UNISTRUT®
Metal Framing

GENERAL ENGINEERING CATALOG

North American Edition

NO. 12

A World of Support at Your Fingertips...

UNISTRUT CORPORATION

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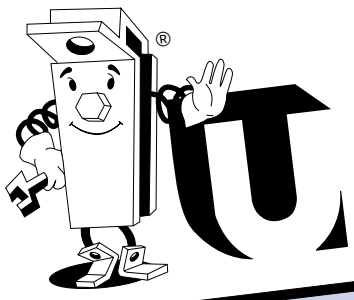
Welcome to the Unistrut No.12 General Engineering Catalog — a comprehensive guide to the World's most versatile metal framing system. Our objective for this fully-revised edition was to create a technical reference tool as hard-working and user-friendly as the metal framing system it describes. From the handy thumb-indexing system to the expanded and updated technical data, every detail was designed for one purpose: to make your job easier.

The following pages contain hundreds of product drawings as well as descriptive material and supporting technical information that will help you make the right specifying or buying decision, quickly and efficiently.

If you're familiar with the Unistrut system, you've experienced its legendary versatility first hand. If not, you're about to discover an exciting and efficient alternative to conventional support systems. Either way, these pages — detailing dozens of channel sections and combinations, plus hundreds of fittings and accessories with accompanying technical information — will open a world of possibilities limited only by your imagination.

Like many break-through ideas, the Unistrut metal framing system just keeps getting stronger. You'll find new framing sections, new fittings and a whole new class of concrete inserts in this edition — all designed to keep Unistrut first by putting you first.

A tradition of quality and unceasing innovation has made Unistrut the first choice of users and specifiers on six continents. This catalog establishes a new industry standard and reflects an important re-statement of that tradition.



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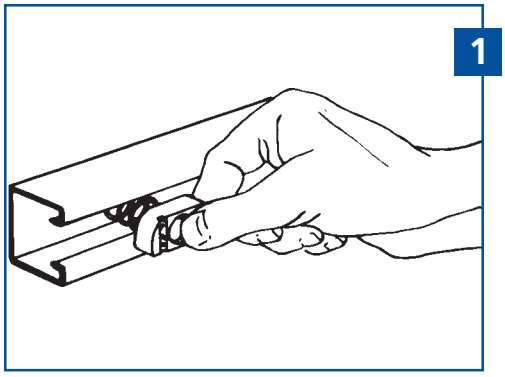
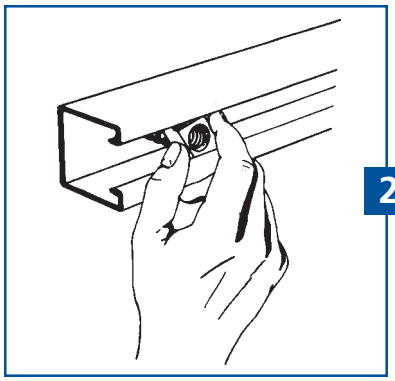
Featuring The Unique Weldless Connection

- Hex-head bolt connects fitting to channel as it is threaded into spring nut.
- Chamfer in nut eases starting of the bolt.
- Nut teeth create a strong, vise-like grip when tightened against the inturned channel edges.
- Channel edges and nut's tapered grooves act as guides to provide fool-proof alignment of connection.
- Nut teeth grip the channel's inturned edges, tying the channel sides together in a "box" configuration for added strength.
- Spring allows precision placement anywhere along channel length, then holds nut in position while connection is completed.

Strong, Fast, Economical and Adjustable

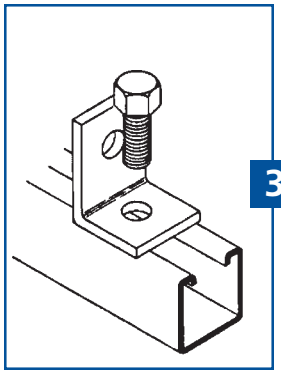


1 Insert the spring nut anywhere along the continuous slotted channel. The rounded nut ends permit easy insertion.

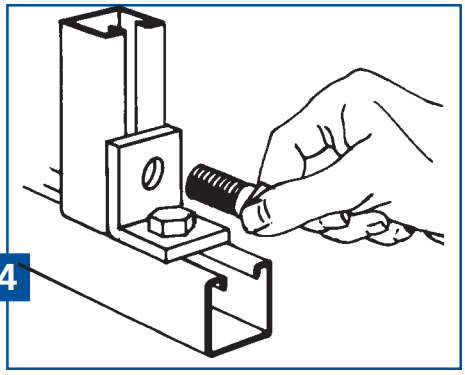


A 90° clockwise turn aligns the grooves in the nut with the inturned edges of the channel.

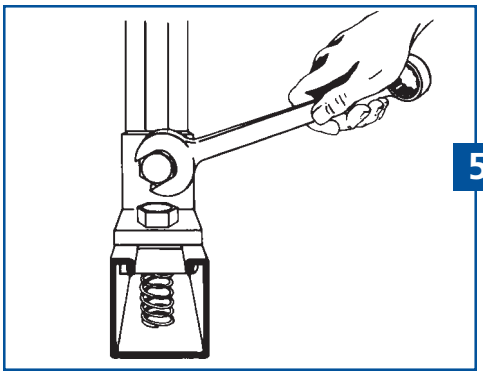
2 Fittings can be placed anywhere along the channel opening, permitting complete freedom of adjustment. The need for drilling holes is eliminated.



3 Insert bolt through fitting and into the spring nut. (See illustration 5 for end view showing nut in place)



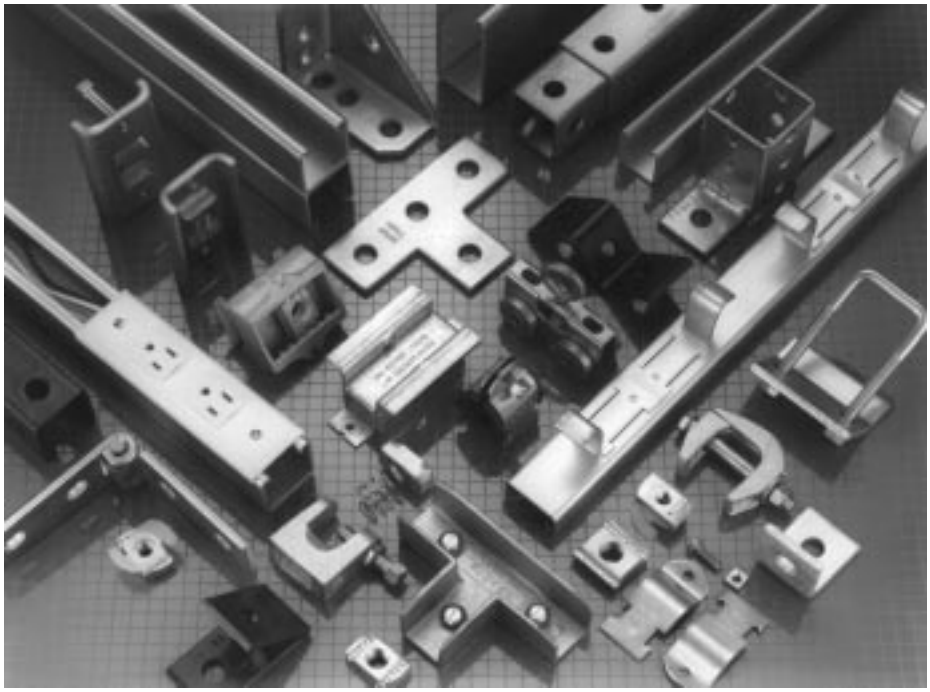
4 Additional channel sections can now be bolted to the fitting already in place by following procedure described in steps 1–3.



5 Tightening with a wrench locks the serrated teeth of the nut into the inturned edges of the channel, to complete a strong, vise-like connection.

Serving Design Professionals for Over 60 Years

Unistrut products have been helping to build a better world since 1924. Used extensively in nuclear, industrial and commercial construction markets for over 60 years, Unistrut Metal Framing has set the standard for product design, quality and performance. The initial Unistrut concept — a simple spring nut and bolt connecting a fitting to a continuous slotted channel — has evolved into a comprehensive engineered building and support system.

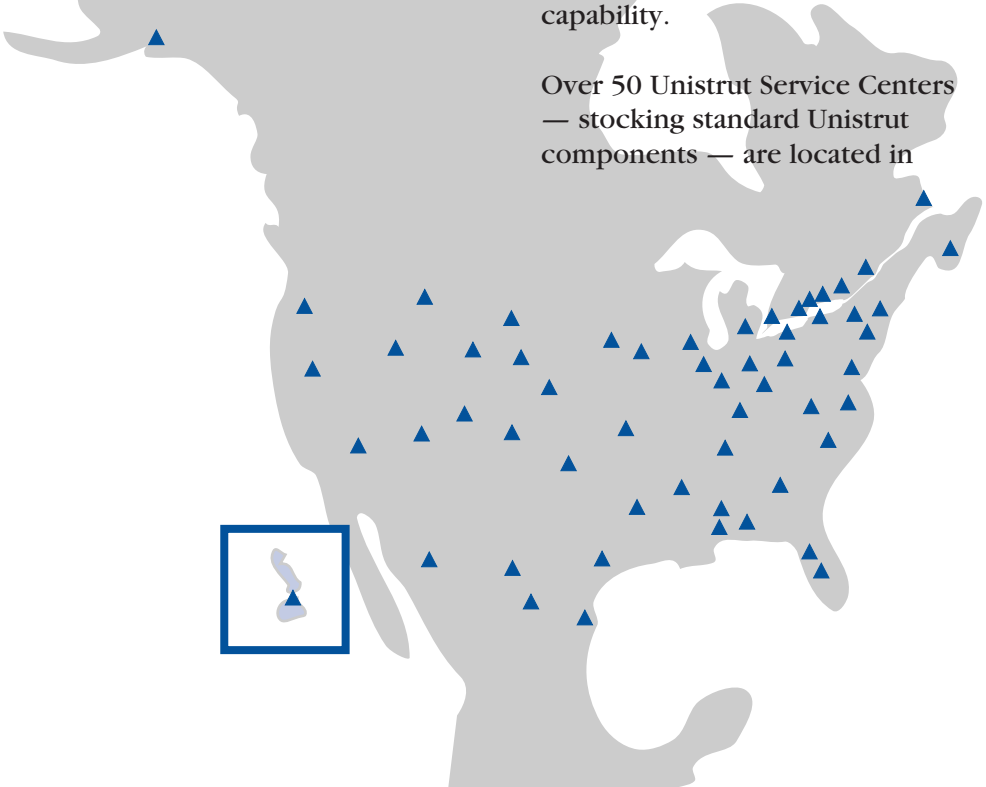


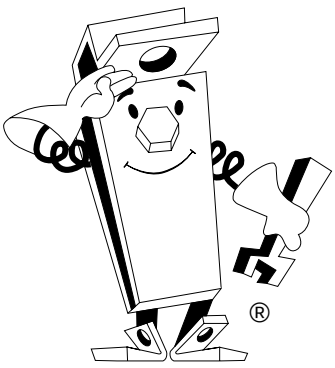
Unistrut — The Original Metal Framing System

There is only one Unistrut Metal Framing System. It incorporates the innovative product improvements that our research and development group has created to give you the most complete and flexible support system available. Backed by our worldwide network of engineering and distribution centers, Unistrut provides customers with total-resource capability.

Over 50 Unistrut Service Centers — stocking standard Unistrut components — are located in principal cities in North America to serve you quickly and directly. Many Service Centers are equipped to design and supply drawings for any type of metal framing application and also offer fabrication and installation services.

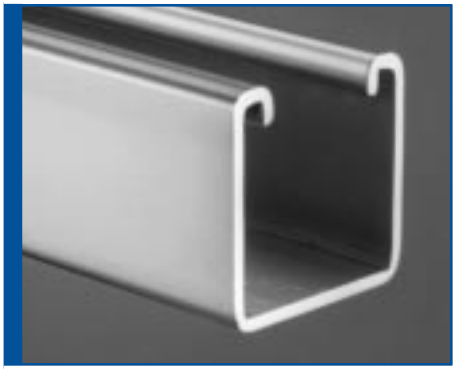
This catalog is a comprehensive presentation of Unistrut Metal Framing components plus technical data required by design, specification and construction professionals.

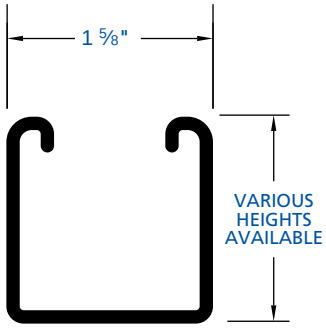




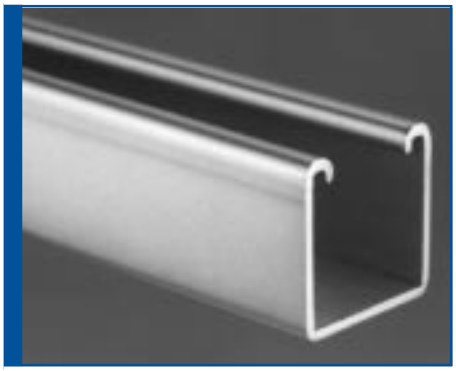
The Most Complete Metal Framing System — Offering Three Channel-Width Options

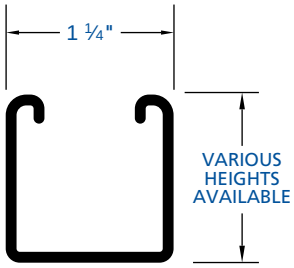
Adjustability, demountability and reusability are engineered into each of the three Unistrut channel series. Each series offers channels of varying depth and gage plus a complete line of fittings and accessories.



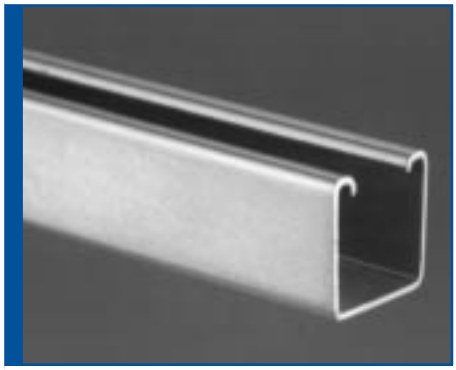


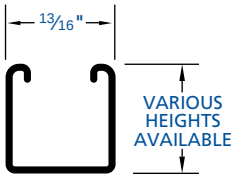
1⅝" width Series Channel begins on page 20.





1¼" width Series Channel begins on page 180.





13⁄16" width Series Channel begins on page 198.

1⅝" (41mm) width

Designed to carry the heaviest loads and provide the widest variety of applications, the 1⅝" series has become the accepted standard for use in mechanical, electrical and general construction applications where supports and attachments must meet the highest strength requirements.

1¼" (32mm) width

A framing system designed for medium loads, the 1¼" series is especially suitable for use in the OEM, commercial and display markets. It maintains a lightness in scale and a clean line that makes it aesthetically pleasing as well as functional.

13⁄16" (21mm) width

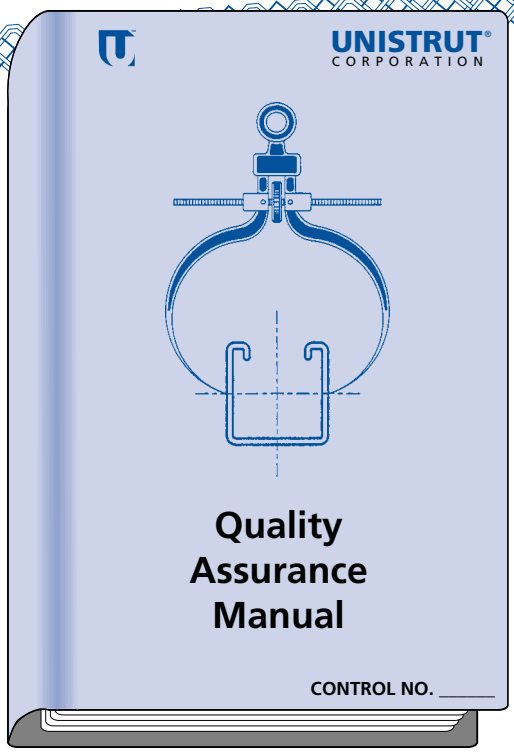
A unique half-size reduction of the 1⅝" channel-width series, this smaller channel size can be used to carry light loads economically in applications such as instrumentation, retail displays and light-duty laboratory supports. It also provides the flexibility found in all Unistrut framing systems.

A STATEMENT OF QUALITY

Unistrut Corporation's growth and leadership in the metal framing industry is a direct result of developing and maintaining the highest standards of quality with respect to raw materials, manufacturing and finishing. Design criteria and testing are based on the most stringent industry codes and standards. The commercial grade quality-assurance program developed and adopted by Unistrut Corporation has been audited and accepted by member utilities of the nuclear power-generating industry.

For Unistrut safety-related products conforming to 10CFR50 Appendix B, 10CFR21, ANSI N45.2 and NQA-1, consult our Nuclear Power Engineering catalog.

Conformance to your Canadian Standards Association CSA 299.4 Quality Assurance Program also available.



Unistrut is committed to being the "best" in the metal framing industry. In order to meet this goal, Unistrut has adopted the philosophy of "Zero Defects and Continuous Improvement". This means on-going reviews of our manufacturing processes, operating procedures and quality systems to find ways of improving efficiency, productivity and quality. It means establishing process controls and problem-prevention techniques to ensure that superior quality is built into every Unistrut product.

Our drive to be the best includes not just quality products, but on-time delivery and prompt resolution of customer needs and concerns. At Unistrut, quality is number one.

Product Testing is an Important Part of Unistrut's Quality-Assurance Program.

We utilize our own testing facilities, as well as those of independent testing laboratories, to determine design loads with proper and adequate safety factors. These design loads are indicated, where applicable, throughout the catalog. Loads are based on AISI Specification For The Design Of Cold-Formed Steel Structural Members, August 1986 Edition, December 1989 Addendum.

Destructive and non-destructive testing procedures are used to test for variables such as corrosion, conductivity, electro-static dissipation, ultra-violet resistance, wind resistance, dimensional accuracy, material integrity and slip resistance.

Fixture testing of Unistrut brackets establishes design loads and technical specifications.

In short, if there's a specification to meet, Unistrut will develop a test to quantify and verify it. Using design properties of the Unistrut framing members, load data given in this catalog, and/or design procedures of the American Iron & Steel Institute Specification For The Design Of Cold-Formed Steel Structural Members, August 1986 Edition, December 1989 Addendum, it is possible to design any type of structure within the capabilities of the system. Assemblies or connections that cannot be calculated using provisions of the AISI specifications must be established by application-specific tests.

Regular QC checks assure that our products continue to meet rigid Unistrut quality-control standards.

A Leader Knows How to Listen…

The original Unistrut Metal Framing System was the product of a single-minded search for a better, faster, more economical way to build structural supports. That spirit of innovation continues to fuel Unistrut research and development programs, that have resulted in literally hundreds of new fittings, channel designs and accessories.

Our research and development process starts with the customer. First, we listen. Then we get to work on ideas to meet the customer's needs. That approach has kept us a step ahead in product development ever since we introduced the Unistrut Metal Framing concept in 1940. Unistrut research and development engineers also have extensive experience in product "design-for-application" projects. New products, materials, coatings and systems-development expertise are available through Unistrut's manufacturing facilities. Customers who have utilized Unistrut's research and development capabilities include members of the nuclear-power, automotive, aerospace, environmental-protection industries and engineering profession.

We stay in touch with changing customer needs by listening to the professionals who specify and use Unistrut products every day.

A steady-stream of new-product and special-application prototypes helps keep the Unistrut metal framing system as current as today's customer needs.

If you have a special need or a unique application, turn to Unistrut for engineering and design assistance. Helping *you* is the cornerstone of our R&D effort.

Framing Members

Unistrut channels and continuous inserts are accurately and carefully cold-formed to size from low carbon strip steel. One side of the channel has a continuous slot with inturned edges. Secure attachments may be made to the framing member with the use of hardened, toothed, slotted nuts which engage the inturned edges.

Raw steel shall conform to the following ASTM specifications.

GAGE	FINISH	ASTM NO.
12	GR & HG	A570 GR 33
	PG	A653 GR 33
14	GR & HG	A570 GR 33
	PG	A653 GR 33
16	GR & HG	A366
	PG	A653 GR 33
19	GR	A366

Fittings

Unistrut fittings, unless noted otherwise, are punch-press made from hot rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A575, A576, A635 or A36. The fitting steel also meets the physical requirement of ASTM A570 GR 33. The pickling of the steel produces a smooth surface free from scale.

Nuts and Bolts

Unistrut nuts are made from steel bars. After all machining operations are complete, they are thoroughly case hardened. Nuts are rectangular with ends shaped to permit a quarter turn clockwise in the framing member after insertion through the slotted opening in the channel. Two toothed grooves in the top of the nut engage the inturned edges of the channel and, after bolting operations are completed, will prevent any movement of the bolt and nut within the framing member. All bolts and nuts have Unified coarse screw threads. The standard framing nut is ½" and conforms to ASTM Specification A576 GR 1015 (material only). Screws conform to SAE J429 GR 2 (also meets and exceeds ASTM A307).

Finishes

PERMA-GREEN® II (GR)

Channel and parts are carefully cleaned and phosphated. Immediately after phosphating, a uniform coat of a highly effective rust-inhibiting acrylic enamel paint is applied by electro-deposition and thoroughly baked. Color is Perma-Green per Federal Standard 595a color number 14109 (dark limit V-). The resulting finish will withstand 400 hours of salt spray when tested in accordance with ASTM designation B-117.

ELECTRO-GALVANIZED (EG)

Parts, screws and nuts are coated with zinc electrolytically to commercial standards (ASTM - B633 Type III SC1).

PLAIN (PL)

Plain finish designation means that the channel retains the oiled surface applied to the raw steel during the rolling process. The fittings have the original oiled surface of the bar-stock material.

PRE-GALVANIZED (PG)

Material (steel strip) is coated with zinc by hot-dip process prior to roll-forming or press operations. The zinc coating weight is G90 conforming to ASTM Specification A653 GR 33.

HOT-DIPPED GALVANIZED (HG)

Material is coated with zinc after being roll-formed or after all manufacturing operations are completed, conforming to ASTM specification No. A123 or A153.

SPECIAL COATING

When specific applications require other than standard available finishes, special finishes can be supplied per customer requirements.

WEIGHTS AND DIMENSIONS

Weights given for all materials are approximate shipping weights. All dimensions subject to commercial tolerance within published specifications.

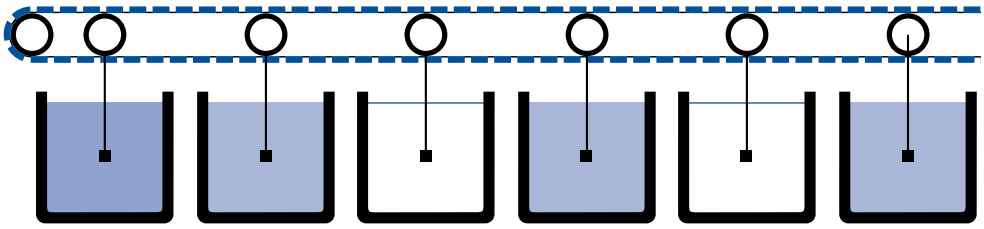
WE RESERVE THE RIGHT TO MAKE SPECIFICATION CHANGES WITHOUT NOTICE .

WHILE EVERY EFFORT HAS BEEN MADE TO ASSURE THE ACCURACY OF INFORMATION CONTAINED IN THIS CATALOG AT THE TIME OF PUBLICATION, WE CANNOT ACCEPT RESPONSIBILITY FOR INACCURACIES RESULTING FROM UNDETECTED ERRORS OR OMISSIONS.

THE BLUE COLOR USED ON UNISTRUT COMPONENTS ILLUSTRATED IN THIS CATALOG IS FOR GRAPHIC ENHANCEMENT ONLY, AND DOES NOT REPRESENT ACTUAL PRODUCT COLOR.

Perma-Green® II

The performance of Unistrut's Perma-Green II far exceeds that of conventional finishes. And compared to competitive "high-performance" coatings, Perma-Green II provides superior resistance to chalking, checking and fading and is far less vulnerable to common acidic atmospheres, solvents and alkalis. Just as important, Perma-Green II is the result of an environmentally neutral process that virtually eliminates the toxic metals commonly found in competitive paint-based finishes.



TANK 1
First stage hot alkaline cleaning of channel.

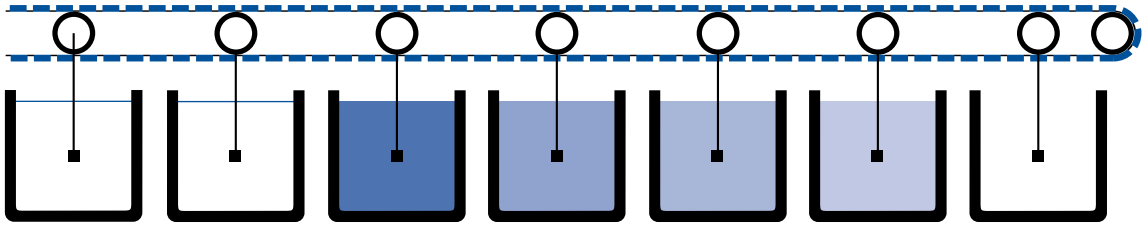
TANK 2
Second stage hot alkaline cleaning of channel.

TANK 3
Channel is rinsed to remove cleaning solution.

TANK 4
Channel is phosphated to produce an iron phosphate coating.

TANK 5
Channel is rinsed to remove excess phosphate solution.

TANK 6
Sealer is applied.



TANK 7
First stage deionizer water rinse to remove excess sealer.

TANK 8
Second stage deionized water rinse to prepare channel for E-Coating.

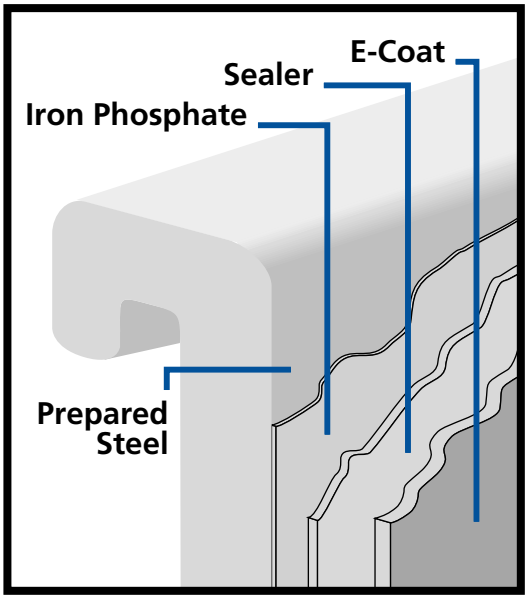
TANK 9
Electro-deposition tank applies the acrylic Perma-Green® II to all surfaces.

TANK 10
First stage permeate rinse to remove excess E-Coat.

TANK 11
Second stage permeate rinse to prepare channel for surfactant.

TANK 12
Surfactant rinse to prepare channel for cure.

OVEN
The cure process dries the channel and cross links the acrylic thermoset resins.



Unistrut Perma-Green II is a factory applied, electro-deposition acrylic coating with superior rust protection and fade-resistance. The acrylic coating is a proprietary formulation and is essentially *"heavy-metal" free*. The electrodeposition coating process provides a smooth, hard, durable surface which is completely cured. This inhibits introduction of airborne contaminates which can adversely affect sensitive manufacturing environments.

Before the electrodeposition acrylic coating is applied, Unistrut channel and fittings are thoroughly cleaned and coated with an iron phosphate conversion coating. Unistrut's unique, custom-designed "prep" process consists of eight separate steps, the most thorough in the industry. The cleaning, phosphating and electrodeposition coating processes are continuous and, unlike "batch" processing, result in a uniform quality coating.

Production samples are tested on a continuous basis for corrosion resistance. Unistrut Perma-Green II exceeds 400 hours salt spray (⅛" creep from scribe) when tested to ASTM B117. Unscribed samples exceed 600 hours salt spray.

PERMA-GREEN® II TECHNICAL DATA

STEEL SUBSTRATE PREPARATION

Eight stage continuous cleaning, phosphate process.

Substrate after "prep": sealed iron phosphate conversion coating.

COATING

Thermoset acrylic

Color: Green Federal STD. 595A, Color No. 14109, Dark Limit V-.

Hardness: 2H.

Coating Process: Anodic Electrodeposition.

PERFORMANCE

Salt Spray:

Scribed: exceeds 400 hours per ASTM B117.
Unscribed: exceeds 600 hours per ASTM B117.

Chalk: nominal at 1,000 hours per weatherometer G-23 test.

Checking: None at 1,000 hours per weatherometer G-23 test.

Fade: Less than 50% compared to standard epoxy E.C. coatings.

ENVIRONMENTAL ISSUES

Formulated as a "heavy metal"-free coating (trace elements only).

Outgassing in service: essentially none at 350°F for 24 hours.

Zinc Coating

Unistrut products are available in three types of zinc coatings: electroplated, pregalvanized and hot dip galvanized.

Zinc coatings offer two types of protection:

1. Barrier: The zinc coating protects the steel substrate from direct contact with the environment,
2. Sacrificial: The zinc coating will protect scratches, cut edges, etc. through an anodic sacrificial process.

The service life of zinc coating is directly related to the zinc coating thickness. As shown in graph, when the zinc coating is double, the service life is double under most conditions.

Electroplated Zinc– ASTM B633 Type III SC1

In the electroplating process, the part to be zinc coated is immersed in a solution of zinc ions. An electric current causes the zinc to be deposited on the part.

Zinc plated parts typically have a zinc coating of .2 to .5 MIL and are recommended for dry indoor use.

Pregalvanized Zinc- ASTM A525

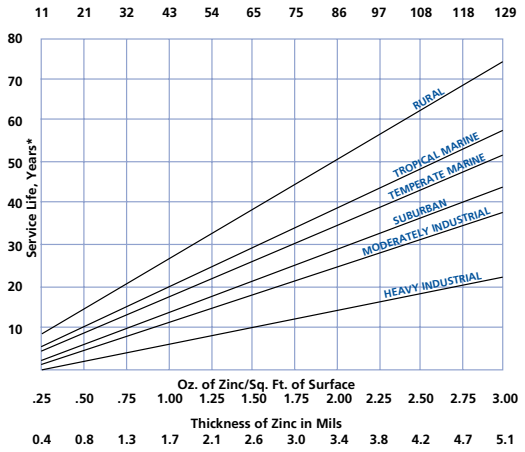
Pregalvanized steel is zinc coated by a hot dip process. Steel strip from a coil is fed through a continuous zinc coater which cleans, fluxes and coats the steel with molten zinc. After cooling, the steel is recoiled.

The pregalvanized zinc coating conforms to a G-90 thickness designation per ASTM A653. The zinc thickness is .75 MIL or .45 oz./sq. ft. of surface area.

This coating is offered on Unistrut channel and tubing and is a well-proven, time-tested performer for indoor and outdoor applications. For severe corrosion applications, hot dip galvanizing, as described below, is a good alternative.

LIFE OF PROTECTION VS. THICKNESS OF ZINC AND TYPE OF ATMOSPHERE

* Service Life is defined as the time to 5% rusting of the steel surface



Hot Dip Galvanized– ASTM A123 OR A153

In hot dip galvanizing, the finished part is immersed in a bath of molten zinc. This method results in complete zinc coverage and a thicker coating than pregalvanized or plated zinc.

The zinc coating is typically 2.6 MIL or 1.5 oz./sq. ft. of surface area.

This is the coating of choice for applications where severe corrosion is a design factor.

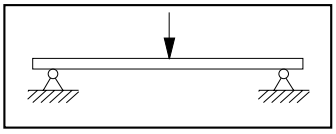
A) BEAMS

Beams are structural members loaded at right angles (perpendicular) to their length. Most beams are horizontal and subjected to gravity or vertical loads, e.g. a shelf support. However a vertical member can act as a beam under certain conditions, such as a curtain wall mullion subjected to wind loading. The bending moment developed in a beam is dependent on

(a) the amount of load applied,
(b) the type of loading applied, and
(c) the support conditions.

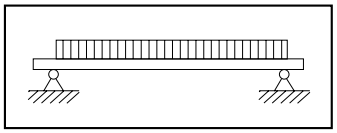
1) Types of Beam Loading

a) Point Load



A load concentrated onto a very small length of the beam is a point load.

b) Uniform Load

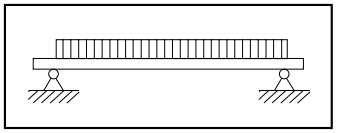


A load spread evenly over a relatively long length of the beam is a uniform load.

Point and uniform loads can be placed on a beam in any combination. A series of point loads can approximate a uniform loading. The load charts and tables are based on a uniform load unless identified otherwise.

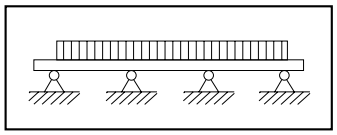
2) Support conditions

a) Simple Beam



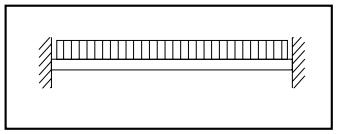
A simple beam has supports that prevent movement left and right, or up and down, but do not restrain the beam from rotating at the supports into a natural deflected curve. Most Unistrut Metal Framing connections produce simple beams. The load charts and tables are based on simple beams unless identified otherwise.

b) Continuous Beam



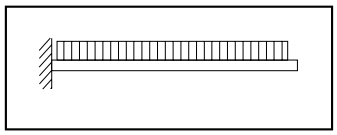
Any simple beam that is supported at one or more intermediate points is a continuous beam. A mezzanine joist that passes over three or more columns is an example of a continuous beam.

c) Fixed-End Beam



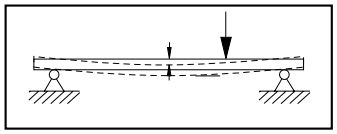
Supports that prevent the beam from rotating into a natural deflected curve, produce a fixed-end beam. A welded end connection to very rigid support produces a fixed-end beam.

d) Cantilever Beam



A cantilever beam is a fixed-end beam that is supported at one end only, while the other end is unsupported. Unistrut brackets are examples of cantilever beams.

3) Deflection



All beams deflect under load. The amount of deflection is dependent on

(a) the amount of load,
(b) the support conditions,
(c) the stiffness of the beam's cross-sectional shape, and
(d) the stiffness of the beam material.

The stiffness of the beam's cross-sectional shape is measured by its "Moment Of Inertia" or "I". The larger a beam's "I", the stiffer it is and the less it will deflect. A beam's "I" can change for each major axis. The "I" of both major axes (I 1-1 and I 2-2) are provided. The stiffness of a beam's material is measured by its "Modulus of Elasticity" or "E". The larger a material's "E", the stiffer it is and the less it deflects. For example, steel is about three times stiffer than aluminum and as a result, deflects only one-third as much. Do not confuse stiffness with strength. Two materials may have identical strengths yet still have different "E's". A high-strength aluminum may be as strong as steel and still deflect three times as much. The load charts and tables give calculated deflections for the loads shown. In many cases, a final design will be determined by the maximum deflection, not the maximum load.

