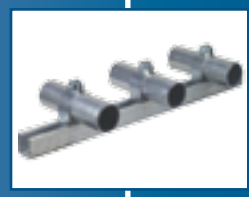
UNISTRUT®

Electrical & Mechanical Support Systems



- Unistrut® Channel and Metal Framing
- Cable Tray
- Cable Ladder
- Pipe and Cable Clamps

Electrical and Mechanical Solutions™

www.unistrut.com.au

ELECTRICAL & MECHANICAL SUPPORT SYSTEMS

Unistrut®, the premier name in electrical and metal support solutions and the inventor of the popular metal framing system, has been designing and manufacturing products in Australia for over 50 years. During that time, Unistrut® has consistently delivered superior performance in design, engineering, distribution and customer service to the Australian market.

As part of a world-wide leading manufacturer Tyco Electrical and Metal Products, UNISTRUT® provides an even greater range of electrical and mechanical support systems for the Australian market.

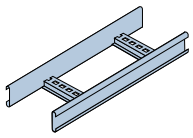
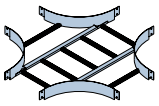
The newest Unistrut® offering is the Acrofil® range of wire-mesh cable tray. Acrofil complements the existing cable management range which includes Nema rated Cable Ladders, Supatray ladder trays, and Riteway trays.

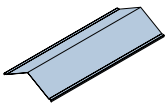
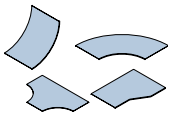
Also new to Unistrut® is a comprehensive range of rapid connections metal framing systems called Kwikstrut®.

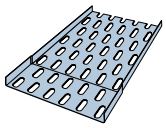
This catalogue represents our range of cable management, metal framing, pipe and cable supports. For more information on any of these products, visit:

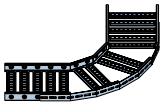
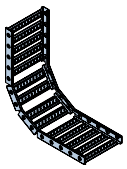
www.unistrut.com.au

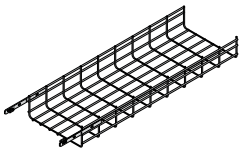
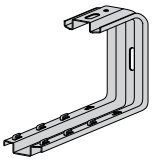
Cable Support Systems

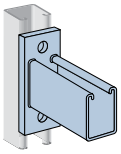
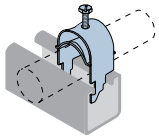



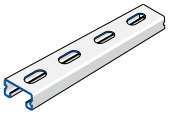
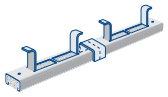


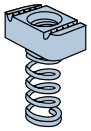
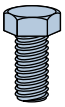
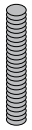




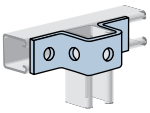
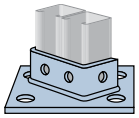



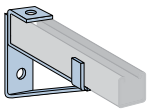
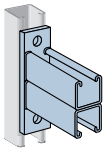
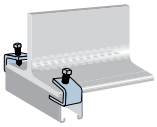



Unistrut Channel & Fittings

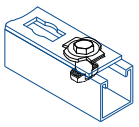
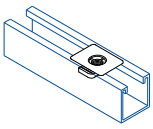
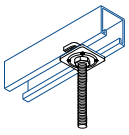




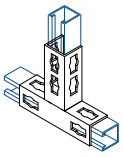
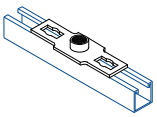
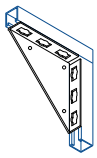




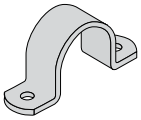
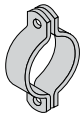
Kwikstrut Systems

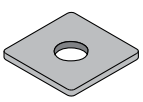
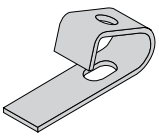
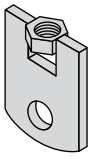
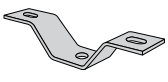




Pipe & Tube Clamps



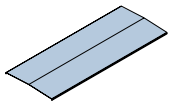
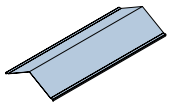
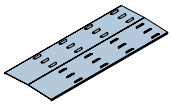
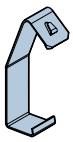
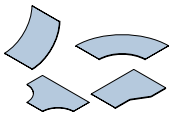
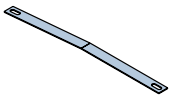
Fixpoints

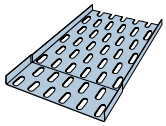
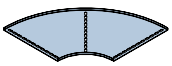
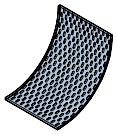
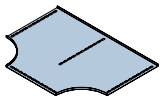
Steel Cable Ladder

Aluminum Cable Ladder

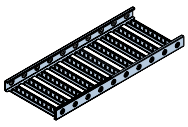
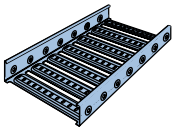
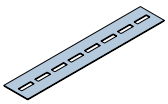
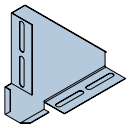
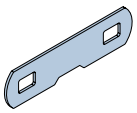
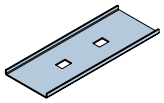
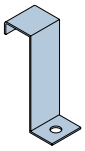
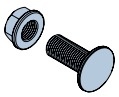
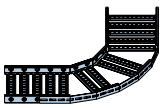
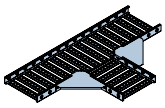
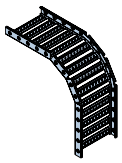
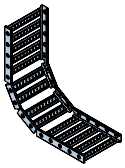
Ladder Covers

 Standard Cover pg. 31	 Peaked Cover pg. 31	 Ventilated Cover pg. 31	 Cable Ladder Cover Fixings pg. 32	 Accessory Covers pg. 32	 Cover Straps [HG] pg. 32	 Hook Bolt & Wing Nut [MG] pg. 32

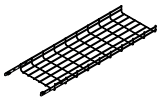
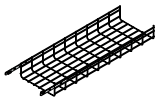
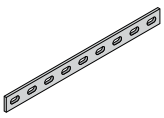
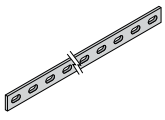
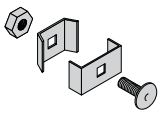
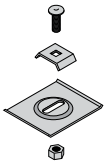
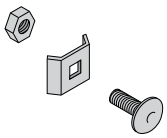
Riteway Cable Tray

 Riteway Tray (Galvabond & HDG) pgs. 34-36	 Bend (Galvabond & HDG) pgs. 35-36	 Internal Riser (Galvabond & HDG) pgs. 35-36	 External Riser (Galvabond & HDG) pgs. 35-36	 Tee (Galvabond & HDG) pgs. 35-36	 Cross (Galvabond & HDG) pgs. 35-36	

Supatray Cable Tray

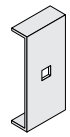
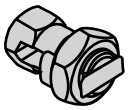
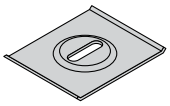
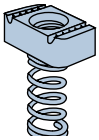
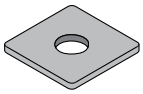
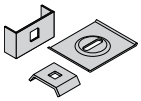
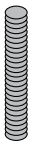
 ST3 Supatray [GB/HG] pg. 37	 ST5 Supatray [GB/HG] pg. 37	 Bendside pg. 38	 T-X Bracket pg. 38	 Link Plate pg. 38	 Splice Plate pg. 38	 Hold Down Bracket pg. 38
 Joining Hardware pg. 38	 Supatray Bend pg. 39	 Supatray T-X Bracket pg. 39	 Supatray External Riser pg. 39	 Supatray Internal Riser pg. 39		

ACROFIL® Wire Basket

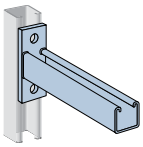
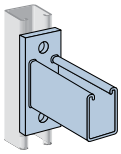
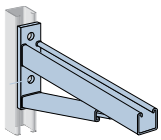
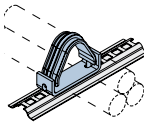
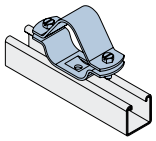
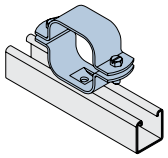
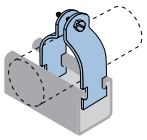
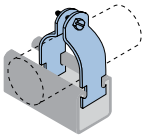
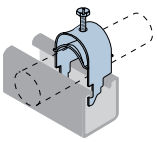
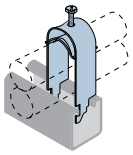
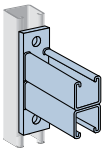
 Double Rod Reinforced Tray (50mm Depth) pg. 42	 Triple Rod Reinforced Tray (100mm Depth) pg. 43	 Splice (225mm long) pg. 45	 Bar Connector (550 or 1100mm long) pg. 45	 Connector Kit [AF-KITCH1] pg. 46	 Connector Kit [AF-KITCH2] pg. 47	 Connector Kit [AF-KITCH3] pg. 47

ACROFIL® Wire Basket (cont.)

ACROFIL® Wire Basket (cont.)

 Grounding Clip [AF-GCLIP] pg. 66	 Grounding Clamp/ Split Bolt pg. 66	 Hold Down Clip [AF-BCLIP] pg. 67	 Hex Head Set Screws pg. 68	 Pan Head Screws pg. 68	 Hexagon Nuts pg. 68	 Spring Washers pg. 68
 Flat Washers pg. 68	 Strut Nuts pg. 69	 Square Strut Washers pg. 69	 Tray Clips pg. 69	 Unirod Steel Threaded Rod pg. 69		

Brackets & Supports for Cable Support Systems

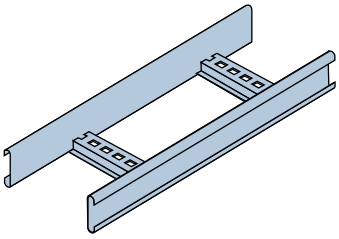
 P2663 [HG/SS] pg. 74	 P5663 [HG] pg. 74	 PCL Series {HG/SS] pg. 74	 TC Series - Trifoil [HG] pg. 74	 TF Series - Trifoil [ZP] pg. 74	 QF Series Quadfoil [ZP] pg. 75	 Conduit Clamp pg. 75
 Sheathed Cable Clamp pg. 75	 KS2026-1 Series – Single Cable Clamp pg. 76	 KS2026-2 Series – Double Cable Clamp pg. 76	 P2542 pg. 110			

NEMA CABLE LADDER [GENERAL INFORMATION]

Unistrut manufactures and markets the largest range of cable ladder systems for the Australian Electrical Industry. This extensive range of cable ladder support systems include 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.

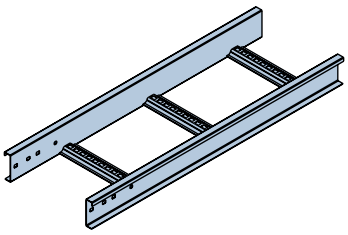
In cases where extremely high corrosion resistance is required, stainless steel cable ladder systems are available against special order. All Unistrut Cable Ladder systems are complemented with a complete range of accessories: Horizontal Bends, Internal and External Risers, Tees, Crosses, Reducers, Hinged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

NEMA 12B - Steel



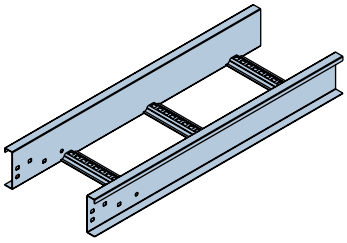
Length: 4m & 6m
Width: 150, 300, 450, 600mm
Cable Laying Depth: 44mm

NEMA 16A - Steel



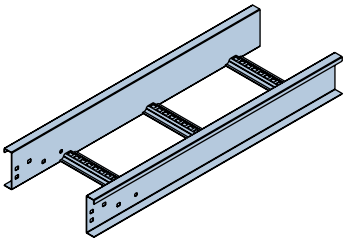
Length: 6m
Width: 150, 300, 450, 600mm
Cable Laying Depth: 72mm

NEMA 20B - Steel



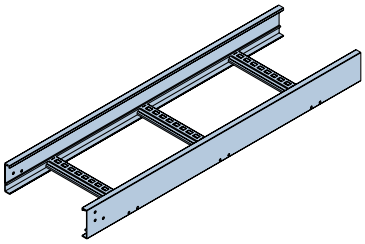
Length: 6m
Width: 150, 300, 450, 600mm
Cable Laying Depth: 109mm

NEMA 20C - Steel



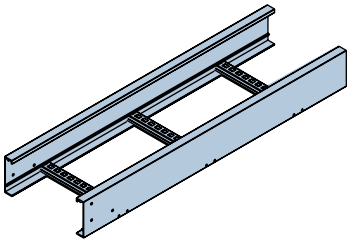
Length: 6m
Width: 150, 300, 450, 600mm
Cable Laying Depth: 125mm

NEMA 12A - Aluminium



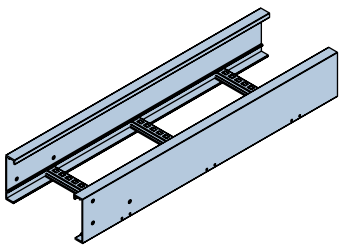
Length: 6m
Width: 150, 300, 450, 600mm
Cable Laying Depth: 67mm

NEMA 20A - Aluminium



Length: 6m
Width: 150, 300, 450, 600mm
Cable Laying Depth: 96mm

NEMA 20C - Aluminium



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

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 and 600mm, 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, 450mm and 600mm, depending on the system load class. Non-standard ladder widths and accessory radii can be manufactured against order.

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.

   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.

b) **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 (say) 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.

c) **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 and Tray Systems 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 1/360th of span are imposed, the resultant cable ladder will be grossly over designed 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 1/180th 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.

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.

a) **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 chemicals, especially sulphurous compounds, which may be intrinsic to plant operations where the ladder is installed. Correspondingly, a longer life will be expected in lighter industrial situations and if drier conditions exist.

b) **Aluminium** – Aluminium is also a popular choice of material for cable ladders. Most frequently it is selected because of its excellent performance in marine environments such as is found on wharves, coal loaders or similar Port Facilities where salt spray or salt laden atmosphere is present. Another reason for using aluminium is that it offers a long maintenance free life which is important in cases where access for future painting or repairs may be costly and difficult.

   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.

c) **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 my 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.

d) **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.

The NEMA Standards

NEMA STANDARD No. 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 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 Australian 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. 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, 20B or 20C. 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 (ie 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 intepreted by normal design methods.

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.

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)

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 75 lb/ft. over a 20ft.span. (ie.112kg/m over a 6.0m span)

Steel Cable Ladder (SCL)

Galvanised steel cable ladders are the most popular 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 provide a wide range of load and span combinations to suit the requirement of almost any installations.

Side-Rail Alternative - With the exception of Nema 12B, all ladder systems are available with the side-rails turned outward (as standard), or inward (RI) 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, 20B and 20C Systems - Unistrut steel splice plates are of a robust and practical design. The neat fitting flanges and bolted configuration of Unistrut splices also reduces 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.

12B Systems - The 12B splice plate incorporates virtually all of the working features as described for the 16A, 20B and 20C ladders, but because the 12B is a lighter duty system, a simplified splice design is used. Requiring only two fixing bolts and eliminating the need for matching holes in the side-rail, the 12B splice plate is convenient in use and extremely fast to install.

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.

If in doubt, please consult your Unistrut Service Centre.

Accessories – All Unistrut 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 channel 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 hot-dipped galvanised to AS/NZS 4680 / BS EN ISO 1461:2009, after fabrication.

NEMA 12B Straight Tray [HG]

Cable Laying Depth: 44mm

Loading Data:
Basic Load Capacity
112kg/lin.m on 3.6m span

Length: 4m & 6m

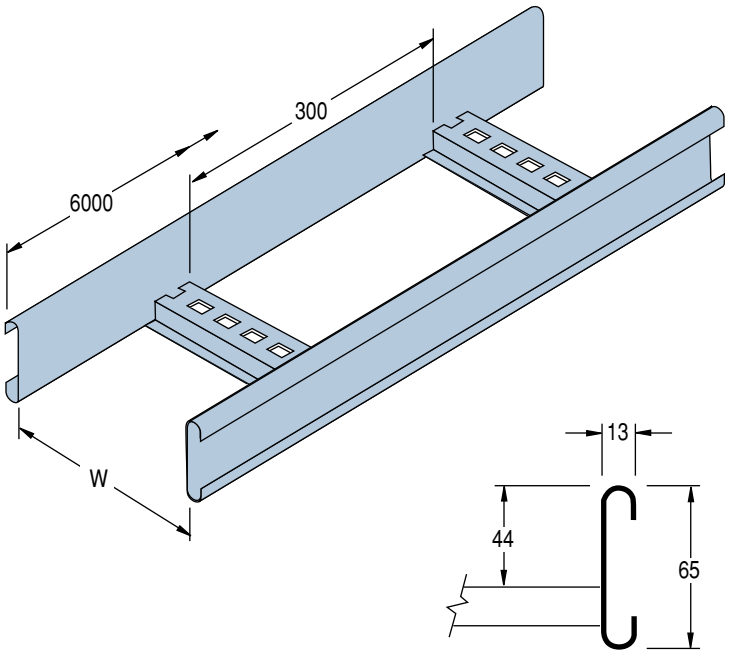
Rung Spacing: 300mm nominal

Standard Finish: Hot Dipped Galvanised

Also available in Stainless Steel (3m length, part no. LUE)

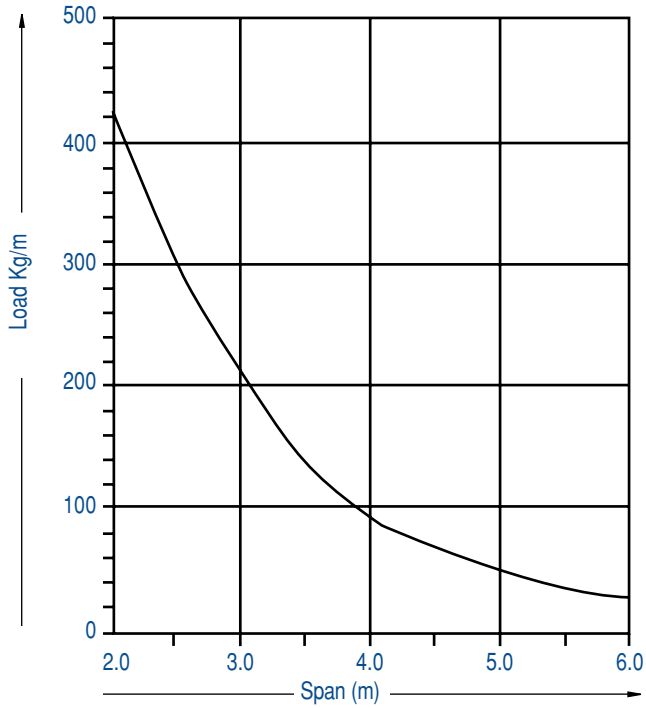
Dim "W"	Type	Part No.	
		4m	6m
150	12B	**LEE101**	**LEE1016**
300	12B	**LEE103**	**LEE1036**
450	12B	**LEE104**	**LEE1046**
600	12B	**LEE106**	**LEE1066**

Note: Fire Rated to AS/NZS3013:1995 Appendix B - Classification WS5X.
Refer to your local Service Centre for load ratings and correct installation procedures.



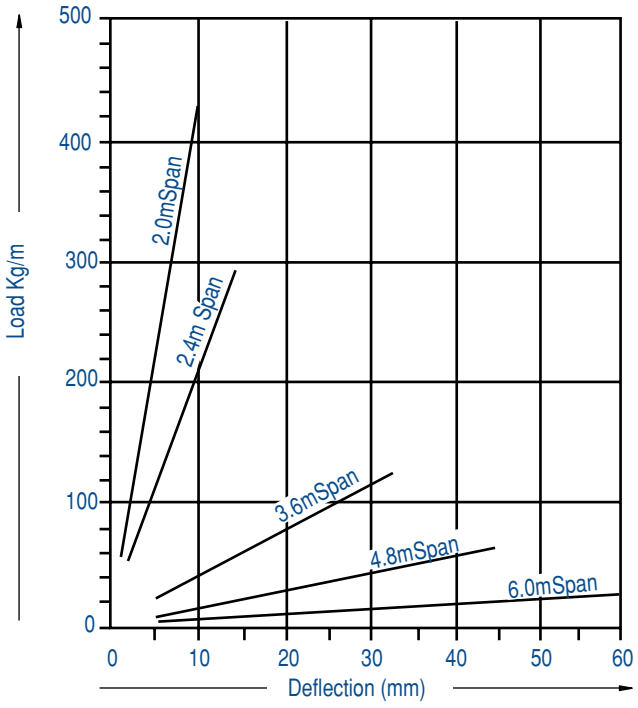
• Splice plate & fixing screws are not included (order separately).

Allowable Load Graph



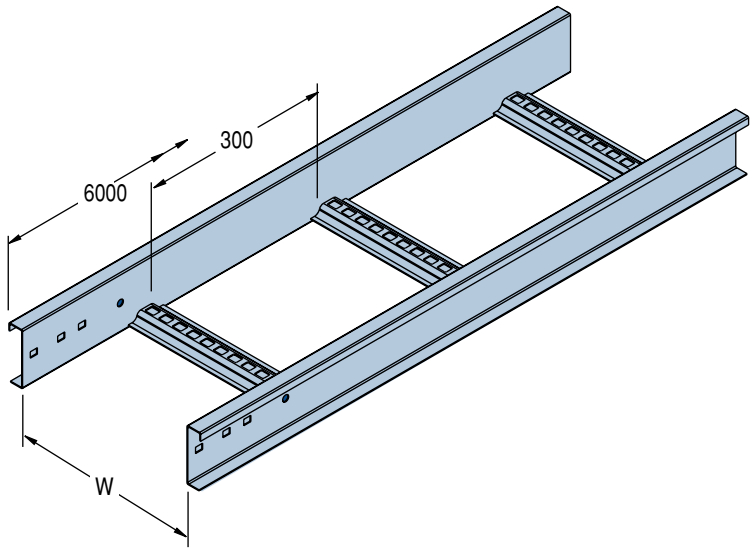
Allowable loads are determined generally in accordance with NEMA Standard VE1 and verified by testing.
Safety Factor = 1.5 on collapse load for single span.

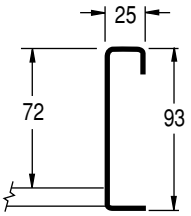
Deflection Graph

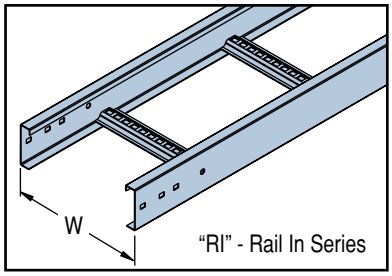


Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.

NEMA 16A Straight Tray [HG]







Cable Laying Depth: 72mm

Loading Data:
Basic Load Capacity
90kg/lin.m on 4.8m span
79kg/lin.m on 6m span

Length: 6m

Rung Spacing: 300mm nominal

Standard Finish: Hot Dipped Galvanised

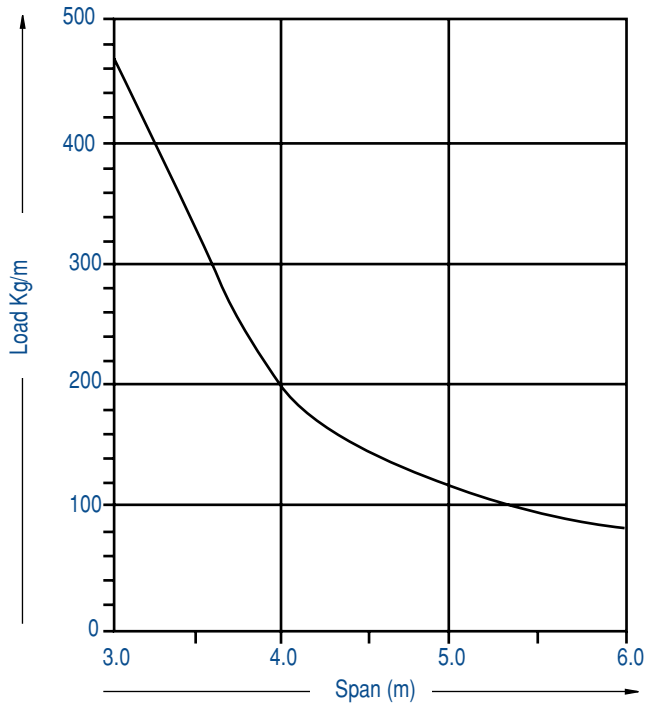
Also available in Stainless Steel Grade 316 (3m length, part no. LUG)

Dim "W"	Type	Part No.
150	16A	**LEG101**
300	16A	**LEG103**
450	16A	**LEG104**
600	16A	**LEG106**
150	16A-RI	**LEG101R**
300	16A-RI	**LEG103R**
450	16A-RI	**LEG104R**
600	16A-RI	**LEG106R**

Note: Fire Rated to AS/NZS3013:1995 Appendix B - Classification WS5X.
Refer to your local Service Centre for load ratings and correct installation procedures.

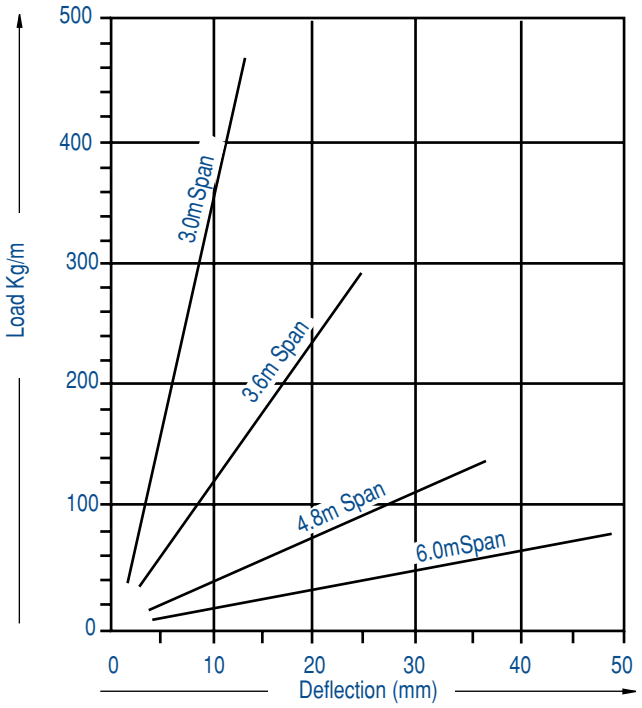
• *Splice plate & fixing screws are not included (order separately).*

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 20B Straight Tray [HG]

Cable Laying Depth: 109mm

Loading Data:
Basic Load Capacity
136kg/lin.m on 6m span

Length: 6m

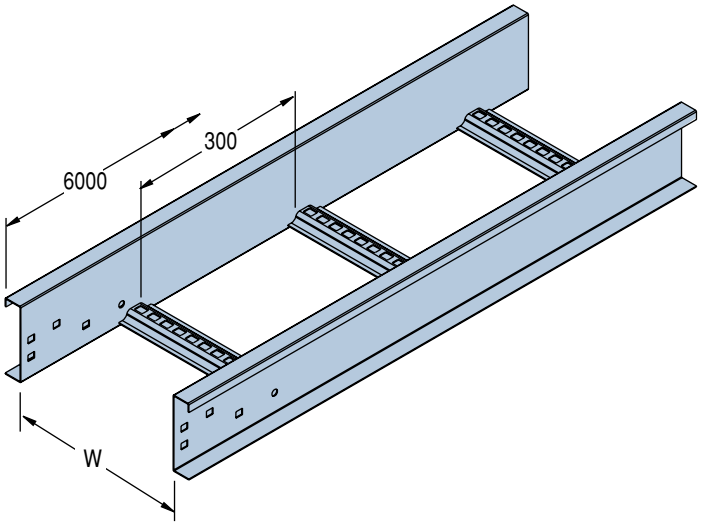
Rung Spacing: 300mm nominal

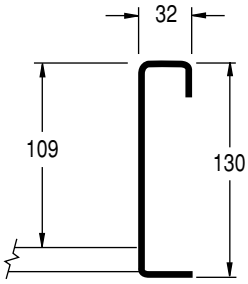
Standard Finish: Hot Dipped Galvanised

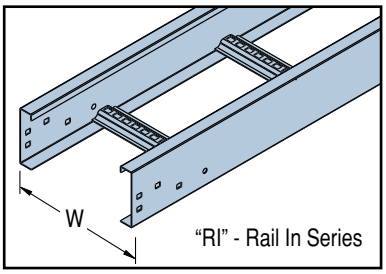
Also available in Stainless Steel Grade 316 (part no. LUK)

Dim "W"	Type	Part No.
150	20B	**LEK101**
300	20B	**LEK103**
450	20B	**LEK104**
600	20B	**LEK106**
150	20B-RI	**LEK101R**
300	20B-RI	**LEK103R**
450	20B-RI	**LEK104R**
600	20B-RI	**LEK106R**

Note: Fire Rated to AS/NZS3013:1995 Appendix B - Classification WS5X.
Refer to your local Service Centre for load ratings and correct installation procedures.

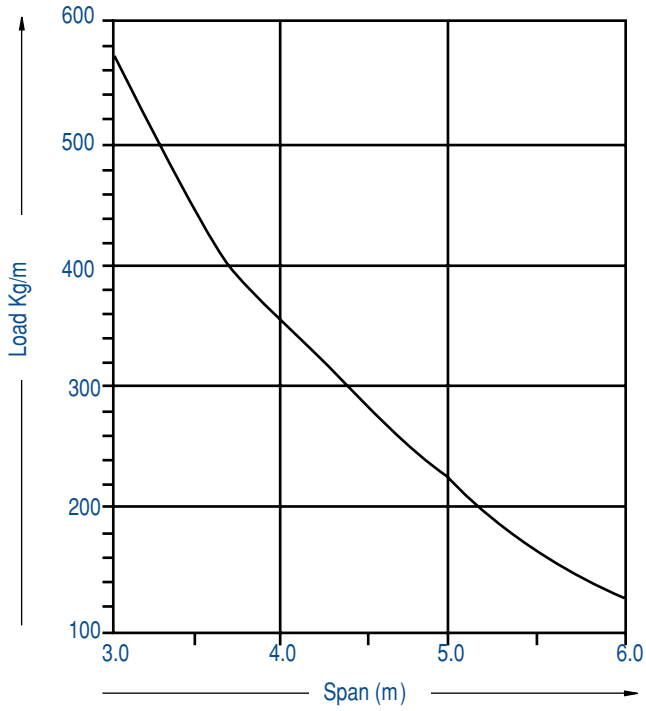






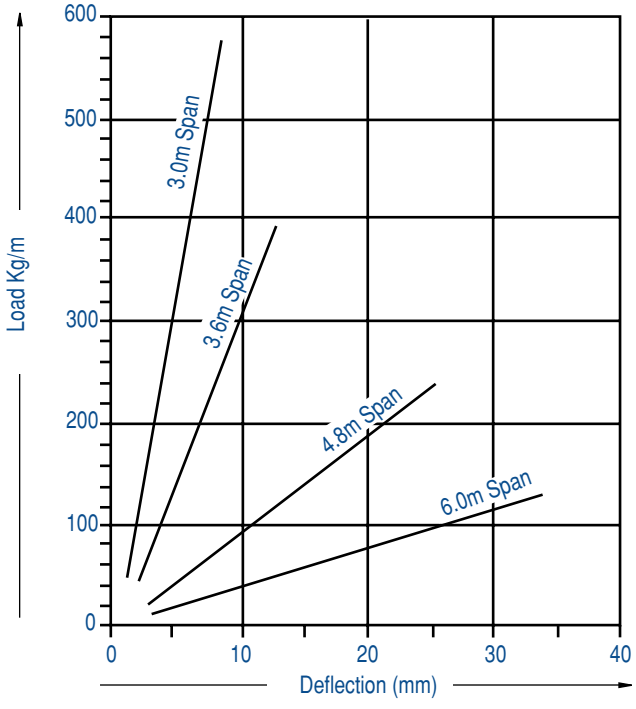
• Splice plate & fixing screws are not included (order separately).

Allowable Load Graph



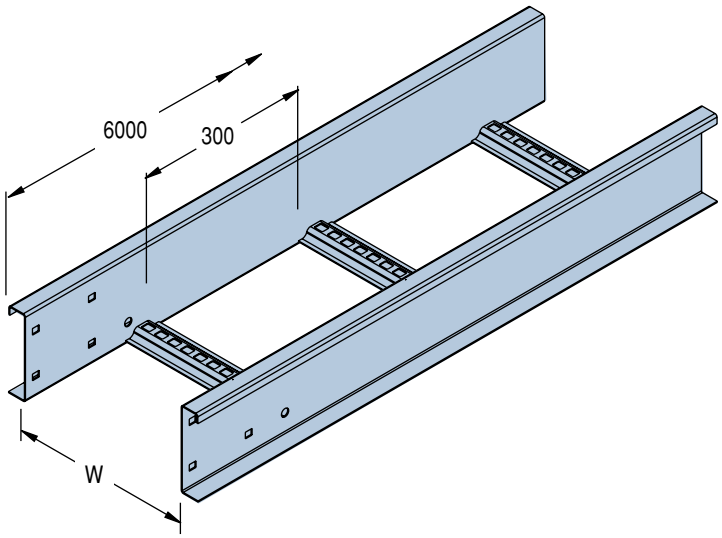
Allowable loads are determined generally in accordance with NEMA Standard VE1 and verified by testing.
Safety Factor = 1.5 on collapse load for single span.

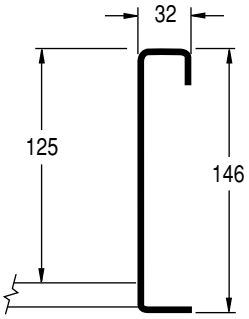
Deflection Graph

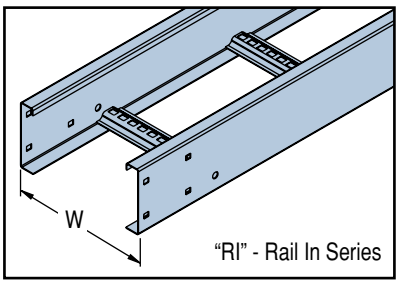


Deflections shown apply to the end-bays (ie. worst case) of a continuous ladder run. To find deflection of a single span, multiply by 2.5.

NEMA 20C Straight Tray







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

Cable Laying Depth: 125mm

Loading Data:
Basic Load Capacity
168kg/lin.m on 6m span

Length: 6m

Rung Spacing: 300mm nominal

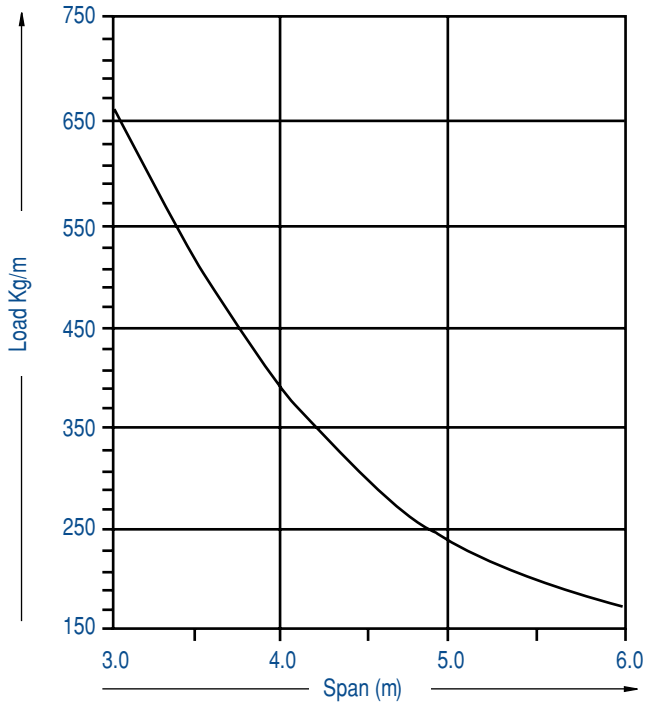
Standard Finish: Hot Dipped Galvanised

Also available in Stainless Steel Grade 316 (3m length, part no. LUL)

Dim "W"	Type	Part No.
150	20C	**LEL101**
300	20C	**LEL103**
450	20C	**LEL104**
600	20C	**LEL106**
150	20C-RI	**LEL101R**
300	20C-RI	**LEL103R**
450	20C-RI	**LEL104R**
600	20C-RI	**LEL106R**

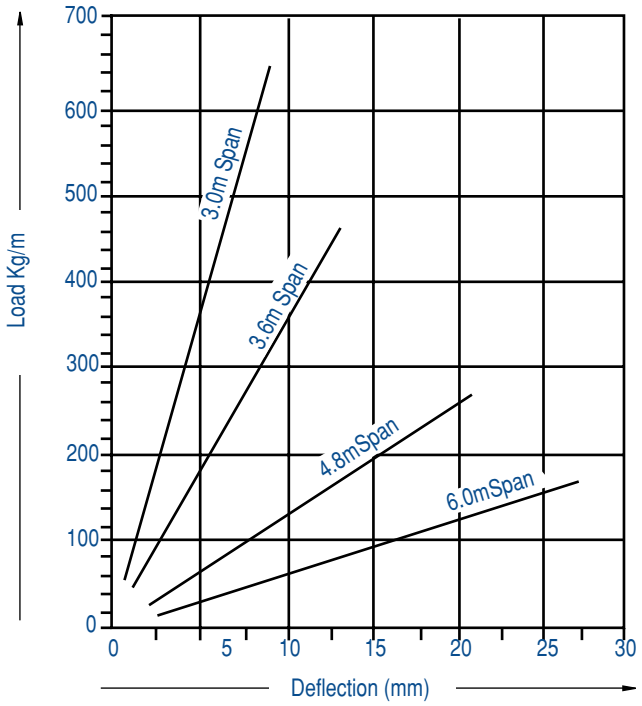
Note: Fire Rated to AS/NZS3013:1995 Appendix B - Classification WS5X.
Refer to your local Service Centre for load ratings and correct installation procedures.

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.

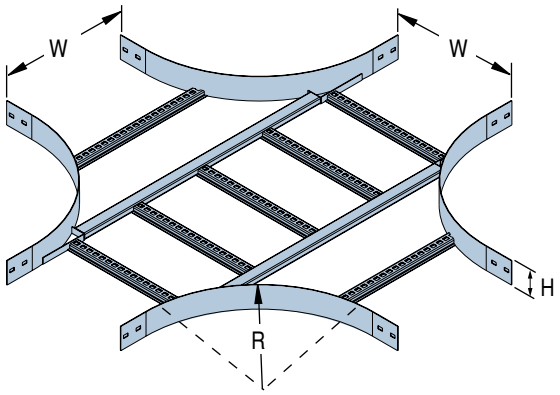
Deflection Graph



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.

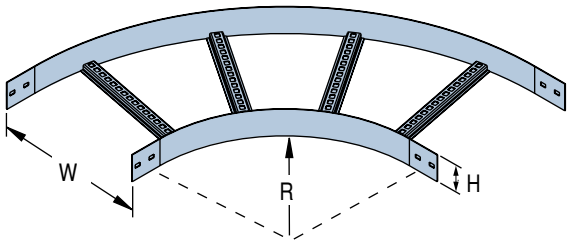
Cross [HG]

Type	Radius"R"	Width"W"	Height"H"	Part No.
12B	300	150	60	LEE181
12B	300	300	60	LEE183
12B	300	450	60	LEE184
12B	300	600	60	LEE186
16A	450	150	84	LEG181
16A	450	300	84	LEG183
16A	450	450	84	LEG184
16A	450	600	84	LEG186
20B	600	150	119	LEK181
20B	600	300	119	LEK183
20B	600	450	119	LEK184
20B	600	600	119	LEK186
20C	600	150	135	LEL181
20C	600	300	135	LEL183
20C	600	450	135	LEL184
20C	600	600	135	LEL186



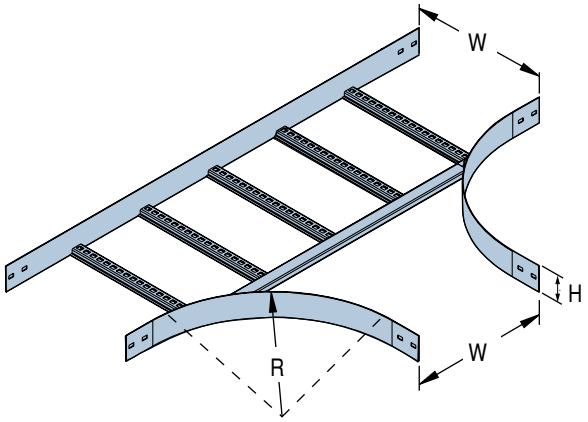
Flat Bend 90° [HG]

Type	Radius"R"	Width"W"	Height"H"	Part No.
12B	300	150	60	LEE111
12B	300	300	60	LEE113
12B	300	450	60	LEE114
12B	300	600	60	LEE116
16A	450	150	84	LEG111
16A	450	300	84	LEG113
16A	450	450	84	LEG114
16A	450	600	84	LEG116
20B	600	150	119	LEK111
20B	600	300	119	LEK113
20B	600	450	119	LEK114
20B	600	600	119	LEK116
20C	600	150	135	LEL111
20C	600	300	135	LEL113
20C	600	450	135	LEL114
20C	600	600	135	LEL116



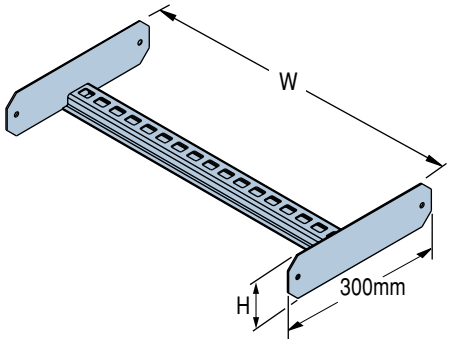
Tee [HG]

Type	Radius"R"	Width"W"	Height"H"	Part No.
12B	300	150	60	LEE191
12B	300	300	60	LEE193
12B	300	450	60	LEE194
12B	300	600	60	LEE196
16A	450	150	84	LEG191
16A	450	300	84	LEG193
16A	450	450	84	LEG194
16A	450	600	84	LEG196
20B	600	150	119	LEK191
20B	600	300	119	LEK193
20B	600	450	119	LEK194
20B	600	600	119	LEK196
20C	600	150	135	LEL191
20C	600	300	135	LEL193
20C	600	450	135	LEL194
20C	600	600	135	LEL196



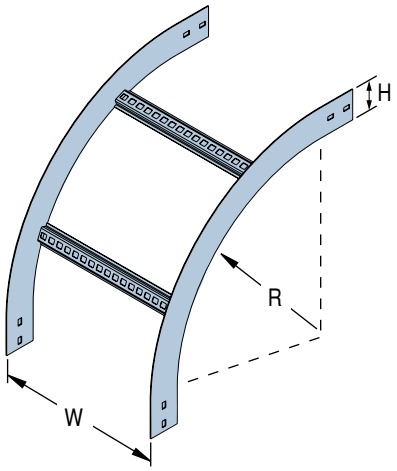
• Fixing Hardware for all cable ladder systems must be ordered separately.

Adjustable Riser [HG]



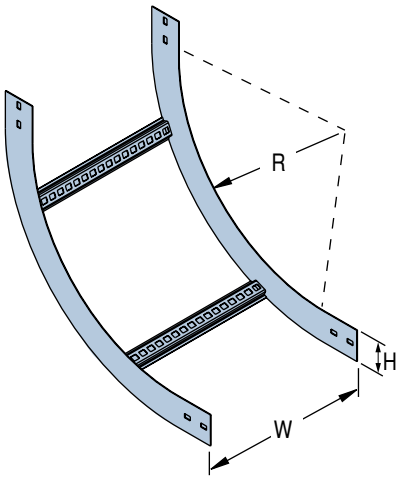
Type	Width"W"	Height"H"	Part No.
12B	150	60	LEE141
12B	300	60	LEE143
12B	450	60	LEE144
12B	600	60	LEE146
16A	150	84	LEG141
16A	300	84	LEG143
16A	450	84	LEG144
16A	600	84	LEG146
20B	150	119	LEK141
20B	300	119	LEK143
20B	450	119	LEK144
20B	600	119	LEK146
20C	150	135	LEL141
20C	300	135	LEL143
20C	450	135	LEL144
20C	600	135	LEL146

External Riser - 90° [HG]



Type	Radius"R"	Width"W"	Height"H"	Part No.
12B	300	150	60	LEE131
12B	300	300	60	LEE133
12B	300	450	60	LEE134
12B	300	600	60	LEE136
16A	450	150	84	LEG131
16A	450	300	84	LEG133
16A	450	450	84	LEG134
16A	450	600	84	LEG136
20B	600	150	119	LEK131
20B	600	300	119	LEK133
20B	600	450	119	LEK134
20B	600	600	119	LEK136
20C	600	150	135	LEL131
20C	600	300	135	LEL133
20C	600	450	135	LEL134
20C	600	600	135	LEL136

Internal Riser - 90° [HG]

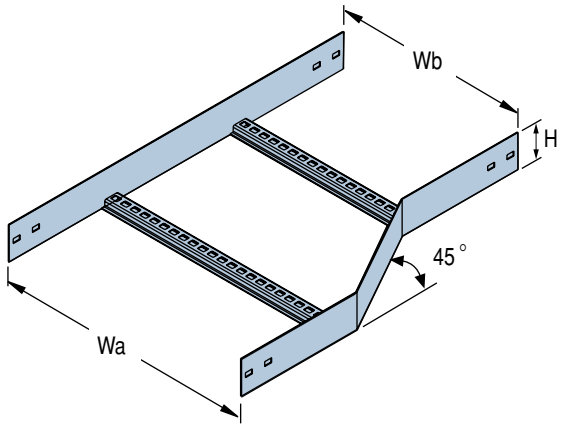


Type	Radius"R"	Width"W"	Height"H"	Part No.
12B	300	150	60	LEE121
12B	300	300	60	LEE123
12B	300	450	60	LEE124
12B	300	600	60	LEE126
16A	450	150	84	LEG121
16A	450	300	84	LEG123
16A	450	450	84	LEG124
16A	450	600	84	LEG126
20B	600	150	119	LEK121
20B	600	300	119	LEK123
20B	600	450	119	LEK124
20B	600	600	119	LEK126
20C	600	150	135	LEL121
20C	600	300	135	LEL123
20C	600	450	135	LEL124
20C	600	600	135	LEL126

• Fixing Hardware for all cable ladder systems must be ordered separately.

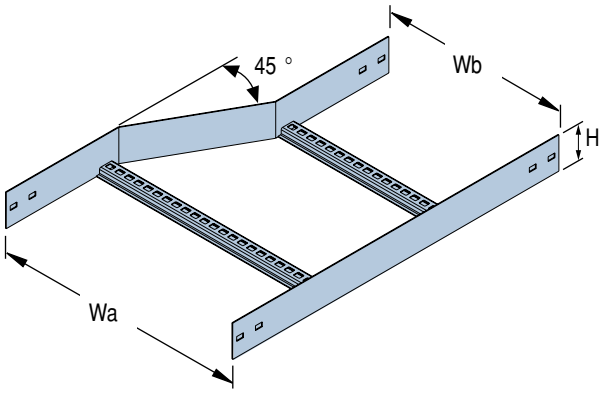
Offset Reducer, Left Hand [HG]

Type	Width "Wa"	Width "Wb"	Height "H"	Part No.
12B	600	450	60	**LEE1764**
12B	600	300	60	**LEE1763**
12B	600	150	60	**LEE1761**
12B	450	300	60	**LEE1743**
12B	450	150	60	**LEE1741**
12B	300	150	60	**LEE1731**
16A	600	450	84	**LEG1764**
16A	600	300	84	**LEG1763**
16A	600	150	84	**LEG1761**
16A	450	300	84	**LEG1743**
16A	450	150	84	**LEG1741**
16A	300	150	84	**LEG1731**
20B	600	450	119	**LEK1764**
20B	600	300	119	**LEK1763**
20B	600	150	119	**LEK1761**
20B	450	300	119	**LEK1743**
20B	450	150	119	**LEK1741**
20B	300	150	119	**LEK1731**
20C	600	450	135	**LEL1764**
20C	600	300	135	**LEL1763**
20C	600	150	135	**LEL1761**
20C	450	300	135	**LEL1743**
20C	450	150	135	**LEL1741**
20C	300	150	135	**LEL1731**



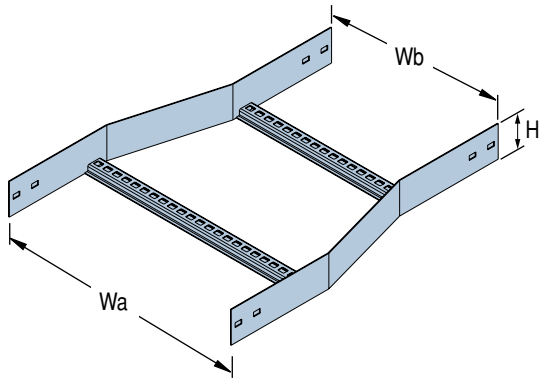
Offset Reducer, Right Hand [HG]

Type	Width "Wa"	Width "Wb"	Height "H"	Part No.
12B	600	450	60	**LEE1664**
12B	600	300	60	**LEE1663**
12B	600	150	60	**LEE1661**
12B	450	300	60	**LEE1643**
12B	450	150	60	**LEE1641**
12B	300	150	60	**LEE1631**
16A	600	450	84	**LEG1664**
16A	600	300	84	**LEG1663**
16A	600	150	84	**LEG1661**
16A	450	300	84	**LEG1643**
16A	450	150	84	**LEG1641**
16A	300	150	84	**LEG1631**
20B	600	450	119	**LEK1664**
20B	600	300	119	**LEK1663**
20B	600	150	119	**LEK1661**
20B	450	300	119	**LEK1643**
20B	450	150	119	**LEK1641**
20B	300	150	119	**LEK1631**
20C	600	450	135	**LEL1664**
20C	600	300	135	**LEL1663**
20C	600	150	135	**LEL1661**
20C	450	300	135	**LEL1643**
20C	450	150	135	**LEL1641**
20C	300	150	135	**LEL1631**



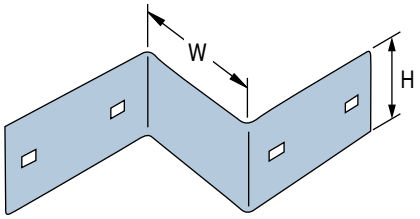
• Fixing Hardware for all cable ladder systems must be ordered separately.

Straight Reducer [HG]



Type	Width "Wa"	Width "Wb"	Height "H"	Part No.
12B	600	450	60	**LEE1564**
12B	600	300	60	**LEE1563**
12B	600	150	60	**LEE1561**
12B	450	300	60	**LEE1543**
12B	450	150	60	**LEE1541**
12B	300	150	60	**LEE1531**
16A	600	450	84	**LEG1564**
16A	600	300	84	**LEG1563**
16A	600	150	84	**LEG1561**
16A	450	300	84	**LEG1543**
16A	450	150	84	**LEG1541**
16A	300	150	84	**LEG1531**
20B	600	450	119	**LEK1564**
20B	600	300	119	**LEK1563**
20B	600	150	119	**LEK1561**
20B	450	300	119	**LEK1543**
20B	450	150	119	**LEK1541**
20B	300	150	119	**LEK1531**
20C	600	450	135	**LEL1564**
20C	600	300	135	**LEL1563**
20C	600	150	135	**LEL1561**
20C	450	300	135	**LEL1543**
20C	450	150	135	**LEL1541**
20C	300	150	135	**LEL1531**

Reducer Splice [HG]



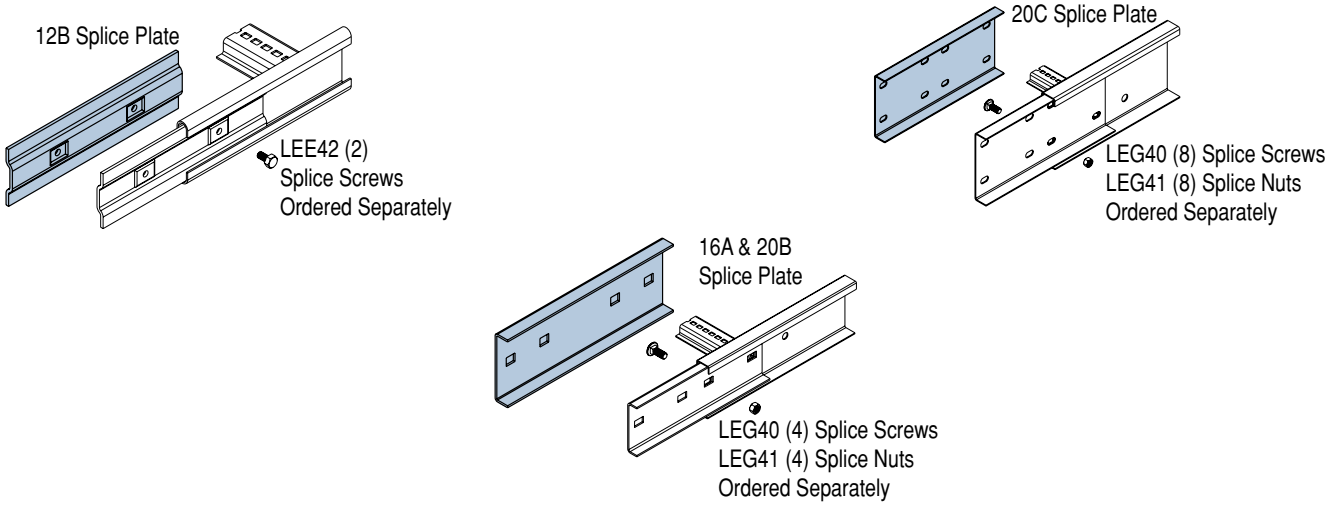
Reduction of ladder width is normally carried out using straight or offset reducers. Reducer Splice Plates are a flexible, cost effective alternative which bolt directly to the ladder side-rails.

Available for all steel cable ladder systems.

Type	Width "W"	Height "H"	Part No.
12B	75	60	**LEE380**
12B	150	60	**LEE381**
12B	300	60	**LEE383**
12B	450	60	**LEE384**
16A	75	84	**LEG380**
16A	150	84	**LEG381**
16A	300	84	**LEG383**
16A	450	84	**LEG384**
20B	75	119	**LEK380**
20B	150	119	**LEK381**
20B	300	119	**LEK383**
20B	450	119	**LEK384**
20C	75	135	**LEL380**
20C	150	135	**LEL381**
20C	300	135	**LEL383**
20C	450	135	**LEL384**

• Fixing Hardware for all cable ladder systems must be ordered separately.

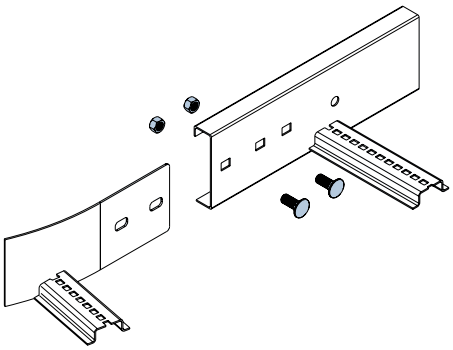
Splice Plate [HG]



Type	Part No.
12B	**LEE30**
16A	**LEG30**
20B	**LEK30**
20C	**LEL30**

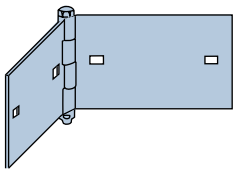
The neat fitting flanges and bolted configuration of Unistrut splice plates also reduces deflection at joints as the ladder is loaded. Unsightly dips or discontinuities along the ladder run are therefore avoided. Bolt holes in splice plates and ladder side-rails are elongated so that site misalignments as well as thermal expansion and contraction are catered for.

Fastener Quantities for Accessories



Steel Cable Ladder Accessories			
12B	Splice Screw (HG)	**LEE42**	4 per Bend, Riser or Reducer 6 per Tee 8 per Cross
16A, 16A-RI, 20B, 20B-RI	Splice Screw (HG) Splice Nut (HG)	**LEG40** **LEG41**	8 per Bend, Riser or Reducer 12 per Tee 24 per Cross
20C, 20C-RI	Splice Screw (HG) Splice Nut (HG)	**LEG40** **LEG41**	16 per Bend, Riser or Reducer 24 per Tee 32 per Cross

Hinged Horizontal Splice Plate [HG]



Type	Part No.
12B	**LEE35**
16A	**LEG35**
20B	**LEK35**
20C	**LEL35**

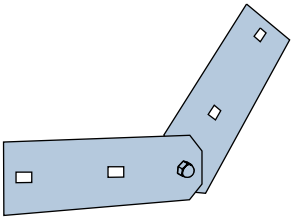
A fast and economical method of changing ladder direction where exact site dimensions must be met. Especially suitable where the angle is less that 45°, or larger angles where the cable bending radius is not important. Also provides a flexible alternative to standard accessory sizes and radii. Suits all Unistrut steel cable ladder systems.

• Fixing Hardware for all cable ladder systems must be ordered separately.

Hinged Vertical Splice Plate [HG]

Ideal for making changes in vertical level or direction. Easily adapts to exact site dimensions which may otherwise be difficult to achieve with fixed risers. Cables form their own bending radius spanning between adjacent end-rungs. Also used to form adjustable risers providing flexibility to adjust to any site restrictions.

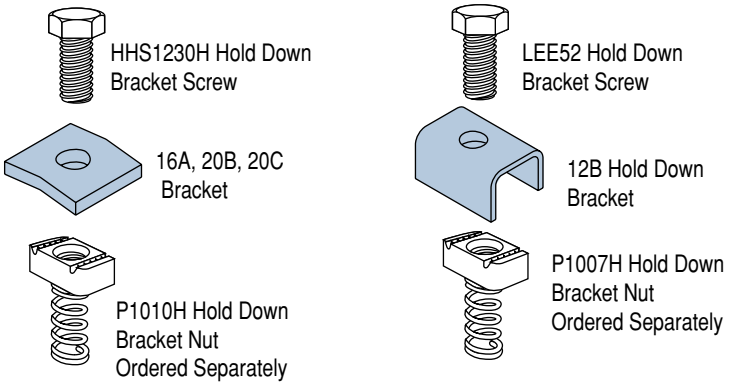
Type	Part No.
12B	**LEE36**
16A	**LEG36**
20B	**LEK36**
20C	**LEL36**



Hold Down Brackets [HG]

Hold Down Brackets provide rigid clamping for all steel cable ladder systems. The Brackets can be positioned at any point along the ladder length.

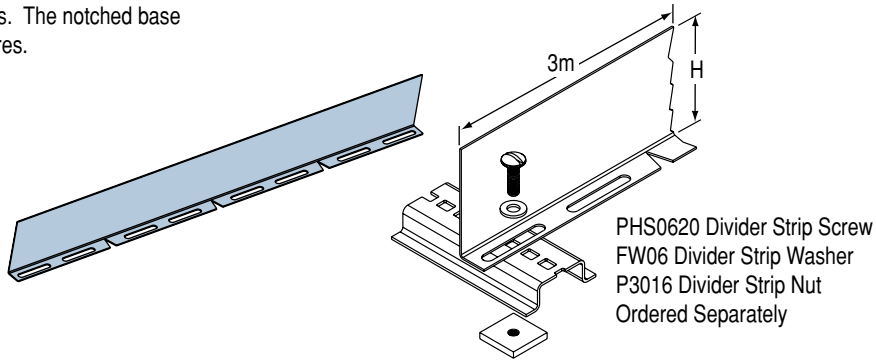
Type	Part No.
12B	**LEE50**
16A	**LEG50**
20B	**LEG50**
20C	**LEG50**



Divider Strip [GB/HG]

Used to separate cables of different voltages or circuits. The notched base permits forming to the required shape. Fix at 1m centres.

Type	Part No.	Height "H"
12B	**LEE55**	37mm
16A	**LEM55**	70mm
20B	**LEM55**	70mm
20C	**LEM55**	70mm



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 NEMA Aluminium cable ladder systems. These 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 and shaped so that it is retained neatly and firmly between mating flanges incorporated in the ladder side-rails. Initial deflection or “take-up” of the joint under load is thereby minimised, resulting in a tidy and rigid installation, free from excessive sag at splice points.

The splice design also permits up to 20mm 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 & fittings which are readily available.

Built-in Splice

The principal feature of all Unistrut cable ladder accessories is the ‘built-in’ 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.
- 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.

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

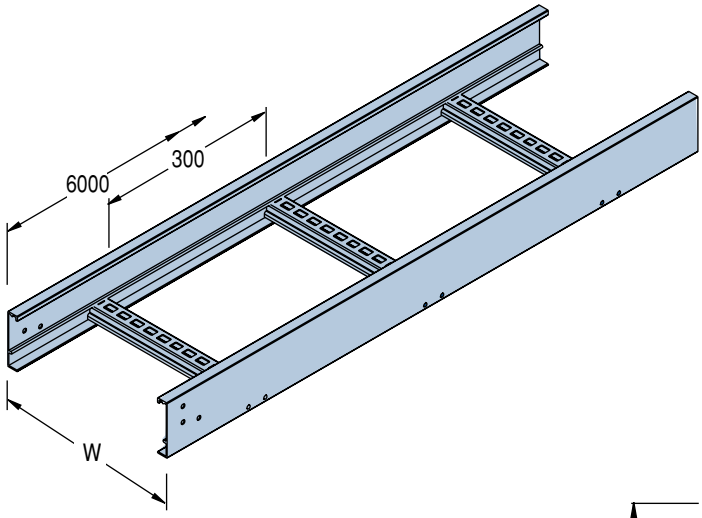
Unistrut aluminium cable ladder systems are manufactured from high strength alloy 6106-T6 for all extruded components and 5005 for sheet or plate components. These alloys are suitable for marine applications and offer excellent all round corrosion resistance. All fasteners are made from 300 series grade of stainless steel for optimum corrosion resistance.

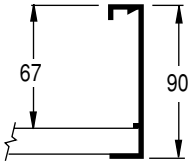
Each rung on 12A, 20A and 20C is attached to the side-rails with four stainless steel screws. In both assembly methods rung ends are held captive between flanges extruded into the side-rail, resulting in a strong and reliable connection.

C.K.D. Feature

Aluminium cable ladders with screwed rungs are also available in C.K.D. (completely knocked down) which provides a particular advantage when on-site assembly is necessary and in freight savings for remote areas.

NEMA 12A Straight Tray [AL]





Cable Laying Depth: 67mm

Loading Data:
Basic Load Capacity
98kg/lin.m on 3.6m span

Length: 6m

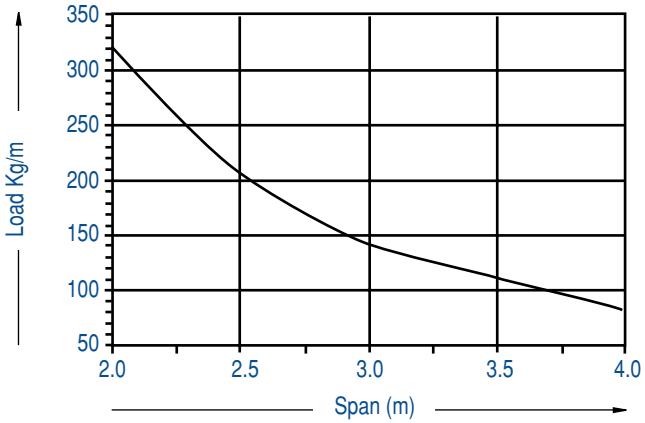
Rung Spacing: 300mm nominal

Standard Finish: Aluminium

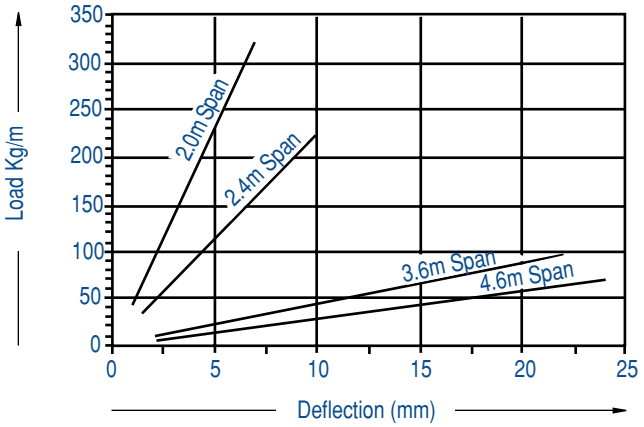
Dim "W"	Type	Part No.
150	12A	**LAD101**
300	12A	**LAD103**
450	12A	**LAD104**
600	12A	**LAD106**

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

Allowable Load Graph



Deflection 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.

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 20A Straight Tray [AL]

Cable Laying Depth: 96mm

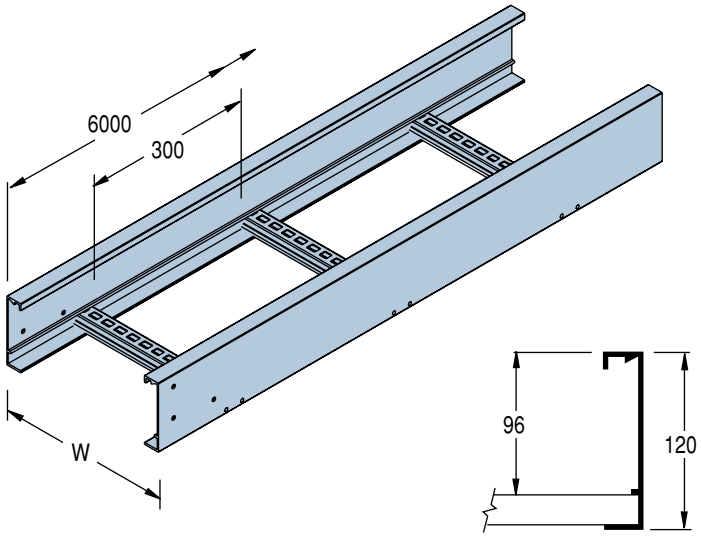
Loading Data:
Basic Load Capacity
95kg/lin.m on 6m span
352kg/lin.m on 3m span

Length: 6m

Rung Spacing: 300mm nominal

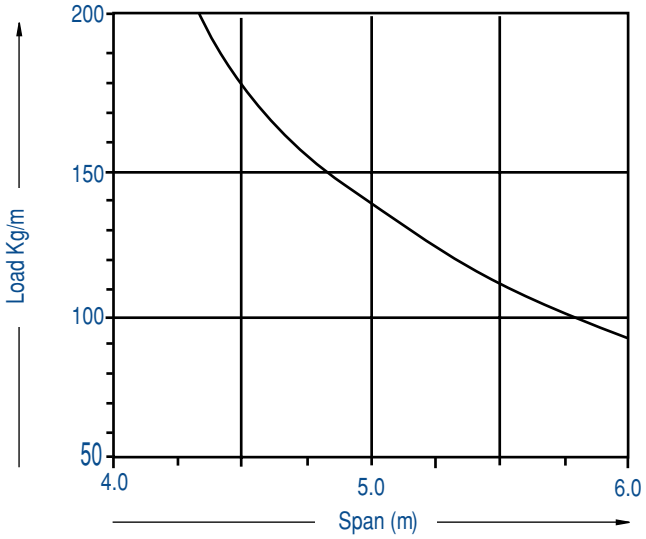
Standard Finish: Aluminium

Dim "W"	Type	Part No.
150	20A	**LAJ101**
300	20A	**LAJ103**
450	20A	**LAJ104**
600	20A	**LAJ106**



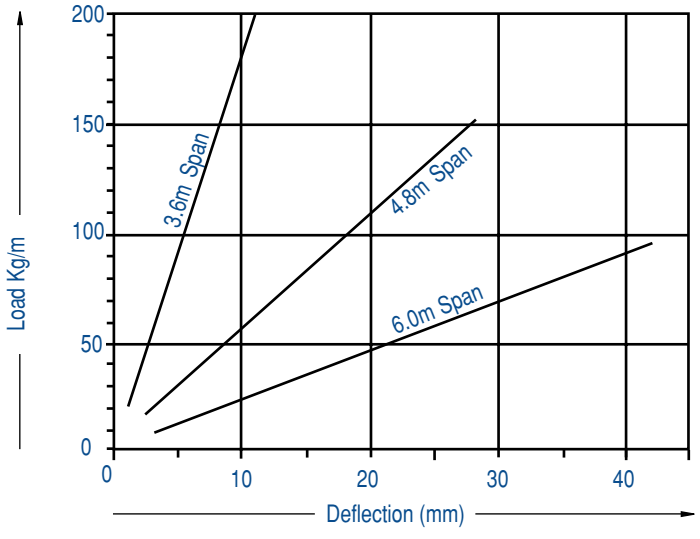
• Splice plate & fixing screws are not included (order separately).

