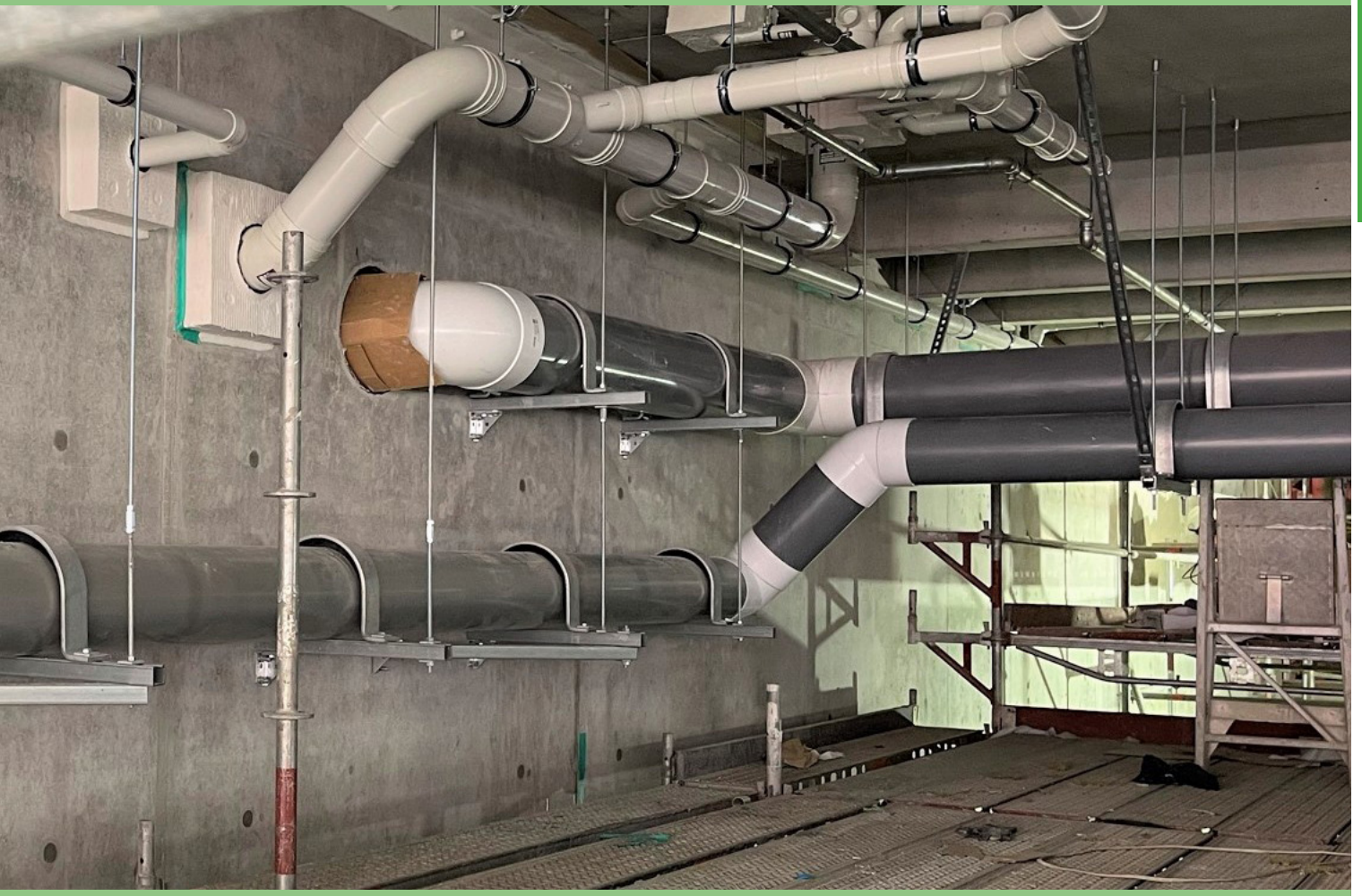
## UN35 – Eye Nuts [HG]