4) Bending Moment

Is it strong enough? This is the final consideration for any beam. A beam must not only hold up the anticipated loads, but must also have sufficient additional capacity to safely hold unforeseen variations in applied loads and material strengths. This additional capacity is called a safety factor and is usually regulated by the various design codes and standards. A beam's strength is usually measured by an allowable bending moment or an allowable stress. The traditional approach is the allowable stress method, where a beam is determined to have a maximum allowable stress (in pounds per square inch) which is not to be exceeded. The approach of the current AISI "Specification For The Design Of Cold-Formed Steel Structural Members" is to use a maximum allowable bending moment (in inch-pounds) which is not to be exceeded. Bending moment divided by a beam's section modulus or "S" equals stress.

B) COLUMNS

Columns are structural members that are loaded parallel to their length. Most columns are vertical and are used to carry loads from a higher level to a lower level. However any member subjected to compression loads, such as a diagonal or prop brace, is a column.

A column fails by "buckling", which is a sudden loss of straightness and subsequent collapse. Allowable column load is dependent on

(a) the length of column,
(b) the type of loading,
(c) the support conditions, and
(d) the column's cross-sectional shape and material.

1) Column Length

The column length is measured from braced point to braced point. A braced point is where the column is restrained from lateral movement (translation) in all directions.

2) Types Of Column Loading

a) Concentric Loading

Loads applied to the center of gravity of the column cross-section are considered concentric. A beam that passes over and rests on the top of a column is an example of concentric loading.

b) Eccentric Loading

Any load which is not concentric is eccentric. The amount of eccentricity (in inches) has a major effect on the load-carrying capacity of any particular column. A load that is transmitted to a Unistrut Metal Framing column using a standard fitting bolted to the slot face is considered eccentric.

The load tables give allowable loads for both concentric (loaded at C.G.) and certain eccentric (loaded at slot face) loading. Allowable loads for other eccentric loading must be determined by a qualified design professional.

3) Support Conditions

Based on the support conditions, an appropriate "K" value is selected. This "K" value, which mathematically describes the column end conditions, is used in the column design equations. The most common support condition combinations are as follows:

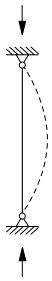
a) Fixed Top – Fixed Bottom

Both ends are restrained against rotation and lateral movement (translation). K equals .65.

b) Pinned Top – Fixed Bottom

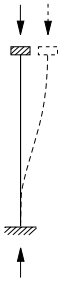
The top is restrained against lateral movement (translation) but, is allowed to rotate. The bottom is restrained against rotation and lateral movement. This is a common support condition and is used to construct the allowable column load applied at the Slot Face tables. "K" equals .80.

c) Pinned Top – Pinned Bottom



Both ends are restrained against lateral movement (translation) but, are allowed to rotate. "K" equals 1.0.

d) Fixed / Free Top – Fixed Bottom



The top is restrained against rotation but is allowed to move laterally. The bottom is restrained against rotation and lateral movement (translation). "K" equals 1.2.

4) Cross-Sectional Shape

The cross-sectional shape of a column member determines the value of it's "Radius of Gyration" or "r". In general, a member with a large "r" makes a better column than a member with a small "r". Each axis of a column has a different "r". Typically the axis with the smallest "r" determines the final design.

C) BOLT TORQUE

Bolt torque values are given to ensure the proper connection between Unistrut Metal Framing components. It is important to understand that there is a direct, but not necessarily consistent, relationship between bolt torque and tension in the bolt. Too much tension in the bolt can cause it to break or crush the component parts. Too little tension in the bolt can prevent the connection from developing its full load capacity. The torque values given have been developed over many years of experience and testing.

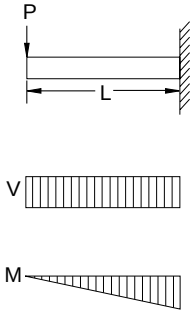
BOLT SIZE	¼" 20	5/16" 18	⅜" 16	½" 13	⅝" 11	¾" 10
FOOT LBS.	6	11	19	50	100	125
N·m	8	15	25	70	135	170

These are based on using a properly calibrated torque wrench with a clean dry (non-lubricated) Unistrut fitting, bolt and nut. A lubricated bolt or nut can cause extremely high tension in the connection and may lead to bolt failure. It must be noted that the accuracy of commercial torque wrenches varies widely and it is the responsibility of the installer to ensure that proper bolt torque has been achieved.

CONVERSION FACTORS

To Convert From	To	Multiply By	To Convert From	Multiply To	By
Length					
Inch [in]	Millimeter [mm]	25.400 000	Millimeter [mm]	Inch [in]	0.039 370
Foot [ft]	Meter [m]	0.304 800	Meter [m]	Foot [ft]	3.280 840
Yard [yd]	Meter [m]	0.914 400	Meter [m]	Yard [yd]	1.093 613
Mile (U.S. Statute) [mi]	Kilometer [km]	1.609 347	Kilometer [km]	Mile (U.S. Statute) [mi]	0.621 370
Area					
Square Inch [in^2]	Square Millimeter [mm^2]	645.16	Square Millimeter [mm^2]	Square Inch [in^2]	0.001550
Square Foot [ft^2]	Square Meter [m^2]	0.092 903	Square Meter [m^2]	Square Foot [ft^2]	10.763 915
Square Yard [yd^2]	Sqare Meter [m^2]	0.836 127	Sqare Meter [m^2]	Square Yard [yd^2]	1.195 991
Square Mile [mi^2] (U.S. Statute)	Square Kilometer [km^2]	2.589 998	Square Kilometer [km2]	Square Mile [mi^2] (U.S. Statute)	0.386 101
Acre	Square Meter [m^2]	4046.873	Square Meter [m^2]	Acre	0.000 247
Acre	Hectare	0.404 687	Hectare	Acre	2.471 046
Volume					
Cubic Inch [in^3]	Cubic Millimeter [mm^3]	16387.06	Cubic Millimeter [mm^3]	Cubic Inch [in^3]	0.000061
Cubic Foot [ft^3]	Cubic Meter [m^3]	0.028 317	Cubic Meter [m^3]	Cubic Foot [ft^3]	35.314 662
Cubic Yard [yd^3]	Cubic Meter [m^3]	0.764 555	Cubic Meter [m^3]	Cubic Yard [yd^3]	1.307 950
Gallon (U.S. Liquid) [gal]	Litre [l]	3.785 412	Litre [l]	Gallon (U.S. Liquid) [gal]	0.264 172
Quart (U.S. Liquid) [qt]	Litre [l]	0.946 353	Litre [l]	Quart (U.S. Liquid) [qt]	1.056 688
Mass					
Ounce (Avoirdupois) [oz]	Gram [g]	28.349 520	Gram [g]	Ounce (Avoirdupois) [oz]	0.035 274
Pound (Avoirdupois) [lb]	Kilogram [kg]	0.453 592	Kilogram [kg]	Pound (Avoirdupois) [lb]	2.204 624
Short Ton	Kilogram [kg]	907.185	Kilogram [kg]	Short Ton	0.00110
Force					
Ounce-Force	Newton [N]	0.278 014	Newton [N]	Ounce-Force	3.596 941
Pound-Force [lbf]	Newton [N]	4.448 222	Newton [N]	Pound-Force [lbf]	0.224 809
Bending Moment					
Pound-Force-Inch [lbf-in]	Netwon-Meter [N-m]	0.112 985	Netwon-Meter [N-m]	Pound-Force-Inch [lbf-in]	8.850 732
Pound-Force-Foot [lbf-ft]	Newton-Meter [N-m]	1.355 818	Newton-Meter [N-m]	Pound-Force-Foot [lbf-ft]	0.737 562
Pressure, Stress					
Pound-Force per Square Inch [lbf/in^2]	Kilopascal [kPa]	6.894 757	Kilopascal [kPa]	Pound-Force per Square Inch [lbf/in^2]	0.145 038
Foot of Water (39.2 F)	Kilopascal [kPa]	2.988 980	Kilopascal [kPa]	Foot of Water (39.2 F)	0.334 562
Inch of Mercury (32 F)	Kilopascal [kPa]	3.386 380	Kilopascal [kPa]	Inch of Mercury (32 F)	0.295 301
Energy, Work, Heat					
Foot-Pound-Force [ft-lbf]	Joule [J]	1.355 818	Joule [J]	Foot-Pound-Force [ft-lbf]	0.737 562
British Thermal Unit [Btu]	Joule [J]	1055.056	Joule [J]	British Thermal Unit [Btu]	0.000948
Calorie [cal]	Joule [J]	4.186 800	Joule [J]	Calorie [cal]	0.238 846
Kilowatt Hour [kW-h]	Joule [J]	3600000	Joule [J]	Kilowatt Hour [kW-h]	2.78^{-7}
Power					
Foot-Pound-Force /Second [ft-lbs/s]	Watt [W]	1.355 818	Watt [W]	Foot-Pound-Force /Second [ft-lbs/s]	0.737 562
British Thermal Unit /Hour [Btu/h]	Watt [W]	0.293 071	Watt [W]	British Thermal Unit /Hour [Btu/h]	3.412 142
Horsepower (550 Ft. Lbf/s) [hp]	Kilowatt [kW]	0.745 700	Kilowatt [kW]	Horsepower (550 Ft. Lbf/s) [hp]	1.341 022
Angle					
Degree	Radian [rad]	0.017 453	Radian [rad]	Degree	57.295 788
Temperature					
Degree Fahrenheit [F]	Degree Celsius [C]	(F° -32)/1.8	Degree Celsius [C]	Degree Fahrenheit [F]	1.8xC°+32

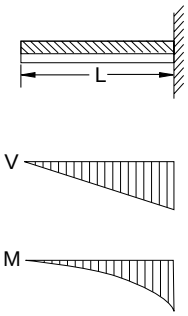
CANTILEVER BEAMS



V max. = P

M max. = PL

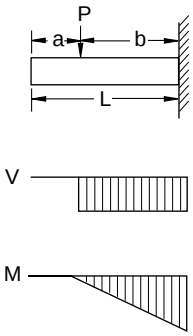
$\Delta max. = \frac{PL^3}{3EI}$



V max. = W

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

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

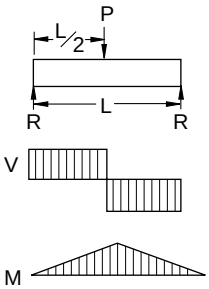


V max. = P

M max. = Pb

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

SIMPLE BEAMS

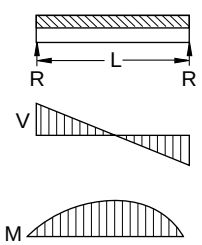


$R = \frac{P}{2}$

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

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

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

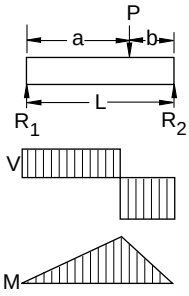


$R = \frac{W}{2}$

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

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

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



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

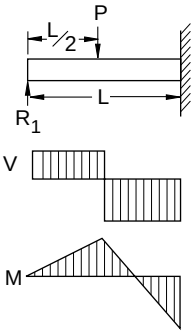
$R_2 = \frac{Pa}{L}$

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

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

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

BEAMS FIXED AT ONE END, SUPPORTED AT OTHER



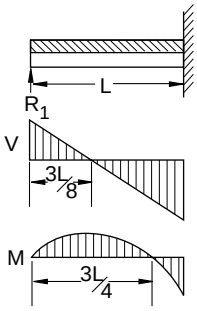
$R_1 = \frac{5P}{16}$

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

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

$\Delta max.$ at x = 0.447L

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



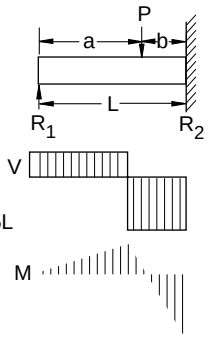
$R_1 = \frac{3W}{8}$

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

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

$\Delta max.$ at x = 0.4215L

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



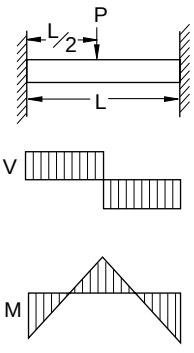
$R_1 = \frac{Pb^2}{2L^3}(a+2L)$

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

M at point of load = $R_1 a$

M at fixed end = $\frac{Pab}{2L^3}(a+L)$

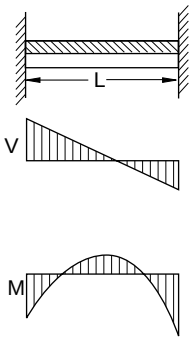
BEAMS FIXED AT BOTH ENDS



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

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

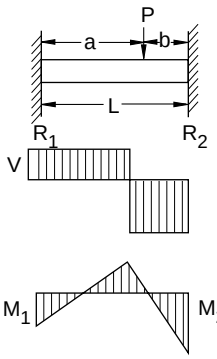
$\Delta max. = \frac{PL^3}{192EI}$



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

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

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



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

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

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

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

R – Reaction
M – Moment
P – Concentrated Load

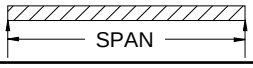
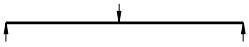
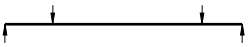
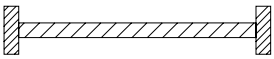
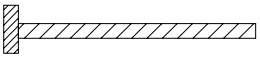
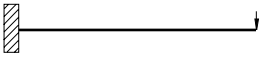
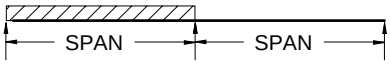
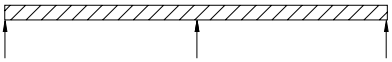
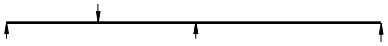
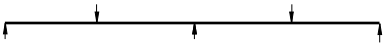
W – Total Uniform Load
V – Shear
L – Length

Δ – Deflection
E – Modulus of Elasticity
I – Moment of Inertia

CONVERSION FACTORS FOR BEAMS WITH VARIOUS STATIC LOADING CONDITIONS

All Beam Load tables are for single-span (simple) beams supported at the ends. These can be used in the majority of the cases.

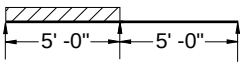
There are times when it is necessary to know what happens with other loading and support conditions. Some common arrangements are shown below. Simply multiply the values from the Beam Load tables by factors given below

LOAD AND SUPPORT CONDITION	LOAD FACTOR	DEFLECTION FACTOR
1. Simple Beam, Uniform Load 	1.00	1.00
2. Simple Beam, Concentrated Load at Center 	.50	.80
3. Simple Beam, Two Equal Concentrated Loadcs at 1/4 pts 	1.00	1.10
4. Beam Fixed at Both Ends, Uniform Load 	1.50	.30
5. Beam Fixed at Both Ends, Concentrated Load at Center 	1.00	.40
6. Cantilever Beam, Uniform Load 	.25	2.40
7. Cantilever Beam, Concentrated Load at End 	.12	3.20
8. Continuous Beam, Two Equal Spans, Uniform Load on One Span 	1.30	.92
9. Continuous Beam, Two Equal Spans, Uniform Load on Both Ends 	1.00	.42
10. Continuous Beam, Two Equal Spans, Concentrated Load at Center of One Span 	.62	.71
11. Continuous Beam, Two Equal Spans, Concentrated Load at Center of Each Span 	.67	.48

EXAMPLE I

PROBLEM:

Determine load and deflection of a P 1000 beam continuous over one support and loaded uniformly on one span.



SOLUTION:

A. From load table for P1000 on page 24 load for a 5'-0" span is 680# and deflection is .35".
B. Multiply by factors from Table above.
   Load = 680# x 1.30 = 884#
   Deflection = .35" x .92 = .32"

EXAMPLE II

PROBLEM:

Determine load and deflection of a P 5500 cantilever beam with a concentrated load on the end.

SOLUTION:

A. From load table P5500 on page 57 load for a 3'-0" span is 2190# and deflection is .09".
B. Multiply by factors from Table above.
   Load = 2190# x .12 = 263#
   Deflection = .09" x 3.20 = .29"

PART I - GENERAL

1.01 SCOPE OF WORK

A. Provide all Unistut Metal Framing material, fittings and related accessories (Strut System) as indicated on the Contract Drawings.
B. Provide all labor, supervision, engineering, and fabrication required for installation of the Strut System in accordance with the Contract Drawings and as specified herein.
C. Related work specified elsewhere.

1.02 QUALITY ASSURANCE

A. Manufacturer's qualifications:
   1. The manufacturer shall not have had less than 10 year's experience in manufacturing Strut Systems.
   2. The manufacturer must certify in writing all components supplied have been produced in accordance with an established quality assurance program.
B. Installer's qualifications:
   1. Installer must be a Unistrut trained manufacturer's authorized representative/installer with not less than 5 years experience in the installation of Strut Systems of this size and conformation.
   2. All Strut System components must be supplied by a single manufacturer.
C. Standards:
   1. Work shall meet the requirements of the following standards.

      Federal, State and Local codes.
      American Iron and Steel Institute (AISI) Specification for the Design of Cold-Formed Steel Structural Members August 19, 1986 Edition, December 11, 1989 Addendum.

      American Society for Testing And Materials (ASTM).

1.03 SUBMITTALS

A. Structural Calculations and Shop Drawings
   1. Submit structural calculations for approval by the project engineer. Calculations may include, but are not limited to:
      a. Description of design criteria.
      b. Stress and deflection analysis.
      c. Selection of Unistrut framing members, fittings, and accessories.
   2. Submit all shop/assembly drawings necessary to completely install the Strut System in compliance with the Contract Drawings.
   3. Submit all pertinent manufacturers published data.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. All material is to be delivered to the work site in original factory packaging to avoid damage to the finish.
B. Upon delivery to the work site, all components shall be protected from the elements by a shelter or other covering.

1.05 GUARANTEE

A. Separate guarantees shall be issued from the erector and manufacturer, valid for a period of 1 year, against any defects that may arise from the installation or manufacture of the Strut System components.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. All Strut System components shall be as manufactured by UNISTRUT CORPORATION or approved equal as determined by the Architect or Engineer of record in writing 10 days prior to bid date.

2.02 MATERIALS

A. All channel members shall be fabricated from structural grade steel conforming to one of the following ASTM specifications:
   A 570 GR 33, A 653 GR 33
B. All fittings shall be fabricated from steel conforming to one of the following ASTM specifications:
   A 575, A 576, A 36 or A 635
C. Substitutions
   Any substitutions of product or manufacturer must be approved in writing ten days prior to bid date, by Architect or Engineer of record.

2.03 FINISHES

A. Strut System components shall be finished in accordance with one of the following standards:

   1. PERMA-GREEN® II (GR)
      Rust inhibiting acrylic enamel paint applied by electro-deposition, after cleaning and phosphating, and thoroughly baked. Color is per Federal Standard 595a color number 14109 (dark limit V-). Finish to withstand minimum 400 hours salt spray when tested in accordance with ASTM B 117.

   2. ELECTRO-GALVANIZED (EG)
      Electrolytically zinc coated per ASTM B 633 Type III SC 1

   3. PRE-GALVANIZED (PG)
      Zinc coated by hot-dipped process prior to roll forming. The zinc weight shall be G90 conforming to ASTM A 653.

   4. HOT-DIPPED GALVANIZED (HG)
      Zinc coated after all manufacturing operations are complete. Coating shall conform to ASTM A 123 or A 153.

   5. SPECIAL COATING / MATERIAL
      (Describe as applicable)

PART 3 - EXECUTION

3.01 EXAMINATION

A. The installer shall inspect the work area prior to installation. If work area conditions are unsatisfactory, installation shall not proceed until satisfactory corrections are completed.

3.02 INSTALLATION

A. Installation shall be accomplished by a fully trained manufacturer authorized installer.
B. Set Strut System components into final position true to line, level and plumb, in accordance with approved shop drawings.
C. Anchor material firmly in place. Tighten all connections to their recommended torques.

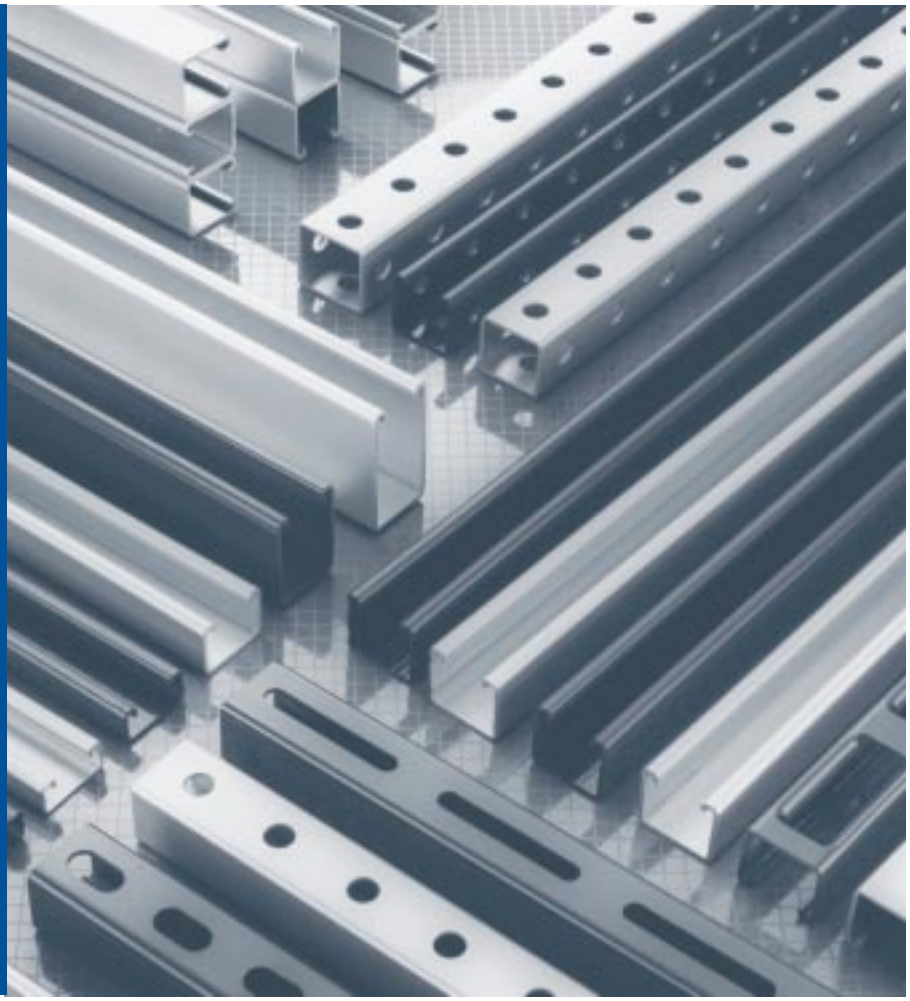
3.03 CLEANUP

A. Upon completion of this section of work, remove all protective wraps and debris. Repair any damage due to installation of this section of work.

3.04 PROTECTION

A. During installation, it shall be the responsibility of the installer to protect this work from damage.
B. Upon completion of this scope of work, it shall become the responsibility of the general contractor to protect this work from damage during the remainder of construction on the project and until substantial completion.

	Page
P1000 12 Gage	23
P1100 14 Gage	32
P2000 16 Gage	36
P3000 12 Gage	40
P3300 12 Gage	43
P4000 16 Gage	46
P4100 14 Gage	50
P5000 12 Gage	53
P5500 12 Gage	56
Closure Strips	59
Pierced Sections	60
P9000 Series 12 Gage	62



MATERIAL
Unistrut channels are accurately and carefully cold formed to size from low-carbon strip steel.

Spot-welded combination members are welded 3" (maximum) on center.

STEEL: PLAIN
12 Ga. (2.7 mm), 14 Ga.(1.9 mm) ASTM A570 GR 33
16 Ga. (1.5 mm) ASTM A366

STEEL: PRE-GALVANIZED
12 Ga. (2.7 mm), 14 Ga. (1.9 mm) and 16 Ga. (1.5mm) ASTM A653 GR 33

For other materials, see Special Metals and Fiberglass section.

FINISHES
All channels are available in: Perma Green II (GR), pre-galvanized (PG), conforming to ASTM A653; Hot-dipped galvanized (HG), conforming to ASTM A123 or A153; and plain (PL).

STANDARD LENGTHS
Standard lengths are 10 feet (3.05m) and 20 feet (6.10m). Tolerances are +⅛" (3.2 mm) to +½" (12.7 mm) to allow for cutting. Special lengths are available for a small cutting charge with a tolerance of ±⅛" (3.2mm).

CURVED CHANNEL
Many Unistrut 1⅝" (41mm) channel sections are available as curved pieces in both single and combination styles. Contact your local Unistrut Service Center or Unistrut Corporation for ordering information.

DIMENSIONS
Imperial dimensions are illustrated in inches. Metric dimensions are shown in millimeters and rounded to one decimal place.

LOAD DATA
All beam and column load data pertains to carbon steel and stainless steel channels. Load tables and charts are constructed to be in accordance with the SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS AUGUST 19, 1986 EDITION with DECEMBER 11, 1989 ADDENDUM published by the AMERICAN IRON AND STEEL INSTITUTE.

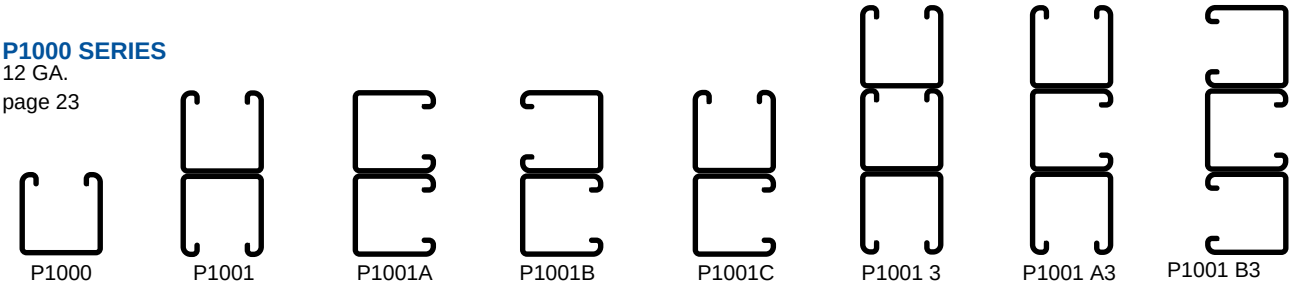
CHANNELS & COMBINATIONS

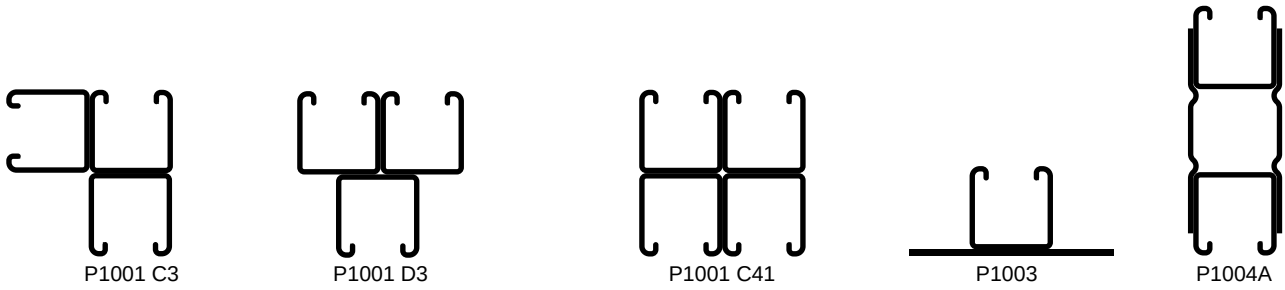
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1000 SERIES

12 GA.

page 23

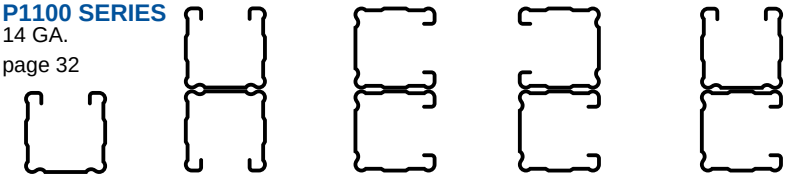




P1100 SERIES

14 GA.

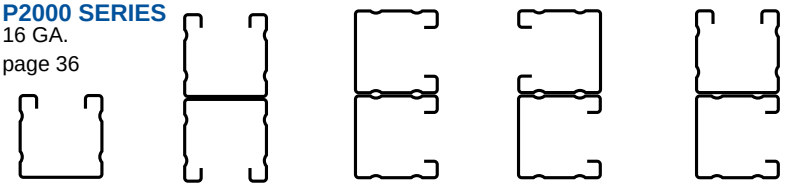
page 32



P2000 SERIES

16 GA.

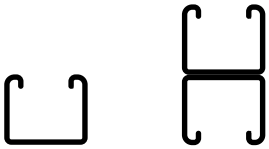
page 36



P3000 SERIES

12 GA.

page 40



P3300 SERIES

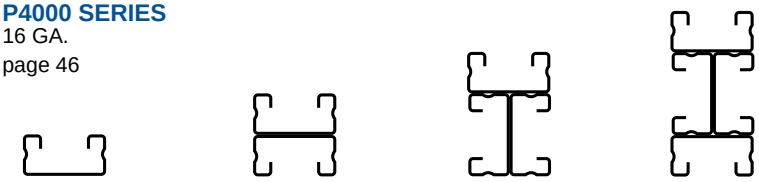
12 GA.

page 43

P4000 SERIES

16 GA.

page 46



P4100 SERIES

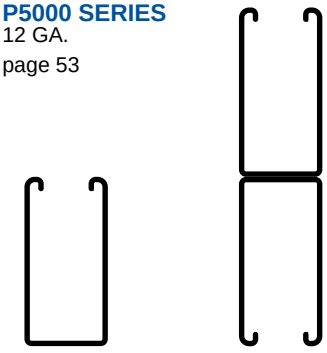
14 GA.

page 50

P5000 SERIES

12 GA.

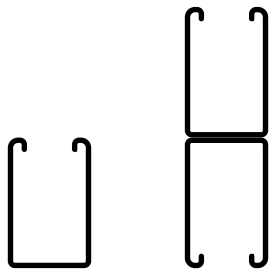
page 53



P5500 SERIES

12 GA.

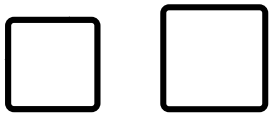
page 56



P9000 SERIES

12 GA.

page 62



See page 180 for 1-¼" width channels and combinations and page 198 for 13⁄16" channels and combinations.

Combinations not shown in catalog are available on special order. Consult factory for details.

CHANNEL SELECTION CHART

Channel	Channel Dimensions				Material & Thickness			Hole Pattern Styles					
	Width		Height					KO	T	SL	HS	DS	H3
	In	mm	In	mm	Steel	Stain-less Steel	Alum.						
P1000	1⅝	41	1⅝	41	12 ga	12 ga	.109	■	■	■	■	■ *	■ *
P1100	1⅝	41	1⅝	41	14 ga	14 ga	—	■	■	■	■		
P2000	1⅝	41	1⅝	41	16 ga	—	—	■	■	■	■		
P3000	1⅝	41	1⅜	35	12 ga	—	—	■	■	■	■		
P3300	1⅝	41	⅞	22	12 ga	12 ga	—		■	■	■		
P4000	1⅝	41	13/16	21	16 ga	16 ga	.078		■	■	■		
P4100	1⅝	41	13/16	21	14 ga	—	—		■	■	■		
P5000	1⅝	41	3¼	83	12 ga	—	—	■	■	■	■		
P5500	1⅝	41	2 7/16	62	12 ga	—	.109	■	■	■	■		

- This reference chart reflects the available channels and hole patterns manufactured by Unistrut Corporation.
- Stainless steel sections are also available on special order in "T," "SL" and "HS" hole pattern.
- Metric equivalent for material thickness: 12 ga. (2.7 mm); 14 ga. (1.9 mm); and 16 ga. (1.5 mm).

* Not available in aluminum.

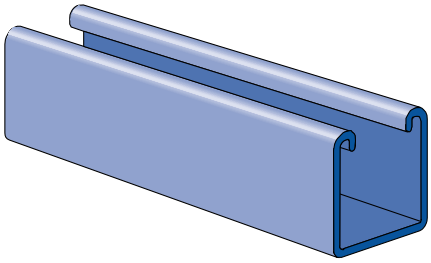
CHANNELS & COMBINATIONS IN DESCENDING ORDER OF STRENGTH

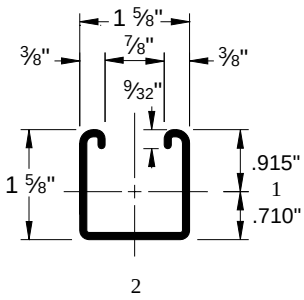
Channel	S in^3	I in^4	Area in^2	Weight Lbs/Ft
P5001	1.716*	5.578*	1.794	6.10
P1004 A	1.673	4.079	1.978	6.70
P5501	1.153	2.811	1.453	4.94
P1001 C41	1.145	1.860	2.223	7.60
P5000	.628	1.099	.897	3.05
P1001	.572	.930	1.112	3.80
P1101	.456	.741	.834	2.84
P3001	.431	.593	1.007	3.40
P5500	.391	.523	.726	2.47
P2001	.379	.616	.681	2.32
P9200	.297	.278	.489	2.23

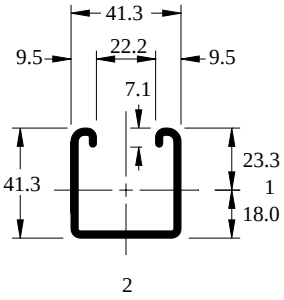
Channel	S in^3	I in^4	Area in^2	Weight Lbs/Ft
P9000	.203	.164	.384	2.05
P3301	.202	.177	.797	2.70
P1000	.202	.185	.556	1.90
P1100	.166	.149	.417	1.42
P3000	.154	.121	.503	1.70
P4101	.141	.114	.574	1.94
P2000	.140	.124	.340	1.16
P4001	.125	.101	.478	1.64
P3300	.072	.037	.398	1.35
P4100	.053	.025	.287	.97
P4000	.048	.023	.239	.82

* Effective section properties.

P1000



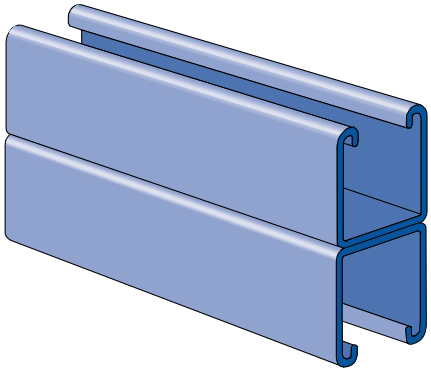


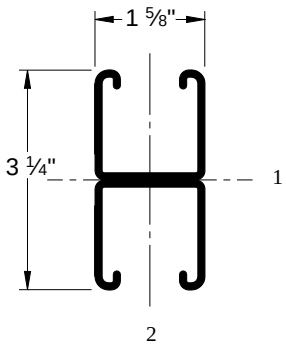


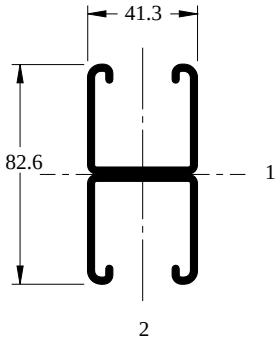
Pierced channels are found on pages 60 and 61.