Allowable Load Graph



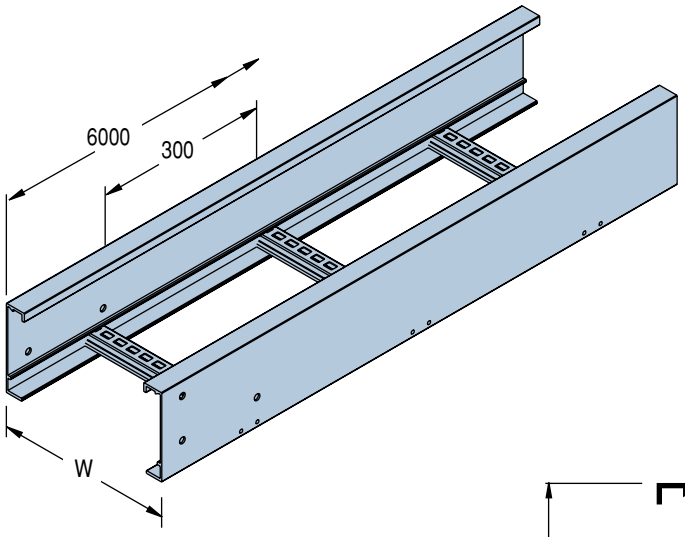
Allowable loads are determined generally in accordance with NEMA Standard VE1 and verified by testing.
Safety Factor = 1.5 on collapse load for single span.

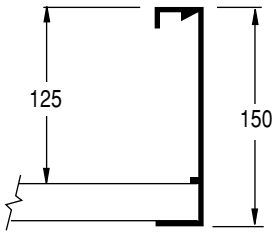
Deflection Graph



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 20C Straight Tray [AL]





Cable Laying Depth: 125mm

Loading Data:
Basic Load Capacity
175kg/lin.m on 6m span

Length: 6m

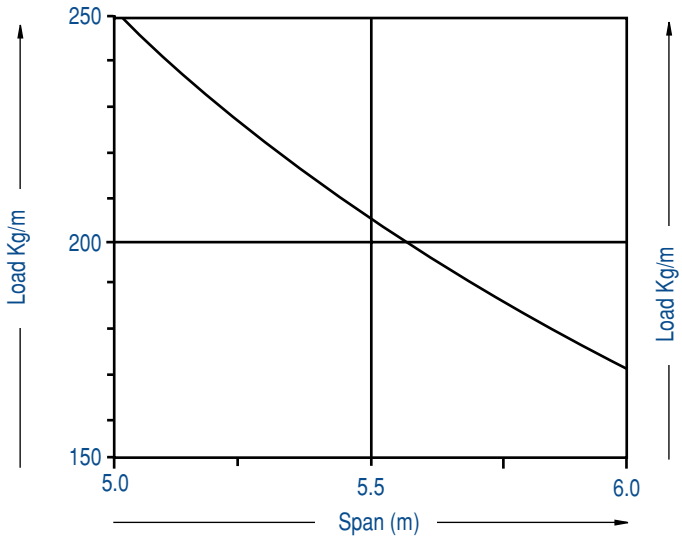
Rung Spacing: 300mm nominal

Standard Finish: Aluminium

Dim "W"	Type	Part No.
150	20C	**LAL101**
300	20C	**LAL103**
450	20C	**LAL104**
600	20C	**LAL106**

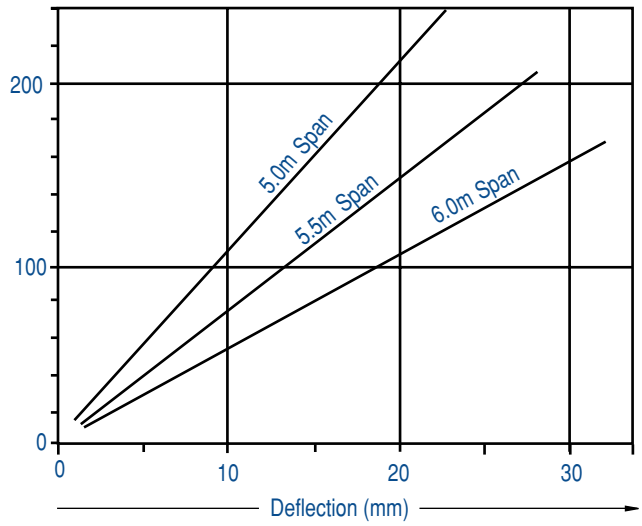
• Splice plate & fixing screws are not included (order separately).

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.

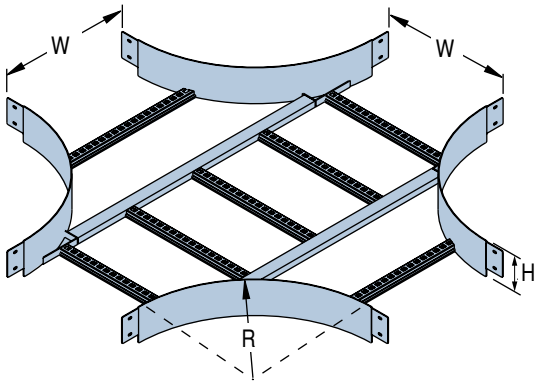
Deflection Graph



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.

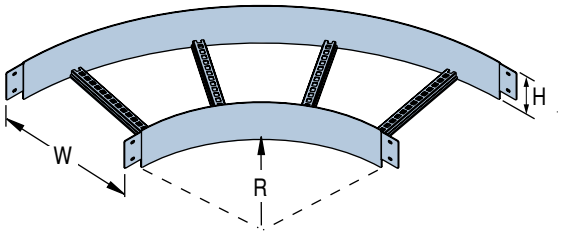
Cross [AL]

Type	Radius"R"	Width"W"	Height"H"	Part No.
12A	300	150	93	LAD181
12A	300	300	93	LAD183
12A	300	450	93	LAD184
12A	300	600	93	LAD186
20A	450	150	120	LAH181
20A	450	300	120	LAH183
20A	450	450	120	LAH184
20A	450	600	120	LAH186
20C	600	150	150	LAL181
20C	600	300	150	LAL183
20C	600	450	150	LAL184
20C	600	600	150	LAL186



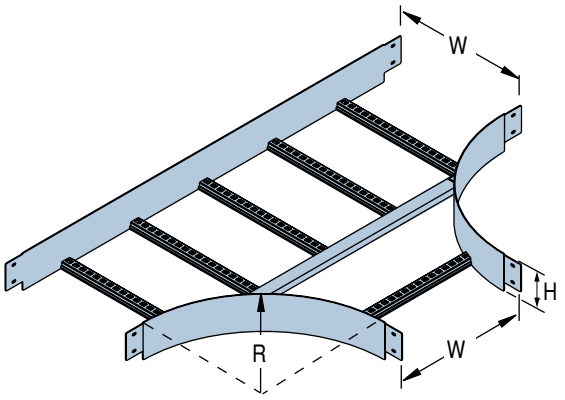
Flat Bend – 90° [AL]

Type	Radius"R"	Width"W"	Height"H"	Part No.
12A	300	150	93	LAD111
12A	300	300	93	LAD113
12A	300	450	93	LAD114
12A	300	600	93	LAD116
20A	450	150	120	LAH111
20A	450	300	120	LAH113
20A	450	450	120	LAH114
20A	450	600	120	LAH116
20C	600	150	150	LAL111
20C	600	300	150	LAL113
20C	600	450	150	LAL114
20C	600	600	150	LAL116



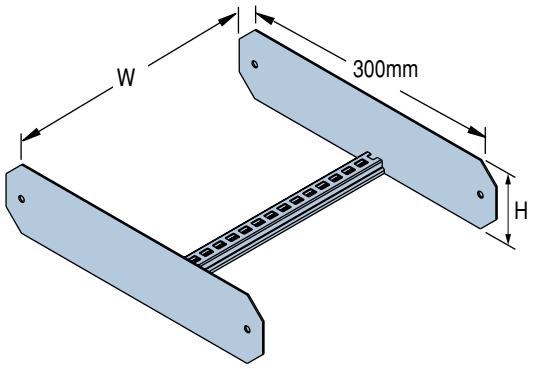
Tee [AL]

Type	Radius"R"	Width"W"	Height"H"	Part No.
12A	300	150	93	LAD191
12A	300	300	93	LAD193
12A	300	450	93	LAD194
12A	300	600	93	LAD196
20A	450	150	120	LAH191
20A	450	300	120	LAH193
20A	450	450	120	LAH194
20A	450	600	120	LAH196
20C	600	150	150	LAL191
20C	600	300	150	LAL193
20C	600	450	150	LAL194
20C	600	600	150	LAL196



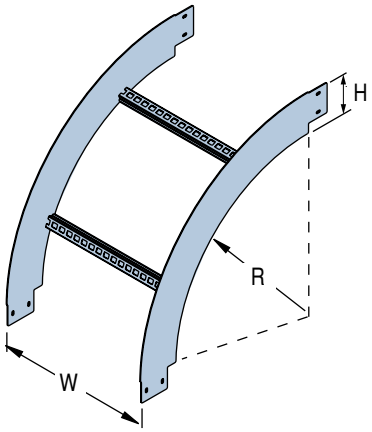
• Fixing Hardware for all cable ladder systems must be ordered separately.

Adjustable Riser [AL]



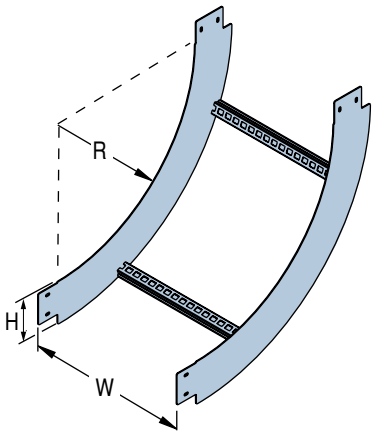
Type	Width"W"	Height"H"	Part No.*
12A	150	93	LAD141
12A	300	93	LAD143
12A	450	93	LAD144
12A	600	93	LAD146
20A	150	120	LAH141
20A	300	120	LAH143
20A	450	120	LAH144
20A	600	120	LAH146
20C	150	150	LAL141
20C	300	150	LAL143
20C	450	150	LAL144
20C	600	150	LAL146

External Riser – 90° [AL]



Type	Radius"R"	Width"W"	Height"H"	Part No.*
12A	300	150	93	LAD131
12A	300	300	93	LAD133
12A	300	450	93	LAD134
12A	300	600	93	LAD136
20A	450	150	120	LAH131
20A	450	300	120	LAH133
20A	450	450	120	LAH134
20A	450	600	120	LAH136
20C	600	150	150	LAL131
20C	600	300	150	LAL133
20C	600	450	150	LAL134
20C	600	600	150	LAL136

Internal Riser – 90° [AL]

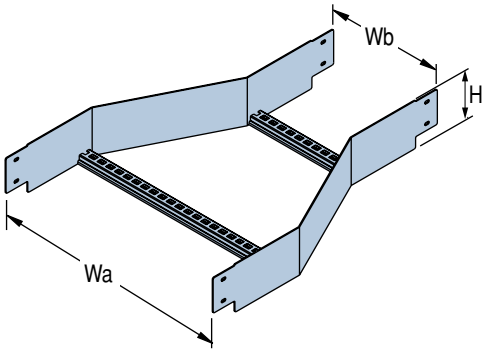


Type	Radius"R"	Width"W"	Height"H"	Part No.*
12A	300	150	93	LAD121
12A	300	300	93	LAD123
12A	300	450	93	LAD124
12A	300	600	93	LAD126
20A	450	150	120	LAH121
20A	450	300	120	LAH123
20A	450	450	120	LAH124
20A	450	600	120	LAH126
20C	600	150	150	LAL121
20C	600	300	150	LAL123
20C	600	450	150	LAL124
20C	600	600	150	LAL126

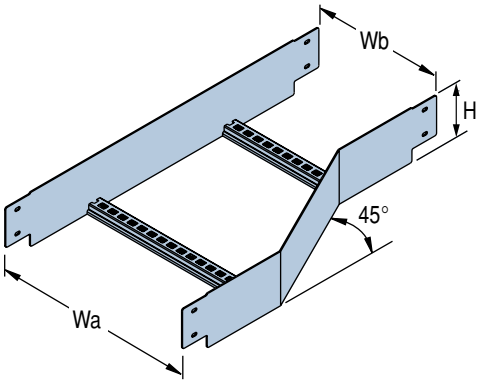
• Fixing Hardware for all cable ladder systems must be ordered separately.

Straight Reducer [AL]

Type	Width "Wa"	Width "Wb"	Height "H"	Part No.
12A	600	450	93	**LAD1564**
12A	600	300	93	**LAD1563**
12A	600	150	93	**LAD1561**
12A	450	300	93	**LAD1543**
12A	450	150	93	**LAD1541**
12A	300	150	93	**LAD1531**
20A	600	450	120	**LAH1564**
20A	600	300	120	**LAH1563**
20A	600	150	120	**LAH1561**
20A	450	300	120	**LAH1543**
20A	450	150	120	**LAH1541**
20A	300	150	120	**LAH1531**
20C	600	450	150	**LAL1564**
20C	600	300	150	**LAL1563**
20C	600	150	150	**LAL1561**
20C	450	300	150	**LAL1543**
20C	450	150	150	**LAL1541**
20C	300	150	150	**LAL1531**

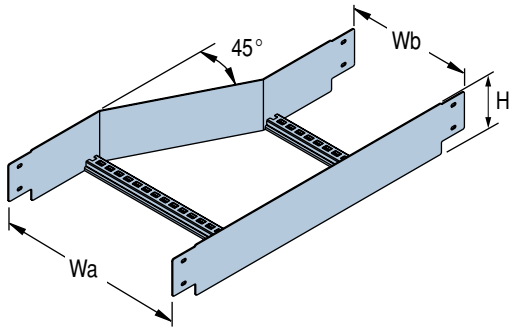


Offset Reducer – Left Hand [AL]



Type	Width "Wa"	Width "Wb"	Height "H"	Part No.
12A	600	450	93	**LAD1764**
12A	600	300	93	**LAD1763**
12A	600	150	93	**LAD1761**
12A	450	300	93	**LAD1743**
12A	450	150	93	**LAD1741**
12A	300	150	93	**LAD1731**
20A	600	450	120	**LAH1764**
20A	600	300	120	**LAH1763**
20A	600	150	120	**LAH1761**
20A	450	300	120	**LAH1743**
20A	450	150	120	**LAH1741**
20A	300	150	120	**LAH1731**
20C	600	450	150	**LAL1764**
20C	600	300	150	**LAL1763**
20C	600	150	150	**LAL1761**
20C	450	300	150	**LAL1743**
20C	450	150	150	**LAL1741**
20C	300	150	150	**LAL1731**

Offset Reducer – Right Hand [AL]

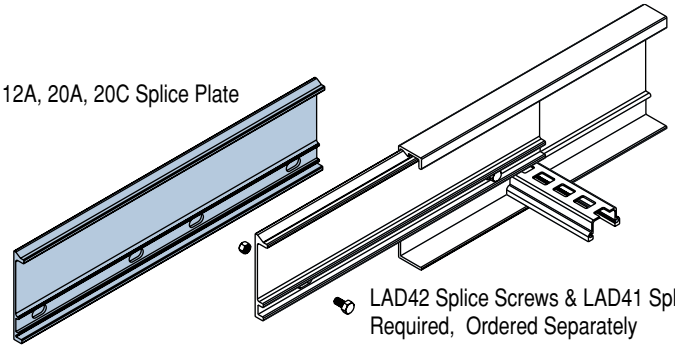


Type	Width "Wa"	Width "Wb"	Height "H"	Part No.
12A	600	450	93	**LAD1664**
12A	600	300	93	**LAD1663**
12A	600	150	93	**LAD1661**
12A	450	300	93	**LAD1643**
12A	450	150	93	**LAD1641**
12A	300	150	93	**LAD1631**
20A	600	450	120	**LAH1664**
20A	600	300	120	**LAH1663**
20A	600	150	120	**LAH1661**
20A	450	300	120	**LAH1643**
20A	450	150	120	**LAH1641**
20A	300	150	120	**LAH1631**
20C	600	450	150	**LAL1664**
20C	600	300	150	**LAL1663**
20C	600	150	150	**LAL1661**
20C	450	300	150	**LAL1643**
20C	450	150	150	**LAL1641**
20C	300	150	150	**LAL1631**

• Fixing Hardware for all cable ladder systems must be ordered separately.

Splice Plate

12A, 20A, 20C Splice Plate



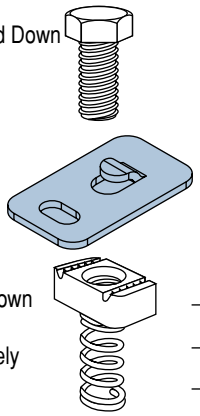
LAD42 Splice Screws & LAD41 Splice Nuts Required, Ordered Separately

Type	Part No.	Pairs of LAD42/LAD41 Required
12A	**LAD30**	2
20A	**LAH30**	2
20C	**LAL30**	4

The unique Unistrut aluminium splice plate is close fitting and shaped so that it is retained neatly and firmly between mating flanges incorporated in the ladder-side rails.

General Hold Down Bracket

HHS1225SS Hold Down Bracket Screw

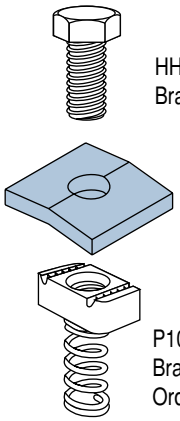


P1013SS Hold Down Bracket Nut Ordered Separately

Type	Part No.
12A, 20A	**LAD50**
20C	**LAL50**

Rigid Hold Down Bracket

HHS1230SS Hold Down Bracket Screw

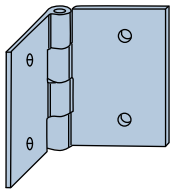


P1013SS Hold Down Bracket Nut Ordered Separately

Type	Part No.
All Aluminium Systems	**LAM50**

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.

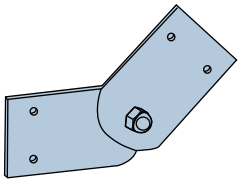
Hinged Horizontal Splice



Type	Part No.
12A	**LAD35**
20A	**LAH35**
20C	**LAL35**

A fast and economical method of changing ladder direction where exact site dimensions must be met. Especially suitable where the angle is less that 45°, or larger angles where the cable bending radius is not important. Also provides a flexible alternative to standard accessory sizes and radii. Suits all Unistrut aluminium cable ladder systems.

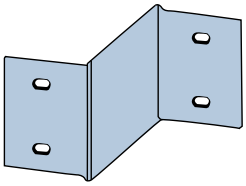
Hinged Vertical Splice



Type	Part No.
12A	**LAD36**
20A	**LAH36**
20C	**LAL36**

Ideal for making changes in vertical level or direction. Easily adapts to exact site dimensions which may otherwise be difficult to achieve with fixed risers. Cables form their own bending radius spanning between adjacent end-rungs. Also used to form adjustable risers providing flexibility to adjust to any site restrictions.

Reducer Splice

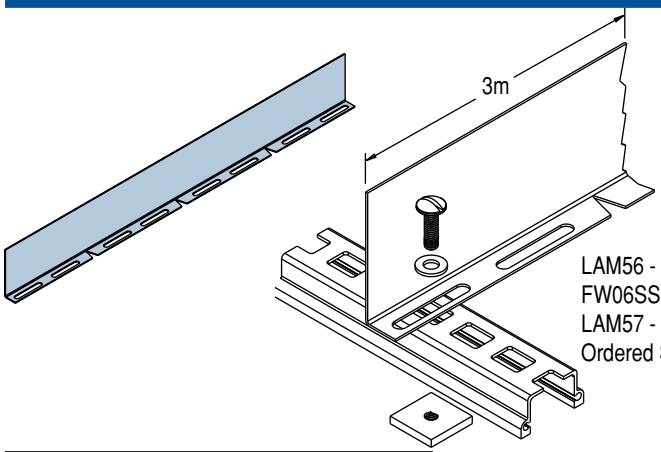


Type	Width (mm)	Part No.
12A	75W	**LAD380**
12A	150W	**LAD381**
12A	300W	**LAD383**
20A	75W	**LAH380**
20A	150W	**LAH381**
20A	300W	**LAH383**
20C	75W	**LAL380**
20C	150W	**LAL381**
20C	300W	**LAL383**

Reduction of ladder width is normally carried out using straight or offset reducers. Reducer splice plates are a flexible, cost effective alternative which bolt directly to the ladder side-rails. Available for all aluminium cable ladder systems.

• Fixing Hardware for all cable ladder systems must be ordered separately.

Divider Strip

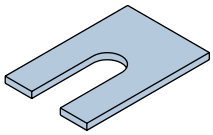


LAM56 - Divider Strip Screw,
FW06SS - Divider Strip Washer
LAM57 - Divider Strip Nut
Ordered Separately

Type	Part No.
All Aluminium Systems	**LAM55**

Divider Strip is used to separate cables of different voltages or circuits. The notched base permits forming to the required shape.

Interface Spacer



Type	Part No.
All Aluminium Systems	**LAM54**

Used to separate cable ladder and supports in corrosive environments.

Ladder Covers

Covers are normally specified where protection is required:

1. To safeguard against damage to cables 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 the life of the installation.

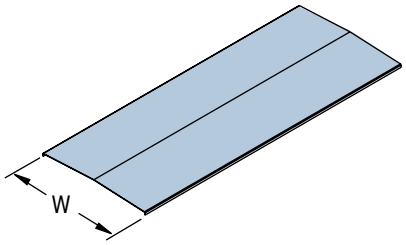
Availability

Standard flat covers are available for all Unistrut cable ladder systems. Standard length is 3 metres. Straight, peaked or ventilated covers are available to special order.

Material

Steel Systems: Galvabond, hot-dip galvanised steel sheet to AS1397.
Aluminium Systems: Aluminium Alloy 5005. Suitable for marine applications and compatible with the 6106-T6 alloy used in ladders.

Standard Cover



The most common type used because they afford maximum protection to cables at the lowest cost.

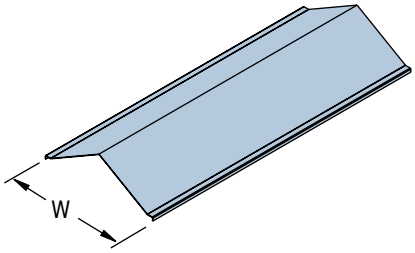
Alum. Covers - Standard

Type	Width "W"	Part No.
12A/20A/20C	150	**LAM6013**
12A/20A/20C	300	**LAM6033**
12A/20A/20C	450	**LAM6043**
12A/20A/20C	600	**LAM6063**

Steel Covers - Standard

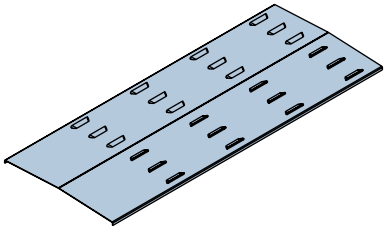
Type	Width "W"	Part No.
12B	150	**LEE6013**
12B	300	**LEE6033**
12B	450	**LEE6043**
12B	600	**LEE6063**
16A	150	**LEG6013**
16A	300	**LEG6033**
16A	450	**LEG6043**
16A	600	**LEG6063**
20B/20C	150	**LEK6013**
20B/20C	300	**LEK6033**
20B/20C	450	**LEK6043**
20B/20C	600	**LEK6063**
20B-RI/20C-RI	150	**LEM6013**
2OB-RI/20C-RI	300	**LEM6033**
2OB-RI/20C-RI	450	**LEM6043**
2OB-RI/20C-RI	600	**LEM6063**

Peaked Cover



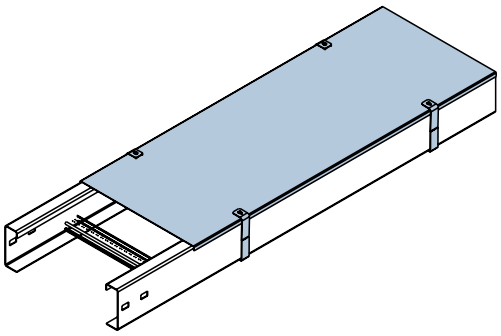
Used in very dusty situations where the self-cleaning effect of sloping sides prevents excessive dust accumulations. The larger air-space above the cables also assists with the dissipation of heat.

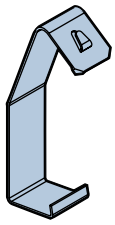
Ventilated Cover



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

Cable Ladder Cover Fixings





Covers are retained in position by means of cover clips as illustrated. Manufactured from high strength stainless steel, these unique clips, which have no thread components to freeze up, are very quickly installed and are also easily removed or replaced at a later date.

One size of clip for each ladder system suits both straight and accessory covers.

Recommended Spacing For Cover Clips

Service conditions	Design Wind velocity, Vz (AS1170)	Ladder Width, mm 600	450	300	150
Up to and including exposed external locations	50m/s	1.2m	1.2m	1.2m	1.2m
Cyclonic Areas	65m/s	0.6m	0.8m	1.2m	1.2m

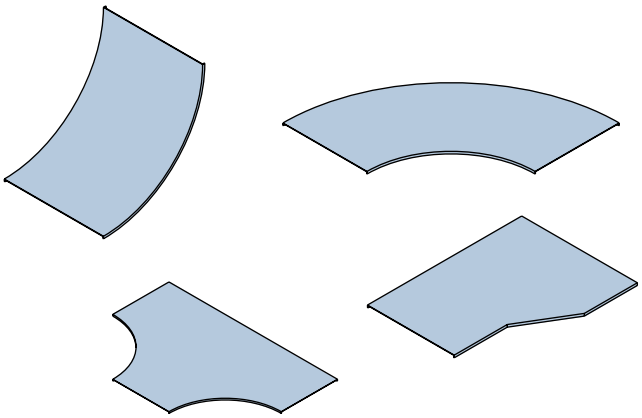
SS Clips For Steel Covers

Type	Part No.
12B	**LEE90**
16A	**LEG90**
20B	**LEK90**
20C	**LEL90**

SS Clips For Aluminum Covers

Type	Part No.
12A	**LAD90**
16A	**LAH90**
20C	**LAL90**

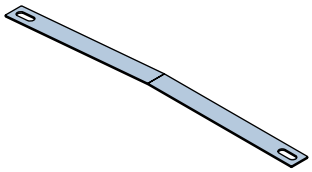
Accessory Covers



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: *Flat covers are available to match accessories of all Unistrut NEMA Cable Ladders in both steel and aluminum material and are the same as for the straight covers.*

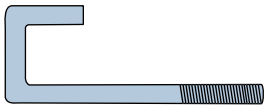
Cover Straps [HG]



Type	Ladder Width	Part No.
16A	150	**LEG931**
16A	300	**LEG933**
16A	450	**LEG934**
16A	600	**LEG936**
20B	150	**LEK931**
20B	300	**LEK933**
20B	450	**LEK934**
20B	600	**LEK936**

Hook Bolt & Wing Nut [MG]

Note: *Two pair of hook bolts and wing nuts are used to attached the Cover Straps. Hook bolt and wing nut sold separately.*



Part No.	Description
LEK8873MG	Hook Bolt
WN10MG	Wing Nut M10

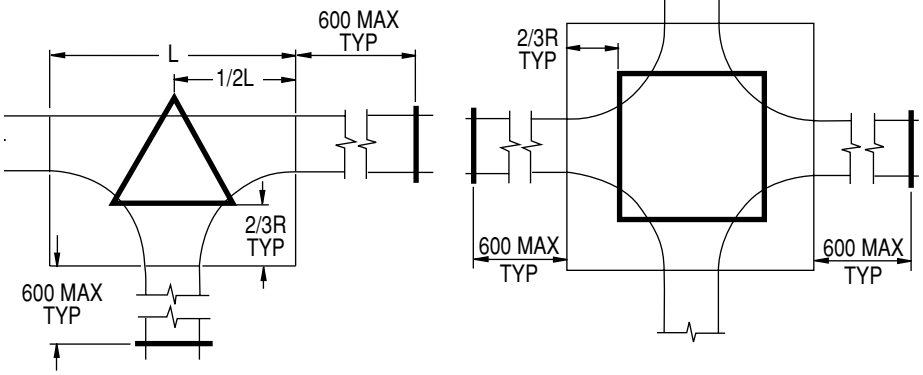
Accessories for all Unistrut cable ladder systems are available in the four standard widths - 150, 300, 450 or 600mm.

System	Std. Radius
12B SCL and 12A ACL	300mm
16A SCL and 20A ACL	450mm
20B, 20C SCL and 20C ACL	600mm

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 VE 1.

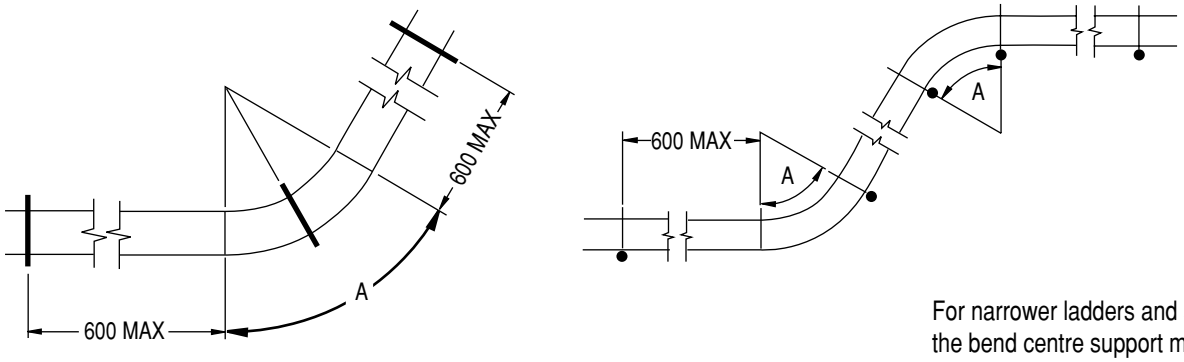
Tees & Crosses



For smaller radius accessories and / or lightly loaded ladders, the support methods shown may be reduced or even eliminated.

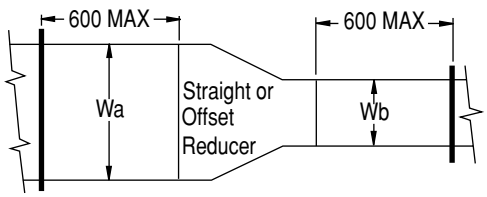
This is best determined at the point of installation or consult your local Unistrut Service Centre.

Risers & Bends



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

Straight or Offset Reducers



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.

RITEWAY CABLE TRAY AND SUPATRAY

Unistrut Australia manufacture a range of Cable Trays in a variety of materials as detailed in the individual catalogue pages:

Riteway Cable Tray [*12mm high square side]*
ST3 Supatray [*50mm high square side*]
ST5 Supatray [*75mm high square side*]

The selection of a Cable Tray System for a particular application depends on FOUR main factors:

1. Environment conditions - the working environment of the Cable Tray System determines the choice of material used in the manufacture of the Cable Tray. Unistrut has the capability of manufacturing Cable Trays in several different materials to suit different environments as follows: Galvabond; Hot Dipped Galvanised to AS/NZS 4680; Aluminium; 316 Grade Stainless Steel.
2. Physical size and quantity of cables - smaller diameter cables do not require the same strength of support but they do not have any rigidity to support themselves and therefore require a more continuous support platform. A large quantity of smaller diameter cables would probably require a high sided cable tray in order to contain the sideways movement of the cables during laying.
3. Cable weight - The total maximum weight of the cables to be supported determines the choice of Tray Profile and Height in conjunction with the designated Support Span.
4. Support Span - The distance over which the Cable Tray has to support the nominated Total weight of cables determines the choice of tray Profile and Height.

Other Riteway Cable Trays (made to order)

Unistrut has the capability to manufacture other Riteway Cable Tray profiles and perforation configuration to suit a variety of application and uses.

Cable tray can be manufactured up to a Maximum width of 750mm in Standard Riteway Profile (12mm Square Edge) as a one piece unit. Wider Cable Trays could be manufactured in multiple units but a more practical approach would be to install two or more standard width cable trays alongside each other to make up the desired width.

Cable tray can be manufactured up to a maximum length of 3 meters in increments of 50mm or even down to lengths of less than meter (again in increments of 50mm).

Cable tray can be manufactured with a variety of side heights (not necessarily two equal side heights and in increments of 25mm) providing that the sum of the side heights and width does not exceed 750mm and that the width equals or exceeds the side height.

Riteway Tray

Features

12mm Square Edge. “Joggled” end on tray provides built in splice connection.

Punched slots accept 12.7mm wide cable tie.

Recommended joining hardware is:

M6 x 8 Gutter Bolt and M6 Flange Nut.

Standard Length: 2.4m

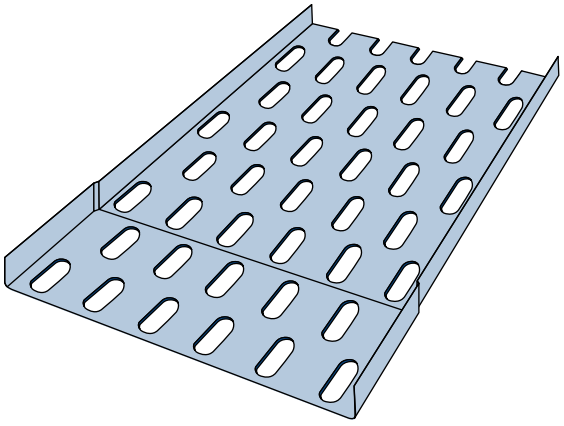
Standard Finish: Galvabond.

Also available in: Hot dipped galvanised, Aluminium, Powder coated, 304 & 316 Stainless Steel.

Nominated Standard Widths:

75, 100, 150, 200, 300, 450 and 600mm.

Note:
Fire rated to AS/NZS3013:1995 Appendix B - Classification WS5X - Refer to your local Service Centre for load ratings and correct installation procedures.

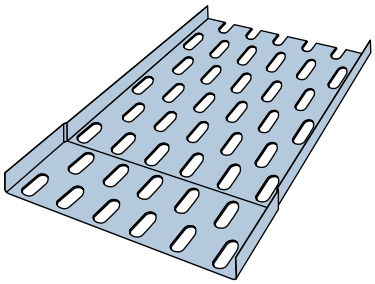


Load Data

	Span Metres				
Tray width (mm)	1.0	1.2	1.5	2.0	2.4
75	10.0	6.9	4.4	2.5	1.75
100	10.0	6.9	4.4	2.5	1.75
150	10.0	6.9	4.4	2.5	1.75
200	10.0	6.9	4.4	2.5	1.75
300	12.8	8.8	5.6	3.2	2.05
450	24.0	16.6	10.6	6.0	3.85
600	24.0	16.6	10.6	6.0	3.85

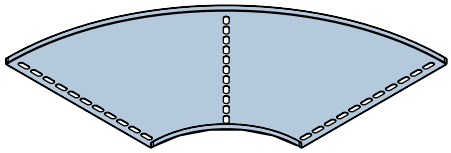
Note: *Load Carrying Capacities (kg/m) of Standard Galvabond Riteway Tray.*

Riteway Tray



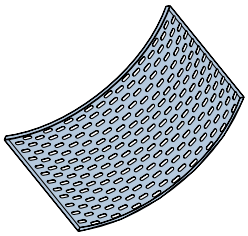
Part No.	Description	Unit
ATG1A207	75mm Riteway Tray	2.4M
ATG1A210	100mm Riteway Tray	2.4M
ATG1A215	150mm Riteway Tray	2.4M
ATG1A220	200mm Riteway Tray	2.4M
ATG1A230	300mm Riteway Tray	2.4M
ATG1A245	450mm Riteway Tray	2.4M
ATG1A260	600mm Riteway Tray	2.4M

Riteway Bend



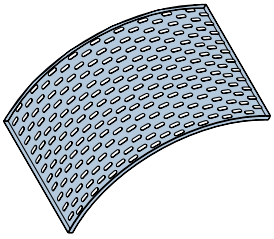
Part No.	Description	Radius (R)	Unit
ATG1B107	75mm Riteway Bend	150mm	EA
ATG1B110	100mm Riteway Bend	150mm	EA
ATG1B115	150mm Riteway Bend	150mm	EA
ATG1B120	200mm Riteway Bend	150mm	EA
ATG1B130	300mm Riteway Bend	150mm	EA
ATG1B145	450mm Riteway Bend	150mm	EA
ATG1B160	600mm Riteway Bend	150mm	EA

Riteway Internal Riser



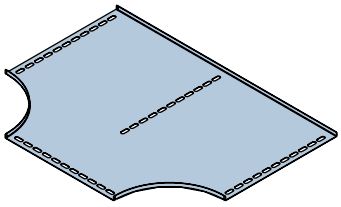
Part No.	Description	Radius (R)	Unit
ATG1I107	75mm Riteway Internal Riser	225mm	EA
ATG1I110	100mm Riteway Internal Riser	225mm	EA
ATG1I115	150mm Riteway Internal Riser	225mm	EA
ATG1I120	200mm Riteway Internal Riser	225mm	EA
ATG1I130	300mm Riteway Internal Riser	225mm	EA
ATG1I145	450mm Riteway Internal Riser	225mm	EA
ATG1I160	600mm Riteway Internal Riser	225mm	EA

Riteway External Riser



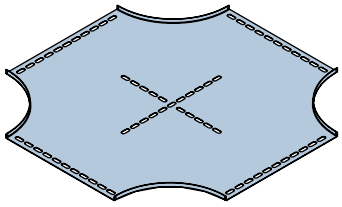
Part No.	Description	Radius (R)	Unit
ATG1E207	75mm Riteway External Riser	225mm	EA
ATG1E210	100mm Riteway External Riser	225mm	EA
ATG1E115	150mm Riteway External Riser	225mm	EA
ATG1E120	200mm Riteway External Riser	225mm	EA
ATG1E130	300mm Riteway External Riser	225mm	EA
ATG1E145	450mm Riteway External Riser	225mm	EA
ATG1E160	600mm Riteway External Riser	225mm	EA

Riteway Tee



Part No.	Description	Radius (R)	Unit
ATG1T107	75mm Riteway Tee	150mm	EA
ATG1T110	100mm Riteway Tee	150mm	EA
ATG1T115	150mm Riteway Tee	150mm	EA
ATG1T120	200mm Riteway Tee	150mm	EA
ATG1T130	300mm Riteway Tee	150mm	EA
ATG1T145	450mm Riteway Tee	150mm	EA
ATG1T160	600mm Riteway Tee	150mm	EA

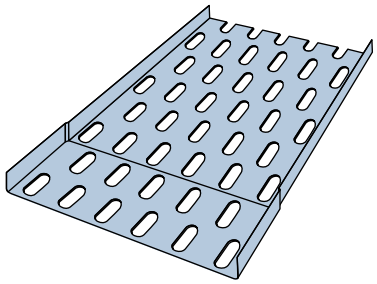
Riteway Cross



Part No.	Description	Radius (R)	Unit
ATG1X107	75mm Riteway Cross	150mm	EA
ATG1X110	100mm Riteway Cross	150mm	EA
ATG1X115	150mm Riteway Cross	150mm	EA
ATG1X120	200mm Riteway Cross	150mm	EA
ATG1X130	300mm Riteway Cross	150mm	EA
ATG1X145	450mm Riteway Cross	150mm	EA
ATG1X160	600mm Riteway Cross	150mm	EA

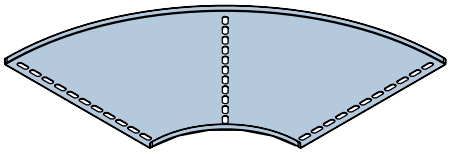
AHZS106008 – M6 x 8 Gutter Bolt & M6 Flange Nut (50/pack)

Riteway Tray



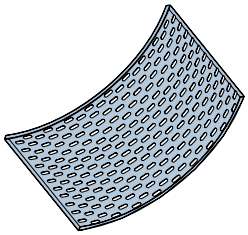
Part No.	Description	Unit
ATH1A207	75mm Riteway Tray	2.4M
ATH1A210	100mm Riteway Tray	2.4M
ATH1A215	150mm Riteway Tray	2.4M
ATH1A220	200mm Riteway Tray	2.4M
ATH1A230	300mm Riteway Tray	2.4M
ATH1A245	450mm Riteway Tray	2.4M
ATH1A260	600mm Riteway Tray	2.4M

Riteway Bend



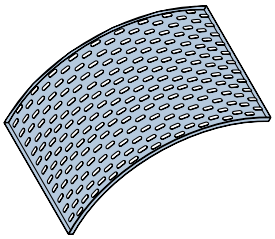
Part No.	Description	Radius (R)	Unit
ATH1B107	75mm Riteway Bend	150mm	EA
ATH1B110	100mm Riteway Bend	150mm	EA
ATH1B115	150mm Riteway Bend	150mm	EA
ATH1B120	200mm Riteway Bend	150mm	EA
ATH1B130	300mm Riteway Bend	150mm	EA
ATH1B145	450mm Riteway Bend	150mm	EA
ATH1B160	600mm Riteway Bend	150mm	EA

Riteway Internal Riser



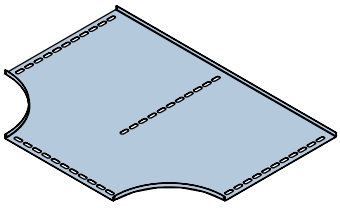
Part No.	Description	Radius (R)	Unit
ATH1I107	75mm Riteway Internal Riser	225mm	EA
ATH1I110	100mm Riteway Internal Riser	225mm	EA
ATH1I115	150mm Riteway Internal Riser	225mm	EA
ATH1I120	200mm Riteway Internal Riser	225mm	EA
ATH1I130	300mm Riteway Internal Riser	225mm	EA
ATH1I145	450mm Riteway Internal Riser	225mm	EA
ATH1I160	600mm Riteway Internal Riser	225mm	EA

Riteway External Riser



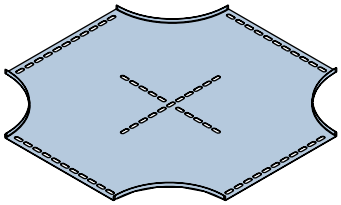
Part No.	Description	Radius (R)	Unit
ATH1E207	75mm Riteway External Riser	225mm	EA
ATH1E210	100mm Riteway External Riser	225mm	EA
ATH1E115	150mm Riteway External Riser	225mm	EA
ATH1E120	200mm Riteway External Riser	225mm	EA
ATH1E130	300mm Riteway External Riser	225mm	EA
ATH1E145	450mm Riteway External Riser	225mm	EA
ATH1E160	600mm Riteway External Riser	225mm	EA

Riteway Tee



Part No.	Description	Radius (R)	Unit
ATH1T107	75mm Riteway Tee	150mm	EA
ATH1T110	100mm Riteway Tee	150mm	EA
ATH1T115	150mm Riteway Tee	150mm	EA
ATH1T120	200mm Riteway Tee	150mm	EA
ATH1T130	300mm Riteway Tee	150mm	EA
ATH1T145	450mm Riteway Tee	150mm	EA
ATH1T160	600mm Riteway Tee	150mm	EA

Riteway Cross



Part No.	Description	Radius (R)	Unit
ATH1X107	75mm Riteway Cross	150mm	EA
ATH1X110	100mm Riteway Cross	150mm	EA
ATH1X115	150mm Riteway Cross	150mm	EA
ATH1X120	200mm Riteway Cross	150mm	EA
ATH1X130	300mm Riteway Cross	150mm	EA
ATH1X145	450mm Riteway Cross	150mm	EA
ATH1X160	600mm Riteway Cross	150mm	EA

AHZS106008 – M6 x 8 Gutter Bolt & M6 Flange Nut (50/pack)

ST3 Supatray [GB/HG]

Features

50mm high side. Rapid on-site fabrication of accessories.

Recommended joining hardware is:

TU940 Nut and Bolt Pack (40/pkt).

Standard Length: 3m

Standard Finish: Galvabond.

Also available in: Hot dipped Galvanised, Aluminium, Powder Coated.

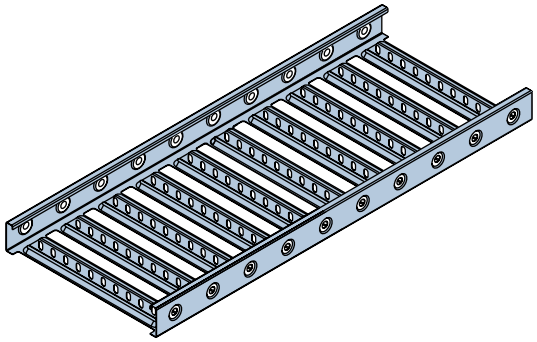
Nominal Standard Widths:

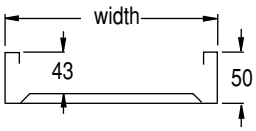
150, 300, 450 and 600mm.

Load carrying capacities of standard galvabond ST3 Supatray:

140kg/lin. metre over 1.5m span
36kg/lin. metre over 3m span.

Note: Fire rated to ASNZS3013:1995 Appendix B - Classification WS5X - *Refer to your local Service Centre for load ratings and correct installation procedures.*





Description	Part No.
ST3-150-GB	**AUG2A315**
ST3-300-GB	**AUG2A330**
ST3-450-GB	**AUG2A345**
ST3-600-GB	**AUG2A360**

Description	Part No.
ST3-150-HG	**AUH2A315**
ST3-300-HG	**AUH2A330**
ST3-450-HG	**AUH2A345**
ST3-600-HG	**AUH2A360**

ST5 Supatray [GB/HG]

Features

75mm high side. Rapid on-site fabrication of accessories.

Recommended joining hardware is:

TU940 Nut and Bolt Pack (40/pkt).

Standard Length: 3m

Standard Finish: Galvabond.

Also available in: Hot dipped Galvanised, Aluminium, Powder Coated.

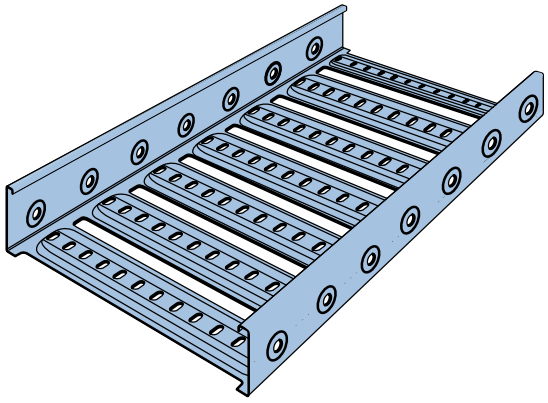
Nominal Standard Widths:

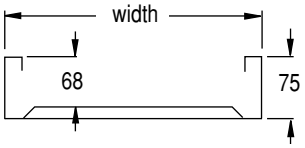
150, 300, 450 and 600mm.

Load carrying capacities of standard galvabond ST5 Supatray:

300kg/lin. metre over 1.5m span
80kg/lin. metre over 3m span.

Note: Fire rated to AS/NZS3013:1995 Appendix B - Classification WS5X - *Refer to your local Service Centre for load ratings and correct installation procedures.*



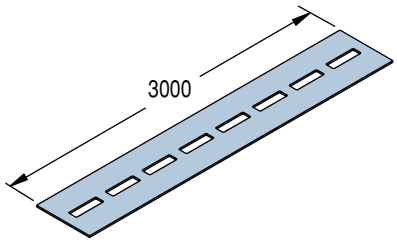


Description	Part No.
ST5-150-GB	**AUG5A315**
ST5-300-GB	**AUG5A330**
ST5-450-GB	**AUG5A345**
ST5-600-GB	**AUG5A360**

Description	Part No.
ST5-150-HG	**AUH5A315**
ST5-300-HG	**AUH5A330**
ST5-450-HG	**AUH5A345**
ST5-600-HG	**AUH5A360**

Bendside

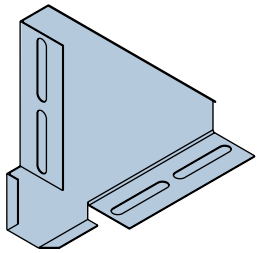
Create bends of varying degrees.



Description	Finish	Part No.	Finish	Part No.
ST3 Bendside	GB	**AUG2BS3**	HG	**AUH2BS3**
ST5 Bendside	GB	**AUG5BS3**	HG	**AUH5BS3**

T-X Bracket

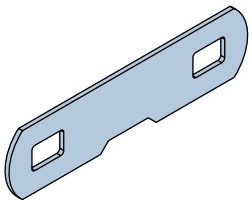
Intersect and change direction of cable tray by creating either a tee or cross section.



Description	Finish	Part No.	Finish	Part No.
ST3 T-X Bracket	GB	**AUG2BTX**	HG	**AUH2BTX**
ST5 T-X Bracket	GB	**AUG5BTX**	HG	**AUH5BTX**

Link Plate

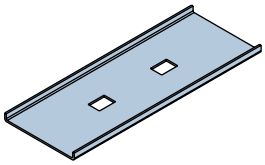
Join and vary the angle of the cable tray.
Create internal and external risers to run cable tray vertically.



Description	Finish	Part No.	Finish	Part No.
ST3 Link Plate	GB	**AUG2PLK**	HG	**AUH2PLK**
ST5 Link Plate	GB	**AUG5PLK**	HG	**AUH5PLK**

Splice Plate

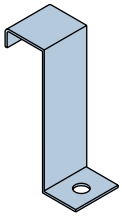
Used to join tray sections together.



Description	Finish	Part No.	Finish	Part No.
ST3 Splice Plate	GB	**AUG2PFH**	HG	**AUH2PFH**
ST5 Splice Plate	GB	**AUG5PFH**	HG	**AUH5PFH**

Hold Down Bracket

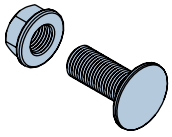
Allow you to secure the cable tray to the Unistrut support system - cantilever brackets or trapeze hangers.



Description	Finish	Part No.	Finish	Part No.
ST3 Hold Down Bracket	GB	**AUG2HDC**	HG	**AUH2HDC**
ST5 Hold Down Bracket	GB	**AUG5HDC**	HG	**AUH5HDC**

Joining Hardware

Used to secure link plates, splice plates, bendsides and T-X brackets to the cable tray.



Description	Finish	Part No.	Finish	Part No.
ST3 Joining Hardware (40/pkt)	ZP	**TU940**	MG	**TU940MG**
ST5 Joining Hardware (40/pkt)	ZP	**TU940**	MG	**TU940MG**
ST3 Divider Strip - 3m long	GB	**LEE55**	HG	**LEE55**
ST5 Divider Strip - 3m long	GB	**LEM55**	HG	**LEM55**

The Versatile, Cost Effective Cable Support System

You get strength and versatility where you need it.

No system could be simpler to install than Unistrut Supatray.

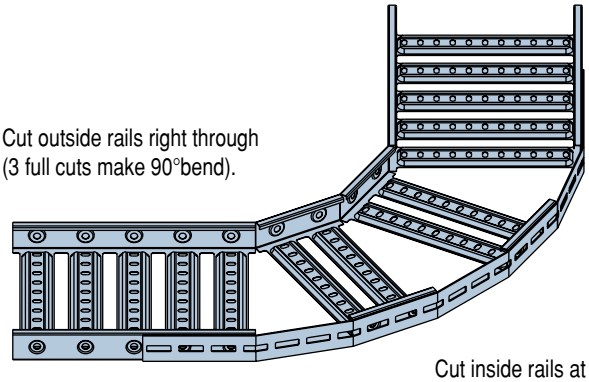
Basic inexpensive components allow you to run the Supatray in any direction with minimum fuss and ease of installation.

No cumbersome accessories to worry about!

With a hacksaw and a spanner - risers, tees, crosses and bends can all be fabricated on-site.

Supatray Bend

Cut outside rails right through (3 full cuts make 90°bend).



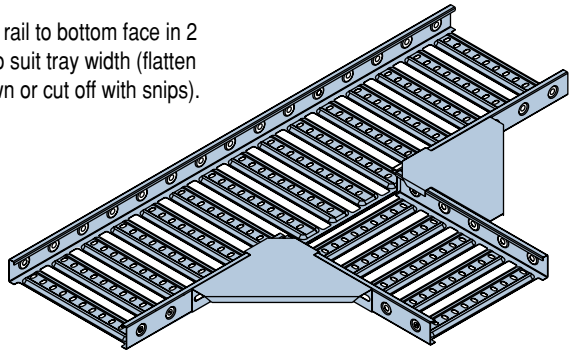
Cut inside rails at top and bottom flanges only.

Form bendside to suit and cut to length before fixing to tray with standard joining hardware.

Supatray T-X Bracket

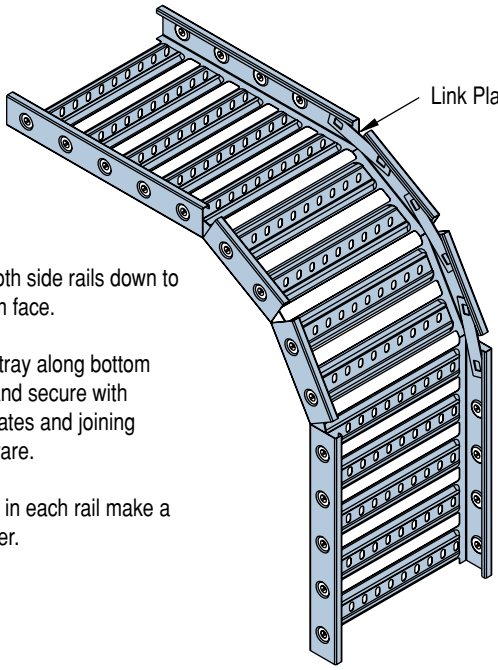
Note: Cross is same procedure repeated on the other side.

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.

Supatray External Riser

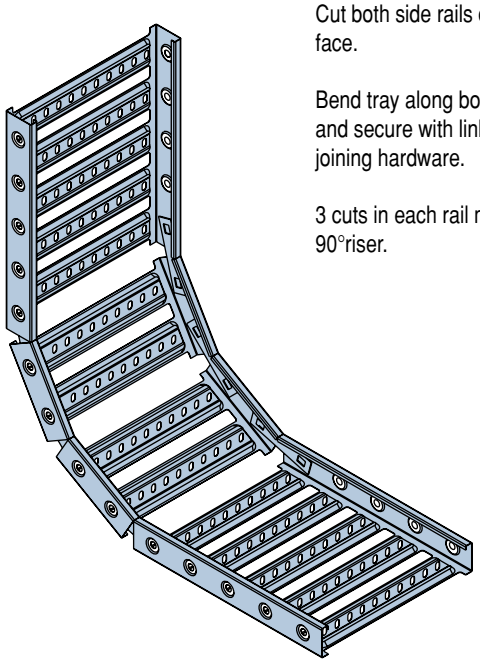


Cut both side rails down to bottom face.

Bend tray along bottom face and secure with link plates and joining hardware.

3 cuts in each rail make a 90°riser.

Supatray 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.

Product Description

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 channel, and then finishing. The 50mmX100mm wire spacing permits continuous airflow to help prevent heat buildup. In addition this unique open design prevents the buildup of dust, contaminants and bacterial proliferation.

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

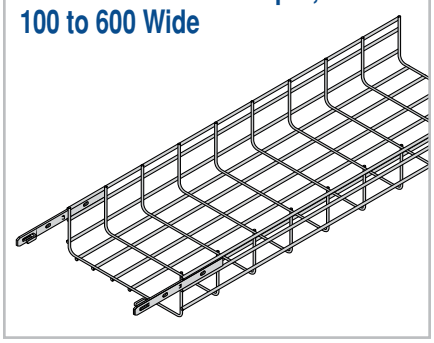
ACROFIL is offered in nine different widths:

50 mm,	400mm,
100mm,	450mm,
150mm,	500mm,
200mm,	600mm
300mm.	

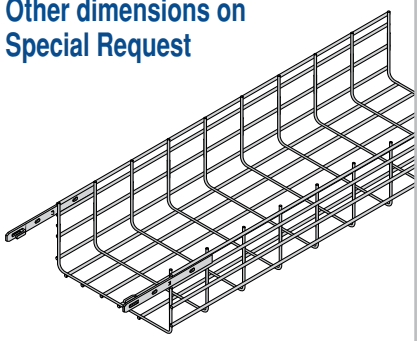
Special sizes are available to meet your unique requirements.

AF50 Series – 50 Depth, 50 to 600 Wide

AF100 Series – 100 Depth, 100 to 600 Wide



Other dimensions on Special Request



[Standard Finish] Zinc Plated (ZP) – (AS 1789)

Channel, fittings and components are electroplated generally in accordance with AS 1789.
Fasteners are electroplated generally in accordance with AS 1897.

Hot Dip Galvanised (HG) – (AS/NZS 4680)

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.

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.

Other – Powder Coated (PC), Galvabond (GB), 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 catalog are for the standard zinc plated finish.
For special order finishes, add the finish code as a suffix.

Example

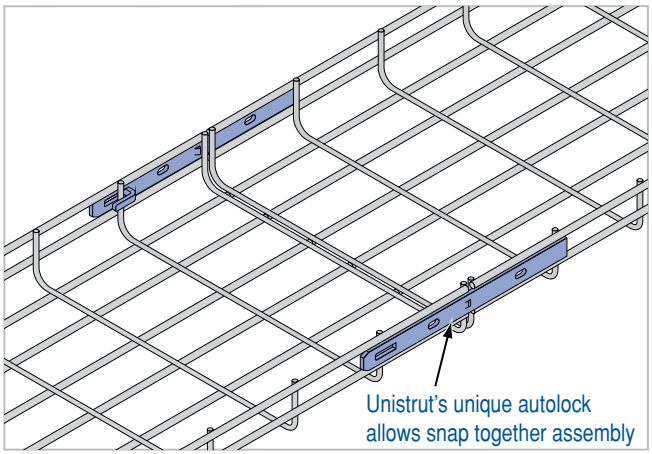
AF50-300 is zinc plated.
AF50-300-SS is stainless steel type 316.

Masses and Dimensions

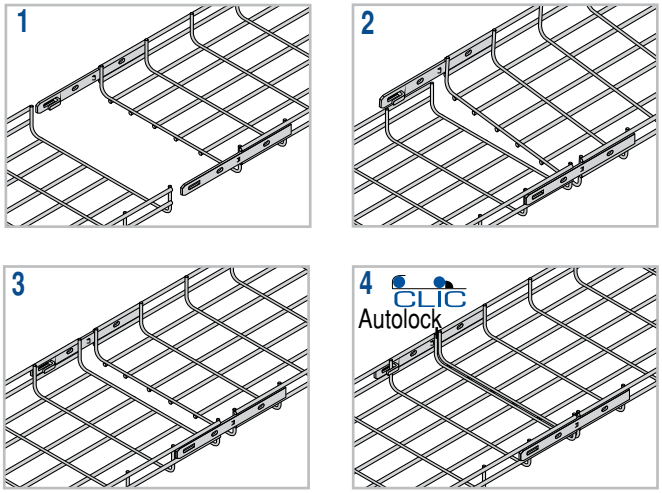
Masses given for all material are approximate shipping weights.
All dimensions subject to commercial tolerance variations.

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. For proper grounding of ACROFIL please refer to page 66.



ACROFIL Assembly - AF50, AF100, & AF150



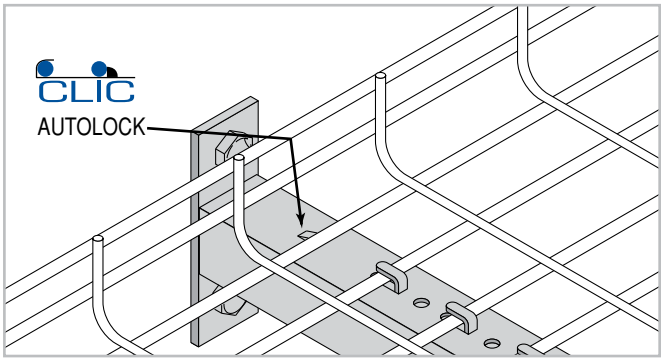
Step 1 Align the trays as shown.

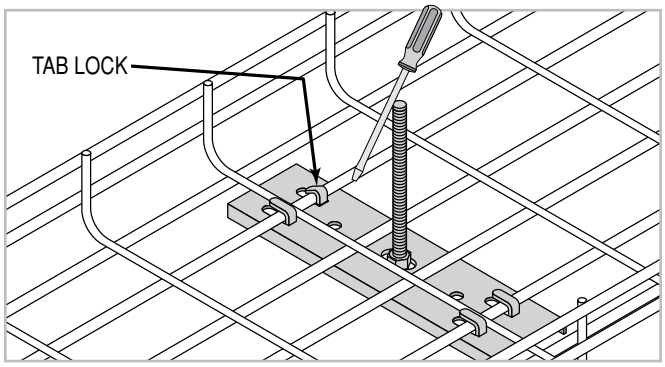
Step 2 While raising the rear edge of the male connection, slide the tray forward, but do not engage the locking clip.

Step 3 Push the rear locking clip over the back edge of the tray.

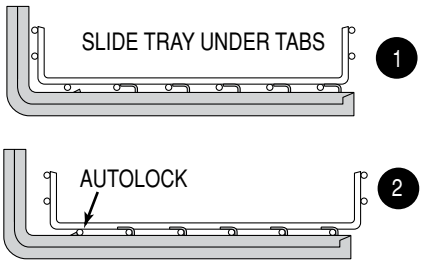
Step 4 Slide the tray forward to engage both front and rear locking clips.

Accessory Assembly

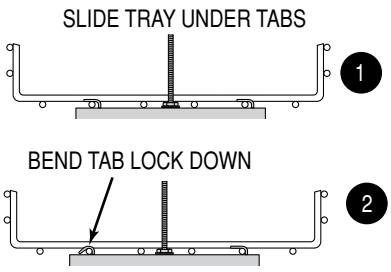




Many of the ACROFIL wire basket accessories feature the unique autolock. Just slide the tray under the tabs and then push down to engage the autolock. No tools, bending, or attachments are required for a secure connection.

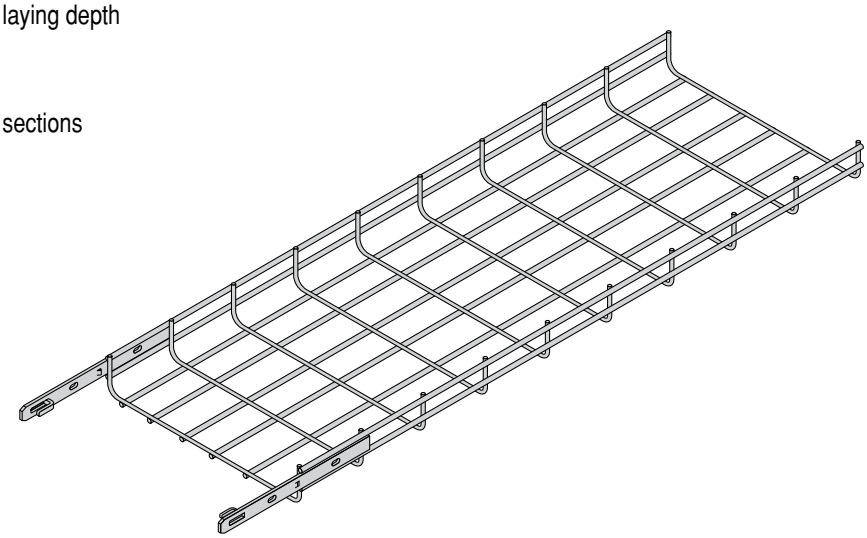


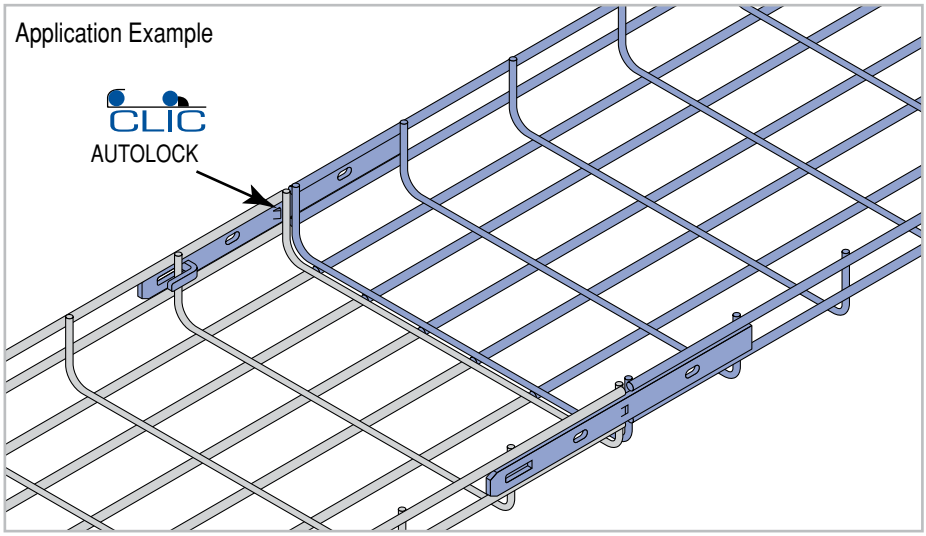
For accessories which use the tab lock, the tray is secured by using a screw driver to gently bend one of the tabs down over the tray.



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
  (See page 66.)