Non Stock Item.  
Made to Order

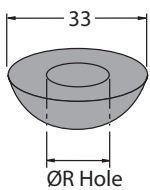


Part No	H	H1	H2	ØE	ØF	R	W x T	Working Load	kg
UN35-12-M10	70	20	30	14	12	18	40 x 6	3.60 kN	0.13
UN35-16-M12	80	25	30	18	16	20	75 x 10	5.80 kN	0.47
UN35-20-M16	90	30	35	22	20	25	90 x 12	9.72 kN	0.76
UN35-24-M20	90	30	35	26	24	31	90 x 12	14.48 kN	0.76
UN35-30-M24	120	35	50	32	30	37	100 x 20	21.84 kN	1.88
UN35-36-M30	140	40	60	38	36	47	130 x 20	32.56 kN	2.86

# Pipe Supports - Heavy Duty and Accessories

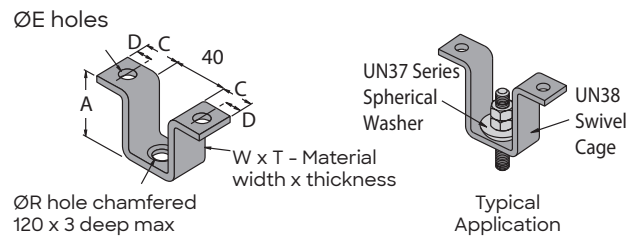


## UN37 - Spherical Washer for UN38 [MI]



Part No	ØR	Kg	
UN37-06	08	0.10	100
UN37-10	12	0.09	100
UN37-12	14	0.09	100
UN37-16	18	0.07	50

## UN38 - Swivel Cage [HG]

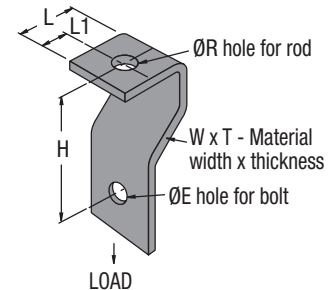


Part No	A	C	D	ØE	ØR	W x T	Kg	
UN38-06	65	31	12	10	08	25x5	0.20	25
UN38-10	65	31	12	10	12	25x5	0.20	25
UN38-12	65	47	20	14	14	40x6	0.35	20
UN38-16	100	47	20	14	18	50x6	0.52	10

# Pipe Supports - Accessories and Beam Attachments

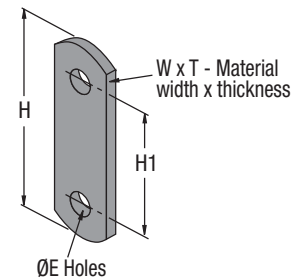
## UNCL - Clevis Hanger [HG]

Part No	L	L1	H	ØE	ØR	WxT	Working Load	kg
UNCL-10	35	15	70	10	12	25 x 5	1.75 kN	0.08
UNCL-12	45	20	75	14	14	40 x 5	2.17 kN	0.20
UNCL-16	48	20	100	14	18	50 x 5	2.55 kN	0.32
UNCL-20	62	32	112	22	22	75 x 10	9.08 kN	1.08



## UNLP - Link Plate [HG]

Part No	H	H1	ØE	WxT	kg
UNLP08	64	36	10	25 x 3	0.03
UNLP10	64	36	12	25 x 5	0.05
UNLP12	120	80	14	40 x 6	0.23
UNLP16	120	80	18	50 x 6	0.28
UNLP20	190	126	22	75 x 10	1.11



## Universal Hinge (UH10Z)

### Features & Benefits

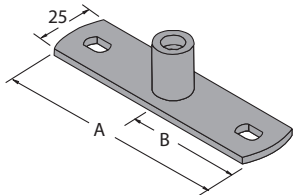
- Can be fixed directly to roof sections, or attached to Atkore Unistrut channel mounted across purlins/beams.
- Accepts all M10 ZP threaded products (including threaded rod)
- Allowable load 828kg (per Universal Hinge Mount)
- Full adjustable through 135 degrees to suit any mounting application