Weight: 190 Lbs/C Ft (283 kg/100 m)

P1001

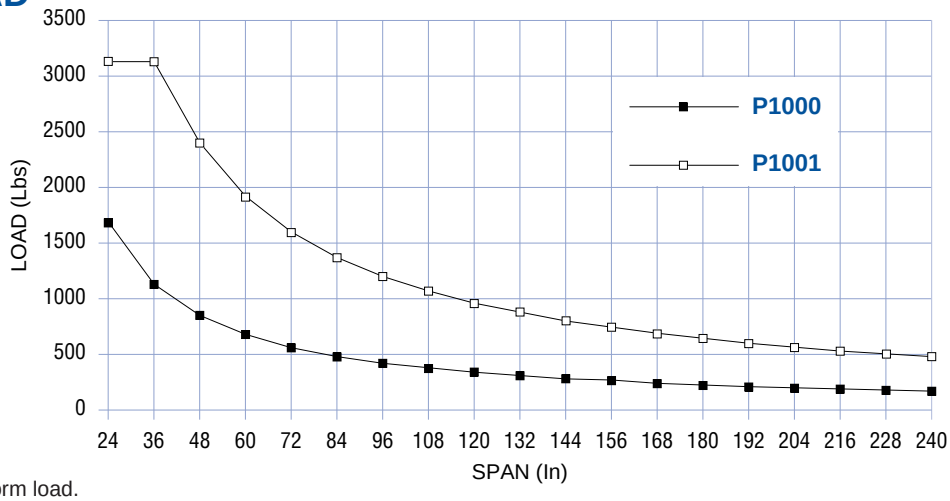






Weight: 380 Lbs/C Ft (566 kg/100 m)

BEAM LOAD*



*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1000	1.90	2.8	5,080	570	.105	2.7	■	■	■	■	■	■	■	■
P1001	3.80	5.7	14,390	1630	.105	2.7	■	■	■	■	■	■	■	■

Nominal thickness of 12 gage strip steel is .105 inches.

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1000 P1001	1690 3130*	7.5 13.9	0.06 0.02	1 1	1690 3130*	7.5 13.9	1690 3130*	7.5 13.9	1690 3130*	7.5 13.9
36	914	P1000 P1001	1130 3130*	5.0 13.9	0.13 0.07	3 2	1130 3130*	5.0 13.9	1130 3130*	5.0 13.9	900 3130*	4.0 13.9
48	1219	P1000 P1001	850 2400	3.8 10.7	0.22 0.13	6 3	850 2400	3.8 10.7	760 2400	3.4 10.7	510 2400	2.3 10.7
60	1524	P1000 P1001	680 1920	3.0 8.5	0.35 0.20	9 5	650 1920	2.9 8.5	490 1920	2.2 8.5	320 1630	1.4 7.3
72	1829	P1000 P1001	560 1600	2.5 7.1	0.50 0.28	13 7	450 1600	2.0 7.1	340 1600	1.5 7.1	220 1130	1.0 5.0
84	2134	P1000 P1001	480 1370	2.1 6.1	0.68 0.39	17 10	330 1370	1.5 6.1	250 1240	1.1 5.5	170 830	0.8 3.7
96	2438	P1000 P1001	420 1200	1.9 5.3	0.89 0.50	23 13	250 1200	1.1 5.3	190 950	0.8 4.2	130 640	0.6 2.8
108	2743	P1000 P1001	380 1070	1.7 4.8	1.14 0.64	29 16	200 1000	0.9 4.4	150 750	0.7 3.3	100 500	0.4 2.2
120	3048	P1000 P1001	340 960	1.5 4.3	1.40 0.79	36 20	160 810	0.7 3.6	120 610	0.5 2.7	80 410	0.4 1.8
144	3658	P1000 P1001	280 800	1.2 3.6	1.99 1.13	51 29	110 560	0.5 2.5	80 420	0.4 1.9	60 280	0.3 1.2
168	4267	P1000 P1001	240 690	1.1 3.1	2.72 1.55	69 39	80 410	0.4 1.8	60 310	0.3 1.4	40 210	0.2 0.9
192	4877	P1000 P1001	210 600	0.9 2.7	3.55 2.02	90 51	60 320	0.3 1.4	50 240	0.2 1.1	NR 160	NR 0.7
216	5486	P1000 P1001	190 530	0.8 2.4	4.57 2.53	116 64	50 250	0.2 1.1	40 190	0.2 0.8	NR 130	NR 0.6
240	6096	P1000 P1001	170 480	0.8 2.1	5.61 3.15	142 80	40 200	0.2 0.9	NR 150	NR 0.7	NR 100	NR 0.4

NR = Not Recommended

*Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1000 P1001	3400 6360	15.1 28.3	9600 23820	42.7 106.0	9500 23560	42.3 104.8	9320 23130	41.5 102.9	9100 22610	40.5 100.6
36	914	P1000 P1001	3000 6190	13.3 27.5	7640 23190	34.0 103.2	7400 22610	32.9 100.6	7000 21640	31.1 96.3	6490 20460	28.9 91.0
48	1219	P1000 P1001	2570 5970	11.4 26.6	5910 22310	26.3 99.2	5530 21270	24.6 94.6	4980 19560	22.2 87.0	4430 17460	19.7 77.7
60	1524	P1000 P1001	2230 5690	9.9 25.3	4780 21180	21.3 94.2	4390 19560	19.5 87.0	3850 16870	17.1 75.0	3330 13590	14.8 60.5
72	1829	P1000 P1001	1970 5360	8.8 23.8	4090 19790	18.2 88.0	3680 17460	16.4 77.7	3140 13590	14.0 60.5	2650 9570	11.8 42.6
84	2134	P1000 P1001	1760 4970	7.8 22.1	3600 18150	16.0 80.7	3170 14980	14.1 66.6	2630 10130	11.7 45.1	2160 7030	9.6 31.3
96	2438	P1000 P1001	1580 4510	7.0 20.1	3220 16270	14.3 72.4	2770 12120	12.3 53.9	2240 7750	10.0 34.5	1800 5380	8.0 23.9
108	2743	P1000 P1001	1430 4030	6.4 17.9	2910 14120	12.9 62.8	2450 9570	10.9 42.6	1930 6130	8.6 27.3	** 4250	** 18.9
120	3048	P1000 P1001	1290 3610	5.7 16.1	2640 11750	11.7 52.3	2180 7750	9.7 34.5	** 4960	** 22.1	** **	** **

**$\frac{KL}{r} > 200$

ELEMENTS OF SECTION

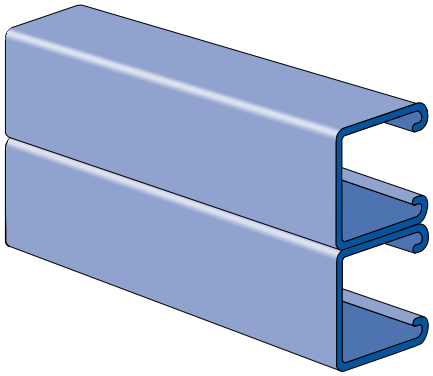
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P1000	.556	3.6	.185	7.7	.202	3.3	.577	1.5	.236	9.8	.290	4.7	.651	1.7
P1001	1.112	7.2	.930	38.7	.572	9.4	.915	2.3	.472	19.6	.580	9.5	.651	1.7

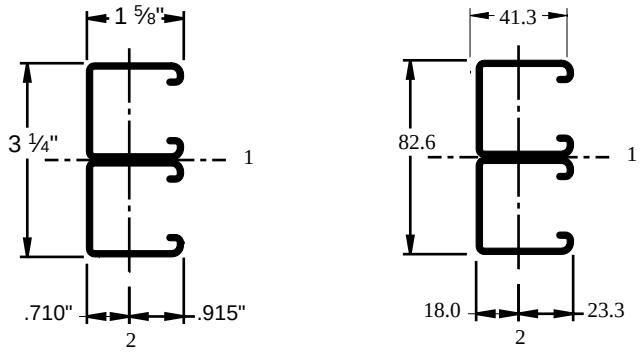
I - Moment of Inertia S - Section Modulus r - Radius of Gyration

P1000 CHANNEL COMBINATIONS

FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

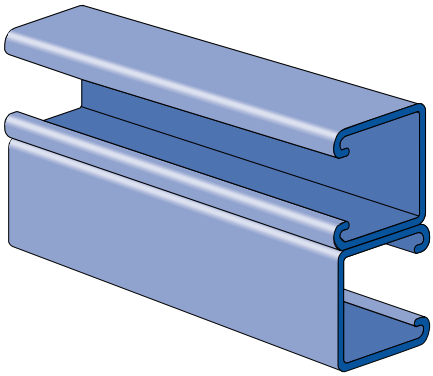
P1001 A

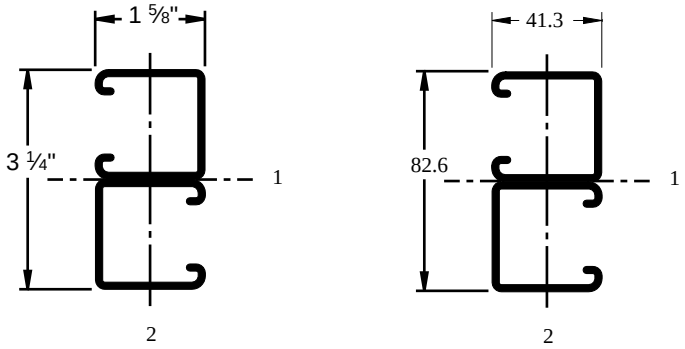




Weight: 380 Lbs/C Ft (566 kg/100 m)

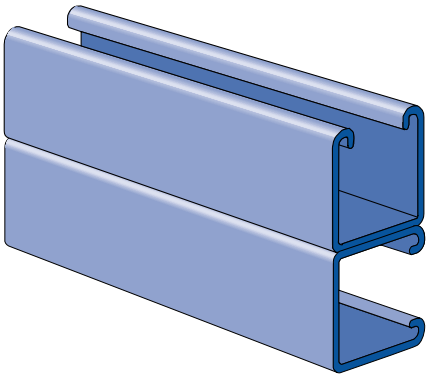
P1001 B

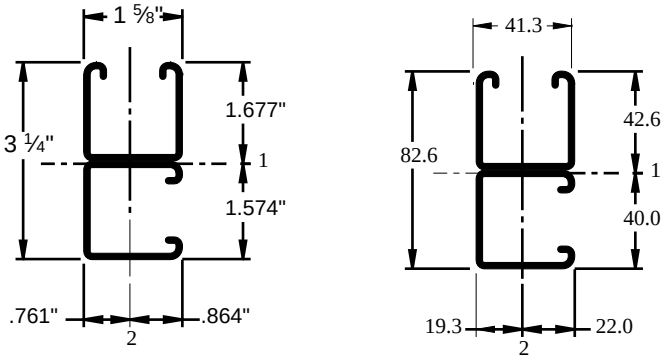




Weight: 380 Lbs/C Ft (566 kg/100 m)

P1001 C

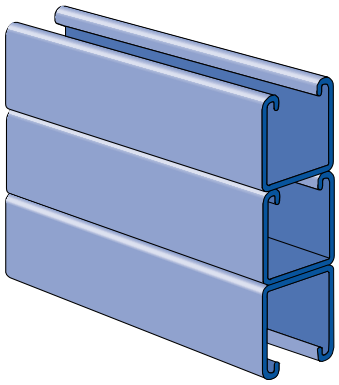


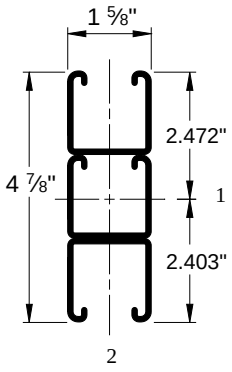


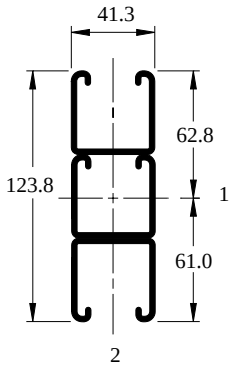
Weight: 380 Lbs/C Ft (566 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1001 A	3.80	5.7	18,660	2110	.105	2.7	■	■	■	■	■	■		
P1001 B	3.80	5.7	18,660	2110	.105	2.7	■	■	■	■	■	■		
P1001 C	3.80	5.7	15,970	1800	.105	2.7	■	■	■	■	■	■		

P1001 3

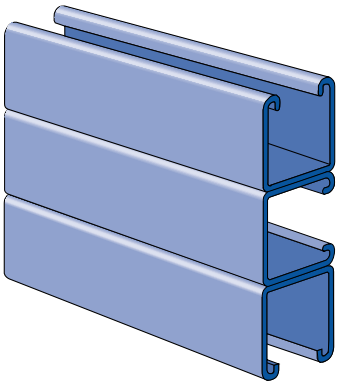


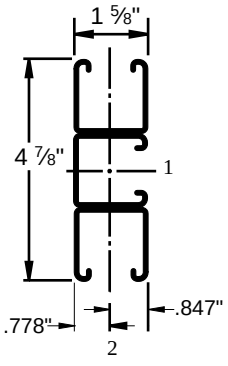


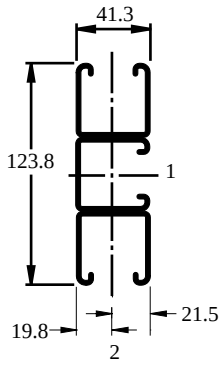


Weight: 570 Lbs/C Ft (848 kg/100 m)

P1001 A3

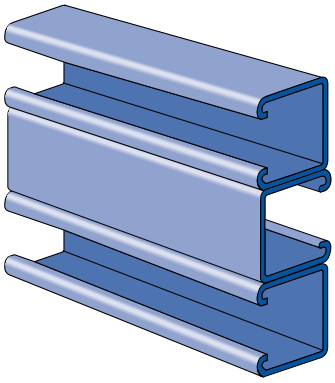


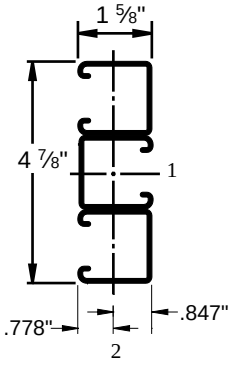


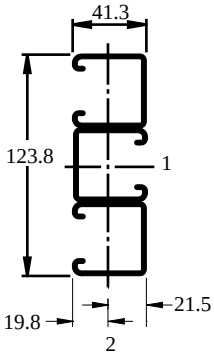


Weight: 570 Lbs/C Ft (848 kg/100 m)

P1001 B3



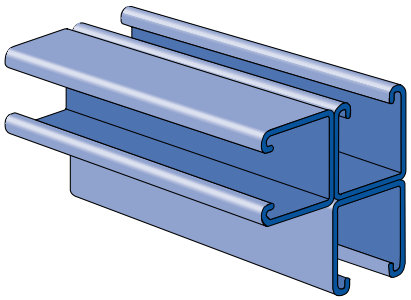


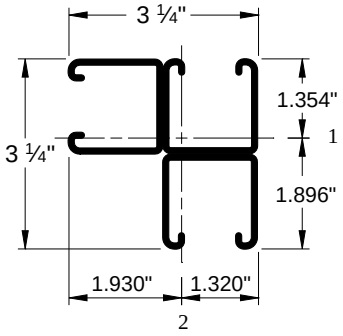


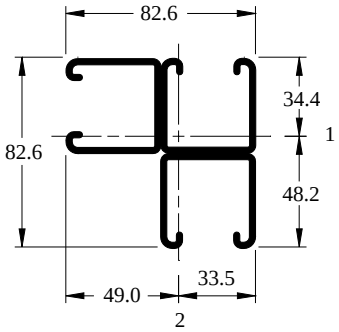
Weight: 570 Lbs/C Ft (848 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1001 3	5.70	8.5	31,890	3600	.105	2.7	■	■	■	■	■	■		
P1001 A3	5.70	8.5	32,820	3710	.105	2.7	■	■	■	■	■	■		
P1001 B3	5.70	8.5	37,570	4240	.105	2.7	■	■	■	■	■	■		

P1001 C3

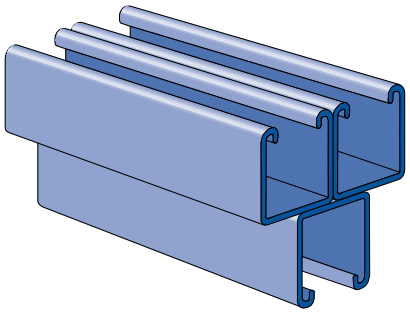


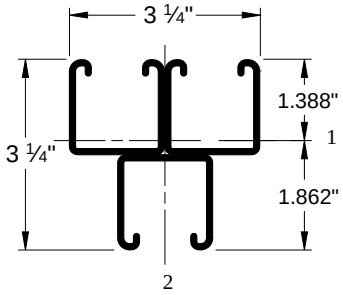


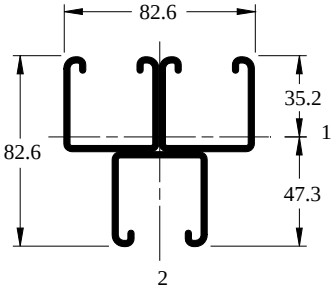


Weight: 570 Lbs/C Ft (848 kg/100 m)

P1001 D3

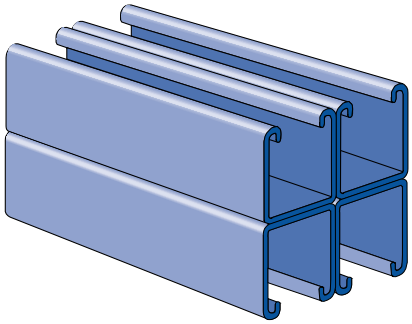


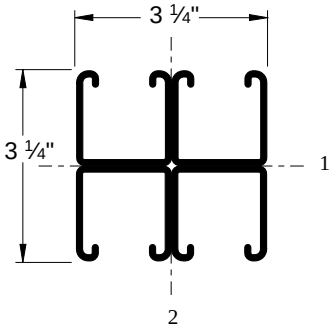


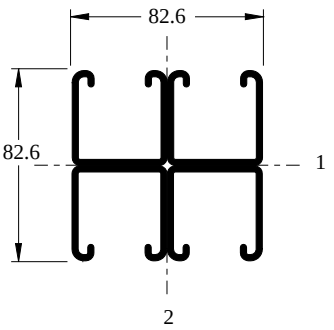


Weight: 570 Lbs/C Ft (848 kg/100 m)

P1001 C41



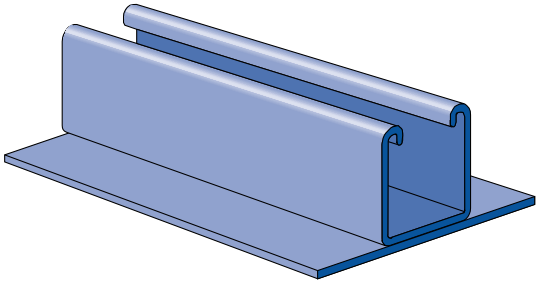


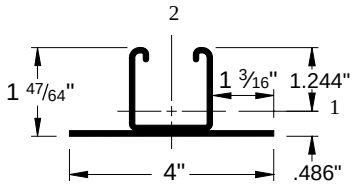


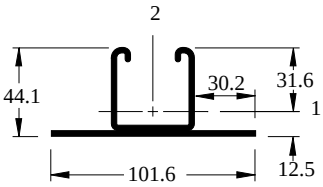
Weight: 760 Lbs/C Ft (1131 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1001 C3	5.70	8.5	18,710	2110	.105	2.7	■	■	■	■	■	■		
P1001 D3	5.70	8.5	17,580	1990	.105	2.7	■	■	■	■	■	■		
P1001 C41	7.60	11.3	28,800	3250	.105	2.7	■	■	■	■	■	■		

P1003

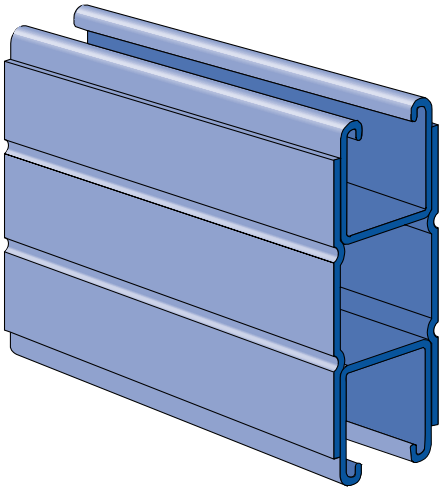


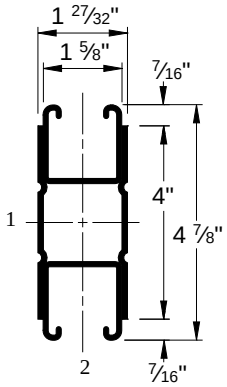


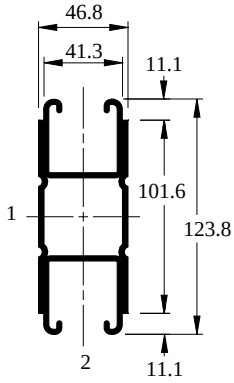


Weight: 332 Lbs/C Ft (494 kg/100 m)

P1004 A







Weight: 670 Lbs/C Ft (997 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1003	3.32	5.0	6,560	740	.105	2.7	■	■	■	■		■		
P1004 A	6.70	10.0	42,080	4750	.105	2.7	■	■	■	■	■	■		

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1004 A P1001C41	9350*† 6270*	41.6 27.9	0.01 0.02	0 1	9350*† 6270*	41.6 27.9	9350*† 6270*	41.6 27.9	9350*† 6270*	41.6 27.9
36	914	P1004 A P1001C41	9350*† 6270*	41.6 27.9	0.05 0.07	1 2	9350*† 6270*	41.6 27.9	9350*† 6270*	41.6 27.9	9350*† 6270*	41.6 27.9
48	1219	P1004 A P1001C41	7010 4800	31.2 21.4	0.08 0.13	2 3	7010 4800	31.2 21.4	7010 4800	31.2 21.4	7010 4800	31.2 21.4
60	1524	P1004 A P1001C41	5610 3840	25.0 17.1	0.13 0.20	3 5	5610 3840	25.0 17.1	5610 3840	25.0 17.1	5610 3250	25.0 14.5
72	1829	P1004 A P1001C41	4680 3200	20.8 14.2	0.19 0.28	5 7	4680 3200	20.8 14.2	4680 3200	20.8 14.2	4680 2260	20.8 10.1
84	2134	P1004 A P1001C41	4010 2740	17.8 12.2	0.26 0.39	7 10	4010 2740	17.8 12.2	4010 2490	17.8 11.1	3640 1660	16.2 7.4
96	2438	P1004 A P1001C41	3510 2400	15.6 10.7	0.34 0.50	9 13	3510 2400	15.6 10.7	3510 1910	15.6 8.5	2790 1270	12.4 5.6
108	2743	P1004 A P1001C41	3120 2130	13.9 9.5	0.43 0.64	11 16	3120 2010	13.9 8.9	3120 1510	13.9 6.7	2200 1000	9.8 4.4
120	3048	P1004 A P1001C41	2810 1920	12.5 8.5	0.53 0.79	13 20	2810 1630	12.5 7.3	2670 1220	11.9 5.4	1780 810	7.9 3.6
144	3658	P1004 A P1001C41	2340 1600	10.4 7.1	0.76 1.13	19 29	2340 1130	10.4 5.0	1860 850	8.3 3.8	1240 560	5.5 2.5
168	4267	P1004 A P1001C41	2000 1370	8.9 6.1	1.03 1.54	26 39	1820 830	8.1 3.7	1360 620	6.0 2.8	910 410	4.0 1.8
192	4877	P1004 A P1001C41	1750 1200	7.8 5.3	1.34 2.02	34 51	1390 640	6.2 2.8	1040 480	4.6 2.1	700 320	3.1 1.4
216	5486	P1004 A P1001C41	1560 1070	6.9 4.8	1.70 2.56	43 65	1100 500	4.9 2.2	830 380	3.7 1.7	550 250	2.4 1.1
240	6096	P1004 A P1001C41	1400 960	6.2 4.3	2.09 3.15	53 80	890 410	4.0 1.8	670 300	3.0 1.3	450 200	2.0 0.9

*Load limited by spot weld shear. †Bearing load may govern capacity. See page 67.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

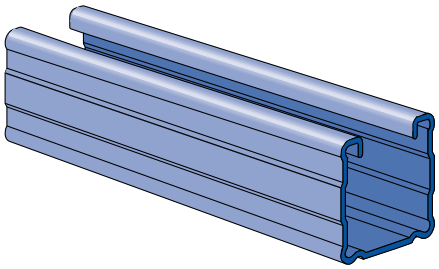
Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1004 A P1001C41	12190 12770	54.2 56.8	42600 48120	189.5 214.0	42250 47860	187.9 212.9	41680 47420	185.4 210.9	40990 46890	182.3 208.6
36	914	P1004 A P1001C41	12010 12510	53.4 55.6	41760 47480	185.8 211.2	40990 46890	182.3 208.6	39700 45910	176.6 204.2	38130 44720	169.6 198.9
48	1219	P1004 A P1001C41	11750 12160	52.3 54.1	40590 46590	180.6 207.2	39210 45540	174.4 202.6	36930 43800	164.3 194.8	34140 41680	151.9 185.4
60	1524	P1004 A P1001C41	11420 11730	50.8 52.2	39080 45440	173.8 202.1	36930 43800	164.3 194.8	33360 41090	148.4 182.8	29000 37770	129.0 168.0
72	1829	P1004 A P1001C41	11010 11230	49.0 50.0	37240 44040	165.7 195.9	34140 41680	151.9 185.4	29000 37770	129.0 168.0	22730 32990	101.1 146.7
84	2134	P1004 A P1001C41	10510 10680	46.8 47.5	35060 42380	156.0 188.5	30840 39170	137.2 174.2	23850 33850	106.1 150.6	16740 27350	74.5 121.7
96	2438	P1004 A P1001C41	9910 10090	44.1 44.9	32550 40470	144.8 180.0	27040 36270	120.3 161.3	18450 29320	82.1 130.4	12820 21270	57.0 94.6
108	2743	P1004 A P1001C41	9160 9470	40.7 42.1	29710 38310	132.2 170.4	22730 32990	101.1 146.8	14580 24200	64.9 107.6	10130 16800	45.1 74.7
120	3048	P1004 A P1001C41	8310 8820	37.0 39.2	26530 35880	118.0 159.6	18450 29320	82.1 130.4	11810 19600	52.5 87.2	8200 13610	36.5 60.5

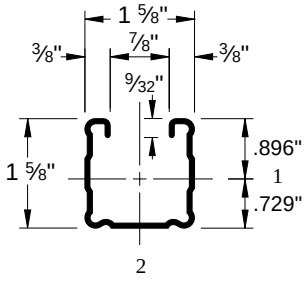
ELEMENTS OF SECTION

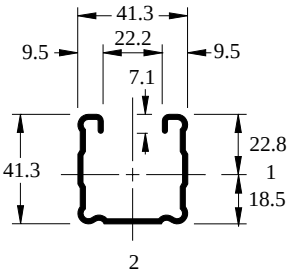
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P1004 A	1.978	12.8	4.079	169.8	1.673	27.4	1.436	3.6	1.121	46.7	1.204	19.7	.753	1.9
P1001 C41	2.223	14.3	1.860	77.4	1.145	18.8	.915	2.3	2.411	100.4	1.484	24.3	1.041	2.6

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

P1100



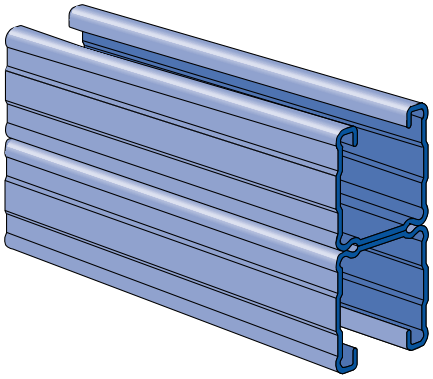


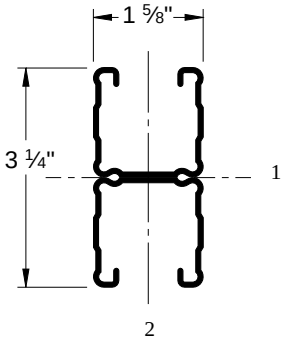


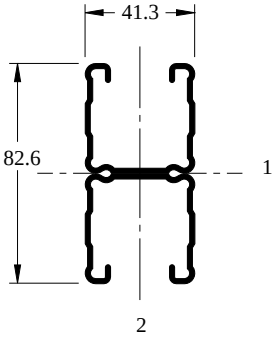
Pierced channels are found on pages 60 and 61.

Weight: 142 Lbs/C Ft (211 kg/100 m)

P1101

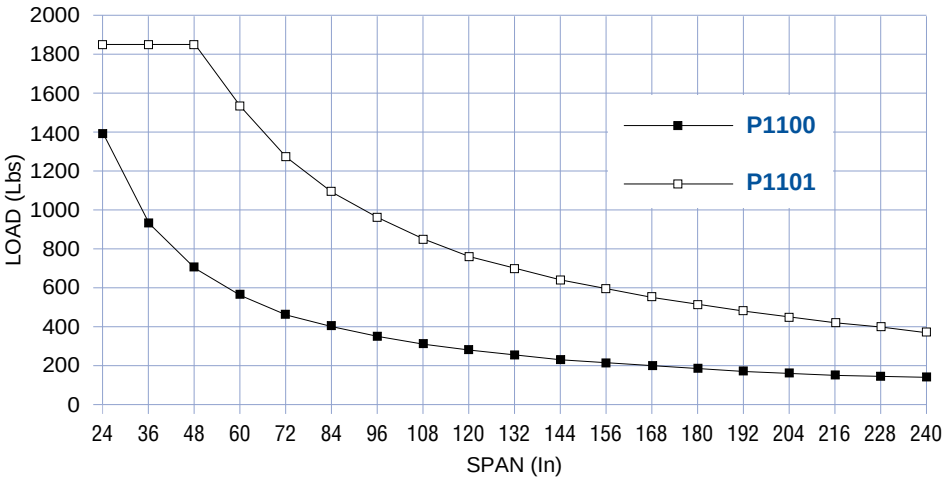






Weight: 284 Lbs/C Ft (423 kg/100 m)

BEAM LOAD*



*Maximum allowable uniform load.

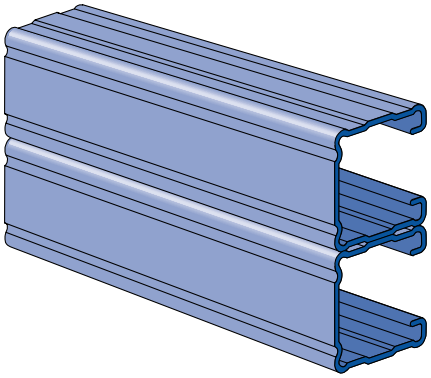
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1100	1.42	2.1	4,170	470	.075	1.9	■	■	■	■	■	■	■	
P1101	2.84	4.2	11,470	1300	.075	1.9	■	■	■	■	■	■	■	

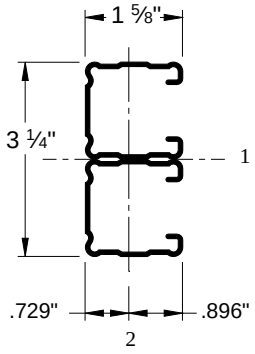
Nominal thickness of 14 gage strip steel is .075 inches.