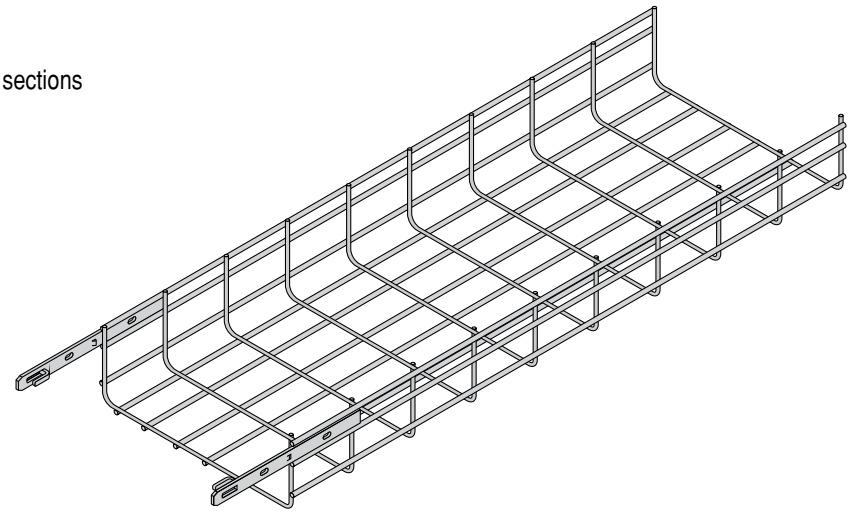
Part Description		Width Nominal (mm)	Depth (mm)	Wt. (kg) (piece)	Loading (kg/m)		
					1.5m Span	2.0m Span	2.5m Span
	AF50-50	50	50	1.9	25.1	17.8	13.1
	AF50-100	100	50	2.6	34.2	23.3	17.2
	AF50-150	150	50	3.6	56.3	36.6	27.8
	AF50-200	200	50	4.2	58.7	39.2	29.8
	AF50-300	300	50	5.5	64.0	39.3	29.0
	AF50-400	400	50	8.1	89.4	49.4	36.5
	AF50-450	450	50	8.8	97.5	53.9	39.8
	AF50-500	500	50	9.5	105.4	63.0	46.5
	AF50-600	600	50	10.8	114.9	68.7	50.7

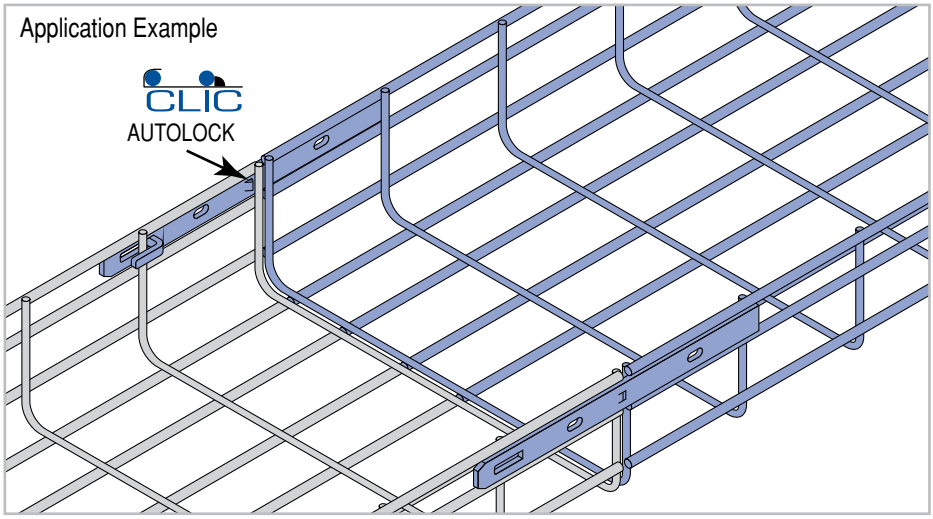
Load Values are determined by IEC61537 testing. Copies of load tests available upon request.

Safety Factor 1.7

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
  (See page 66.)





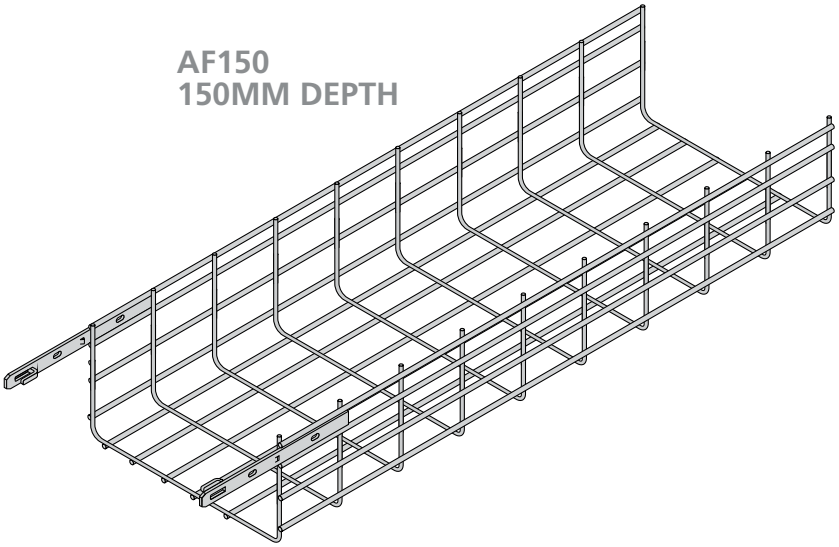
Part Description		Width Nominal (mm)	Depth (mm)	Wt. (kg) (piece)	Loading (kg/m)		
					2.0m Span	2.5m Span	3.0m Span
	**AF100-100**	**100**	100	4.2	69.6	54.2	41.2
	**AF100-200**	200	100	5.5	78.4	58.4	46.4
	**AF100-300**	300	100	8.1	109.9	85.0	67.4
	**AF100-400**	400	100	9.5	129.3	96.1	76.3
	**AF100-500**	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

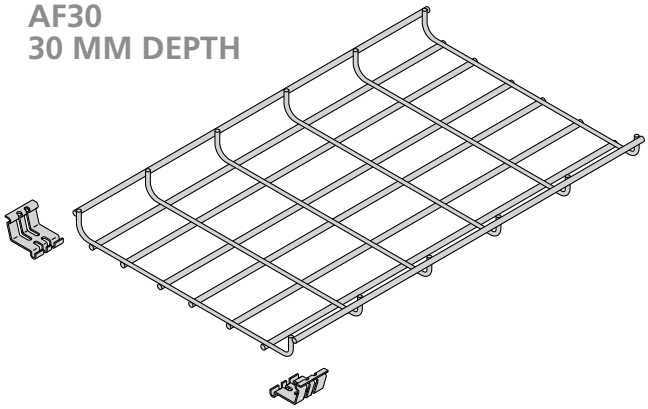
Other Products Available at Special Request

- Quadruple rod reinforced tray (150mm depth)
- Heavy duty cable tray
- Single rod tray available (30mm depth)

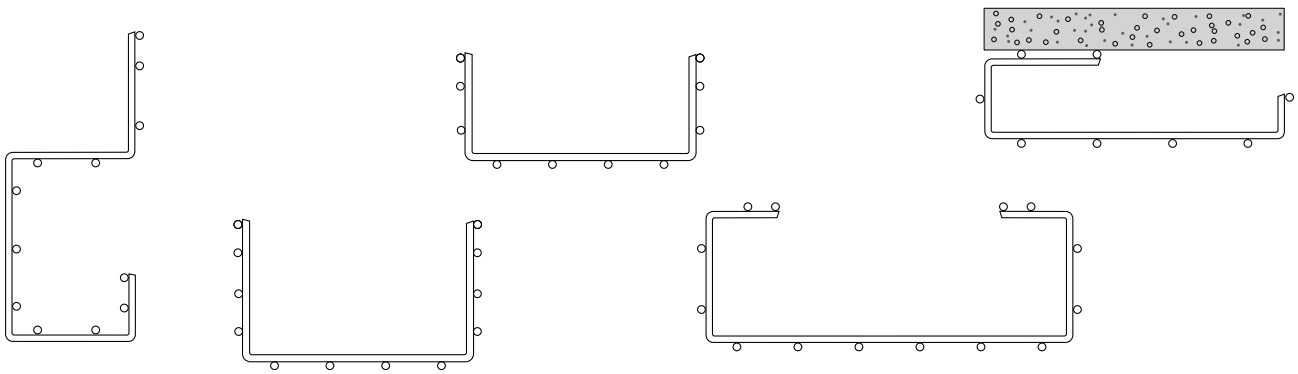
AF150
150MM DEPTH



AF30
30 MM DEPTH



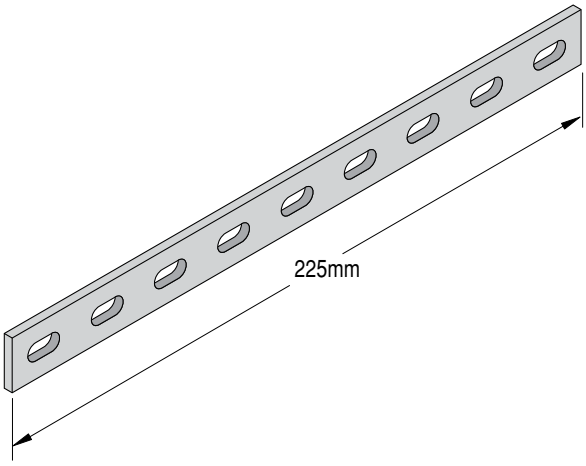
Custom Made Tray Examples



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

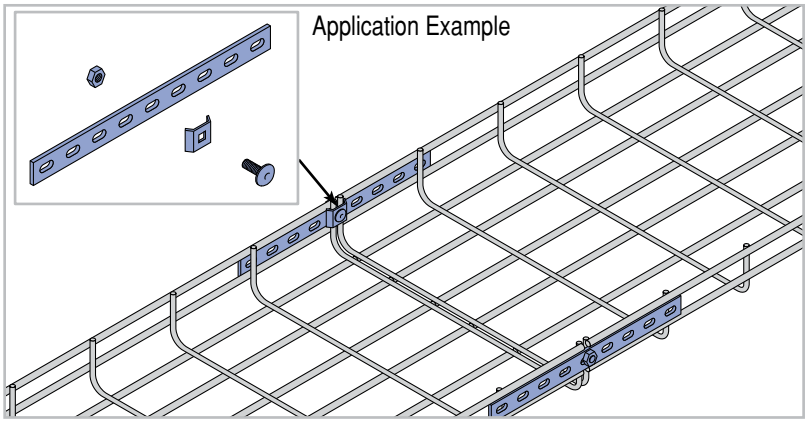


NOTES:

1. Always place nut on outside of tray

2. For use with AF50, AF100 & AF150 tray

3. The splice connector is used connect remnant sections of tray cut from standard lengths and to field fabricate fittings.

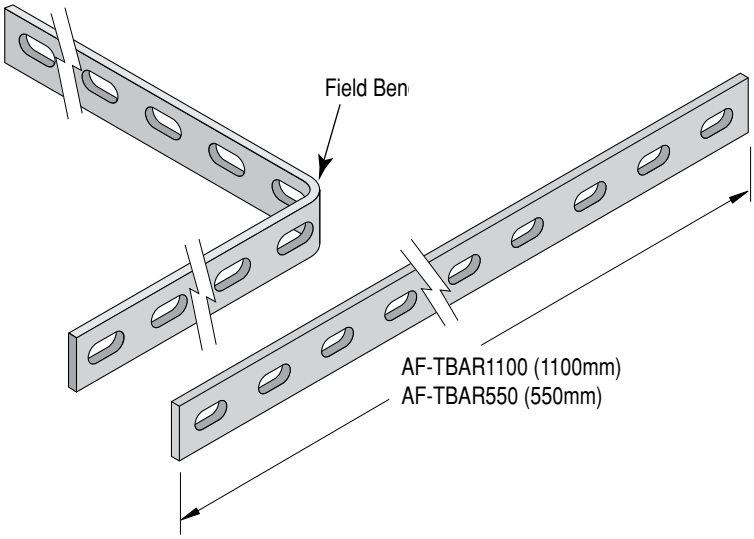


Bend & Intersection Bars

AF-TBAR1100

Weight: 0.65/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: 0.32 kg/each

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

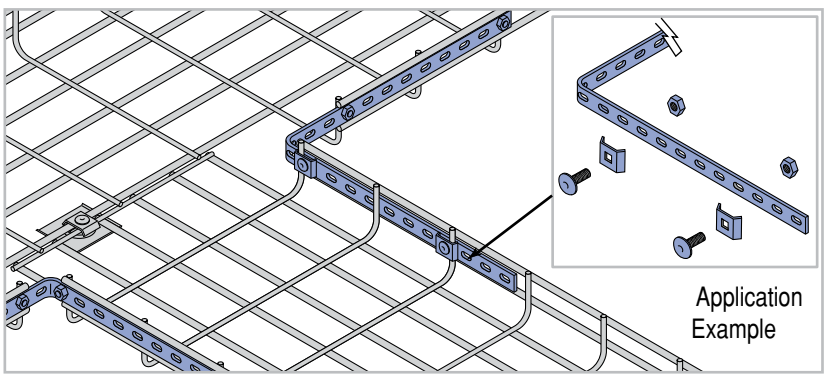
NOTES:

1. Always place nut on outside of tray

2. For use with AF50, AF100 & AF150 tray

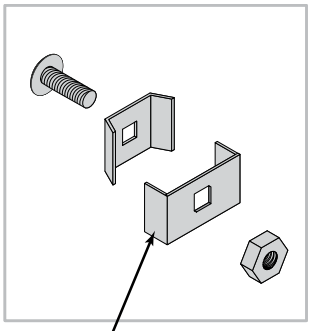
3. Used for tees which require a heavier support

4. These bars are normally cut to appropriate length

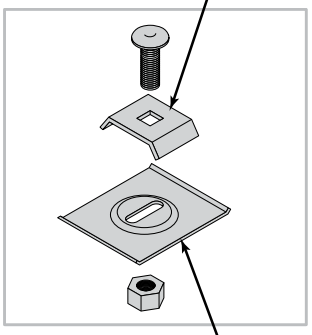


Connector Hardware Overview

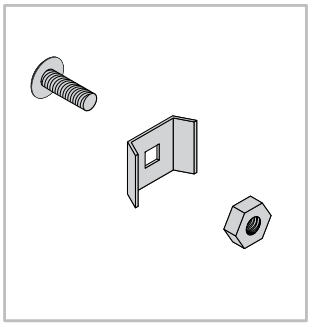
AF-KITCH1



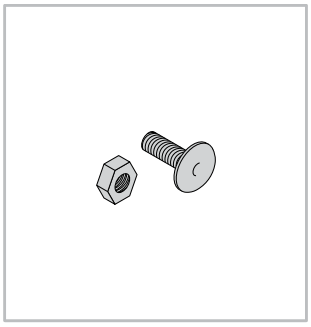
AF-KITCH2



AF-KITCH3



AF-EG-CBN



AF-WCLIP

AF-BCLIP (Hold-Down)
(Also see page 67)

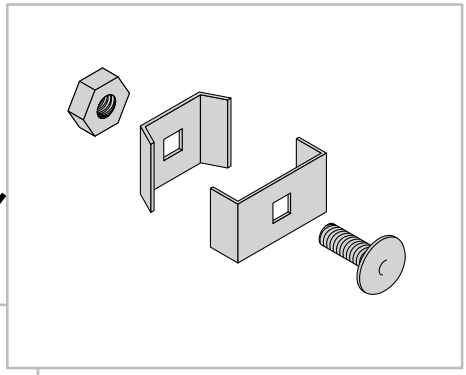
Part Kit	Weight (kg)	NO./ PKG
AF-KITCH1	0.32	10
AF-KITCH2	0.53	10
AF-KITCH3	0.20	10
AF-EG-CBN	0.09	10

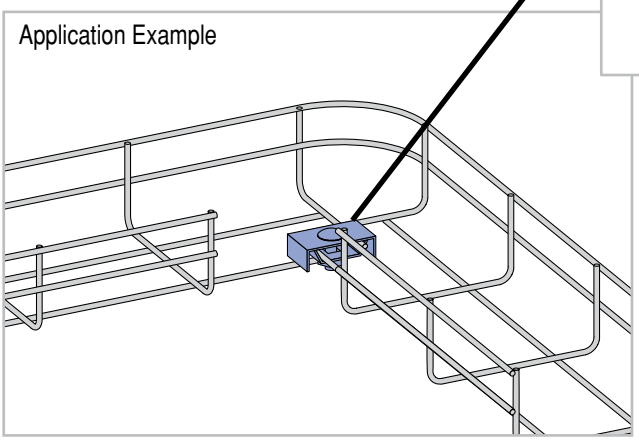
Single Part	Weight (kg)	NO./ PKG
AF-SCLIP	0.20	10
AF-WCLIP	0.31	10
AF-BCLIP	0.92	10

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

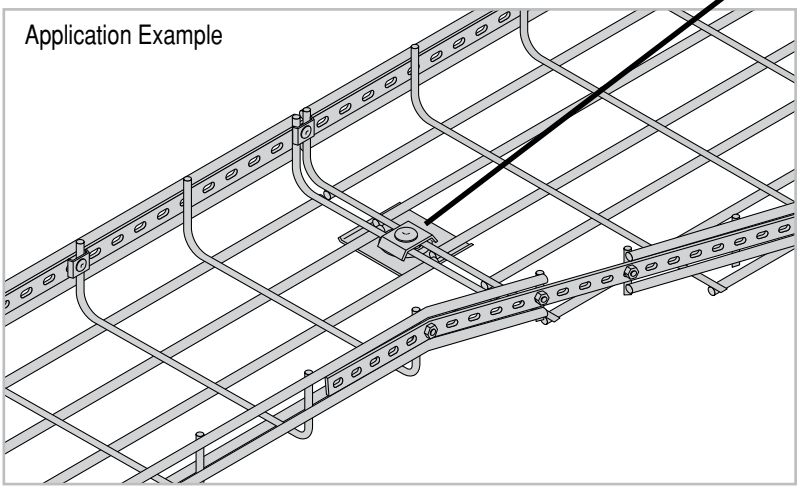


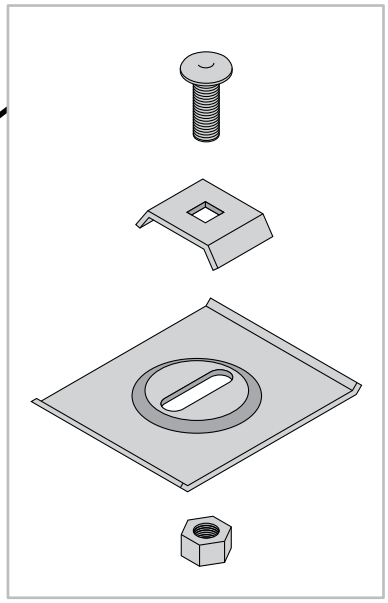


Connector Kit [AF-KITCH2]

- 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

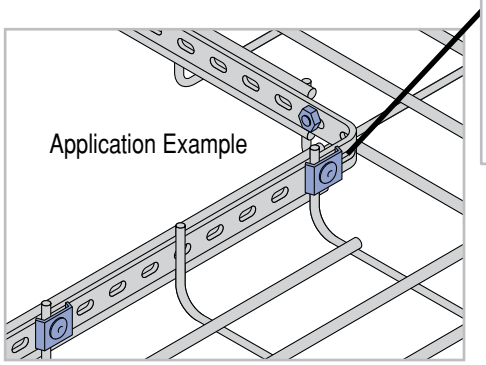


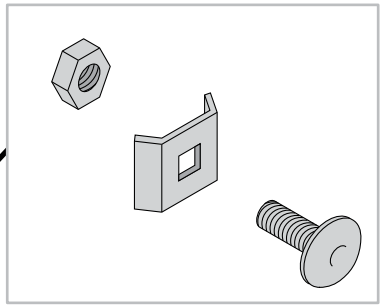


Connector Kit [AF-KITCH3]

- 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

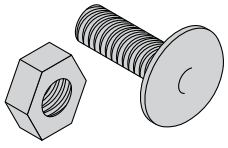




Connector Hardware [AF-EG-CBN]

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

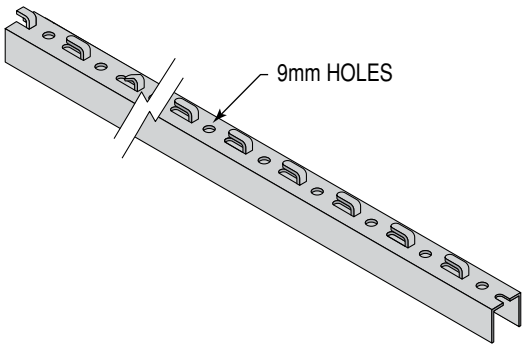
NOTE: Always place nut on outside of tray



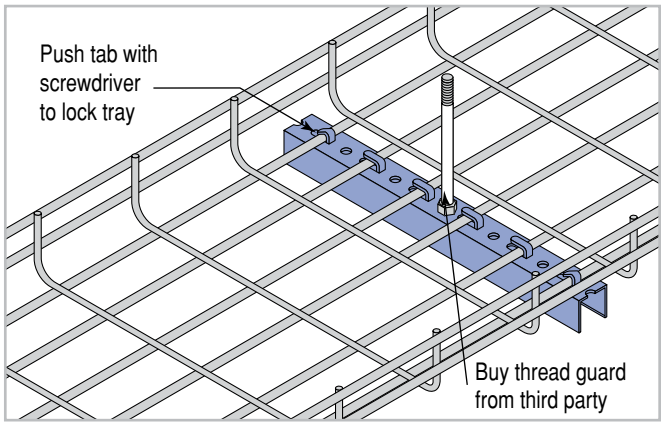
U Support Bracket [AF-USB-3M]

Weight: 3.1 kg/each

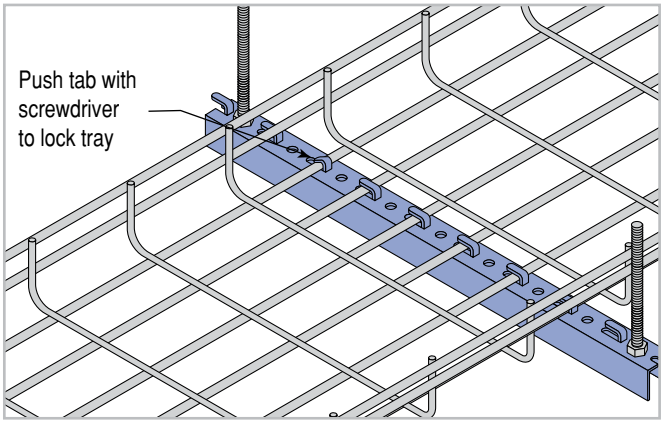
- U support bracket 24mm x 24mm channel
- Standard finish is zinc plated
- Support is 3m long, customer cuts to size as needed
- Cut lengths 150mm wider than tray width for trapeze
  Cut lengths 25mm shorter than tray width for single rod support
- Unique grip system requires only a push of a screwdriver to fasten the tray to the supports



Single Rod

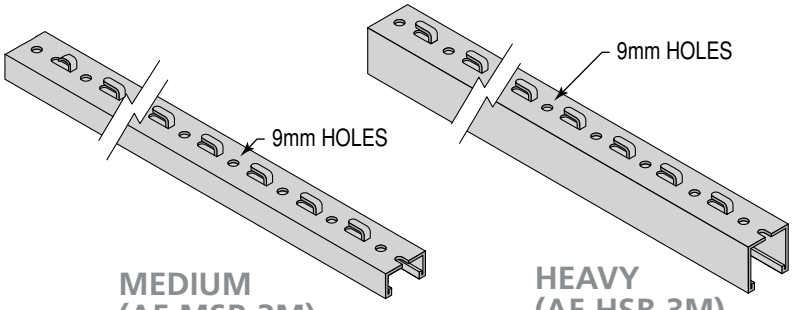


Trapeze



Support Bracket Medium [AF-MSB-3M] & Heavy [AF-HSB-3M]

- Heavy support bracket is 41mm x 41mm strut,
  Medium support bracket is 41mm x 21mm strut
- Standard finish is zinc plated
- Support is 3m long, customer cuts to size as needed
- Cut lengths 150mm wider than tray width for trapeze
  Cut lengths 25mm shorter than tray width for single rod support
- Unique grip system requires only a push of a screwdriver to fasten the tray to the supports



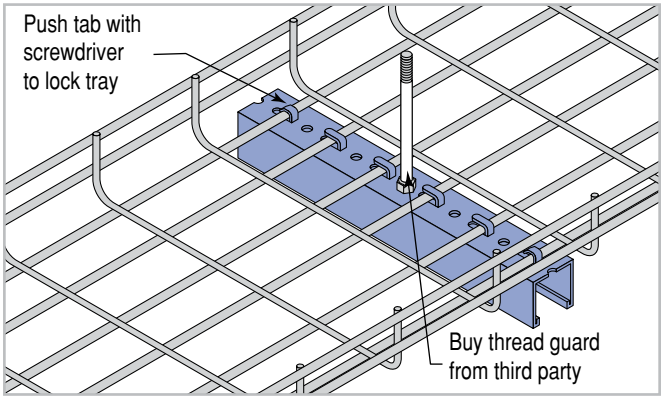
MEDIUM
(AF-MSB-3M)

Weight 5.4 kg/each

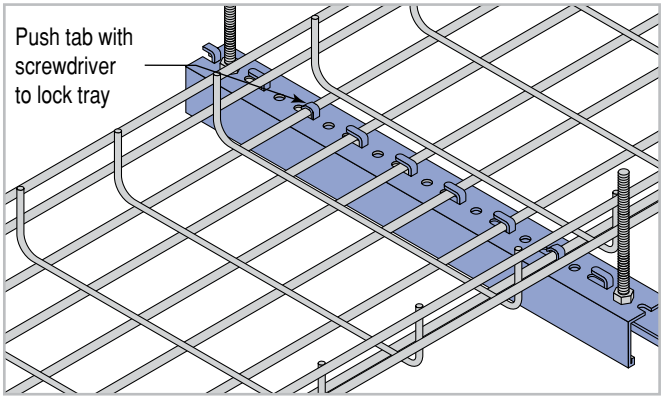
HEAVY
(AF-HSB-3M)

Weight: 7.5 kg/each

Single Rod



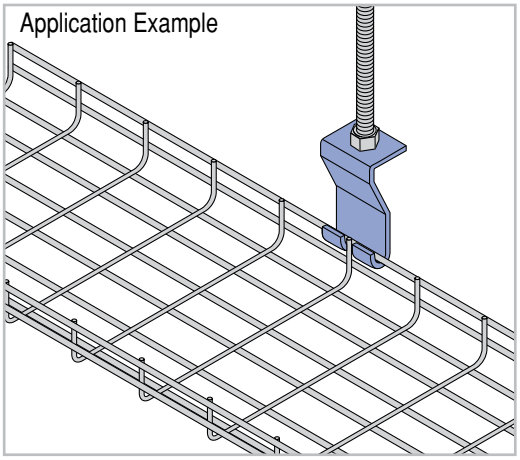
Trapeze

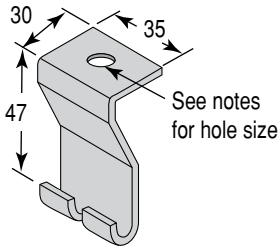


Drop Rod Clip [AF-SIDECLIP]

Weight: 0.06 kg/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

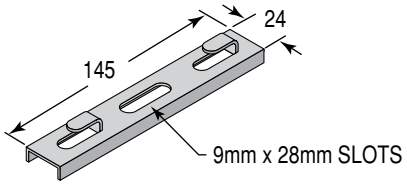


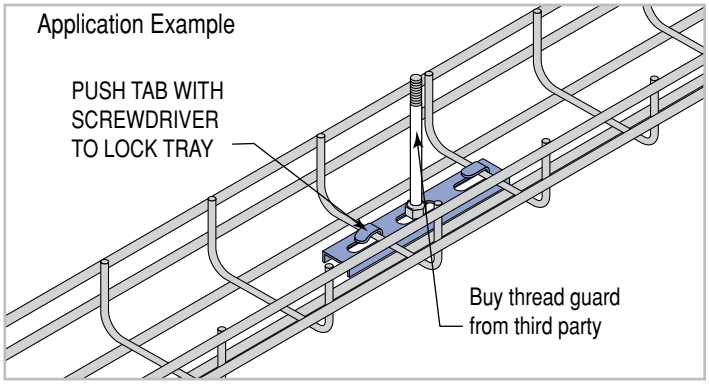


Drop Rod Clip [AF-RODCLIP1]

Weight: 0.05 kg/each

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

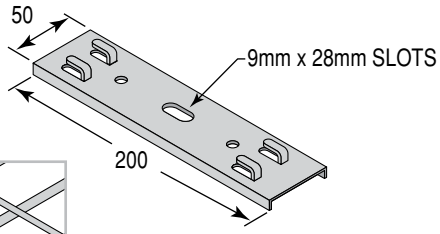


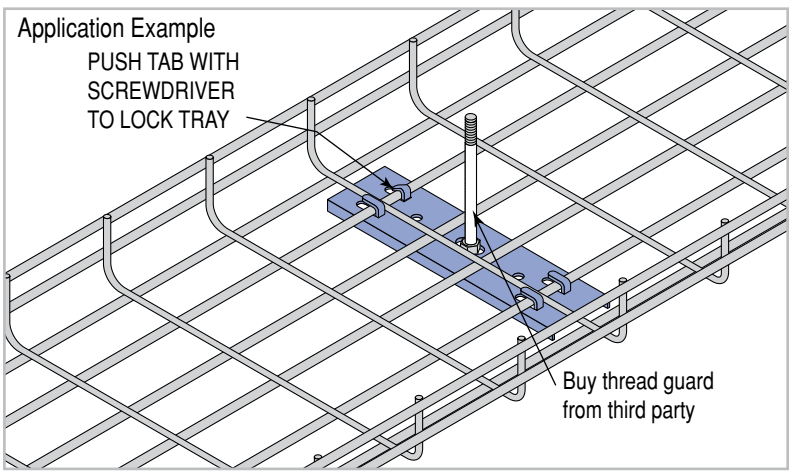


Drop Rod Clip [AF-RODCLIP2]

Weight: 0.18 kg/each

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

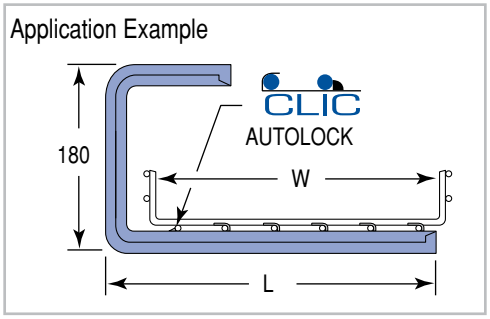


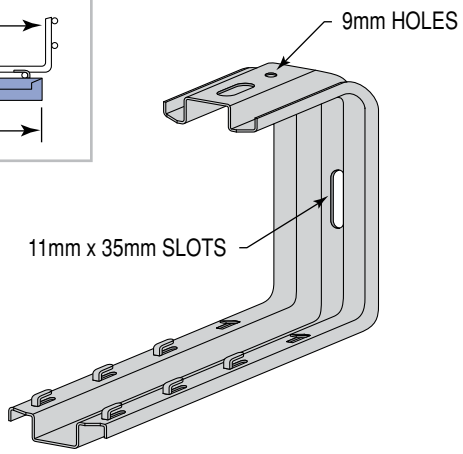


Ceiling Clip [AF-CCA-{W}]

- For attaching tray to ceiling
- Standard finish Galvabond Z275
- Easy mounting of the cable tray using grips and autolock

Application Example



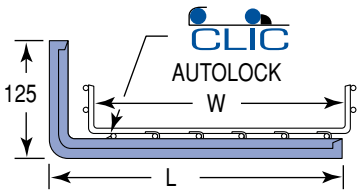


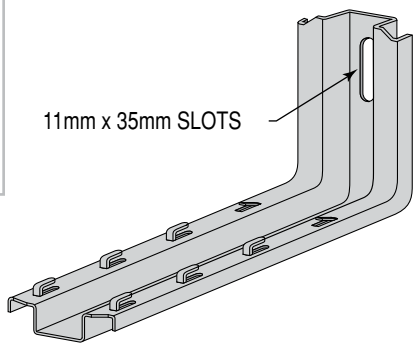
Part No.	Tray Size (W) (mm)	Length (L) (mm)	Weight (kg)	Load (kN)
AF-CCA-100	100	145	0.59	1.08
AF-CCA-150	150	195	0.67	0.78
AF-CCA-200	200	245	0.75	0.59
AF-CCA-300	300	345	0.90	0.39
AF-CCA-400	400	445	1.05	0.29

Wall Clip [AF-CPA-{W}]

- For attaching tray to wall
- Standard finish Galvabond Z275
- Easy mounting of the cable tray using grips and autolock

Application Example

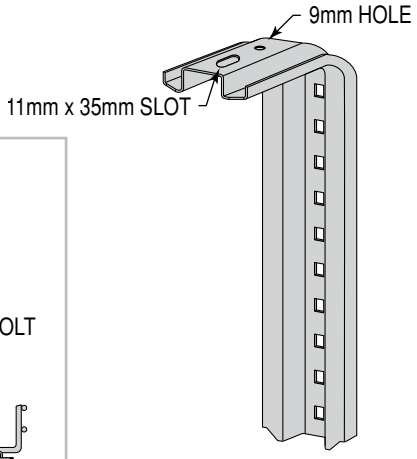




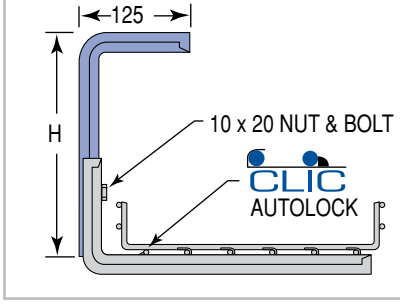
Part No.	Tray Size (W) (mm)	Length (L) (mm)	Weight (kg)	Load (kN)
AF-CPA-100	100	145	0.37	1.28
AF-CPA-150	150	195	0.44	1.28
AF-CPA-200	200	245	0.52	0.88
AF-CPA-300	300	345	0.67	0.59
AF-CPA-400	400	445	0.82	0.49

Pendant [AF-PPA-{H}]

- Standard finish is Galvabond Z275
- For attaching tray to ceiling. Used with wall clip AF-CPA Series



Application Example

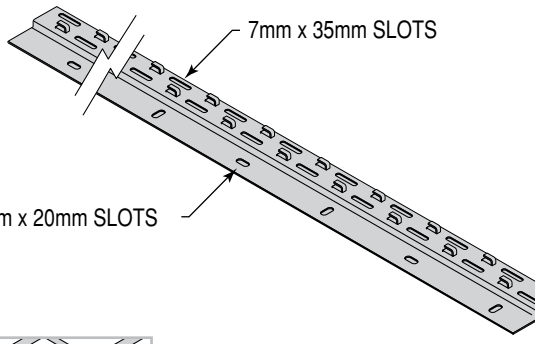


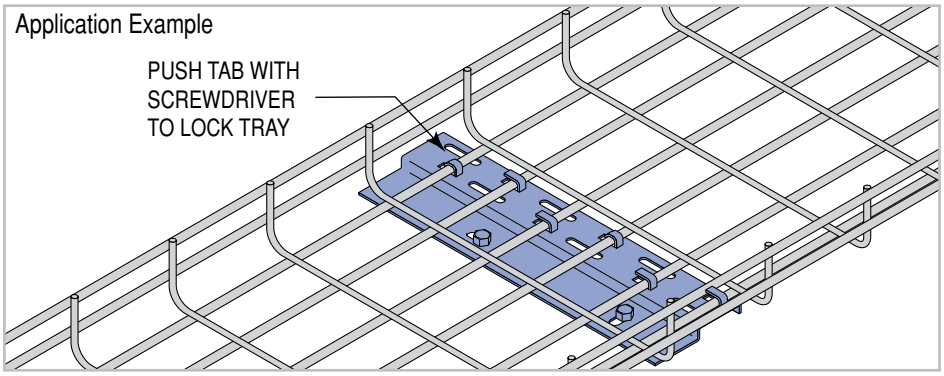
Part No.	Height (H) (mm)	Weight (kg)
AF-PPA-150	150	0.32
AF-PPA-250	250	0.50
AF-PPA-350	350	0.59
AF-PPA-450	450	0.77
AF-PPA-550	550	0.91
AF-PPA-650	650	1.04

ZED [AF-ZBAR-3M]

Weight: 4.8 kg/each

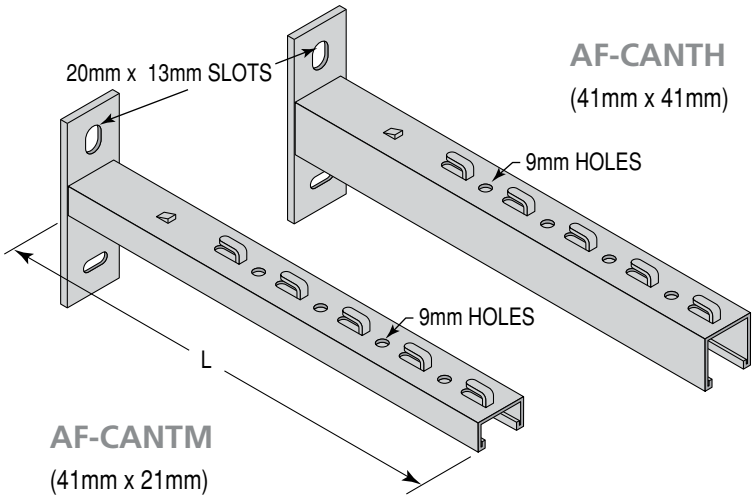
- ZED floor or wall mounted support is 13mm x 89mm
- Standard finish Galvabond Z275
- Support is 3m long, customer cuts to size as needed
- Unique grip system requires only a push of a screwdriver to fasten the tray to the supports



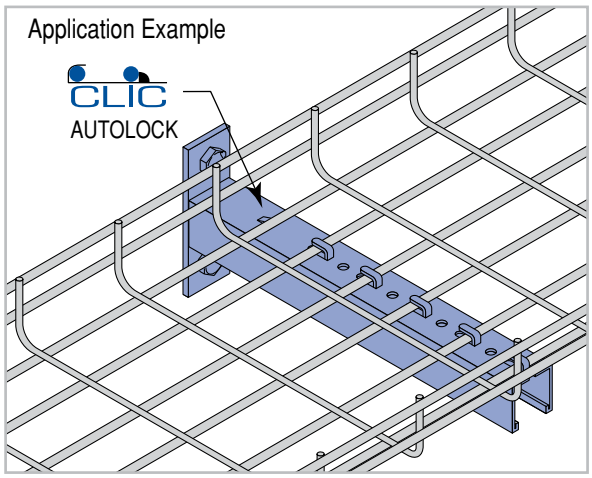


Cantilever Medium [AF-CANTM-(W)] & Heavy [AF-CANTH-(W)]

- Standard finish is Hot Dipped Galvanised
- Cantilever arm support 41mm x 41mm or 41mm x 21mm strut
- Unique Auto-Lock system requires no hardware to fasten the tray to the supports
- Use Strut Profile to support other items below the support bracket using strut hardware



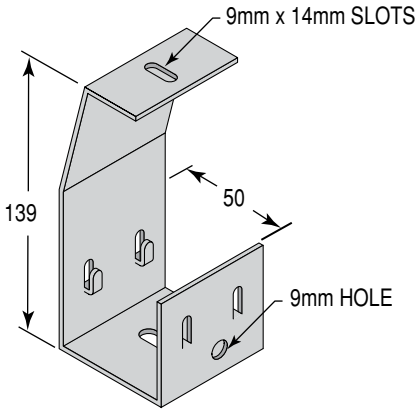
Part No.	Channel Size (mm)	Tray Width (W) (mm)	Length (L) (mm)	Weight (kg)	Load (kN)
AF-CANTM-150	41 x 21	150	186	0.45	2.45
AF-CANTM-200	41 x 21	200	236	0.52	1.77
AF-CANTM-300	41 x 21	300	336	0.66	1.57
AF-CANTH-200	41 x 41	200	236	0.72	4.41
AF-CANTH-300	41 x 41	300	336	0.95	3.34
AF-CANTH-400	41 x 41	400	436	1.29	2.65
AF-CANTH-500	41 x 41	500	536	1.52	2.65
AF-CANTH-600	41 x 41	600	636	1.78	2.16

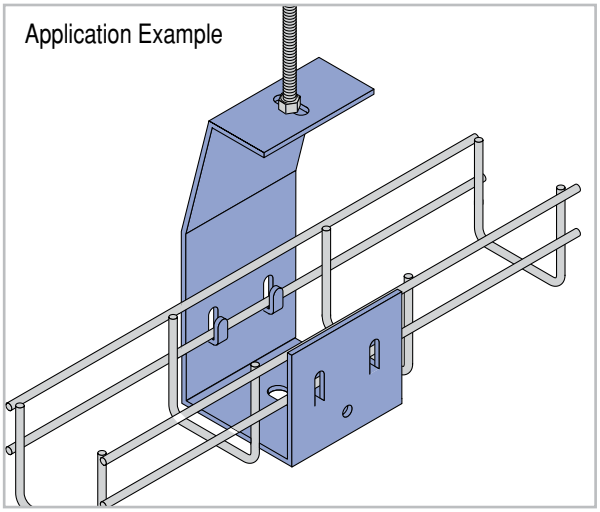


Hanger [AF-HGR-50]

- Standard finish is Galvabond Z275
- Ceiling or center hung with threaded rod

NOTE: For use with AF50-50 only

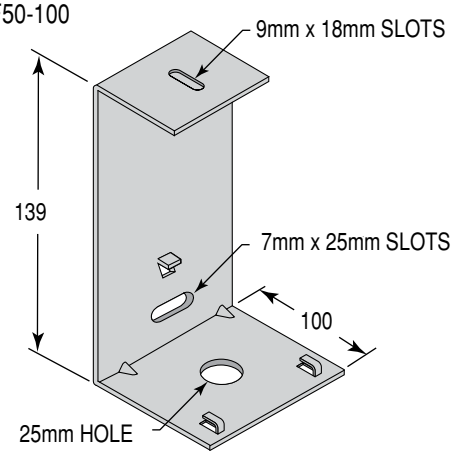


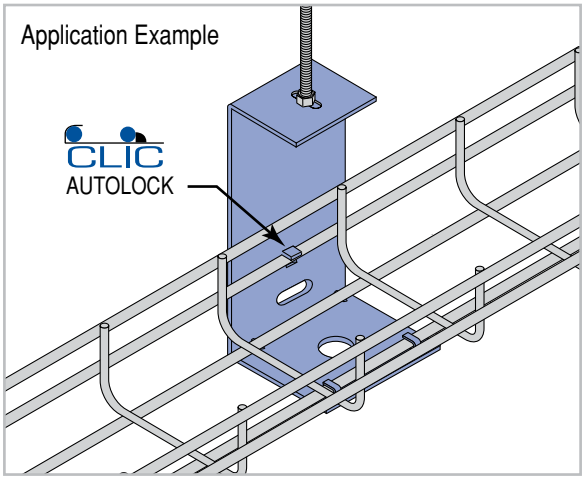


Hanger [AF-HGR-100]

- Standard finish is Galvabond Z275
- Ceiling or center hung with Unirod steel threaded rod

NOTE: For use with AF50-100 or AF100-100 only

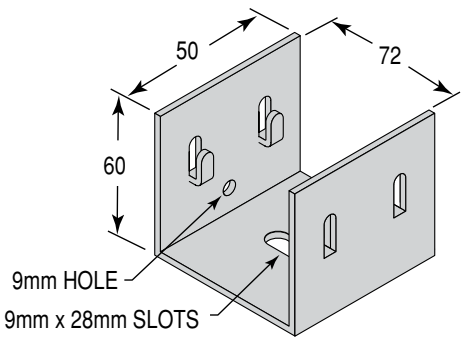


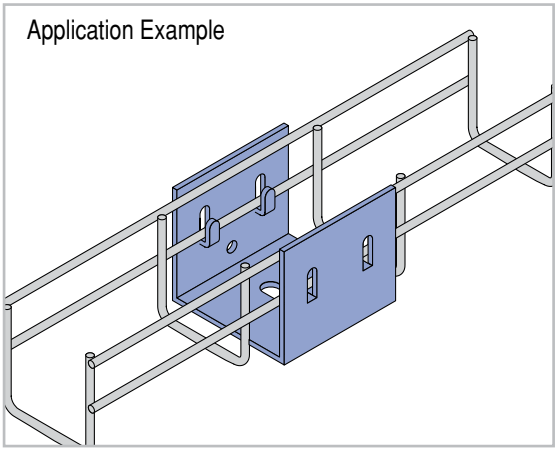


Wall Bracket [AF-WC-50]

- Standard finish is Galvabond Z275

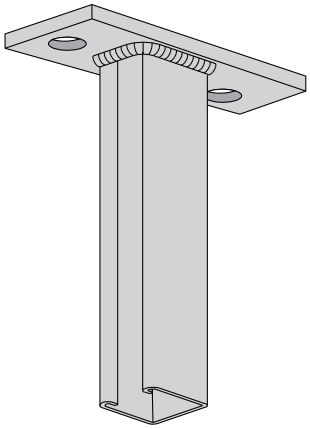
NOTE: For use with AF50-50 only





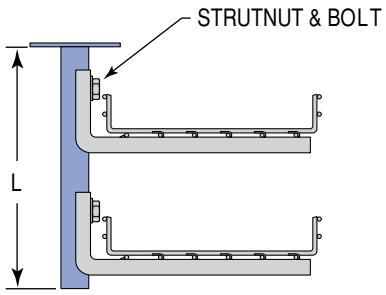
Single Channel Pendant [P2663-(L)]

- Standard finish is zinc plated



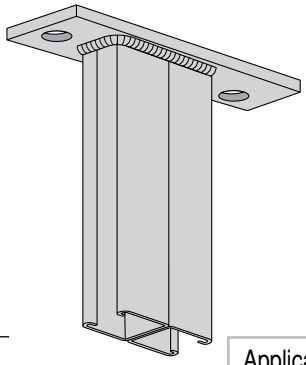
Part No.	Length (L) (mm)	Design Uniform Load (kN)	Weight (kg)
P2663-250	250	3.01	1.02
P2663-400	400	1.88	1.43
P2663-550	550	1.36	1.86
P2663-700	700	1.06	2.29

Application Example



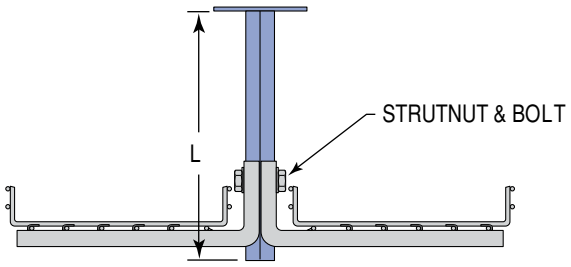
Back-to-Back Channel Pendant [P2542 thru P2546]

- Standard finish is zinc plated



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

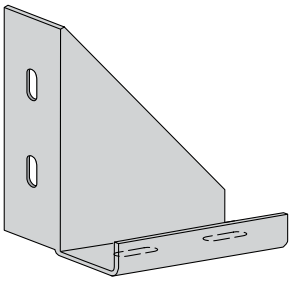
Application Example



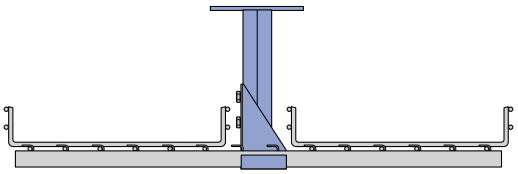
Hanging Bracket [AF-AB-USB]

Weight: 0.28 kg/each

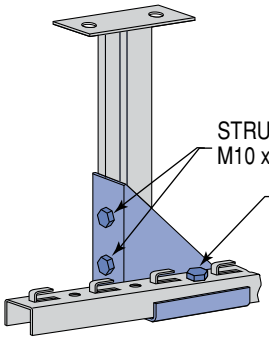
- Standard finish is Galvabond Z275
- For use with AF-USB-3M Support Bracket Channel see page 48



Application Example



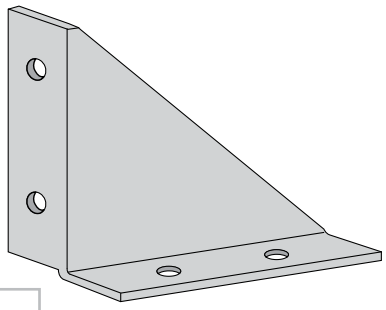
Application Example



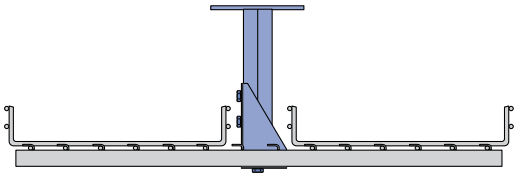
Hanging Bracket [AF-AB-HSB]

Weight: 0.50 kg/each

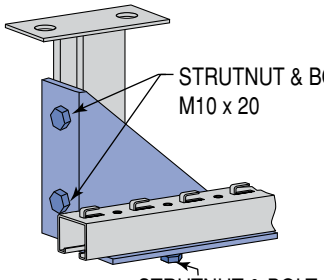
- Standard finish is Galvabond Z275
- For Use with:
  AF-MSB-3M Medium Support Bracket Strut
  AF-HSB-3M Heavy Support Bracket Strut see page 48



Application Example



Application Example

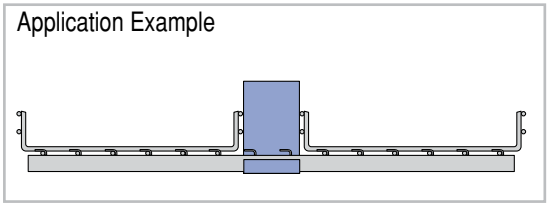


Hanging Bracket [AF-CB-MSB]

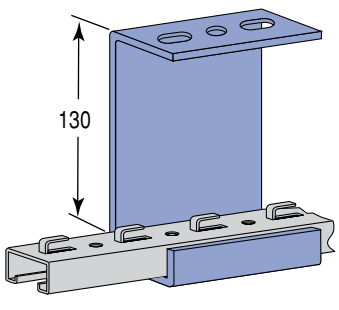
Weight: 0.66 kg/each

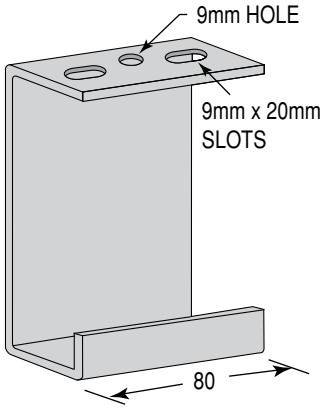
- Standard finish is Galvabond Z275
- For Use with:
  AF-MSB-3M Medium Support Bracket Strut see page 48

Application Example



Application Example

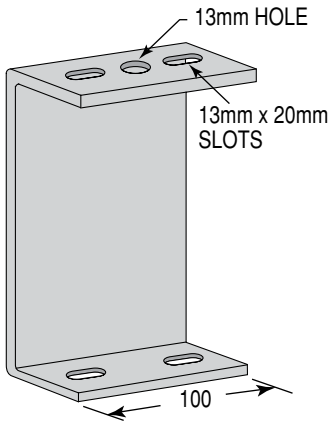




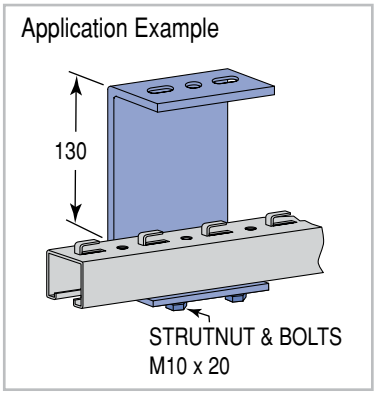
Hanging Bracket [AF-CB-HSB]

Weight: 1.35 kg/each

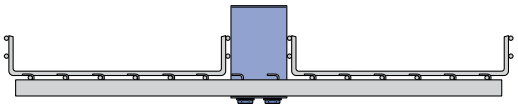
- Available in hot-dipped galvanized
- For Use with:
  AF-MSB-3M Medium Support Bracket Strut
  AF-HSB-3M Heavy Support Bracket Strut



Application Example

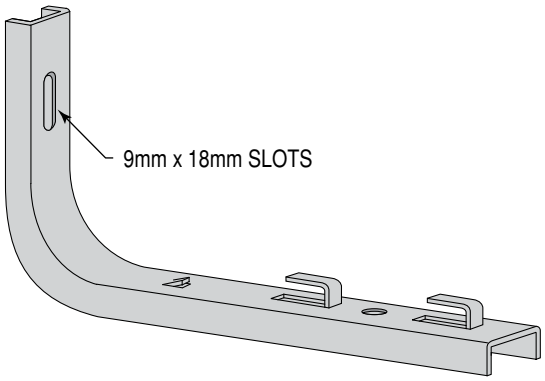


Application Example

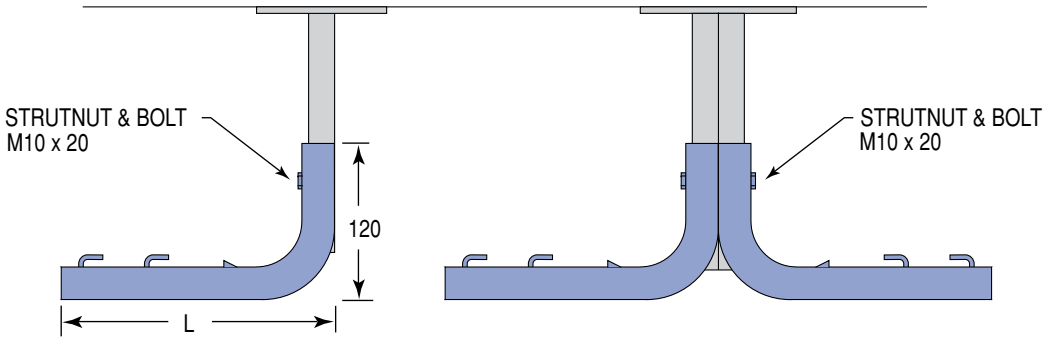


Bracket [AF-CMA-(W)]

- Standard finish is Galvabond Z275
- Mounted on cantilever arms or channels
- Easy mounting of the bracket using grips and autolock
- Designed for use with new/existing 41mm strut framing



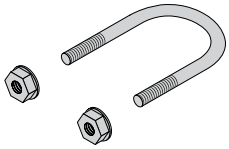
Application Example



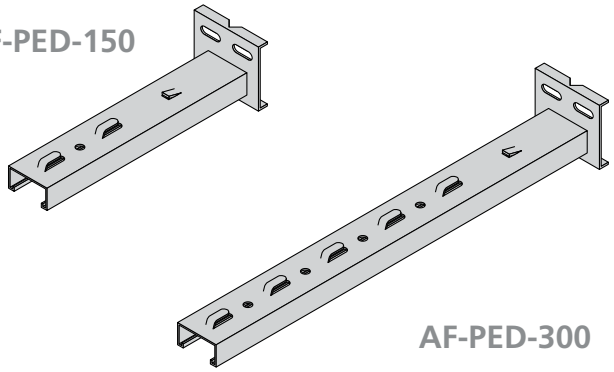
Part No.	Tray Width (W) (mm)	Length (L) (mm)	Wt (kg)	Load (kN)
AF-CMA-100	100	133	0.36	1.27
AF-CMA-150	150	183	0.45	1.03
AF-CMA-200	200	233	0.50	0.78
AF-CMA-300	300	333	0.68	0.59
AF-CMA-400	400	433	0.82	0.39

Pedestal Brackets [AF-PED-150] & [AF-PED-300]

- Channel use on pedestal for raised floor
- Attach to pedestal using U-Bolt & nuts (included)

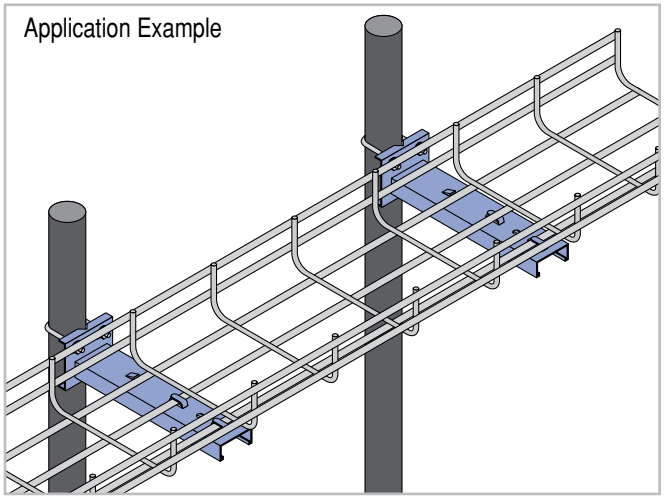


AF-PED-150

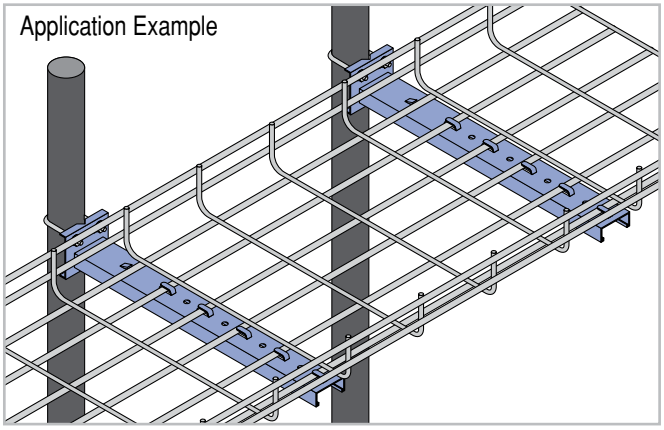


AF-PED-300

Application Example

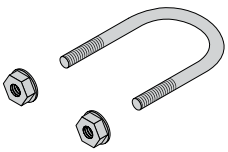


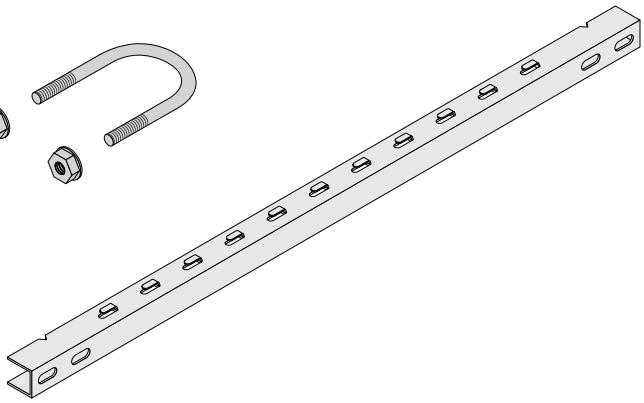
Application Example



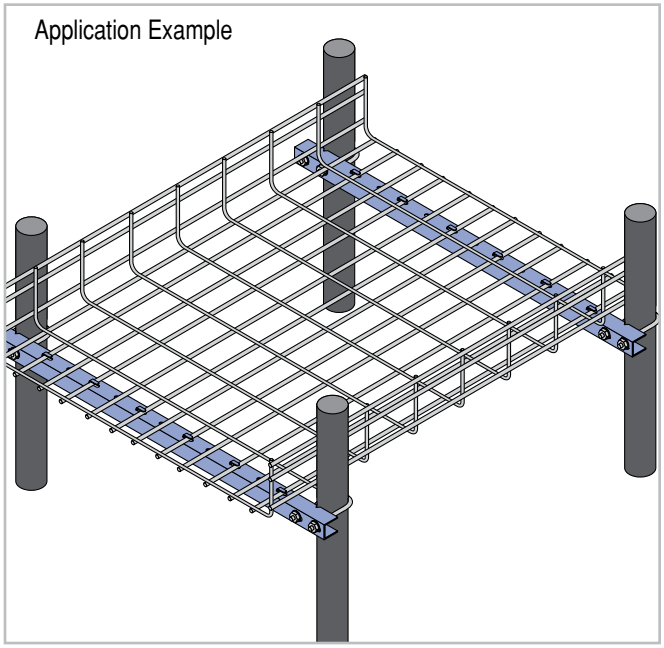
Pedestal Kit [AF-PED-KIT]

- Channel use on pedestal for raised floor
- Attach to pedestal using U-Bolt & nuts (included)

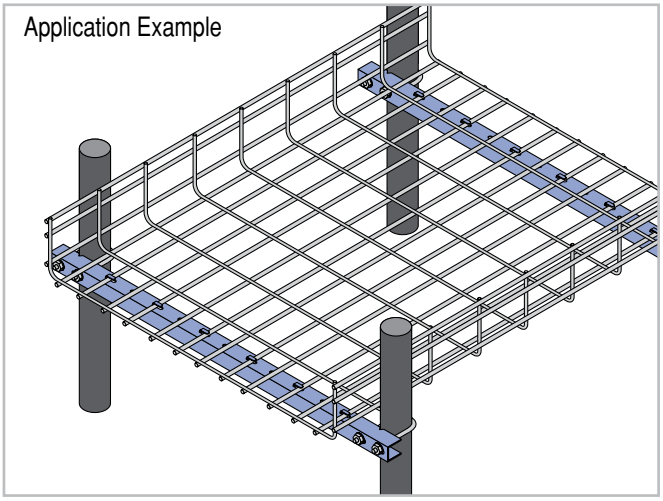




Application Example

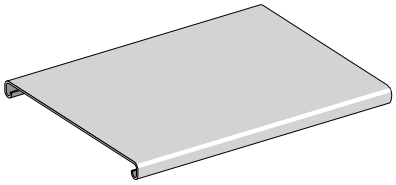


Application Example



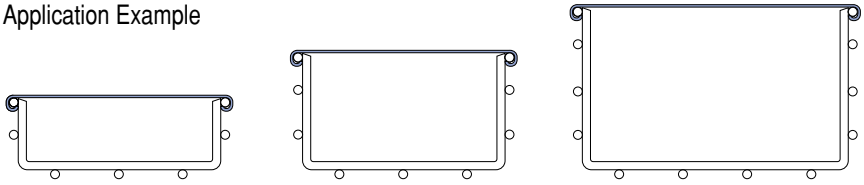
Cover [AF-CVR-(W)]

- Standard finish is Galvabond Z275
- Length is 3m



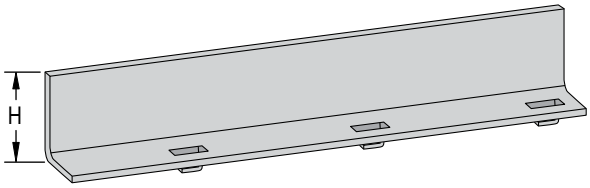
Part	Weight (kg)
AF-CVR-50	2.4
AF-CVR-100	3.6
AF-CVR-150	4.8
AF-CVR-200	6.0
AF-CVR-300	8.4
AF-CVR-400	16.2
AF-CVR-450	18.0
AF-CVR-500	19.8
AF-CVR-600	23.4

Application Example



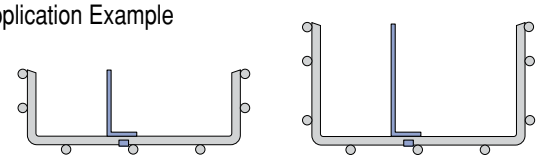
Tray Dividers [AF-DIV50], & [AF-DIV100]

- 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



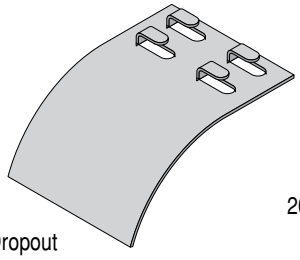
Part	Height (H) (mm)	Weight (kg)
AF-DIV-50	50	2.4
AF-DIV-100	100	3.6

Application Example

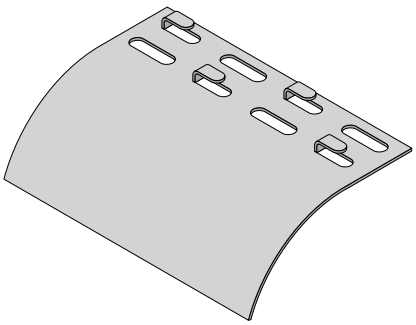


Drop Out [AF-(W)DO]

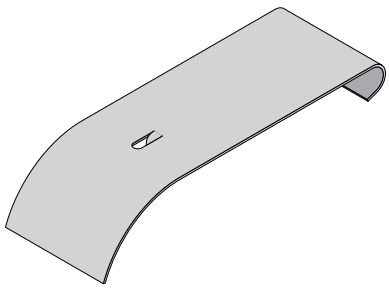
- Standard finish is Galvabond Z275
- AF-UNI-DO can be used in any 50mm x 100mm mesh opening or as a "side-out"



100mm Dropout

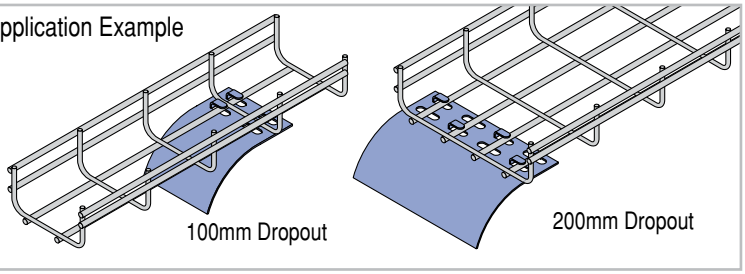


200mm Dropout

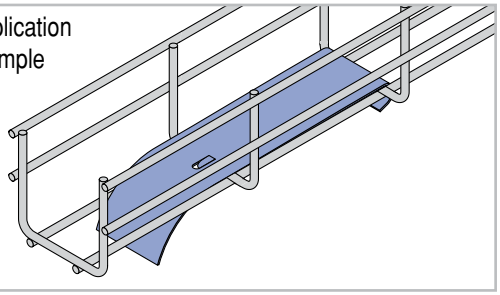


AF-UNI-DO (50mm Universal Dropout)

Application Example



Application Example



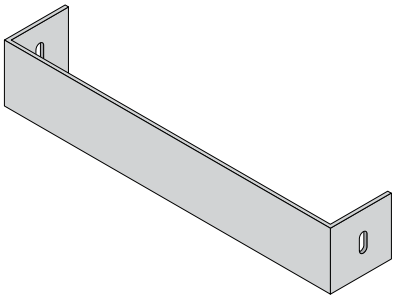
Blind End [AF(H)-BE(W)]

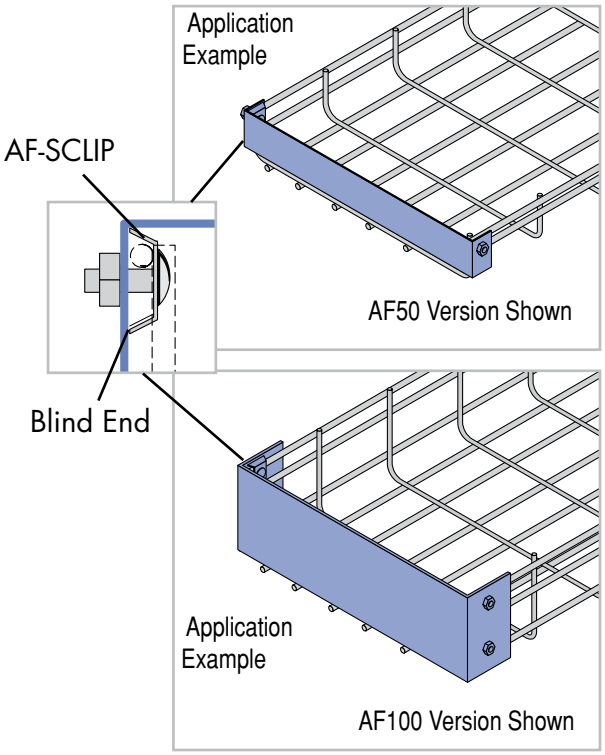
- Standard finish is Galvabond Z275
- Standard use per blind end is:
  (2 pc) AF-KITCH3 (sold separately)

NOTES:

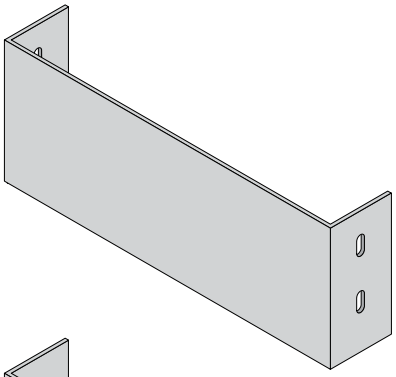
1. Always place nut on outside of tray

Part	Weight (kg)
AF50-BE100	0.08
AF50-BE150	0.10
AF50-BE200	0.13
AF50-BE300	0.18
AF50-BE400	0.23
AF50-BE450	0.26
AF50-BE500	0.29
AF50-BE600	0.32

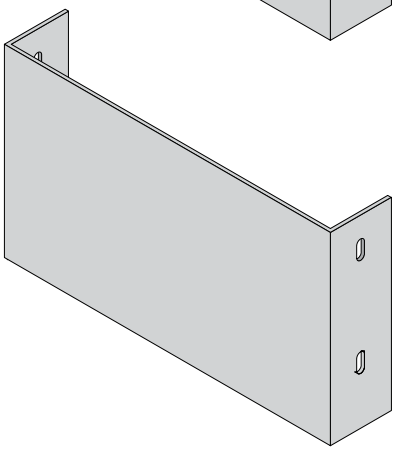




Part	Weight (kg)
AF100-BE100	0.24
AF100-BE200	0.29
AF100-BE300	0.34
AF100-BE400	0.44
AF100-BE450	0.49
AF100-BE500	0.54
AF100-BE600	0.65

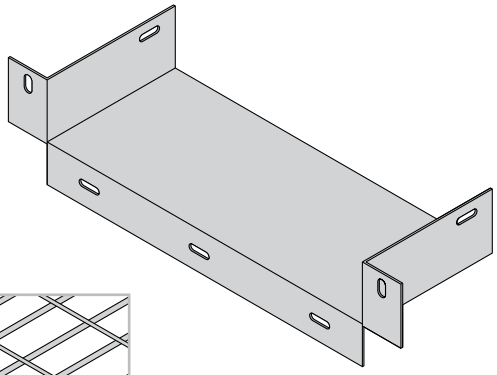


Part	Weight (kg)
AF150-BE300	0.51
AF150-BE400	0.64
AF150-BE600	0.95



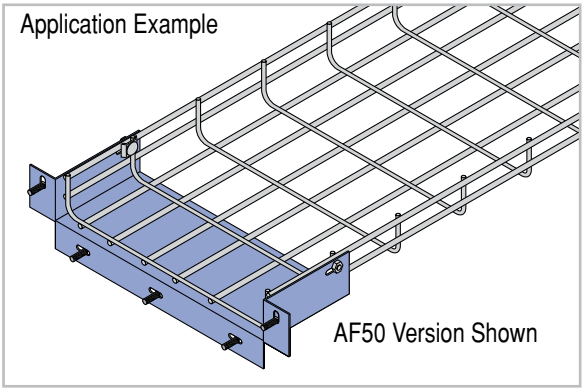
Box Connector [AF(H)-(W)CB]

- Standard finish is Galvabond Z275
- Standard use per box connector is:
  (2 pc) AF-KITCH3
  (5 pc) AF-EG-CBN
  (both sold separately)



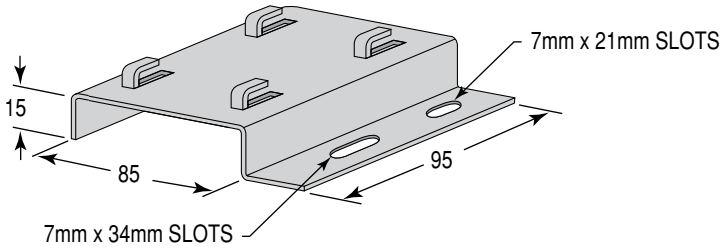
NOTES:

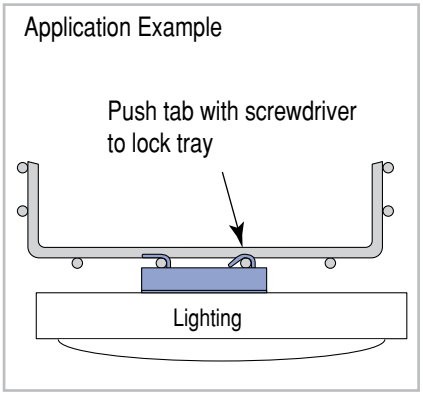
1. Always place nut on outside of tray
2. For use with AF50 & AF100



Lighting Bracket [AF-LIGHTB]

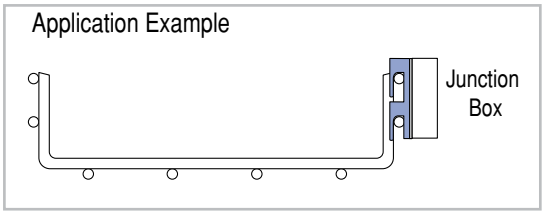
- Standard finish is Galvabond Z275

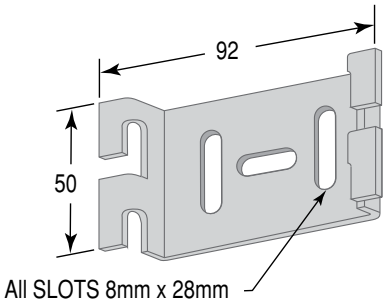




Electrical Box Bracket [AF-JBOX]

- Standard finish is Galvabond Z275





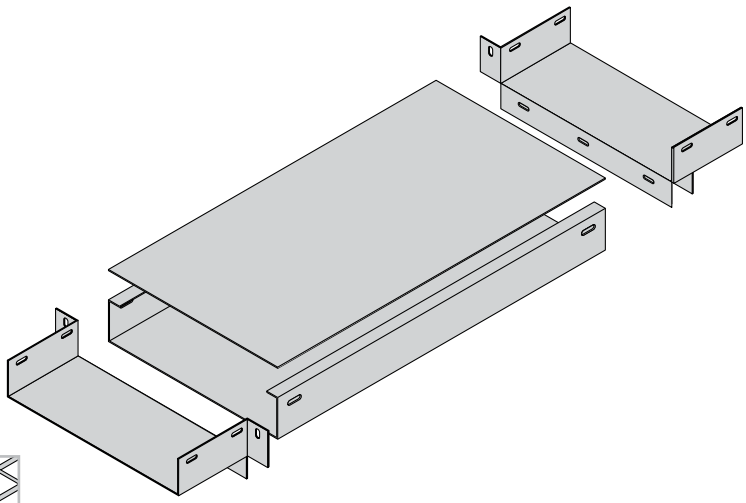
Wall Sleeve [AF(H)-(W)WS]

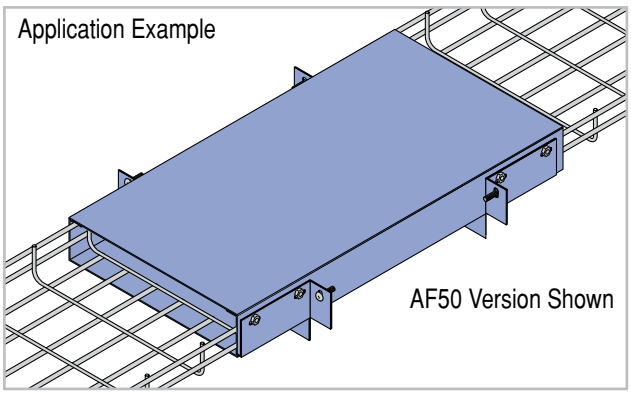
- Standard finish is Galvabond Z275
- Standard use per wall sleeve is:
  - (4 pc) AF-KITCH3
  - (5 pc) 6112-0
  - (4 pc) 5003-1
  - (4 pc) 5009-1
  - (8 pc) EM -CC
  - (all sold separately)

NOTES:

1. Always place nut on outside of tray

2. Example AF50-12WS



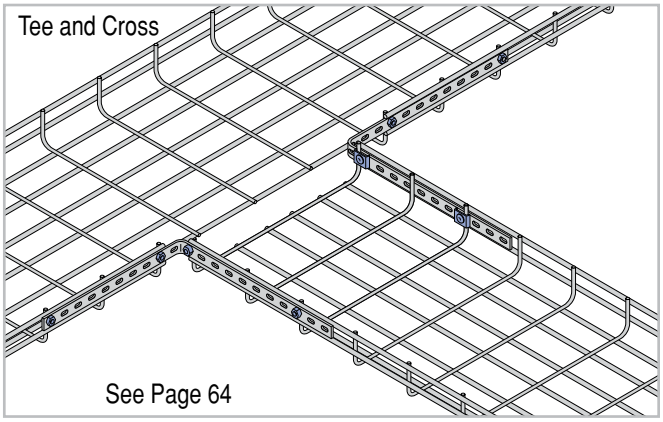


Fittings Overview

Fittings are typically fabricated on the job.