# Pipe Supports – Accessories and Beam attachments

## EF1200A – Rod Hanger Mounting Plate



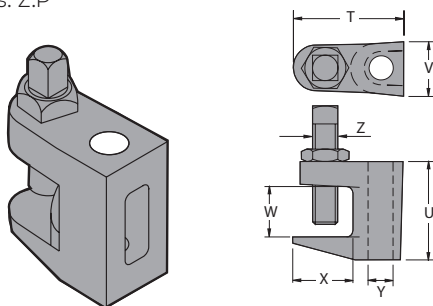
EF1200A  
Base Plate

Part No	Description	Thread Size	Dim "A"	Dim "B"
EF1200A-M10	EF1200A-M10 ROD HANGER CENTRAL MOUNT ZP	M10	100mm	50mm
EF1200A-M12	EF1200A-M12 ROD HANGER CENTRAL MOUNT ZP	M12	100mm	50mm
BP10Z	BASE PLATE 10MM THREAD	M10		
BP10-SPZ	BASE PLATE 10MM 45°	M10		

Other finishes available. Made to order and minimum order quantities may apply.

## EF1600 – Flange Clamp

Standard Finishes: Z.P



The simplest, quickest and most cost-effective method of suspending building services from steel beams and suitable for use with parallel or tapered flange beams, the EF1600 is supplied with the back hole drilled to accept a threaded rod. The EF1600 uses a grade 8.8 cup point setscrew to provide a maximum bite into steelwork and maximum load performance.

Product Code	Drop Rod	Tensile Loads Safe Working Load 4:1(kN)	Setscrew Torque (Nm)	Lockout Torque (Nm)	T	U	V	W	X	Y	Z
EF1600-10	M10	2.4	8	22	45	40	22	19	22	11	10
EF1600-12	M12	3.1	8	22	50	46	25	23	28	13	10



Concrete Vertigo  
M8/M10/M12



Wood Vertigo  
M10 25mm/50mm



Steel Vertigo  
M10



Purlin Side Hanger  
with backing nut  
M10



# Engineering Data - Mass Charts

## Copper Tube

Nom. Size	Actual Size O.D. (AUS)	Actual Size O.D. (NZ)	Mass of Pipe kg/m	Mass of Pipe filled with water kg/m
15 x 0.9	12.7	14.7	0.30	0.39
18 x 1.0	15.9		0.43	0.58
20 x 1.0	19.0	21.0	0.52	0.75
25 x 1.2	25.4	27.4	0.83	1.25
32 x 1.2	31.8	34.1	1.05	1.72
40 x 1.2	38.1	40.6	1.27	2.27
45 x 1.2	44.5		1.48	2.87
50 x 1.2	51.2	53.3	1.70	3.57
65 x 1.2	63.5	65.0	2.14	5.07
80 x 1.6	76.2	79.4	3.42	7.60
90 x 1.6	88.9	92.5	4.00	9.76
100 x 1.6	101.6	105.6	4.58	12.18
125 x 1.6	127.0	130.2	5.74	17.77
150 x 2.0	152.4	158.0	8.58	25.86
175 x 2.0	177.8		10.03	33.74
200 x 2.0	203.2		11.48	42.63
225 x 2.6	228.6		16.77	56.94

## Pressure Pipe

### API Std Wt - ANSI Sch 40 (up to 250 NS)

Nom. Pipe Size	Actual Size O.D. x Wall	Mass of Pipe kg/m	Mass of Pipe filled with water kg/m
8	13.7 x 2.24	0.62	0.69
10	17.1 x 2.31	0.85	0.97
15	21.3 x 2.77	1.27	1.47
20	26.7 x 2.87	1.68	2.11
25	33.4 x 3.38	2.50	3.06
32	42.2 x 3.56	3.38	4.35
40	48.3 x 3.68	4.05	5.37
50	60.3 x 3.91	5.44	7.60
65	73.0 x 5.16	8.62	11.71
80	88.9 x 5.49	11.29	16.06
90	101.6 x 5.74	13.57	19.95
100	114.3 x 6.02	16.07	24.28
125	141.3 x 6.55	21.78	34.69
150	168.3 x 7.11	28.26	46.91
200	219.1 x 8.18	42.53	74.81
250	273.0 x 9.27	60.29	111.14
300	323.9 x 9.53	73.82	146.81
350	355.6 x 9.53	81.28	170.23
400	406.4 x 9.53	93.21	211.05
450	457.0 x 9.53	105.14	255.75
500	508.0 x 9.53	117.07	304.85
600	609.6 x 9.53	140.94	414.85