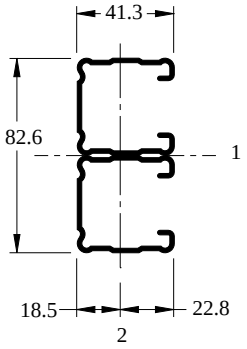
P1100 CHANNEL COMBINATIONS

FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1101 A

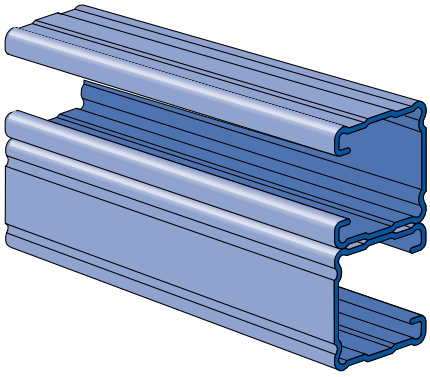


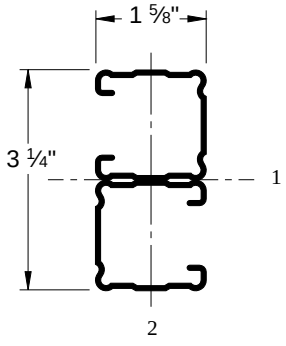


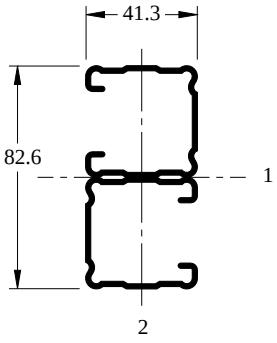


Weight: 284 Lbs/C Ft (423 kg/100 m)

P1101 B

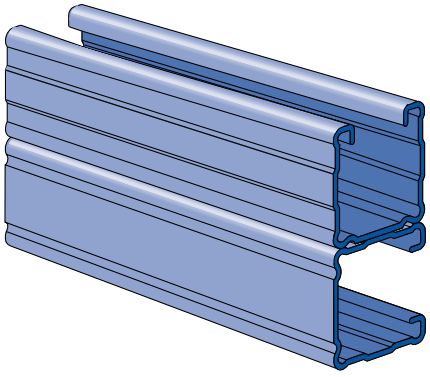


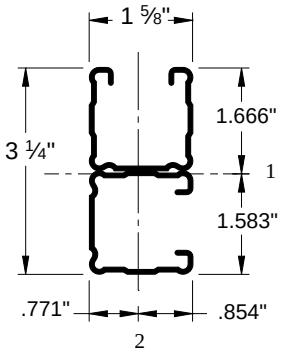


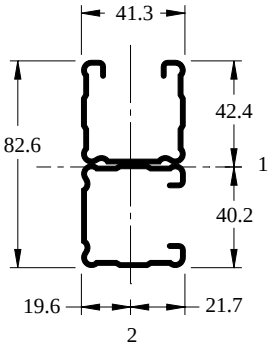


Weight: 284 Lbs/C Ft (423 kg/100 m)

P1101 C







Weight: 284 Lbs/C Ft (423 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P1101 A	2.84	4.2	14,180	1600	.075	1.9	■	■	■	■	■	■		
P1101 B	2.84	4.2	14,180	1600	.075	1.9	■	■	■	■	■	■		
P1101 C	2.84	4.2	12,500	1410	.075	1.9	■	■	■	■	■	■		

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P1100 P1101	1390 1850*	6.2 8.2	0.06 0.02	1 1	1390 1850*	6.2 8.2	1390 1850*	6.2 8.2	1390 1850*	6.2 8.2
36	914	P1100 P1101	930 1850*	4.1 8.2	0.13 0.05	3 1	930 1850*	4.1 8.2	930 1850*	4.1 8.2	720 1850*	3.2 8.2
48	1219	P1100 P1101	700 1850*	3.1 8.2	0.23 0.12	6 3	700 1850*	3.1 8.2	610 1850*	2.7 8.2	410 1850*	1.8 8.2
60	1524	P1100 P1101	560 1530	2.5 6.8	0.36 0.20	9 5	520 1530	2.3 6.8	390 1530	1.7 6.8	260 1300	1.2 5.8
72	1829	P1100 P1101	460 1270	2.0 5.6	0.51 0.28	13 7	360 1270	1.6 5.6	270 1270	1.2 5.6	180 900	0.8 4.0
84	2134	P1100 P1101	400 1090	1.8 4.8	0.70 0.38	18 10	270 1090	1.2 4.8	200 990	0.9 4.4	130 660	0.6 2.9
96	2438	P1100 P1101	350 960	1.6 4.3	0.92 0.51	23 13	200 960	0.9 4.3	150 760	0.7 3.4	100 510	0.4 2.3
108	2743	P1100 P1101	310 850	1.4 3.8	1.16 0.64	29 16	160 800	0.7 3.6	120 600	0.5 2.7	80 400	0.4 1.8
120	3048	P1100 P1101	280 760	1.2 3.4	1.43 0.78	36 20	130 650	0.6 2.9	100 490	0.4 2.2	70 320	0.3 1.4
144	3658	P1100 P1101	230 640	1.0 2.8	2.03 1.14	52 29	90 450	0.4 2.0	70 340	0.3 1.5	50 220	0.2 1.0
168	4267	P1100 P1101	200 550	0.9 2.4	2.81 1.55	71 39	70 330	0.3 1.5	50 250	0.2 1.1	30 170	0.1 0.8
192	4877	P1100 P1101	170 480	0.8 2.1	3.56 2.02	91 51	50 250	0.2 1.1	40 190	0.2 0.8	30 130	0.1 0.6
216	5486	P1100 P1101	150 420	0.7 1.9	4.48 2.52	114 64	40 200	0.2 0.9	30 150	0.1 0.7	NR 100	NR 0.4
240	6096	P1100 P1101	140 380	0.6 1.7	5.73 3.13	146 79	30 160	0.1 0.7	NR 120	NR 0.5	NR 80	NR 0.4

*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	**P1100**	2720	12.1	7160	31.8	7090	31.5	6960	31.0	6800	30.2
		P1101	4990	22.2	17880	79.5	17690	78.7	17380	77.3	17000	75.6
36	914	**P1100**	2330	10.4	5360	23.8	5190	23.1	4900	21.8	4530	20.2
		P1101	4860	21.6	17420	77.5	17000	75.6	16300	72.5	15440	68.7
48	1219	**P1100**	1890	8.4	3730	16.6	3540	15.7	3250	14.5	2940	13.1
		P1101	4690	20.9	16780	74.6	16030	71.3	14780	65.7	13260	59.0
60	1524	**P1100**	1590	7.1	2880	12.8	2690	12.0	2430	10.8	2160	9.6
		P1101	4470	19.9	15960	71.0	14780	65.7	12840	57.1	10460	46.5
72	1829	**P1100**	1390	6.2	2390	10.6	2210	9.8	1950	8.7	1710	7.6
		P1101	4210	18.7	14960	66.5	13260	59.0	10460	46.5	7420	33.0
84	2134	**P1100**	1230	5.5	2070	9.2	1890	8.4	1640	7.3	1400	6.2
		P1101	3920	17.4	13770	61.3	11460	51.0	7850	34.9	5450	24.2
96	2438	**P1100**	1100	4.9	1850	8.2	1650	7.3	1400	6.2	1180	5.2
		P1101	3560	15.8	12400	55.2	9390	41.8	6010	26.7	4180	18.6
108	2743	**P1100**	1000	4.4	1670	7.4	1470	6.5	1220	5.4	**	**
		P1101	3180	14.1	10850	48.3	7420	33.0	4750	21.1	3300	14.7
120	3048	**P1100**	910	4.0	1530	6.8	1330	5.9	**	**	**	**
		P1101	2850	12.7	9110	40.5	6010	26.7	3850	17.1	**	**

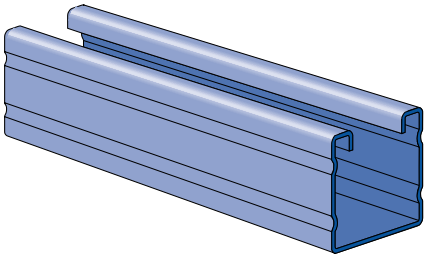
**$\frac{KL}{r} > 200$

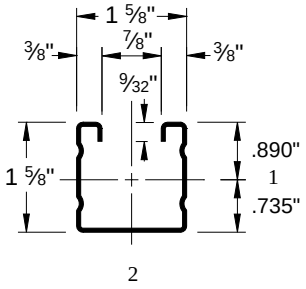
ELEMENTS OF SECTION

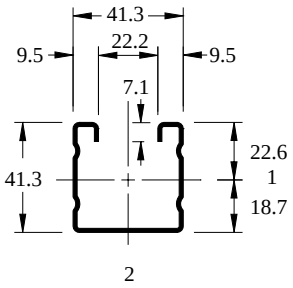
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P1100	.417	2.7	.149	6.2	.166	2.7	.597	1.5	.183	7.6	.225	3.7	.662	1.7
P1101	.834	5.4	.741	30.8	.456	7.5	.942	2.4	.366	15.2	.451	7.4	.662	1.7

I - Moment of Inertia **S - Section Modulus** **r - Radius of Gyration**

P2000



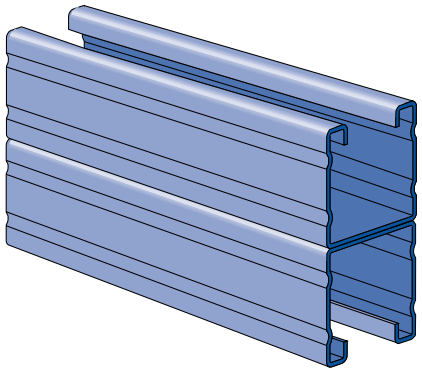


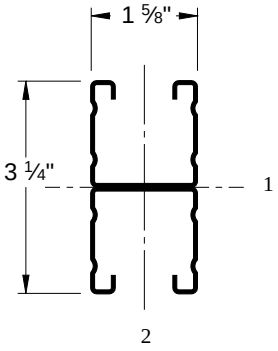


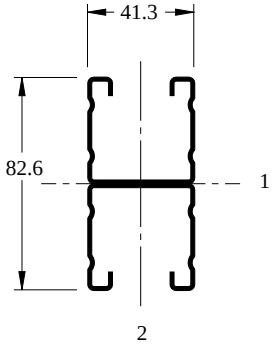
Pierced channels are found on pages 60 and 61.

Weight: 116 Lbs/C Ft (173 kg/100 m)

P2001

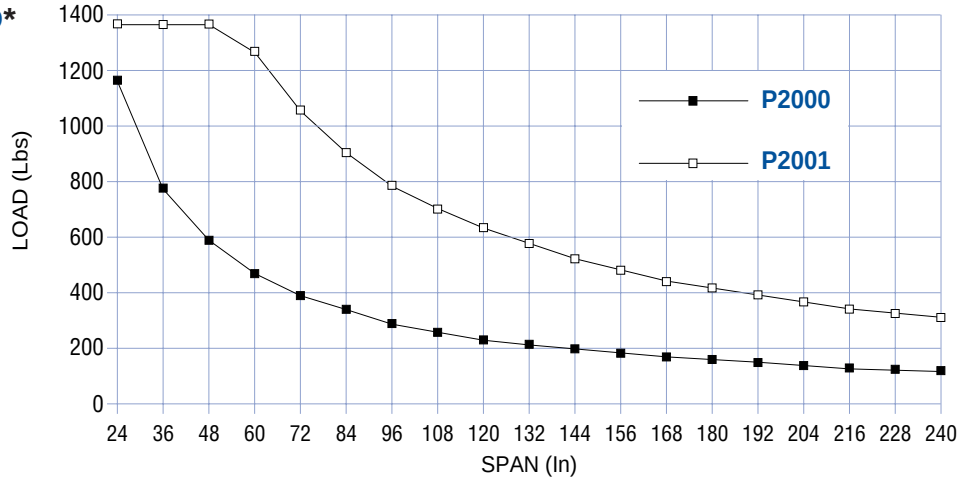






Weight: 232 Lbs/C Ft (345 kg/100 m)

BEAM LOAD*

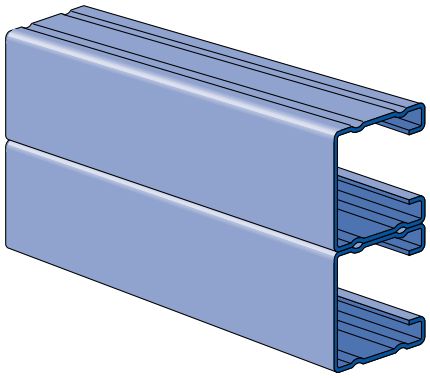


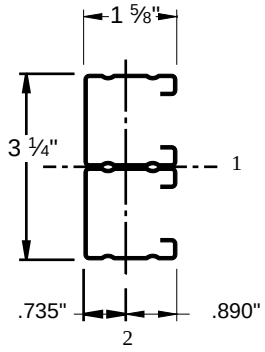
*Maximum allowable uniform load.

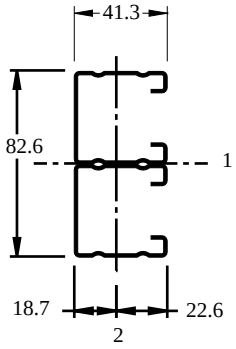
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P2000	1.16	1.7	3,520	400	.060	1.5	■	■	■	■	■	■		
P2001	2.32	3.4	9,530	1080	.060	1.5	■	■	■	■	■	■		

Nominal thickness of 16 gage strip steel is .060 inches.

P2001 A

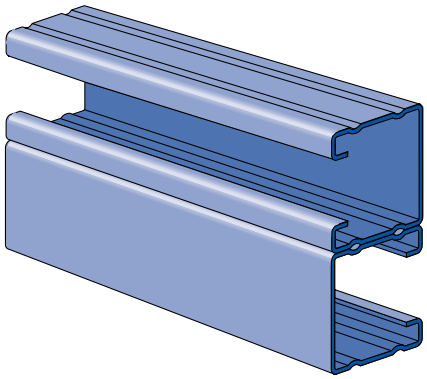


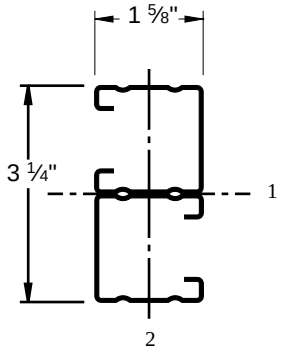


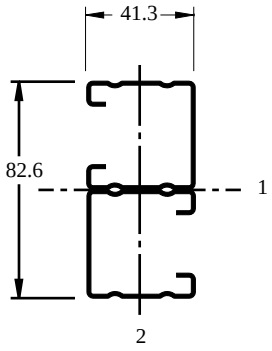


Weight: 232 Lbs/C Ft (345 kg/100 m)

P2001 B

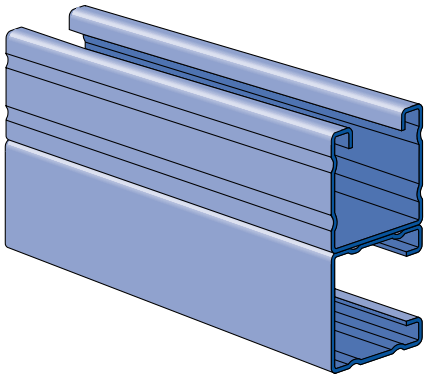


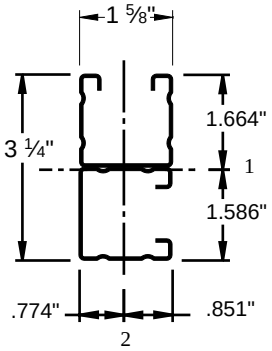


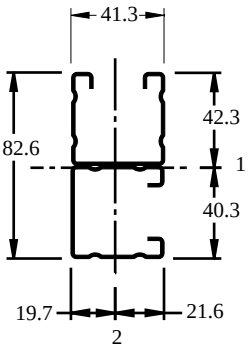


Weight: 232 Lbs/C Ft (345 kg/100 m)

P2001 C







Weight: 232 Lbs/C Ft (345 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P2001 A	2.32	3.4	11,640	1320	.060	1.5	■	■	■	■	■	■		
P2001 B	2.32	3.4	11,640	1320	.060	1.5	■	■	■	■	■	■		
P2001 C	2.32	3.4	10,340	1170	.060	1.5	■	■	■	■	■	■		

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	**P2000** **P2001**	1170 1370*	5.2 6.1	0.06 0.01	1 0	1170 1370*	5.2 6.1	1170 1370*	5.2 6.1	1170 1370*	5.2 6.1
36	914	**P2000** **P2001**	780 1370*	3.5 6.1	0.13 0.05	3 1	780 1370*	3.5 6.1	780 1370*	3.5 6.1	600 1370*	2.7 6.1
48	1219	**P2000** **P2001**	590 1370*	2.6 6.1	0.23 0.11	6 3	590 1370*	2.6 6.1	510 1370*	2.3 6.1	340 1370*	1.5 6.1
60	1524	**P2000** **P2001**	470 1270	2.1 5.6	0.36 0.20	9 5	430 1270	1.9 5.6	330 1270	1.5 5.6	220 1080	1.0 4.8
72	1829	**P2000** **P2001**	390 1060	1.7 4.7	0.52 0.28	13 7	300 1060	1.3 4.7	230 1060	1.0 4.7	150 750	0.7 3.3
84	2134	**P2000** **P2001**	340 910	1.5 4.0	0.72 0.39	18 10	220 910	1.0 4.0	170 820	0.8 3.6	110 550	0.5 2.4
96	2438	**P2000** **P2001**	290 790	1.3 3.5	0.91 0.50	23 13	170 790	0.8 3.5	130 630	0.6 2.8	80 420	0.4 1.9
108	2743	**P2000** **P2001**	260 710	1.2 3.2	1.17 0.64	30 16	130 660	0.6 2.9	100 500	0.4 2.2	70 330	0.3 1.5
120	3048	**P2000** **P2001**	230 640	1.0 2.8	1.41 0.79	36 20	110 540	0.5 2.4	80 400	0.4 1.8	50 270	0.2 1.2
144	3658	**P2000** **P2001**	200 530	0.9 2.4	2.13 1.13	54 29	80 370	0.4 1.6	60 280	0.3 1.2	40 190	0.2 0.8
168	4267	**P2000** **P2001**	170 450	0.8 2.0	2.87 1.53	73 39	60 270	0.3 1.2	40 210	0.2 0.9	30 140	0.1 0.6
192	4877	**P2000** **P2001**	150 400	0.7 1.8	3.78 2.03	96 52	40 210	0.2 0.9	30 160	0.1 0.7	NR 110	NR 0.5
216	5486	**P2000** **P2001**	130 350	0.6 1.6	4.66 2.53	118 64	30 170	0.1 0.8	30 120	0.1 0.5	NR 80	NR 0.4
240	6096	**P2000** **P2001**	120 320	0.5 1.4	5.90 3.17	150 81	30 130	0.1 0.6	NR 100	NR 0.4	NR 70	NR 0.3

*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	**P2000**	2260	10.1	5660	25.2	5600	24.9	5500	24.5	5370	23.9
		P2001	4120	18.3	14600	64.9	14450	64.3	14200	63.2	13900	61.8
36	914	**P2000**	1750	7.8	3460	15.4	3350	14.9	3170	14.1	2970	13.2
		P2001	4020	17.9	14240	63.3	13900	61.8	13330	59.3	12640	56.2
48	1219	**P2000**	1230	5.5	1950	8.7	1880	8.4	1780	7.9	1670	7.4
		P2001	3880	17.3	13720	61.0	13120	58.4	12110	53.9	10890	48.4
60	1524	**P2000**	900	4.0	1250	5.6	1210	5.4	1140	5.1	1070	4.8
		P2001	3700	16.5	13060	58.1	12110	53.9	10550	46.9	8640	38.4
72	1829	**P2000**	680	3.0	870	3.9	840	3.7	790	3.5	740	3.3
		P2001	3490	15.5	12250	54.5	10890	48.4	8640	38.4	6150	27.4
84	2134	**P2000**	520	2.3	640	2.8	610	2.7	580	2.6	550	2.4
		P2001	3250	14.5	11300	50.3	9440	42.0	6510	29.0	4520	20.1
96	2438	**P2000**	410	1.8	490	2.2	470	2.1	450	2.0	420	1.9
		P2001	2960	13.2	10190	45.3	7770	34.6	4990	22.2	3460	15.4
108	2743	**P2000**	330	1.5	380	1.7	370	1.6	350	1.6	**	**
		P2001	2640	11.7	8950	39.8	6150	27.4	3940	17.5	2740	12.2
120	3048	**P2000**	280	1.2	310	1.4	300	1.3	290	1.3	**	**
		P2001	2370	10.5	7550	33.6	4990	22.2	3190	14.2	**	**

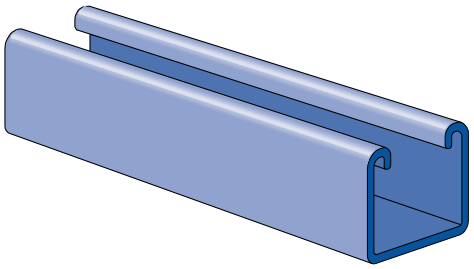
**$\frac{KL}{r} > 200$

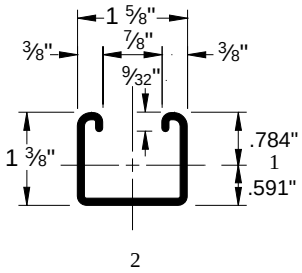
ELEMENTS OF SECTION

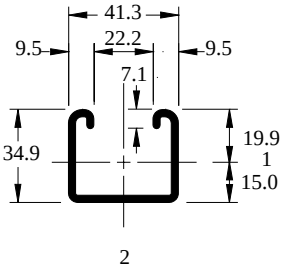
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P2000	.340	2.2	.124	5.2	.140	2.3	.605	1.5	.151	6.3	.186	3.0	.667	1.7
P2001	.681	4.4	.616	25.6	.379	6.2	.951	2.4	.303	12.6	.373	6.1	.667	1.7

I - Moment of Inertia **S - Section Modulus** **r - Radius of Gyration**

P3000



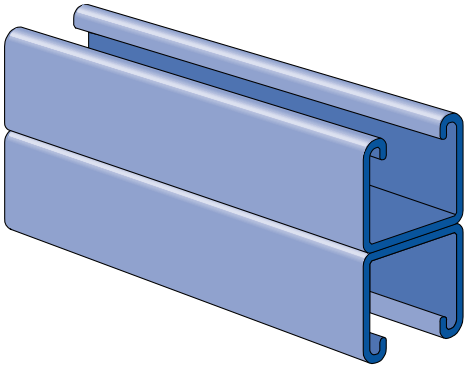


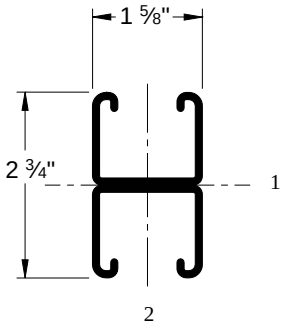


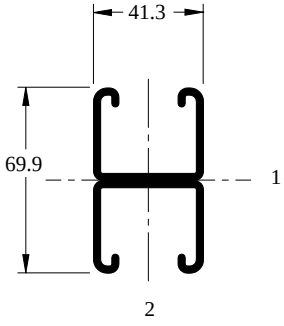
Pierced channels are found on pages 60 and 61.

Weight: 170 Lbs/C Ft (253 kg/100 m)

P3001

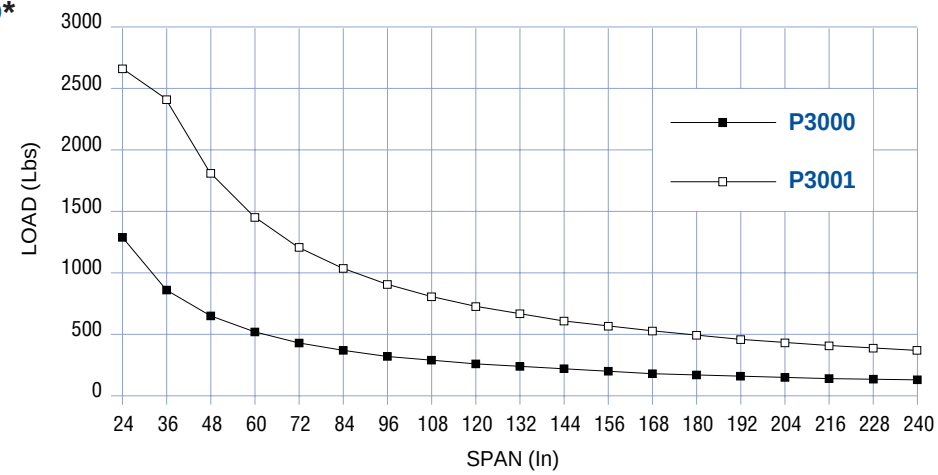






Weight: 340 Lbs/C Ft (506 kg/100 m)

BEAM LOAD*



* Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P3000	1.70	2.5	3,870	440	.105	2.7	■	■	■	■	■	■	■	
P3001	3.40	5.1	10,840	1220	.105	2.7	■	■	■	■	■	■	■	

Nominal thickness of 12 gage strip steel is .105 inches.

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P3000 P3001	1290 2660*	5.7 11.8	0.07 0.03	2 1	1290 2660*	5.7 11.8	1290 2660*	5.7 11.8	1290 2660*	5.7 11.8
36	914	P3000 P3001	860 2410	3.8 10.7	0.15 0.08	4 2	860 2410	3.8 10.7	860 2410	3.8 10.7	590 2410	2.6 10.7
48	1219	P3000 P3001	650 1810	2.9 8.1	0.26 0.15	7 4	650 1810	2.9 8.1	500 1810	2.2 8.1	330 1620	1.5 7.2
60	1524	P3000 P3001	520 1450	2.3 6.4	0.41 0.23	10 6	420 1450	1.9 6.4	320 1450	1.4 6.4	210 1040	0.9 4.6
72	1829	P3000 P3001	430 1200	1.9 5.3	0.59 0.33	15 8	290 1200	1.3 5.3	220 1080	1.0 4.8	150 720	0.7 3.2
84	2134	P3000 P3001	370 1030	1.6 4.6	0.80 0.45	20 12	220 1030	1.0 4.6	160 790	0.7 3.5	110 530	0.5 2.4
96	2438	P3000 P3001	320 900	1.4 4.0	1.03 0.59	26 15	170 810	0.8 3.6	120 610	0.5 2.7	80 400	0.4 1.8
108	2743	P3000 P3001	290 800	1.3 3.6	1.33 0.75	34 19	130 640	0.6 2.8	100 480	0.4 2.1	70 320	0.3 1.4
120	3048	P3000 P3001	260 720	1.2 3.2	1.64 0.93	42 24	110 520	0.5 2.3	80 390	0.4 1.7	50 260	0.2 1.2
144	3658	P3000 P3001	220 600	1.0 2.7	2.40 1.33	61 34	70 360	0.3 1.6	60 270	0.3 1.2	40 180	0.2 0.8
168	4267	P3000 P3001	180 520	0.8 2.3	3.11 1.84	79 47	50 260	0.2 1.2	40 200	0.2 0.9	30 130	0.1 0.6
192	4877	P3000 P3001	160 450	0.7 2.0	4.13 2.37	105 60	40 200	0.2 0.9	30 150	0.1 0.7	NR 100	NR 0.4
216	5486	P3000 P3001	140 400	0.6 1.8	5.15 3.00	131 76	NR 160	NR 0.7	NR 120	NR 0.5	NR 80	NR 0.4
240	6096	P3000 P3001	130 360	0.6 1.6	6.56 3.70	167 94	NR 130	NR 0.6	NR 100	NR 0.4	NR 60	NR 0.3

*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P3000 P3001	3040 5660	13.5 25.2	8890 21550	39.5 95.9	8800 21310	39.1 94.8	8640 20910	38.4 93.0	8440 20410	37.5 90.8
36	914	P3000 P3001	2720 5480	12.1 24.4	7520 20960	33.5 93.2	7310 20410	32.5 90.8	6930 19510	30.8 86.8	6460 18400	28.7 81.8
48	1219	P3000 P3001	2390 5240	10.6 23.3	6390 20130	28.4 89.5	5990 19160	26.6 85.2	5310 17550	23.6 78.1	4600 15570	20.5 69.3
60	1524	P3000 P3001	2090 4940	9.3 22.0	5430 19070	24.2 84.8	4870 17550	21.7 78.1	4130 15020	18.4 66.8	3460 11940	15.4 53.1
72	1829	P3000 P3001	1830 4610	8.1 20.5	4680 17770	20.8 79.0	4080 15570	18.1 69.3	3340 11940	14.9 53.1	2450 8350	10.9 37.1
84	2134	P3000 P3001	1610 4230	7.2 18.8	4110 16230	18.3 72.2	3480 13240	15.5 58.9	2600 8840	11.6 39.3	** 6140	** 27.3
96	2438	P3000 P3001	1420 3800	6.3 16.9	3640 14450	16.2 64.3	3000 10570	13.3 47.0	1990 6770	8.9 30.1	** 4700	** 20.9
108	2743	P3000 P3001	1230 3380	5.5 15.0	3240 12440	14.4 55.3	2450 8350	10.9 37.1	** 5350	** 23.8	** **	** **
120	3048	P3000 P3001	1070 3020	4.8 13.4	2890 10250	12.9 45.6	1990 6770	8.9 30.1	** 4330	** 19.3	** **	** **

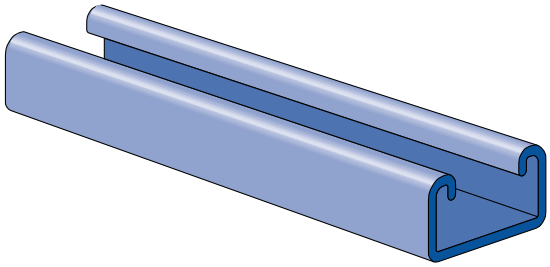
$^{**}\frac{KL}{r} > 200$

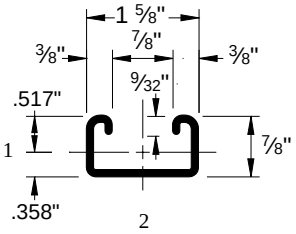
ELEMENTS OF SECTION

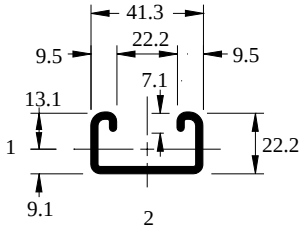
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P3000	.503	3.2	.121	5.0	.154	2.5	.490	1.2	.205	8.5	.253	4.1	.639	1.6
P3001	1.007	6.5	.593	24.7	.431	7.1	.767	1.9	.411	17.1	.506	8.3	.639	1.6

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

P3300



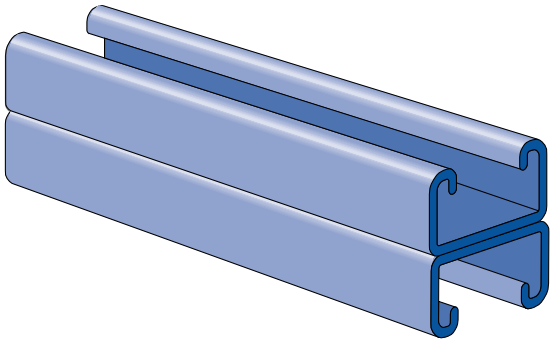


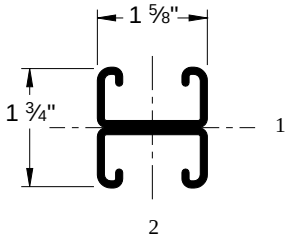


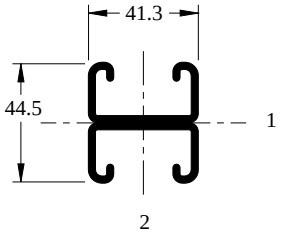
Pierced channels are found on pages 60 and 61.

Weight: 135 Lbs/C Ft (201 kg/100 m)

P3301

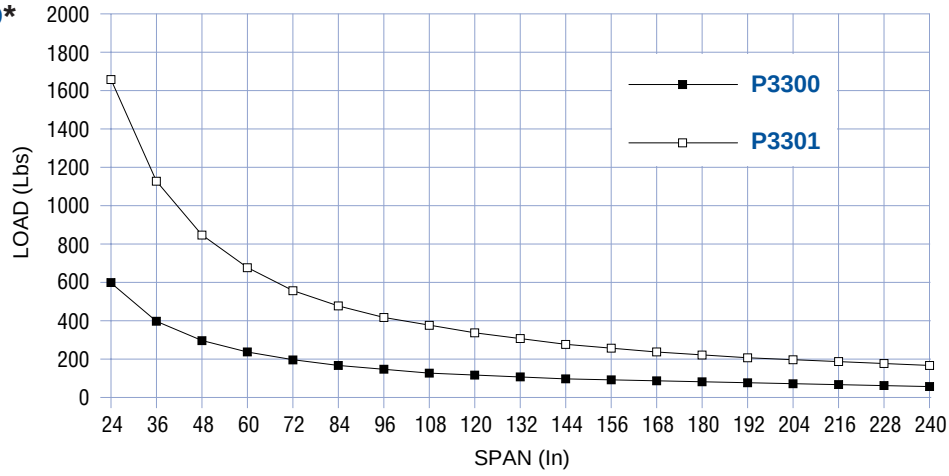






Weight: 270 Lbs/C Ft (402 kg/100 m)

BEAM LOAD*



* Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P3300	1.35	2.0	1,810	200	.105	2.7	■	■	■	■	■	■	■	
P3301	2.70	4.0	5,080	570	.105	2.7	■	■	■	■	■	■	■	

Nominal thickness of 12 gage strip steel is .105 inches.

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P3300 P3301	600 1660*	2.7 7.4	0.10 0.06	3 1	600 1660*	2.7 7.4	600 1660*	2.7 7.4	400 1660*	1.8 7.4
36	914	P3300 P3301	400 1130	1.8 5.0	0.22 0.13	6 3	360 1130	1.6 5.0	270 1130	1.2 5.0	180 860	0.8 3.8
48	1219	P3300 P3301	300 850	1.3 3.8	0.40 0.23	10 6	200 850	0.9 3.8	150 730	0.7 3.2	100 480	0.4 2.1
60	1524	P3300 P3301	240 680	1.1 3.0	0.62 0.37	16 9	130 620	0.6 2.8	100 460	0.4 2.0	60 310	0.3 1.4
72	1829	P3300 P3301	200 560	0.9 2.5	0.89 0.52	23 13	90 430	0.4 1.9	70 320	0.3 1.4	40 210	0.2 0.9
84	2134	P3300 P3301	170 480	0.8 2.1	1.20 0.71	31 18	70 320	0.3 1.4	50 240	0.2 1.1	30 160	0.1 0.7
96	2438	P3300 P3301	150 420	0.7 1.9	1.58 0.93	40 24	50 240	0.2 1.1	40 180	0.2 0.8	30 120	0.1 0.5
108	2743	P3300 P3301	130 380	0.6 1.7	1.95 1.19	50 30	40 190	0.2 0.8	30 140	0.1 0.6	20 100	0.1 0.4
120	3048	P3300 P3301	120 340	0.5 1.5	2.47 1.47	63 37	30 150	0.1 0.7	20 120	0.1 0.5	20 80	0.1 0.4

*Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P3300 P3301	2110 4110	9.4 18.3	7100 16740	31.6 74.5	7030 16390	31.3 72.9	6770 15800	30.1 70.3	5920 15080	26.3 67.1
36	914	P3300 P3301	1790 3820	8.0 17.0	6250 15880	27.8 70.6	5920 15080	26.3 67.1	4360 13760	19.4 61.2	3030 12150	13.5 54.0
48	1219	P3300 P3301	1400 3470	6.2 15.4	5440 14680	24.2 65.3	3830 13260	17.0 59.0	2450 10900	10.9 48.5	1700 8080	7.6 35.9
60	1524	P3300 P3301	1080 3070	4.8 13.7	3720 13120	16.5 58.4	2450 10900	10.9 48.5	1570 7450	7.0 33.1	** 5170	** 23.0
72	1829	P3300 P3301	860 2640	3.8 11.7	2580 11230	11.5 50.0	1700 8080	7.6 35.9	** 5170	** 23.0	** 3590	** 16.0
84	2134	P3300 P3301	** 2250	** 10.0	1900 8990	8.5 40.0	** 5940	** 26.4	** 3800	** 16.9	** **	** **
96	2438	P3300 P3301	** 1930	** 8.6	** 6890	** 30.6	** 4550	** 20.2	** **	** **	** **	** **
108	2743	P3300 P3301	** 1670	** 7.4	** 5440	** 24.2	** 3590	** 16.0	** **	** **	** **	** **
120	3048	P3300 P3301	** **	** **	** 4410	** 19.6	** **	** **	** **	** **	** **	** **

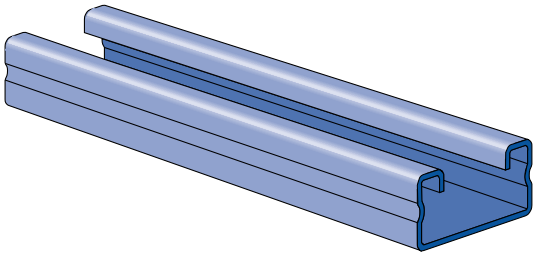
**$\frac{KL}{r} > 200$

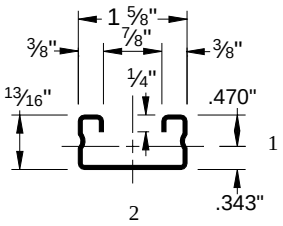
ELEMENTS OF SECTION

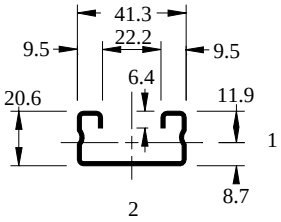
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P3300	.398	2.6	.037	1.5	.072	1.2	.306	.78	.145	6.0	.178	2.9	.603	1.5
P3301	.797	5.1	.177	7.4	.202	3.3	.471	1.2	.289	12.0	.356	5.8	.603	1.5

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

P4000



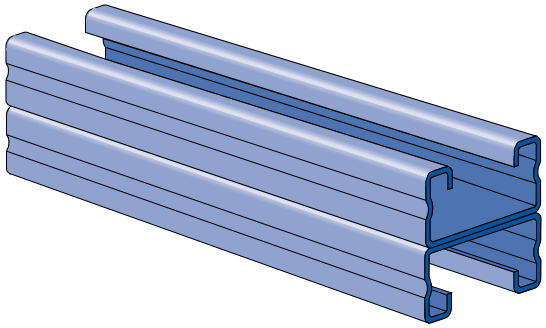


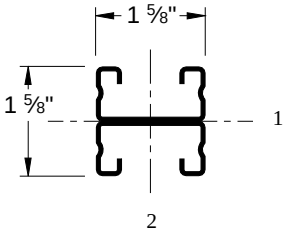


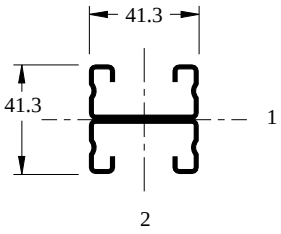
Pierced channels are found on pages 60 and 61.