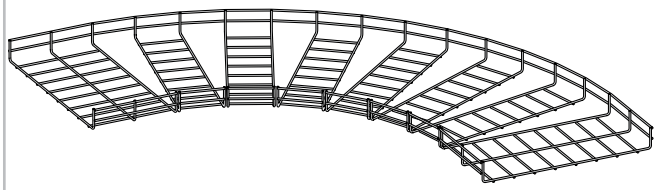
To determine the fitting hardware required to create a set of fittings, see the following pages

Tee and Cross



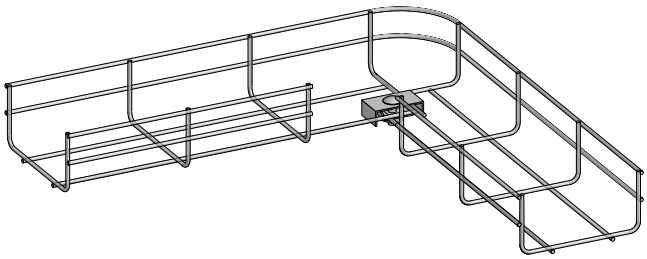
See Page 64

90° Long Radius Bend



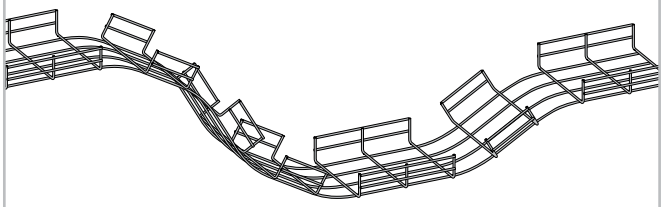
See Page 61

90° Short Radius Bend



See Page 62 - 63

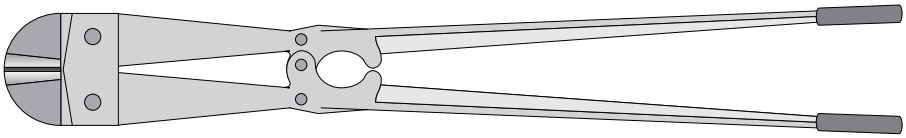
Risers

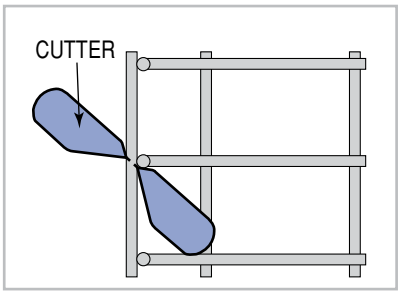


See Page 65

Cutting Tool [AF-CUTTOOL]

Fittings can be formed easily on-site by cutting the bottom and side wires. Cut the tray bars on an angle as shown in the illustration.





Note: When cutting, keep the remaining sharp edge away from the inside of the tray.

90° Bends - Long Radius

1 CUT THE BOTTOM AND SIDE WIRES

To form 90° bends in the tray, cut out the number of sections shown below based on the width of the tray used.

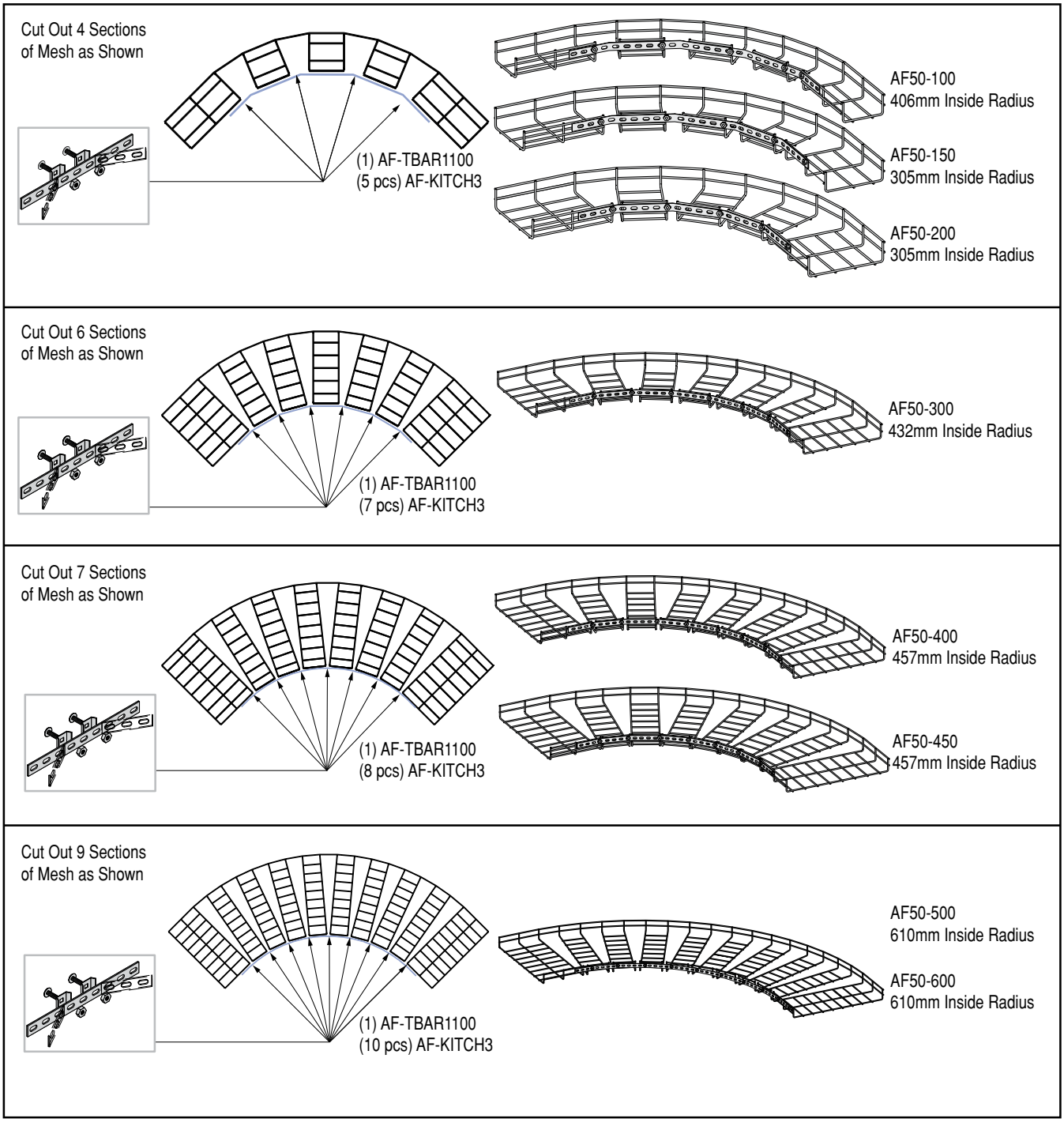
2 ASSEMBLE USING APPROPRIATE HARDWARE

Standard hardware is shown with each bend size.

Advantages:

- Use as bonding jumper
- Vertical support of standing sections
- Adjustable radius allowances

NOTE: Always place nut on outside of tray



90° Bends - Forming Instructions

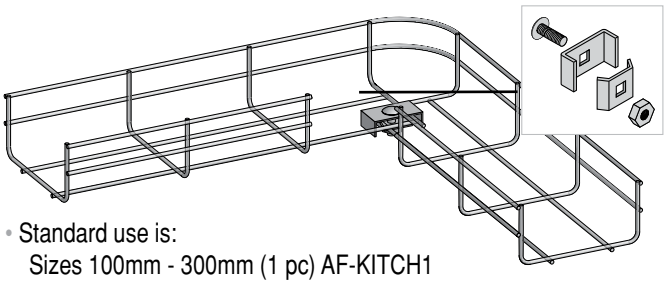
To form 90° bends in the tray, cut the wires shown in the color shaded area of the drawing which corresponds to the width of the tray used.

1 CUT THE BOTTOM AND SIDE WIRES

Bends can be formed easily on-site by cutting the bottom and side wires. The shaded areas indicated should be cut and removed. Then, simply bend ACROFIL cable tray to form a 90° angle and you are ready to install. Make sure you use the appropriate hardware.

2 ASSEMBLE USING APPROPRIATE HARDWARE

AF-KITCH1

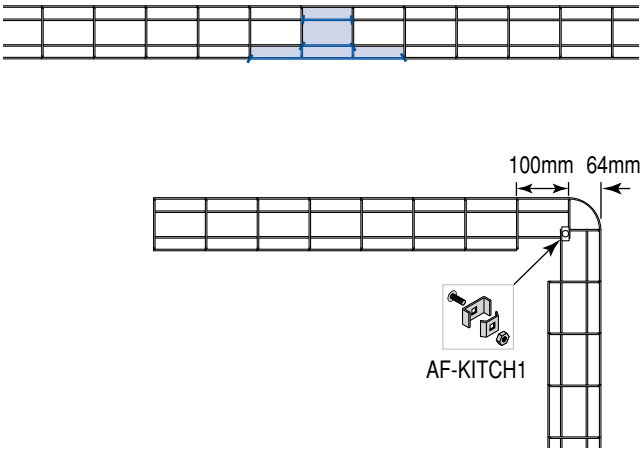


- Standard use is:
  Sizes 100mm - 300mm (1 pc) AF-KITCH1
  Sizes 400mm - 600mm (2 pc) AF-KITCH1

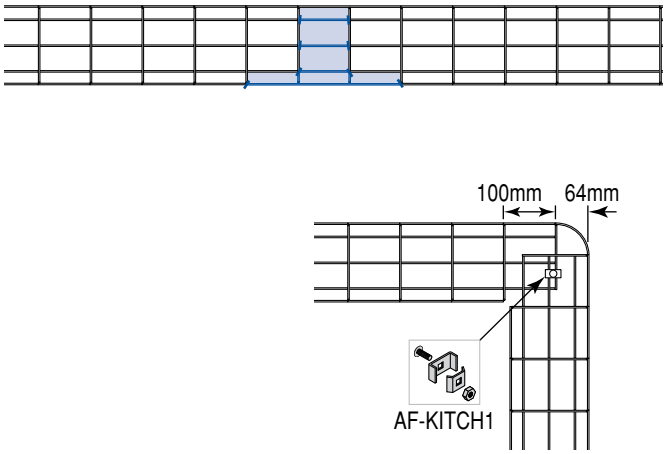
NOTE: Always place nut on outside of tray)

90° Bends - Cutting Diagrams

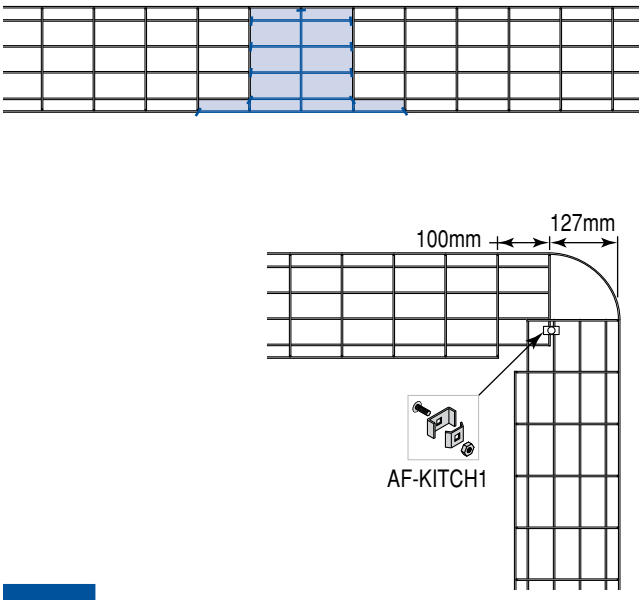
100mm



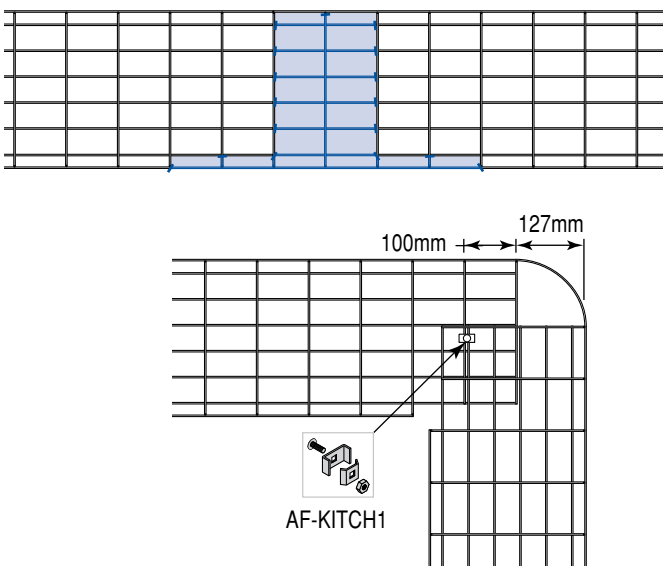
150mm



200mm

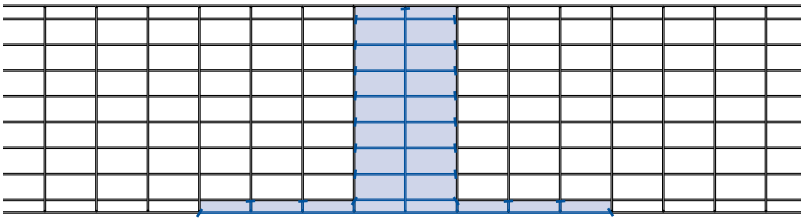


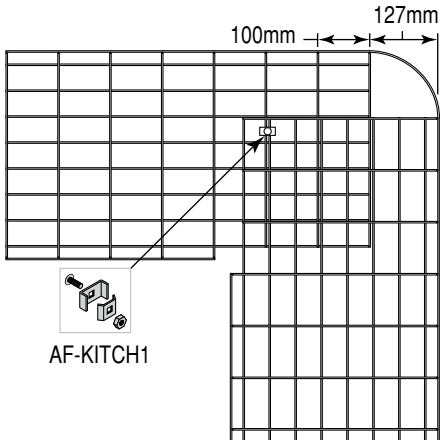
300mm



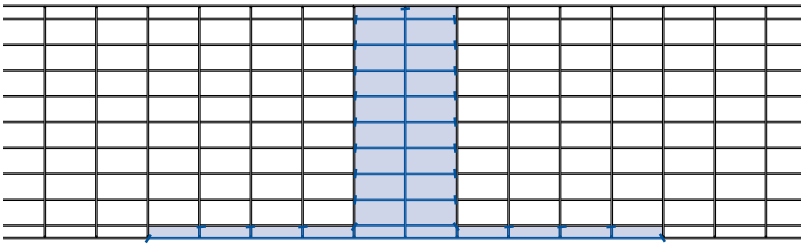
90° Bends - Cutting Diagrams

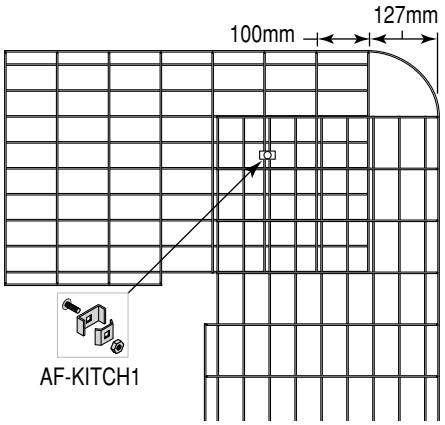
400mm



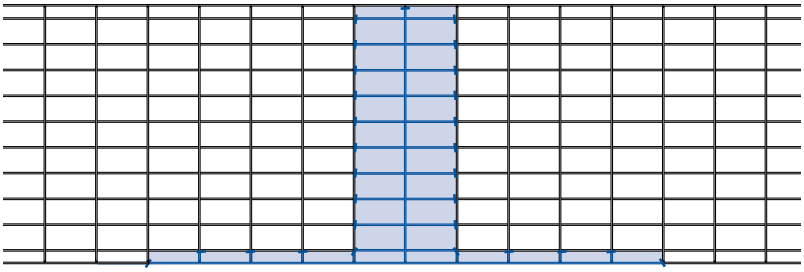


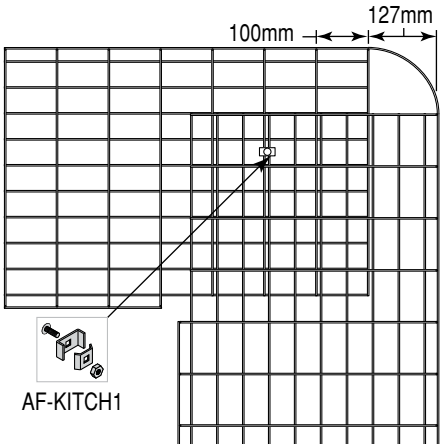
450mm



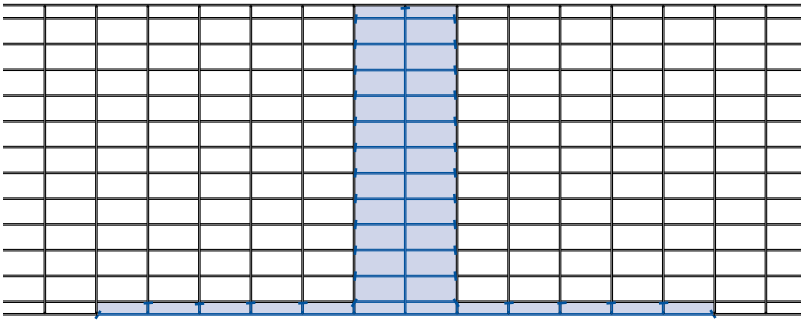


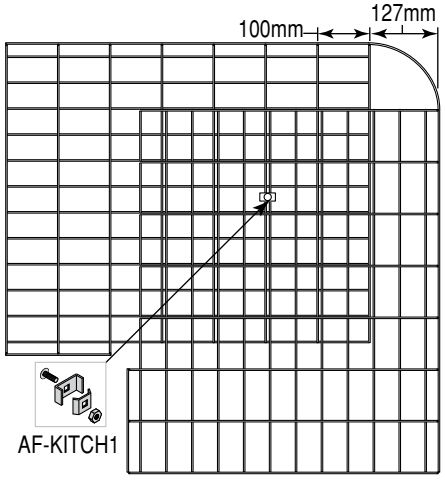
500mm





600mm



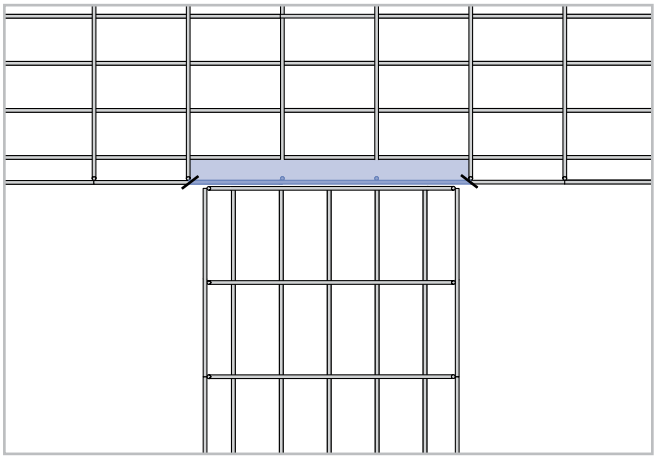


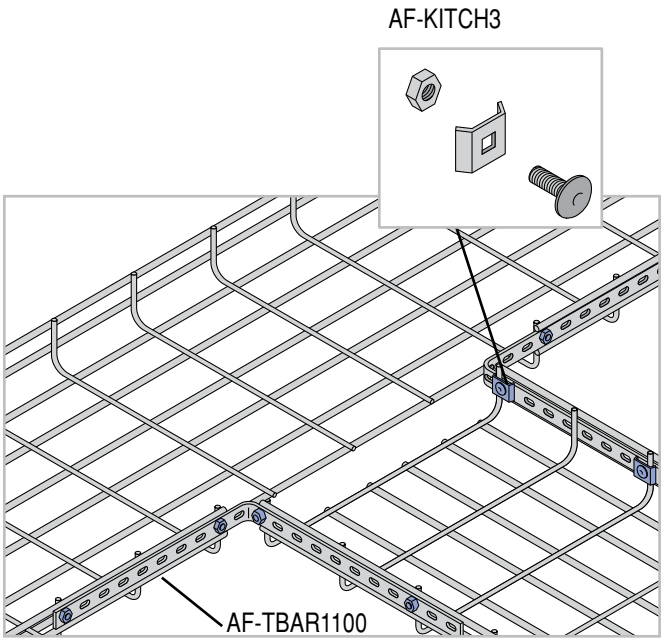
Standard Tee

- Standard use per tee is:
  (2 pc) AF-TBAR550 or (1 pc) AF-TBAR1100 cut in half
  (8 pc) AF-KITCH3

NOTE: Always place nut on outside of tray

To form a tee, cut the wires marked in blue.



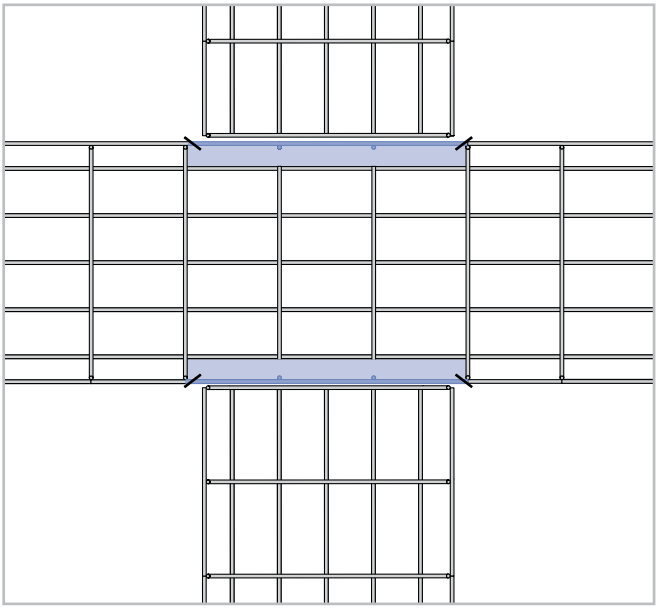


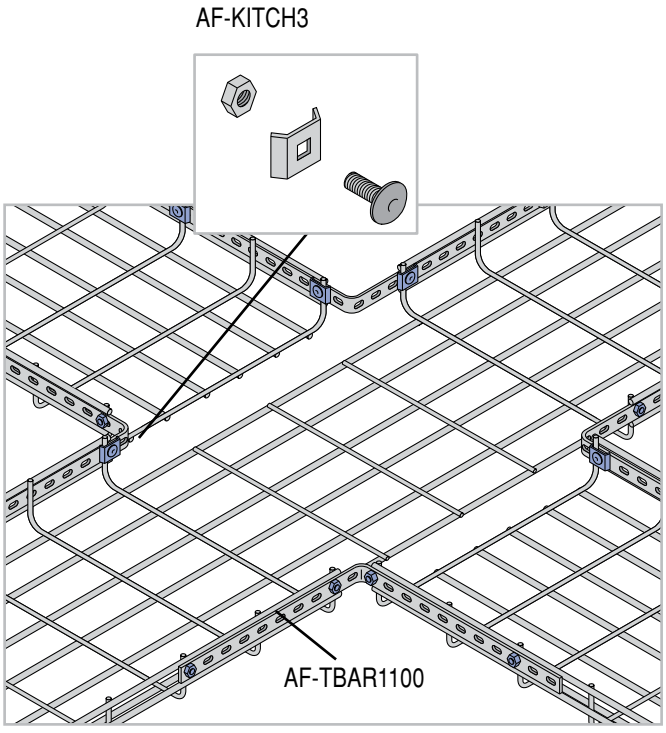
Cross

- Standard use per cross is:
  (4 pc) AF-TBAR550 or (2 pc) AF-TBAR1100 cut in half
  (16 pc) AF-KITCH3

NOTE: Always place nut on outside of tray

To form a cross, cut the wires marked in blue.

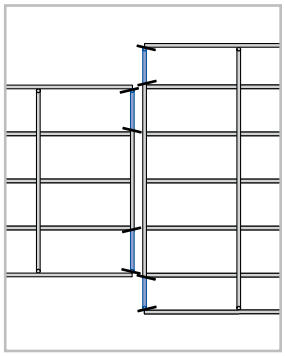




Reducer

- Standard use per reducer is:
  (2 pc) AF-TBAR1100
  (8 pc) AF-KITCH3
  (1 pc) AF-KITCH2

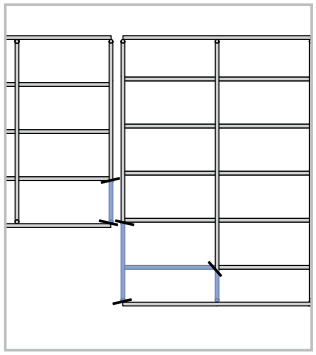
NOTE: Always place nut on outside of tray

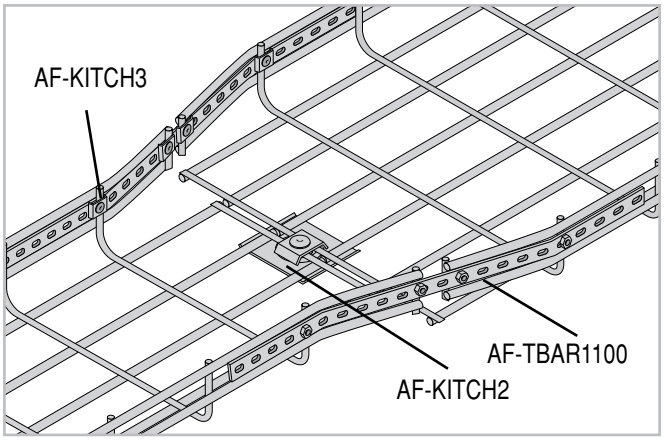


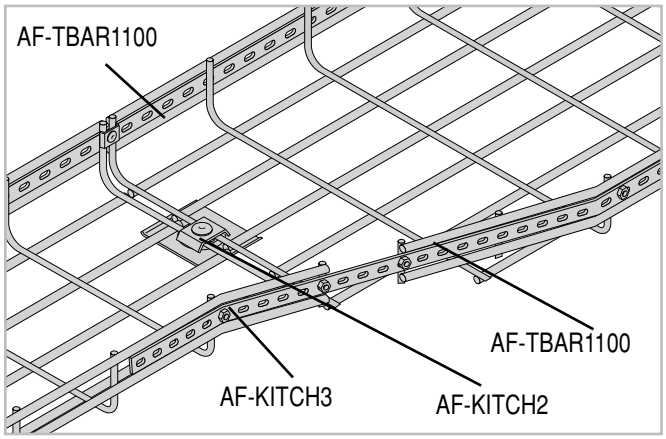
Offset

- Standard use per offset is:
  (2 pc) AF-TBAR1100
  (8 pc) AF-KITCH3
  (1 pc) AF-KITCH2

NOTE: Always place nut on outside of tray

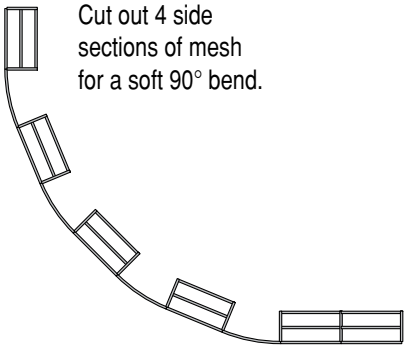


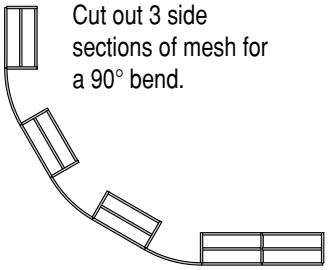


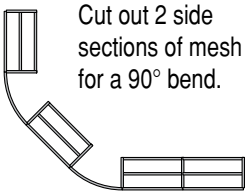


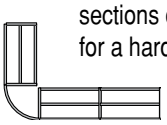
Riser

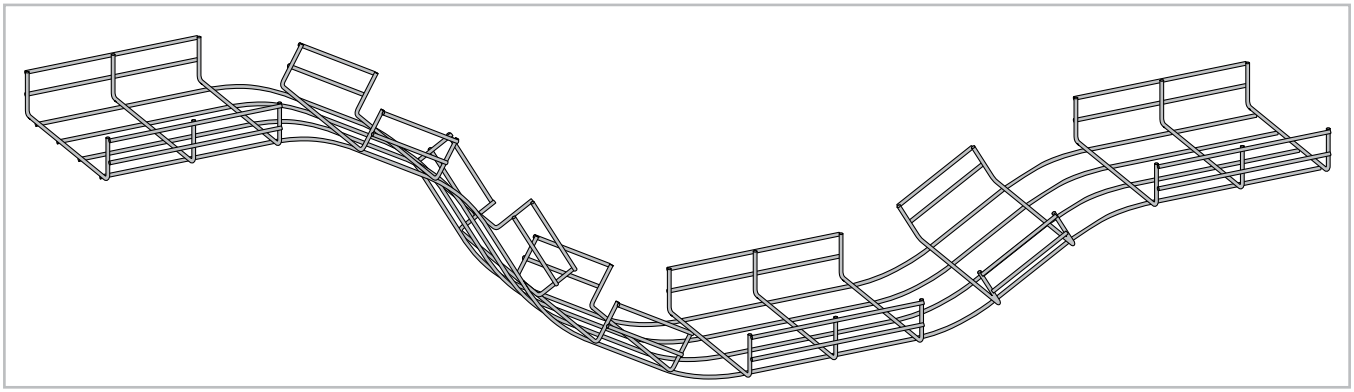
Risers and drops can be created to avoid different obstacles in the job path. Simply cut out the required number of side mesh sections and bend a vertical riser or drop to fit the application.











Grounding

Unistrut recommends use of a separate ground wire for equipment grounding.

Any non-conductive coating to ACROFIL must be removed by the contractor/end-user to maintain electrical continuity.

Straight Sections - The grounding of two straight sections requires the use of

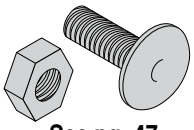
(2) AF-GCLIP's and
(2) AF-EG-CBN's.

These items consist of grounding clips and the appropriate hardware, for connecting to the trays. One clip should be placed on both sides of the tray, attached at the self-splicing bar.

Straights

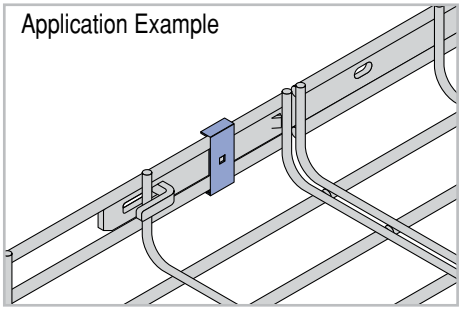
2 pcs of AF-GCLIP
2 pcs of AF-EG-CBN

AF-EG-CBN



See pg. 47

Application Example

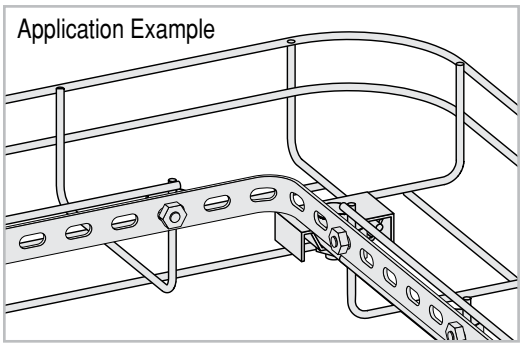


Fittings - Grounding of fittings requires special attention. Typically fittings are fabricated in the field by cutting straight sections, thus altering the cross sectional area of the tray. A bonding jumper, and or a AF-TBAR1100 Splice, along with the appropriate hardware must be used on either side of the fitting to ensure electrical continuity.

Fittings

AF-TBAR1100 and
AF-KITCH3s

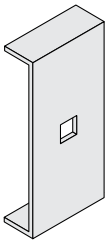
Application Example



Grounding Clip [AF-GCLIP]

- Standard finish is Galvabond Z275
- Sold in packs of 10
- Connection to splice bars requires a nut and bolt assembly (AF-EG-CBN) purchased separately
- Use on both sides of tray

NOTE: Always place nut on outside of tray

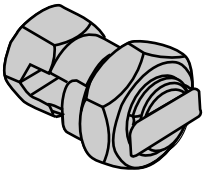


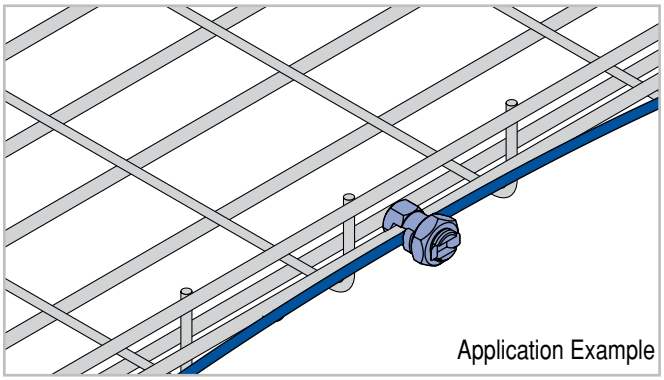
AF-GCLIP's must be utilized if the tray is to be utilized as an equipment ground conductor.

Grounding Clamp/Split Bolt

- Split bolts are utilised for the attachment of a separate ground wire.

NOTE: Always place nut on outside of tray

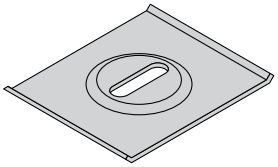




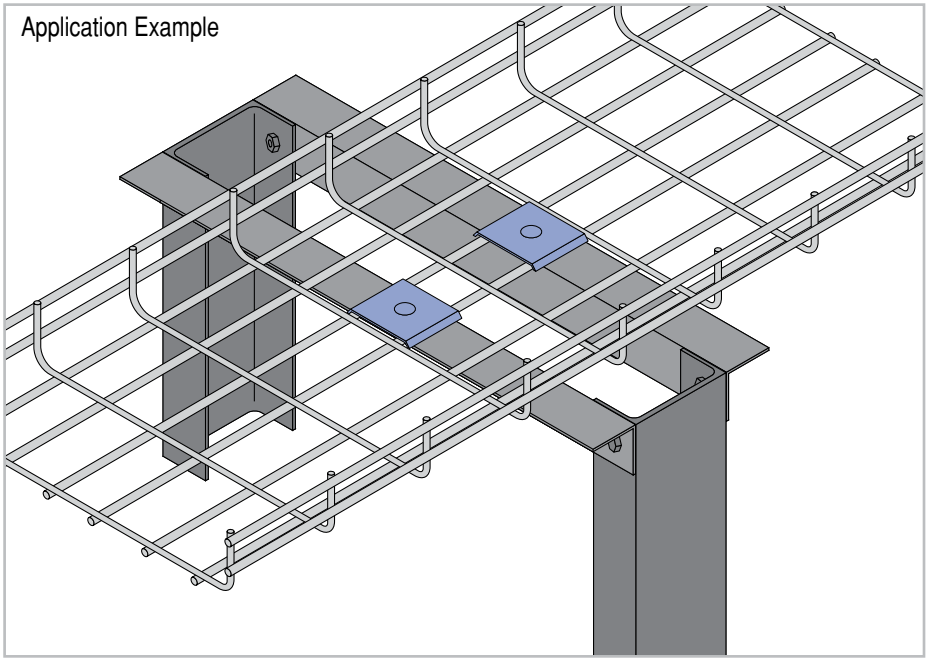
Application Example

AF-BCLIP

- AF-BCLIP used as a hold-down clip



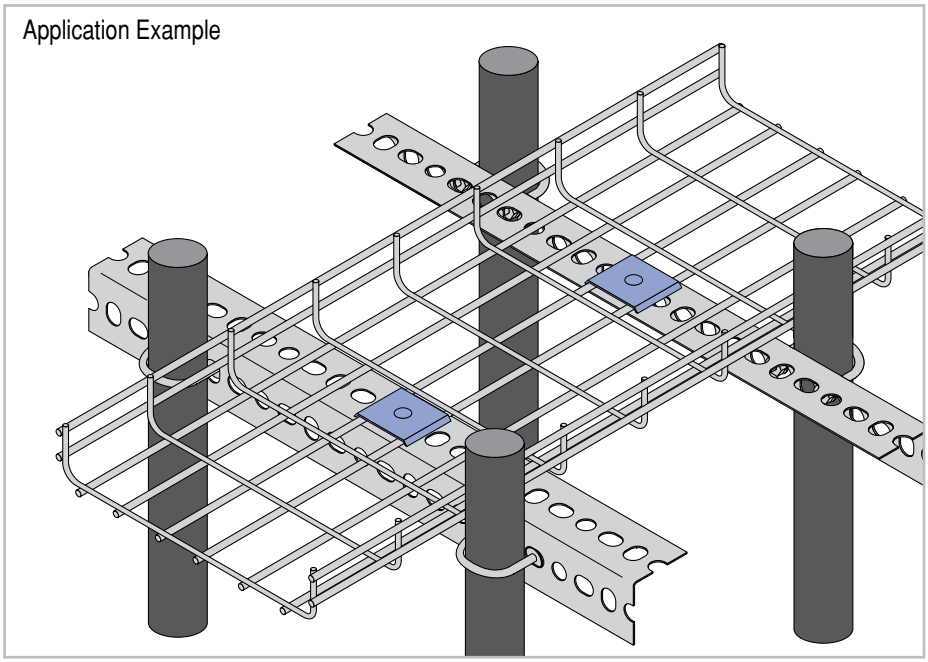
Application Example



Drill hole in aluminum angle of relay rack.

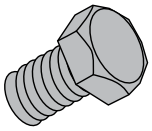
Use AF-BCLIP to hold ACROFIL to relay rack using 6 x 20 round head machine screw and bolt and washer.

Application Example



Hex Head Set Screws

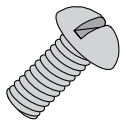
- Standard finish is Zinc Plated



Part No.	Size	Weight/100 (kg)
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

Pan Head Screws

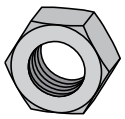
- Standard finish is Zinc Plated



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

Hexagon Nuts

- Standard finish is Zinc Plated



Part No.	Size	Weight/100 (kg)
HN06	M6	0.2
HN08	M8	0.5
HN10	M10	0.8

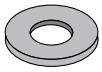
Spring Washers

- Standard finish is Zinc Plated

Part No.	Size	Weight/100 (kg)
SW06	M6	0.1
SW08	M8	0.2
SW10	M10	0.3

Flat Washers

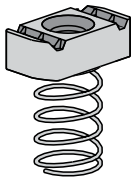
- Standard finish is Zinc Plated



Part No.	Size	Weight/100 (kg)
FW06	M6	0.1
FW08	M8	0.1
FW10	M10	0.3

Strut Nuts

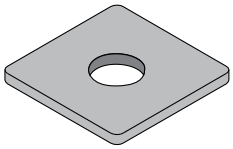
- Standard finish is Zinc Plated



Part No.	Size	Weight/100 (kg)
P1006	M6	3.18
P1007	M8	3.18
P1008	M10	4.54

Square Strut Washers

- Standard finish is Zinc Plated

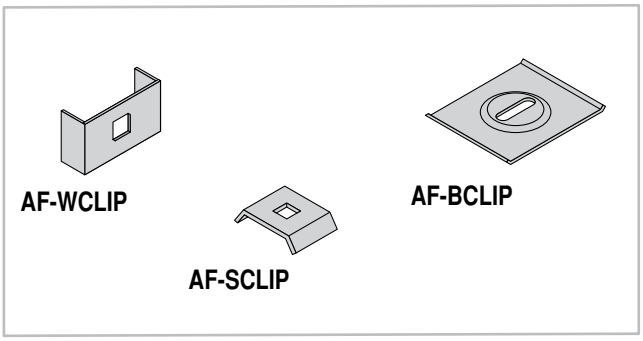


Part No.	Hole Size (mm)	Weight/100 (kg)
P1062	9	7.0
P1063	12	6.8
P1064	14	6.6

Tray Clips (See Pages 46 - 47 for Connector Kits)

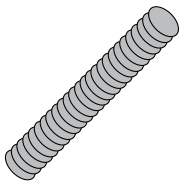
Standard finish is Zinc Plated

Single Part	Weight (kg)	No./ Pkg
AF-SCLIP	0.09	10
AF-WCLIP	0.14	10
AF-BCLIP	0.42	10



Unirod Steel Threaded Rod

- Standard finish is Zinc Plated
- Standard Length is 3M



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

Part No.	Description	Max. Recommended Tensile Load (kN)	Mass (kg/m)
UR06	M6	3.47	0.20
UR08	M8	6.32	0.35
UR10*	M10	10.02	0.50

** Also available in Hot Dipped Galvanised.*

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 1789

2.1.b Other Finishes

Hot Dipped Galvanized – Steel in accordance with AS/NZS 4680

Galvabond – AS 1397 with a coating class of Z275.

SS – AISI 316L stainless steel.

SS304 – AISI 304L 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 50, 100, 150, 200, 300, 400, 450, 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

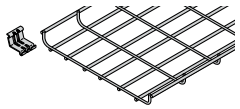
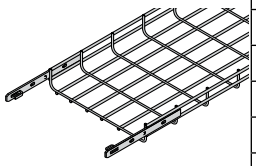
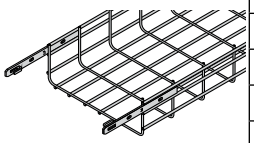
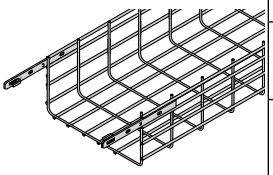
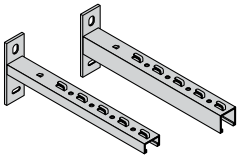
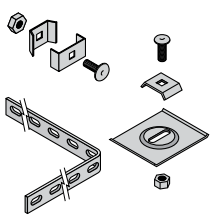
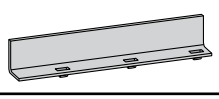
Supports shall include, but are not limited to, center type, trapeze type, wall supports, and floor supports.

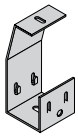
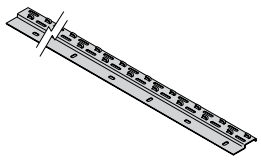
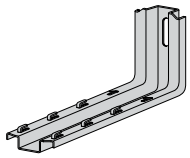
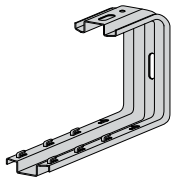
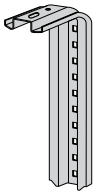
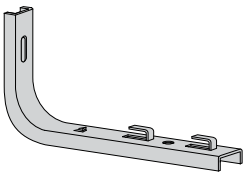
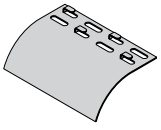
7.1 Auto Locking

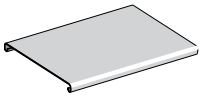
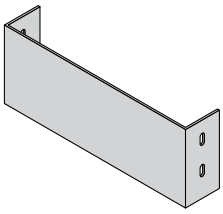
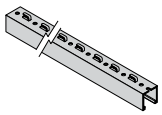
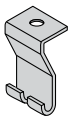
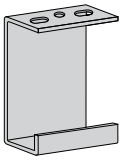
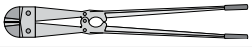
All supports shall be supplied with an Auto locking feature, requiring no special tools for attachment of the trays.

7.2 Finish

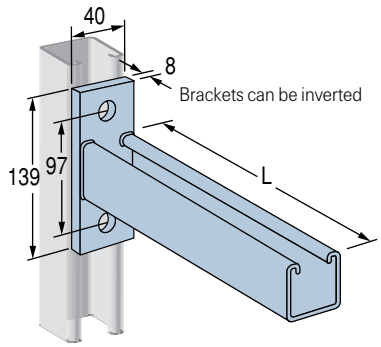
All supports, including threaded rod and associated hardware shall be zinc plated coated to AS 1789.

Part	Short Name	Description	Part No. Standard	Part No. HDG	Part No. SS	Page No.
AF30 	AF30-50	AF30-50 ACROFIL MESH 30X50X3000	4027316	4027348	4027548	44
	AF30-100	AF30-100 ACROFIL MESH 30X100X3000	4027317	4027349	4027549	44
	AF30-150	AF30-150 ACROFIL MESH 30X150X3000	4027318	4027350	4027550	44
	AF30-200	AF30-200 ACROFIL MESH 30X200X3000	4027319	4027351	4027551	44
	AF30-300	AF30-300 ACROFIL MESH 30X300X3000	4027320	4027352	4027552	44
AF50 	AF50-50	AF50-50 ACROFIL 50X50X3000	4027321	4027353	4027553	42
	AF50-100	AF50-100 ACROFIL 50X100X3000	4027322	4027354	4027554	42
	AF50-150	AF50-150 ACROFIL 50X150X3000	4027323	4027355	4027555	42
	AF50-200	AF50-200 ACROFIL 50X200X3000	4027324	4027356	4027556	42
	AF50-300	AF50-300 ACROFIL 50X300X3000	4027325	4027357	4027557	42
	AF50-400	AF50-400 ACROFIL 50X400X3000	4027326	4027358	4027558	42
	AF50-450	AF50-450 ACROFIL 50X450X3000	4027327	4027359	4027559	42
	AF50-500	AF50-500 ACROFIL 50X500X3000	4027328	4027360	4027560	42
	AF50-600	AF50-600 ACROFIL 50X600X3000	4027329	4027361	4027561	42
AF100 	AF100-100	AF100-100 ACROFIL 100X100X3000	4027330	4027362	4027562	43
	AF100-200	AF100-200 ACROFIL 100X200X3000	4027331	4027363	4027563	43
	AF100-300	AF100-300 ACROFIL 100X300X3000	4027332	4027364	4027564	43
	AF100-400	AF100-400 ACROFIL 100X400X3000	4027333	4027365	4027565	43
	AF100-500	AF100-500 ACROFIL 100X500X3000	4027335	4027367	4027567	43
	AF100-600	AF100-600 ACROFIL 100X600X3000	4027336	4027368	4027568	43
AF150 	AF150-300	AF150-300 ACROFIL 150X300X3000	4027337	4027369	4027569	44
	AF150-400	AF150-400 ACROFIL 150X400X3000	4027338	4027370	4027570	44
	AF150-600	AF150-600 ACROFIL 150X600X3000	4027339	4027371	4027571	44
CANT. B. 	AF-CANTM-150-HG	AF-CANTM-150-HG CANT. B. MEDIUM 150MM	4027372	4027372	4027572	51
	AF-CANTM-200-HG	AF-CANTM-200-HG CANT. B. MEDIUM 150MM	4027373	4027373	4027573	51
	AF-CANTM-300-HG	AF-CANTM-300-HG CANT. B. MEDIUM 150MM	4027374	4027374	4027574	51
	AF-CANTH-200-HG	AF-CANTH-200-HG CANT. B. HEAVY 200MM	4027375	4027375	4027575	51
	AF-CANTH-300-HG	AF-CANTH-300-HG CANT. B. HEAVY 300MM	4027376	4027376	4027576	51
	AF-CANTH-400-HG	AF-CANTH-400-HG CANT. B. HEAVY 400MM	4027377	4027377	4027577	51
	AF-CANTH-500-HG	AF-CANTH-500-HG CANT. B. HEAVY 500MM	4027378	4027378	4027578	51
	AF-CANTH-600-HG	AF-CANTH-600-HG CANT. B. HEAVY 600MM	4027379	4027379	4027579	51
"HARDWARE, BARS & CLIPS" 	AF-SPLICE	AF-SPLICE SPLICE BAR 225MM	4027456	4027380	4027580	45
	AF-SCLIP	AF-SCLIP SHORT CLIP A2	4027457	4027381	4027581	69
	AF-WCLIP	AF-WCLIP WIDE CLIP A3	4027458	4027382	4027582	69
	AF-BCLIP	AF-BCLIP BOTTOM CLIP A4	4027459	4027383	4027583	69
	AF-TBAR550	AF-TBAR550 CONNECTIONBAR 550MM	4027522	4027446	4027611	45
	AF-TBAR1100	AF-TBAR1100 CONNECTIONBAR 1100	4027460	4027384	4027584	45
	AF-GCLIP	AF-GCLIP GROUNDING CLIP	4027461	4027385	4027585	66
	AF-SPLICE30	AF-SPLICE30 SPLICE FOR AF30	4027465	4027389	4027589	-
	AF-KITCH1	AF-KITCH1 10X (1NUT 1 BOLT 2 CLAMPS)	4027542	4027450	4027615	46
	AF-KITCH2	AF-KITCH2 10X (1NUT 1BOLT 2CLAMPS)	4027543	4027451	4027616	47
	AF-KITCH3	AF-KITCH3 10X (1NUT 1BOLT 1CLAMP)	4027544	4027452	4027617	47
	AF-EG-CBN	AF-EG-CBN CONNECTOR HARDWARE	4027545	4027453	4027618	47
DIVIDER 	AF-DIV30	AF-DIV30 DIVIDER 30MMX3M	4027462	4027386	4027586	-
	AF-DIV50	AF-DIV50 DIVIDER 50MMX3M	4027463	4027387	4027587	57
	AF-DIV100	AF-DIV100 DIVIDER 100MMX3M	4027464	4027388	4027588	57

Part	Short Name	Description	Part No. Standard	Part No. HDG	Part No. SS	Page No.
BRACKET 	AF-B50	AF-B50 AF1-50 BRACKET	4027466	4027390	4027590	–
	AF-JBOX	AF-JBOX BRACKET 50MM	4027467	4027391	4027591	59
	AF-HGR-50	AF-HGR-50 HANGER 50MM WIDE	4027474	–	–	52
	AF-WB-50	AF-WB-50 WALL BRACKET 50MM	4027480	4027404	4027599	–
	AF-HGR-100	AF-HGR-100 HANGER 100MM WIDE	4027484	–	–	52
	AF-LIGHTB	AF-LIGHTB LIGHTING BRACKET	4027490	4027414	4027602	59
ZED 	AF-ZED-100	AF-ZED-100 ZED SUPPORT 100MM	4027491	4027415	4027603	SP
	AF-ZED-150	AF-ZED-150 ZED SUPPORT 150MM	4027492	4027416	4027604	SP
	AF-ZED-200	AF-ZED-200 ZED SUPPORT 200MM	4027470	4027394	4027594	SP
	AF-ZED-400	AF-ZED-400 ZED SUPPORT 400MM	4027471	4027395	4027595	SP
	AF-ZED-3M	AF-ZED-3M ZED SUPPORT 3000MM	4027472	4027396	4027596	51
WALL CLIP 	AF-CPA-100	AF-CPA-100 CPA WALL B. 100MM	4027475	4027399	–	50
	AF-CPA-150	AF-CPA-150 CPA WALL B. 150MM	4027476	4027400	–	50
	AF-CPA-200	AF-CPA-200 CPA WALL B. 200MM	4027477	4027401	–	50
	AF-CPA-300	AF-CPA-300 CPA WALL B. 300MM	4027478	4027402		50
	AF-CPA-400	AF-CPA-400 CPA WALL B. 400MM	4027479	4027403	–	50
CEILING CLIP 	AF-CCA-100	AF-CCA-100 CEILING CLIP 100	4027485	4027409	–	50
	AF-CCA-150	AF-CCA-150 CEILING CLIP 150	4027486	4027410	–	50
	AF-CCA-200	AF-CCA-200 CEILING CLIP 200	4027487	4027411	–	50
	AF-CCA-300	AF-CCA-300 CEILING CLIP 300	4027488	4027412	–	50
	AF-CCA-400	AF-CCA-400 CEILING CLIP 400	4027489	4027413	–	50
PENDANT 	AF-PPA-150	AF-PPA-150 PENDANT CPA H150	4027493	4027417	–	50
	AF-PPA-250	AF-PPA-250 PENDANT CPA H250	4027494	4027418	–	50
	AF-PPA-350	AF-PPA-350 PENDANT CPA H350	4027495	4027419	–	50
	AF-PPA-450	AF-PPA-450 PENDANT CPA H450	4027496	4027420	–	50
	AF-PPA-550	AF-PPA-550 PENDANT CPA H550	4027497	4027421	–	50
	AF-PPA-650	AF-PPA-650 PENDANT CPA H650	4027498	4027422	–	50
BRACKET 	AF-CMA-100	AF-CMA-100 CMA BRACKET 100MM	4027500	4027424	4027605	55
	AF-CMA-150	AF-CMA-150 CMA BRACKET 150MM	4027501	4027425	4027606	55
	AF-CMA-200	AF-CMA-200 CMA BRACKET 200MM	4027502	4027426	4027607	55
	AF-CMA-300	AF-CMA-300 CMA BRACKET 300MM	4027503	4027427	4027608	55
	AF-CMA-400	AF-CMA-400 CMA BRACKET 400MM	4027504	4027428	4027609	55
DROP-OUT 	AF-UNI-DO	AF-UNI-DO DROP OUT UNIVERSAL	4027505	4027429	–	57
	AF-100-DO	AF-100-DO DROP OUT 100MM	4027506	4027430	–	57
	AF-150-DO	AF-150-DO DROP OUT 150MM	4027473	4027397	–	57
	AF-200-DO	AF-200-DO DROP OUT 200MM	4027507	4027431	–	57
	AF-300-DO	AF-300-DO DROP OUT 300MM	4027508	4027432	–	57
	AF-400-DO	AF-400-DO DROP OUT 400MM	4027509	4027433	–	57
	AF-500-DO	AF-500-DO DROP OUT 500MM	4027510	4027434	–	57
	AF-600-DO	AF-600-DO DROP OUT 600MM	4027511	4027435	–	57

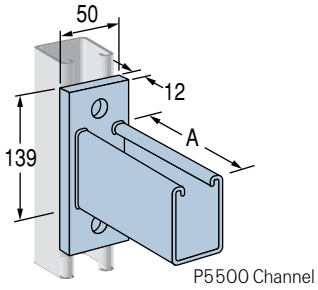
Part	Short Name	Description	Part No. Standard	Part No. HDG	Part No. SS	Page No.
COVER 	AF-CVR50	AF-CVR50 COVER 50MM	4027512	4027436	–	57
	AF-CVR100	AF-CVR100 COVER 100MM	4027513	4027437	–	57
	AF-CVR150	AF-CVR150 COVER 150MM	4027514	4027438	–	57
	AF-CVR200	AF-CVR200 COVER 200MM	4027515	4027439	–	57
	AF-CVR300	AF-CVR300 COVER 300MM	4027516	4027440	–	57
	AF-CVR400	AF-CVR400 COVER 400MM	4027517	4027441	–	57
	AF-CVR500	AF-CVR500 COVER 500MM	4027518	4027442	–	57
	AF-CVR600	AF-CVR600 COVER 600MM	4027519	4027443	–	57
	AF-CVR450	AF-CVR450 COVER 450MM	4027520	4027444	–	57
BLIND END 	AF-BE-50-100	AF-BE-50-100 BLIND END 50x100	4027523	–	–	58
	AF-BE-50-150	AF-BE-50-150 BLIND END 50x150	4027524	–	–	58
	AF-BE-50-200	AF-BE-50-200 BLIND END 50x200	4027525	–	–	58
	AF-BE-50-300	AF-BE-50-300 BLIND END 50x300	4027526	–	–	58
	AF-BE-50-400	AF-BE-50-400 BLIND END 50x400	4027527	–	–	58
	AF-BE-50-450	AF-BE-50-450 BLIND END 50x450	4027528	–	–	58
	AF-BE-50-500	AF-BE-50-500 BLIND END 50x500	4027529	–	–	58
	AF-BE-50-600	AF-BE-50-600 BLIND END 50x600	4027530	–	–	58
	AF-BE-100-100	AF-BE-100-100 BLIND END 100X100	4027531	–	–	58
	AF-BE-100-150	AF-BE-100-150 BLIND END 100X150	4027532	–	–	58
	AF-BE-100-200	AF-BE-100-200 BLIND END 100X200	4027533	–	–	58
	AF-BE-100-300	AF-BE-100-300 BLIND END 100X300	4027534	–	–	58
	AF-BE-100-400	AF-BE-100-400 BLIND END 100X400	4027535	–	–	58
	AF-BE-100-500	AF-BE-100-500 BLIND END 100X500	4027537	–	–	58
	AF-BE-100-600	AF-BE-100-600 BLIND END 100X600	4027538	–	–	58
RAIL SUPPORT 	AF-HSB-3M	AF-HSB-3M STRUT SUPPORT M8 3M	4027539	4027447	4027612	48
	AF-MSB-3M	AF-MSB-3M STRUT SUPPORT M8 3M	4027540	4027448	4027613	48
	AF-USB-3M	AF-USB-3M U SUPPORT M8 3M	4027499	4027423	–	48
ROD FIXING 	AF-SIDECLIPM10	AF-SIDECLIPM10 SIDE CLIP M10	4027541	4027449	4027614	49
	AF-SIDECLIPM8	AF-SIDECLIPM8 HANGING CLIP M8	4027468	4027392	4027592	49
	AF-RODCLIP1	AF-RODCLIP1 ROD CLIP 50-150	4027469	4027393	4027593	49
	AF-RODCLIP2	AF-RODCLIP2 ROD CLIP 200-300	4027483	4027407	4027600	49
HANGING BRACKET 	AF-CB-USB	AF-CB-USB HANGING BKT FOR U	4027481	4027405	–	54
	AF-AB-USB	AF-AB-USB ARM HANGING B.	4027482	4027406	–	54
	AF-AB-HSB	AF-AB-HSB HEAVY HANGING BKT	4027521	4027445	4027610	54
CUT TOOL 	AF-CUTTOOL	AF-CUTTOOL CUT TOOL	4027619	–	–	60

P2663 [HG/SS]



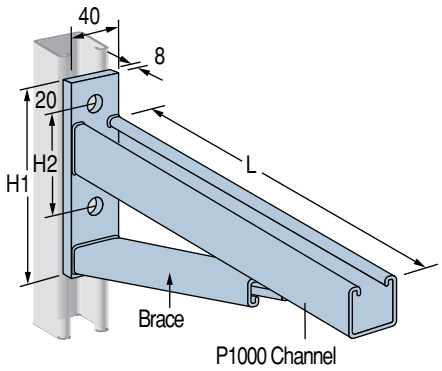
Length "L"	Design Uniform Load kN	Mass kg/100	Part No.
250	3.01	102	**P2663250**
400	1.88	143	**P2663400**
550	1.36	186	**P2663550**
700	1.06	229	**P2663700**

P5663 [HG]



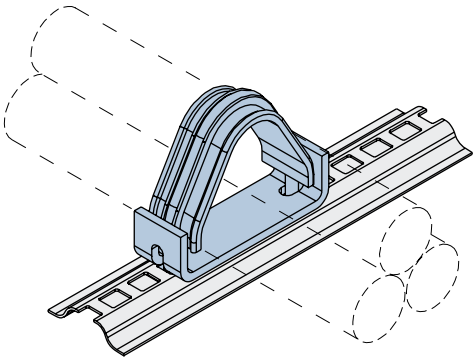
Length "A"	Design Uniform Load kN	Mass kg/100	Part No.
300	6.93	173	**P5663300**
450	4.78	224	**P5663450**
600	3.62	276	**P5663600**
750	2.91	327	**P5663750**

PCL Series {HG/SS]



Length "L"	"H1"	"H2"	Design Uniform Load kN	Mass kg/100	Part No.
320	165	86	4.47	170	**PCL150**
470	165	86	3.17	230	**PCL300**
635	215	112	3.33	340	**PCL450**
780	215	112	2.80	380	**PCL600**

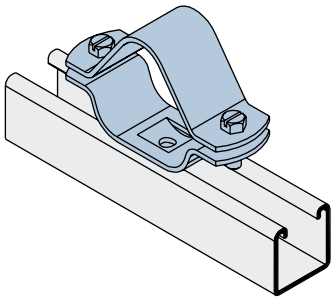
TC Series - Trifoil [HG]

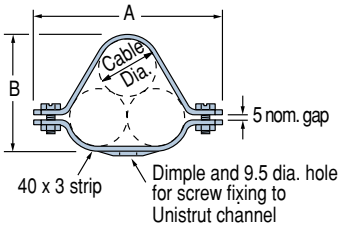


Cable Dia.	Mass kg/100	Part No.
57 - 63	71.2	**TC0**
51 - 57	66.4	**TC1**
45 - 51	59.7	**TC2**
40 - 45	54.8	**TC3**
39 - 40	55.6	**TC3L**
34.5 - 39	50.1	**TC4**
32.5 - 34.5	50.7	**TC4L**
29 - 32.5	45.0	**TC5**
26.5 - 29	45.5	**TC5L**
24 - 26.5	38.8	**TC6**
22 - 24	39.3	**TC6L**

"L" denotes clamp with neoprene liner across base.