## Pressure Pipe

### ANSI Sch 80 - API XS (up to 200 NS)

Nom. Pipe Size	Actual Size O.D. x Wall	Mass of Pipe kg/m	Mass of Pipe filled with water kg/m
8	13.7 x 3.02	0.80	0.85
10	17.1 x 3.20	1.10	1.19
15	21.3 x 3.73	1.62	1.77
20	26.7 x 3.91	2.19	2.47
25	33.4 x 4.55	3.23	3.69
32	42.2 x 4.85	4.47	5.30
40	48.3 x 5.08	5.41	6.55
50	60.3 x 5.54	7.48	9.38
65	73.0 x 7.01	11.41	14.4
80	88.9 x 7.62	15.27	19.53
90	101.6 x 8.08	18.63	24.36
100	114.3 x 8.56	22.37	29.73
125	141.3 x 9.53	30.95	42.69
150	168.3 x 10.97	42.56	59.38
200	219.1 x 12.70	64.63	94.10
250	273.0 x 12.70	81.54	129.70
300	323.9 x 12.70	97.44	167.4
350	355.6 x 12.70	107.38	193.00
400	406.4 x 12.70	123.29	234.30
450	457.0 x 12.70	139.19	285.50
500	508.0 x 12.70	155.10	337.00
600	609.6 x 12.70	186.92	455.00

## Galvanised Pipe

Nom. Size	Actual Size O.D. x Wall	Mass of Pipe kg/m	Mass of Pipe filled with water kg/m
8 N.B Med.	13.5 x 2.3	0.68	0.74
10 N.B Med.	17.2 x 2.3	0.89	1.01
15 N.B Med.	21.3 x 2.6	1.27	1.47
20 N.B Med.	26.9 x 2.6	1.65	2.02
25 N.B Med.	33.7 x 3.2	2.52	3.11
32 N.B Med.	42.4 x 3.2	3.24	4.26
40 N.B Med.	48.3 x 3.2	3.73	5.11
50 N.B Med.	60.3 x 3.6	5.24	7.46
65 N.B Med.	76.1 x 3.6	6.69	10.42
80 N.B Med.	88.9 x 4.0	8.68	13.82
100 N.B Med.	114.3 x 4.5	12.40	21.11
125 N.B Med.	139.7 x 4.9	16.50	29.75
150 N.B Med.	165.1 x 4.9	19.60	38.55



# Engineering Data - Mass Charts

## PVC Pressure Pipe - Class 15

Nom. Size	Actual Size O.D. x Wall	Mass of Pipe kg/m	Mass of Pipe filled with water kg/m
15	21.3 x 1.5	0.14	0.40
20	26.7 x 1.9	0.22	0.61
25	33.5 x 2.3	0.33	0.99
32	42.2 x 2.9	0.54	1.58
40	48.2 x 3.3	0.69	2.05
50	60.3 x 4.1	1.07	3.20
65	75.3 x 5.1	1.66	5.00
80	88.9 x 6.1	2.31	6.93
100	114.3 x 7.7	3.83	11.51
125	140.2 x 9.4	5.76	17.34
150	168.2 x 11.3	8.28	24.93
200	219.1 x 14.8	14.12	42.32

## PVC Pressure Pipe - Class 6

Nom. Size	Actual Size O.D. x Wall	Mass of Pipe kg/m	Mass of Pipe filled with water kg/m
40	48.2 x 1.5	0.31	1.91
50	60.3 x 1.8	0.48	3.00
65	75.3 x 2.2	0.75	4.70
80	88.9 x 2.6	1.03	6.53
100	114.3 x 3.2	1.70	10.84
125	140.2 x 4.0	2.55	16.28
150	168.2 x 4.8	3.65	23.41
200	219.1 x 6.2	6.19	39.75