Weight: 82 Lbs/C Ft (122 kg/100 m)

P4001

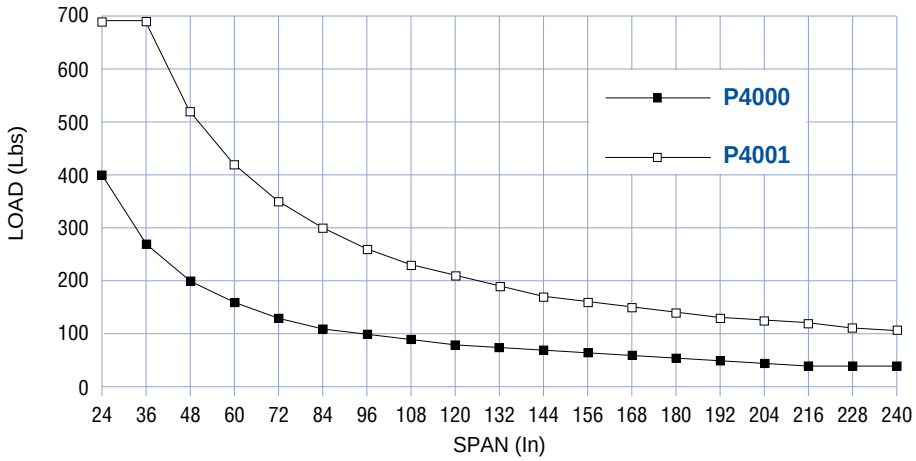






Weight: 164 Lbs/C Ft (244 kg/100 m)

BEAM LOAD*

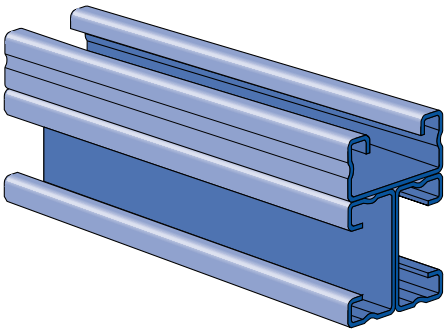


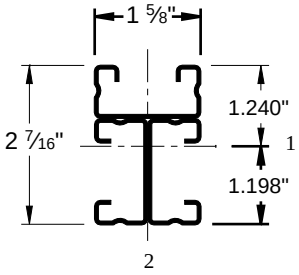
*Maximum allowable uniform load.

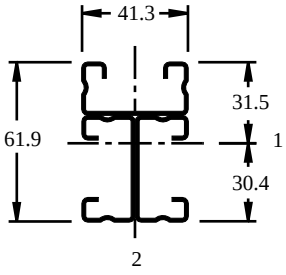
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P4000	0.82	1.2	1,210	140	.060	1.5	■	■	■	■	■	■	■	■
P4001	1.64	2.4	3,140	350	.060	1.5	■	■	■	■	■	■		■

Nominal thickness of 16 gage strip steel is .060 inches.

P4003

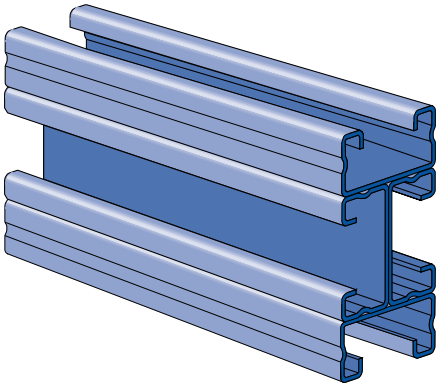


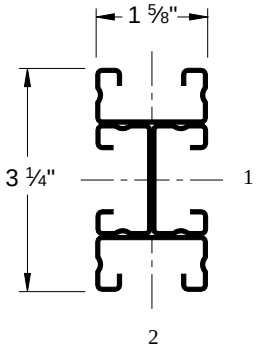


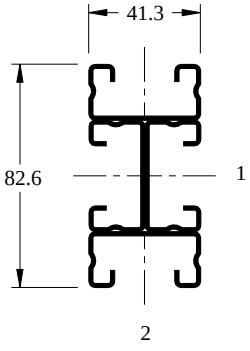


Weight: 246 Lbs/C Ft (366 kg/100 m)

P4004







Weight: 328 Lbs/C Ft (488 kg/100 m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P4003	2.46	3.7	8,450	950	.060	1.5	■	■	■	■	■	■		
P4004	3.28	4.9	13,380	1,510	.060	1.5	■	■	■	■	■	■		

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P4000 P4001	400 690*	1.8 3.1	0.11 0.04	3 1	400 690*	1.8 3.1	380 690*	1.7 3.1	250 690*	1.1 3.1
36	914	P4000 P4001	270 690*	1.2 3.1	0.24 0.14	6 4	220 690*	1.0 3.1	170 690*	0.8 3.1	110 490	0.5 2.2
48	1219	P4000 P4001	200 520	0.9 2.3	0.42 0.25	11 6	130 520	0.6 2.3	90 410	0.4 1.8	60 280	0.3 1.2
60	1524	P4000 P4001	160 420	0.7 1.9	0.66 0.40	17 10	80 350	0.4 1.6	60 260	0.3 1.2	40 180	0.2 0.8
72	1829	P4000 P4001	130 350	0.6 1.6	0.93 0.57	24 15	60 250	0.3 1.1	40 180	0.2 0.8	30 120	0.1 0.5
84	2134	P4000 P4001	110 300	0.5 1.3	1.25 0.78	32 20	40 180	0.2 0.8	30 140	0.1 0.6	20 90	0.1 0.4
96	2438	P4000 P4001	100 260	0.4 1.2	1.70 1.01	43 26	30 140	0.1 0.6	20 100	0.1 0.4	20 70	0.1 0.3
108	2743	P4000 P4001	90 230	0.4 1.0	2.18 1.27	55 32	20 110	0.1 0.5	20 80	0.1 0.4	10 50	0.0 0.2
120	3048	P4000 P4001	80 210	0.4 0.9	2.65 1.59	67 40	20 90	0.1 0.4	20 70	0.1 0.3	NR 40	NR 0.2

*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P4000 P4001	1380 2650	6.1 11.8	3720 10020	16.5 44.6	3680 9800	16.4 43.6	3610 9430	16.1 41.9	3520 8980	15.7 39.9
36	914	P4000 P4001	990 2440	4.4 10.9	2010 9480	8.9 42.2	1960 8980	8.7 39.9	1880 8150	8.4 36.3	1780 7130	7.9 31.7
48	1219	P4000 P4001	690 2200	3.1 9.8	1130 8720	5.0 38.8	1100 7830	4.9 34.8	1060 6350	4.7 28.2	1000 4620	4.4 20.6
60	1524	P4000 P4001	500 1920	2.2 8.5	720 7750	3.2 34.5	710 6350	3.2 28.2	680 4260	3.0 18.9	** 2960	** 13.2
72	1829	P4000 P4001	380 1630	1.7 7.3	500 6550	2.2 29.1	490 4620	2.2 20.6	** 2960	** 13.2	** 2050	** 9.1
84	2134	P4000 P4001	** 1370	** 6.1	370 5140	1.7 22.9	** 3400	** 15.1	** 2170	** 9.7	** **	** **
96	2438	P4000 P4001	** 1170	** 5.2	** 3940	** 17.5	** 2600	** 11.6	** **	** **	** **	** **
108	2743	P4000 P4001	** 1010	** 4.5	** 3110	** 13.8	** 2050	** 9.1	** **	** **	** **	** **
120	3048	P4000 P4001	** **	** **	** 2520	** 11.2	** **	** **	** **	** **	** **	** **

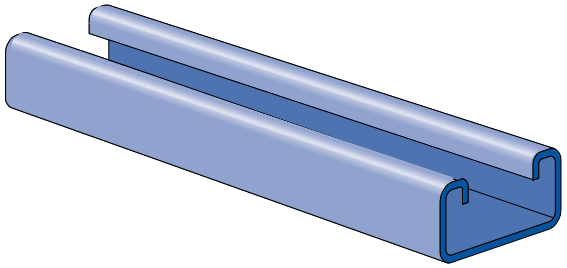
**$\frac{KL}{r} > 200$

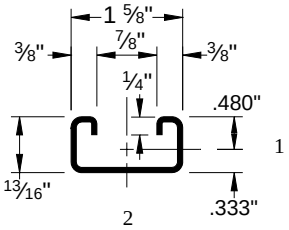
ELEMENTS OF SECTION

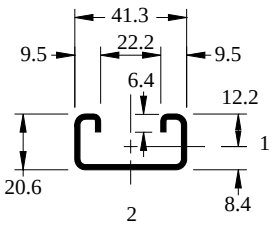
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P4000	.239	1.50	.023	0.96	.048	0.79	.308	0.78	.091	3.80	.112	1.80	.617	1.60
P4001	.478	3.10	.101	4.20	.125	2.00	.460	1.20	.182	7.60	.224	3.70	.617	1.60

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

P4100



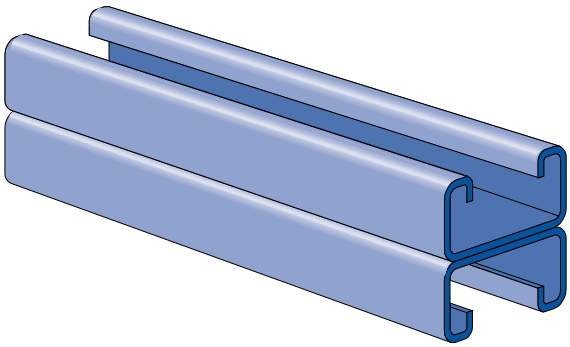


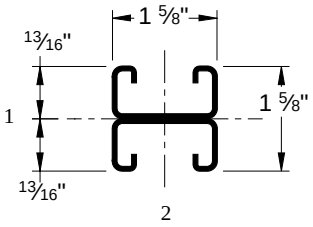


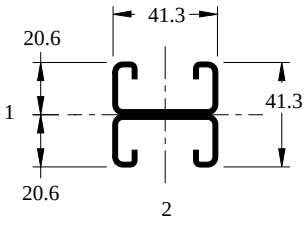
Pierced channels are found on pages 60 and 61.

Weight: 97 Lbs/C Ft (144 kg/100 m)

P4101

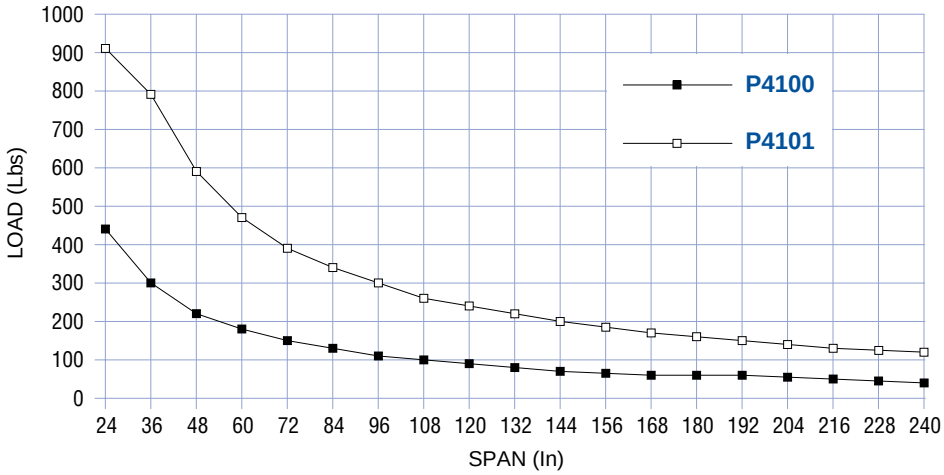






Weight: 194 Lbs/C Ft (289 kg/100 m)

BEAM LOAD*



*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P4100	.97	1.4	1,330	150	.075	1.9	■	■	■	■	■	■		
P4101	1.94	2.9	3,550	400	.075	1.9	■	■	■	■	■	■		

Nominal thickness of 14 gage strip steel is .075 inches.

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P4100 P4101	440 910*	2.0 4.0	0.11 0.05	3 1	440 910*	2.0 4.0	410 910*	1.8 4.0	270 910*	1.2 4.0
36	914	P4100 P4101	300 790	1.3 3.5	0.25 0.14	6 4	240 790	1.1 3.5	180 790	0.8 3.5	120 550	0.5 2.4
48	1219	P4100 P4101	220 590	1.0 2.6	0.43 0.25	11 6	140 590	0.6 2.6	100 470	0.4 2.1	70 310	0.3 1.4
60	1524	P4100 P4101	180 470	0.8 2.1	0.69 0.39	17 10	90 400	0.4 1.8	70 300	0.3 1.3	40 200	0.2 0.9
72	1829	P4100 P4101	150 390	0.7 1.7	0.99 0.56	25 14	60 280	0.3 1.2	50 210	0.2 0.9	30 140	0.1 0.6
84	2134	P4100 P4101	130 340	0.6 1.5	1.36 0.78	35 20	40 200	0.2 0.9	30 150	0.1 0.7	20 100	0.1 0.4
96	2438	P4100 P4101	110 300	0.5 1.3	1.72 1.03	44 26	30 160	0.1 0.7	30 120	0.1 0.5	20 80	0.1 0.4
108	2743	P4100 P4101	100 260	0.4 1.2	2.22 1.27	56 32	30 120	0.1 0.5	20 90	0.1 0.4	10 60	0.0 0.3
120	3048	P4100 P4101	90 240	0.4 1.1	2.75 1.61	70 41	20 100	0.1 0.4	20 70	0.1 0.3	NR 50	NR 0.2

*Load limited by spot weld shear.

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P4100	1620	7.2	5320	23.7	5270	23.4	4810	21.4	4160	18.5
		P4101	3030	13.5	12000	53.4	11720	52.1	11250	50.0	10680	47.5
36	914	P4100	1340	6.0	4870	21.7	4160	18.5	2980	13.3	2070	9.2
		P4101	2790	12.4	11320	50.4	10680	47.5	9620	42.8	8330	37.1
48	1219	P4100	1020	4.5	3800	16.9	2620	11.7	1680	7.5	1160	5.2
		P4101	2500	11.1	10350	46.0	9210	41.0	7330	32.6	5240	23.3
60	1524	P4100	780	3.5	2540	11.3	1680	7.5	**	**	**	**
		P4101	2180	9.7	9110	40.5	7330	32.6	4830	21.5	3350	14.9
72	1829	P4100	610	2.7	1760	7.8	1160	5.2	**	**	**	**
		P4101	1840	8.2	7590	33.8	5240	23.3	3350	14.9	2330	10.4
84	2134	P4100	**	**	1300	5.8	**	**	**	**	**	**
		P4101	1550	6.9	5830	25.9	3850	17.1	2460	10.9	**	**
96	2438	P4100	**	**	**	**	**	**	**	**	**	**
		P4101	1320	5.9	4470	19.9	2950	13.1	**	**	**	**
108	2743	P4100	**	**	**	**	**	**	**	**	**	**
		P4101	1140	5.1	3530	15.7	2330	10.4	**	**	**	**
120	3048	P4100	**	**	**	**	**	**	**	**	**	**
		P4101	**	**	2860	12.7	**	**	**	**	**	**

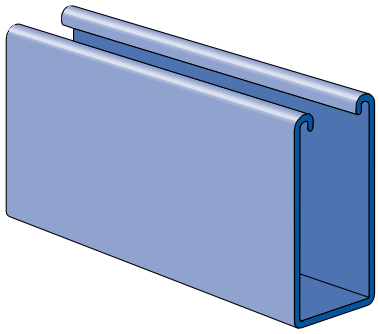
**$\frac{KL}{r} > 200$

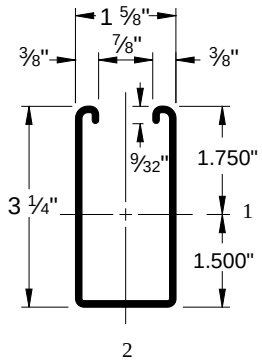
ELEMENTS OF SECTION

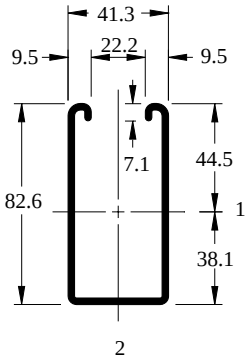
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P4100	.287	1.9	.025	1.0	.053	.87	.298	.76	.106	4.4	.131	2.1	.609	1.5
P4101	.574	3.7	.114	4.7	.141	2.3	.447	1.1	.212	8.8	.261	4.3	.609	1.5

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

P5000



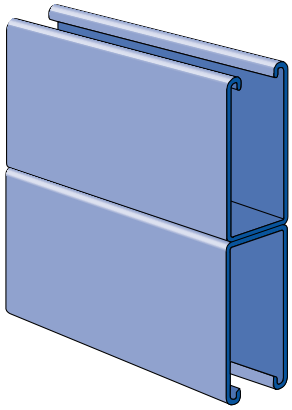


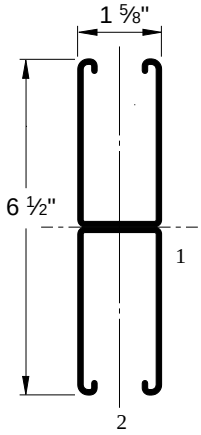


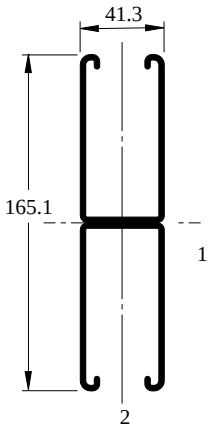
Pierced channels are found on pages 60 and 61.

Weight: 305 Lbs/C Ft (454 kg/100 m)

P5001

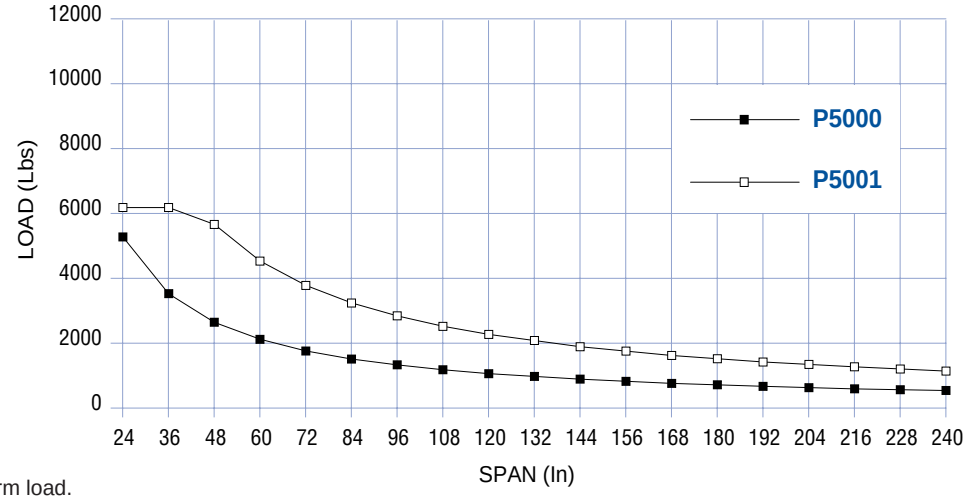






Weight: 610 Lbs/C Ft (908 kg/100 m)

BEAM LOAD*



*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P5000	3.05	4.5	15,790	1,780	.105	2.7	■	■	■	■	■	■		
P5001	6.10	9.1	33,910	3,830	.105	2.7	■	■	■	■	■	■		

Nominal thickness of 12 gage strip steel is .105 inches.

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P5000 P5001	5260† 6170*†	23.4 27.4	0.03 0.01	1 0	5260 6170*†	23.4 27.4	5260 6170*†	23.4 27.4	5260 6170*†	23.4 27.4
36	914	P5000 P5001	3510 6170*†	15.6 27.4	0.07 0.02	2 1	3510 6170*†	15.6 27.4	3510 6170*†	15.6 27.4	3510 6170*†	15.6 27.4
48	1219	P5000 P5001	2630 5650†	11.7 25.1	0.12 0.05	3 1	2630 5650†	11.7 25.1	2630 5650†	11.7 25.1	2630 5650†	11.7 25.1
60	1524	P5000 P5001	2110 4520†	9.4 20.1	0.18 0.08	5 2	2110 4520†	9.4 20.1	2110 4520†	9.4 20.1	1920 4520†	8.5 20.1
72	1829	P5000 P5001	1750 3770	7.8 16.8	0.26 0.11	7 3	1750 3770	7.8 16.8	1750 3770	7.8 16.8	1330 3770	5.9 16.8
84	2134	P5000 P5001	1500 3230	6.7 14.4	0.36 0.15	9 4	1500 3230	6.7 14.4	1470 3230	6.5 14.4	980 3230	4.4 14.4
96	2438	P5000 P5001	1320 2830	5.9 12.6	0.47 0.20	12 5	1320 2830	5.9 12.6	1130 2830	5.0 12.6	750 2830	3.3 12.6
108	2743	P5000 P5001	1170 2510	5.2 11.2	0.59 0.25	15 6	1170 2510	5.2 11.2	890 2510	4.0 11.2	590 2510	2.6 11.2
120	3048	P5000 P5001	1050 2260	4.7 10.1	0.73 0.31	19 8	960 2260	4.3 10.1	720 2260	3.2 10.1	480 2260	2.1 10.1
144	3658	P5000 P5001	880 1880	3.9 8.4	1.06 0.44	27 11	670 1880	3.0 8.4	500 1880	2.2 8.4	330 1690	1.5 7.5
168	4267	P5000 P5001	750 1610	3.3 7.2	1.43 0.60	36 15	490 1610	2.2 7.2	370 1610	1.6 7.2	250 1240	1.1 5.5
192	4877	P5000 P5001	660 1410	2.9 6.3	1.88 0.79	48 20	380 1410	1.7 6.3	280 1410	1.2 6.3	190 950	0.8 4.2
216	5486	P5000 P5001	580 1260	2.6 5.6	2.35 1.00	60 26	300 1260	1.3 5.6	220 1130	1.0 5.0	150 750	0.7 3.3
240	6096	P5000 P5001	530 1130	2.4 5.0	2.94 1.24	75 31	240 1130	1.1 5.0	180 910	0.8 4.0	120 610	0.5 2.7

*Load limited by spot weld shear. †Bearing load may govern capacity. See page 67.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P5000	5120	22.8	12130	54.0	12030	53.5	11870	52.8	11660	51.9
		P5001	7730	34.4	30390	135.2	30170	134.2	29790	132.5	29330	130.5
36	914	P5000	4310	19.2	8650	38.5	8430	37.5	8050	35.8	7590	33.8
		P5001	7650	34.0	29840	132.7	29330	130.5	28490	126.7	27460	122.1
48	1219	P5000	3310	14.7	5520	24.6	5320	23.7	5020	22.3	4690	20.9
		P5001	7540	33.5	29070	129.3	28170	125.3	26670	118.6	24830	110.4
60	1524	P5000	2660	11.8	4000	17.8	3840	17.1	3590	16.0	3330	14.8
		P5001	7390	32.9	28080	124.9	26670	118.6	24320	108.2	21460	95.5
72	1829	P5000	2240	10.0	3160	14.1	3020	13.4	2800	12.5	2570	11.4
		P5001	7200	32.0	26870	119.5	24830	110.4	21460	95.5	17330	77.1
84	2134	P5000	1940	8.6	2650	11.8	2510	11.2	2310	10.3	2100	9.3
		P5001	6960	31.0	25440	113.2	22670	100.8	18070	80.4	12930	57.5
96	2438	P5000	1730	7.7	2310	10.3	2170	9.7	1980	8.8	1780	7.9
		P5001	6660	29.6	23790	105.8	20170	89.7	14260	63.4	9900	44.0
108	2743	P5000	1570	7.0	2070	9.2	1930	8.6	1730	7.7	1540	6.9
		P5001	6280	27.9	21920	97.5	17330	77.1	11270	50.1	7820	34.8
120	3048	P5000	1440	6.4	1880	8.4	1740	7.7	1550	6.9	**	**
		P5001	5800	25.8	19830	88.2	14260	63.4	9130	40.6	**	**

**$\frac{KL}{r} > 200$

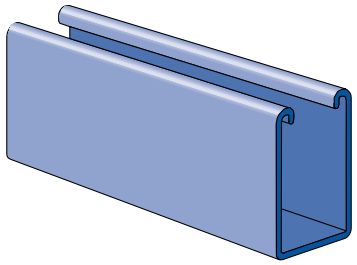
ELEMENTS OF SECTION

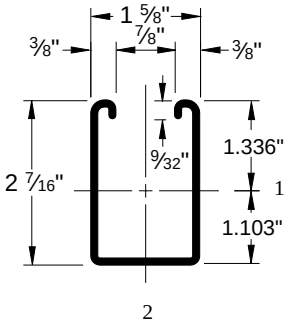
Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P5000	.897	5.8	1.099	45.7	.628	10.3	1.107	2.8	.359*	14.9	.442*	7.2	.695	1.8
P5001	1.794	11.6	5.578*	232.2	1.716*	28.1	1.864	4.7	.719*	29.9	.884*	14.5	.695	1.8

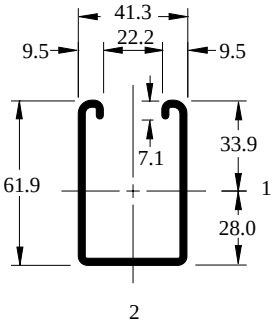
I - Moment of Inertia **S - Section Modulus** **r - Radius of Gyration**

* These are effective section properties.

P5500



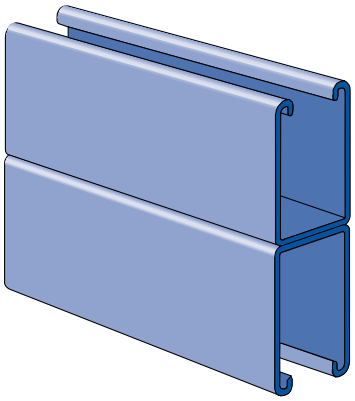


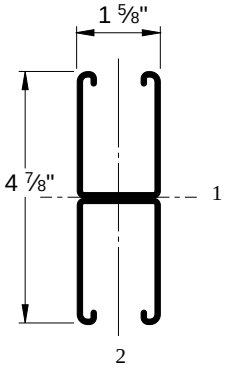


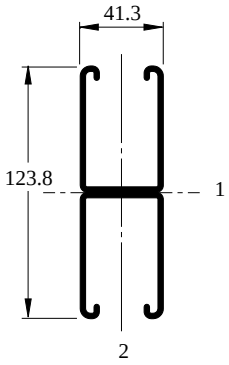
Pierced channels are found on pages 60 and 61.

Weight: 247 Lbs/C Ft (368 kg/100 m)

P5501

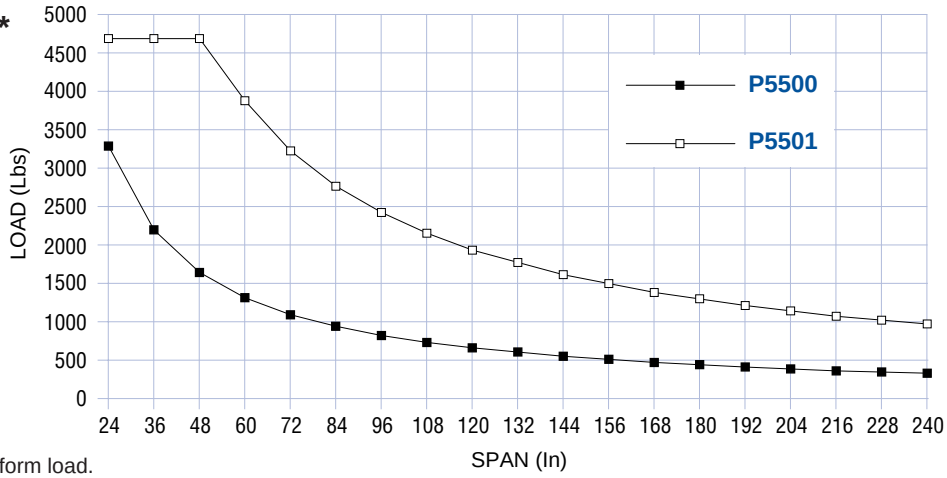






Weight: 494 Lbs/C Ft (735 kg/100 m)

BEAM LOAD*



*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P5500	2.47	3.7	9,830	1110	.105	2.7	■	■	■	■	■	■		■
P5501	4.94	7.4	29,000	3280	.105	2.7	■	■	■	■	■	■		

Nominal thickness of 12 gage strip steel is .105 inches.

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P5500 P5501	3280 4680*	14.6 20.8	0.04 0.01	1 0	3280 4680*	14.6 20.8	3280 4680*	14.6 20.8	3280 4680*	14.6 20.8
36	914	P5500 P5501	2190 4680*	9.7 20.8	0.09 0.03	2 1	2190 4680*	9.7 20.8	2190 4680*	9.7 20.8	2190 4680*	9.7 20.8
48	1219	P5500 P5501	1640 4680*	7.3 20.8	0.15 0.08	4 2	1640 4680*	7.3 20.8	1640 4680*	7.3 20.8	1430 4680*	6.4 20.8
60	1524	P5500 P5501	1310 3870	5.8 17.2	0.24 0.13	6 3	1310 3870	5.8 17.2	1310 3870	5.8 17.2	910 3870	4.0 17.2
72	1829	P5500 P5501	1090 3220	4.8 14.3	0.34 0.19	9 5	1090 3220	4.8 14.3	950 3220	4.2 14.3	630 3220	2.8 14.3
84	2134	P5500 P5501	940 2760	4.2 12.3	0.47 0.26	12 7	930 2760	4.1 12.3	700 2760	3.1 12.3	470 2510	2.1 11.2
96	2438	P5500 P5501	820 2420	3.6 10.8	0.61 0.34	16 9	710 2420	3.2 10.8	540 2420	2.4 10.8	360 1920	1.6 8.5
108	2743	P5500 P5501	730 2150	3.2 9.6	0.78 0.43	20 11	560 2150	2.5 9.6	420 2150	1.9 9.6	280 1520	1.2 6.8
120	3048	P5500 P5501	660 1930	2.9 8.6	0.96 0.52	24 13	460 1930	2.0 8.6	340 1840	1.5 8.2	230 1230	1.0 5.5
144	3658	P5500 P5501	550 1610	2.4 7.2	1.39 0.75	35 19	320 1610	1.4 7.2	240 1280	1.1 5.7	160 850	0.7 3.8
168	4267	P5500 P5501	470 1380	2.1 6.1	1.88 1.03	48 26	230 1250	1.0 5.6	170 940	0.8 4.2	120 630	0.5 2.8
192	4877	P5500 P5501	410 1210	1.8 5.4	2.45 1.34	62 34	180 960	0.8 4.3	130 720	0.6 3.2	90 480	0.4 2.1
216	5486	P5500 P5501	360 1070	1.6 4.8	3.06 1.69	78 43	140 760	0.6 3.4	110 570	0.5 2.5	70 380	0.3 1.7
240	6096	P5500 P5501	330 970	1.5 4.3	3.85 2.11	98 53	110 610	0.5 2.7	90 460	0.4 2.0	60 310	0.3 1.4

*Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P5500	4490	20.0	12060	53.6	11930	53.1	11710	52.1	11430	50.8
		P5501	8540	38.0	31180	138.7	30870	137.3	30350	135.0	29720	132.2
36	914	P5500	3810	16.9	8560	38.1	8260	36.7	7760	34.5	7200	32.0
		P5501	8390	37.3	30420	135.3	29720	132.2	28560	127.0	27140	120.7
48	1219	P5500	3080	13.7	5810	25.8	5540	24.6	5130	22.8	4700	20.9
		P5501	8190	36.4	29360	130.6	28120	125.1	26060	115.9	23540	104.7
60	1524	P5500	2610	11.6	4480	19.9	4230	18.8	3860	17.2	3480	15.5
		P5501	7920	35.2	28000	124.6	26060	115.9	22830	101.6	18900	84.1
72	1829	P5500	2290	10.2	3730	16.6	3480	15.5	3120	13.9	2760	12.3
		P5501	7590	33.8	26340	117.2	23540	104.7	18900	84.1	13610	60.5
84	2134	P5500	2050	9.1	3250	14.5	2990	13.3	2630	11.7	2290	10.2
		P5501	7160	31.8	24370	108.4	20560	91.5	14400	64.1	10000	44.5
96	2438	P5500	1860	8.3	2910	12.9	2640	11.7	2270	10.1	1940	8.6
		P5501	6620	29.4	22100	98.3	17120	76.2	11020	49.0	7650	34.0
108	2743	P5500	1710	7.6	2640	11.7	2360	10.5	2000	8.9	1680	7.5
		P5501	5970	26.6	19530	86.9	13610	60.5	8710	38.7	6050	26.9
120	3048	P5500	1580	7.0	2430	10.8	2140	9.5	1770	7.9	**	**
		P5501	5380	23.9	16660	74.1	11020	49.0	7050	31.4	**	**

**$\frac{KL}{r}$ > 200

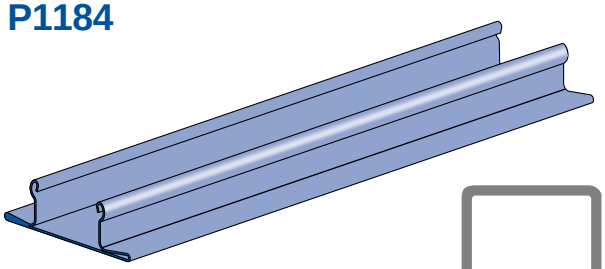
ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In²	cm²	In⁴	cm⁴	In³	cm³	In	cm	In⁴	cm⁴	In³	cm³	In	cm
P5500	.726	4.7	.523	21.8	.391	6.4	.848	2.2	.335	13.9	.412	6.8	.679	1.7
P5501	1.453	9.4	2.811	117.0	1.153	18.9	1.391	3.5	.669	27.8	.824	13.5	.679	1.7

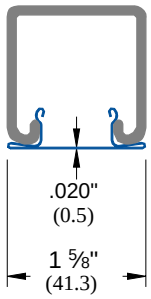
I - Moment of Inertia S - Section Modulus r - Radius of Gyration

CLOSURE STRIPS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1184



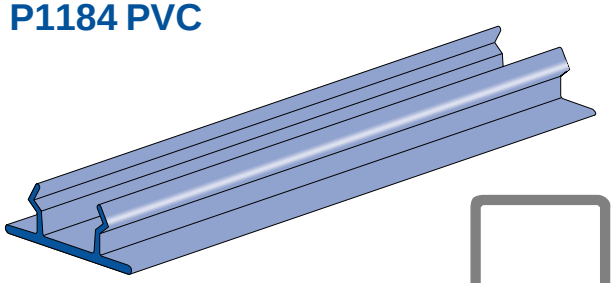
Standard Length: 10'.



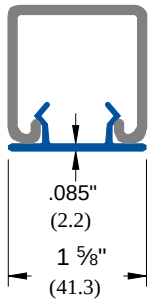
Finish: Zinc bonderized, plain.

Weight: 27 Lbs/C Ft (40.2 kg/100 m)

P1184 PVC



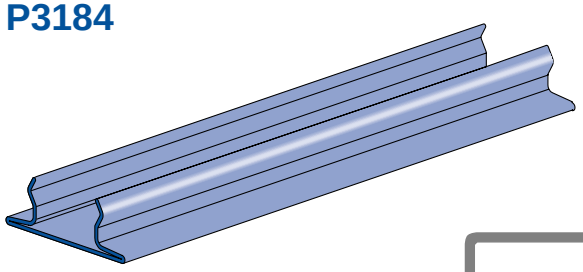
Standard Length: 10'.