TF Series - Trifoil [ZP]





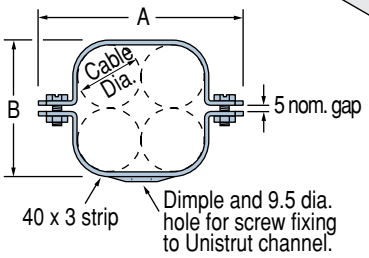
Cable Dia.	Dim. A	Dim. B	Part No.
20	92	43	**TF20**
22	96	47	**TF22**
24	100	51	**TF24**
27	106	56	**TF27**
30	112	62	**TF30**
33	118	68	**TF33**
37	126	75	**TF37**
41	134	83	**TF41**
45	142	90	**TF45**

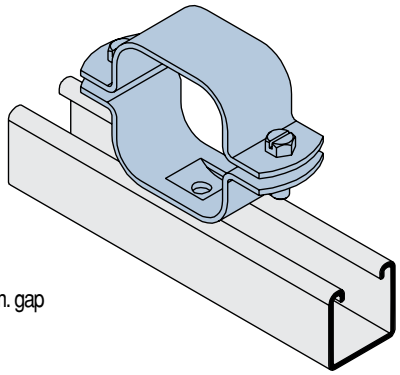
Specifically designed for fixing directly to Unistrut channels.

QF Series Quadfoil [ZP]

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**

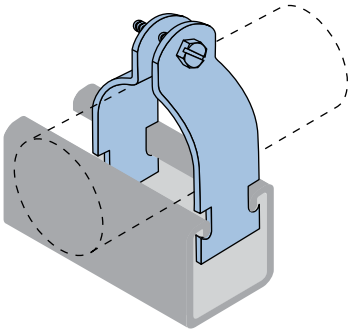
Specifically designed for fixing directly to Unistrut channels.





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

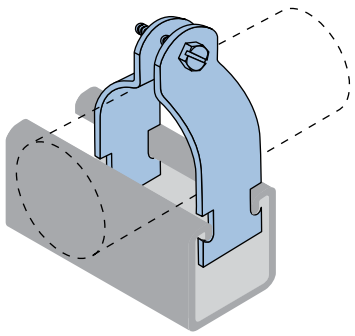


Slotted hex head screw and nut included

Sheathed Cable Clamp

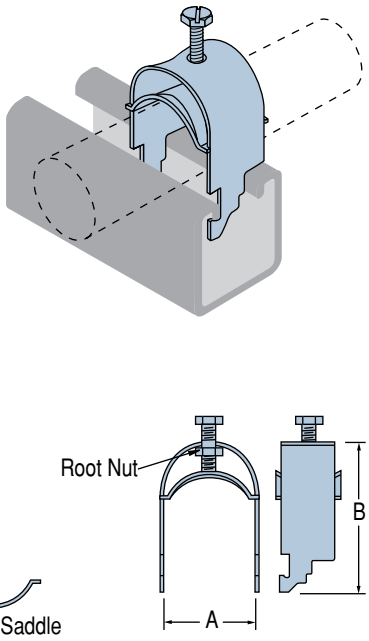
Part No	Sheathed Cable O.D	Mass Kg/100
P2024	8	3.6
P2025	11	3.6
P2026	14	4.1
P2027	17	4.5
P2028	19	5.0
P2029	22	5.4
P2030	25	6.4
P2031	29	6.8
P2032	32	7.3
P2033	35	7.7
P2034	38	8.2
P2035	43	8.6
P2036	44	10.6
P2037	49	12.7

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
2052	95	26.3
P2055	105	28.1



Slotted hex head screw and nut included

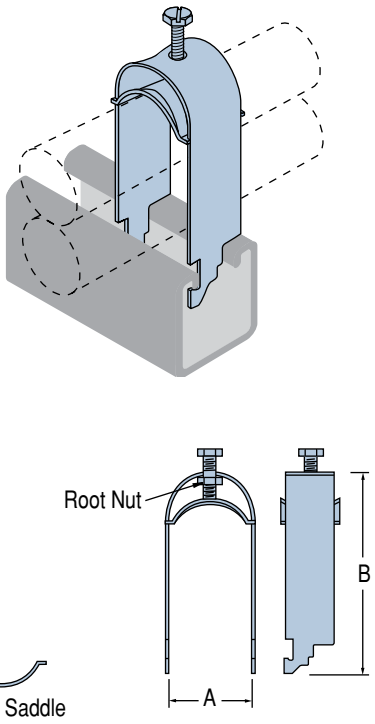
KS2026-1 Series – Single Cable Clamp



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

Note: Bottom Saddle if required can be ordered separately

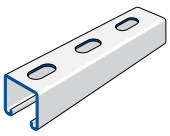
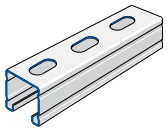
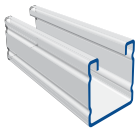
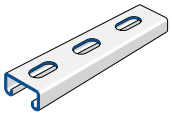
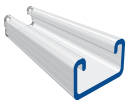
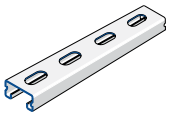
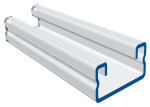
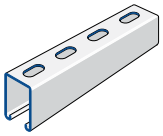
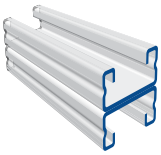
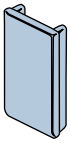
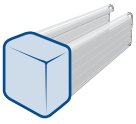
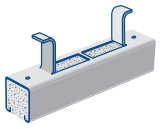
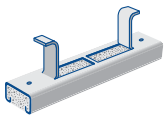
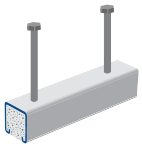
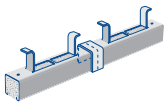
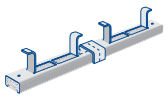
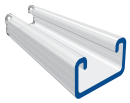
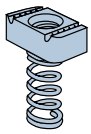
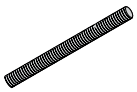
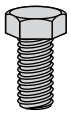
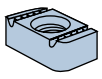
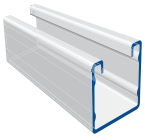
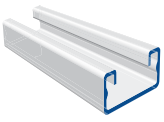
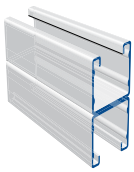
KS2026-2 Series – Double Cable Clamp



Part No.	Cable Dia.	Dim. A	Dim. B	Mass Kg/100
KS2026-2	13	16	64	6.1
KS2028-2	19	22	76	7.5
KS2030-2	25	29	91	9.0
KS2032-2	32	35	102	9.7
KS2034-2	38	44	118	18.2
KS2036-2	44	51	128	20.2
KS2038-2	51	57	143	22.8
KS2040-2	57	64	156	26.0
KS2042-2	64	70	170	28.0
KS2044-2	70	76	185	31.6
KS2046-2	76	83	198	33.6

Note: Bottom Saddle if required can be ordered separately

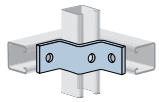
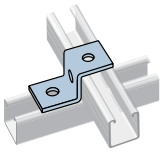
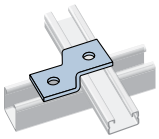
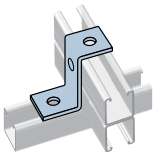
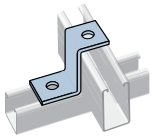
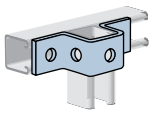
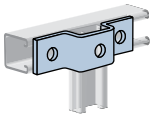
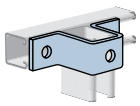
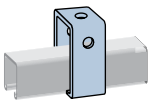
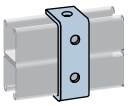
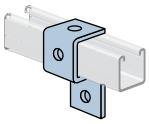
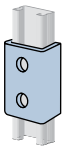
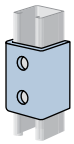
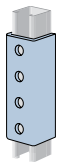
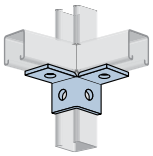
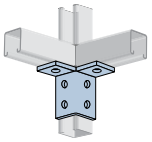
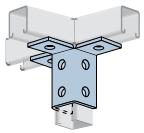
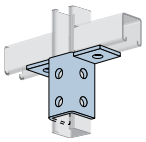
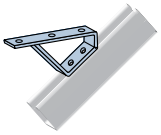
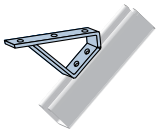
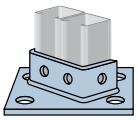
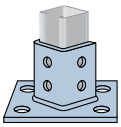
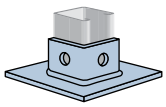
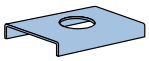
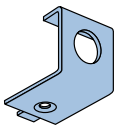
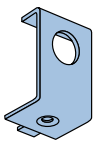
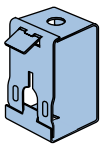
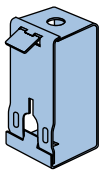
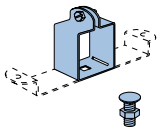
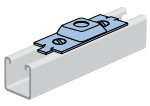
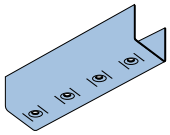
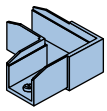
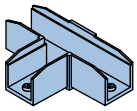
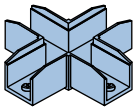
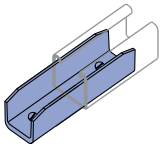
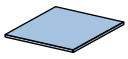
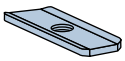
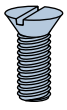
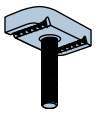
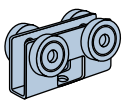
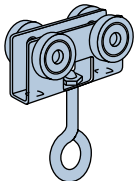
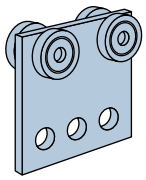
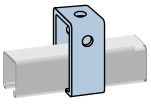
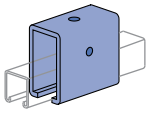
Unistrut System - Channel

 P1000T [GB/HG] pg. 84	 P1000 [GB/HG] pg. 84	 P2000T [GB/HG] pg. 85	 P2000 [GB/HG] pg. 85	 P3300T [GB/HG] pg. 86	 P3300 [GB/HG] pg. 86	 P4000T [GB/HG] pg. 87
 P4000 [GB/HG] pg. 87	 P5500T [GB/HG] pg. 88	 P5500 [GB/HG] pg. 88	 P1001 [GB/HG] pg. 89	 P2001 [GB/HG] pg. 89	 P3301 [GB/HG] pg. 90	 P4001 [GB/HG] pg. 90
 P5501 [GB/HG] pg. 91	 P1184 – Plastic Closure Strip pg. 92	 P1184A – Aluminum Closure Strip pg. 92	 P2240 pg. 92	 P4240 pg. 92	 P5580 pg. 92	 P2860-10 – Channel End Caps – Plastic pg. 92
 P1000CI pg. 94	 P3300CI pg. 94	 P3753 Heavy Duty Insert pg. 94	 P1663 CI Joint Cover pg. 94	 P4663 CI Joint Cover pg. 94	 P1000-SS Stainless Steel pg. 95	 P3300-SS Stainless Steel pg. 95
 Unistrut Channel Nuts Stainless Steel pg. 95	 UNIROD Stainless Steel pg. 95	 Hex Head Set Screw Stainless Steel pg. 95	 Hexagon Nuts Stainless Steel pg. 95	 Channels, With Springs Stainless Steel pg. 95	 Channel Nuts Without Springs Stainless Steel pg. 95	 P2000-AL Aluminum pg. 96
 P4000-AL Aluminum pg. 96	 P2001-AL Aluminum pg. 96	 P4001-AL Aluminum pg. 96	 P1184A - CLOSURE STRIP Aluminum pg. 96	 P2240 & 4240 - End Caps Aluminum pg. 96		

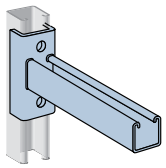
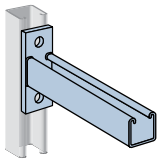
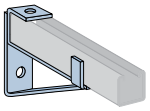
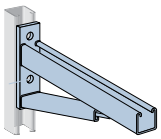
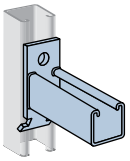
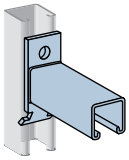
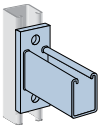
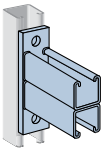
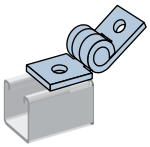
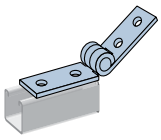
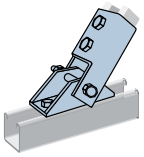
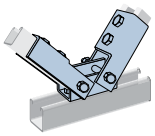
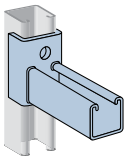
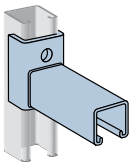
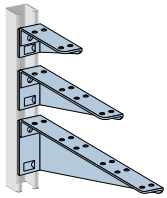
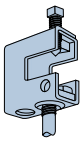
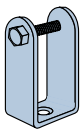
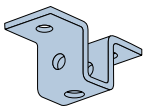
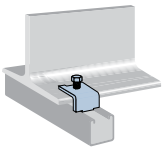
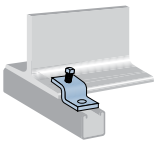
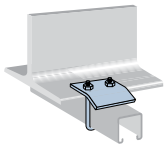
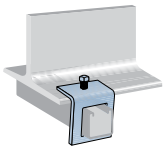
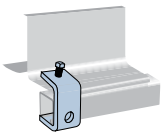
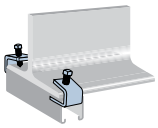
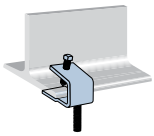
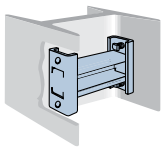
Unistrut System - Nuts & Bolts

Unistrut System - Fittings

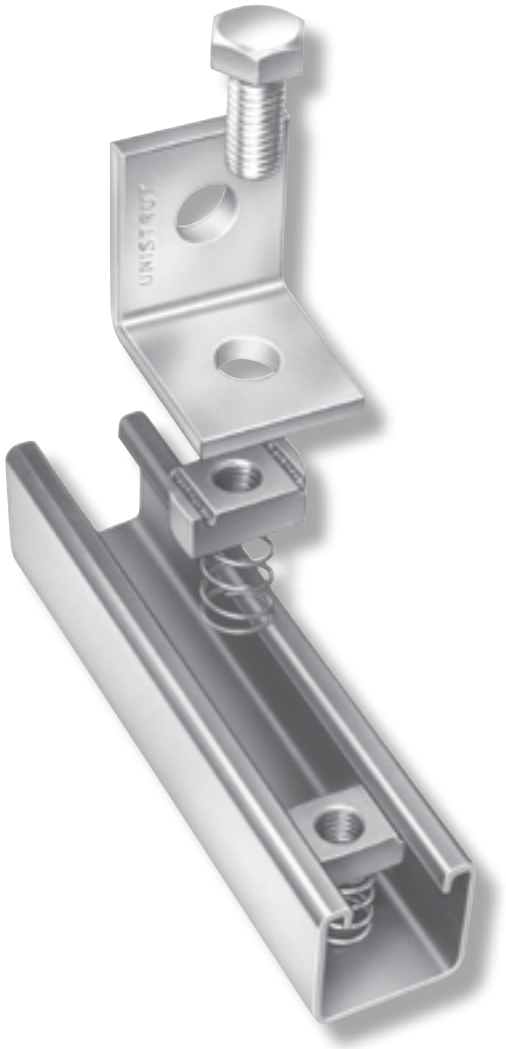
Unistrut System - Fittings (Cont.)

 P1736 pg. 101	 P1045 pg. 101	 P4045 pg. 102	 P1453 pg. 102	 P5545 pg. 102	 P1047 pg. 102	 P4047 pg. 102
 P5547 pg. 102	 P1834 pg. 102	 P1044 pg. 102	 P1046 pg. 102	 P4376 pg. 102	 P1376 pg. 102	 P1377 pg. 102
 P2223 pg. 103	 P2224 pg. 103	 P2228 pg. 103	 P2346 pg. 103	 P2655 pg. 103	 P1944 pg. 103	 P2073 pg. 103
 P2072A pg. 103	 P2072S1 pg. 103	 P2541 - Spacer Clevis pg. 104	 P2521 - Conduit End Connector pg. 104	 P5521 - Conduit End Connector pg. 104	 P2855 pg. 104	 P2755 pg. 104
 P2539 - Fixture Hanger Fitting pg. 104	 P2535 - Conduit Hanger Fitting pg. 104	 P2377 - Splice Fitting pg. 105	 P2902 Two Way pg. 105	 P2901 Three Way pg. 105	 P2903 Four Way pg. 105	 P2900 One Way pg. 105
 P2552 –Wire Retainer [FIbre] pg. 105	 P3016 - Trunking Nuts pg. 106	 Countersunk Head Screw pg. 106	 P3116 - Fixture Stud Nut pg. 106	 SHS0620 - Slotted Hex Head Screw pg. 106	 P2749 pg. 107	 P2750 pg. 107
 P2751 pg. 107	 P2950 pg. 107	 P1834 – Trolley Support pg. 107	 P1834A – Trolley Support pg. 107			

Unistrut System - Brackets & Beam Clamps

 P2233 & P2234 pg. 108	 P2663-250 to P2663-700 pg. 108	 P1075-8 pg. 108	 PCL150 to PCL600 pg. 108	 P2513 thru P2516 pg. 109	 P2513A thru P2516A pg. 109	 P5663-300 thru P5663-750 pg. 109
 P2542 thru P2546 pg. 109	 P1843 pg. 110	 P1354 pg. 110	 P2815 pg. 110	 P2815D pg. 110	 P2231 & P2232 pg. 110	 P2231A & P2232A pg. 110
 P2491R-L thru P2500R-L pg. 110	 P2676 pg. 111	 P2679 - Swivel Nut pg. 111	 P2677 pg. 111	 P2682 pg. 111	 P1386 pg. 111	 P1379 pg. 111
 P2785 & P2786 pg. 112	 P1796 pg. 112	 P1271 pg. 112	 P1272 pg. 112	 P1270 pg. 112	 P3087 pg. 112	

ADJUSTABLE, DEMOUNTABLE, REUSABLE



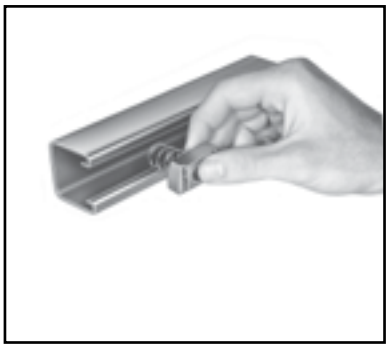
LOOK FOR THESE FEATURES:

Large chamfer in the nut eases starting of bolt.

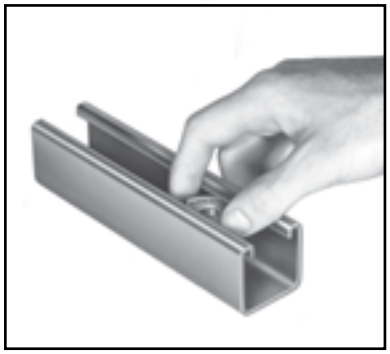
Special shaped inturned edges and tapered, serrated grooves produce strong vice-like grip between channel and nut.

- Channel edges and nut's tapered grooves act as guides to provide positive alignment of connection.
- Nut teeth grip the channel's inturned edges, tying the channel sides together in a "box" conflguration for added strength.
- Longitudinal movement of nut is resisted as hardened teeth bite into the inturned edges.

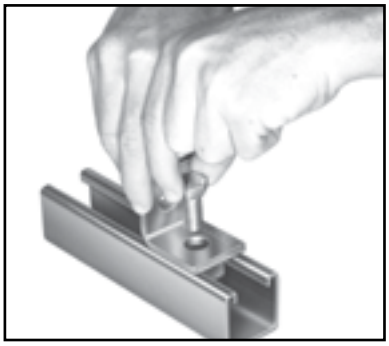
Spring allows precision placement anywhere along channel length, then holds nut in position while connection is completed - the installer's "third hand".



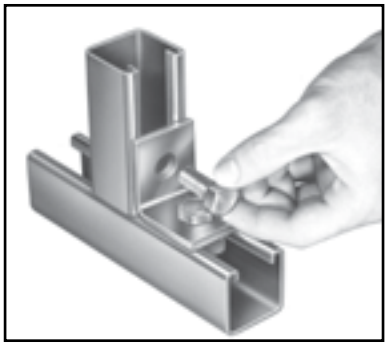
Spring nut is inserted anywhere along continuous slot. Rounded nut ends permit easy insertion.



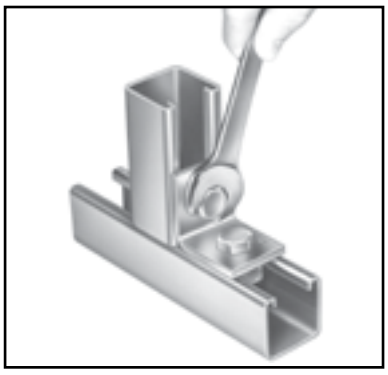
A 90° turn positions the serrated grooves in the nut with the inturned edges of the channel.



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



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



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

FRAMING MEMBERS

Channels and continuous inserts are accurately and carefully cold formed to size from low carbon strip steel. The channel 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.

CHANNEL 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 channel and to prevent any further turning of the nut. Two serrated grooves in the top of the nut engage the inturned edges of the channel 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 Channel members are accurately and carefully rolled from strip steel to AS1594 and AS1365. Spot-welded combination members are welded 75mm (maximum) on centre. Some members may require fillet welding.

Standard Lengths

Standard lengths of the above channels are 5.8m. Facilities are available to cut standard lengths into any special lengths for a small cutting charge.

Section Shape

The roll forming process used by UNISTRUT AUSTRALIA produces a consistant channel within the manufacturing tolerance allowed . The process includes stresses within the section itself which we are released when the channel is cut. This creates a common condition known as “Bellmouth” where the section deforms slightly for a small distance in from the end.

FINISHES

All channels are available in Plain, Hot Dipped Galvanised, Galvabond, Zinc Plated and Polyester finishes.

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

Galvabond Channel - Input material is supplied by the steel mill generally in accordance with AS1397 having a coating class of Z275. The material is slit to width and roll formed to shape.

Powder Coated - Channel 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.

Hot Dipped 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 - Channel, fittings and components are electroplated generally in accordance with AS1789. Fasteners are electroplated generally in accordance with AS1897 Service Condition 1.

Stainless Steel - Unistrut stainless steel channel 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 aluminium channels 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.

We reserve the right to make specification changes without notice in the interest of improving our products.

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 Fy has been taken as 210MPa for plain channels, 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/NZS4600:1996. 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.

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:

$$\delta_2 = (W2 / W1) \times (L2 / L1)^3 \times \delta_1$$

where:

W1 = tabulated load in kN
δ_1 = corresponding tabulated deflection in mm
L1 = corresponding tabulated length in mm
W2 = new load
L2 = new length
δ_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 Australia Pty Limited 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: $\delta_2 = 0.80 \times \delta_1$ where δ_1 is the deflection for a uniform load which is double the value of the point load.

ABBREVIATIONS

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

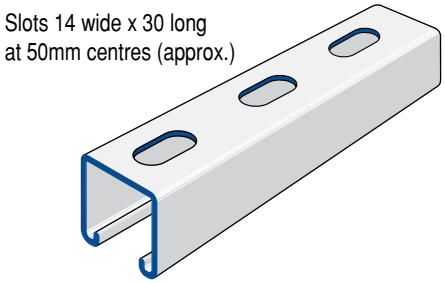
FINISHES:

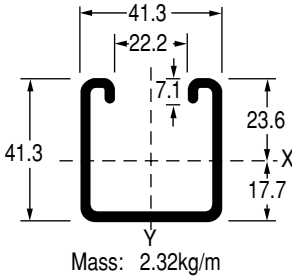
AL Aluminium
GB Galvabond
HG Hot Dipped Galvanised
MG Mechanically Galvanised
PL Plain
PVC Plastic
SS Stainless Steel
ZP Zinc Plated
ZA Zinc Plated Chromate

MEASUREMENT:

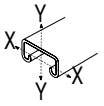
m metre
mm Millimetre
kg Kilogram

P1000T [GB/HG]





Mass: 2.32kg/m



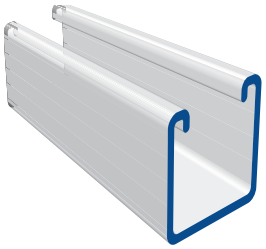
A	=	295mm^2
kg/m	=	2.32kg/m
I x-x	=	0.059 10^{6}mm^4
Z x-x	=	2.698 10^{3}mm^3
r x-x	=	14.1mm
I y-y	=	0.091 10^{6}mm^4
Z y-y	=	4.423 10^{3}mm^3
r y-y	=	17.6mm

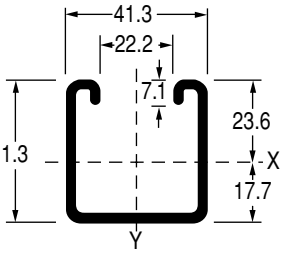
L (mm)	Fmax (kN) F	fmax (mm) f	F(kN)
250	13.35	0.20	40.96
500	6.68	0.78	33.16
750	4.45	1.77	25.40
1000	3.34	3.15	19.30
1250	2.67	4.91	14.78
1500	2.22	7.08	11.88
1750	1.91 (2)	9.64	9.90
2000	1.66 (2)	12.59	8.41
2250	1.48 (2)	15.93	7.24
2500	1.33 (2)	19.66	6.31
2750	1.21 (2)	23.80	5.53
3000	1.12 (2)	28.32	-

(2) See Note 2, Page 83

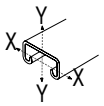
Part No.	Material Thickness	Length
P1000T-GB	2.5mm	5.8m
P10003T-GB	2.5mm	3m
P1000T-HG	2.5mm	5.8m
P10003T-HG	2.5mm	3m

P1000 [GB/HG]





Mass: 2.61kg/m



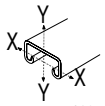
A	=	330mm^2
kg/m	=	2.66 kg/m
I x-x	=	0.069 10^{6}mm^4
Z x-x	=	2.920 10^{3}mm^3
r x-x	=	14.5mm
I y-y	=	0.092 10^{6}mm^4
Z y-y	=	4.451 10^{3}mm^3
r y-y	=	16.7mm

L (mm)	Fmax (kN) F	fmax (mm) f	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	-

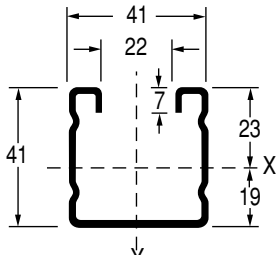
(2) See Note 2, Page 83

Part No.	Material Thickness	Length
P1000-GB	2.5mm	5.8m
P10003-GB	2.5mm	3m
P1000-HG	2.5mm	5.8m
P10003-HG	2.5mm	3m

P2000T [GB/HG]

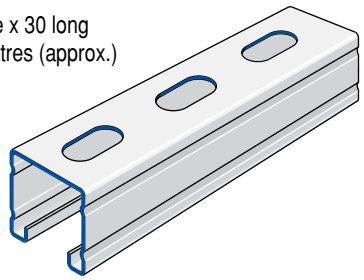


A	=	206mm^2
kg/m	=	1.62kg/m
I x-x	=	0.045 10^{6}mm^4
Z x-x	=	2.136 10^{3}mm^3
r x-x	=	14.7mm
I y-y	=	0.065 10^{6}mm^4
Z y-y	=	3.125 10^{3}mm^3
r y-y	=	17.7mm



Mass: 1.62kg/m

Slots 14 wide x 30 long
at 50mm centres (approx.)

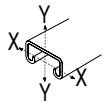


Part No.	Material Thickness	Length
P2000T-GB	1.6mm	5.8m
P20003T-GB	1.6mm	3m
P2000T-HG	1.6mm	5.8m
P20003T-HG	1.6mm	3m

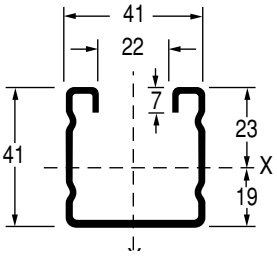
L (mm)	Fmax (kN) F	fmax (mm)	F(kN)
250	9.27	0.18	29.63
500	5.45	0.85	23.90
750	3.64	1.91	17.29
1000	2.73	3.39	11.62
1250	2.18	5.30	8.13
1500	1.82	7.63	6.20
1750	1.56 (2)	10.39	5.00
2000	1.14 (2)	7.57	4.91
2250	1.22 (2)	17.16	3.62
2500	1.09 (2)	21.20	3.18
2750	0.99 (2)	25.64	2.83
3000	0.91 (2)	30.52	2.54

(2) See Note 2, Page 83

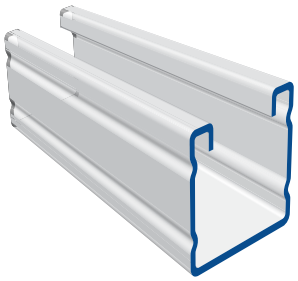
P2000 [GB/HG]



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



Mass: 1.79kg/m

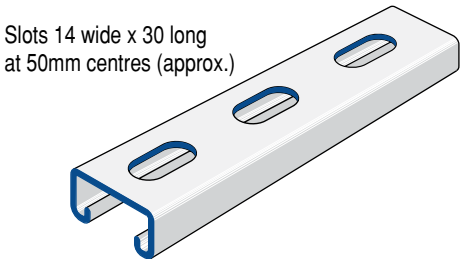


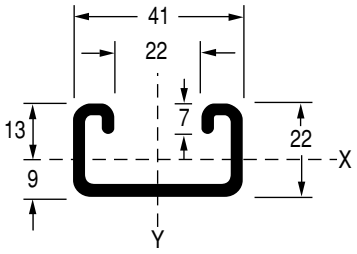
Part No.	Material Thickness	Length
P2000-GB	1.6mm	5.8m
P20003-GB	1.6mm	3m
P2000-HG	1.6mm	5.8m
P20003-HG	1.6mm	3m

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

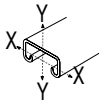
(2) See Note 2, Page 83

P3300T [GB/HG]





Mass: 1.55kg/m



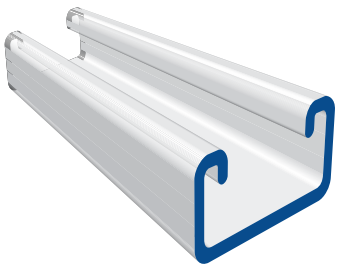
A	=	197mm^2
kg/m	=	1.55kg/m
I x-x	=	0.011 10^{6}mm^4
Z x-x	=	0.912 10^{3}mm^3
r x-x	=	7.5mm
I y-y	=	0.054 10^{6}mm^4
Z y-y	=	2.634 10^{3}mm^3
r y-y	=	16.6mm

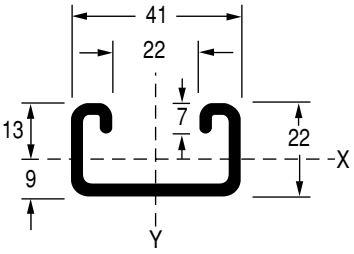
L (mm)	Fmax (kN) F / f	fmax (mm)	F(kN)
250	4.97	0.38	31.39
500	2.48	1.51	24.98
750	1.66	3.41	17.48
1000	1.24	6.07	10.87
1250	0.99	9.48	7.11
1500	0.83	13.64	5.00
1750	0.71 (2)	18.57	-
2000	0.62 (2)	24.26	-
2250	0.55 (2)	30.70	-
2500	0.50 (2)	37.90	-
2750	0.45 (2)	45.86	-
3000	0.41 (2)	54.57	-

Part No.	Material Thickness	Length
P3300T-GB	2.5mm	5.8m
P33003T-GB	2.5mm	3m
P3300T-HG	2.5mm	5.8m
P33003T-HG	2.5mm	3m

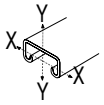
(2) See Note 2, Page 83

P3300 [GB/HG]





Mass: 1.88kg/m



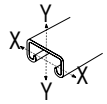
A	=	232mm^2
kg/m	=	1.88 kg/m
I x-x	=	0.013 10^{6}mm^4
Z x-x	=	0.999 10^{3}mm^3
r x-x	=	7.6mm
I y-y	=	0.055 10^{6}mm^4
Z y-y	=	2.661 10^{3}mm^3
r y-y	=	15.4mm

L (mm)	Fmax (kN) F / 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	-

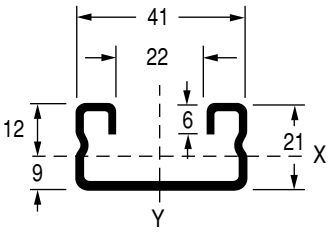
Part No.	Material Thickness	Length
P3300-GB	2.5mm	5.8m
P33003-GB	2.5mm	3m
P3300-HG	2.5mm	5.8m
P33003-HG	2.5mm	3m

(2) See Note 2, Page 83

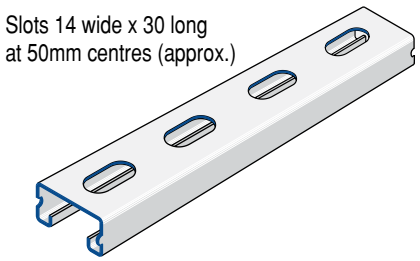
P4000T [GB/HG]



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



Mass: 1.08kg/m

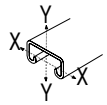


Part No.	Material Thickness	Length
P4000T-GB	1.6mm	5.8m
P40003T-GB	1.6mm	3m
P4000T-HG	1.6mm	5.8m
P40003T-HG	1.6mm	3m

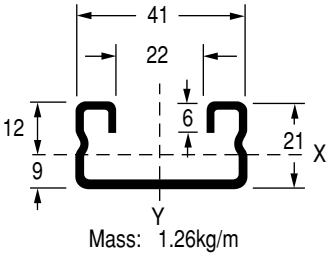
L (mm)	Fmax (kN) F	fmax (mm) f	F(kN)
250	3.78	0.40	20.12
500	1.89	1.59	14.67
750	1.26	3.58	9.41
1000	0.95	6.37	5.89
1250	0.76	9.96	4.09
1500	0.63 (2)	14.35	3.02
1750	0.54 (2)	19.52	-
2000	0.47 (2)	25.50	-
2250	0.42 (2)	32.27	-
2500	0.38 (2)	39.84	-
2750	0.34 (2)	48.21	-
3000	0.32 (2)	57.21	-

(2) See Note 2, Page 83

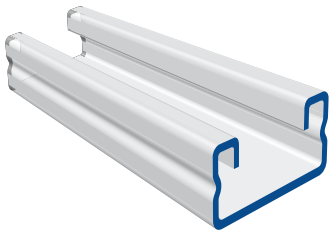
P4000 [GB/HG]



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



Mass: 1.26kg/m



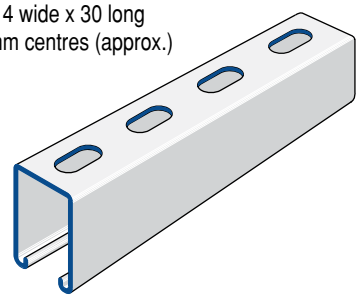
Part No.	Material Thickness	Length
P4000-GB	1.6mm	5.8m
P40003-GB	1.6mm	3m
P4000-HG	1.6mm	5.8m
P40003-HG	1.6mm	3m

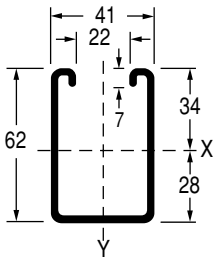
L (mm)	Fmax (kN) F	fmax (mm) f	F(kN)
250	4.20	0.44	22.36
500	2.10	1.77	16.30
750	1.40	3.98	10.46
1000	1.05	7.08	6.54
1250	0.84	11.07	4.54
1500	0.70 (2)	15.94	3.35
1750	0.60 (2)	21.69	-
2000	0.52 (2)	28.33	-
2250	0.47 (2)	35.86	-
2500	0.42 (2)	44.27	-
2750	0.38 (2)	53.57	-
3000	0.35 (2)	63.57	-

(2) See Note 2, Page 83

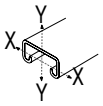
P5500T [GB/HG]

Slots 14 wide x 30 long
at 50mm centres (approx.)





Mass: 3.12kg/m



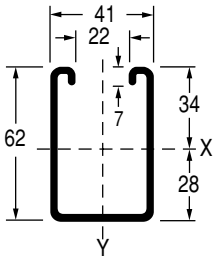
A	=	398mm^2
kg/m	=	3.12kg/m
I x-x	=	0.170 10^{6}mm^4
Z x-x	=	5.322 10^{3}mm^3
r x-x	=	20.7mm
I y-y	=	0.130 10^{6}mm^4
Z y-y	=	6.300 10^{3}mm^3
r y-y	=	18.1mm

L (mm)	Fmax (kN) (F, 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

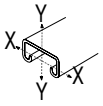
(2) See Note 2, Page 83

Part No.	Material Thickness	Length
P5500T-GB	2.5mm	5.8m
P55003T-GB	2.5mm	3m
P5500T-HG	2.5mm	5.8m
P55003T-HG	2.5mm	3m

P5500 [GB/HG]



Mass: 3.43kg/m



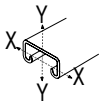
A	=	433mm^2
kg/m	=	3.43 kg/m
I x-x	=	0.197 10^{6}mm^4
Z x-x	=	5.730 10^{3}mm^3
r x-x	=	21.3mm
I y-y	=	0.131 10^{6}mm^4
Z y-y	=	6.328 10^{3}mm^3
r y-y	=	17.4mm

L (mm)	Fmax (kN) (F, 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	9.89
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

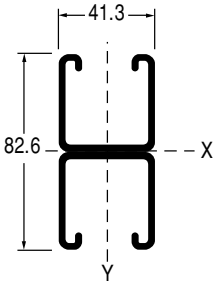
(2) See Note 2, Page 83

Part No.	Material Thickness	Length
P5500-GB	2.5mm	5.8m
P55003-GB	2.5mm	3m
P5500-HG	2.5mm	5.8m
P55003-HG	2.5mm	3m

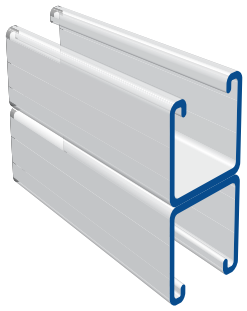
P1001 [GB/HG]



A = 660mm^2
kg/m = 5.22kg/m
I x-x = 0.318 10^6mm^4
Z x-x = 7.711 10^3mm^3
r x-x = 22.0mm
I y-y = 0.184 10^6mm^4
Z y-y = 8.902 10^3mm^3
r y-y = 16.7mm



Mass: 5.22kg/m

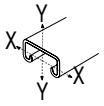


Part No.	Material Thickness	Length
P1001-GB	2.5mm	5.8m
P1001-HG	2.5mm	5.8m

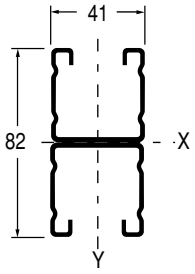
L (mm)	Fmax (kN)	fmax (mm)	F(kN)
250	25.64 (1)	0.08	97.71
500	19.58	0.50	94.09
750	13.06	1.13	88.35
1000	9.79	2.00	80.90
1250	7.83	3.13	72.23
1500	6.53	4.50	62.89
1750	5.60 (2)	6.13	53.40
2000	4.90 (2)	8.01	44.21
2250	4.35 (2)	10.13	35.62
2500	3.92 (2)	12.51	28.85
2750	3.56 (2)	15.14	23.85
3000	3.26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

(1) See Note 1, Page 83 ,(2) See Note 2, Page 83

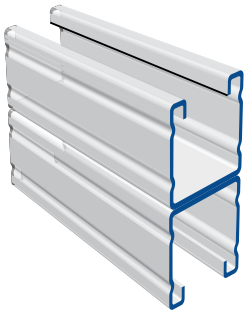
P2001 [GB/HG]



A = 462mm^2
kg/m = 3.58 kg/m
I x-x = 0.261 10^6mm^4
Z x-x = 6.321 10^3mm^3
r x-x = 23.8mm
I y-y = 0.131 10^6mm^4
Z y-y = 6.367 10^3mm^3
r y-y = 16.9mm



Mass: 3.58kg/m

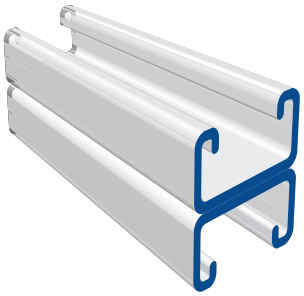


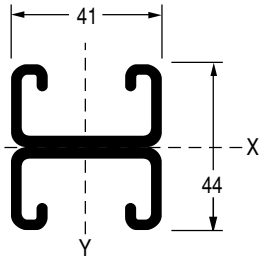
Part No.	Material Thickness	Length
P2001-GB	1.6mm	5.8m
P2001-HG	1.6mm	5.8m

L (mm)	Fmax (kN)	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

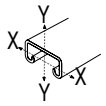
(1) See Note 1, Page 83 ,(2) See Note 2, Page 83

P3301 [GB/HG]





Mass: 3.76kg/m



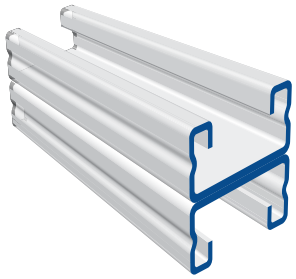
A = 465mm²
kg/m = 3.76kg/m
I x-x = 0.063 10⁶mm⁴
Z x-x = 2.841 10³mm³
r x-x = 11.6mm
I y-y = 0.110 10⁶mm⁴
Z y-y = 5.329 10³mm³
r y-y = 15.4mm

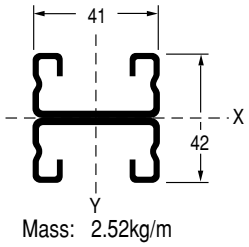
L (mm)	Fmax (kN) F f	fmax (mm)	F(kN)
250	15.58	0.25	73.20
500	7.79	1.01	67.32
750	5.19	2.26	58.55
1000	3.90	4.02	48.16
1250	3.12	6.28	37.47
1500	2.60	9.05	27.50
1750	2.23 (2)	12.32	20.21
2000	1.95 (2)	16.09	15.47
2250	1.73 (2)	20.36	12.22
2500	1.56 (2)	25.13	-
2750	1.42 (2)	30.41	-
3000	1.30 (2)	36.19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

Part No.	Material Thickness	Length
P3301-GB	2.5mm	5.8m
P3301-HG	2.5mm	5.8m

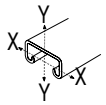
(2) See Note 2, Page 83

P4001 [GB/HG]





Mass: 2.52kg/m



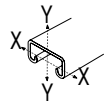
A = 320mm²
kg/m = 2.52 kg/m
I x-x = 0.044 10⁶mm⁴
Z x-x = 2.082 10³mm³
r x-x = 11.7mm
I y-y = 0.078 10⁶mm⁴
Z y-y = 3.764 10³mm³
r y-y = 15.6mm

L (mm)	Fmax (kN) F 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	-

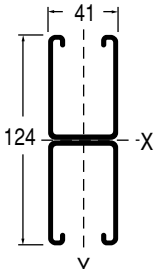
Part No.	Material Thickness	Length
P4001-GB	1.6mm	5.8m
P4001-HG	1.6mm	5.8m

(2) See Note 2, Page 83

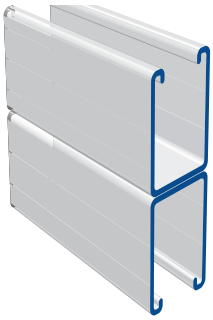
P5501 [GB/HG]



A	=	867mm^2
kg/m	=	6.86kg/m
I x-x	=	1.052 10^{6}mm^4
Z x-x	=	16.990 10^{3}mm^3
r x-x	=	34.8mm
I y-y	=	0.261 10^{6}mm^4
Z y-y	=	12.662 10^{3}mm^3
r y-y	=	17.4mm



Mass: 6.86kg/m

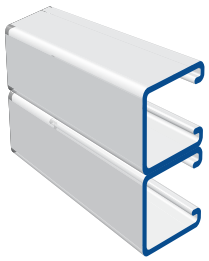


Part No.	Material Thickness	Length
P5501-GB	2.5mm	5.8m
P5501-HG	2.5mm	5.8m

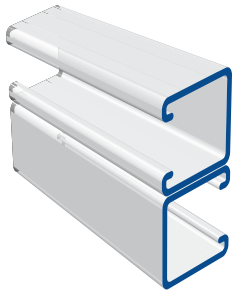
L (mm)	Fmax (kN) F	fmax (mm) f	F(kN)
250	27.04 (1)	0.03	122.16
500	27.04 (1)	0.21	118.17
750	27.04	0.71	111.82
1000	20.50	1.27	103.50
1250	16.40	1.98	93.71
1500	13.67	2.86	82.98
1750	11.72	3.89	71.88
2000	10.25	5.08	60.91
2250	9.11 (2)	6.43	50.48
2500	8.20 (2)	7.93	41.04
2750	7.46 (2)	9.60	33.92
3000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

(1) See Note 1, Page 83, (2) See Note 2, Page 83

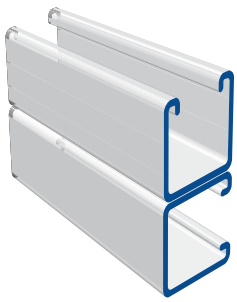
OPTIONAL COMBINATIONS



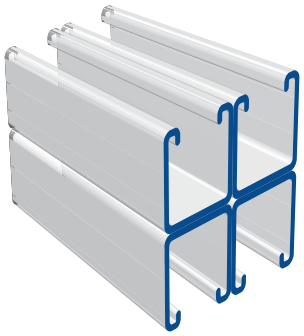
P1001A



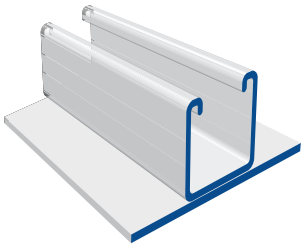
P1001B



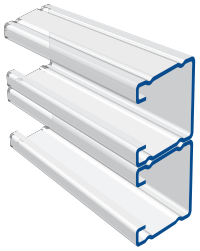
P1001C



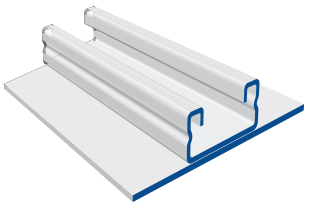
P1001C41



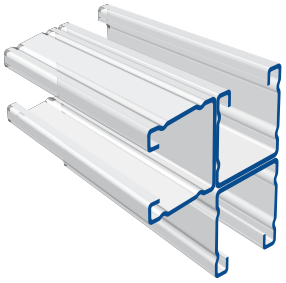
P1003



P2001A

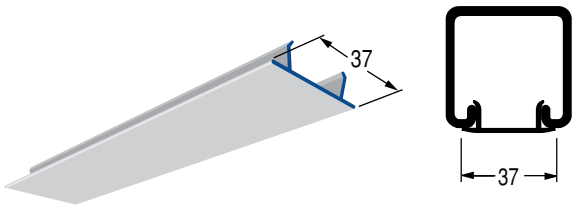


P4002-1



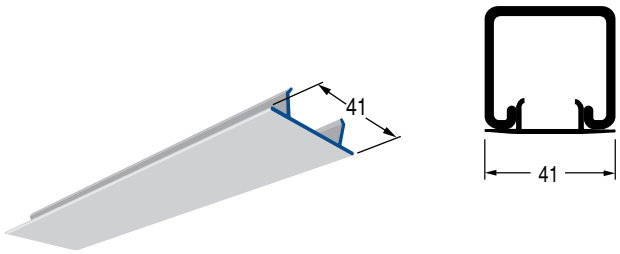
P2001C3

P1184 – Plastic Closure Strip



Standard Length: 3m
Mass: 0.11kg/m

P1184A – Aluminum Closure Strip



Standard Length: 3m
Mass: 0.18kg/m

Channel End Caps – Plastic, UV Stabilised

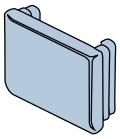
P2240

Mass: 0.70kg/100

For P1000 & P2000 Channels

P4240

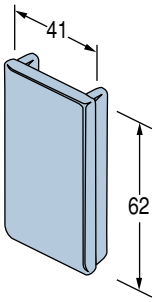
Mass: 0.40kg/100



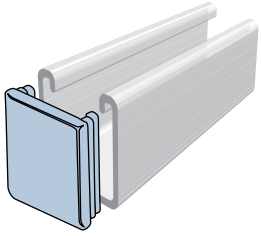
For P3300 & P4000 Channels

P5580

Mass: 1.2kg/100



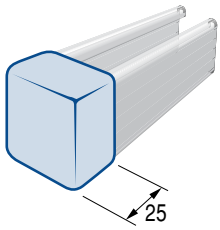
For P5500 Channels



Typical Installation

P2860-10 – Channel End Caps – Plastic

Fits P1000 & P2000 Channel



Mass: 1.54kg/100

Note: Caps provide a protective covering on protruding channels to guard against personal injury or damage to clothing. They slip easily over the ends of channel.

Concrete Inserts are manufactured from standard Unistrut channel 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 track welded or wired to reinforcement.

Filler Methods

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

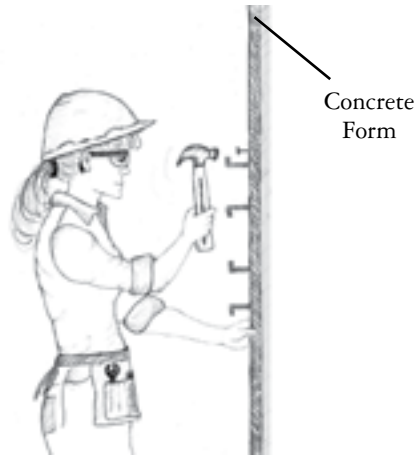
Finishes

Unistrut Concrete Inserts are available in the following styles and finishes - P1000 & P3300 in Hot Dipped Galvanised and Stainless Steel - Grade 316.

Note: Test results are available on request.

Installing Concrete Insert

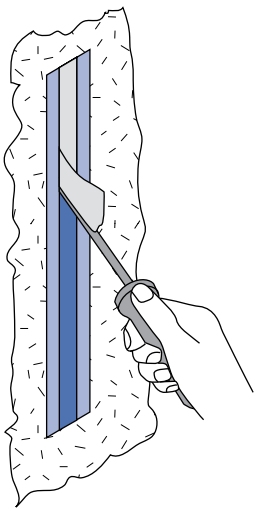
1. Nail insert to concrete form using prepunched nail holes



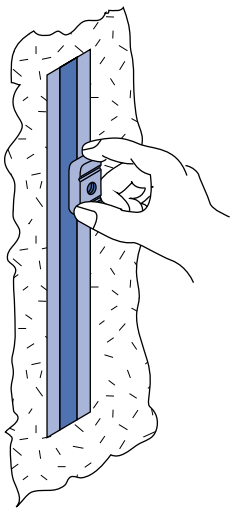
2. Attach rebars to flanges on insert

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 channel.

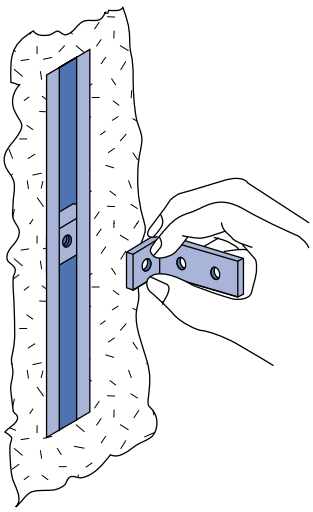
Using Installed Concrete Insert



1. Scrape out filler



2. Insert channel nut.



3. Attach fitting

P1000CI

Mass: 2.80kg/m

Standard Length: 5.8m

Finish: Hot Dipped Galvanised and Stainless Steel grade 316.

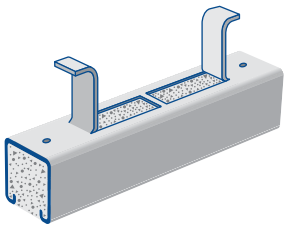
Loading Data: The support capacity of any concrete insert depends largely on the strength of the concrete used. Therefore, we cannot guarantee any particular load.

Recommended Pullout Loading*:

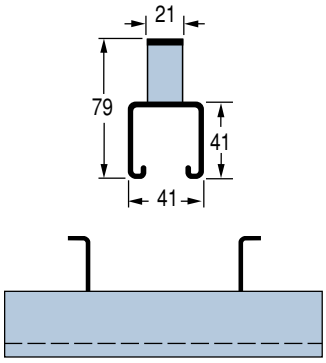
Inserts 300mm and over 8.83kN per 300mm.

Factor of Safety; Approximately 3

Design load based on 21mpa concrete



Lugs at 100mm centres



Note: Exercise care during installation - Do not bend lugs.

P3300CI

Mass: 1.94kg/m

Standard Length: 5.8m

Finish: Hot Dipped Galvanised and Stainless Steel grade 316.

Loading Data: The support capacity of any concrete insert depends largely on the strength of the concrete used. Therefore, we cannot guarantee any particular load.

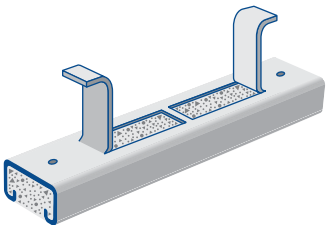
Recommended Pullout Loading*:

Inserts 300mm and over 11kN per 300mm.
Spacing of point loads - 76mm
Max. allowable uniform load - 22kN

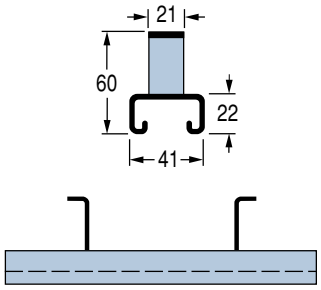
Factor of Safety: Approximately 3

Design load based on 21mpa concrete

Note: Exercise care during installation - Do not bend lugs.



Lugs at 100mm centres



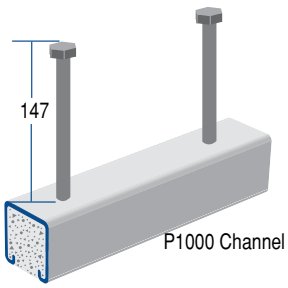
P3753 HEAVY DUTY INSERT

Standard Length: 300mm

Finish: Hot Dipped Galvanised and Stainless Steel grade 316.

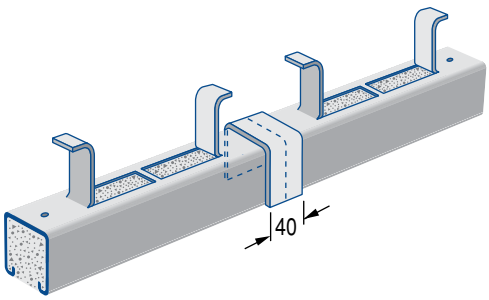
Loading Data: Because the support capacity of any Concrete Insert depends largely on the strength of the concrete used, we cannot guarantee any particular load.

Recommended Loading*: We can supply a range of heavy duty inserts to suit different applications requiring load capacities outside the range of our normal concrete insert. Please contact your local Customer Service Centre for assistance in these cases.



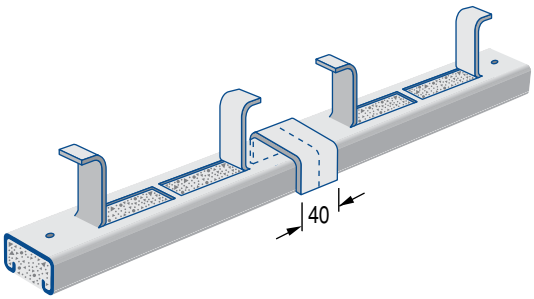
P1663 CI Joint Cover

Mass: 4.5kg/100

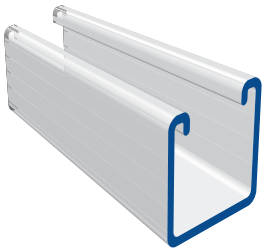


P4663 CI Joint Cover

Mass: 2.7kg/100

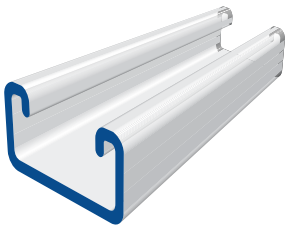


P1000-SS & P3300-SS



Part No.	Material	Mass kg/m
P1000-SS	Stainless Steel - Grade 316	2.76
P3300-SS	Stainless Steel - Grade 316	1.96

Standard Length: 5.8m



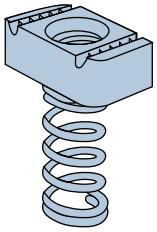
P1000
41.3 x 41.3
2.5mm Thick

P3300
41.3 x 22.2
2.5mm Thick

UNISTRUT NUTS, BOLTS & UNIROD

UNISTRUT CHANNEL NUTS

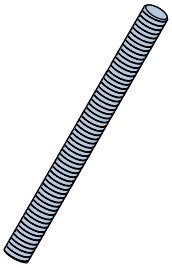
Part No.	Size	Mass kg/100
P1006SS	M6	3.18
P1007SS	M8	2.72
P1008SS	M10	4.54
P1013SS	M12	5.45



UNIROD

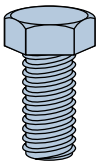
Part No.	Size	Mass kg/m
UR06SS	M6	0.2
UR08SS	M8	0.4
UR10SS	M10	0.5
UR12SS	M12	0.8

Standard Length: 3m



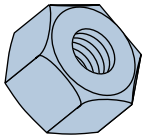
HEX HEAD SET SCREW

Part No.	Size	Mass kg/100
HHS0620SS	M6	0.6
HHS0825SS	M8	1.4
HHS1025SS	M10	2.1
HHS1225SS	M12	4.3

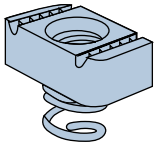


HEXAGON NUTS

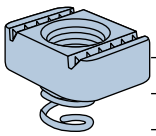
Part No.	Size	Mass kg/100
HN06SS	M6	0.2
HN08SS	M8	0.5
HN10SS	M10	0.8
HN12SS	M12	1.8



For P3300 & P4000 Channels, With Springs



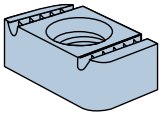
P4006/7/8/10



P4012S

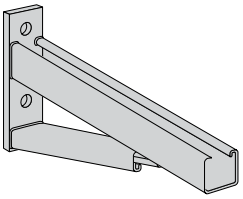
Part No.	Size	Mass kg/100
P4006SS	M6	2.73
P4007SS	M8	2.73
P4008SS	M10	4.42
P4010SS	M12	3.65
P4012SS	M16	4.99

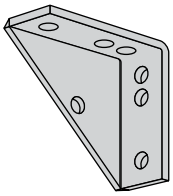
Channel Nuts Without Springs

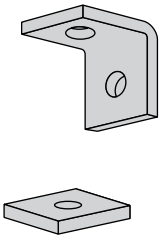


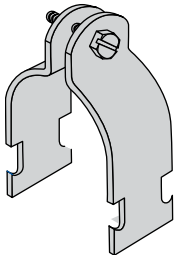
Part No.	Size	Mass kg/100
P3006SS	M6	2.80
P3007SS	M8	2.80
P3008SS	M10	4.56
P3013SS	M12	4.20

UNISTRUT FITTINGS, CANTILEVER BRACKETS & PIPE CLAMPS



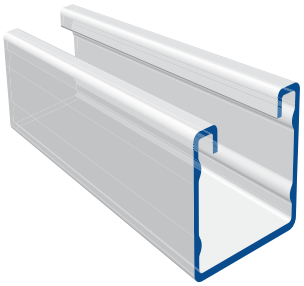






Most fittings, as shown in this catalogue can be supplied in stainless steel on special order.

P2000-AL



41.3W x 41.3H

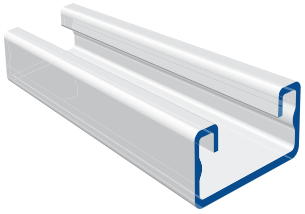
Standard Length: 5.8m

Material: Aluminium

Type: 6106-T6

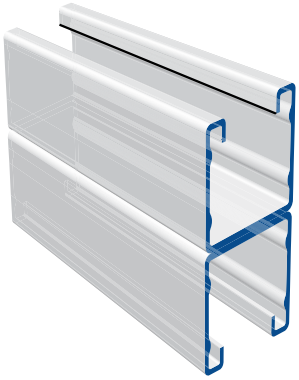
Part No.	Mass kg/m
P2000-AL	0.77
P2001-AL	0.91
P4000-AL	0.56
P4001-AL	0.93
P4003-AL	1.31
P4004-AL	1.68

P4000-AL



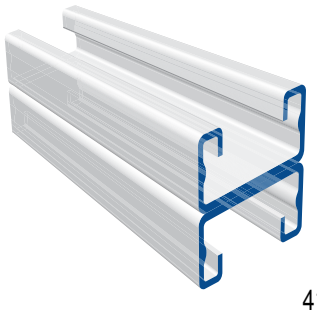
41.3W x 20.6H

P2001-AL



41.3W x 82.6H

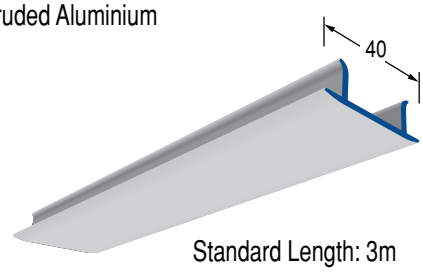
P4001-AL



41.3W x 41.3H

P1184A - CLOSURE STRIP

Extruded Aluminium

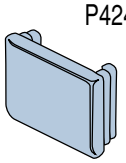


Standard Length: 3m

Mass 0.68kg/m

P2240 & 4240 - END CAPS

P4240



P2240

Part No.	For Channel	Mass kg/100
P2240	P2000-AL	0.70
P4240	P4000-AL	0.40

Plastic for Extruded Aluminium Channels

LOAD DATA

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

Material	Load Factor
Extruded Aluminium	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 Aluminium	75%	50%

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

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 inturned edge of the Unistrut channel. Similar nuts without springs are also available. Stud nuts are manufactured by welding studs to UNISTRUT nuts except for USB series which are drop forged. Nuts and bolts are manufactured to AS1111 & AS1112.

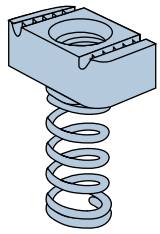
Threads – All threads on the nuts and bolts are metric coarse.

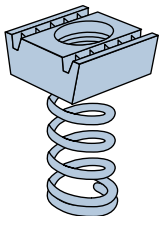
Design Bolt Torque – Refer to Engineering Data Page 118

Finishes –

Nuts and bolts are zinc plated to Australian Standards AS1897, selected sizes also available in hot dipped galvanised to AS1214.