## Cast Iron Pipes - Class K9

Nom. Size	Actual Size O.D. x Wall	Mass of Pipe kg/m	Pipe and Water kg/m	Concrete Lining Thickness	Mass of Lined Pipe kg/m	Mass of Lined Pipe and Water kg/m
80	95.5 x 6.0	12.36	17.84	6.0	15.64	19.66
100	121.9 x 6.1	16.55	26.00	6.0	21.09	28.59
150	177.3 x 6.3	25.09	46.39	6.0	31.82	50.13
200	232.2 x 6.4	34.18	71.89	8.0	46.18	78.67
225	259.1 x 6.6	39.45	86.94	8.0	52.91	94.42
250	286.0 x 6.8	44.73	103.00	8.0	60.00	111.63
300	345.4 x 7.2	57.09	143.24	10.0	81.45	157.42
375	426.2 x 7.9	79.27	211.55	10.0	109.45	229.15
400	507.0 x 8.6	107.82	290.24	10.0	138.73	312.08
500	560.3 x 9.0	117.82	347.95	10.0	158.91	373.16



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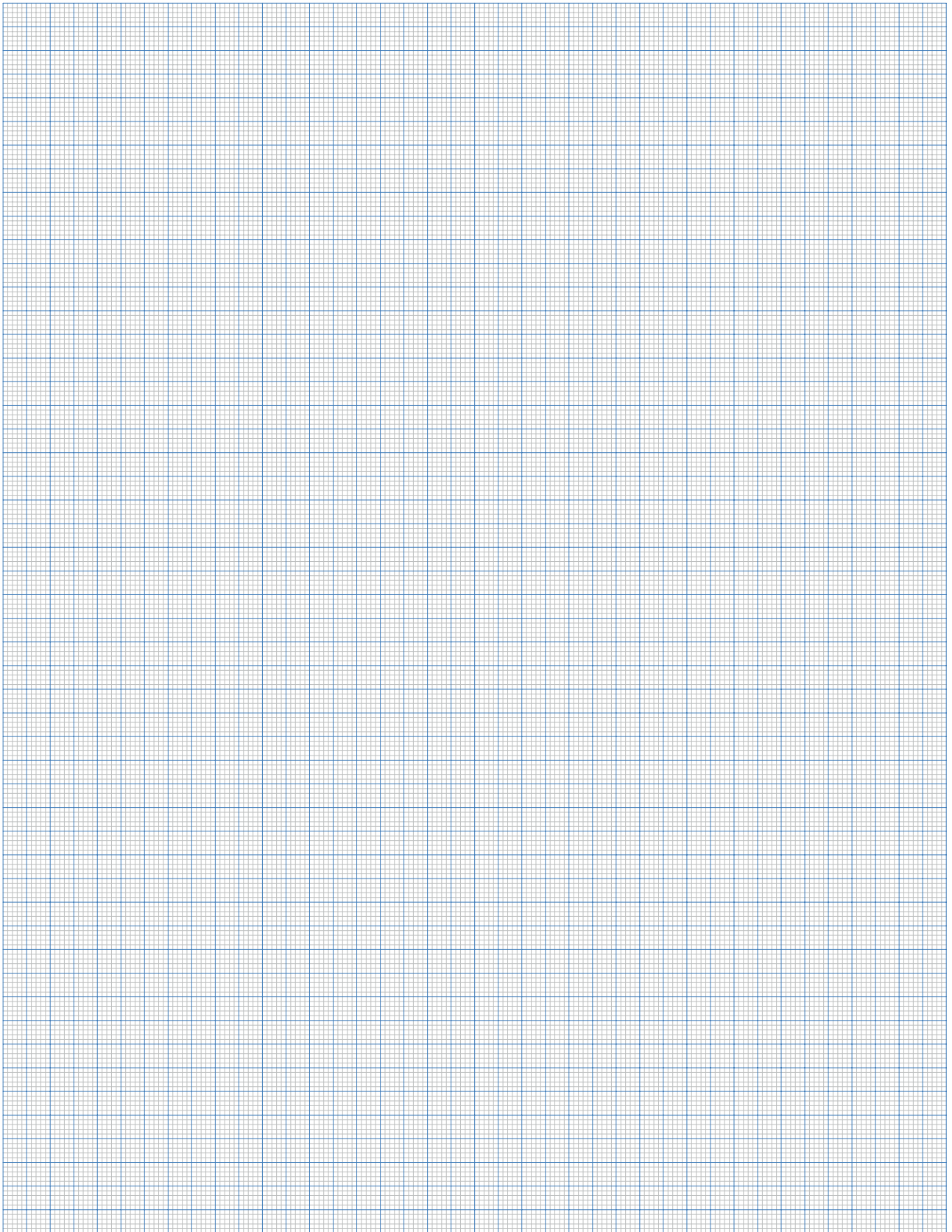
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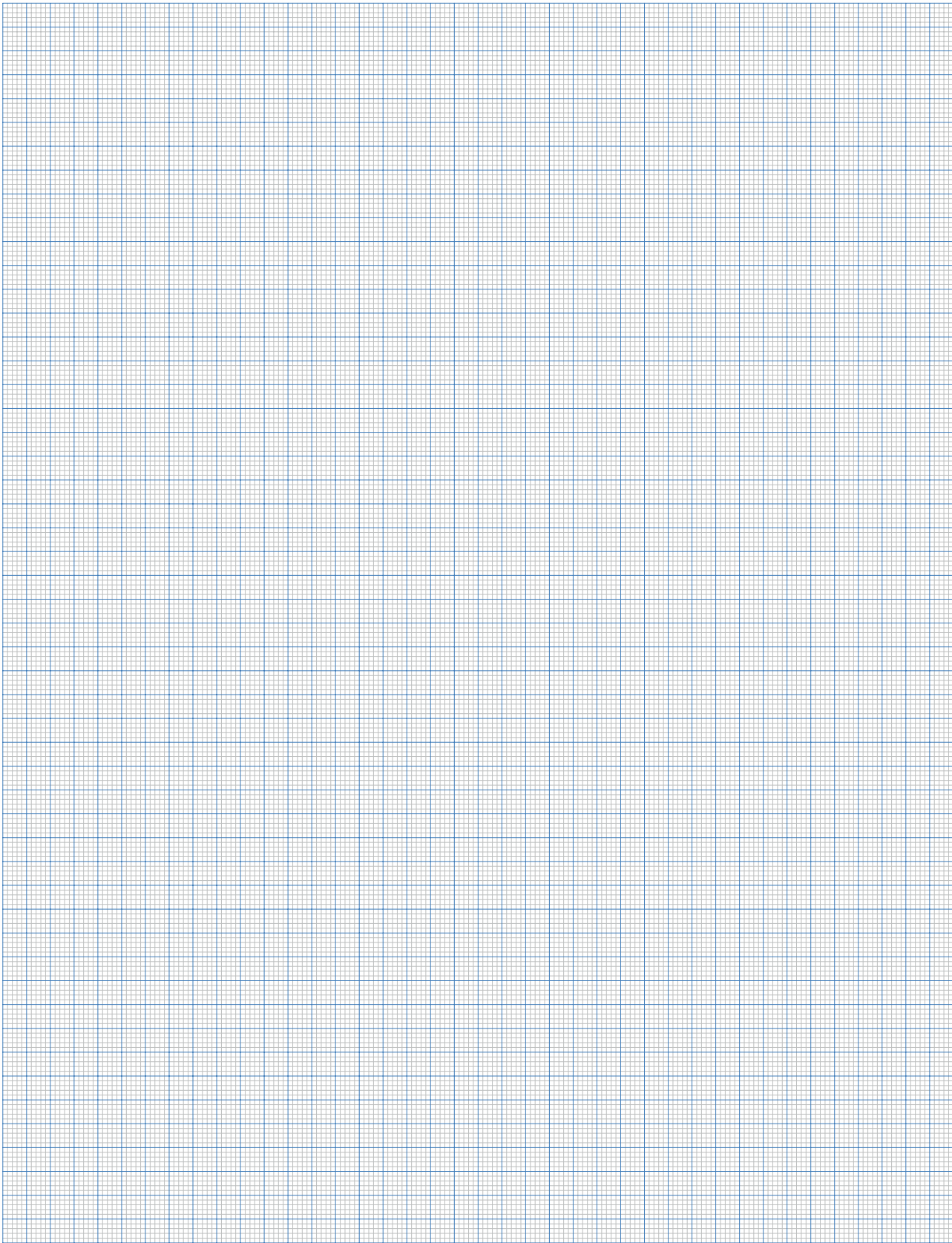


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