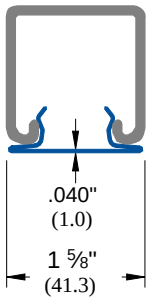
Material: Paintable PVC.
Color: Green, Grey.

Weight: 11 Lbs/C Ft (16.5 kg/100 m)

P3184



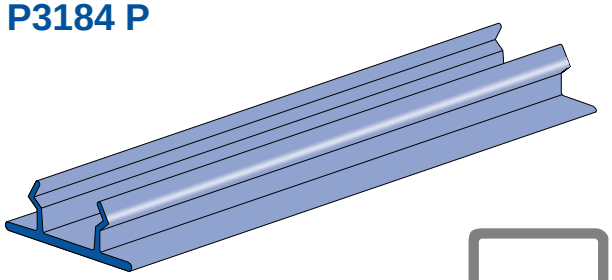
Standard Length: 10'.



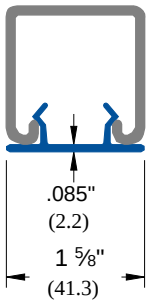
Finish: Green, pre-galvanized, plain.

Weight: 47 Lbs/C Ft (69.9 kg/100 m)

P3184 P



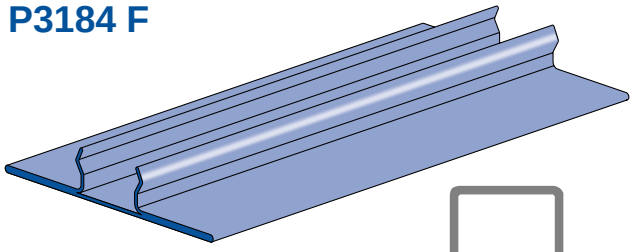
Standard Length: 10'.



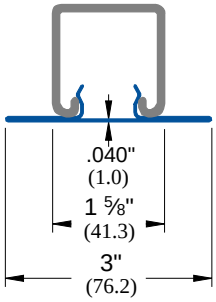
Material : G.E. Noryl® Plastic.
Color: Green, Grey.

Weight: 9.4 Lbs/C Ft (14.0 kg/100 m)

P3184 F



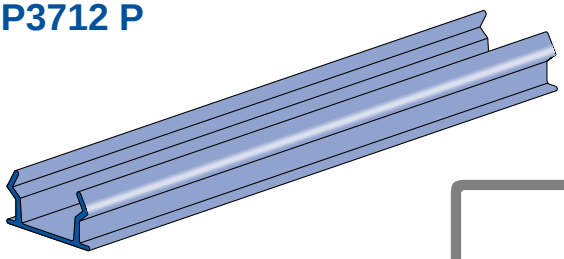
Standard Length: 16'.



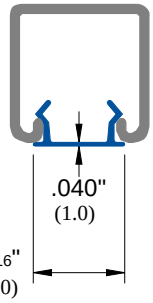
Finish: Green, pre-galvanized, plain.

Weight: 90 Lbs/C Ft (134 kg/100 m)

P3712 P



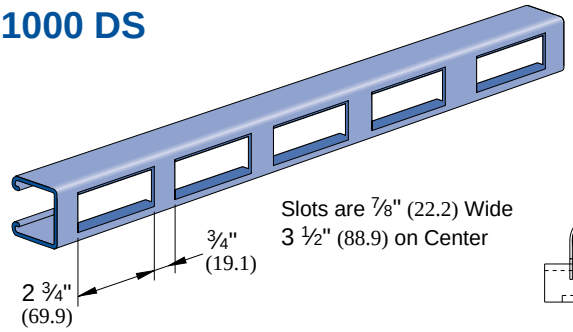
Standard Length: 10'.

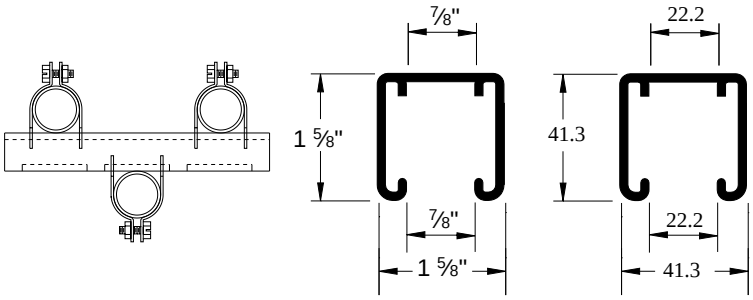


Material: Plastic.
Color: Black.
Note: Use with P3170, P3270, and P3370 series concrete insert.

Weight: 5.4 Lbs/C Ft (8.0 kg/100 m)

P1000 DS



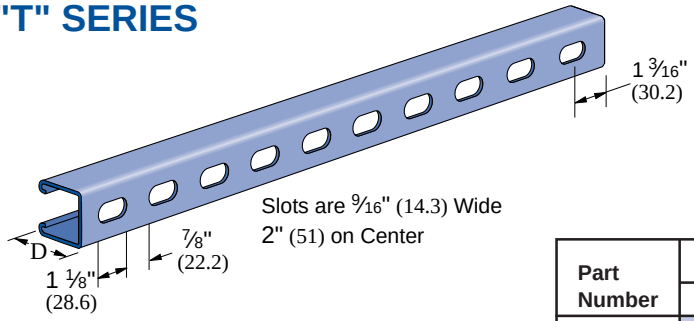


Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 70% of P1000 load chart.

Weight: 173 Lbs/C Ft (257 kg/100m)

"T" SERIES

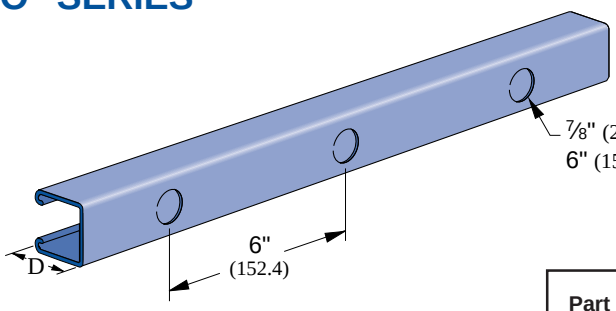


Part Number	Depth "D"		Material Thickness		Weight	
	In	mm	In	mm	Lbs/C Ft	kg/100m
P1000 T	1⅝	41	.105	2.7	185	275
P1100 T	1⅝	41	.075	1.6	136	202
P2000 T	1⅝	41	.060	1.5	113	168
P3000 T	1⅜	35	.105	2.7	165	245
P3300 T	⅞	22	.105	2.7	130	193
P4000 T	13/16	21	.060	1.5	79	118
P4100 T	13/16	21	.075	1.6	87	129
P5000 T	3¼	82	.105	2.7	300	446
P5500 T	2 7/16	62	.105	2.7	242	360

Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 85% of appropriate load chart.

"KO" SERIES

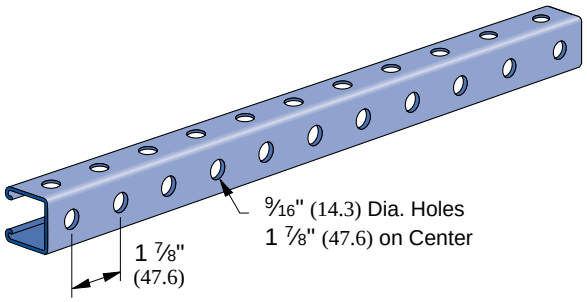


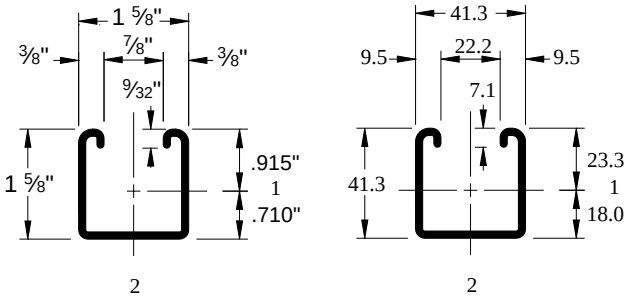
Part Number	Depth "D"		Material Thickness		Weight	
	In	mm	In	mm	Lbs/C Ft	kg/100m
P1000 KO	1⅝	41	.105	2.7	190	283
P1100 KO	1⅝	41	.075	1.9	140	208
P2000 KO	1⅝	41	.060	1.5	117	174
P3000 KO	1⅝	35	.105	2.7	170	253
P5000 KO	3¼	82	.105	2.7	305	454
P5500 KO	2 7/16	62	.105	2.7	247	368

Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 95% of appropriate load chart.

P1000 H3



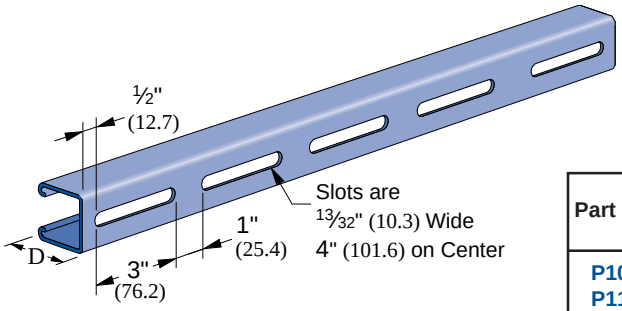


Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 90% of P1000 load chart. For column load capacity, use 68% of P1000 load chart.

Weight: 175 Lbs/C Ft (260 kg/100 m)

"SL" SERIES

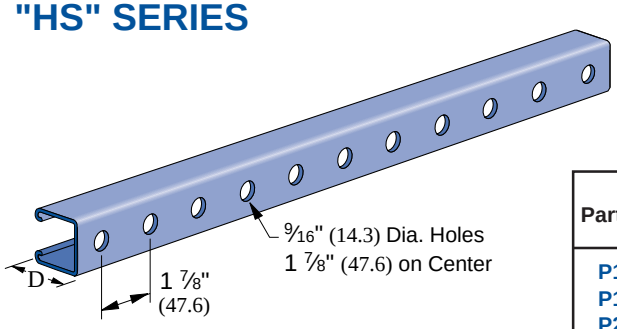


Part Number	Depth "D"		Material Thickness		Weight	
	In	mm	In	mm	Lbs/C Ft	kg/100 m
P1000 SL	1⅝	41	.105	2.7	185	275
P1100 SL	1⅝	41	.075	1.9	136	202
P2000 SL	1⅝	41	.060	1.5	113	168
P3000 SL	1⅜	35	.105	2.7	165	246
P3300 SL	⅞	22	.105	2.7	130	193
P4000 SL	13⁄16	21	.060	1.5	79	118
P4100 SL	13⁄16	21	.075	1.9	87	129
P5000 SL	3¼	82	.105	2.7	300	446
P5500 SL	2 7⁄16	62	.105	2.7	242	360

Standard Lengths: 10' and 20'.

Note: For beam load capacity, use 85% of appropriate load chart.

"HS" SERIES



Part Number	Depth "D"		Material Thickness		Weight	
	In	mm	In	mm	Lbs/C Ft	kg/100 m
P1000 HS	1⅝	41	.105	2.7	185	275
P1100 HS	1⅝	41	.075	1.9	136	202
P2000 HS	1⅝	41	.060	1.5	113	168
P3000 HS	1-⅜	35	.105	2.7	165	246
P3300 HS	⅞	22	.105	2.7	130	193
P4000 HS	13⁄16	21	.060	1.5	79	118
P4100 HS	13⁄16	21	.075	1.9	87	129
P5000 HS	3¼	82	.105	2.7	300	446
P5500 HS	2 7⁄16	62	.105	2.7	242	360

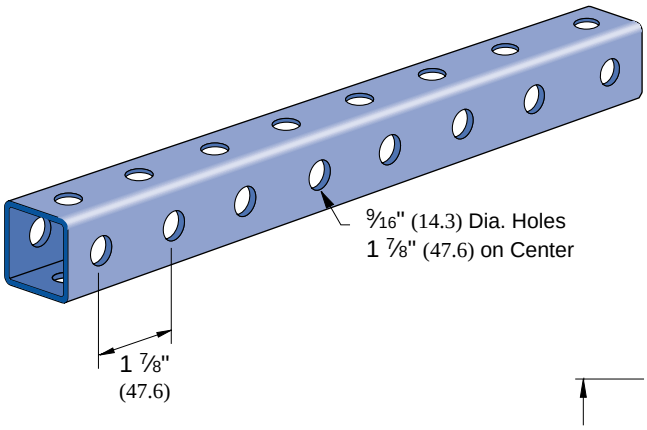
Standard Lengths: 10' and 20'.

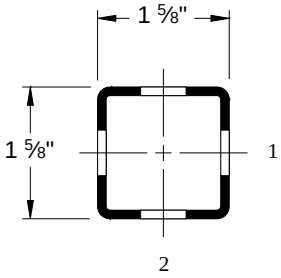
Note: For beam load capacity, use 90% of appropriate load chart.

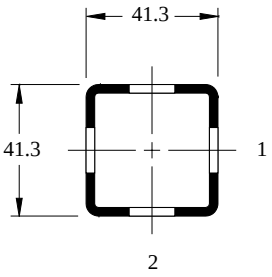
P9000

TELESTRUT TUBING

PATENT PENDING







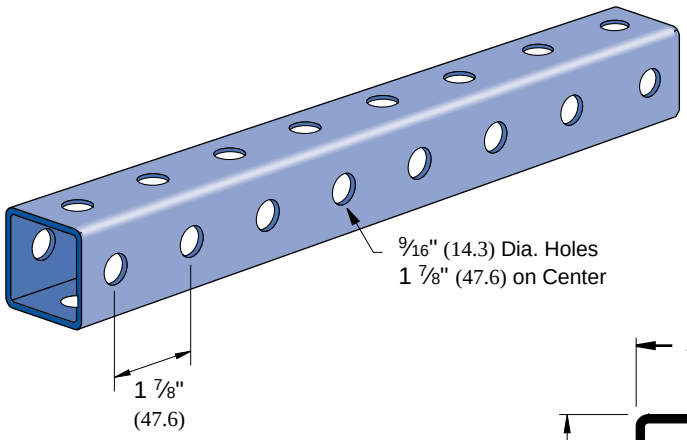
Note: Can be used with 1⅝" (41mm) fittings.

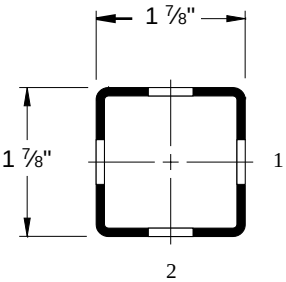
Weight: 205 Lbs/C Ft (305 kg/100 m)

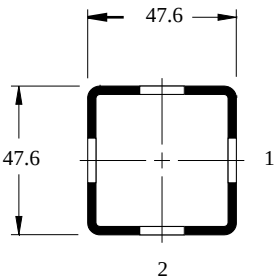
P9200

TELESTRUT TUBING

PATENT PENDING







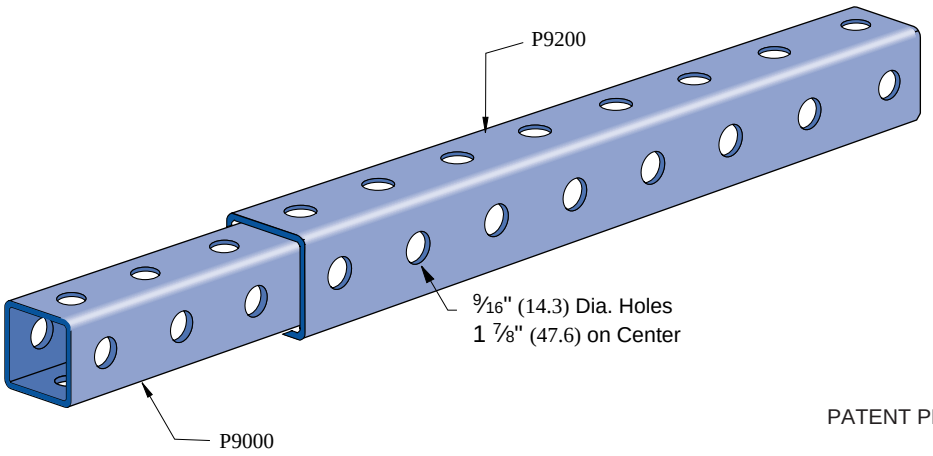
Note: Allows telescoping of P9000 and all 1⅝" (41mm) Unistrut channels.

Weight: 223 Lbs/C Ft (332 kg/100 m)

Telestrut	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
P9000	2.05	3.1	5,060	570	.105	2.7	■	■	■	■		■		
P9200	2.23	3.3	7,470	840	.105	2.7	■	■	■	■		■		

Nominal thickness of 12 gage strip steel is .105 inches.

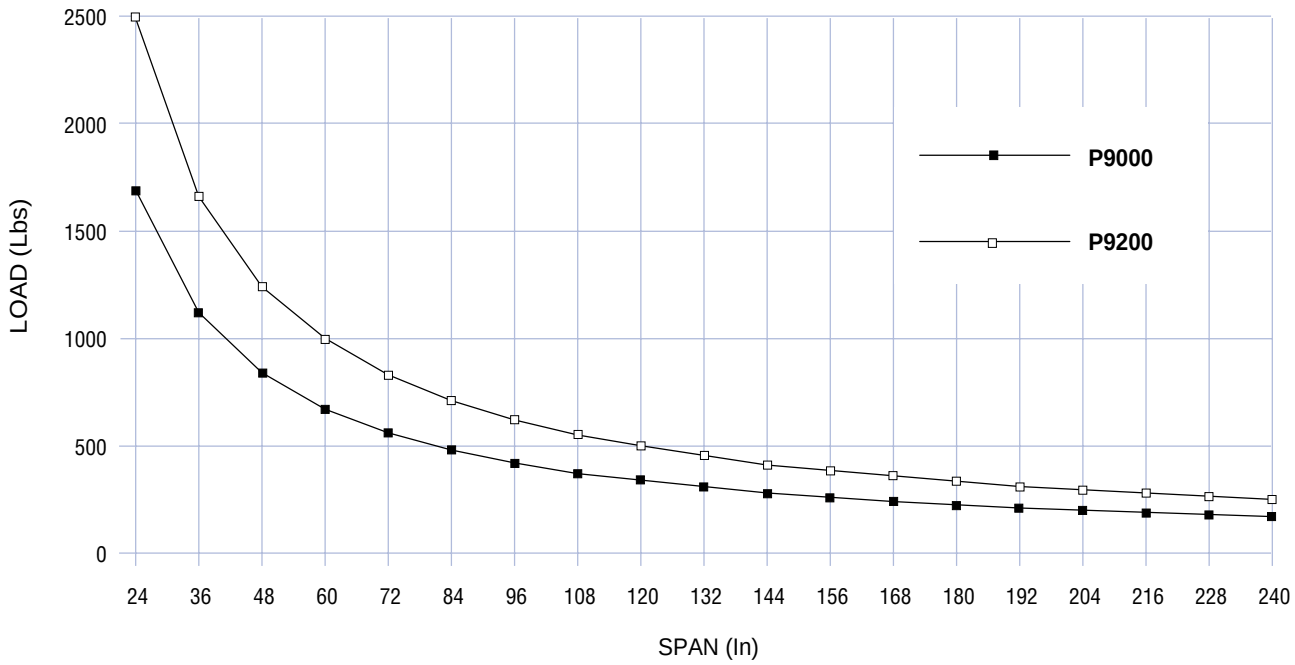
TELESTRUT TUBING



PATENT PENDING

Note: See Hardware section for rivets and gravity pins.

BEAM LOAD*



*Maximum allowable uniform load.

BEAM LOADING DATA

Span		Telestrut	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P9000 P9200	1690 2490	7.5 11.1	0.06 0.05	2 1	1690 2490	7.5 11.1	1690 2490	7.5 11.1	1690 2490	7.5 11.1
36	914	P9000 P9200	1120 1660	5.0 7.4	0.14 0.12	4 3	1120 1660	5.0 7.4	1120 1660	5.0 7.4	800 1350	3.6 6.0
48	1219	P9000 P9200	840 1240	3.7 5.5	0.25 0.22	6 6	840 1240	3.7 5.5	670 1140	3.0 5.1	450 760	2.0 3.4
60	1524	P9000 P9200	670 1000	3.0 4.4	0.39 0.34	10 9	570 970	2.5 4.3	430 730	1.9 3.2	290 490	1.3 2.2
72	1829	P9000 P9200	560 830	2.5 3.7	0.56 0.49	14 12	400 670	1.8 3.0	300 510	1.3 2.3	200 340	0.9 1.5
84	2134	P9000 P9200	480 710	2.1 3.2	0.77 0.67	19 17	290 500	1.3 2.2	220 370	1.0 1.6	150 250	0.7 1.1
96	2438	P9000 P9200	420 620	1.9 2.8	1.00 0.87	25 22	220 380	1.0 1.7	170 280	0.8 1.2	110 190	0.5 0.8
108	2743	P9000 P9200	370 550	1.6 2.4	1.25 1.10	32 28	180 300	0.8 1.3	130 220	0.6 1.0	90 150	0.4 0.7
120	3048	P9000 P9200	340 500	1.5 2.2	1.58 1.37	40 35	140 240	0.6 1.1	110 180	0.5 0.8	70 120	0.3 0.5
144	3658	P9000 P9200	280 410	1.2 1.8	2.25 1.94	57 49	100 170	0.4 0.8	70 130	0.3 0.6	50 80	0.2 0.4
168	4267	P9000 P9200	240 360	1.1 1.6	3.06 2.7	78 69	70 120	0.3 0.5	50 90	0.2 0.4	40 60	0.2 0.3
192	4877	P9000 P9200	210 310	0.9 1.4	4.00 3.48	102 88	60 90	0.3 0.4	40 70	0.2 0.3	NR 50	NR 0.2
216	5486	P9000 P9200	190 280	0.8 1.2	5.15 4.48	131 114	NR 70	NR 0.3	NR 60	NR 0.3	NR 40	NR 0.2
240	6096	P9000 P9200	170 250	0.8 1.1	6.32 5.49	161 139	NR 60	NR 0.3	NR 50	NR 0.2	NR 30	NR 0.1

NR = Not Recommended

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.
4. See page 66 for lateral bracing load reduction charts.

COLUMN LOADING DATA

Unbraced Height		Telestrut	Max. Design Load Applied at Col. Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P9000 P9200	3420 4420	15.2 19.7	8230 10530	36.6 46.8	8140 10450	36.2 46.5	7990 10310	35.5 45.9	7810 10130	34.7 45.1
36	914	P9000 P9200	3240 4240	14.4 18.9	8010 10330	35.6 46.0	7810 10130	34.7 45.1	7480 9820	33.3 43.7	7070 9430	31.4 41.9
48	1219	P9000 P9200	3010 4010	13.4 17.8	7710 10040	34.3 44.7	7350 9700	32.7 43.1	6760 9130	30.1 40.6	6040 8450	26.9 37.6
60	1524	P9000 P9200	2750 3740	12.2 16.6	7320 9660	32.6 43.0	6760 9130	30.1 40.6	5840 8250	26.0 36.7	4720 7180	21.0 31.9
72	1829	P9000 P9200	2470 3440	11.0 15.3	6840 9210	30.4 41.0	6040 8450	26.9 37.6	4720 7180	21.0 31.9	3330 5630	14.8 25.0
84	2134	P9000 P9200	2180 3130	9.7 13.9	6280 8670	27.9 38.6	5190 7630	23.1 33.9	3520 5910	15.7 26.3	2440 4150	10.9 18.5
96	2438	P9000 P9200	1890 2810	8.4 12.5	5630 8050	25.0 35.8	4210 6690	18.7 29.8	2690 4570	12.0 20.3	1870 3180	8.3 14.1
108	2743	P9000 P9200	1630 2490	7.3 11.1	4900 7350	21.8 32.7	3330 5630	14.8 25.0	2130 3610	9.5 16.1	1480 2510	6.6 11.2
120	3048	P9000 P9200	1410 2180	6.3 9.7	4080 6570	18.1 29.2	2690 4570	12.0 20.3	1720 2930	7.7 13.0	** 2030	** 9.0

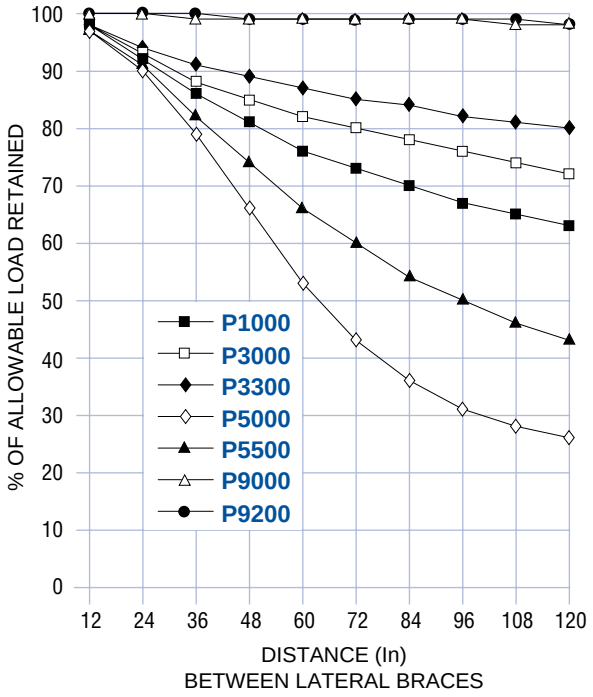
**$\frac{KL}{r}$ > 200

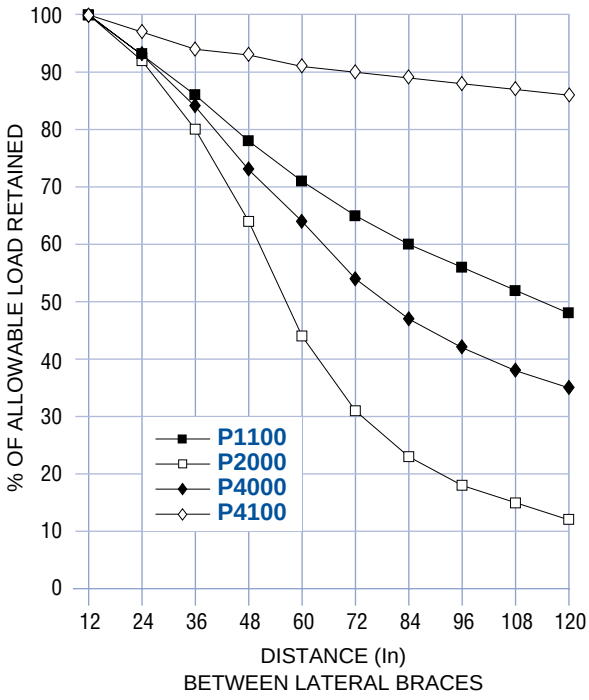
ELEMENTS OF SECTION

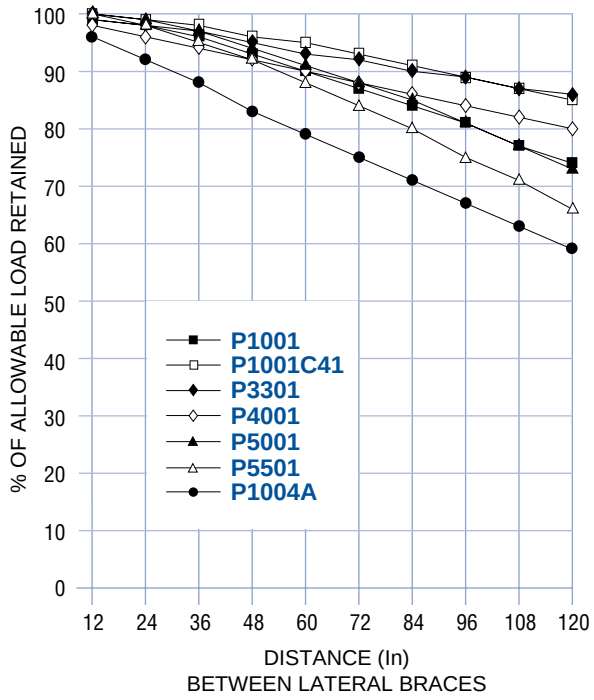
Telestrut	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P9000	.384	2.5	.164	6.8	.203	3.3	.653	1.7	.164	6.8	.203	3.3	.653	1.7
P9200	.489	3.2	.278	11.6	.297	4.9	.754	1.9	.278	11.6	.297	4.9	.754	1.9

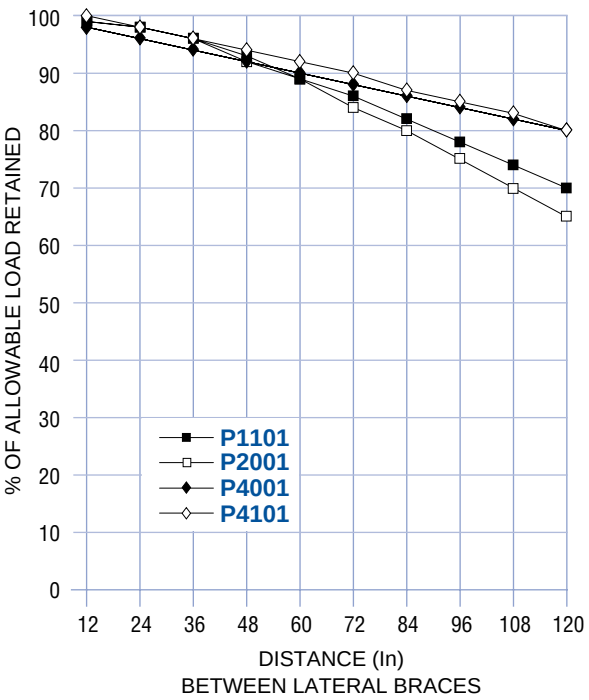
I - Moment of Inertia S - Section Modulus r - Radius of Gyration

LATERAL BRACING LOAD REDUCTION CHARTS

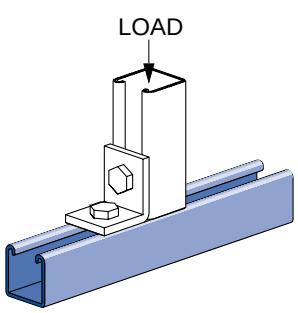
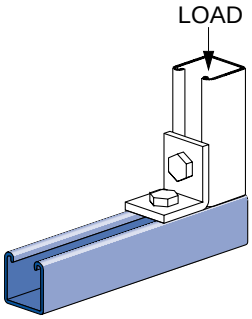
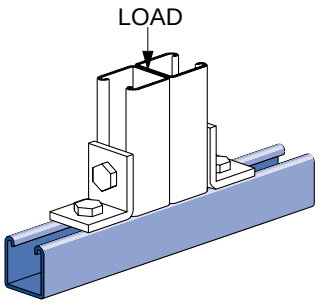








BEARING LOADS ON UNISTRUT CHANNELS

	Bearing Length 1⅝" (41 mm) 		Bearing Length 1⅝" (41 mm) 		Bearing Length 3¼"(92 mm) 	
Channel	Maximum Allowable Loads		Maximum Allowable Loads		Maximum Allowable Loads	
	Lbs	kN	Lbs	kN	Lbs	kN
P1000	5000	22.2	3500	15.6	8000	35.6
P1100	3500	15.6	2500	11.1	5500	24.5
P2000	2000	8.9	1500	6.7	3000	13.3
P3000	5000	22.2	3500	15.6	8000	35.6
P3300	6000	26.7	4000	17.8	9000	40.0
P4000	2200	9.8	1700	7.6	3500	15.6
P4100	3400	15.1	2600	11.6	4800	21.4
P5000	4000	17.8	2000	8.9	5500	24.5
P5500	5000	22.2	3500	15.6	8000	35.6
P9000	5000	22.2	3500	15.6	8000	35.6
P9200	5000	22.2	3500	15.6	8000	35.6

Safety Factor — 2½

	Page
Channel Nut Selection Chart	70
Channel Nuts With Springs	72
Channel Nuts Without Springs	73
Top Retainer Nuts	74
Stud Nuts	74
Hardware	75

MATERIAL
Unistrut channel nuts are manufactured from mild steel bars, and after machining operations are completed, they are case hardened, assuring positive biting action into the inturned edge of the Unistrut channel.

The standard channel nut conforms to ASTM A576 GR 1015. Screws conform to SAE J429 GR 2 (also meets and exceeds ASTM A307).

FINISHES
Nuts, bolts and washers are electro-galvanized (EG), ASTM B633 Type III SC1 finish, unless otherwise noted.

Many hardware items are also available in stainless steel. Consult factory for ordering information.

THREADS
All threads on the nuts and bolts are Unified and American coarse screw threads.

DESIGN BOLT TORQUE

BOLT SIZE	¼" 20	5/16" 18	⅜" 16	½" 13	⅝" 11	¾" 10
FOOT LBS.	6	11	19	50	100	125
N·m	8	15	25	70	135	170

DIMENSIONS
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

Many Unistrut nuts, bolts and hardware items are also available in standard metric dimensions. Consult factory for ordering information.

MAXIMUM ALLOWABLE PULL-OUT AND SLIP LOADS

Channel Nut Size/Thread	Gage	Channel	Allowable Pull-Out Strength		Resistance to Slip		Torque	
			Lbs	kN	Lbs	kN	Ft Lbs	N•m
¾" - 10	12	P1000 P3000 P5000 P5500	2500	11.1	1700	7.6	125*	170
⅝" - 11			2500	11.1	1500	6.7	100*	135
½" - 13			2000	8.9	1500	6.7	50	70
7⁄16" - 14			1400	6.2	1000	4.4	35	50
⅜" - 16			1000	4.4	800	3.6	19	25
5⁄16" - 18			800	3.6	500	2.2	11	15
¼" - 20			600	2.7	300	1.3	6	8
½" - 13	12	P3300	1500	6.7	1500	6.7	50	70
⅜" - 16			1000	4.4	800	3.6	19	25
5⁄16" - 18			800	3.6	500	2.2	11	15
¼" - 20			600	2.7	300	1.3	6	8
½" - 13	14	P1100 & P4100	1400	6.2	1000	4.4	50	70
⅜" - 16			1000	4.4	750	3.3	19	25
5⁄16" - 18			800	3.6	400	1.8	11	15
¼" - 20			600	2.7	300	1.3	6	8
½" - 13	16	P2000 & P4000	1000	4.4	1000	4.4	50	70
⅜" - 16			1000	4.4	750	3.3	19	25
5⁄16" - 18			800	3.6	400	1.8	11	15
¼" - 20			600	2.7	300	1.3	6	8

* May require ⅜" or ½" thick fitting.
Nut design loads include a minimum safety factor of 3.
Note: Refer to the Channel Nut Selection Chart on the following two pages for the part number.