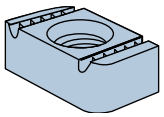
For P1000 & P2000 Channels, With Springs

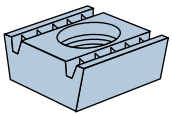

P1006/7/8/10

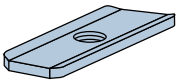

P1012S

Part No.	Size	Mass kg/100
P1006	M6	3.18
P1007	M8	3.18
P1008	M10	4.54
P1010	M12	5.45
P1012S	M16	9.53

For P1000 & P2000 Channels, No Springs

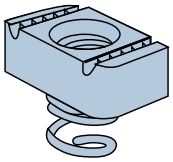

P3006/7/8/10

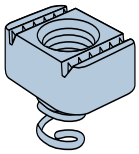

P1012


P3016

Part No.	Size	Mass kg/100
P3016	M6	1.00
P3006	M6	2.72
P3007	M8	2.72
P3008	M10	4.41
P3010	M12	3.64
P1012	M16	9.08

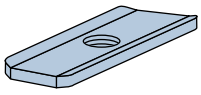
For P3300 & P4000 Channels, With Springs

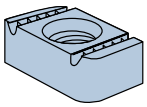

P4006/7/8/10

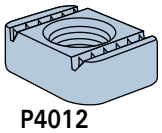

P4012S

Part No.	Size	Mass kg/100
P4006	M6	2.73
P4007	M8	2.73
P4008	M10	4.42
P4010	M12	3.65
P4012S	M16	4.99

For P3300 & P4000 Channels, No Springs

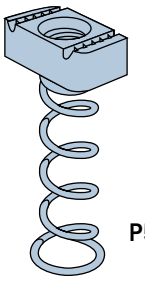

P3016


P3006/7/8/10


P4012

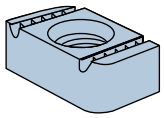
Part No.	Size	Mass kg/100
P3016	M6	1.00
P3006	M6	2.72
P3007	M8	2.72
P3008	M10	4.41
P3013	M12	4.20
P4012	M16	4.54

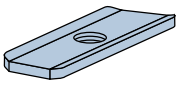
For P5500 Channels - With Springs

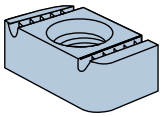

P5508/10

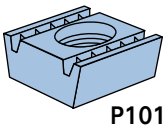
Part No.	Size	Mass kg/100
P5508	M10	4.54
P5510	M12	5.54

For P5500 Channels - No Springs


P3006/7/8/10

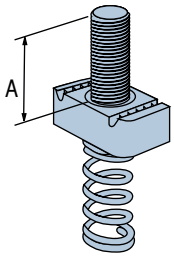

P3016


P3010


P1012

Part No.	Size	Mass kg/100
P3016	M6	1.00
P3006	M6	2.72
P3007	M8	2.72
P3008	M10	4.41
P3010	M12	3.64
P1012	M16	9.08

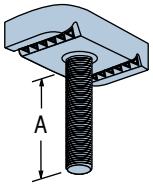
Stud Nut - P2378M6-1 to P2381M12-5



Part No.	Size	Dim "A"	Mass kg/100
P2378M6-1	M6	22	3.63
P2378M6-3	M6	34	4.09
P2380M10-1	M10	22	5.90
P2380M10-4	M10	41	6.18
P2381M12-2	M12	22	6.36
P2381M12-5	M12	41	8.17

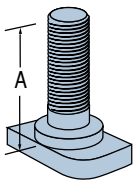
Note : Grooves Serrated

Fixture Stud Nut - P3116



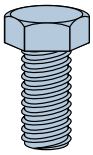
Part No.	Size	Dim "A"	Mass kg/100
P3116	M6	30	3.50

Stud Bolt - USB045 to USB102



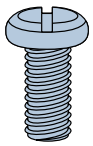
Part No.	Size	Dim "A"	Mass kg/100
USB045	M16	45	10.00
USB076	M16	76	14.00
USB102	M16	102	18.00

Hex Head Set Screws



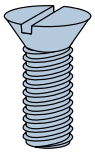
Part No.	Size	Mass kg/100
HHS0620	M6 x 20	0.6
HHS0625	M6 x 25	0.7
HHS0630	M6 x 30	0.8
HHS0820	M8 x 20	1.2
HHS0825	M8 x 25	1.4
HHS0830	M8 x 30	1.5
HHS0840	M8 x 40	1.8
HHS1020	M10 x 20	1.9
HHS1025	M10 x 25	2.1
HHS1030	M10 x 30	2.5
HHS1040	M10 x 40	3.0
HHS1224	M12 x 24	4.2
HHS1230	M12 x 30	4.5
HHS1240	M12 x 40	5.1
HHS1260	M12 x 60	7.5
HHS1640	M16 x 40	9.5

Pan Head Screws



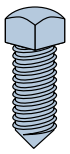
Part No.	Size	Mass kg/100
PHS0620	M6 x 20	0.6
PHS0625	M6 x 25	0.7
PHS0630	M6 x 30	0.8
PHS0825	M8 x 25	1.3

Countersunk Head Screw



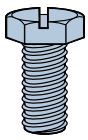
Part No.	Size	Mass kg/100
CKS0615	M6 x 15	0.3
CKS0620	M6 x 20	0.4
CKS0820	M8 x 20	0.8
CKS1020	M10 x 20	1.3

Cone Point Set Screw



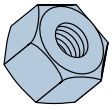
Part No.	Size	Mass kg/100
CPS1040	M10 x 40	2.3
CPS1240	M12 x 40	3.8
CPS1250	M12 x 50	4.4

Slotted Hex Head Set Screws



Part No.	Size	Mass kg/100
SHS0620	M6 x 20	0.6
SHS0825	M8 x 25	1.2
SHS0830	M8 x 30	1.3

Hexagon Nuts

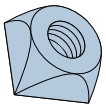


Part No.	Size	Mass kg/100
HN06	M6	0.2
HN08	M8	0.5
HN10	M10	0.8
HN12	M12	1.8
HN16	M16	3.3
HN20	M20	5.6

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

Swivel Nuts



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

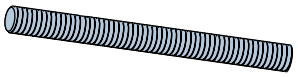
Spring Washers

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 Washer

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	0.20
UR08	M8	5.84	0.35
UR10*	M10	9.28	0.50
UR12*	M12	13.48	0.80
UR16*	M16	25.12	1.30
UR20*	M20	39.20	2.10

Standard Finish: Zinc Plated.

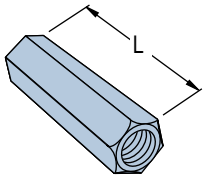
*Also available in Hot Dipped Galvanised.

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.

Rod Couplers

Part No.	Size	Length 'A'	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 Hot Dipped Galvanised.

Fittings - General Information

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 seperately.

Design Load Data

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

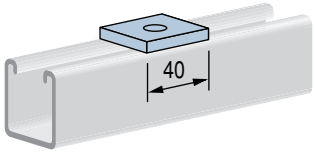
Design Bolt Torque

Refer to Engineering Data (See Page 118).

Finishes

All fittings in this section are available in zinc plated finish to Australian Standard AS1789 and Hot Dipped Galvanised to AS/NS4680.

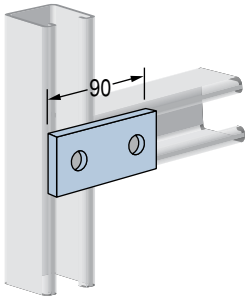
P1062 - P1964



Part No.	Bolt Size	Hole Size	Mass kg/100
P1062	8	9	7.0
P1063	10	12	6.8
P1064	12	14	6.6
P1964	16	18	6.4

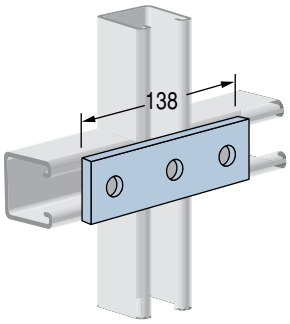
P1065

Mass: 16kg/100



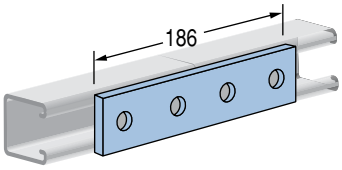
P1066

Mass: 24kg/100



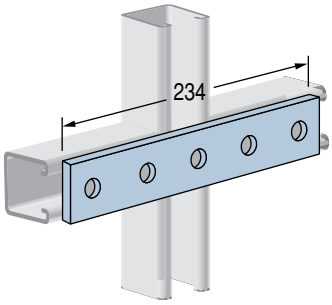
P1067

Mass: 32kg/100



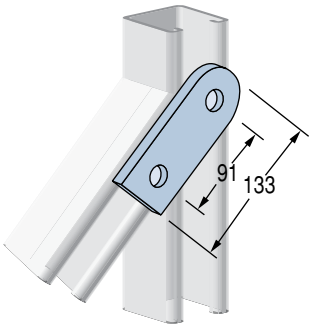
P1941

Mass: 41kg/100



P2325

Mass: 23kg/100

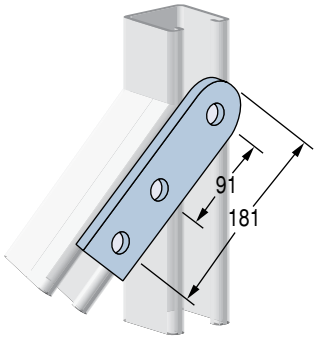


Standard Dimensions for 41mm width series channel fittings *(Unless Otherwise Shown on Drawing)*

Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Center: 48mm; Width: 41mm; Thickness: 6mm

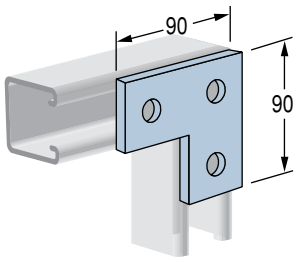
P2324

Mass: 31kg/100



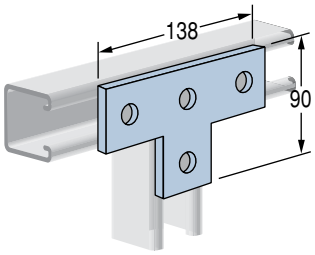
P1036

Mass: 25kg/100



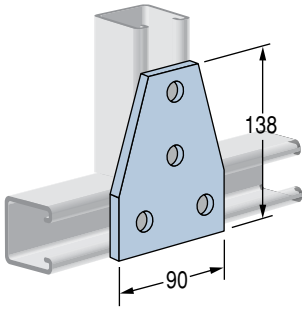
P1031

Mass: 35kg/100



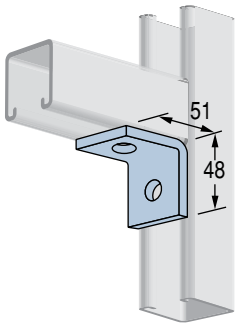
P1358

Mass: 48kg/100



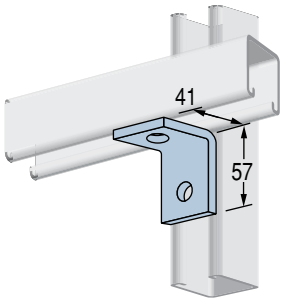
P1026

Mass: 17kg/100



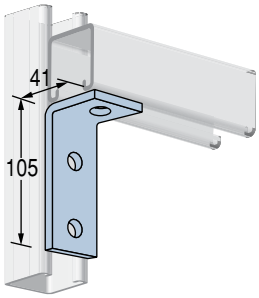
P1068

Mass: 17kg/100



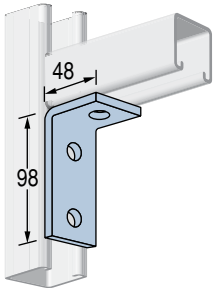
P1326

Mass: 24kg/100



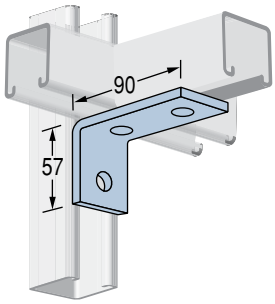
P1346

Mass: 24kg/100



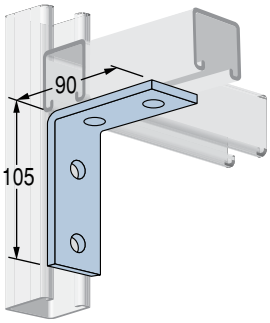
P1458

Mass: 24kg/100



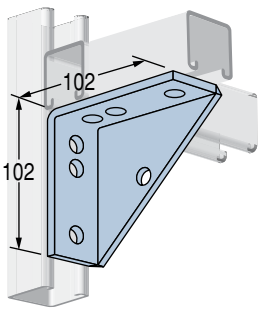
P1325

Mass: 33kg/100



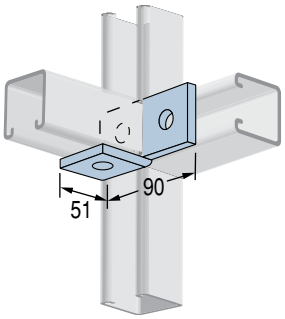
P2484

Mass: 61kg/100



P1038

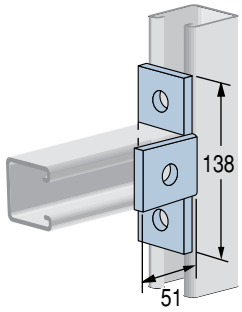
Mass: 25 kg/100



Standard Dimensions for 41mm width series channel fittings *(Unless Otherwise Shown on Drawing)*
Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Center: 48mm; Width: 41mm; Thickness: 6mm

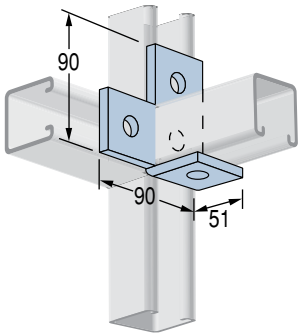
P1033

Mass: 35kg/100



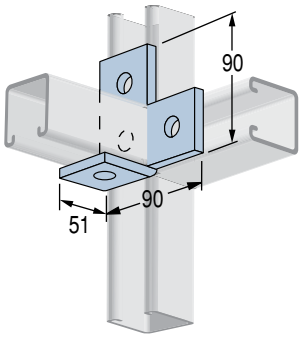
P1034

Mass: 35kg/100



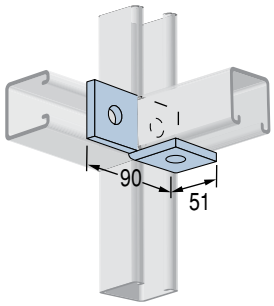
P1035

Mass: 35kg/100



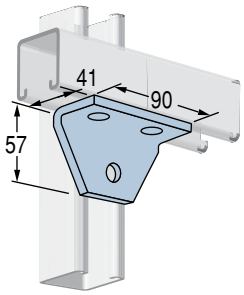
P1037

Mass: 25kg/100



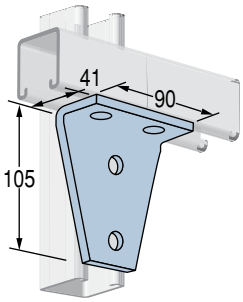
P1357

Mass: 32kg/100



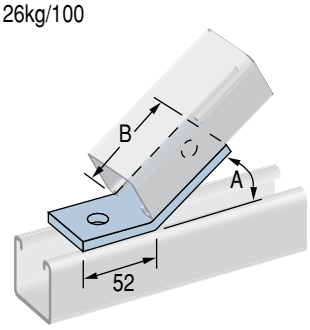
P1359

Mass: 48kg/100



P2101 & P2103

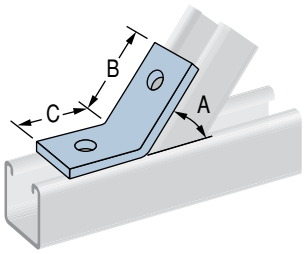
Mass: 26kg/100



Part No.	A	B
P2101	30	83
P2103	15	84

P2095 to P1546

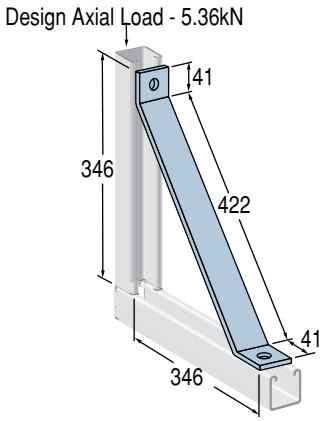
Mass: 26kg/100



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

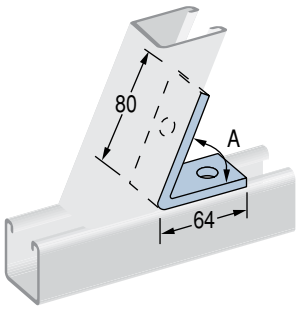
P2452

Mass: 103kg/100



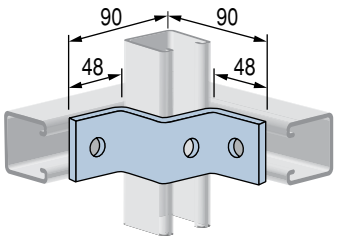
P2106 to P1186

Mass: 26kg/100



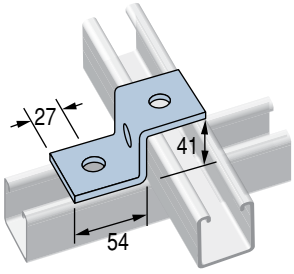
P1736

Mass: 27kg/100



P1045

Mass: 24kg/100

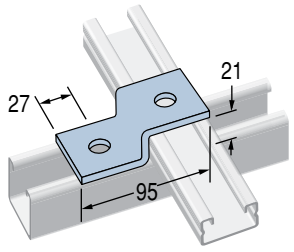


Standard Dimensions for 41mm width series channel fittings *(Unless Otherwise Shown on Drawing)*

Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Center: 48mm; Width: 41mm; Thickness: 6mm

P4045

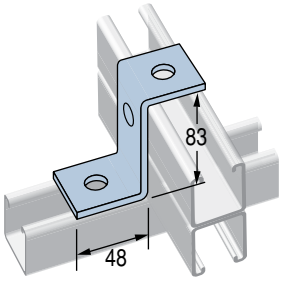
Mass: 20kg/100



P4000 Shown

P1453

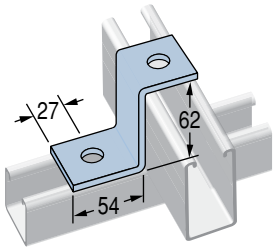
Mass: 30kg/100



P1001 Shown

P5545

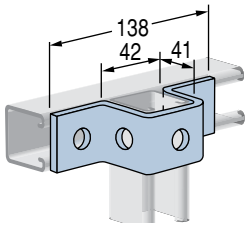
Mass: 29kg/100



P5500 Shown

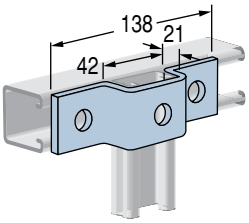
P1047

Mass: 37kg/100



P4047

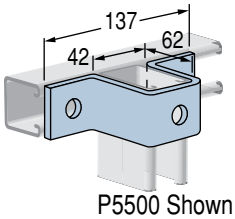
Mass: 30kg/100



P4000 Shown

P5547

Mass: 47kg/100

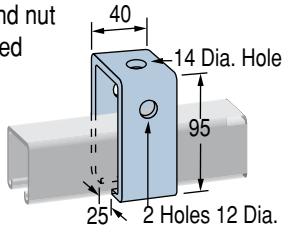


P5500 Shown

P1834

Mass: 46kg/100

M10 x 70
bolt and nut
included

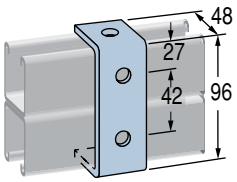


Design Load: 5.34kN

Channel Trolley Support

P1044

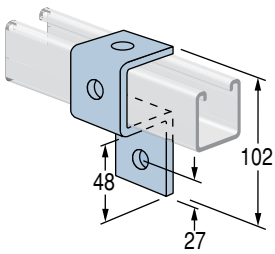
Mass: 30kg/100



P1001 Shown

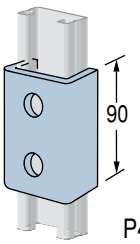
P1046

Mass: 35kg/100



P4376

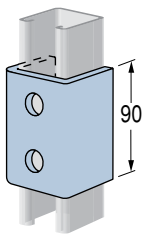
Mass: 38kg/100



P4000

P1376

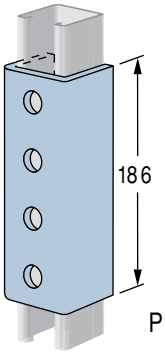
Mass: 56kg/100



P1000

P1377

Mass: 115kg/100

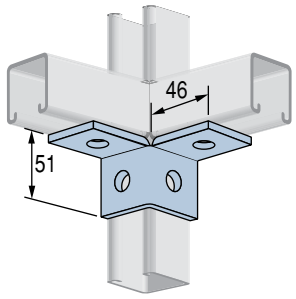


P1000

Standard Dimensions for 41mm width series channel fittings *(Unless Otherwise Shown on Drawing)*
Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Center: 48mm; Width: 41mm; Thickness: 6mm

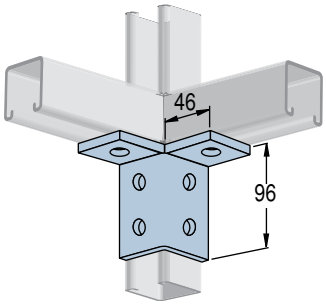
P2223

Mass: 34kg/100



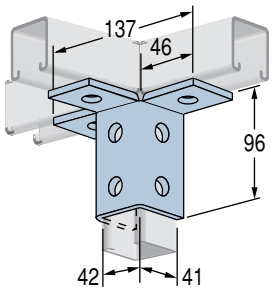
P2224

Mass: 50kg/100



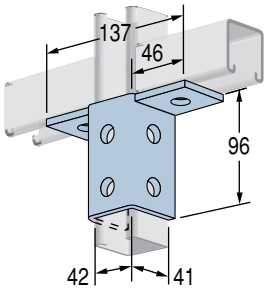
P2228

Mass: 78kg/100



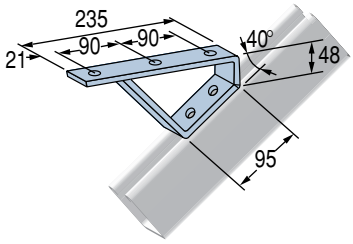
P2346

Mass: 66kg/100



P2655

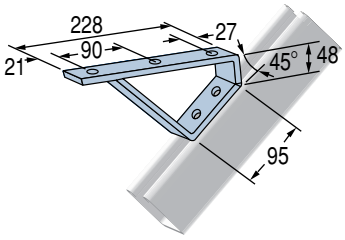
Mass: 95kg/100



40" Star Tread Support

P1944

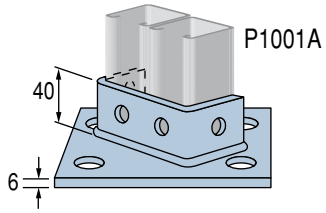
Mass: 96kg/100

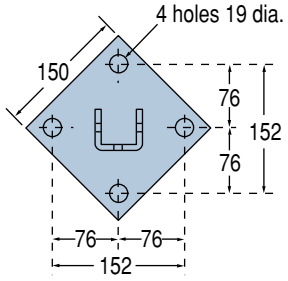


45" Star Tread Support

P2073

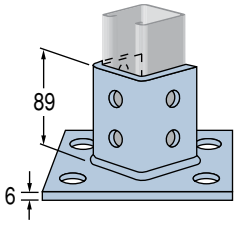
Mass: 140kg/100

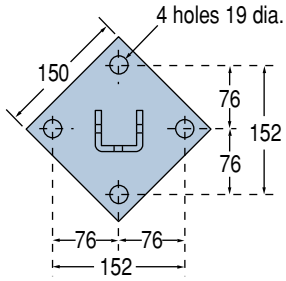




P2072A

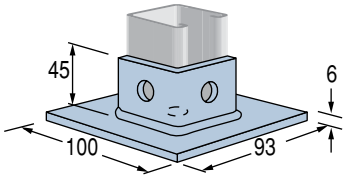
Mass: 164kg/100





P2072S1

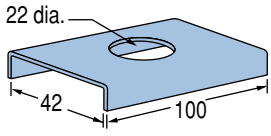
Mass: 62kg/100

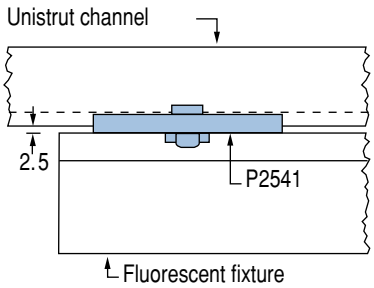


Standard Dimensions for 41mm width series channel fittings *(Unless Otherwise Shown on Drawing)*

Hole Diameter: 14mm; Hole Spacing - From End: 21mm; Hole Spacing - On Center: 48mm; Width: 41mm; Thickness: 6mm

P2541 - Spacer Clevis

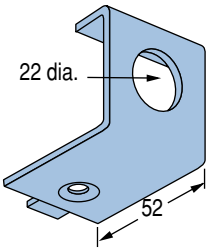


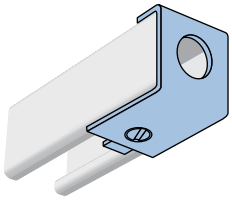


P2521 - Conduit End Connector

Mass: 12kg/100

Finish: Zinc Plated



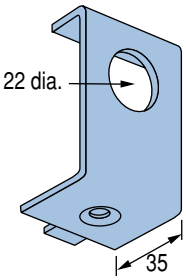


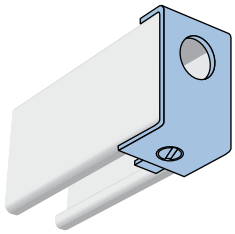
Fitted to end of trunking for attachment of electrical conduit. P2521 for use with P1000 and P2000 Channels. Countersunk head screw and clamping nut included.

P5521 - Conduit End Connector

Mass: 12kg/100

Finish: Zinc Plated

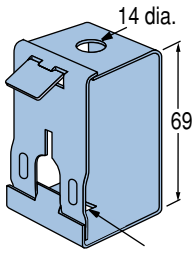




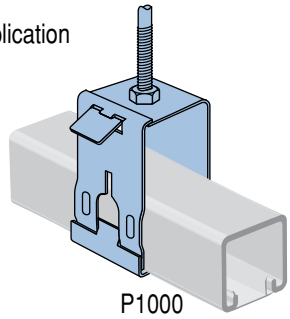
Fitted to end of trunking for attachment of electrical conduit. P5521 for use with P5500 Channel. Countersunk head screw and clamping nut included.

P2855

Mass: 19kg/100



Application

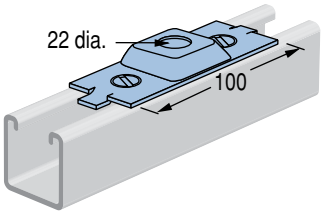


Design Load: 0.5kN
Finish: Zinc Plated

P2535 - Conduit Hanger Fitting

Mass: 13kg/100

M6 x 15 Countersunk screws and P3016 nuts included

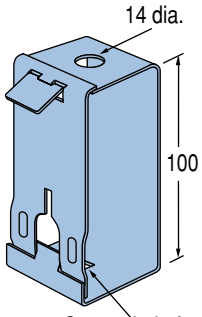


Conduit hanger fitting for rigid attachment to Unistrut channel.

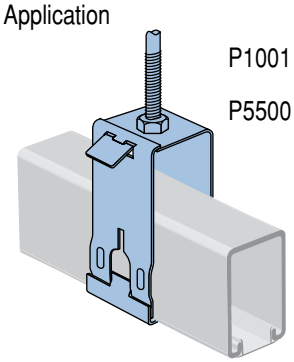
Design Load: 0.5kN
Finish: Zinc Plated

P2755

Mass: 30kg/100



Application

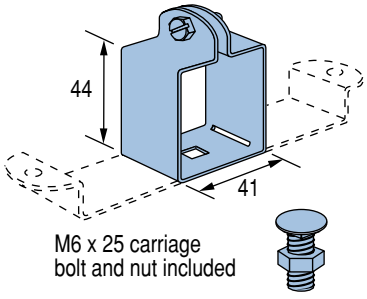


Design Load: 0.5kN
Finish: Zinc Plated

P2539 - Fixture Hanger Fitting

Mass: 11kg/100

M6 x 20 screw and nut included.

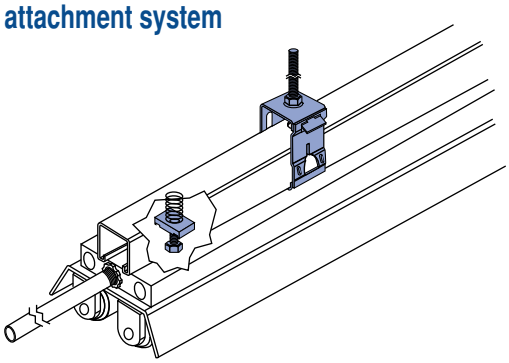


Design Load: 0.5kN
Finish: Zinc Plated

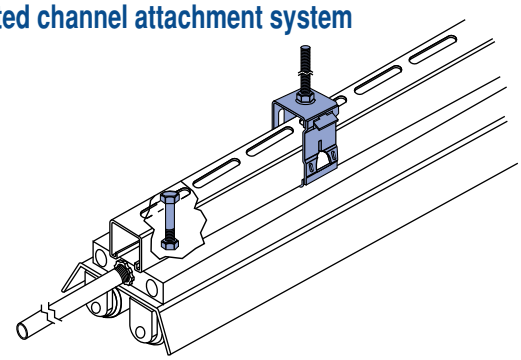
Fluorescent hanger fittings provide a means of mounting fixtures to Unistrut. They are shipped flat and are easily bent to form around the Unistrut channel. For use with P1000 and P2000 Unistrut channels.

Fluorescent Fixture – Support Applications

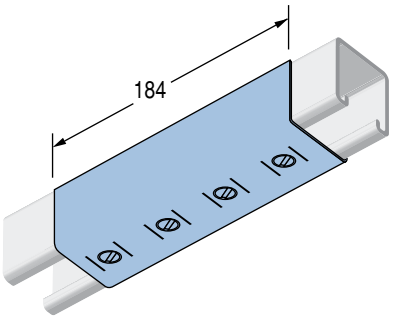
Spring-Nut attachment system



Slotted channel attachment system



P2377 - Splice Fitting



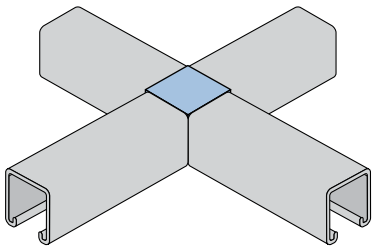
For joining together continuous runs of trunking channel. P2377 external 41 deep, for use with P1000 and P2000 trunking. Four P3016 (page 106) clamping nuts and four M6 x 15 countersunk head screws should be ordered with each fitting.

Finish: Zinc Plated

Mass: 25kg/100

Joiner Fittings

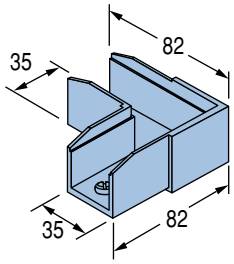
Cast aluminium fittings designed to fit inside the channel section and provide a continuous profile on external surfaces. Fittings are secured to the channel by a pre-installed screw and washer assembly. Closure strip can be clipped into channel and extended over the fitting to complete a neat installation.



Typical Assembly

P2902 Two Way

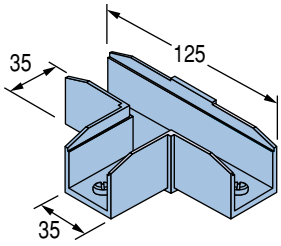
Mass: 12.2kg/100



Socket Cup Point Set Screws Included
Material: Cast aluminum.

P2901 Three Way

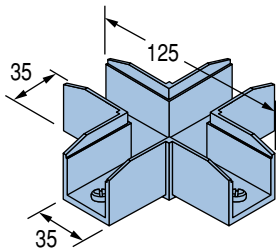
Mass: 15.9kg/100



Socket Cup Point Set Screws Included
Material: Cast aluminum.

P2903 Four Way

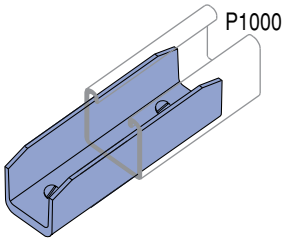
Mass: 20.4kg/100



Socket Cup Point Set Screws Included
Material: Cast aluminum.

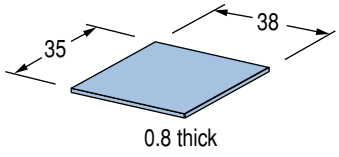
P2900 One Way

Mass: 9.1 kg/100

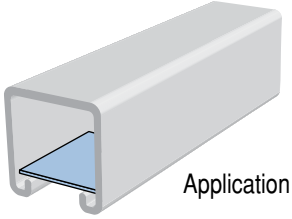


Socket Cup Point Set Screws Included
Material: Cast aluminum.

P2552 –Wire Retainer [Flbre]



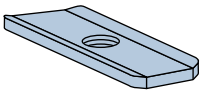
Wire retainer is pushed into Unistrut Channel to support wires until the Closure Strip is installed.



Application

P3016 - Trunking Nuts

Mass: 1kg/100

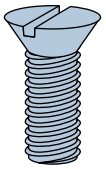


For the fixing of fittings and accessories
6mm diameter

CKS0615 - Countersunk Head Screw

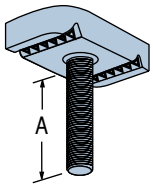
Mass: 0.3kg/100

Size: M6 x 15



P3116 - Fixture Stud Nut

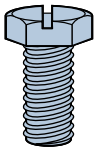
Mass: 3.5kg/100



Size: M6 x 30

SHS0620 - Slotted Hex Head Screw

Mass: 0.6kg/100

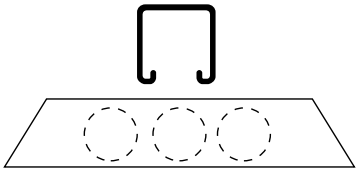


Size: M6 x 20

Loading Data

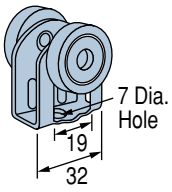
Unistrut Channel and Spacing of 1220mm Long Fluorescent Fittings.		1 x 36W 6kg	2 x 36W 9kg	3 x 36W 12kg	4 x 36W 14kg	1 x 58W 8kg	2 x 58W 13kg
		Hanger Rod Spacing In Metres					
P1000	Continuous run of fittings	4.1	3.8	3.6	3.6	3.9	3.5
	Fittings 600mm apart	4.4	4.1	3.9	3.8	4.2	3.9
	Fittings 1200mm apart	4.5	4.3	4.1	4.0	4.4	4.1
P2000	Continuous run of fittings	4.0	3.7	3.4	3.3	3.7	3.4
	Fittings 600mm apart	4.2	3.9	3.7	3.6	4.0	3.7
	Fittings 1200mm apart	4.4	4.2	3.9	3.8	4.2	3.9
P5500	Continuous run of fittings	5.2	4.9	4.6	4.5	5.0	4.6
	Fittings 600mm apart	5.5	5.2	5.0	4.8	5.3	4.9
	Fittings 1200mm apart	5.6	5.4	5.2	5.1	5.5	5.1
P2001	Continuous run of fittings	5.5	5.2	4.9	4.8	5.3	4.8
	Fittings 600mm apart	5.8	5.5	5.3	5.1	5.6	5.2
	Fittings 1200mm apart	6.0	5.7	5.5	5.4	5.8	5.4
P1001	Continuous run of fittings	5.7	5.4	5.2	5.0	5.6	5.1
	Fittings 600mm apart	6.0	5.7	5.5	5.4	5.8	5.4
	Fittings 1200mm apart	6.1	5.9	5.7	5.6	6.0	5.6

Note: Spacings have been calculated to limit section deflections between hangers to approximately 10mm, with sections considered continuous over three spans.
For Single spans - multiply spacing by 0.85. For Double spans - multiply spacing by 1.07.
For greater than 3 spans - use table above. Spacings have been calculated for Unistrut Channel opening on the underside.

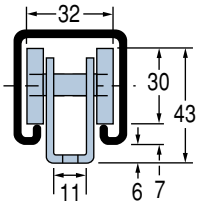


P2749

Mass: 10kg/100

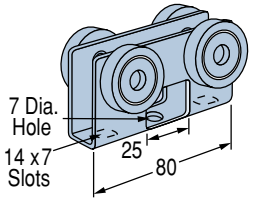


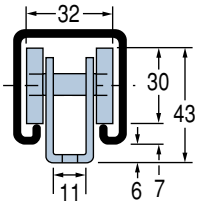
Clevis 2.5mm



P2750

Mass: 22kg/100



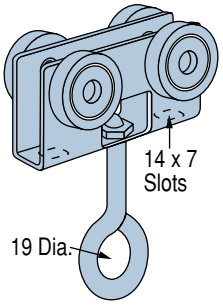


Loads (kN)

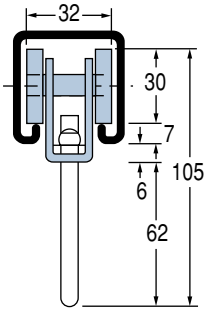
Part No.	Wheel – Steel Ball Bearing Approx. Design Load kN
P2749	0.22
P2750	0.45
P2751	0.45

P2751

Mass: 26kg/100

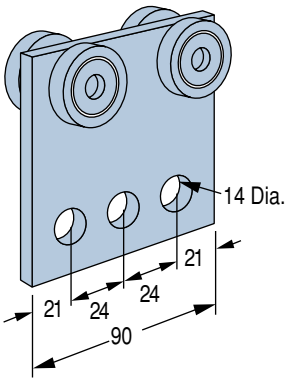


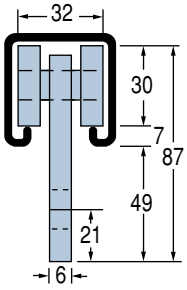
Clevis 2.5mm



P2950

Mass: 48kg/100

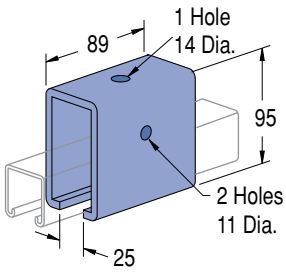




MPM	RPM	Design Load in P1000 kN
54	600	1.33
27	300	2.00
9	100	2.67

P1834A – Trolley Support

Mass: 46kg/100

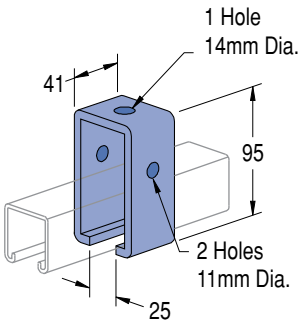


M10 x 70 Bolt & Nut Included

Design Load - 1.12 kN

P1834 – Trolley Support

Mass: 46.3 kg/100



M10 x 70 Bolt & Nut Included

Design Load - 5.34 kN

Brackets - General Information

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.

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 118).

Finishes

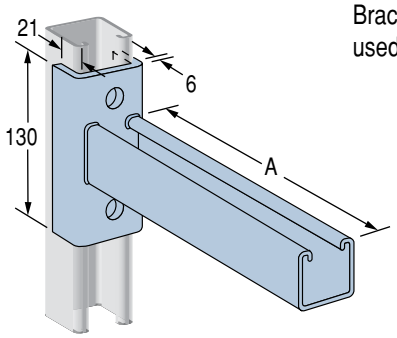
All fittings in this section are Hot Dipped Galvanised to AS/NZS4680 unless otherwise shown.

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
Thickness	- 6mm

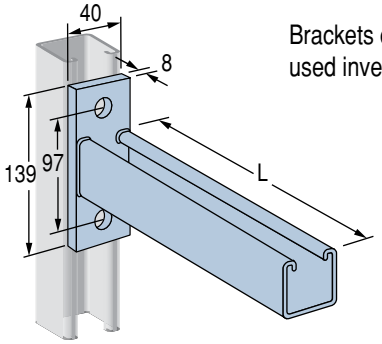
P2233 & P2234



Brackets can be used inverted

Part No.	A	Design Uniform Load - kN	Mass kg/100
P2233	457	3.14	189
P2234	610	1.97	232

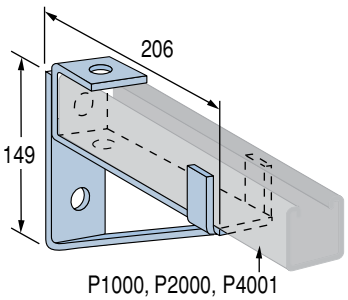
P2663-250 to P2663-700



Brackets can be used inverted

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

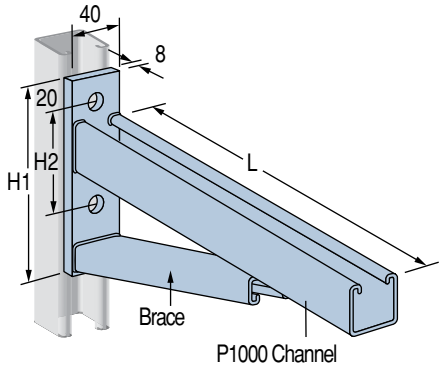
P1075-8



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

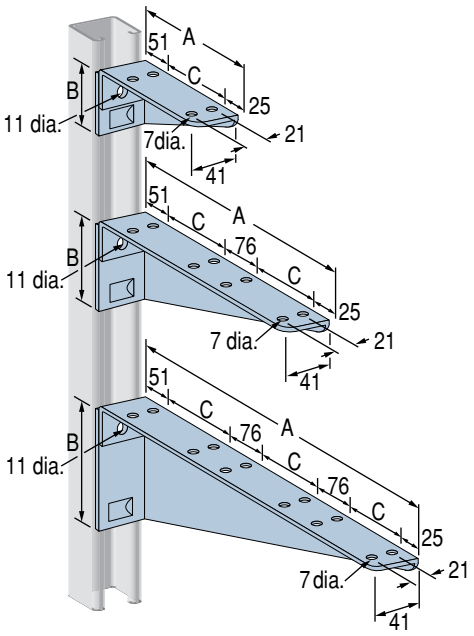
** Applies only to fittings and not to strength of Unistrut arm. Designed for use with "Unistrut" nuts, do not use through bolts.*

PCL150 to PCL600



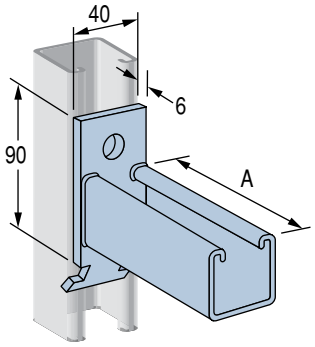
Part No.	A	B	C	Design Uniform Load kN	Mass kg/100
PCL150	320	165	86	4.47	170
PCL300	470	165	86	3.17	230
PCL450	635	215	112	3.33	340
PCL600	780	215	112	2.80	380

P2491R-L thru P2500R-L



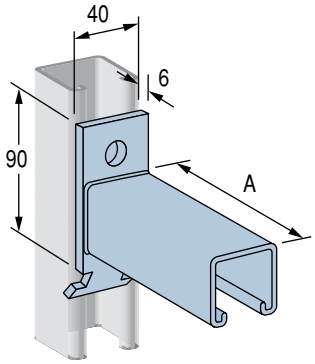
Part No.	A	B	C	Design Uniform Load kN	Mass kg/100
P2491R	152	56	76	1.57	30
P2491L	152	56	76	1.57	30
P2494R	305	87	76	1.37	69
P2494L	305	87	76	1.37	69
P2497R	457	125	152	1.01	121
P2497L	457	125	152	1.01	121
P2500R	610	164	127	0.98	182
P2500L	610	164	127	0.98	182

P2513 thru P2516



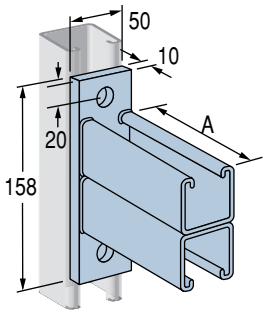
Part No.	A	Design Uniform Load kN	Mass kg/100
P2513	250	1.77	91
P2514	400	1.10	128
P2515	550	0.80	177
P2516	700	0.62	216

P2513A thru P2516A



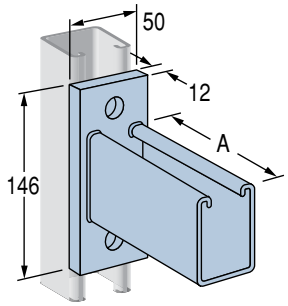
Part No.	A	Design Uniform Load kN	Mass kg/100
P2513A	250	1.77	91
P2514A	400	1.10	128
P2515A	550	0.80	177
P2516A	700	0.62	216

P2542 thru P2546



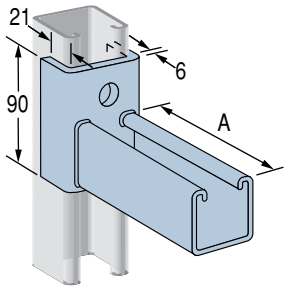
Part No.	A	Design Uniform Load kN	Mass kg/100
P2542	305	7.57	228
P2543	460	5.22	314
P2544	610	3.98	400
P2545	760	3.21	487
P2546	915	2.67	574

P5663-300 thru P5663-750



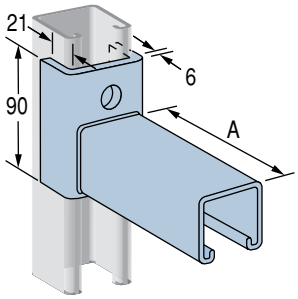
Part No.	A	Design Uniform Load kN	Mass kg/100
P5663-300	300	6.93	173
P5663-450	450	4.78	224
P5663-600	600	3.62	276
P5663-750	750	2.91	327

P2231 & P2232



Part No.	A	Design Uniform Load kN	Mass kg/100
P2231	152	6.46	81
P2232	305	3.78	124

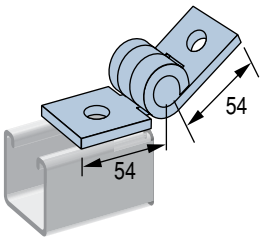
P2231A & P2232A



Part No.	A	Design Uniform Load kN	Mass kg/100
P2231A	152	6.46	81
P2232A	305	3.78	124

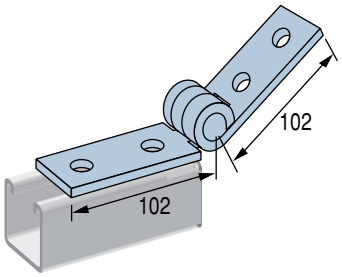
P1843

Mass: 31kg/100



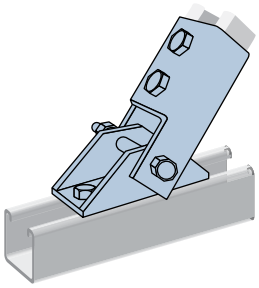
P1354

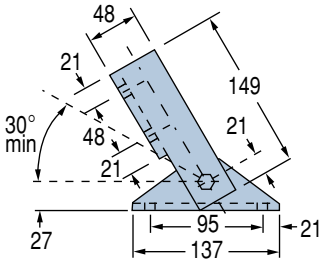
Mass: 49kg/100



P2815

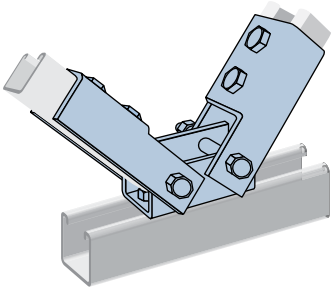
Mass: 139kg/100

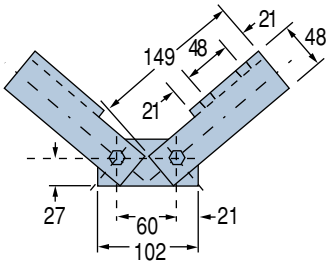




P2815D

Mass: 26kg/100





Beam Clamps- General Information

Applications

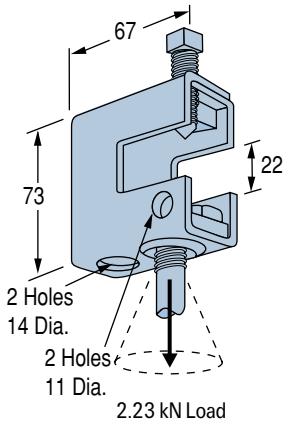
Beam Clamps are designed to provide a fast easy attachment to overhead structures. They alleviate the need for drilling and welding as well as being completely adjustable.

Finishes – Standard finishes as shown.

Design Bolt Torque – Refer to Engineering Data (page 118)

P2676

Mass: 33kg/100



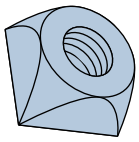
Beam Attachment Applications:
Clamp P2676 provides a means of rod suspension, either fixed, or where a free swing of up to 15 degrees is required. Swivel nuts to be ordered separately.

Clamp may also be used with P2677 as illustrated in application drawings.

Standard Finishes – Z.P, H.D.G. & S.S.

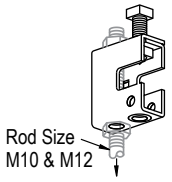
M12 x 50 cone-pointed screw & nut included
Clamp material 3mm thick
Swivel nut and Lock nut not included
Rod size M10 & M12
Rod swivel 15° all directions

P2679 - Swivel Nut



Part No.	Size	Mass kg/100
P267910	M10	17
P267912	M12	1.5

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

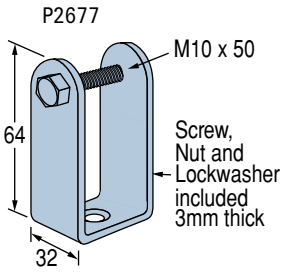


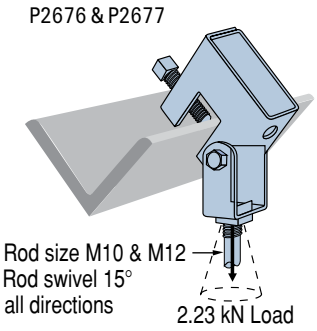
Design Load
1.33 kN

Design Load
2.23 kN

P2677

Mass: 15kg/100





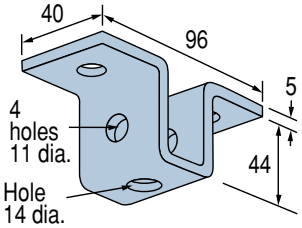
P2677 clevis hanger to be used with P2676 to provide angle adjustment and 15 degree free swing for up to M12 rod suspension.

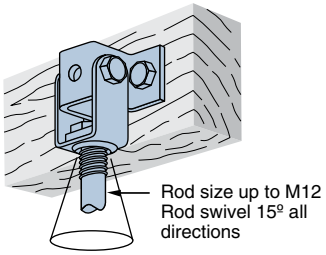
Order P2679 series swivel nuts required.

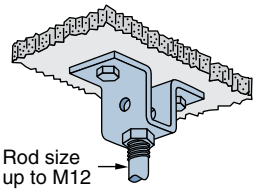
Standard Finish: Z.P

P2682

Mass: 23kg/100





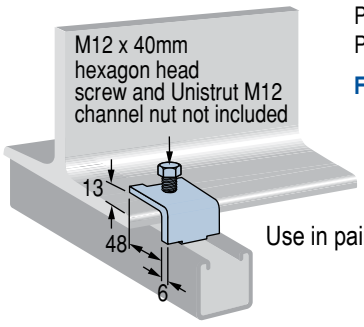


Hanger clevis for up to M12 rod suspension. Suitable for wood ceilings. May also be used with P2677 as illustrated in application drawings.

Standard Finishes: Z.P.

P1386

Mass: 12kg/100

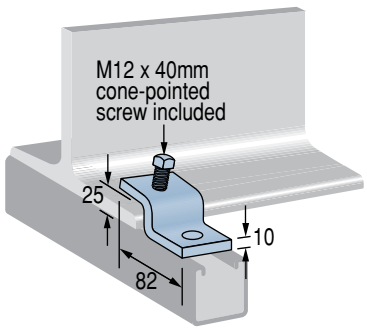


Design Load Per Pair:
P1000 - 5.30kN
P2000 - 3.92kN

Finishes: Z.P. & H.D.G

P1379

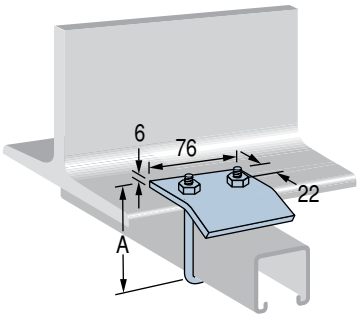
Mass: 34kg/100



Design Load Per Pair:
P1000 - 5.34kN
P2000 - 3.92kN
Finishes: Z.P. & H.D.G.

Each clamp requires
M12 x 30 Hex Head Set Screw and
M12 Channel Nut (not included)

P2785 & P2786



Design Load Per Pair: 8.82kN
Finishes: Z.P & H.D.G

Use in pairs only

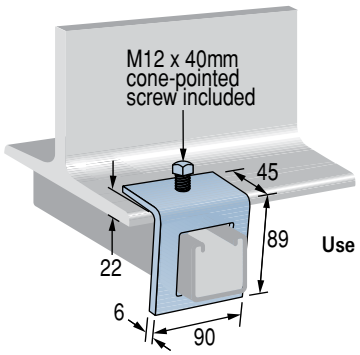
P2785 accepts following channels:
P1000, P2000, P3300, P4000
A = 86 Mass: 38kg/100

P2786 accepts following channels
P1001, P2001, P5500
For use with beams up to 19mm
A = 127 Mass: 41kg/100

P1796

Mass: 49kg/100

Suits P1000 & P2000
Design Load Per Pair: 4.32kN
Finishes: Z.P & H.D.G.

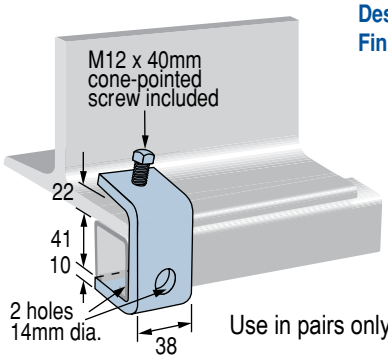


Use in pairs only

P1271

Mass: 43kg/100

Design Load Per Pair: 4.50kN
Finishes: H.D.G.



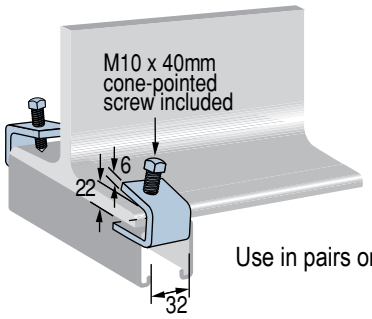
Requires P1010
Channel nut & bolt

Use in pairs only

P1272

Mass: 18kg/100

Design Load Per Pair: 3.92kN
Finishes: Z.P., H.D.G., & S.S.

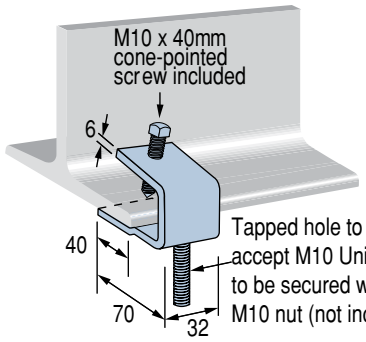


Use in pairs only

P1270

Mass: 29kg/100

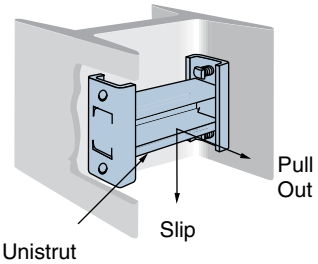
Design Load Per Pair: 0.38kN
Finishes: Z.P. & H.D.G.



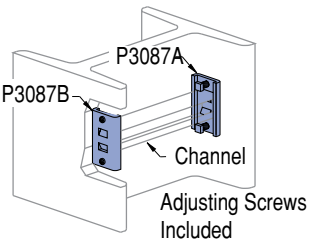
P3087

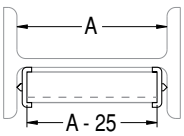
Mass: 45kg/100

Hardened cone-point
adjusting screws included



Unistrut
Channel
not included





Channel Type	Design Pullout Load kN	Design Slip Load kN
P1000	4.41	3.53
P2000	2.11	1.32

Safety Factor: 3
Standard Finishes: Z.P. & H.D.G.

Engineering Data - Beams & Columns

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 83, and 'How to use Load Tables' pages 122-123.

Beams & Columns - P1000 Channel & 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
	P1001-3	27.90 (1)	0.02	146.48
	P1001C3	25.64 (1)	0.05	145.92
	P1001C41	25.64 (1)	0.04	195.70
	P1003	17.46	0.15	78.01
	P1004A	26.33 (1)	0.02	157.31
500	P1000	7.42	0.87	36.84
	P1001	19.58	0.50	94.09
	P1001-3	27.90	0.19	141.13
	P1001C3	25.64	0.39	138.70
	P1001C41	25.64	0.30	188.76
	P1003	8.73	0.59	74.48
	P1004A	26.33	0.14	153.24
750	P1000	4.94	1.97	28.22
	P1001	13.06	1.13	88.35
	P1001-3	27.90	0.65	132.53
	P1001C3	18.61 (2)	0.96	128.60
	P1001C41	25.64	1.02	178.34
	P1003	5.82	1.33	68.94
	P1004A	26.33	0.47	146.68
1000	P1000	3.71	3.50	21.44
	P1001	9.79	2.00	80.90
	P1001-3	23.76	1.31	121.36
	P1001C3	13.96 (2)	1.72	117.29
	P1001C41	21.16	2.00	165.65
	P1003	4.36	2.37	61.87
	P1004A	26.33	1.12	137.97
1250	P1000	2.97	5.46	16.42
	P1001	7.83	3.13	72.23
	P1001-3	19.01	2.05	108.36
	P1001C3	11.17 (2)	2.68	105.77
	P1001C41	16.93	3.13	151.78
	P1003	3.49	3.70	53.84
	P1004A	22.82 (2)	1.90	127.53
1500	P1000	2.47	7.87	13.20
	P1001	6.53	4.50	62.89
	P1001-3	15.84	2.95	94.35
	P1001C3	9.31 (2)	3.86	94.42
	P1001C41	14.11	4.50	137.52
	P1003	2.91	5.33	45.43
	P1004A	19.02	2.73	115.84
1750	P1000	2.12 (2)	10.71	11.00
	P1001	5.60 (2)	6.13	53.40
	P1001-3	13.58 (2)	4.02	80.11
	P1001C3	7.98 (2)	5.25	83.31
	P1001C41	12.09	6.13	123.36
	P1003	2.49	7.25	37.16
	P1004A	16.30 (2)	3.72	103.39
2000	P1000	1.85 (2)	13.99	9.35
	P1001	4.90 (2)	8.01	44.21
	P1001-3	11.88 (2)	5.25	66.33
	P1001C3	6.98 (2)	6.86	72.48
	P1001C41	10.58	8.01	109.59
	P1003	2.18	9.48	29.41
	P1004A	14.26 (2)	4.86	90.69
2250	P1000	1.65 (2)	17.70	8.05
	P1001	4.35 (2)	10.13	35.62
	P1001-3	10.56 (2)	6.65	53.44
	P1001C3	6.20 (2)	8.68	62.04
	P1001C41	9.41	10.13	96.41
	P1003	1.94	11.99	23.24
	P1004A	12.68 (2)	6.15	78.16
2500	P1000	1.48 (2)	21.85	7.01
	P1001	3.92 (2)	12.51	28.85
	P1001-3	9.50 (2)	8.21	43.29
	P1001C3	5.58 (2)	10.72	52.11
	P1001C41	8.47 (2)	12.51	83.93
	P1003	1.75	14.81	18.82
	P1004A	11.41 (2)	7.59	66.20
2750	P1000	1.35 (2)	26.44	6.14
	P1001	3.56 (2)	15.14	23.85
	P1001-3	8.64 (2)	9.93	35.78
	P1001C3	5.08 (2)	12.97	44.05
	P1001C41	7.70 (2)	15.13	72.11
	P1003	3.56	15.14	23.85
	P1004A	10.37 (2)	9.19	55.06
3000	P1000	1.24 (2)	31.47	0.00
	P1001	3.26 (2)	18.02	20.04
	P1001-3	7.92 (2)	11.82	30.07
	P1001C3	4.65 (2)	15.44	37.67
	P1001C41	7.05 (2)	18.01	62.18
	P1003	1.45 (2)	21.32	0.00
	P1004A	9.51 (2)	10.93	46.27

Elements of Section - P1000 Channel & Combination

Part No.	Mass kg/m	Area of Section mm^2	Axis XX			Axis YY		
			I 10^6mm^4	Z 10^3mm^3	r mm	I 10^6mm^4	Z 10^3mm^3	r mm
P1000	2.61	330	0.069	2.920	14.5	0.092	4.451	16.7
P1001	5.22	660	0.318	7.711	22.0	0.184	8.902	16.7
P1001-3	7.83	991	1.178	18.713	34.5	0.276	13.365	16.7
P1001C3	7.83	991	0.530	10.995	23.1	0.576	13.945	24.1
P1001D3	7.83	991	0.481	10.203	22.0	0.557	13.491	23.7
P1001C41	10.44	1322	0.688	16.670	22.8	0.931	22.546	26.5
P1003	4.57	580	0.120	3.771	14.4	0.300	6.007	22.8
P1004A	9.15	1162	1.529	24.660	36.3	0.424	18.336	19.1

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

For Slip and Pullout Performance details refer to this Tab Section. (page 118)

Beam & Column - P2000 Channel & 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	P2000	10.30	0.20	32.92
	P2001	11.78 (1)	0.05	70.84
	P2001C3	11.77 (1)	0.03	106.31
500	P2000	6.06	0.94	26.55
	P2001	11.78	0.37	68.18
	P2001C3	11.77 (1)	0.24	101.69
750	P2000	4.04	2.12	19.21
	P2001	11.09	1.17	63.96
	P2001C3	11.77 (2)	0.24	94.74
1000	P2000	3.03	3.77	12.91
	P2001	8.32	2.07	58.50
	P2001C3	10.91	1.80	86.31
1250	P2000	2.42	5.89	9.03
	P2001	6.65	3.24	52.15
	P2001C3	8.73 (2)	2.82	77.21
1500	P2000	2.02	8.48	6.89
	P2001	5.54	4.67	45.32
	P2001C3	7.28 (2)	4.06	68.03

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
1750	P2000	1.73 (2)	11.54	5.56
	P2001	4.75 (2)	6.35	38.39
	P2001C3	6.24 (2)	5.53	59.16
2000	P2000	1.27 (2)	8.41	5.46
	P2001	3.48 (2)	4.63	31.77
	P2001C3	4.01 (2)	3.97	58.18
2250	P2000	1.35 (2)	19.07	4.02
	P2001	3.70 (2)	10.50	25.48
	P2001C3	4.85 (2)	9.13	43.10
2500	P2000	1.21 (2)	23.55	3.53
	P2001	3.33 (2)	12.96	20.64
	P2001C3	4.37 (2)	11.28	36.13
2750	P2000	1.10 (2)	28.49	3.14
	P2001	3.02 (2)	15.68	17.06
	P2001C3	3.97 (2)	13.64	30.72
3000	P2000	1.01 (2)	33.91	2.82
	P2001	2.77 (2)	18.66	14.33
	P2001C3	3.64 (2)	16.24	26.44

Note:
The table should be read in conjunction with 'Notes on Derivation of Structural Data' (page 83) and 'How to use Load Tables' (pages 122-123) in this Tab Section.

Elements of Section - P2000 Channel & Combination

Part No.	Mass kg/m	Area of Section mm^2	Axis XX			Axis YY		
			I $106mm^4$	Z $103mm^3$	r mm	I $106mm^4$	Z $103mm^3$	r mm
P2000	1.79	228	0.052	2.297	15.2	0.065	3.143	16.9
P2001	3.63	462	0.261	6.321	23.8	0.131	6.367	16.9
P2001C3	5.46	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 118)

Beam & Column - P3300 Channel & 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	P3300	5.52	0.42	34.88
	P3301	15.58	0.25	73.20
500	P3300	2.76	1.68	27.76
	P3301	7.79	1.01	67.32
750	P3300	1.84	3.79	19.42
	P3301	5.19	2.26	58.55
1000	P3300	1.38	6.74	12.08
	P3301	3.90	4.02	48.16
1250	P3300	1.10	10.53	7.90
	P3301	3.12	6.28	37.47
1500	P3300	0.92	15.16	5.56
	P3301	2.60	9.05	27.50

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
1750	P3300	0.79 (2)	20.63	0.00
	P3301	2.23 (2)	12.32	20.21
2000	P3300	0.69 (2)	26.95	0.00
	P3301	1.95 (2)	16.09	15.47
2250	P3300	0.61 (2)	34.11	0.00
	P3301	1.73 (2)	20.36	12.22
2500	P3300	0.55 (2)	42.11	0.00
	P3301	1.56 (2)	25.13	0.00
2750	P3300	0.50 (2)	50.95	0.00
	P3301	1.42 (2)	30.41	0.00
3000	P3300	0.46 (2)	60.63	0.00
	P3301	1.30 (2)	36.19	0.00

Note:

The table should be read in conjunction with 'Notes on Derivation of Structural Data' (page 83) and 'How to use Load Tables' (pages 122-123) in this Tab Section.

Elements of Section - P3300 Channel & Combination

Part No.	Mass kg/m	Area of Section mm^2	Axis XX			Axis YY		
			I $106mm^4$	Z $103mm^3$	r mm	I $106mm^4$	Z $103mm^3$	r mm
P3300	1.88	232	0.013	0.999	7.6	0.055	2.661	15.4
P3301	3.76	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 118)

Beam & Column - P4000 Channel & 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	P4000	4.20	0.44	22.36
	P4001	10.39	0.24	49.05
	P4003	11.16 (1)	0.06	73.53
	P4002-1	4.71	0.25	51.41
500	P4000	2.10	1.77	16.30
	P4001	5.55	1.03	45.24
	P4003	11.16	0.51	68.80
	P4002-1	2.35	0.99	42.12
750	P4000	1.40	3.98	10.46
	P4001	3.70	2.33	39.54
	P4003	10.02	1.53	62.23
	P4002-1	2.35	0.99	42.12
1000	P4000	1.05	7.08	6.54
	P4001	2.78	4.14	32.74
	P4003	7.52	2.73	53.62
	P4002-1	1.18	3.95	18.99
1250	P4000	0.84	11.07	4.54
	P4001	2.22	6.46	25.69
	P4003	6.01	4.26	44.23
	P4002-1	0.94	6.18	12.16
1500	P4000	0.70 (2)	15.94	3.35
	P4001	1.85 (2)	9.31	19.06
	P4003	5.01	6.13	34.96
	P4002-1	0.78	8.89	0.00

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
1750	P4000	0.60 (2)	21.69	0.00
	P4001	1.59 (2)	12.67	14.00
	P4003	4.30 (2)	8.35	26.45
	P4002-1	0.67	12.10	0.00
2000	P4000	0.52 (2)	28.33	0.00
	P4001	1.39 (2)	16.54	10.72
	P4003	3.76 (2)	10.90	20.25
	P4002-1	0.59	15.81	0.00
2250	P4000	0.47 (2)	35.86	0.00
	P4001	1.23 (2)	20.94	8.47
	P4003	3.34 (2)	13.80	16.01
	P4002-1	0.52	20.01	0.00
2500	P4000	0.42 (2)	44.27	0.00
	P4001	1.11 (2)	25.85	0.00
	P4003	3.01 (2)	17.04	12.97
	P4002-1	0.47	24.70	0.00
2750	P4000	0.38 (2)	53.57	0.00
	P4001	1.01 (2)	31.28	0.00
	P4003	2.73 (2)	20.61	0.00
	P4002-1	0.43	29.89	0.00
3000	P4000	0.35 (2)	63.57	0.00
	P4001	0.93 (2)	37.22	0.00
	P4003	2.51 (2)	24.53	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 83) and 'How to use Load Tables' (pages 122-123) in this Tab Section.

Elements of Section - P4000 Channel & Combination

Part No.	Mass kg/m	Area of Section mm^2	Axis XX			Axis YY		
			I $106mm^4$	Z $103mm^3$	r mm	I $106mm^4$	Z $103mm^3$	r mm
P4000	1.26	160	0.010	0.786	7.8	0.039	1.880	15.6
P4001	2.51	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	3.77	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 118)

Beam & Column - P5500 Channel & 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	P5500	27.04	0.14	57.03
	P5501	27.04 (1)	0.03	122.16
500	P5500	13.84	0.57	45.91
	P5501	27.04 (1)	0.21	118.17
750	P5500	9.23	1.29	33.78
	P5501	27.04	0.71	111.82
1000	P5500	6.92	2.29	23.85
	P5501	20.50	1.27	103.50
1250	P5500	5.54	3.58	17.38
	P5501	16.40	1.98	93.71
1500	P5500	4.61	5.15	13.76
	P5501	13.67	2.86	82.98
1750	P5500	3.95 (2)	7.01	11.48
	P5501	11.72	3.89	71.88
2000	P5500	3.46 (2)	9.16	9.89
	P5501	10.25	5.08	60.91

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
2250	P5500	3.08 (2)	11.59	8.72
	P5501	9.11 (2)	6.43	50.48
2500	P5500	2.77 (2)	14.31	7.81
	P5501	8.20 (2)	7.93	41.04
2750	P5500	2.52 (2)	17.31	7.06
	P5501	7.46 (2)	9.60	33.92
3000	P5500	2.31 (2)	20.61	6.43
	P5501	6.83 (2)	11.42	28.50
3250	P5500	2.13 (2)	24.18	5.89
	P5501	6.31 (2)	13.41	24.28
3500	P5500	1.98 (2)	28.05	0.00
	P5501	5.86 (2)	15.55	0.00
3750	P5500	1.85 (2)	32.20	0.00
	P5501	5.47 (2)	17.85	0.00
4000	P5500	1.73 (2)	36.63	0.00
	P5501	5.13 (2)	20.31	0.00

Note:

The table should be read in conjunction with 'Notes on Derivation of Structural Data' (page 83) and 'How to use Load Tables' (pages 122-123) in this Tab Section.

Elements of Section - P5500 Channel & Combination

Part No.	Mass kg/m	Area of Section mm^2	Axis XX			Axis YY		
			I $106mm^4$	Z $103mm^3$	r mm	I $106mm^4$	Z $103mm^3$	r mm
P5500	3.43	433	0.197	5.730	21.3	0.131	6.328	17.4
P5501	6.86	867	1.052	16.990	34.8	0.261	12.662	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 118)

Slip & Pullout Performance - Zinc Plated

Channel Type	Nut Type	Pullout (kN)	Slip (kN)	Torque (Nm)
P1000	P1006	7.3	2.7*	9
	P1007	10.1	5.2*	22
	P1008	16.5	8.7*	44
	P1010	16.5	12.9*	77
P2000	P3016	2.1	0.3	9
	P1006	4.8	1.1*	9
	P1007	5.0	4.0*	22
	P1008	10.8	7.1*	37
	P1010	10.8	6.7*	37
P3300	P3016	2.2	0.6	9
	P4006	7.3	2.7*	9
	P4007	10.1	5.2*	22
	P4008	16.5	8.7*	44
	P4010	16.5	12.9*	77
P4000	P3016	2.1	0.3	9
	P4006	4.8	1.1*	9
	P4007	5.0	4.0*	22
	P4008	10.8	7.1*	37
	P4010	10.8	6.7*	37
A1000	A1008	11.3	3.7*	44
P5500	P5508	16.5	8.7*	44
	P5510	16.5	12.9*	77

Slip & Pullout Performance - Stainless Steel

Channel Type	Nut Type	Pullout (kN)	Slip (kN)	Torque (Nm)
P1000SS	P1006SS	5.7	0.4	3.5
	P1007SS	8.2	0.5	8.5
	P1008SS	11.6	1.0	17.0
	P1013SS	12.1	1.2	30.0

Slip & Pullout Performance - Alum. 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%

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.

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.

Hot Dipped Galvanised Channel Nuts

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

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

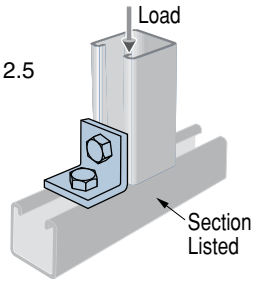
These figures are results obtained from a comprehensive series of tests carried out by a NATA registered laboratory.

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

Note: Some fittings, as shown in this catalogue can be supplied in Aluminium on special order.

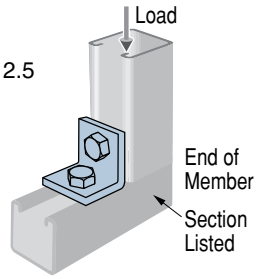
Safe Bearing Loads

Safety Factor: 2.5



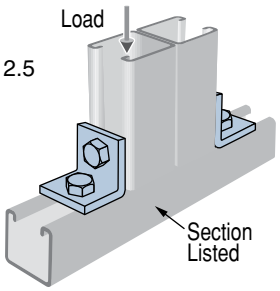
Section	Recommended Load kN
P1000	21.4
P2000	10.8
P3300	25.8
P4000	12.7

Safety Factor: 2.5



Section	Recommended Load kN
P1000	13.5
P2000	6.6
P3300	15.2
P4000	7.2

Safety Factor: 2.5



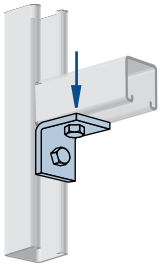
Section	Recommended Load kN
P1000	30.3
P2000	14.6
P3300	50.9
P4000	33.4

Design Load Data - Typical Channel 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)

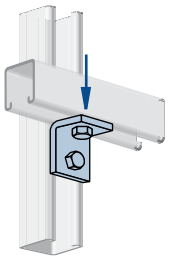
P1026



P1000 9.5kN
P2000 4.5kN

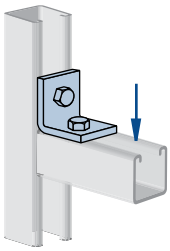
Both Ends Supported

P1068



P1000 3.2kN
P2000 3.2kN

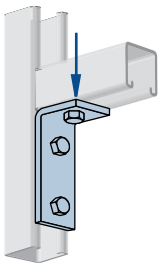
P1026



P1000 7.5kN
P2000 2.7kN

Both Ends Supported

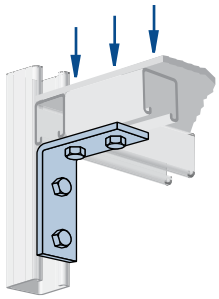
P1346



P1000 10.1kN
P2000 5.4kN

Both Ends Supported

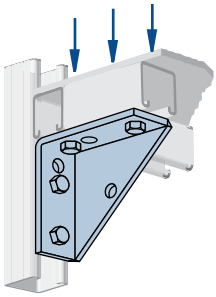
P1325



P1000 12.1kN
P2000 6.3kN

Both Ends Supported

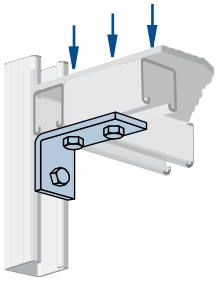
P2484



P1000 18.7kN
P2000 8.5kN

Both Ends Supported

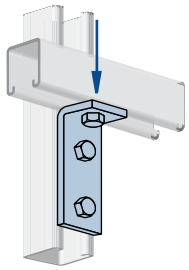
P1458



P1000 9.3kN
P2000 6.1kN

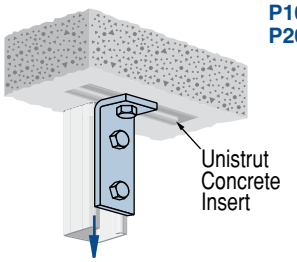
Both Ends Supported

P1326



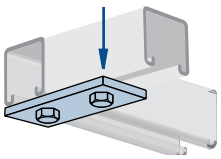
P1000 6.8kN
P2000 4.1kN

P1346



P1000 6.8kN
P2000 5.9kN

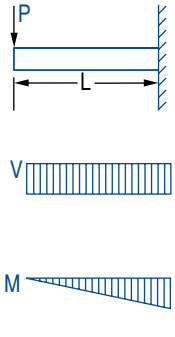
Flat Plate Fittings – P1065



P1000 6.5kN
P2000 2.5kN

Both Ends Supported

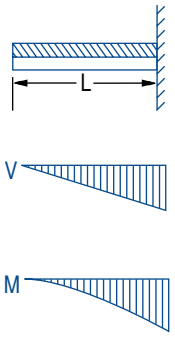
Cantilever Beams



$V_{max.} = P$

$M_{max.} = PL$

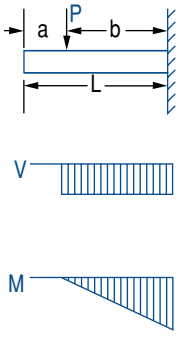
$\Delta_{max.} = \frac{PL^3}{3EI}$



$V_{max.} = W$

$M_{max.} = \frac{WL}{2}$

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

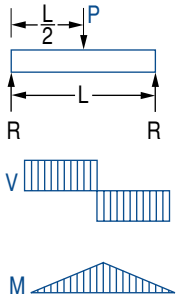


$V_{max.} = P$

$M_{max.} = Pb$

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

Simple Beams

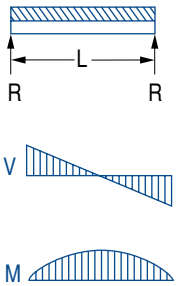


$R = \frac{P}{2}$

$V_{max.} = \frac{P}{2}$

$M_{max.} = \frac{PL}{4}$

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

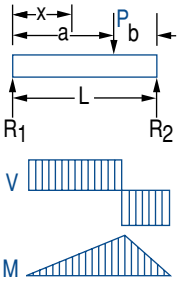


$R = \frac{W}{2}$

$V_{max.} = \frac{W}{2}$

$M_{max.} = \frac{WL}{8}$

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



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

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

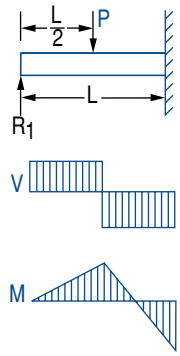
$V_{max.} = \frac{Pa}{L}$

$M_{max.} = \frac{Pab}{L}$

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

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

Beams Fixed One End, Supported at Other



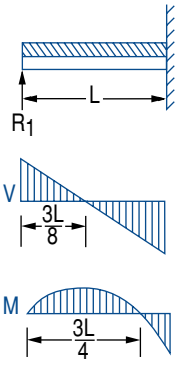
$R_1 = \frac{5P}{16}$

$V_{max.} = \frac{11P}{16}$

$M_{max.} = \frac{3PL}{16}$

$\Delta_{max.}$ at $x = 0.447L$

$\Delta_{max.} = 0.009317\,\frac{PL^3}{EI}$



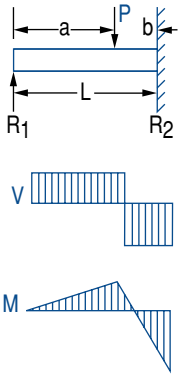
$R_1 = \frac{3W}{8}$

$V_{max.} = \frac{5W}{8}$

$M_{max.} = \frac{WL}{8}$

$\Delta_{max.}$ at $x = 0.4215L$

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



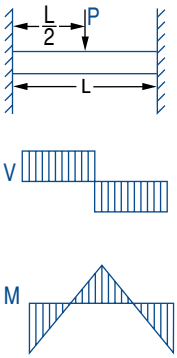
$R1 = \frac{Pb^2}{2L^3}(a + 2L)$

$R2 = \frac{Pa}{2L^3}(3L2 - a^2)$

M at point of load $= R1\,a$

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

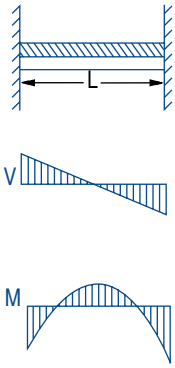
Beams Fixed at Both Ends



$V_{max.} = \frac{P}{2}$

$M_{max.} = \frac{PL}{8}$

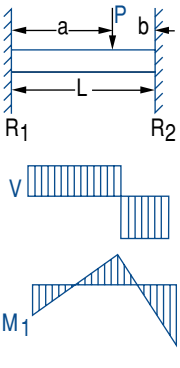
$\Delta_{max.} = \frac{PL^3}{192EI}$



$V_{max.} = \frac{W}{2}$

$M_{max.} = \frac{WL}{12}$

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



$R1 = \frac{Pb^2}{L^3}(3a + b)$

$R2 = \frac{Pa^2}{L^3}(a + 3b)$

$M1 = \frac{Pab^2}{L^2}$

$M2 = \frac{Pa^2b}{L^2}$

R - Reactio n
M - Moment (Nmm)
P - Concentrated load (N)

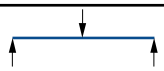
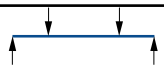
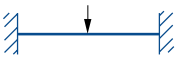
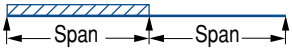
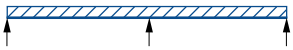
W - To tal uniform load (N)
V - Shear
L - Length (mm)

Δ - Deflection (mm)
E - Modulus of Elasticity (MPa)
I - Moment of Inertia (mm^4)

Conversion Factors for Beams with various Static Loading Conditions

Load tables in this catalogue for 41mm channel width series and 32mm channel 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

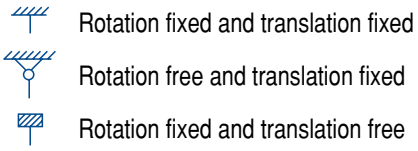
Unistrut Column Loading

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



HOW TO USE LOAD TABLES

Unistrut Sections as Beams

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

a. the nature of the load.

b. the particular section to be used.

c. the span of the beam.

d. the beam-load capacity of the section for a given span.

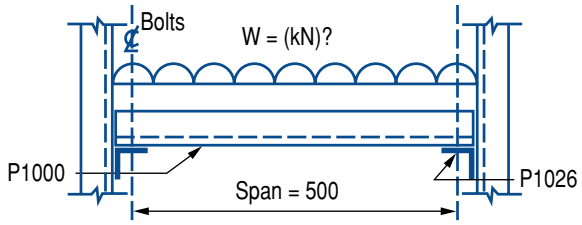
e. the load capacity of the connectors used to support the beams on the columns.

f. 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 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 Beam and Column in load table page 113, 500mm and Section P1000, W = 7.42kN.

Step 2

- Find load capacity of connectors.
- From Safe Bearing Loads in load table on page 119. for P1000 section supported on P1026 connectors; Support load = 4.75kN
  Beam load = 2 x support load = 2 x 4.75 = 9.5kN.

Step 3

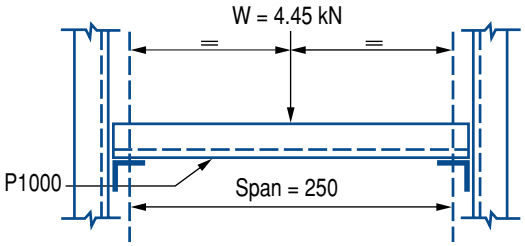
- Check deflection limitations.
- No special deflection considerations apply.

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 = 757kg uniformly distributed.

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 x 2 = 8.9kN.

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 = 9.5kN.
- 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 113)

- From Beam load table for P1000 section with L1 = 250mm, W1 = 14.83kN and $\delta_1 = 0.22$mm
- From example data and step 1 above W2 = 8.9kN, L2 = 250mm
- Substituting values in formula $\delta_2 = (8.9/14.83) \times (250/250)^3 \times 0.22 = 0.14$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 x 0.8 = 0.11mm.

HOW TO USE LOAD TABLES

Unistrut Sections as Columns

The load capacity of Unistrut 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.

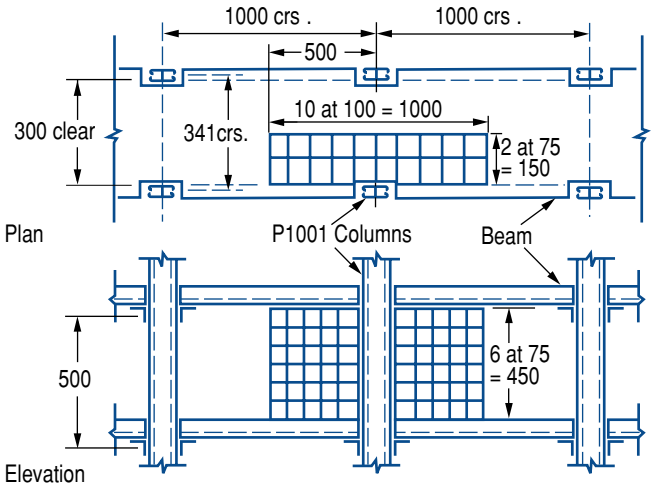
If a) and b) are known and if c) and d), for the case being considered, match the conditions in Structural Data Notes then the load capacity of the section can be read directly from the tables under 'maximum column load'.

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?



Step 1

- Determine Concentric load for shelf.
- Plan area supported by each main column
  = 1000 x 150 = 150,000mm2
- 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 x 120kg
and load per shelf = 6.5 x 120 x 0.0098
= 7.64kN per column.

Step 2

- Determine load capacity of P1001 section.
- From P1001 Beams and Columns Table on page 89 for P1001 with height 500mm.
- Maximum column load = 94.09kN.

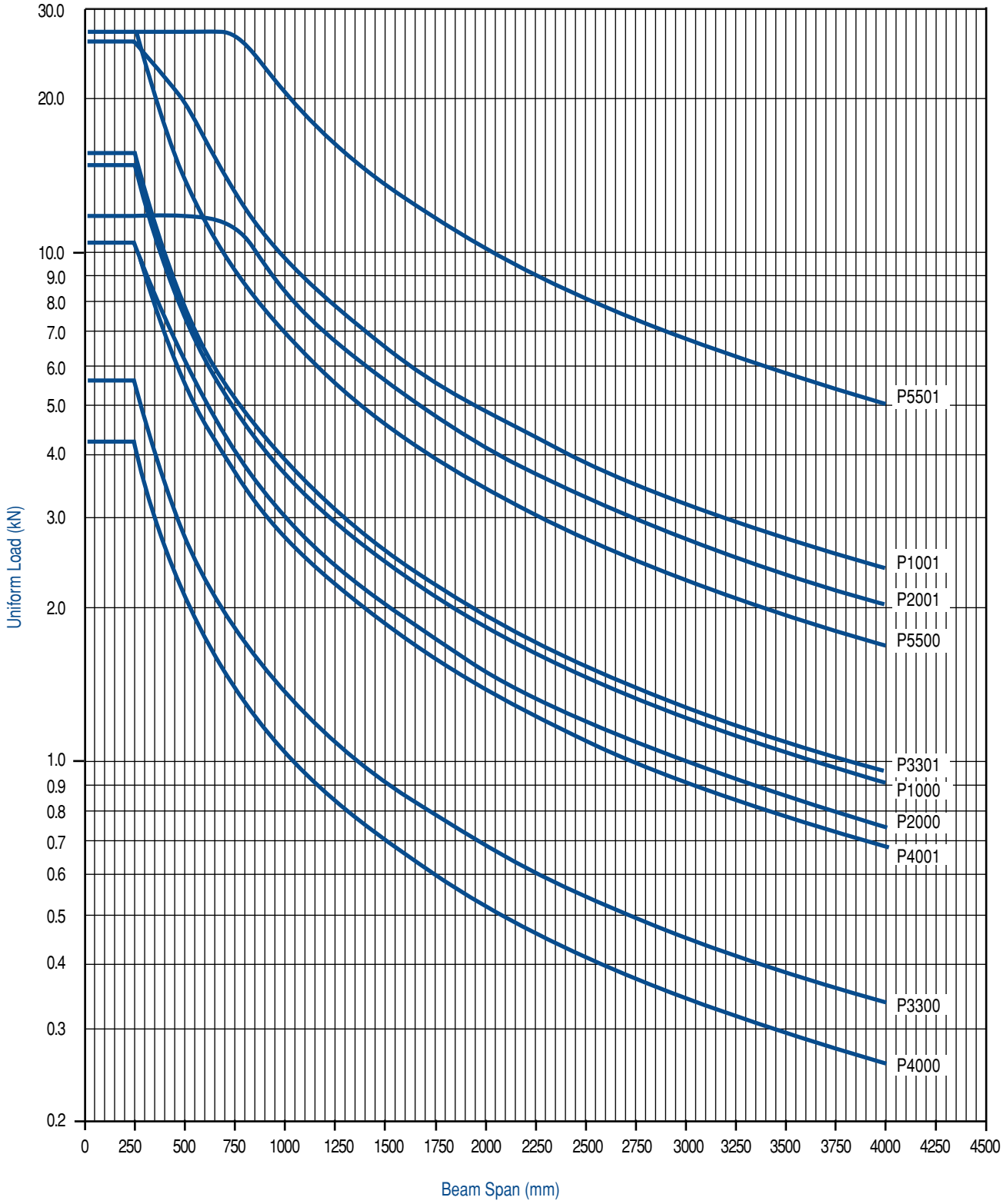
Step 3

- 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 x 0.5 = 6.0 metres.

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 30.3 kN.

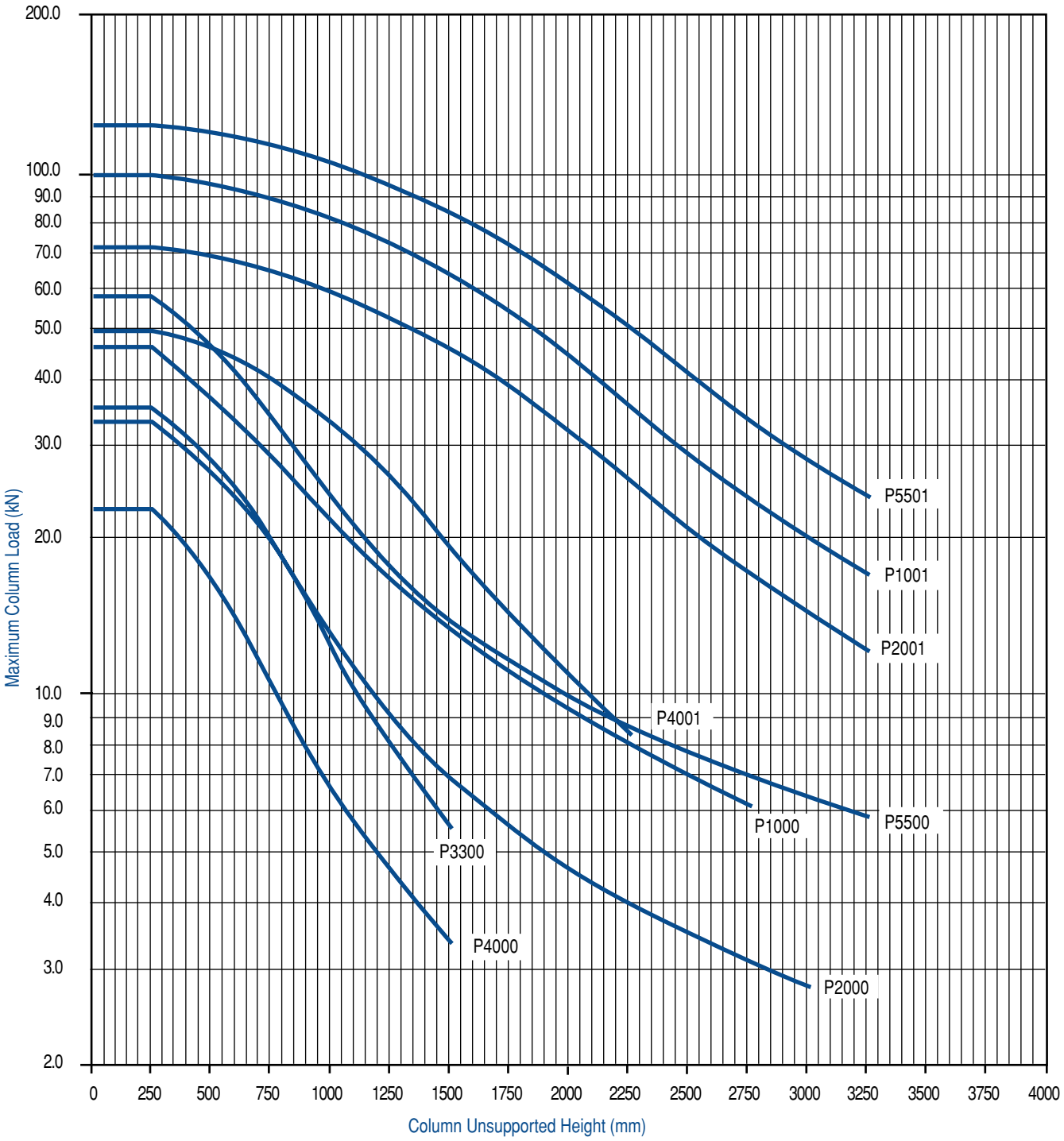
The number of shelves would then be given by: 30.3 / 7.64 = 3.96
i.e. 3 shelves, totalling 1.5 metres high.

UNIFORM WORKING LOAD FOR SIMPLY SUPPORTED BEAMS



Note: *(Ultimate divided by 1.5)*

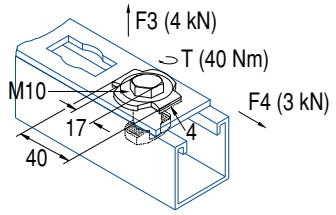
MAXIMUM WORKING COLUMN LOADS

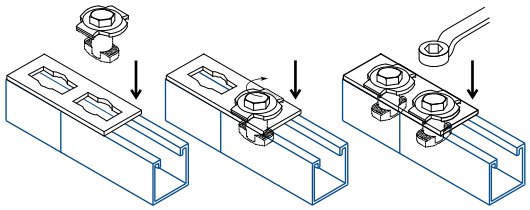


Note: *(Ultimate divided by 1.5)*

Kwikstrut

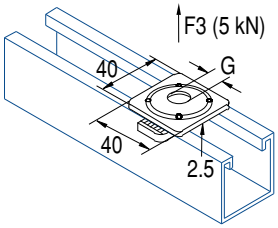
QFNH Channel Nut [ZP/HG]

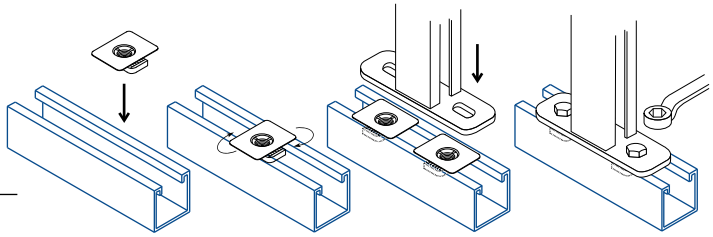




Part No. [ZP]	Part No. [HG]	Kg	
139 10 16	139 10 19	0.100	50

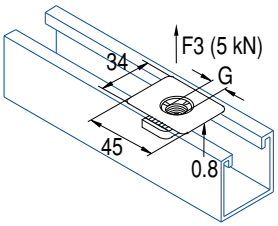
QRN Channel Nut [ZP/HG]

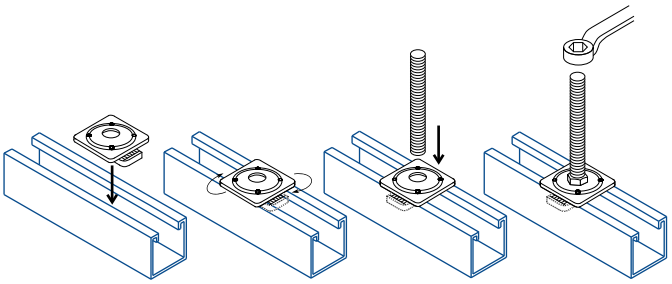




Part No. [ZP]	Part No. [HG]	G	Kg	
139 08 21	139 08 23	M8	0.060	50
139 10 21	139 10 23	M10	0.058	50
139 12 21	139 12 23	M12	0.055	50

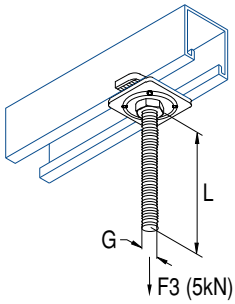
QCN Channel Nut [ZP/HG]

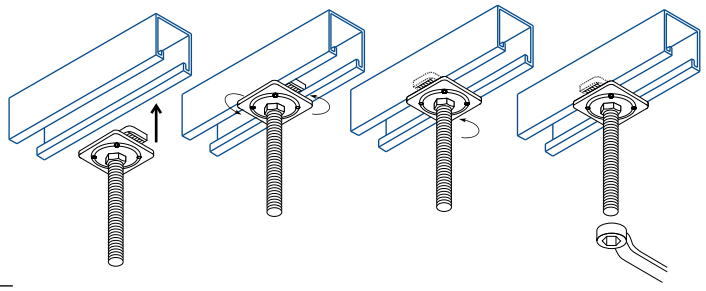




Part No. [ZP]	Part No. [HG]	G	Kg	
139 08 31	139 08 33	M8	0.033	50
139 10 31	139 10 36	M10	0.030	50
139 12 31	139 12 33	M12	0.028	50

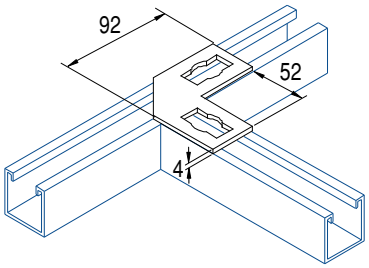
QTB Kwik-Washer w/Threaded Rod [ZP]





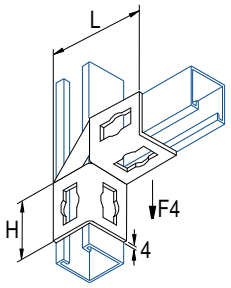
Part No.	G x L	Kg	
139 02 53	M10 x 25	0.100	100
139 05 03	M10 x 50	0.110	100
139 10 03	M10 x 100	0.129	100
139 15 03	M10 x 150	0.156	100
139 20 03	M10 x 200	0.168	100

QFA – Flat Plate Fitting [ZP/DT]



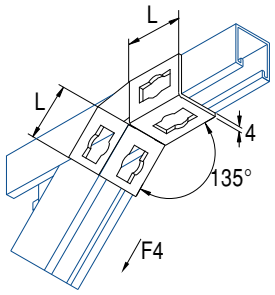
Part No. ZP	Part No. DT		Kg	
139 01 25	139 01 26	1 & 1	0.125	25

QFAZ – 90° Angle Fitting [ZP/DT]



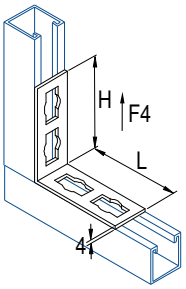
Part No. ZP	Part No. DT		H mm	L mm	F4 kN	Kg	
139 90 55	139 90 56	2 & 2	58	103	2	0.249	10
139 90 65	139 90 66	4 & 4	106	150	3	0.408	10

QFA135 – 135° Angle Fitting [ZP/DT]



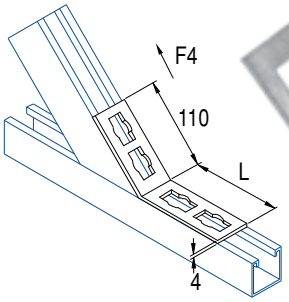
Part No. ZP	Part No. DT		L mm	F4 kN	Kg	
139 35 55	139 35 56	2 & 2	56	2	0.249	10
139 35 65	139 35 66	4 & 4	103	3	0.390	10

QFFA – 90° Angle Fitting [ZP/DT]



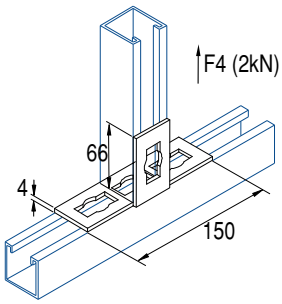
Part No. ZP	Part No. DT		H mm	L mm	F4 kN	Kg	
139 90 25	139 90 26	1 & 1	65	65	2	0.109	25
139 90 35	139 90 36	1 & 2	110	65	2	0.146	25
139 90 45	139 90 46	2 & 2	110	110	3	0.186	25

QFFA135 – 135° Angle Fitting [ZP/DT]



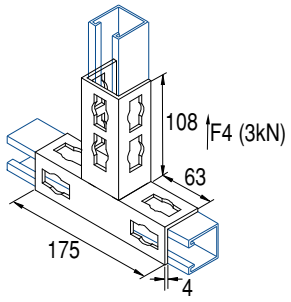
Part No. ZP	Part No. DT		L mm	F4 kN	Kg	
139 35 35	139 35 36	1 & 2	65	2	0.143	25
139 35 45	139 35 46	2 & 2	110	3	0.180	25

QFFT – 90° Angle Fitting [ZP/DT]



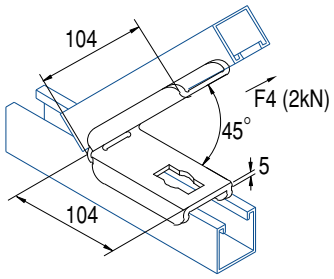
Part No. ZP	Part No. DT		Kg	
139 01 15	139 01 1	1 & 3	0.187	25

QFT – "U" Shaped Angle Fitting [ZP/DT]



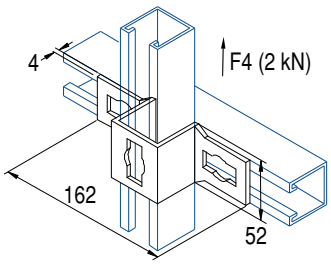
Part No. ZP	Part No. DT		Kg	
139 41 18	139 41 08	6 & 4	0.690	25

QFFA45 – 45° Angle Fitting [ZP/DT]



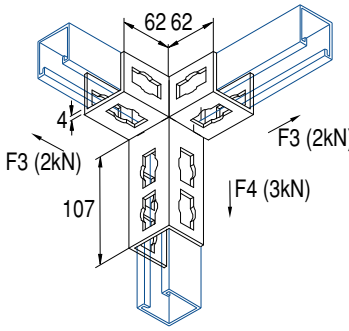
Part No. ZP	Part No. DT		Kg	
139 45 25	139 45 26	1 & 1	0.460	25

QFU – "U" Shaped Angle Fitting [ZP/DT]



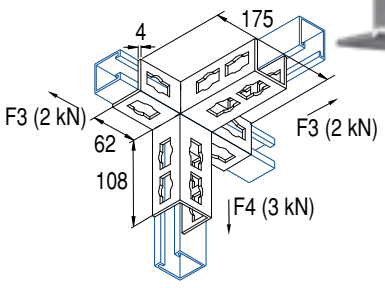
Part No. ZP	Part No. DT		Kg	
139 41 38	139 41 33	2 & 1	0.291	25

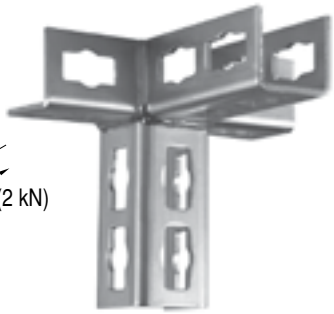
QFCL/QFCR – Wing Shaped Fitting [ZP/DT]



Part No. ZP	Part No. DT			Kg	
139 41 11	139 41 06	Left	6 & 3 & 3	0.660	10
139 41 12	139 41 07	Right	6 & 3 & 3	0.660	10

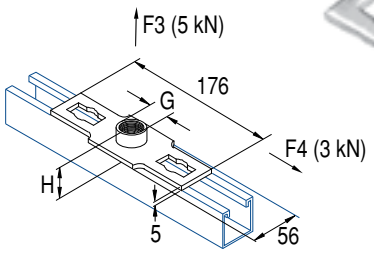
QFCD – Wing Shaped Fitting [ZP/DT]





Part No. ZP	Part No. DT		Kg	
139 41 78	139 41 76	6 & 3 & 4	1.100	10

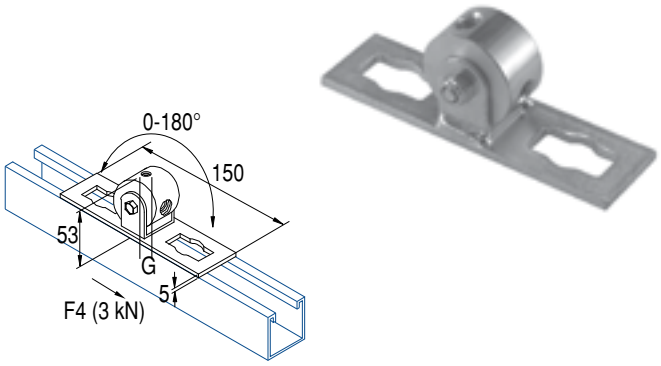
QFMP – Rod Connection Fitting [ZP]



Part No. ZP	G		H mm	Kg	
139 08 25	M8	2	13	0.274	25
139 10 25	M10	2	13	0.272	25
139 12 25	M12	2	15	0.274	25
139 16 25	*M16	2	18	0.306	25

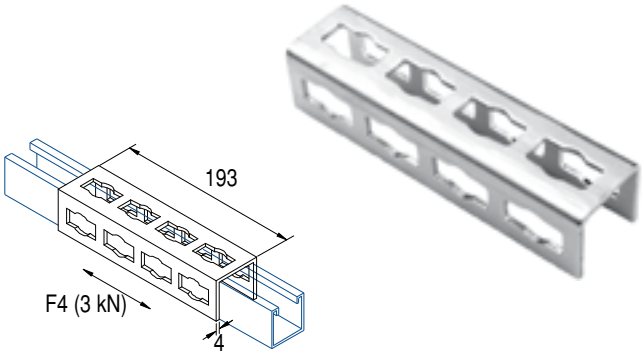
** Full Weld*

QFFC – Rod Connection Fitting [ZP]



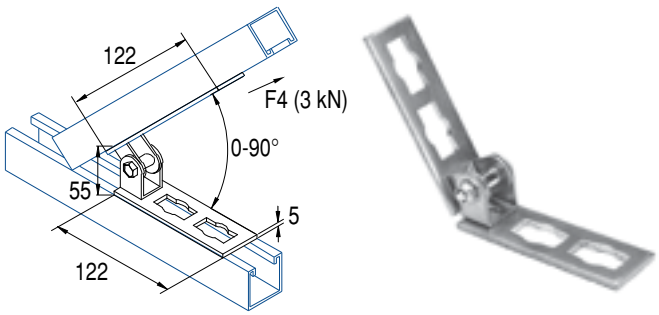
Part No. ZP	G		Kg	
139 01 35	M8/M10/M12	2	0.514	10

QFDC – Joiner Fitting [ZP/DT]



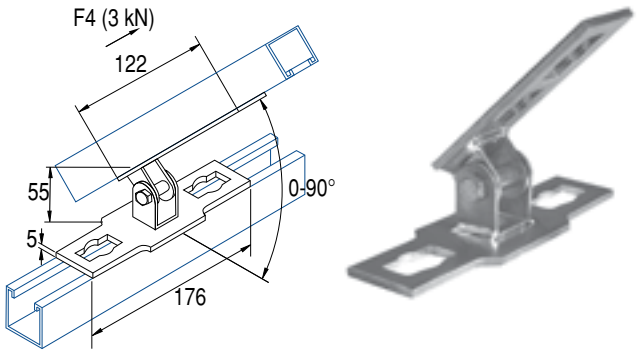
Part No. ZP	Part No. DT		Kg	
139 41 48	139 41 50	12	0.510	10

QFFS – Adjustable Hinge Fitting [ZP/DT]



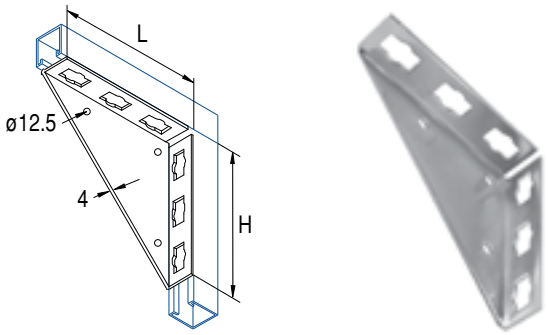
Part No. ZP	Part No. DT		Kg	
139 01 85	139 01 86	2 & 2	0.448	10

QFFSS – Adj. Hinge & Brace Fitting [ZP/DT]



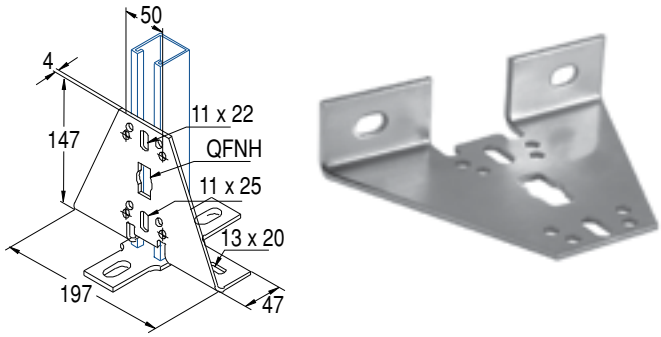
Part No. ZP	Part No. DT		Kg	
139 01 95	139 01 96	2 & 2	0.510	10

QKON – 90° Angle Fitting [ZP/DT]



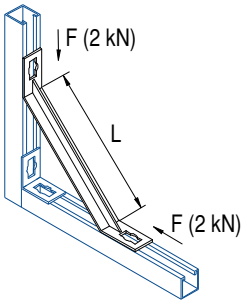
Part No. ZP	Part No. DT	H mm	L mm	Kg	
139 01 55	139 01 56	195	195	0.992	10
139 01 65	139 01 66	210	155	0.778	10

QB – Angle Bracket [ZP/DT]



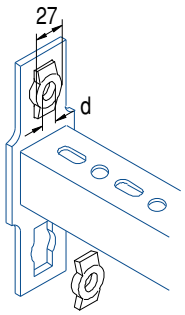
Part No. ZP	Part No. DT	Kg	
139 13 91	139 13 94	0.700	10

QBF –Angular Base Fitting [ZP/DT]



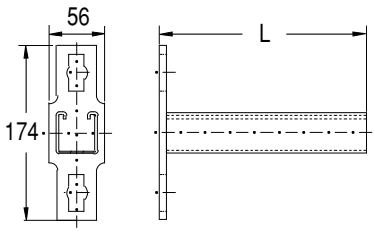
Part No. ZP	Part No. DT	L mm	Kg	
139 30 07	139 30 06	300	0.616	10
139 40 07	139 40 06	400	0.806	10
139 50 07	139 50 06	500	1.026	10
139 60 07	139 60 06	600	1.237	10

QCA – Cantilever Arm In-Fill Washer [ZP/DT]



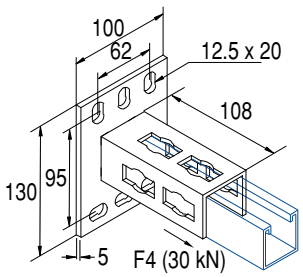
Part No. ZP	Part No. DT	Kg /100	
139 08 65	139 08 66	2.1	50
139 10 65	139 10 66	2.0	50
139 12 65	139 12 66	1.9	50

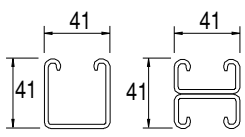
QLCA – Cantilever Arm [ZP/DT]



Part No. ZP	Part No. DT	Kg	L mm	F1 L	F2 150 F2 L	F3 150 F3 150 F3 L	F4 150 F4 150 F4 150 F4 L	
139 41 19	139 41 09	0.752	200	2.37 kN	-	-	-	10
139 41 29	139 41 25	0.873	250	1.55 kN	0.98 kN	-	-	10
139 41 39	139 41 40	1.113	350	1.15 kN	0.68 kN	0.55 kN	-	10
139 41 49	139 41 51	1.362	450	0.92 kN	0.52 kN	0.40 kN	0.36 kN	10

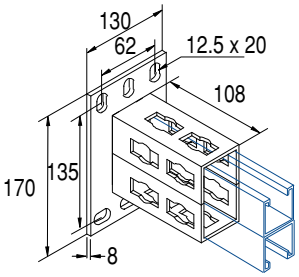
QB41 – Base Fitting for P1000 [ZP/DT]

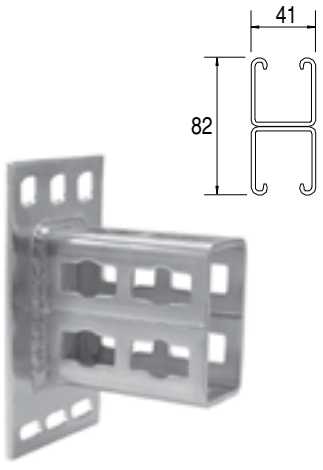




Part No. ZP	Part No. DT		Kg	
139 41 58	139 41 56	6	0.771	10

QB82 – Base Fitting for P1001 [ZP/DT]

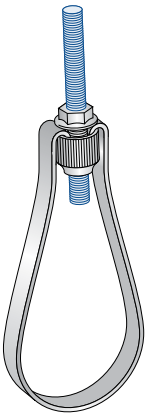


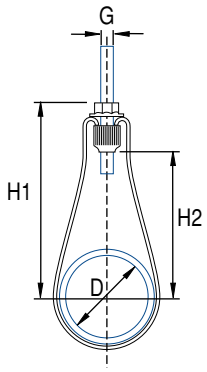


Part No. ZP	Part No. DT		Kg	
139 44 58	139 44 56	6 & 6	1.920	5

Pipe & Tube Clamps

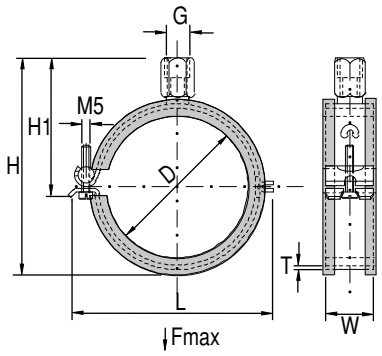
USP – Sprinkler Pipe Hangers [GB]





Part No.	D NB/DN	G	H1 mm	H2 mm	Kg /100		Approvals	
USP15	15	M8	56	41	0.044	50	–	
USP20	20	M8	57	42	0.048	50	–	
USP25	25	M8	57	42	0.052	50	–	
USP32	32	M8	57	42	0.056	50	–	
USP40	40	M8	62	47	0.060	50	–	
USP50	50	M8	72	57	0.064	50	–	
USP2010	20	M10	57	42	0.048	50	–	
USP2510	25	M10	57	42	0.052	50		VdS
USP3210	32	M10	57	42	0.056	50		
USP4010	40	M10	62	47	0.060	50		
USP5010	50	M10	72	57	0.064	50		
USP65	65	M10	89	69	0.130	25	FM	
USP80	80	M10	104	84	0.140	25		
USP100	100	M10	135	115	0.160	25		
USP125	125	M12	151	129	0.200	25		
USP150	150	M12	188	166	0.220	25		
USP200	200	M16	236	214	0.460	10		
USP250	250	M20	310	288	0.800	1	–	

PERFEKT-1S – Sound Insulated Pipe Clamp [ZP]



EPDM/SBR
SHORE A = 45° ± 5°
+ 110° C
- 50° C

Baustoffklasse B2 "Normal entflammbar" nach DIN 4102

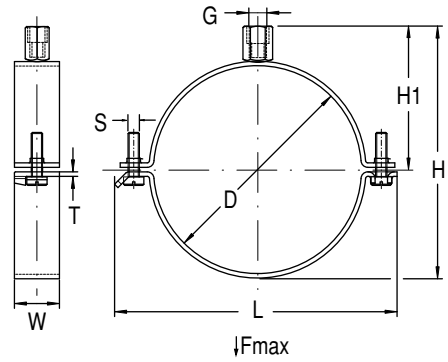
Sound insulation tested

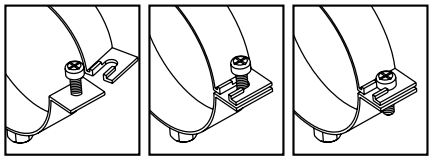
Sound Insulation value on average 22 dB (A)

One Piece Pipe Clamp - 1 Screw

Part No. G=M8/M10	D mm	W x T mm	H mm	H1 mm	L mm	Fmax kN	Kg /100	
119 15 10	15 - 16	20 x 1.00	44	30	43	0.8	4.2	100
119 18 10	17 - 18	20 x 1.00	46	32	45	0.8	4.5	100
119 22 10	21 - 22	20 x 1.00	51	34	50	0.8	4.8	100
119 28 10	27 - 28	20 x 1.00	55	37	56	0.8	5.2	100
119 35 10	34 - 35	20 x 1.25	63	40	64	1.1	6.2	100
119 40 10	40 - 41	20 x 1.25	69	43	69	1.1	6.9	100
119 42 10	42 - 43	20 x 1.25	70	44	71	1.1	7.1	100
119 48 10	48 - 49	20 x 1.25	77	48	77	1.1	7.6	100
119 50 10	49 - 50	20 x 1.25	79	49	79	1.1	8.1	50
119 54 10	54 - 55	20 x 1.25	83	51	83	1.1	8.6	50
119 57 10	57 - 58	20 x 1.25	86	53	86	1.1	8.7	50
119 60 10	60 - 61	20 x 1.25	89	54	89	1.1	8.8	50

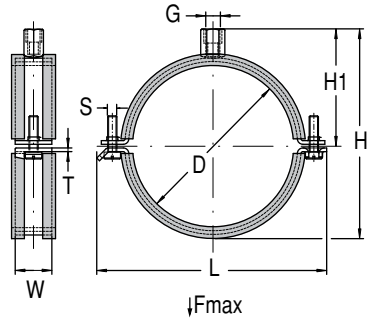
STANDARD-N – Two Piece Pipe Clamp [ZP]

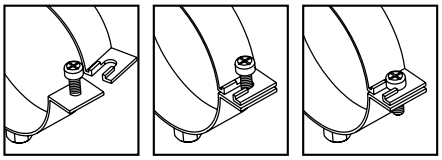




Part No. G=M8/M10	D mm	W x T mm	H mm	H1 mm	L mm	S	Fmax kN	/100	
125 60 18	17 - 20	20 x 1.00	36	25	58	M5	0.6	4.5	100
125 60 22	21 - 24	20 x 1.00	40	26	59	M5	0.6	4.9	100
125 60 28	25 - 28	20 x 1.00	46	29	66	M5	0.6	5.4	100
125 60 35	32 - 35	20 x 1.00	52	33	73	M5	0.6	6.1	100
125 60 40	38 - 41	20 x 1.00	56	34	79	M5	0.6	6.5	100
125 60 42	40 - 43	20 x 1.00	60	37	82	M5	0.6	6.8	50
125 60 48	48 - 51	20 x 1.00	66	40	89	M5	0.6	7.2	50
125 60 54	54 - 57	20 x 1.50	73	44	96	M5	1.4	9.4	50
125 60 60	59 - 63	20 x 1.50	79	46	98	M5	1.4	10.7	50
125 60 70	67 - 72	25 x 1.50	94	56	116	M6	1.9	15.2	50
125 60 76	71 - 77	25 x 1.50	100	59	123	M6	1.9	15.4	50
125 60 89	85 - 90	25 x 2.00	108	64	134	M6	2.3	20.3	50
125 61 14	107 - 114	25 x 2.00	136	84	162	M6	2.3	24.3	50

STANDARD-R – Sound Insulated Two Piece Pipe Clamp [ZP]





Part No. G=M8/M10	D mm	W x T mm	H mm	H1 mm	L mm	S	Fmax kN	/100	
125 70 15	14 - 17	20 x 1.00	41	27	55	M5	0.6	4.4	100
125 70 18	17 - 20	20 x 1.00	43	29	58	M5	0.6	4.6	100
125 70 22	21 - 24	20 x 1.00	47	30	59	M5	0.6	5.0	100
125 70 28	27 - 30	20 x 1.00	53	33	66	M5	0.6	5.5	100
125 70 35	33 - 36	20 x 1.00	59	37	73	M5	0.6	6.2	100
125 70 40	38 - 41	20 x 1.00	63	38	79	M5	0.6	6.6	100
125 70 42	42 - 45	20 x 1.00	67	41	82	M5	0.6	6.9	50
125 70 48	48 - 51	20 x 1.00	73	44	89	M5	0.6	7.3	50
125 70 54	54 - 57	20 x 1.50	80	48	98	M5	1.4	9.6	50
125 70 60	59 - 62	20 x 1.50	86	50	101	M5	1.4	10.8	50
125 70 70	67 - 72	25 x 1.50	101	60	116	M6	1.9	15.3	50
125 70 76	72 - 78	25 x 1.50	107	63	123	M6	1.9	15.5	50
125 70 89	84 - 89	25 x 2.00	115	68	134	M6	2.3	20.4	50
125 71 14	109 - 114	25 x 2.00	143	88	162	M6	2.3	24.4	50

Baustoffklasse • B2 • "Normal entflammbar" nach DIN 4102

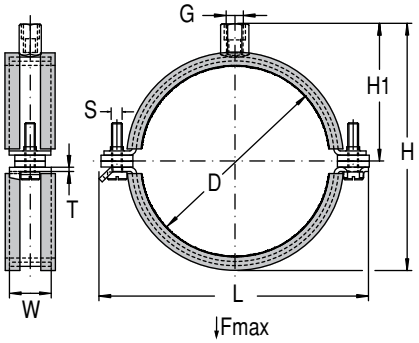
EPDM/SBR
SHORE A = 45° ± 5°

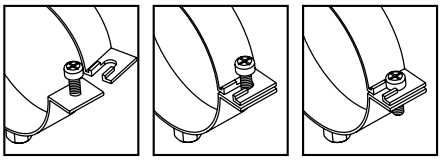
+ 110° C
- 50° C

Sound insulation tested

Sound Insulation value on average 22 dB (A)

STANDARD-P – Plastic Sound Insulated Two Piece Pipe Clamp [ZP]





Part No. G = M8/M10	D mm	W x T mm	H mm	H1 mm	L mm	S	Fmax kN	/100	
133 01 66	16	20 x 1.00	47	32	60	M5	0.6	4.2	100
133 02 06	20	20 x 1.00	52	35	63	M5	0.6	4.5	100
133 02 56	25	20 x 1.00	56	37	68	M5	0.6	5.2	100
133 03 26	32	20 x 1.00	62	40	75	M5	0.6	5.8	100
133 04 06	40	20 x 1.00	72	43	85	M5	0.6	6.5	100
133 05 06	50	20 x 1.00	77	48	91	M5	0.6	6.5	50
133 06 36	63	25 x 1.50	94	55	116	M6	1.45	9.4	50
133 07 86	75/78	25 x 1.50	105	60	125	M6	1.9	22.4	50
133 09 06	90	25 x 1.50	120	70	140	M6	1.9	22.1	50
133 11 06	110	25 x 1.50	141	78	163	M6	1.9	29.5	50
133 12 56	122/127	25 x 2.50	156	88	164	M6	1.9	34.4	50
133 13 56	131/136	25 x 2.50	168	92	175	M6	1.9	34.6	50
133 16 06	164/168	25 x 2.50	190	102	210	M6	1.9	40.1	50

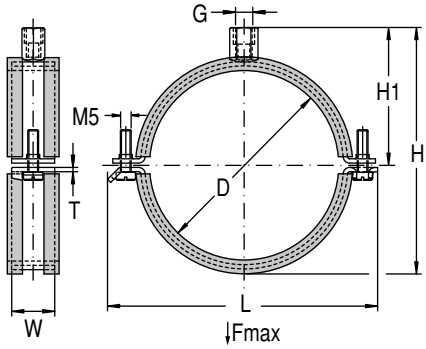
Baustoffklasse • B2 • "Normal entflammbar" nach DIN 4102

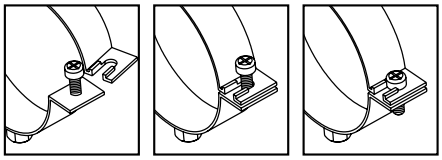
EPDM/SBR
SHORE A = 58° ± 5°
+ 110° C
- 50° C

Sound insulation tested

Sound Insulation value on average 15.4 dB (A)

STANDARD-R-SS – Sound Insulated Two Piece Pipe Clamp [SS 304/A2]





Part No.	D mm	G	W x T mm	H mm	H1 mm	L mm	Fmax kN	/100	
135 01 52	14 - 17	M8	20 x 1.00	39	25	55	0.6	4.4	100
135 01 82	17 - 20	M8	20 x 1.00	41	27	58	0.6	4.6	100
135 02 22	21 - 24	M8	20 x 1.00	45	28	59	0.6	5.0	100
135 02 82	27 - 30	M8	20 x 1.00	51	31	66	0.6	5.5	100
135 03 52	33 - 36	M8	20 x 1.00	57	35	73	0.6	6.2	100
135 04 02	38 - 41	M8	20 x 1.00	61	36	79	0.6	6.6	100
135 04 22	42 - 45	M8	20 x 1.00	65	39	82	0.6	6.9	50
135 04 82	48 - 51	M8	20 x 1.00	71	42	89	0.6	7.3	50
135 05 42	54 - 57	M8	20 x 1.50	78	46	98	1.4	9.6	50
135 06 02	59 - 62	M8	20 x 1.50	84	48	101	1.4	10.8	50
135 07 02	67 - 72	M8/M10	25 x 1.50	101	60	116	1.9	15.3	50
135 07 52	72 - 78	M8/M10	25 x 1.50	107	63	123	1.9	15.5	50
135 08 82	84 - 89	M8/M10	25 x 2.00	115	68	134	2.3	20.4	50
135 11 42	109 - 114	M8/M10	25 x 2.00	143	88	162	2.3	24.4	50

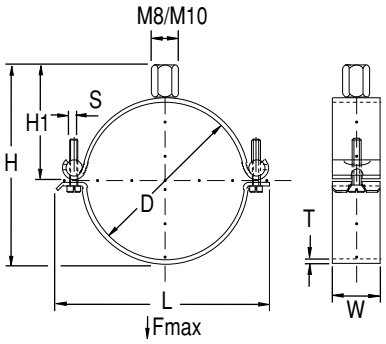
Baustoffklasse • B2 • "Normal entflammbar" nach DIN 4102

EPDM/SBR
SHORE A = 45° ± 5°
+ 110° C
- 50° C

Sound insulation tested

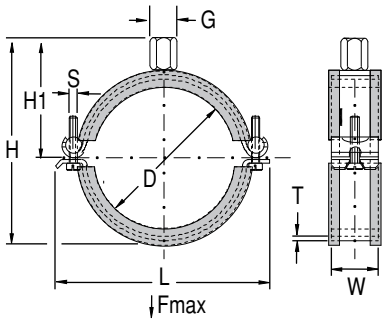
Sound Insulation value on average 22 dB (A)

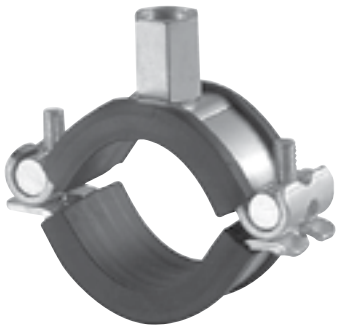
PERFEKT-N – Pipe Clamp [DT]



Part No.	D mm	W x T mm	H mm	H1 mm	L mm	S	Fmax kN	kg /100	
128 01 82	18 - 20	20 x 2.00	39	32	44	M5	0.8	8.1	100
128 02 22	21 - 24	20 x 2.00	42	30	46	M5	0.8	8.2	100
128 02 82	25 - 32	20 x 2.00	47	33	56	M5	0.8	8.8	100
128 03 52	33.5 - 38	20 x 2.00	55	36	61	M5	0.8	9.5	100
128 04 02	39 - 43	20 x 2.00	60	38	65	M5	0.8	9.9	100
128 04 22	42.5 - 46	20 x 2.00	64	40	68	M5	0.8	10.2	100
128 04 82	48.5 - 53	20 x 2.00	70	43	77	M5	0.8	10.9	100
128 06 02	60.5 - 65	20 x 2.00	82	49	89	M5	0.8	12.3	50
128 06 82	68 - 73	25 x 2.50	79	59	105	M6	1.9	17.4	50
128 07 22	73 - 77	25 x 2.50	103	62	107	M6	1.9	18.6	50
128 08 62	84 - 90	25 x 2.50	105	72	121	M6	1.9	20.0	50
128 09 72	97 - 103	25 x 2.50	138	78	142	M6	1.9	21.9	50
128 11 02	109 - 114	25 x 2.50	140	79	145	M6	1.9	23.3	50
128 12 52	125 - 130	25 x 2.50	156	87	163	M6	1.9	26.1	25
128 13 92	139 - 145	25 x 2.50	169	94	173	M6	1.9	29.0	25
128 16 82	160 - 168	25 x 2.50	191	105	193	M6	1.9	32.3	25

PERFEKT-R – Sound Insulated Two Piece Pipe Clamp [ZP]





EPDM/SBR
SHORE A = 45° ± 5°

+ 110° C
- 50° C

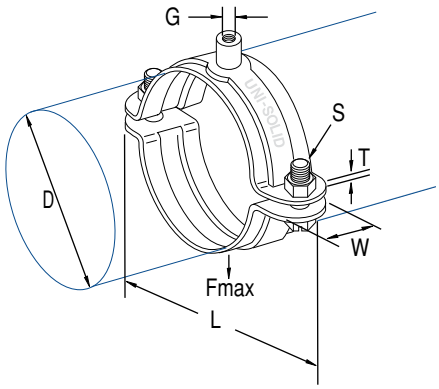
Baustoffklasse • B2 • "Normal entflammbar" nach DIN 4102

Sound insulation tested

Sound Insulation value on average 22 dB (A)

Part No. G=M8/M10	mm	W x T mm	H mm	H1 mm	L mm	S	Fmax kN	kg /100	
119 18 13	15 - 20	20 x 2.00	50	32	50	M5	0.8	8.8	100
119 22 13	21 - 25	20 x 2.00	55	35	58	M5	0.8	9.7	100
119 28 13	26 - 31	20 x 2.00	61	38	62	M5	0.8	10.3	100
119 35 13	32 - 36	20 x 2.00	67	42	71	M5	0.8	11.2	100
119 42 13	42 - 46	20 x 2.00	76	46	79	M5	0.8	12.3	100
119 48 13	46 - 49	20 x 2.00	81	49	80	M5	0.8	12.7	100
119 54 13	50 - 54	20 x 2.00	84	53	87	M5	0.8	13.3	50
119 60 13	56 - 60	20 x 2.00	90	55	95	M5	0.8	14.3	50
119 06 38	63 - 68	25 x 2.50	101	60	107	M6	1.9	21.7	50
119 06 88	68 - 73	25 x 2.50	107	63	110	M6	1.9	23.2	50
119 07 58	75 - 80	25 x 2.50	115	66	116	M6	1.9	24.5	50
119 08 48	84 - 89	25 x 2.50	124	70	126	M6	1.9	27.1	50
119 08 88	88 - 92	25 x 2.50	130	72	129	M6	1.9	28.0	50
119 09 78	97 - 102	25 x 2.50	138	77	140	M6	1.9	29.0	50
119 10 68	106 - 111	25 x 2.50	150	83	152	M6	1.9	32.3	50
119 10 98	109 - 114	25 x 2.50	152	84	153	M6	1.9	32.5	50
119 11 38	113 - 119	25 x 2.50	154	86	154	M6	1.9	32.9	50
119 12 28	122 - 127	25 x 2.50	163	90	164	M6	1.9	34.4	25
119 13 18	131 - 136	25 x 2.50	193	94	175	M6	1.9	36.8	25
119 13 78	137 - 142	25 x 2.50	176	97	181	M6	1.9	37.9	25
119 15 88	158 - 163	25 x 2.50	197	105	192	M6	1.9	40.5	25
119 16 48	164 - 168	25 x 2.50	202	108	195	M6	1.9	42.3	25

SOLID-N – Two-Piece Pipe Clamp [ZP]



Part No.	DN	D mm	W x T mm	L mm	G	S	Fmax kN	/100		Approvals
1174 018	10	15 - 19	25 x 2.5	57	M8/M10	M6	4.0	9	50	
1174 022	15	20 - 24	25 x 2.5	62	M8/M10	M6	4.0	10	50	VdS
1174 028	20	25 - 30	25 x 2.5	68	M8/M10	M6	4.0	11	50	VdS/FM
1174 035	25	31 - 35	30 x 2.5	75	M8/M10	M6	4.0	12	50	VdS/FM
1174 041		36 - 41	30 x 2.5	81	M8/M10	M6	4.0	12	50	VdS
1174 042	32	40 - 45	30 x 2.5	85	M8/M10	M6	4.0	13	50	VdS/FM
1174 048	40	48 - 53	30 x 2.5	93	M8/M10	M6	4.0	15	50	VdS/FM
1174 054		54 - 59	30 x 2.5	104	M8/M10	M6	4.0	16	50	VdS
1174 060	50	60 - 65	30 x 2.5	110	M8/M10	M6	4.0	18	50	VdS/FM
1174 072		67 - 72	30 x 2.5	117	M8/M10	M6	4.0	19	50	VdS
1174 076	65	76 - 81	30 x 3.0	142	M10/M12	M8	5.0	31	25	VdS/FM
1174 085		82 - 85	30 x 3.0	148	M10/M12	M8	5.0	33	25	VdS
1174 089	80	88 - 94	30 x 3.0	154	M10/M12	M8	5.0	34	25	VdS/FM
1174 102		95 - 102	30 x 3.0	163	M10/M12	M8	5.0	35	25	VdS
1174 108		102 - 108	30 x 3.0	169	M10/M12	M8	5.0	40	25	VdS
1174 114	100	110 - 116	30 x 3.0	177	M10/M12	M8	5.0	41	25	VdS/FM
1174 124		117 - 124	30 x 3.0	185	M10/M12	M8	5.0	42	25	VdS
1174 129		124 - 129	30 x 3.0	190	M10/M12	M8	5.0	43	25	VdS
1174 140		133 - 140	40 x 4.0	207	M12/M16	M12	8.0	76	10	VdS
1174 145	125	140 - 146	40 x 4.0	215	M12/M16	M12	8.0	78	10	VdS/FM
1174 155		149 - 155	40 x 4.0	222	M12/M16	M12	8.0	79	10	VdS
1174 165		159 - 165	40 x 4.0	232	M12/M16	M12	8.0	88	10	VdS
1174 168	150	167 - 173	40 x 4.0	240	M12/M16	M12	8.0	88	10	VdS/FM
1174 182		176 - 182	40 x 4.0	265	M12/M16	M12	8.0	93	10	
1174 194		188 - 194	40 x 4.0	273	M12/M16	M12	8.0	97	10	
1174 205		199 - 205	40 x 4.0	284	M12/M16	M12	12.5	103	10	
1174 216		207 - 216	40 x 4.0	295	M12/M16	M12	12.5	114	10	
1174 226	200	219 - 226	40 x 4.0	304	M12/M16	M12	12.5	124	10	
1174 227	200	219 - 226	40 x 4.0	304	M16	M12	12.5	124	10	VdS
1174 236		227 - 236	40 x 4.0	315	M12/M16	M12	12.5	119	10	
1174 250		244 - 250	40 x 4.0	329	M12/M16	M12	12.5	140	10	
1174 261		251 - 261	40 x 4.0	340	M12/M16	M12	12.5	142	10	
1174 273	250	267 - 273	40 x 4.0	352	M12/M16	M12	12.5	144	10	
1174 274	250	267 - 273	40 x 4.0	352	M20	M12	12.5	144	10	VdS
1174 284		278 - 284	40 x 4.0	363	M12/M16	M12	12.5	148	10	
1174 304		297 - 304	40 x 4.0	382	M12/M16	M12	12.5	170	10	
1174 316		305 - 316	40 x 4.0	395	M12/M16	M12	12.5	180	10	
1174 324	300	323.9	50 x 5.0	440	M16	M16	15.0	255	1	
1174 356	350	355.6	50 x 5.0	471	M16	M16	15.0	263	1	
1174 368		368.0	50 x 5.0	482	M16	M16	15.0	271	1	
1174 406	400	406.4	50 x 5.0	520	M16	M16	15.0	290	1	
1174 419		419.0	70 x 7.0	532	M16	M16	15.0	500	1	
1174 508	500	508.0	70 x 7.0	619	M16	M16	15.0	591	1	
1174 521		521.0	70 x 7.0	631	M16	M16	15.0	613	1	