CHANNEL NUT SELECTION CHART

FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

Channel Nut Part Number	Nut Size/ Thread	CHANNEL								
		P1000	P1100	P2000	P3000	P3300	P4000	P4100	P5000	P5500
P1006-0832	#8 - 32	■	■	■	■					
P1006-1024	#10 - 24	■	■	■	■					
P1006-1420	¼" - 20	■	■	■	■					
P1006T1420	¼" - 20	■	■	■	■	■	■	■	■	■
P1007	5/16" - 18	■	■	■	■					
P1008	⅜" - 16	■	■	■	■					
P1008T	⅜" - 16	■	■	■	■	■	■	■	■	■
P1009	7/16" - 14	■	■	■	■					
P1010	½" - 13	■	■	■	■					
P1010T	½" - 13	■	■	■	■				■	■
P1012	⅝" - 11	■	■	■	■				■	■
P1012S	⅝" - 11	■	■	■	■					
P1023	¾" - 10	■	■	■	■				■	■
P1023S	¾" - 10	■	■	■	■					
P1024	⅞" - 9	■	■	■	■				■	■
P1024S	⅞" - 9	■	■	■	■					
P3006-0832	#8 - 32	■	■	■	■	■	■	■	■	■
P3006-1024	#10 - 24	■	■	■	■	■	■	■	■	■
P3006-1420	¼" - 20	■	■	■	■	■	■	■	■	■
P3007	5/16" - 18	■	■	■	■	■	■	■	■	■
P3008	⅜" - 16	■	■	■	■	■	■	■	■	■
P3009	7/16" - 14	■	■	■	■	■	■	■	■	■
P3010	½" - 13	■	■	■	■				■	■
P3013	½" - 13					■	■	■		

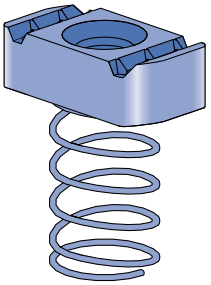
CHANNEL NUT SELECTION CHART

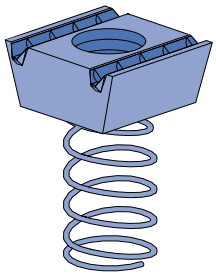
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

Channel Nut Part Number	Nut Size/ Thread	CHANNEL								
		P1000	P1100	P2000	P3000	P3300	P4000	P4100	P5000	P5500
P3016-0632	#6 - 32	■	■	■	■	■	■	■	■	■
P3016-0832	#8 - 32	■	■	■	■	■	■	■	■	■
P3016-1024	#10 - 24	■	■	■	■	■	■	■	■	■
P3016-1420	¼" - 20	■	■	■	■	■	■	■	■	■
P4006-0832	# 8 - 32					■	■	■		
P4006-1024	#10 - 24					■	■	■		
P4006-1420	¼" - 20					■	■	■		
P4007	5/16" - 18					■	■	■		
P4008	⅜" - 16					■	■	■		
P4009	7/16" - 14					■	■	■		
P4010	½" - 13					■	■	■		
P4010T	½" - 13					■	■	■		
P4012	⅝" - 11					■	■	■		
P4012S	⅝" - 11					■	■	■		
P4023	¾" - 10					■	■	■		
P4023S	¾" - 10					■	■	■		
P5506-0832	#8 - 32									■
P5506-1024	#10 - 24									■
P5506-1420	¼" - 20									■
P5507	5/16" - 18									■
P5508	⅜" - 16									■
P5509	7/16" - 14									■
P5510	½" - 13									■

P1006-0832 thru P1024S

CHANNEL NUTS WITH SPRINGS



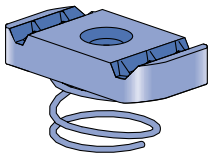


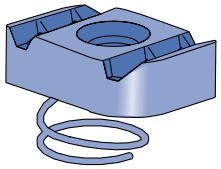
Note: Use with P1000, P1100, P2000 & P3000 channels.

Part Number	Size & Thread	Weight/C	
		Lbs	kg
P1006-0832	#8 - 32	7	3.2
P1006-1024	#10 - 24	7	3.2
P1006-1420	¼" - 20	7	3.2
P1007	5/16" - 18	6	2.7
P1008	⅜" - 16	10	4.5
P1009	7/16" - 14	9	4.1
P1010	½" - 13	12	5.4
P1012S	⅝" - 11	21	9.5
P1023S	¾" - 10	21	9.5
P1024S	⅞" - 9	21	9.5

P4006-0832 thru P4023S

CHANNEL NUTS WITH SPRINGS



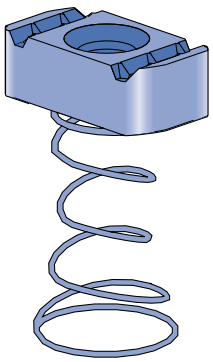


Note: Use with P3300, P4000 & P4100 channels.

Part Number	Size & Thread	Weight/C	
		Lbs	kg
P4006-0832	#8 - 32	7	3.2
P4006-1024	#10 - 24	7	3.2
P4006-1420	¼" - 20	7	3.2
P4007	5/16" - 18	6	2.7
P4008	⅜" - 16	9	4.1
P4009	7/16" - 14	9	4.1
P4010	½" - 13	8	3.6
P4012S	⅝" - 11	11	5.0
P4023S	¾" - 10	11	5.0

P5506-0832 thru P5510

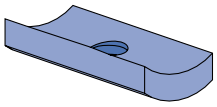
CHANNEL NUTS WITH SPRINGS

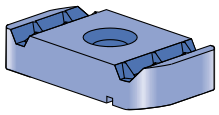


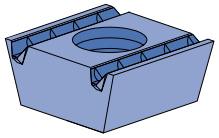
Note: Use with P5500 channels.

Part Number	Size & Thread	Weight/C	
		Lbs	kg
P5506-0832	#8 - 32	7	3.2
P5506-1024	#10 - 24	7	3.2
P5506-1420	¼" - 20	7	3.2
P5507	5/16" - 18	6	2.7
P5508	⅜" - 16	10	4.5
P5509	7/16" - 14	10	4.5
P5510	½" - 13	12	5.4

P1012 thru P3016-1420



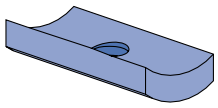


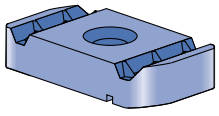


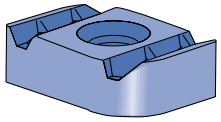
Note: Use with P1000, P1100, P2000, P3000, P5000 & P5500 channels.

Part Number	Size & Thread	Weight/C	
		Lbs	kg
P3016-0632	#6 - 32	2	.9
P3016-0832	#8 - 32	2	.9
P3016-1024	#10 - 24	4	1.8
P3016-1420	¼" - 20	4	1.8
P3006-0832	#8 - 32	6	2.7
P3006-1024	#10 - 24	6	2.7
P3006-1420	¼" - 20	6	2.7
P3007	5/16" - 18	6	2.7
P3008	⅜" - 16	9	4.1
P3009	7/16" - 14	9	4.1
P3010	½" - 13	11	5.0
P1012	⅝" - 11	20	9.1
P1023	¾" - 10	20	9.1
P1024	⅞" - 9	20	9.1

P3006-0832 thru P4023





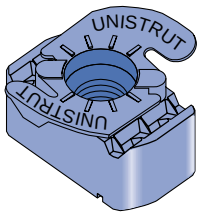


Note: Use with P3300, P4000 & P4100 channels.

Part Number	Size & Thread	Weight/C	
		Lbs	kg
P3016-0632	#6 - 32	2	.9
P3016-0832	#8 - 32	2	.9
P3016-1024	#10 - 24	4	1.8
P3016-1420	¼" - 20	4	1.8
P3006-0832	#8 - 32	6	2.7
P3006-1024	#10 - 24	6	2.7
P3006-1420	¼" - 20	6	2.7
P3007	5/16" - 18	6	2.7
P3008	⅜" - 16	9	4.1
P3009	7/16" - 14	9	4.1
P3013	½" - 13	8	3.6
P4012	⅝" - 11	10	4.5
P4023	¾" - 10	10	4.5

P1006T1420
P1008T
P1010T
P4010T

TOP RETAINER NUT

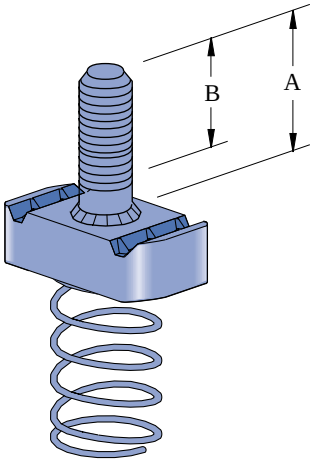


Part Number	Size & Thread	Weight/C	
		Lbs	kg
P1006T1420	¼" - 20	7	3.2
P1008T	⅜" - 16	10	4.5
P1010T	½" - 13	12	5.4
P4010T	½" - 13	8	3.6

Note: For appropriate channel see Channel Nut Selection Chart.

P2378-1 thru P2382-3

STUD NUTS

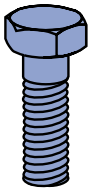


Part Number	Size & Thread	"A" Stud Length In	"B" Thread Length In	Weight/C	
				Lbs	kg
P2378-1	¼" - 20	⅞	⅝	8	3.6
P2378-2		1⅛	⅞	9	4.1
P2378-3		1⅜	1⅛	9	4.1
P2379-1	5/16" - 18	⅞	⅝	12	5.4
P2379-2		1⅛	⅞	12	5.4
P2379-3		1⅜	1⅛	13	5.9
P2380-1	⅜" - 16	⅞	⅝	13	5.9
P2380-2		1⅛	⅞	13	5.9
P2380-3		1⅜	1⅛	13	5.9
P2380-4		1⅝	1⅜	15	6.8
P2380-5		1⅞	1⅝	16	7.3
P2380-6		2⅛	1⅞	16	7.3
P2381-2	½" - 13	⅞	½	14	6.4
P2381-3		1⅛	¾	15	6.8
P2381-4		1⅜	1	17	7.7
P2381-5		1⅝	1¼	18	8.2
P2381-6		1⅞	1½	19	8.6
P2381-7		2⅛	1¾	20	9.1
P2382-2	⅝" - 11	1⅛	⅝	18	8.2
P2382-3		1⅜	⅞	20	9.1

Note: Use with P1000, P1100, P2000 & P3000 channels.

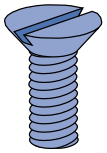
All Stud Nut grooves are serrated. Special stud lengths and thread lengths can be supplied upon request.

HEX HEAD CAP SCREWS



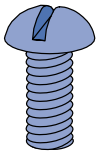
Part Number	Size	Weight/C	
		Lbs	kg
HHCS025044EG	¼" x 7/16"	1.0	0.5
HHCS025075EG	¼" x ¾"	1.3	0.6
HHCS025150EG	¼" x 1½"	2.6	1.2
HHCS031125EG	5/16" x 1¼"	3.6	1.6
HHCS037075EG	⅜" x ¾"	4.0	1.8
HHCS037087EG	⅜" x ⅞"	4.4	2.0
HHCS037100EG	⅜" x 1"	4.5	2.0
HHCS037125EG	⅜" x 1¼"	5.3	2.4
HHCS037150EG	⅜" x 1½"	6.0	2.7
HHCS037200EG	⅜" x 2"	7.6	3.4
HHCS037225EG	⅜" x 2¼"	8.4	3.8
HHCS037250EG	⅜" x 2½"	9.2	4.2
HHCS050094EG	½" x 15/16"	9.1	4.1
HHCS050119EG	½" x 1 3/16"	10.2	4.6
HHCS050150EG	½" x 1½"	11.6	5.3
HHCS050175EG	½" x 1¾"	13.1	5.9
HHCS050200EG	½" x 2"	14.6	6.6
HHCS050225EG	½" x 2¼"	16.0	7.3
HHCS050250EG	½" x 2½"	17.5	7.9

FLAT HEAD MACHINE SCREWS



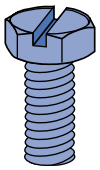
Part Number	Size	Weight/C	
		Lbs	kg
HFMS025062EG	¼" x 5/8"	1.2	0.5
HFMS031100EG	5/16" x 1"	2.6	1.2
HFMS050100EG	½" x 1"	9.3	4.2

ROUND HEAD MACHINE SCREWS



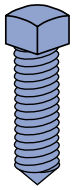
Part Number	Size	Weight/C	
		Lbs	kg
HRMS025050EG	¼" x ½"	1.0	0.5
HRMS025075EG	¼" x ¾"	1.2	0.5
HRMS025100EG	¼" x 1"	1.5	0.7
HRMS031100EG	5/16" x 1"	2.6	1.2
HRMS031125EG	5/16" x 1¼"	3.0	1.4
HRMS037100EG	⅜" x 1"	4.1	1.9
HRMS037125EG	⅜" x 1¼"	4.7	2.1
HRMS037150EG	⅜" x 1½"	5.3	2.4

HEX SLOTTED MACHINE SCREWS



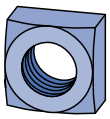
Part Number	Size	Weight/C	
		Lbs	kg
HSHS025050EG	¼" x ½"	1.4	0.6
HSHS025062EG	¼" x ⅝"	1.5	0.7
HSHS025075EG	¼" x ¾"	1.7	0.8
HSHS031100EG	5/16" x 1"	2.6	1.2
HSHS031125EG	5/16" x 1¼"	3.0	1.4
HSHS031150EG	5/16" x 1½"	3.4	1.5
HSHS037125EG	⅜" x 1¼"	5.3	2.4

CONE POINT SET SCREWS



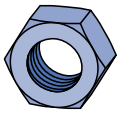
Part Number	Size	Weight/C	
		Lbs	kg
HCSS025100EG	¼" x 1"	2.8	1.3
HCSS031150EG	5/16" x 1½"	3.9	1.8
HCSS037150EG	⅜" x 1½"	4.5	2.0
HCSS037200EG	⅜" x 2"	6.1	2.8
HCSS050150EG	½" x 1½"	8.5	3.9
HCSS050200EG	½" x 2"	11.4	5.2
HCSS062150EG	⅝" x 1½"	14.5	6.6
HCSS062200EG	⅝" x 2"	23.0	10.4

SQUARE NUTS



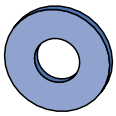
Part Number	Size	Weight/C	
		Lbs	kg
HSQN025EG	¼"	0.9	0.4
HSQN031EG	5/16"	1.6	0.7
HSQN037EG	⅜"	2.7	1.2
HSQN050EG	½"	5.8	2.6
HSQN062EG	⅝"	10.7	4.9
HSQN087EG	⅞"	24.9	11.3
HSQN100EG	1"	36.3	16.5

HEXAGON NUTS



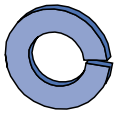
Part Number	Size	Weight/C	
		Lbs	kg
HHXN025EG	¼"	0.6	0.3
HHXN031EG	5/16"	1.2	0.5
HHXN037EG	⅜"	1.6	0.7
HHXN050EG	½"	4.8	2.2
HHXN062EG	⅝"	7.3	3.3
HHXN087EG	⅞"	19.0	8.6
HHXN100EG	1"	28.3	12.8

FLAT WASHERS



Part Number	Size	Weight/C	
		Lbs	kg
HFLW025EG	¼"	0.8	0.4
HFLW031EG	5⁄16"	1.0	0.5
HFLW037EG	⅜"	1.5	0.7
HFLW050EG	½"	3.5	1.6
HFLW062EG	⅝"	7.7	3.5
HFLW075EG	¾"	11.0	5.0
HFLW087EG	⅞"	15.3	6.9
HFLW100EG	1"	18.8	8.5

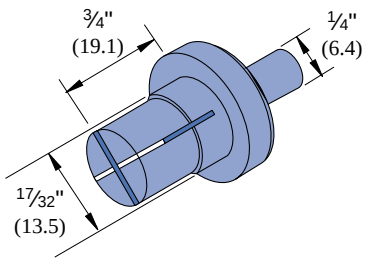
LOCK WASHERS

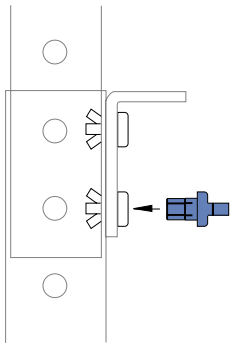


Part Number	Size	Weight/C	
		Lbs	kg
HLKW025EG	¼"	0.25	0.1
HLKW031EG	5⁄16"	0.41	0.2
HLKW037EG	⅜"	0.63	0.3
HLKW050EG	½"	1.32	0.6
HLKW062EG	⅝"	2.20	1.0
HLKW075EG	¾"	3.80	1.7
HLKW087EG	⅞"	6.0	2.7
HLKW100EG	1"	8.8	4.0

P9010

RIVET



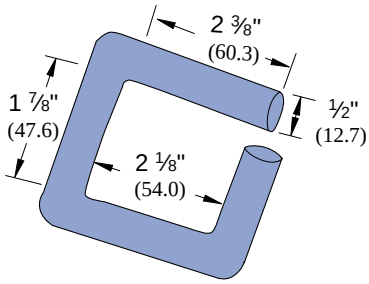


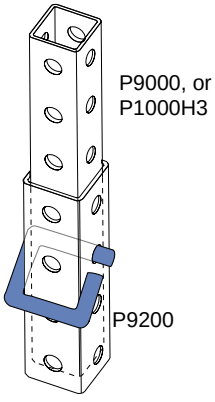
For use with P9000, P9200 & P1000 H3

Wt/C 10.0 Lbs (4.5 kg).

P9209

GRAVITY PIN

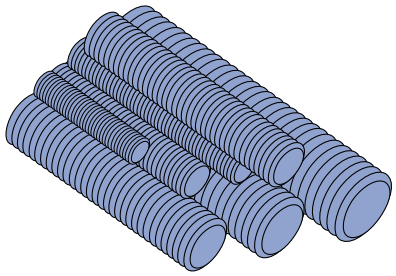




For use with P9000, P9200 & P1000 H3.

Wt/C 10.0 Lbs (4.5 kg)

STEEL THREADED ROD



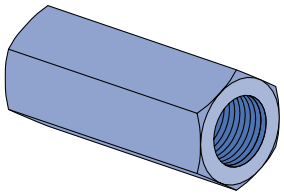
Part Number	Size	Thread per Inch	Weight/C Ft.	
			Lbs	kg
HTHR025	¼"	20	13	5.9
HTHR031	5/16"	18	20	9.1
HTHR037	⅜"	16	30	13.6
HTHR044	7/16"	14	30	13.6
HTHR050	½"	13	53	24.0
HTHR062	⅝"	11	84	38.1
HTHR075	¾"	10	124	56.2
HTHR087	⅞"	9	170	77.1
HTHR100	1"	8	223	101.2

Load Carrying Capacity of Threaded Hot Rolled Steel Conforming to ASTM A575 and A576

Nominal Diameter	Root Area		Maximum Safe Load at 650°F (343°C)	
In	In^2	mm^2	Lbs	kN
⅜	0.068	43.9	610	2.7
½	0.126	81.3	1,130	5.0
⅝	0.202	130.3	1,810	8.0
¾	0.302	194.8	2,710	12.0
⅞	0.419	270.3	3,770	16.8
1	0.552	356.1	4,960	22.1
1⅛	0.693	447.1	6,230	27.7
1¼	0.889	573.5	8,000	35.6
1⅜	1.053	679.4	9,470	42.1
1½	1.293	834.2	11,630	51.7
1⅝	1.515	977.4	13,630	60.6
1¾	1.714	1105.8	15,690	69.8
1⅞	2.048	1321.3	18,430	82.0
2	2.292	1478.7	20,690	92.0

"Extracted from American Standard Code for pressure piping (ASA B31.1-1973, with permission of the publisher, the American Society of Mechanical Engineers, United Engineering Center, 345 E. 47th Street, New York, New York)."

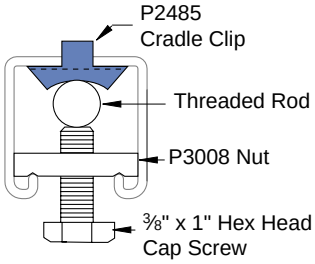
STEEL COUPLER NUTS

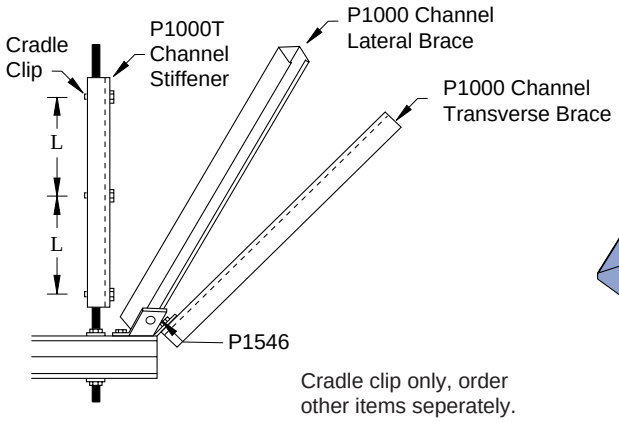


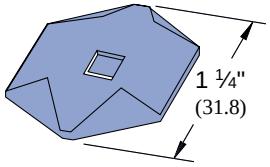
Part Number	Size/Thread	Length	Weight/C	
			Lbs	kg
HRCN025	¼" - 20	⅞"	1.9	0.9
HRCN031	5/16" - 18	1¾"	7.5	3.4
HRCN037	⅜" - 16	1¾"	9.0	4.1
HRCN044	7/16" - 14	1¾"	10.4	4.7
HRCN050	½" - 13	1¾"	10.0	4.5
HRCN062	⅝" - 11	2⅛"	18.0	8.2
HRCN075	¾" - 10	2¼"	28.0	12.7
HRCN087	⅞" - 9	2½"	55.0	25.0
HRCN100	1" - 8	2¾"	73.0	33.1

P2485

CRADLE CLIP







Refer to seismic bracing systems catalog.

Wt/C 3.0 Lbs (1.4 kg)

Rod Size	Root Area		Root Diameter		Radius of Gyration		Max. Allowable Rod Compression @ 100%		Clip Spacing (L) Rod Stress at 50% 4,500 PSI 31,026 kPa		75% 6,750 PSI 16,540 kPa		100% 9,000 PSI 62,053 kPa	
In	In²	mm²	In	mm	In	mm	Lbs	kN	In	mm	In	mm	In	mm
⅜	0.068	43.87	0.314	7.98	0.0785	1.99	610	2.7	14	356	12	305	10	254
½	0.126	81.29	0.425	10.80	0.1063	2.70	1130	5.0	20	508	16	406	14	356
⅝	0.202	130.3	0.536	13.61	0.1341	3.41	1810	8.1	24	610	20	508	16	406
¾	0.302	194.8	0.652	16.56	0.1630	4.14	2710	12.1	30	762	24	610	20	508
⅞	0.419	270.3	0.730	18.54	0.183	4.65	3770	16.8	35	889	28	711	25	635
1	0.552	356.1	0.838	21.29	0.210	5.33	4960	22.1	40	1016	33	838	28	711

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MATERIAL
Fittings, unless noted, are made from hot-rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A575, A576, A635, or A36. The fitting steel also meets the physical requirements of ASTM A570 GR 33. The pickling of the steel produces a smooth surface free from scale.

Many fittings are also available in stainless steel, aluminum and fiberglass. Consult factory for ordering information.

FINISHES
Fittings are available in: Perma-Green II (GR), electro-galvanized (EG), conforming to ASTM B633 Type III SC1; Hot-dipped galvanized (HG), conforming to ASTM A123 or A153 and plain (PL).

APPLICATION
All parts drawings illustrate only one application of each fitting. In most cases many other applications are possible. The channels shown in the illustrations are P1000, 1⅝" square, except where noted otherwise. All 9/16" diameter holes use ½" x 15/16" hex head cap screws and ½" nuts – P1010, P4010 or P5510 – depending on the channel used. Nuts and bolts are not included with the fitting and must be ordered separately.

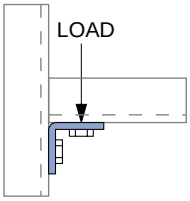
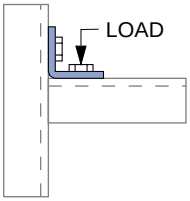
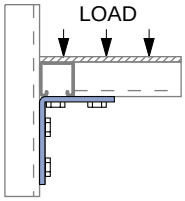
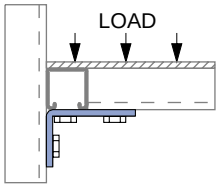
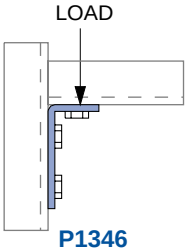
DESIGN BOLT TORQUE

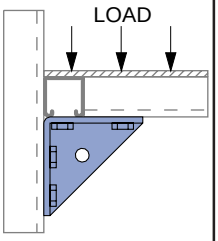
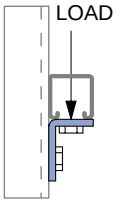
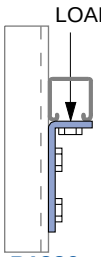
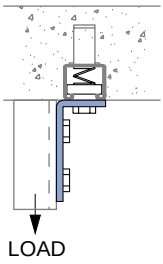
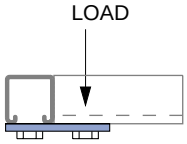
BOLT SIZE	¼" 20	5/16" 18	⅜" 16	½" 13	⅝" 11	¾" 10
FOOT LBS.	6	11	19	50	100	125
N·m	8	15	25	70	135	170

DIMENSIONS
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

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

DESIGN LOAD DATA FOR TYPICAL UNISTRUT CHANNEL CONNECTIONS

90° Fittings (When used in position shown)										
Channel Thickness	 P1026		 P1026		 P1325 P2235		 P1458 P1579		 P1346	
	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
12 ga.	1500	6.7	1000	4.4	2000	8.9	1500	6.7	2000	8.9
14 ga.	1000	4.4	650	2.9	2000	8.9	1000	4.4	1500	6.7
16 ga.	750	3.3	500	2.2	1500	6.7	1000	4.4	900	4.0

90° Fittings (When used in position shown)									Flat Plate Fittings	
Channel Thickness	 P2484		 P1068		 P1326		 P1346		 P1065	
	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
12 ga.	3000	13.3	500	2.2	500	2.2	1200	5.3	1000	4.4
14 ga.	2000	8.9	500	2.2	500	2.2	1200	5.3	800	3.6
16 ga.	1500	6.7	500	2.2	500	2.2	1000	4.4	600	2.7

Both ends of beams supported.

Load diagrams indicate up to three design loads, one for 12 gage sections (P1000), one for 14 gage sections (P1100), and one for 16 gage sections (P2000).

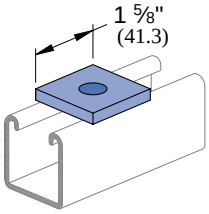
Load data is based on P1010 nut and ½" bolt.

Safety factor = 2½ based on ultimate strength of connection.

FLAT PLATE FITTINGS

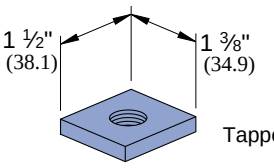
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

P1062, P1063, P1064, P1964, P2471, P2490



Part Number	Bolt Size	Hole Size	Weight/C	
			Lbs	kg
P1062	5/16"	11/32"	18	8.2
P1063	3/8"	7/16"	18	8.2
P1064	1/2"	9/16"	17	7.7
P1964	5/8"	11/16"	16	7.3
P2471	3/4"	13/16"	15	6.8
P2490	7/8"	15/16"	14	6.4

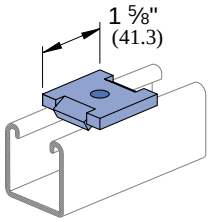
P1959 P1960 P1961



Material: 3/8" (9.5) thick.

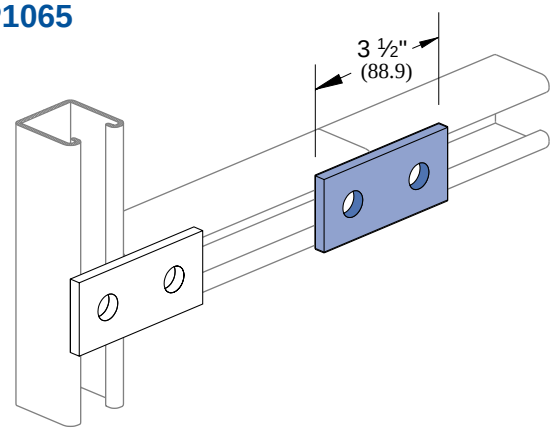
Part Number	U.S. Std. Thd Size	Weight/C	
		Lbs	kg
P1959	3/8"-16	21	9.5
P1960	1/2"-13	20	9.1
P1961	5/8"-11	19	8.6

P2862 P2863 P2864



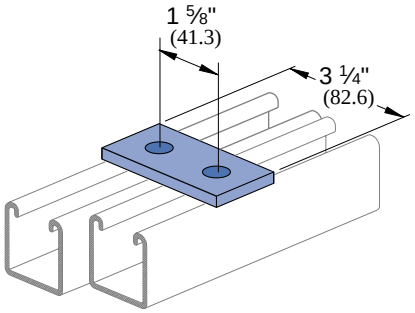
Part Number	Bolt Size	Hole Size	Weight/C	
			Lbs	kg
P2862	5/16"	11/32"	18	8.2
P2863	3/8"	7/16"	18	8.2
P2864	1/2"	9/16"	17	7.7

P1065



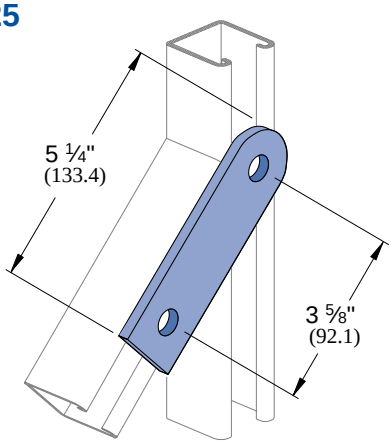
Wt/C 38 Lbs (17.2 kg)

P1924



Wt/C 35 Lbs (15.9 kg)

P2325

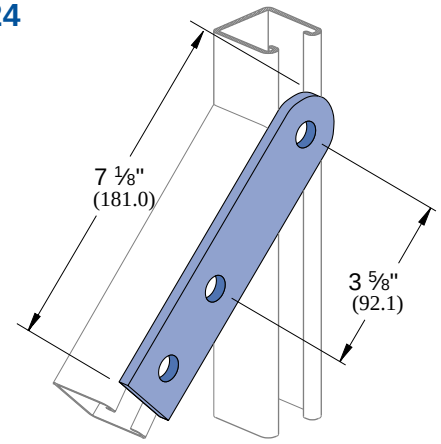


Wt/C 55 Lbs (24.9 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

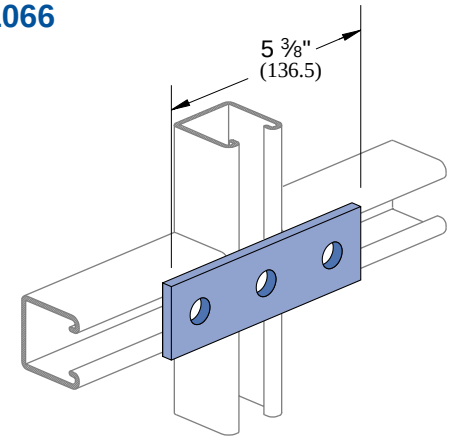
FLAT PLATE FITTINGS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P2324



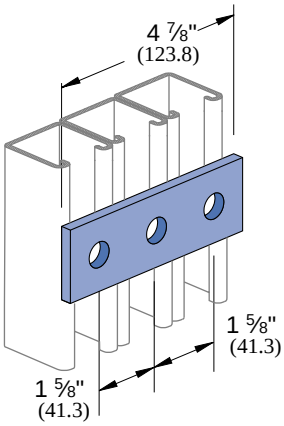
Wt/C 75 Lbs (34.0 kg)

P1066



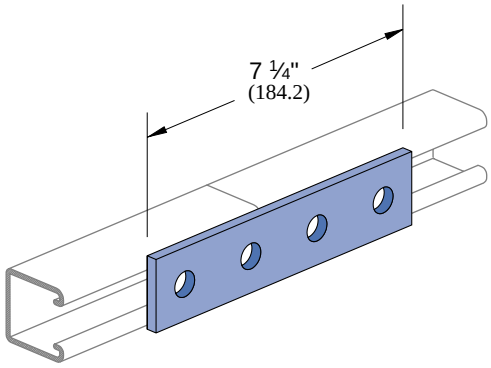
Wt/C 56 Lbs (25.4 kg)

P1925



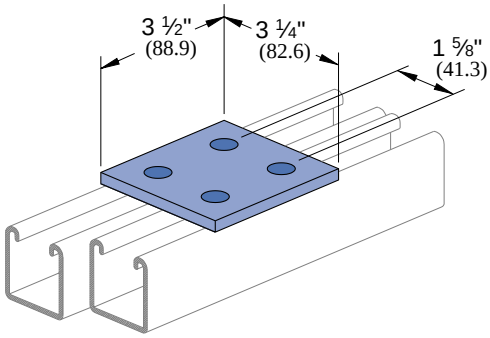
Wt/C 50 Lbs (22.7 kg)

P1067



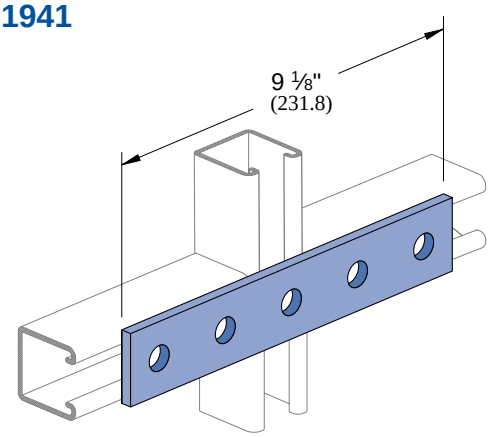
Wt/C 78 Lbs (35.4 kg)

P2079



Wt/C 73 Lbs (33.1 kg)

P1941



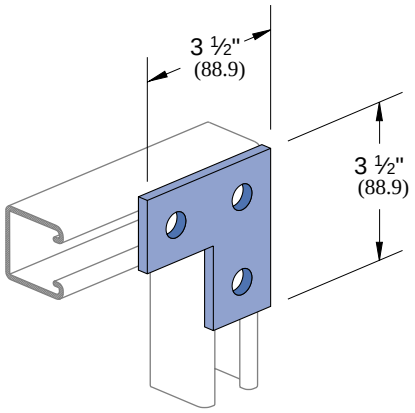
Wt/C 94 Lbs (42.6 kg)

Hole Size	Hole Spacing	Width	Thickness
⁹⁄₁₆" Diameter 14.3 mm	¹³⁄₁₆" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

FLAT PLATE FITTINGS

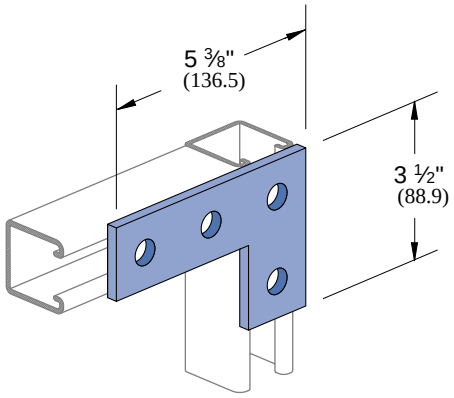
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

P1036



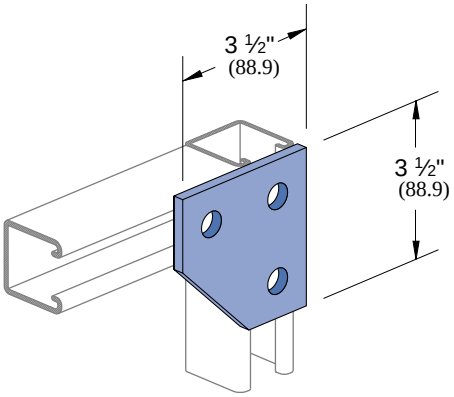
Wt/C 58 Lbs (26.3 kg)