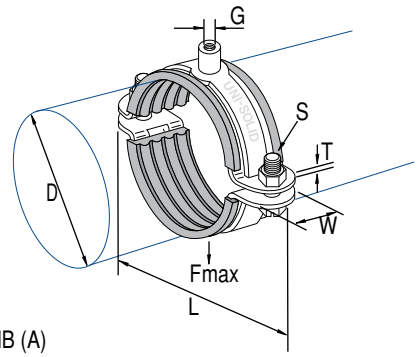
SOLID-R – Rubber Insulated, Two-Piece Pipe Clamp [ZP]

Baustoffklasse B2 "Normal entflammbar" nach DIN 4102

EPDM/SBR
SHORE A = 45° ± 5°
+ 110° C
- 50° C

Sound insulation tested

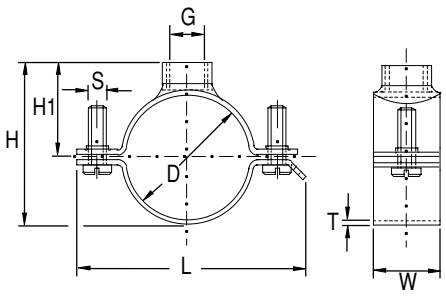
Sound insulation value on average 22 dB (A)



Part No.	DN	mm	W x T mm	L mm	G	S	Fmax kN	Kg /100	
1171 018	10	14 - 18	25 x 2.5	62	M8/M10	M6	4.0	13	50
1171 022	15	19 - 23	25 x 2.5	68	M8/M10	M6	4.0	15	50
1171 028	20	24 - 28	30 x 2.5	75	M8/M10	M6	4.0	17	50
1171 033		29 - 33	30 x 2.5	81	M8/M10	M6	4.0	18	50
1171 035	25	33 - 37	30 x 2.5	85	M8/M10	M6	4.0	19	50
1171 042	32	40 - 45	30 x 2.5	93	M8/M10	M6	4.0	21	50
1171 048	40	47 - 52	30 x 2.5	104	M8/M10	M6	4.0	22	50
1171 054		53 - 58	30 x 2.5	110	M8/M10	M6	4.0	24	50
1171 060	50	60 - 65	30 x 2.5	117	M8/M10	M6	4.0	28	50
1171 072		67 - 72	30 x 3.0	142	M10/M12	M8	5.0	37	25
1171 076	65	73 - 78	30 x 3.0	148	M10/M12	M8	5.0	42	25
1171 085		79 - 85	30 x 3.0	154	M10/M12	M8	5.0	43	25
1171 089	80	88 - 93	30 x 3.0	163	M10/M12	M8	5.0	45	25
1171 099		94 - 99	30 x 3.0	169	M10/M12	M8	5.0	48	25
1171 106		100 - 106	30 x 3.0	177	M10/M12	M8	5.0	52	25
1171 114	100	108 - 116	30 x 3.0	185	M10/M12	M8	5.0	55	25
1171 123		117 - 123	30 x 3.0	190	M10/M12	M8	5.0	59	25
1171 129		124 - 129	40 x 4.0	207	M12/M16	M12	8.0	92	10
1171 137		131 - 137	40 x 4.0	215	M12/M16	M12	8.0	97	10
1171 145	125	138 - 145	40 x 4.0	222	M12/M16	M12	8.0	110	10
1171 154		148 - 154	40 x 4.0	232	M12/M16	M12	8.0	113	10
1171 162		156 - 162	40 x 4.0	240	M12/M16	M12	8.0	115	10
1171 168	150	165 - 171	40 x 4.0	263	M12/M16	M12	8.0	118	10
1171 183		177 - 183	40 x 4.0	273	M12/M16	M12	8.0	122	10
1171 194		188 - 194	40 x 4.0	284	M12/M16	M12	8.0	131	10
1171 203		196 - 203	40 x 4.0	294	M12/M16	M12	12.5	139	10
1171 214		205 - 214	40 x 4.0	304	M12/M16	M12	12.5	145	10
1171 225	200	219 - 225	40 x 4.0	315	M12/M16	M12	12.5	160	10
1171 243		226 - 243	40 x 4.0	329	M12/M16	M12	12.5	170	10
1171 250		244 - 250	40 x 4.0	340	M12/M16	M12	12.5	180	10
1171 264		251 - 264	40 x 4.0	352	M12/M16	M12	12.5	190	10
1171 273	250	265 - 273	40 x 4.0	363	M12/M16	M12	12.5	200	10
1171 295		285 - 295	40 x 4.0	382	M12/M16	M12	12.5	220	10
1171 305		299 - 305	40 x 4.0	395	M12/M16	M12	12.5	230	10
1171 324	300	323.9	50 x 5.0	454	M16	M16	15.0	320	1
1171 356	350	355.6	50 x 5.0	482	M16	M16	15.0	334	1
1171 368		368.0	50 x 5.0	496	M16	M16	15.0	355	1
1171 406	400	406.4	50 x 5.0	534	M16	M16	15.0	388	1
1171 419		419.0	70 x 7.0	546	M16	M16	15.0	608	1
1171 508	500	508.0	70 x 7.0	631	M16	M16	15.0	702	1
1171 521		521.0	70 x 7.0	645	M16	M16	15.0	723	1

MASSIV-N-SS – Heavy Duty Two-Piece Pipe Clamp [SS 304/A2]

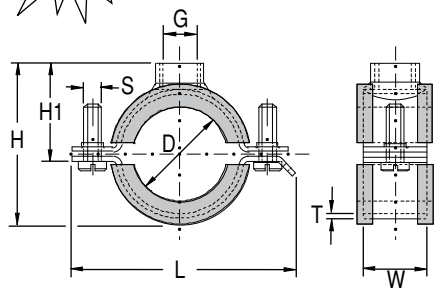
SHOCK TESTED



Part No. G=M10	mm	W x T mm	H mm	H1 mm	L mm	S	Fmax kN	Kg /100	
135 01 84	14 - 20	30 x 2.00	46	26	76	M8	5.7	12.6	25
135 02 24	20 - 26	30 x 2.00	53	30	79	M8	5.7	13.8	25
135 02 84	25 - 31	30 x 2.00	59	33	87	M8	5.7	14.9	25
135 03 54	32 - 38	30 x 2.00	69	37	94	M8	5.7	16.8	25
135 04 24	40 - 46	30 x 2.00	74	41	102	M8	5.7	18.7	25
135 04 84	48 - 54	30 x 2.00	83	45	109	M8	5.7	20.3	25
135 05 44	53 - 55	30 x 2.00	84	46	113	M8	5.7	21.0	25
135 06 04	56 - 62	30 x 2.00	92	49	118	M8	5.7	22.2	25
Part No. G=M12									
135 07 64	72 - 78	30 x 3.00	116	64	149	M10	3.8	41.4	1
135 08 94	86 - 91	30 x 3.00	130	71	162	M10	3.8	44.9	1
135 11 44	108 - 116	30 x 3.00	156	83	191	M10	3.8	51.8	1
135 12 54	122 - 130	40 x 4.00	171	90	211	M10	4.85	90.6	1
135 13 54	132 - 140	40 x 4.00	180	95	225	M10	4.85	95.5	1
135 14 54	139 - 147	40 x 4.00	187	99	232	M10	4.85	103.6	1
135 16 04	157 - 165	40 x 4.00	206	108	246	M10	4.85	109.0	1
135 16 84	165 - 170	40 x 4.00	211	110	255	M10	4.85	111.0	1
135 21 04	208 - 216	40 x 5.00	258	133	305	M10	8.6	146.0	1
135 21 94	216 - 224	40 x 5.00	268	137	315	M10	8.6	167.0	1
135 26 74	265 - 275	40 x 5.00	308	163	336	M10	8.6	195.0	1
135 32 64	322 - 333	40 x 5.00	374	190	412	M10	8.6	230.0	1

MASSIV-R-SS – Heavy Duty Sound Insulated Two-Piece Pipe Clamp [SS 304/A2]

SHOCK TESTED



EPDM/SBR
SHORE A = 40˚ ± 5˚
+ 110˚ C
- 50˚ C

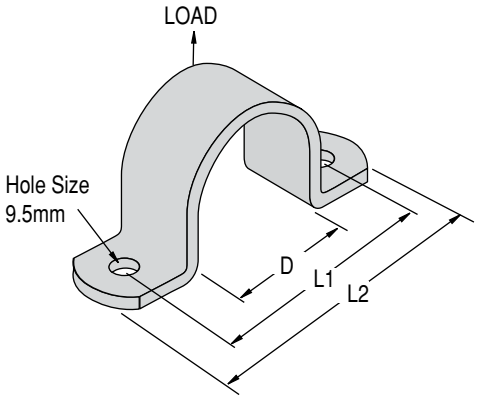
Sound insulation tested

Baustoffklasse • B2 • "Normal entflammbar" nach DIN 4102

Sound Insulation value on average 22 dB (A)

Part No. G=M10	mm	W x T mm	H mm	H1 mm	L mm	S	Fmax kN	Kg /100	
135 01 83	14 - 20	30 x 2.00	46	26	76	M8	5.7	12.6	25
135 02 23	20 - 26	30 x 2.00	53	30	79	M8	5.7	13.8	25
135 02 83	25 - 31	30 x 2.00	59	33	87	M8	5.7	14.9	25
135 03 53	32 - 38	30 x 2.00	69	37	94	M8	5.7	16.8	25
135 04 23	40 - 46	30 x 2.00	74	41	102	M8	5.7	18.7	25
135 04 83	48 - 54	30 x 2.00	83	45	109	M8	5.7	20.3	25
135 05 43	53 - 55	30 x 2.00	84	46	113	M8	5.7	21.0	25
135 06 03	56 - 62	30 x 2.00	92	49	118	M8	5.7	22.2	25
Part No. G=M12									
135 07 63	72 - 78	30 x 3.00	116	64	149	M10	3.8	41.4	1
135 08 93	86 - 91	30 x 3.00	130	71	162	M10	3.8	44.9	1
135 11 43	108 - 116	30 x 3.00	156	83	191	M10	3.8	51.8	1
135 12 53	122 - 130	40 x 4.00	171	90	211	M10	4.85	90.6	1
135 13 53	132 - 140	40 x 4.00	180	95	225	M10	4.85	95.5	1
135 14 53	139 - 147	40 x 4.00	187	99	232	M10	4.85	103.6	1
135 16 03	157 - 165	40 x 4.00	206	108	246	M10	4.85	109.0	1
135 16 83	165 - 170	40 x 4.00	211	110	255	M10	4.85	111.0	1
135 21 03	208 - 216	40 x 5.00	258	133	305	M10	8.6	146.0	1
135 21 93	216 - 224	40 x 5.00	268	137	315	M10	8.6	167.0	1
135 26 73	265 - 275	40 x 5.00	308	163	336	M10	8.6	195.0	1
135 32 63	322 - 333	40 x 5.00	374	190	412	M10	8.6	230.0	1

UN4 - Industrial Light Duty Pipe Clamps [HG]

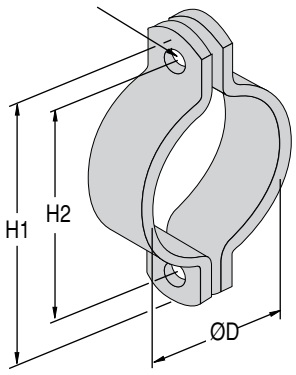


Working Load: 0.75 kN
Safety Factor: 2.5

Part No.	D	WxT	L1 mm	L2 mm	Kg	
UN4-016	16	25x3	56	80	0.04	50
UN4-019	19	25x3	59	83	0.04	50
UN4-021	21	25x3	61	85	0.05	25
UN4-025	25	25x3	65	89	0.06	25
UN4-027	27	25x3	67	91	0.07	25
UN4-032	32	25x3	72	96	0.07	25
UN4-034	34	25x3	74	98	0.08	25
UN4-038	38	25x3	78	102	0.08	50
UN4-043	43	25x3	83	107	0.08	50
UN4-048	48	25x3	88	112	0.09	50
UN4-051	51	25x3	91	115	0.09	50
UN4-060	60	25x3	100	124	0.12	50
UN4-064	64	25x3	104	128	0.12	50
UN4-073	73	25x3	113	137	0.12	25
UN4-076	76	25x3	116	140	0.14	25
UN4-089	89	25x3	129	153	0.16	25
UN4-095	95	25x3	135	159	0.17	25
UN4-102	102	25x3	142	166	0.18	25
UN4-114	114	25x3	154	178	0.18	30
UN4-127	127	25x3	167	191	0.20	30
UN4-140	140	25x3	180	204	0.20	30
UN4-152	152	25x3	192	216	0.20	30
UN4-165	165	25x3	205	229	0.24	30

UN6 - Industrial Light Duty, Two-Piece Pipe Clamps [HG]

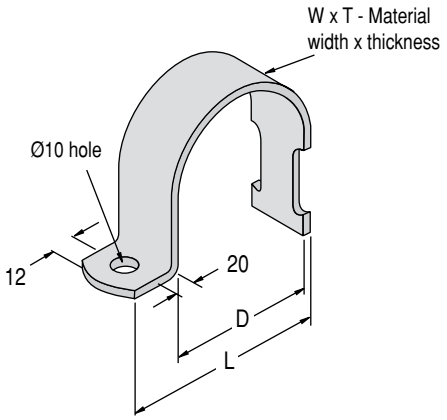
Ø10 holes for M8x30 bolts.
Nuts & Bolts included.



Working Load: 2.88 kN
Safety Factor: 2.5

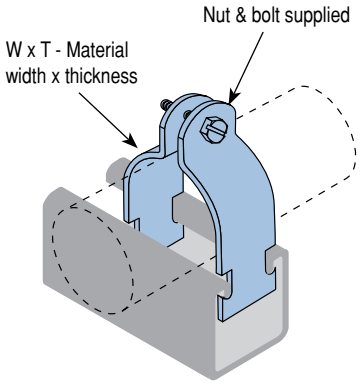
Part No.	ØD	WxT	H1 mm	H2 mm	Kg	
UN6-019	19	25x3	83	59	0.10	25
UN6-021	21	25x3	85	61	0.10	25
UN6-025	25	25x3	89	65	0.11	25
UN6-027	27	25x3	91	67	0.11	25
UN6-032	32	25x3	96	72	0.14	25
UN6-034	34	25x3	98	74	0.14	25
UN6-038	38	25x3	102	78	0.15	25
UN6-043	43	25x3	107	83	0.15	25
UN6-048	48	25x3	112	88	0.15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

UN10 – Industrial Light Duty Single Bolt Strut Clamp [ZP]

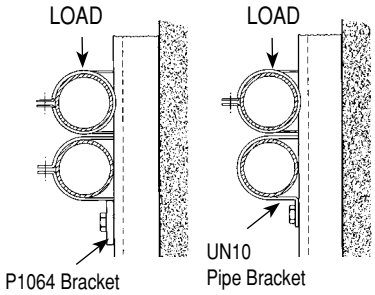


Part No.	D mm	L mm	W x T	Kg
UN10-016	16	51	32 x 1.5	0.02
UN10-017	17	52	32 x 1.5	0.02
UN10-021	21	56	32 x 1.5	0.03
UN10-025	25	60	32 x 1.5	0.04
UN10-027	27	62	32 x 1.5	0.04
UN10-032	32	67	32 x 1.5	0.04
UN10-034	34	69	32 x 1.5	0.05
UN10-038	38	73	32 x 1.5	0.05
UN10-043	43	78	32 x 1.5	0.06
UN10-048	48	83	32 x 1.5	0.06
UN10-051	51	86	32 x 1.5	0.07
UN10-060	60	95	32 x 1.5	0.14
UN10-064	64	99	32 x 1.5	0.15
UN10-076	76	111	32 x 1.5	0.18
UN10-089	89	124	32 x 1.5	0.18
UN10-102	102	137	32 x 1.5	0.20
UN10-114	114	149	32 x 2.4	0.24
UN10-140	140	175	32 x 2.4	0.28
UN10-152	152	187	32 x 2.4	0.31
UN10-165	165	200	32 x 2.4	0.34

P2024 Series Pipe Clamps [ZP]



Also available in Hot Dipped Galvanised Finish.

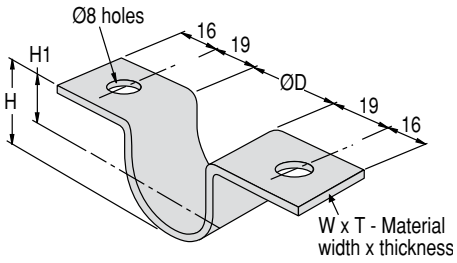


Note: When used in the application illustrated it is recommended that the lower clamp be supported against possible slippage. Where P2024 series clamps are restraining pipework subject to vibration, the use of P2600 Uni-cushion is recommended.

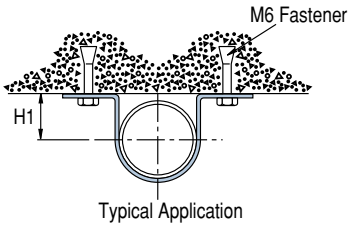
Part No GB	D mm	Kg
P2024	8	0.04
P2025	11	0.04
P2026	14	0.04
P2027	17	0.05
P2028	19	0.05
P2029	22	0.05
P2030	25	0.06
P2031	29	0.07
P2032	32	0.07
P2033	35	0.08
P2034	38	0.08
P2035	43	0.09
P2036	44	0.11
P2037	49	0.13
P2038	51	0.14
P2039	65	0.15
P2040	57	0.15
P2041	60	0.15
P2042	64	0.16
P2043	67	0.17
P2044	70	0.17
P2045	73	0.18
P2046	76	0.19
P2047	79	0.20
P2048	83	0.21
P2049	86	0.21
P2050	90	0.21

Part No GB	D mm	Kg
P2051	92	0.25
P2052	95	0.26
P2053	98	0.27
P2054	102	0.28
P2055	105	0.28
P2056	108	0.29
P2057	111	0.30
P2058	114	0.30
P2059	117	0.32
P2060	121	0.33
P2062	127	0.34
P2064	133	0.35
P2066	140	0.36
P2068	146	0.41
P2070	152	0.43
P2070-62	159	0.45
P2070-64	165	0.46
P2070-66	171	0.47
P2070-70	178	0.49
P2070-74	191	0.53
P2070-80	203	0.56
P2070-84	216	0.59
P2070-225	225	0.62
P2070-230	230	0.63
P2070-240	240	0.65
P2070-250	250	0.68
P2070-260	260	0.71

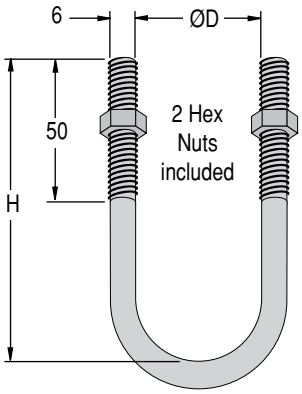
F31000 – Industrial Light Duty Pipe Saddle Clamps [ZP]



Part No	ØD	H	H1	WxT	Kg
F31025	34	41	24.0	25 x 1.5	0.04
F31032	43	51	29.5	25 x 1.5	0.05
F30140	48	52	28.0	25 x 1.5	0.05
F31050	60	67	37.0	25 x 1.5	0.11

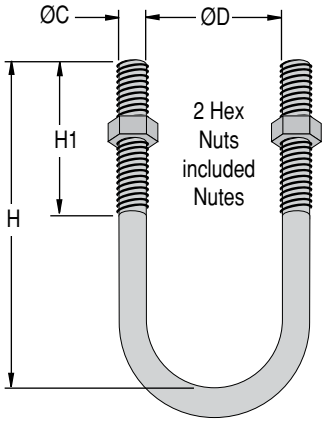


F41000 – "U" Bolts [ZP]



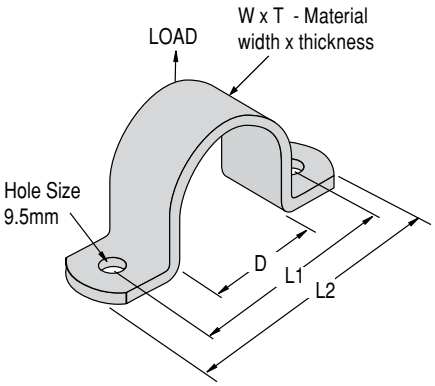
Part No	ØD	H mm	Kg
F41034	34	85	0.03
F41043	43	93	0.03
F41048	48	100	0.04
F41060	60	110	0.06

UN14 – "U" Bolts [HG]



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

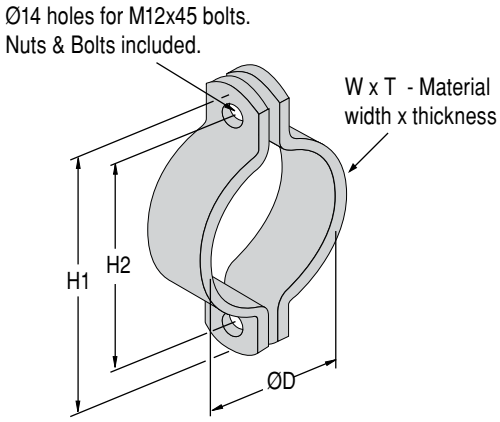
UN15 – Industrial Medium Duty Saddle Clamp [HG]



Part No.	D	L1	L2	WxT	Working Load	Kg	
UN15-021	21	75	115	40x5	2.46kN	0.14	25
UN15-027	27	81	121	40x5	2.46kN	0.20	25
UN15-034	34	88	128	40x5	2.46kN	0.28	25
UN15-043	43	97	137	40x5	2.46kN	0.34	25
UN15-048	48	102	142	40x5	2.46kN	0.34	25
UN15-051	51	105	145	40x5	2.46kN	0.34	25
UN15-060	60	114	154	40x5	2.46kN	0.40	25
UN15-076	76	130	170	40x5	2.46kN	0.46	20
UN15-089	89	143	183	40x5	2.46kN	0.54	25
UN15-102	102	156	196	40x5	2.46kN	0.58	20
UN15-114	114	170	210	40x6	3.57kN	0.65	20
UN15-140	140	196	236	40x6	3.57kN	0.75	10
UN15-152	152	208	248	50x6	4.44kN	1.17	10
UN15-165	165	221	261	50x6	4.44kN	1.25	10
UN15-168	168	224	264	50x6	4.44kN	1.27	10
UN15-203	203	259	299	50x6	4.44kN	1.48	10
UN15-219	219	275	315	50x6	4.44kN	1.58	5

Safety Factor: 2.5

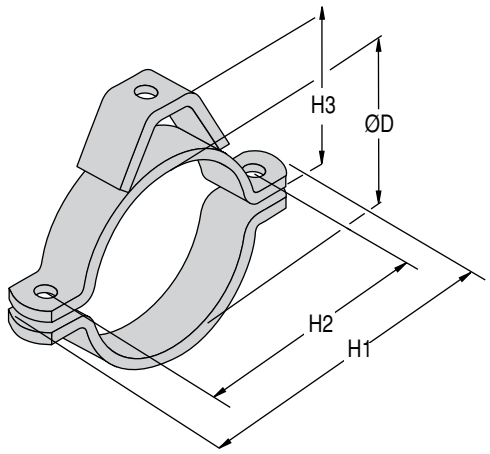
UN16 –Industrial Medium Duty, Two-Piece Pipe Clamp [HG]



Working Load: 7.20 kN
Safety Factor: 2.5

Part No.	ØD	H1	H2	WxT	Kg	
UN16-060	60	154	114	40x5	0.72	10
UN16-076	76	170	130	40x5	0.84	10
UN16-089	89	183	143	40x5	1.02	10
UN16-102	102	196	156	40x5	1.12	10
UN16-114	114	210	170	40x6	1.17	10
UN16-127	127	221	181	40x6	1.25	10
UN16-140	140	234	194	40x6	1.31	10
UN16-152	152	246	206	40x6	1.38	10
UN16-165	165	259	219	40x6	1.46	5
UN16-178	178	272	232	40x6	1.54	5
UN16-190	190	284	244	40x6	1.64	5
UN16-203	203	297	257	40x6	1.69	5
UN16-219	219	313	273	40x6	1.78	5
UN16-230	230	324	284	40x6	1.84	5
UN16-240	240	334	294	40x6	1.92	5
UN16-250	250	344	304	40x6	2.00	5
UN16-273	273	367	327	40x6	2.18	4
UN16-324	324	418	378	40x6	2.59	4

UN18 – Industrial Medium Duty, Two-Piece Pipe Clamps [HG]

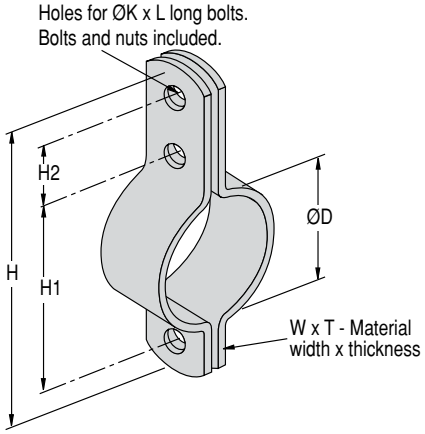


All sizes have a 14mm dia. hole to suit M12 x 45 bolts. Nuts and bolts included.

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

Safety Factor: 2.5

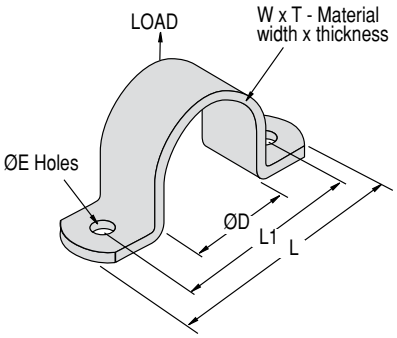
UN20 – Industrial Medium Duty, Three Bolt Pipe Clamp [HG]



Safety Factor: 2.5

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

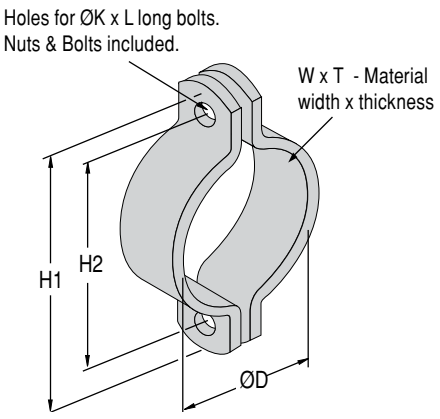
UN30 – Industrial Medium/Heavy Duty, Saddle Clamp [HG]



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

Safety Factor: 2.5

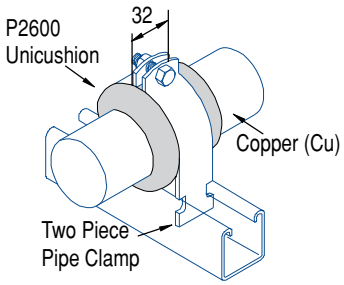
UN31 – Industrial Medium/Heavy Duty, Two-Piece Pipe Clamp [HG]



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

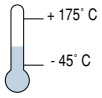
Safety Factor: 2.5

P2600 Unicushion

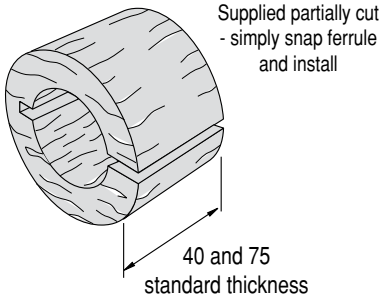


- *Shock absorption*
- *Protection from corrosion and abrasion*
- *Allowance for expansion and contraction*
- *Sound and vibration isolation*
- *Stability in use from -45°C to +175°C*
- *Flexible elastomer material*
- *Packaged in handy 7.6m dispenser pack*

Part No.	W mm	T mm		Kg
P2600	41	2.0	7.6m	1.7



UN60 Series – Timber Ferrules



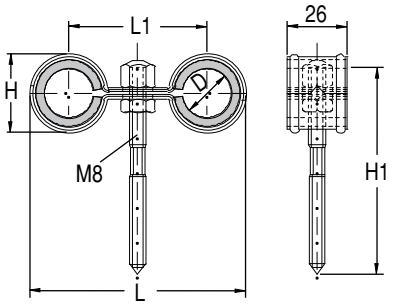
UN60 SERIES TIMBER FERRULES	
Material:	Structural Plywood Machine Planed both sides Partially rip cut
Sizes:	Nominate series, thickness, inside and outside diameters. eg: UN60-40-43x95
Density Grade:	F7

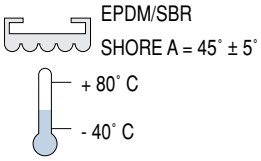
Pipe Size	NB	25mm	Lagging Thickness 38mm	50mm
		I.D. x O.D.	Ferrule Size I.D. x O.D.	I.D. x O.D.
13 O.D.		13 x 64	13 x 89	13 x 114
16 O.D.		16 x 64	16 x 89	16 x 114
19 O.D.		19 x 73	19 x 95	19 x 120
21 O.D.	15	21 x 73	21 x 102	21 x 120
25 O.D.		25 x 76	25 x 102	25 x 127
27 O.D.	20	27 x 76	27 x 102	27 x 127
32 O.D.		32 x 76	32 x 114	32 x 140
34 O.D.	25	34 x 89	34 x 114	34 x 140
38 O.D.		38 x 89	38 x 114	38 x 140
43 O.D.	32	43 x 95	43 x 114	43 x 140
48 O.D.	40	48 x 102	48 x 127	48 x 152
51 O.D.		51 x 102	51 x 127	51 x 152
60 O.D.	50	60 x 114	60 x 140	60 x 165
64 O.D.		64 x 114	64 x 140	64 x 165
76 O.D.	65	76 x 127	76 x 152	76 x 178
89 O.D.	80	89 x 140	89 x 165	89 x 190
102 O.D.		102 x 152	102 x 178	102 x 203
114 O.D.	100	114 x 165	114 x 190	114 x 216
127 O.D.		127 x 178	127 x 203	127 x 230
140 O.D.	125	140 x 190	140 x 219	140 x 240
152 O.D.		152 x 203	152 x 230	152 x 250
165 O.D.	150	165 x 219	165 x 240	165 x 273
168 O.D.		168 x 219	168 x 240	168 x 273
203 O.D.		203 x 250	203 x 273	203 x 324
219 O.D.		219 x 273	219 x 295	219 x 324
273 O.D.		273 x 324	273 x 356	273 x 368

Note: Ferrule O.D.'s shown are preferred to suit existing pipe clamps.

DCWT – Double Pipe Clips with foam rubber insulation [ZP]

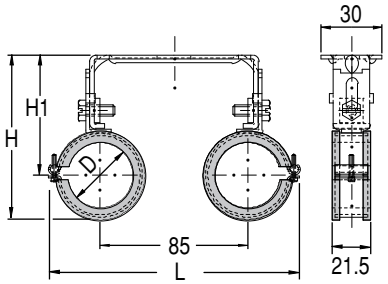
With bolt screw 90mm

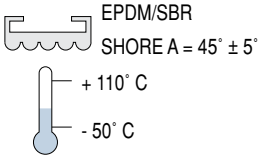




Part No. H1 = 90mm	in	mm	L1 mm	H mm	L mm	/100	
121 12 13	-	12	59	25	85	9.9	50
121 15 13	-	15	60	27	88	10.6	50
121 18 13	3/8"	18	61	30	90	10.9	50
121 22 13	1/2"	22	60	34	94	11.6	50
121 28 13	3/4"	28	60	40	100	12.5	50

DC – Double Pipe Clips with Insulation [ZP]

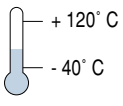


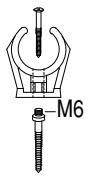


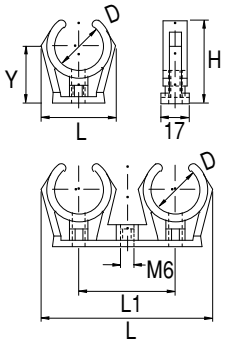
Part No.	"	mm	Fmax N	H mm	H1 mm	L mm	/100	
118 12 76	-	12	600	65-82	52-69	115	15.2	50
118 15 76	-	15	600	68-85	55-72	116	15.4	50
118 18 76	3/8"	18	600	71-88	58-75	121	15.7	50
118 22 76	1/2"	22	600	75-92	62-79	124	16.2	50
118 28 76	3/4"	28	600	81-98	68-85	130	18.3	50

Plastic Snap Clip [PP]

Polypropylene - with brass thread insert M6







Plastic Snap Clip - Single Clip

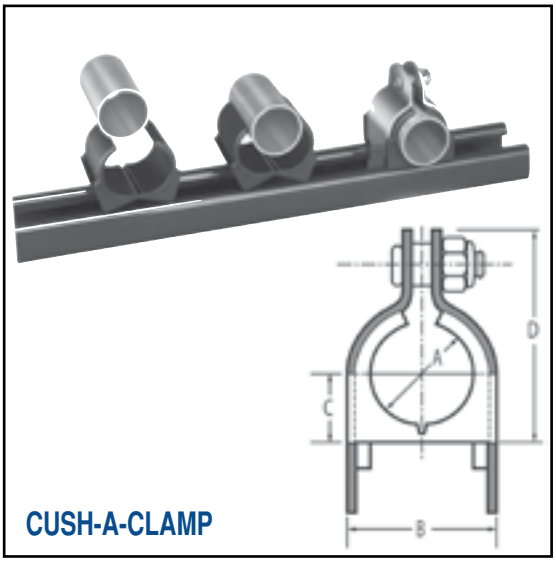
Part No.	"	L1 mm	Y mm	H mm	L mm	/100	
112 08 16	8	-	14	19	15	0.3	100
112 10 16	10	-	15	21	18	0.3	100
112 12 16	12	-	16	23	22	0.4	100
112 15 16	14-15	-	18	27	25	0.5	100
112 18 16	16-18	-	23	33	29	0.6	100

Plastic Snap Clip - Double Clip

Part No.	"	L1 mm	Y mm	H mm	L mm	/100	
112 08 26	8	25	14	19	40	0.5	100
112 10 26	10	29	15	21	47	0.7	100
112 12 26	12	33	16	23	55	0.8	100
112 15 26	14-15	36	18	27	60	0.9	100
112 18 26	16-18	39	23	33	67	1.2	100

Cush-a-Clamp®

Tube Series Assembly							
Part No.	Copper & Steel Tube OD Size	Copper Water Pipe (Nominal)	Dimensions				/100
			"A" (mm)	"B" (mm)	"C" (mm)	"D" (mm)	
004T008	1/4"		6.4	15.7	24.9	6.9	4.5
006T010	3/8"	1/4"	9.4	20.8	28.7	8.4	5.0
008T012	1/2"	3/8"	12.7	23.9	34.0	10.2	5.9
010T014	5/8"	1/2"	15.7	26.9	39.1	11.7	6.4
012T016	3/4"	5/8"	19.1	30.5	42.7	13.2	6.4
014T018	7/8"	3/4"	22.1	33.3	46.2	14.7	6.8
016T020	1"		25.4	36.6	49.5	16.5	7.7
018T022	1-1/8"	1"	28.4	39.9	52.8	17.8	8.2
020T024	1-1/4"		31.8	43.2	56.1	19.6	8.2
022T026	1-3/8"	1-1/4"	34.8	46.2	59.4	21.1	9.1
024N028	1-1/2"		38.1	49.5	62.7	22.9	15.0
026N030	1-5/8"	1-1/2"	41.1	52.6	66.0	24.4	15.9
028N032	1-3/4"		44.5	55.9	69.3	25.9	16.8
030N034	1-7/8"		47.5	58.9	72.6	27.7	17.7
032N036	2"		50.8	62.2	77.2	29.2	20.9
034N040	2-1/8"		53.8	65.3	82.0	32.3	21.3
038N044	2-3/8"		60.2	71.6	93.2	35.8	22.2
040N046	2-1/2"		63.5	74.7	96.3	37.1	23.1
042N048	2-5/8"		66.5	78.0	99.6	38.9	24.9
046N052	2-7/8"		72.9	84.3	105.9	42.2	25.9
050N054	3"		76.2	90.7	112.3	45.2	27.2
050N056	3-1/8"		79.2	90.7	112.3	45.2	27.2
053N060	3-5/16"		84.1	100.6	120.7	48.3	28.1
056N062	3-1/2"		88.9	100.3	121.7	50.0	24.9
058N064	3-5/8"		91.9	106.7	126.7	51.6	31.8
064N072	4"		101.6	113.0	137.7	57.9	39.9
066N074	4-1/8"		104.6	116.1	140.7	59.4	42.6
069N076	4-5/16"		110.2	126.0	148.3	61.0	45.4
072N080	4-1/2"		114.3	125.7	150.4	64.3	49.9
082N090	5-1/8"		130.0	141.5	166.1	72.1	56.7
098N106	6-1/8"		155.4	166.9	191.5	84.8	59.0

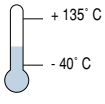


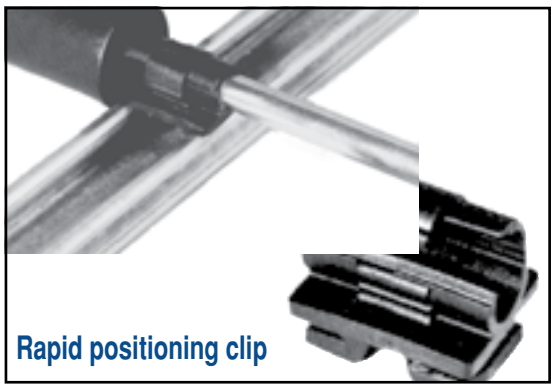
CUSH-A-CLAMP

Pipe Series Assembly						
Part No.	Nominal Pipe Size	Dimensions				/100
		"A" (mm)	"B" (mm)	"C" (mm)	"D" (mm)	
009N012	1/4"	13.7	24.9	34.0	10.9	5.9
011N014	3/8"	17.0	28.7	39.1	12.4	6.4
014N018	1/2"	21.3	32.8	46.2	14.7	6.8
017N022	3/4"	26.7	38.1	49.5	17.8	7.7
021N026	1"	33.3	44.7	59.4	20.6	8.6
027N032	1-1/4"	42.2	55.1	69.3	25.1	15.9
030N034	1-1/2"	48.3	59.7	72.6	27.7	17.7
038N044	2"	60.2	71.6	93.2	35.8	22.2
046N052	2-1/2"	72.9	84.3	105.9	42.2	25.9
056N062	3"	88.9	100.3	121.7	50.0	24.9
064N072	3-1/2"	101.6	113.0	137.7	57.9	39.9
072N080	4"	114.3	125.7	150.4	64.3	49.9

Rapid Positioning Clip

Part No.	Tube Size	
RPC-6	3/8"	5
RPC-8	1/2"	5
RPC-10	5/8"	5
RPC-12	3/4"	5
RPC-14	7/8"	5
RPC-18	1-1/8"	5




Rapid positioning clip

Copper Tube

Nom. Size	Actual Size O.D.	Mass of Pipe Kg/m	Mass of Pipe filled with water kg/m
15	12.7 x 0.9	0.30	0.39
18	15.9 x 1.0	0.43	0.58
20	19.1 x 1.0	0.52	0.75
25	25.4 x 1.2	0.83	1.25
32	31.8 x 1.2	1.05	1.72
40	38.1 x 1.2	1.27	2.27
45	44.5 x 1.2	1.48	2.87
50	50.8 x 1.2	1.70	3.57
65	63.5 x 1.2	2.14	5.07
80	76.2 x 1.6	3.42	7.60
90	88.9 x 1.6	4.00	9.76
100	101.6 x 1.6	4.58	12.18
125	127.0 x 1.6	5.74	17.77
150	152.4 x 2.0	8.58	25.86
175	177.8 x 2.0	10.03	33.74
200	203.2 x 2.0	11.48	42.63

Pressure Pipe – ANSI Sch 80 - API XS (up to 200 NS)

Nom. 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	2.20	2.47
25	33.4 x 4.55	3.24	3.69
32	42.1 x 4.85	4.47	5.20
40	48.2 x 5.10	5.41	6.55
50	60.3 x 5.54	7.50	9.40
65	73.0 x 7.01	11.41	14.14
80	88.9 x 7.62	15.27	19.40
90	101.6 x 8.10	18.63	24.36
100	114.3 x 8.56	22.32	29.73
125	141.3 x 9.53	30.97	42.69
150	168.3 x 11.00	42.56	59.38
200	219.1 x 12.70	64.50	93.90
250	273.1 x 15.09	95.80	142.10
300	323.8 x 17.49	131.80	197.30
350	355.6 x 19.05	159.20	235.40
400	406.4 x 21.44	203.90	306.60
450	457.2 x 23.88	254.55	386.20
500	508.0 x 26.19	311.17	473.80
600	609.6 x 30.96	442.08	677.40

Pressure Pipe – ANSI Sch 40 - API Std. Wt. (up to 250 NS)

Nom. 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	0.63	0.69
10	17.1 x 2.31	0.90	1.00
15	21.3 x 2.77	1.27	1.30
20	26.7 x 2.87	1.68	2.00
25	33.4 x 3.38	2.50	3.06
32	42.1 x 3.56	3.38	4.35
40	48.2 x 3.68	4.05	5.37
50	60.3 x 3.91	5.44	7.50
65	73.0 x 5.16	8.63	11.71
80	88.9 x 5.49	11.29	15.90
90	101.6 x 5.74	13.50	19.80
100	114.3 x 6.02	16.07	24.28
125	141.3 x 6.55	21.77	34.69
150	168.3 x 7.11	28.26	46.80
200	219.1 x 8.18	42.55	74.61
250	273.0 x 9.27	60.20	110.90
300	323.8 x 10.31	75.90	151.90
350	355.6 x 11.10	93.70	180.70
400	406.4 x 12.70	123.50	237.30
450	457.2 x 14.27	156.20	300.80
500	508.0 x 15.10	183.00	361.80
600	609.6 x 17.48	254.50	513..70

Galvanised Pipe

Nom. Size N.B. Med.	Actual Size O.D. x Wall	Mass of Pipe Kg/m	Mass of Pipe filled with water kg/m
8	13.5 x 2.3	0.68	0.74
10	17.2 x 2.3	0.89	1.01
15	21.3 x 2.6	1.27	1.47
20	26.9 x 2.6	1.65	2.02
25	33.7 x 3.2	2.52	3.11
32	42.4 x 3.2	3.24	4.26
40	48.3 x 3.2	3.73	5.11
50	60.3 x 3.6	5.24	7.46
65	76.1 x 3.6	6.69	10.42
80	88.9 x 4.0	8.68	13.82
100	114.3 x 4.5	12.4	21.11
125	139.7 x 4.9	16.5	29.75
150	165.1 x 4.9	19.6	38.55

PVC Pressure Pipe - Class 12

Nom. Size	Actual Size O.D. x Wall	Mass of Pipe Kg/m	Mass of Pipe filled with water kg/m
15	21.2 x 1.5	0.14	0.40
20	26.6 x 1.6	0.20	0.63
25	33.4 x 1.9	0.30	0.99
32	42.2 x 2.4	0.40	1.50
40	48.1 x 2.8	0.60	2.02
50	60.2 x 3.4	0.90	3.14
65	75.2 x 4.2	1.40	4.90
80	88.7 x 5.0	1.90	6.76
100	114.1 x 6.3	3.10	11.19
125	140.0 x 7.7	4.60	16.79
150	160.0 x 8.8	6.10	22.03
200	225.0 x 11.1	10.80	34.10

PVC Pressure Pipe - Class 6

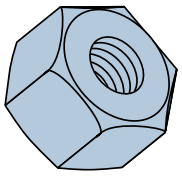
Nom. Size	Actual Size O.D. x Wall	Mass of Pipe Kg/m	Mass of Pipe filled with water kg/m
40	48.1 x 1.6	0.30	1.88
50	60.2 x 1.8	0.50	3.02
65	75.2 x 2.2	0.70	4.64
80	88.7 x 2.6	1.00	6.48
100	114.1 x 3.3	1.60	10.68
125	140.0 x 4.0	2.50	16.18
150	160.0 x 4.5	3.20	21.11
200	225.0 x 5.8	5.70	41.47

Cast Iron Pipes – Class K9

Nominal 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

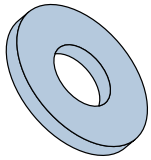
Fixpoints

HN – Hexagon Nuts [ZP/HG]



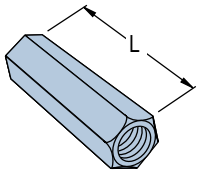
Part No ZP	Part No. HG	Dia.	/100	
HN06	HN06H	M6	0.15	100
HN08	HN08H	M8	0.46	100
HN10	HN10H	M10	0.75	100
HN12	HN12H	M12	1.77	100
HN16	HN16H	M16	3.30	100
HN20	HN20H	M20	5.60	100

FW – Flat Washers [ZP/HG]



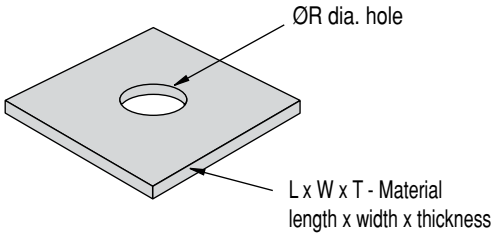
Part No ZP	Part No. HG	Dia.	/100	
FW06	FW06H	M6	0.06	100
FW08	FW08H	M8	0.10	100
FW10	FW10H	M10	0.29	100
FW12	FW12H	M12	0.43	100
FW16	FW16H	M16	0.73	100
FW20	FW20H	M20	0.90	100

RC – Rod Couplers [ZP/HG]



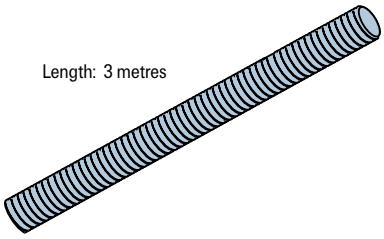
Part No ZP	Part No. HG	Dia.	L	/100	
RC06		M6	20	1.80	100
RC08		M8	20	2.30	100
RC10	RC10H	M10	30	4.00	100
RC12	RC12H	M12	40	7.80	100
RC16	RC16H	M16	50	12.20	100
RC20	RC20H	M20	50	18.90	100

UN40 – Square Washer [HG]



Part No.	ØR	Dimensions L x W x T	/100	
UN40-12	14	75 x 75 x 6	26.0	100
UN40-16	18	75 x 75 x 6	25.0	100
UN40-20	22	75 x 75 x 10	41.0	100

UNIROD – Threaded Rod [ZP/HG]

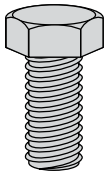


Part No ZP	Part No. HG	Size	Max. Recommended Tensile Load		
UR06		M6	3.47	(354kg)	0.20
UR08		M8	6.32	(644kg)	0.35
UR10	UR10H	M10	10.02	(1021kg)	0.50
UR12	UR12H	M12	14.56	(1484kg)	0.80
UR16	UR16H	M16	24.30	(2477kg)	1.30
UR20	UR20H	M20	37.92	(3866kg)	2.10

Unirod Load Data

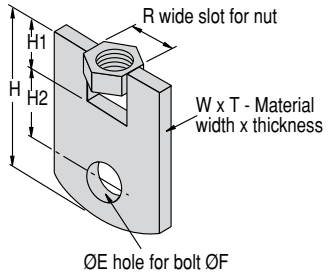
Maximum recommended tensile load is based on a factor of safety of 2.5 using the appropriate stress area of the thread and ultimate tensile strength of 430 MPa.

HHS – Hex Head Set Screws [ZP/HG]



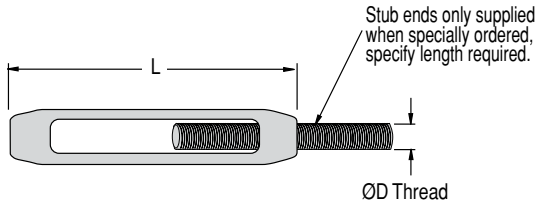
Part No ZP	Part No. HG	Size	/100	
HHS0820	HHS0820H	M8x20	1.2	100
HHS0830	HHS0830H	M8x30	1.5	100
HHS1020	HHS1020H	M10x20	1.9	100
HHS1030	HHS1030H	M10x30	2.5	100
HHS1224	HHS1224H	M12x24	4.2	100
HHS1230	HHS1230H	M12x30	4.5	100
HHS1240	HHS1240H	M12x40	5.1	100
HHS1640	HHS1640H	M16x40	9.5	100

UN35 – Eye Nuts [HG]



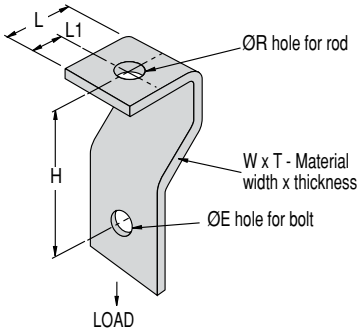
Part No	H	H1	H2	ØE	ØF	R	W x T	Working Load	Kg
UN35-12-M10	70	20	30	14	12	18	40 x 6	3.60 kN	0.13
UN35-16-M12	80	25	30	18	16	20	75 x 10	5.80 kN	0.47
UN35-20-M16	90	30	35	22	20	25	90 x 12	9.72 kN	0.76
UN35-24-M20	90	30	35	26	24	31	90 x 12	14.48 kN	0.76
UN35-30-M24	120	35	50	32	30	37	100 x 20	21.84 kN	1.88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

UN42 – Turnbuckles [HG]



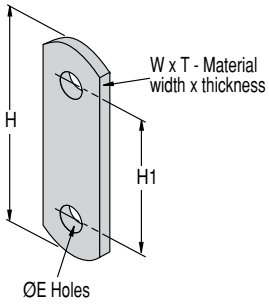
Part No	L	ØD	Working Load	Mass Kg
UN42-10	160	M10	2.45 kN	0.2
UN42-12	200	M12	4.41 kN	0.3
UN42-16	200	M16	7.45 kN	0.5
UN42-20	215	M20	10.78 kN	0.7

UNCL – Clevis Hanger [HG]



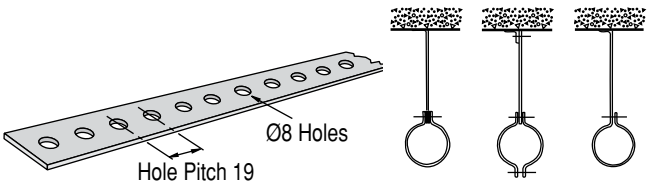
Part No	L	L1	H	ØE	ØR	WxT	Working Load	Kg
UNCL-10	35	15	70	10	12	25 x 5	1.33 kN	0.08
UNCL-12	45	20	75	14	14	40 x 6	2.65 kN	0.20
UNCL-16	48	20	100	14	18	50 x 6	4.41 kN	0.32
UNCL-20	62	32	112	22	22	75 x 10	5.30 kN	1.08

UNPL – 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

UHS – Hanger Strap [GB/ZP]

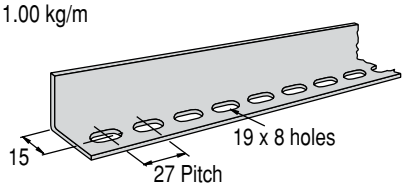


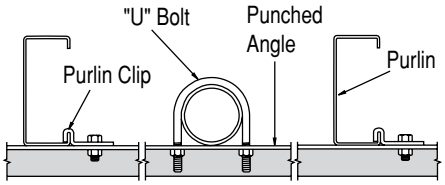
Typical Application

Part No	Finish	W x T	ØR	Length	Bundle	/3m
UHS-25	ZP	25 x 3.0	8	3 metres	10	1.40
UHS-32	GB	32 x 1.6	8	3 metres	10	1.05

F15000 – Punched Angle [HG]

Material: 25x25x3 Angle
Length: 3 metres
Mass: 1.00 kg/m

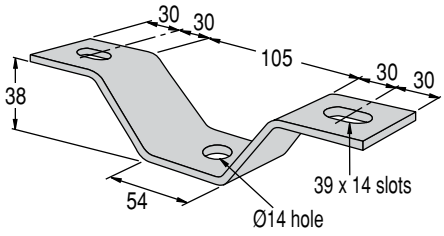


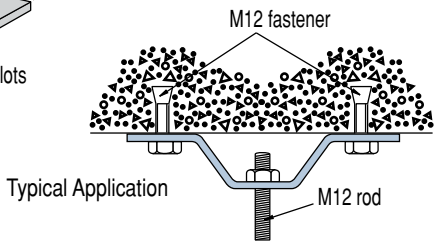


Typical Application

Distance Between Supports	Uniformly Distributed Loading		Mid-Span Point Load	
	Max. Permissable Loading kN	Deflection mm	Max. Permissable Loading kN	Deflection mm
500mm	0.93	1.1	0.46	0.9
1000mm	0.46	4.5	0.23	3.5
1500mm	0.30	9.7	0.15	7.7
2000mm	0.23	17.6	0.11	13.5

F11000 – "U" Bracket [HG]

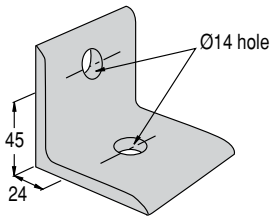


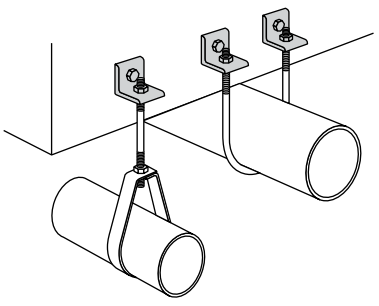


Typical Application

Part No	Material		
F11000	32 x 6	0.30	25

F12000 – Angle Bracket [HG]

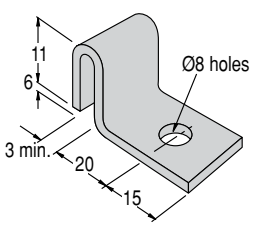


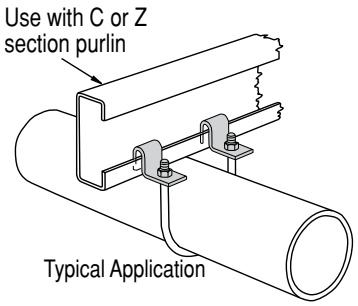


Typical Application

Part No	Material		
F12000	65 x 65 x 6 x 60	0.30	25

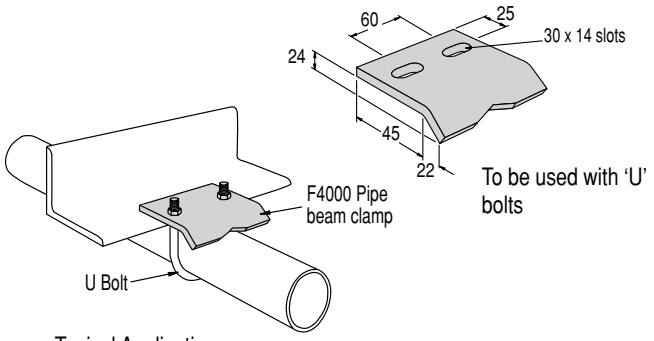
F13000 – Purlin Clamp [HG]





Part No	Material	Kg	
F13000	20 x 3	0.03	100

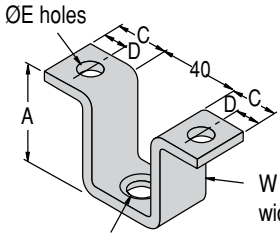
F40000 – Pipe Beam Clamp [HG]

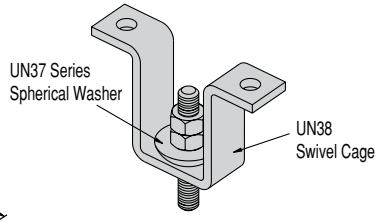


Typical Application

Part No	Material	Kg	
F40000	110 x 5	0.29	25

UN38 – Swivel Cage [HG]

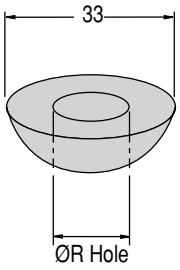




Typical Application

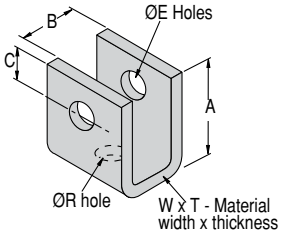
Part No	A	C	D	ØE	ØR	W x T	Kg	
UN38-06	65	31	12	10	08	25x5	0.20	25
UN38-10	65	31	12	10	12	25x5	0.20	25
UN38-12	65	47	20	14	14	40x6	0.35	20
UN38-16	100	47	20	14	18	50x6	0.52	10

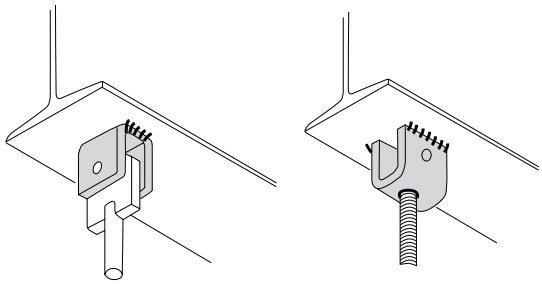
UN37 – Spherical Washer for UN38 [MI]



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

UN39 – Weld On Bracket [PL]

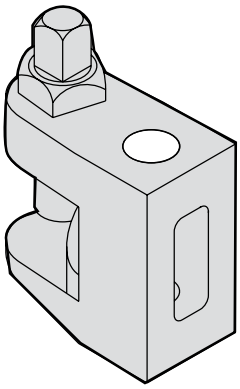


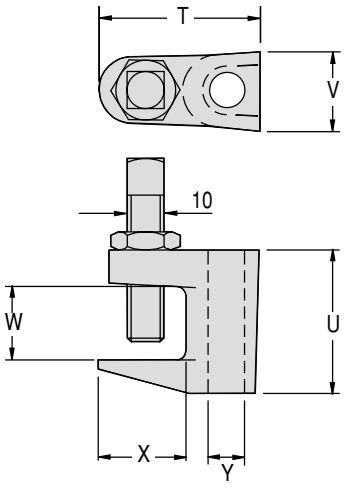


Typical Applications

Part No	A	B	C	ØE	ØR	W x T	Working Load	Kg	
UN39-10	75	32	22	14	12	75x10	1.04kN	1.15	10
UN39-12	75	32	22	18	14	75x10	1.76kN	1.14	10
UN39-16	75	40	25	22	18	75x10	2.56kN	1.16	10
UN39-20	90	40	28	26	22	75x10	4.32kN	1.30	10

FL – Beam Clamp [ZP]

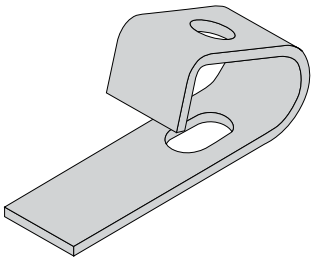


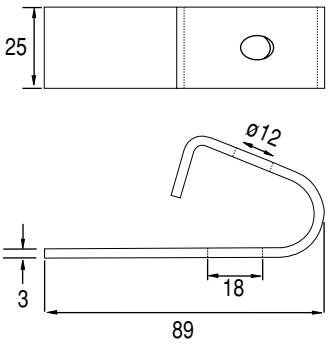


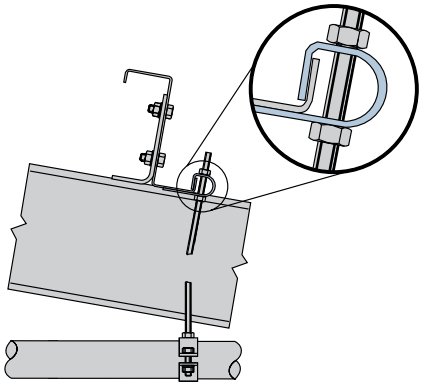
Part No.	FMax Kn	T1 Nm	T2 Nm	T mm	U mm	V mm	W mm	X mm	Y mm	Z mm		Approval
FL210D	2.4	8	22	45	40	22	19	22	11	10	50	VdS/FM
FL312D	3.1	8	22	50	46	25	23	28	13	10	50	VdS/FM
FL412D	3.1	8	22	53	51	26	28	27	13	10	50	VdS/FM

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 FL can be supplied with the back hole drilled to accept threaded rod. The FL uses a grade 8.8 cup point setscrew to provide a maximum bite into steelwork and maximum load performance.

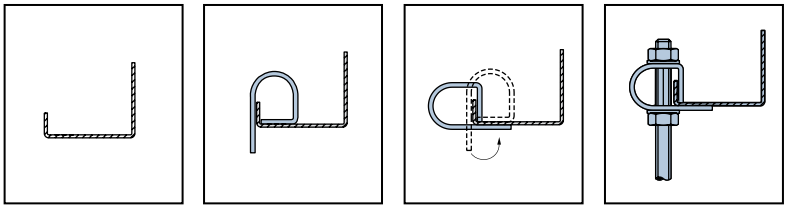
Z10 - Z Purlin Clamp [GB]



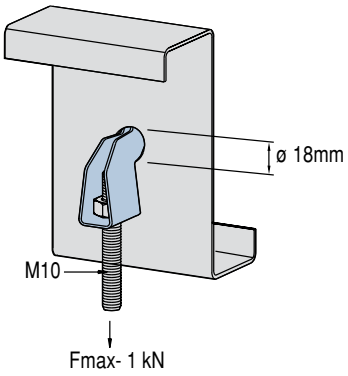


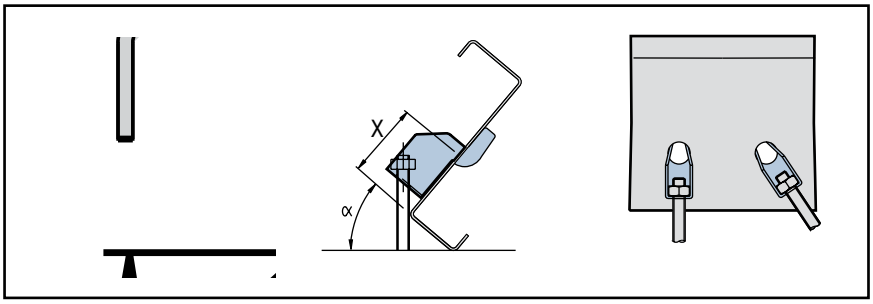


Part No.	/100	
Z10	0.085	100



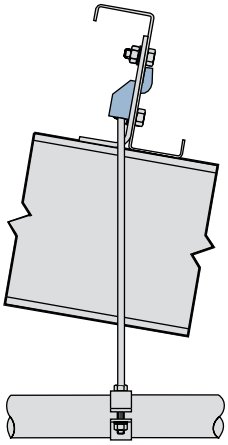
WF – Webfix Perlin Web Fixing [ZP]

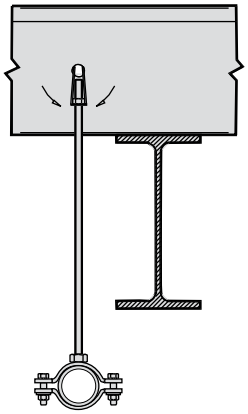


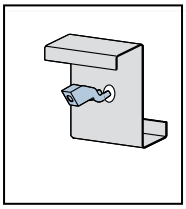


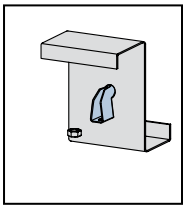
Roof Pitch° α	0°	10°	20°	30°
Xmax (mm)	*	103	94	74

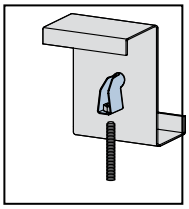
Part No.	/100	
WEBFIX	5.1	100

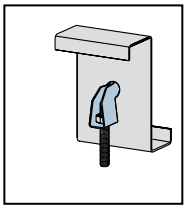












Fixpoints

PART NUMBER INDEX

PART NUMBER INDEX

PART NUMBER INDEX

UNISTRUT®

UNISTRUT® FRAMING SYSTEMS

- Plain Channel
- Galvabond Channel
- Hot-Dip Galvanised Channel
- Aluminum Channel
- Stainless Steel Channel
- Combination Channel
- Concrete iInsert Channel
- Strut Fittings
- Threaded Rod
- Kwikstrut Fittings

CABLE TRAY SYSTEMS

- Riteway Tray
- Ladder tray: ST3 & ST5 Supatray
- Acrofil wire-mesh tray

NEMA CABLE LADDERS

Steel

- Nema 12B
- Nema 16A
- Nema 20B
- Nema 20C

Stainless Steel

- Nema 12B
- Nema 16A
- Nema 20B
- Nema 20C

Aluminium

- Nema 12A
- Nema 20A
- Nema 20C

UNISTRUT® PIPE AND CABLE SUPPORTS

- Sprinkler Pipe Hangers
- Sound Insulated Pipe Clamps
- Heavy Duty Pipe Clamps
- Industrial Pipe Clamps
- Cushioning Clips
- Hanger Fittings
- Beam Clamps
- Cantilever Brackets
- Beam Clamps

allied® TUBE & CONDUIT

CONDUITS

Metal

- Steel Screwed Conduit
- Galvanised and Hot Dip Galvanised
- Fittings

PVC

- Electrical & Telecommunication
- Medium and Heavy Duty
- PVC Fittings

ABS ABSCON

- High Impact ABS Conduit
- ABS Fittings

tyco Electrical & Metal Products

Australia National Service Centre
Tel: 1300 725 877
Fax: 1300 112 300

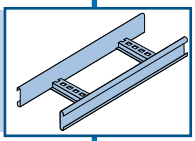
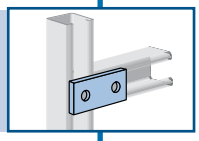
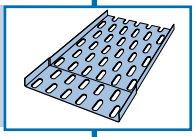
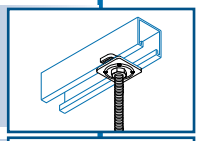
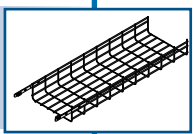
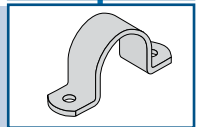
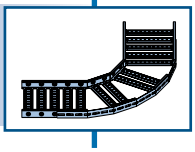
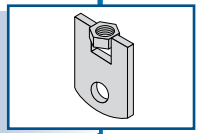
Unistrut Australia Pty Ltd
ABN 15 002 930 396
Tel (02) 9722 2700

Manufacturing, National Distribution & NSW Warehouse
Unit 1, 34-38 Anzac Avenue
Smeaton Grange NSW 2567

Head Office
137 McCredie Road
Guildford NSW 2161

UNISTRUT®

Unistrut®
Family of Innovative Products

- CABLE LADDER 
- UNISTRUT SYSTEM 
- RITEWAY TRAY 
- KWIKSTRUT SYSTEM 
- ACROFIL® BASKET 
- PIPE / CABLE CLAMPS 
- SUPATRAY LADDER 
- FIXPOINTS 

Victoria
567 Somerville Road
Sunshine VIC 3020

Western Australia
325 Treasure Road
Welshpool WA 6106

Queensland
240 Lavarack Avenue
Eagle Farm QLD 4009

South Australia
39 Plymouth Road
Wingfield SA 5013

New South Wales
137 McCredie Road
Guildford NSW 2161

tyco
Electrical & Metal Products

Electrical & Mechanical Solutions www .unistrut.com.au

• Unistrut® Metal & Fiberglass Framing • Allied Tube & Conduit® • Unistrut® Cable Trays and Cable Ladders