P1380 A



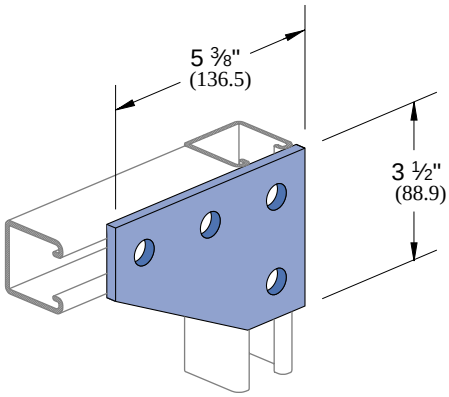
Wt/C 80 Lbs (36.3 kg)

P1334



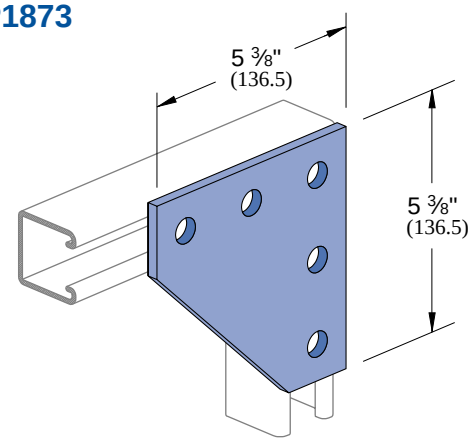
Wt/C 70 Lbs (31.8 kg)

P1380



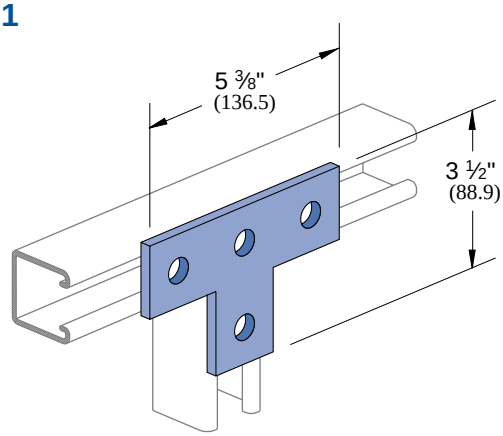
Wt/C 105 Lbs (47.6 kg)

P1873



Wt/C 150 Lbs (68.0 kg)

P1031

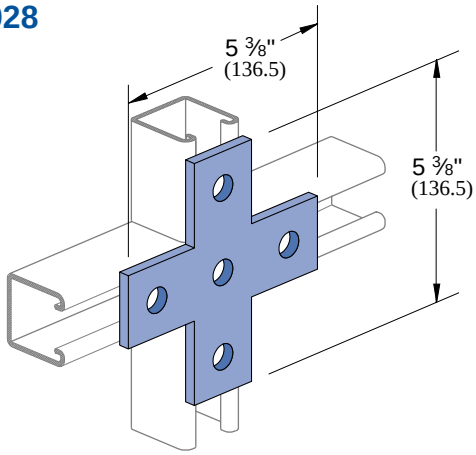


Wt/C 80 Lbs (36.3 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

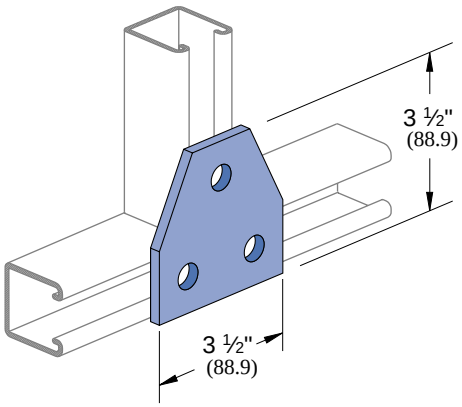
FLAT PLATE FITTINGS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1028



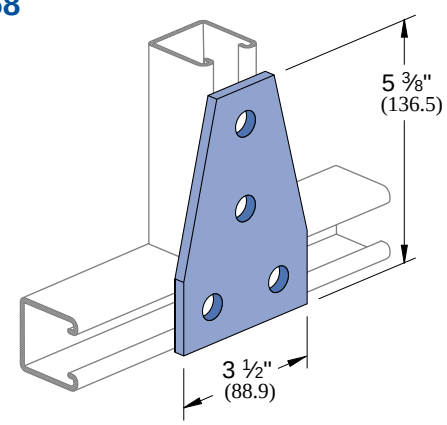
Wt/C 105 Lbs (47.6 kg)

P1356



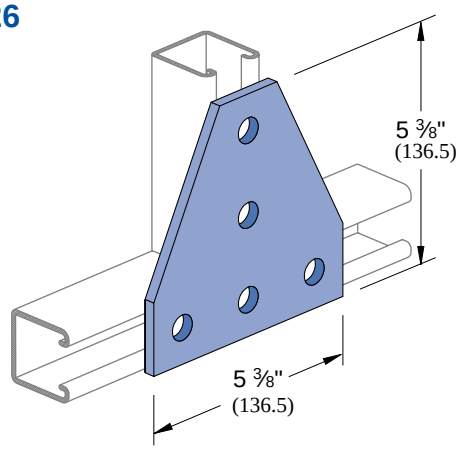
Wt/C 70 Lbs (31.8 kg)

P1358



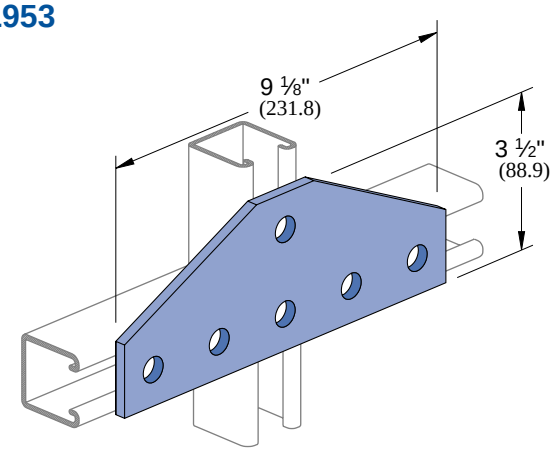
Wt/C 105 Lbs (47.6 kg)

P1726



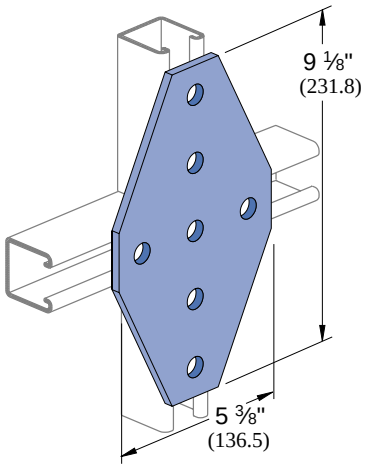
Wt/C 148 Lbs (67.1 kg)

P1953



Wt/C 176 Lbs (79.8 kg)

P1950



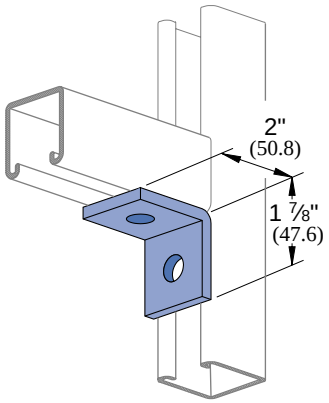
Wt/C 240 Lbs (108.9 kg)

Hole Size	Hole Spacing	Width	Thickness
⁹⁄₁₆" Diameter 14.3 mm	¹³⁄₁₆" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

NINETY DEGREE ANGLE FITTINGS

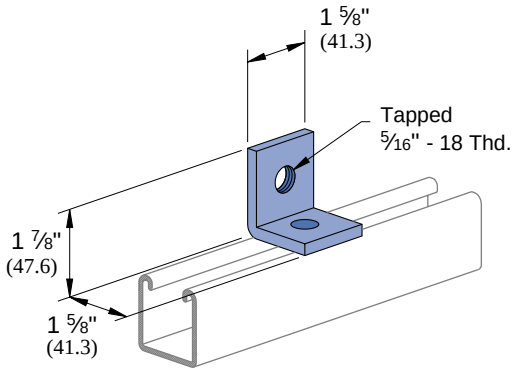
FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

P1026



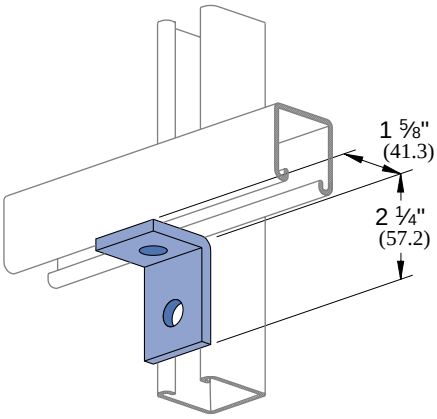
Wt/C 38 Lbs (17.2 kg)

P1723



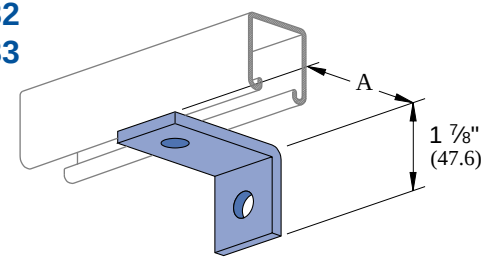
Wt/C 34 Lbs (15.4 kg)

P1068



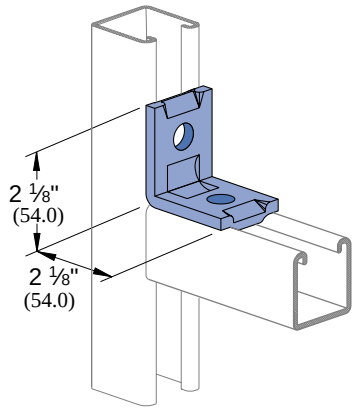
Wt/C 38 Lbs (17.2 kg)

P1281
P1282
P1283



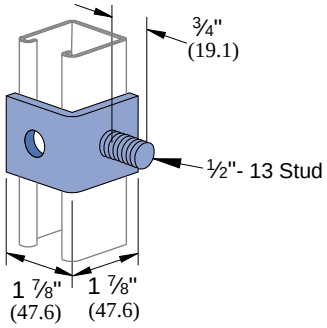
Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P1281	3	76.2	49	22.2
P1282	3½	88.9	54	24.5
P1283	4	101.6	61	27.7

P2626



Wt/C 40 Lbs (18.1 kg)

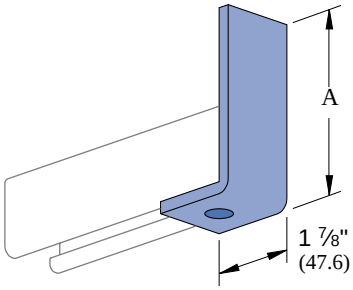
P1315



Wt/C 45 Lbs (20.4 kg)

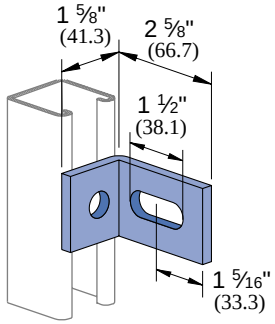
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1 7/8" (47.6 mm) On Center	1 5/8" 41.3 mm	1/4" 6.4 mm

P1538 A thru P1538 D



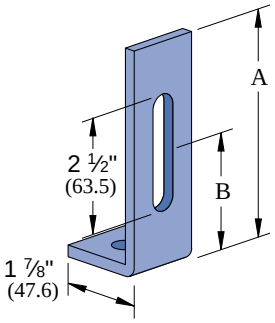
Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P1538 A	3⅞	98.4	61	27.7
P1538 B	5⅞	149.2	84	38.1
P1538 C	7⅞	200.0	107	48.5
P1538 D	9⅞	250.8	130	59.0

P1750



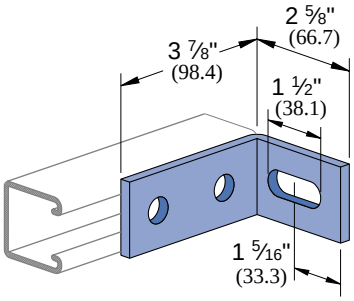
Wt/C 38 Lbs (17.2 kg)

P1498 P1499



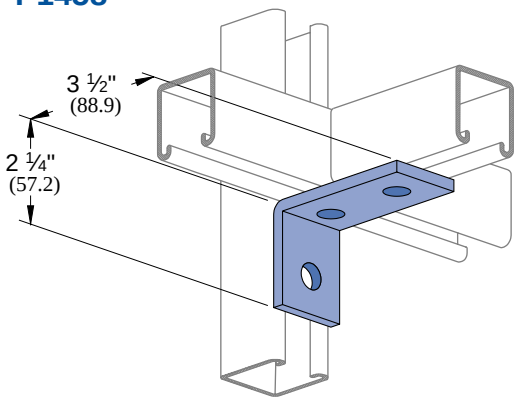
Part Number	"A"		"B"		Weight/C	
	In	mm	In	mm	Lbs	kg
P1498	4⅞	123.8	2½	63.5	65	29.5
P1499	6⅞	174.6	4½	114.3	85	38.6

P1747



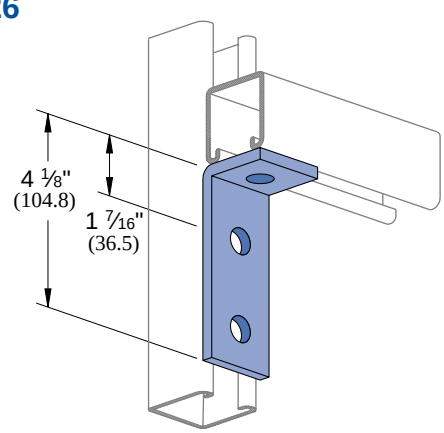
Wt/C 66 Lbs (29.9 kg)

P1458



Wt/C 58 Lbs (26.3 kg)

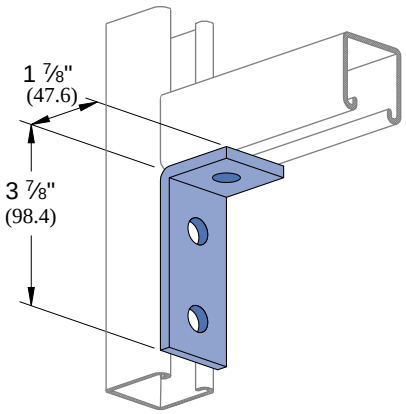
P1326



Wt/C 58 Lbs (26.3 kg)

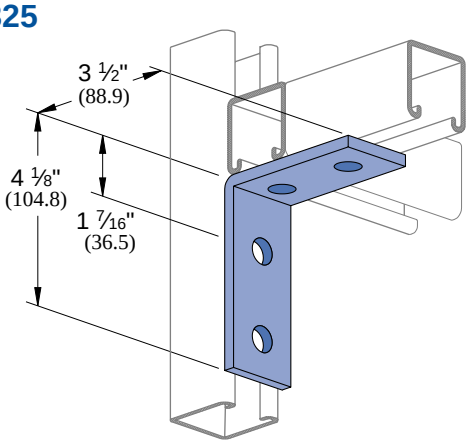
Hole Size	Hole Spacing	Width	Thickness
9⁄16" Diameter 14.3 mm	13⁄16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P1346



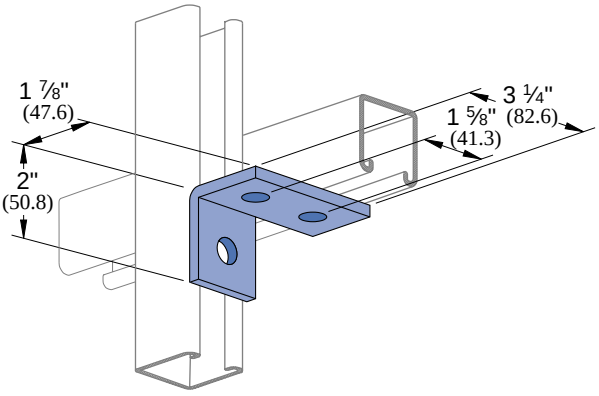
Wt/C 58 Lbs (26.3 kg)

P1325



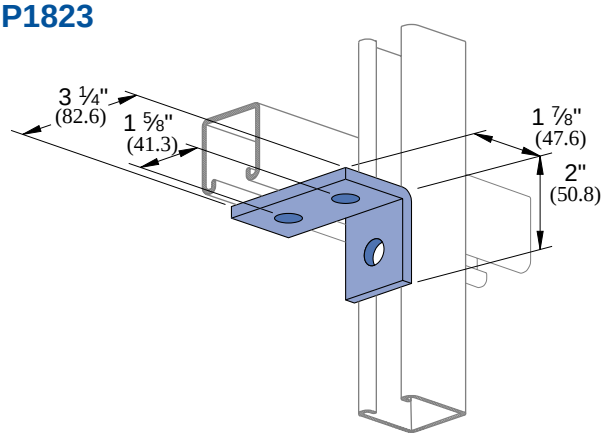
Wt/C 78 Lbs (35.4 kg)

P1822



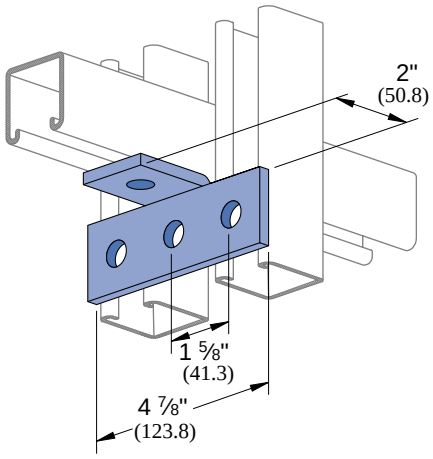
Wt/C 55 Lbs (24.9 kg)

P1823



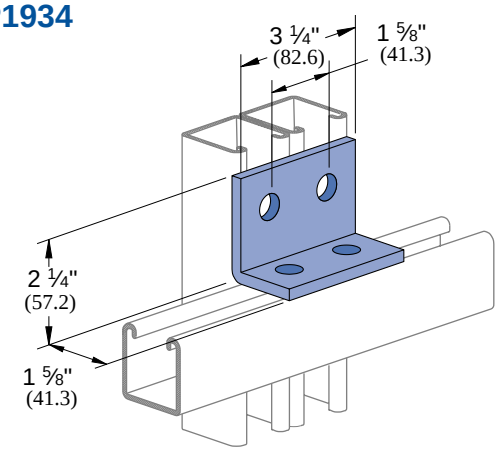
Wt/C 55 Lbs (24.9 kg)

P1821



Wt/C 71 Lbs (32.2 kg)

P1934

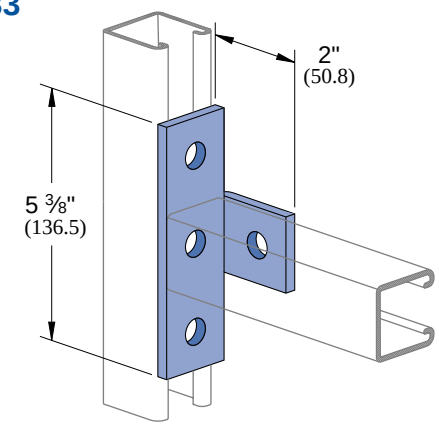


Wt/C 75 Lbs (34.0 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

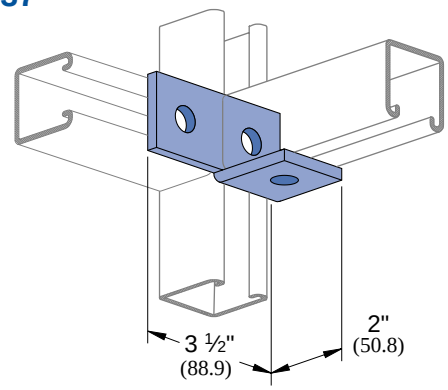
NINETY DEGREE ANGLE FITTINGS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1033



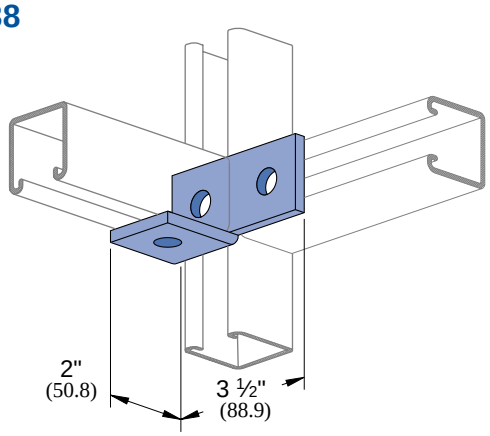
Wt/C 80 Lbs (36.3 kg)

P1037



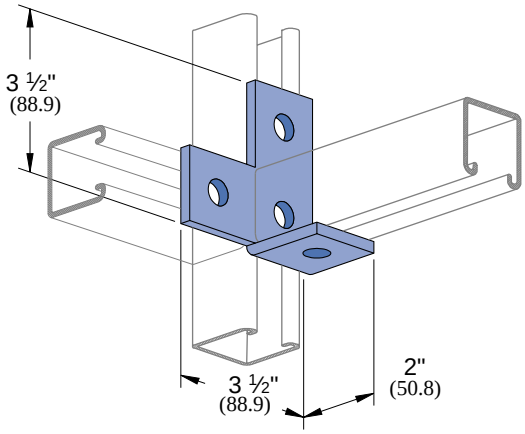
Wt/C 58 Lbs (26.3 kg)

P1038



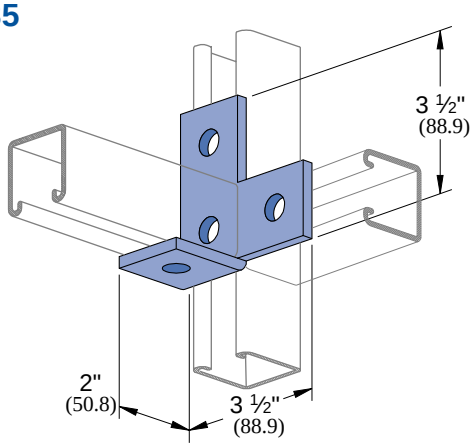
Wt/C 58 Lbs (26.3 kg)

P1034



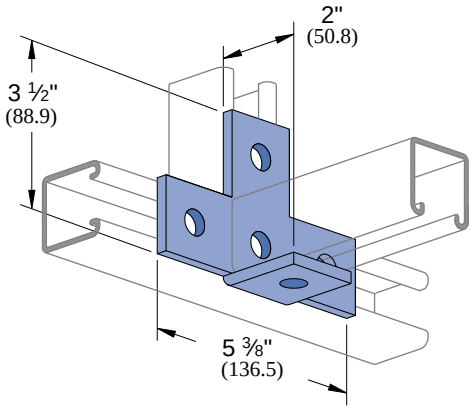
Wt/C 80 Lbs (36.3 kg)

P1035



Wt/C 80 Lbs (36.3 kg)

P1029



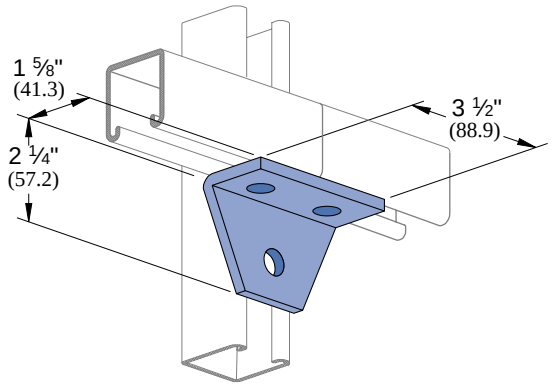
Wt/C 105 Lbs (47.6 kg)

Hole Size	Hole Spacing	Width	Thickness
⁹⁄₁₆" Diameter 14.3 mm	¹³⁄₁₆" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

NINETY DEGREE ANGLE FITTINGS

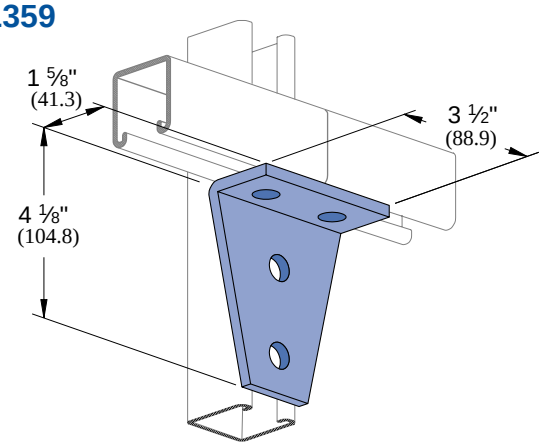
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1357



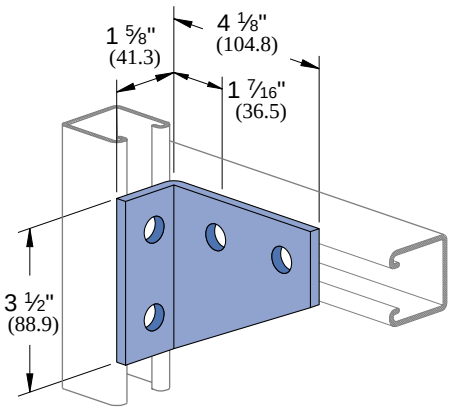
Wt/C 70 Lbs (31.8 kg)

P1359



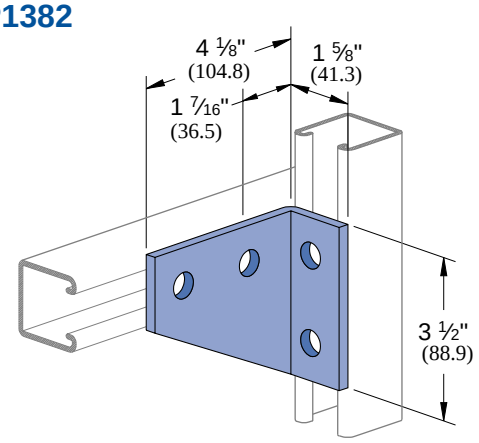
Wt/C 105 Lbs (47.6 kg)

P1381



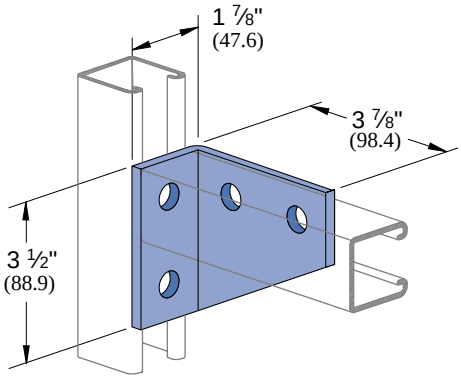
Wt/C 105 Lbs (47.6 kg)

P1382



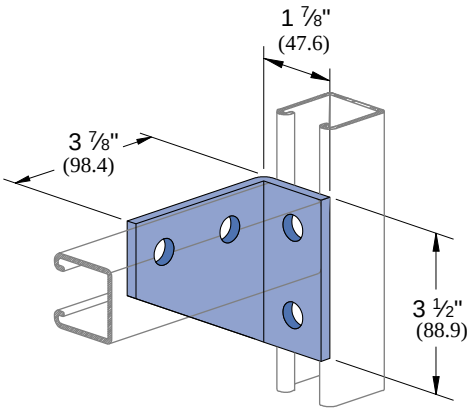
Wt/C 105 Lbs (47.6 kg)

P1290



Wt/C 101 Lbs (45.8 kg)

P1291

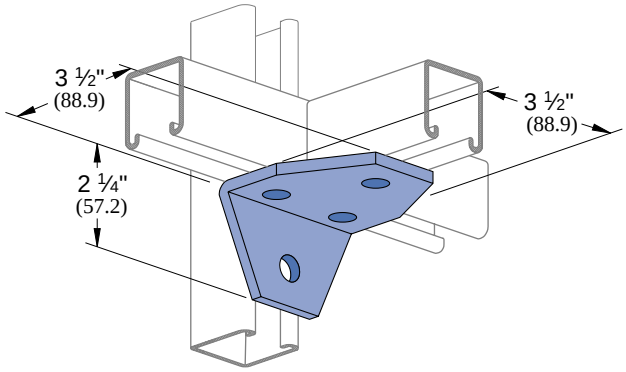


Wt/C 101 Lbs (45.8 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

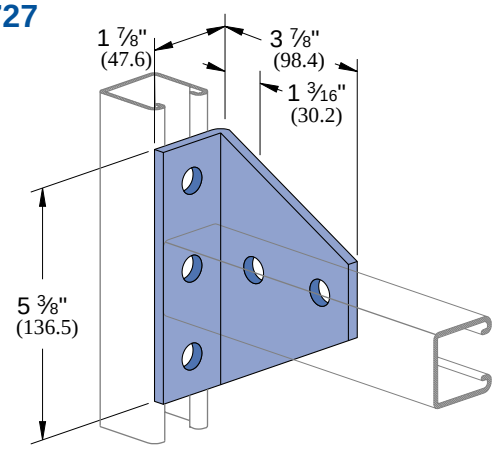
NINETY DEGREE ANGLE FITTINGS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1579



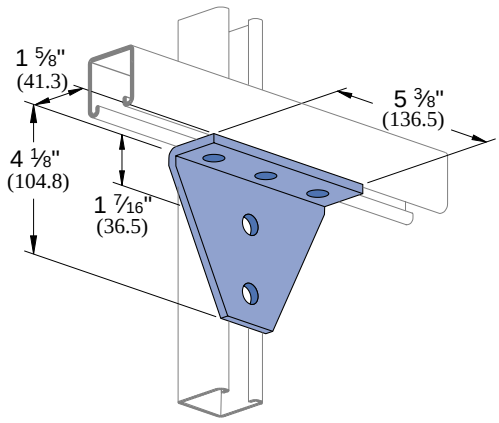
Wt/C 103 Lbs (46.7 kg)

P1727



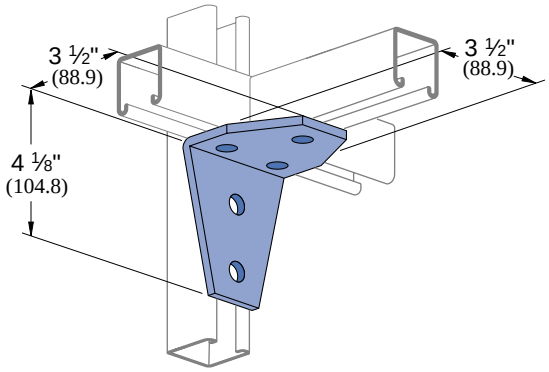
Wt/C 154 Lbs (69.9 kg)

P1728



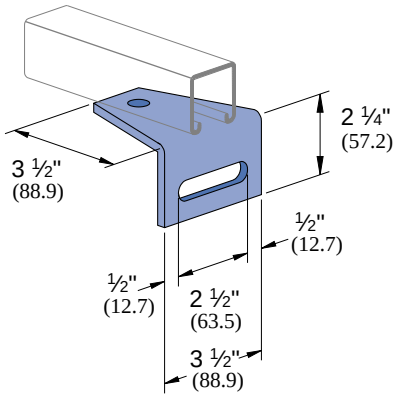
Wt/C 154 Lbs (69.9 kg)

P2235



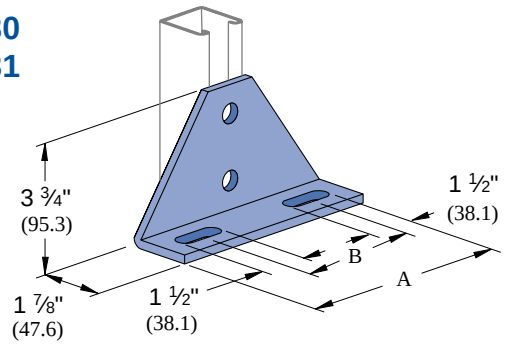
Wt/C 135 Lbs (61.2 kg)

P1713



Wt/C 97 Lbs (44.0 kg)

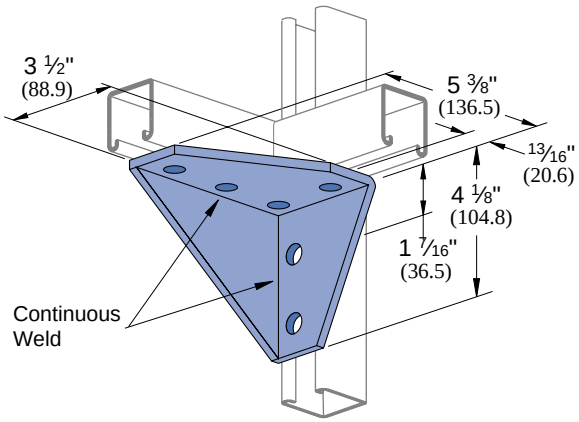
P1130
P1131



Part Number	"A"		"B"		Weight/C	
	In	mm	In	mm	Lbs	kg
P1130	6⅝	168.3	4	101.6	190	86.2
P1131	8⅝	219.1	6	152.4	242	109.8

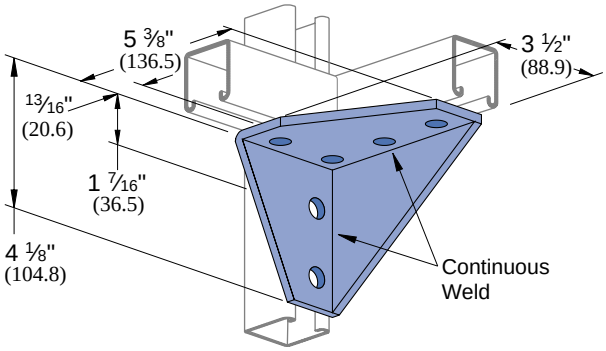
Hole Size	Hole Spacing	Width	Thickness
9⁄16" Diameter 14.3 mm	13⁄16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P1956



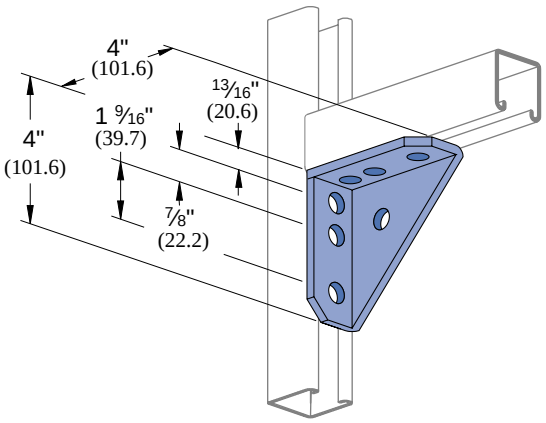
Wt/C 230 Lbs (104.3 kg)

P1957



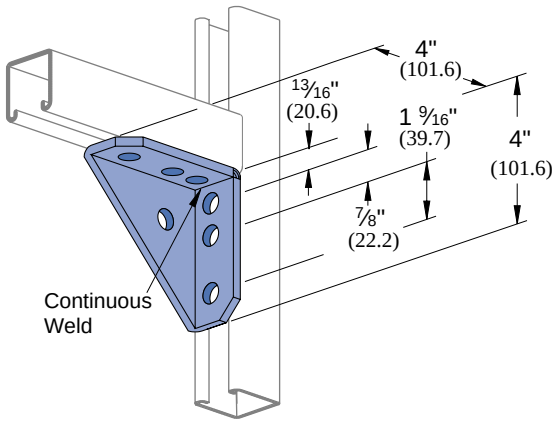
Wt/C 230 Lbs (104.3 kg)

P2484



Wt/C 134 Lbs (60.8 kg)

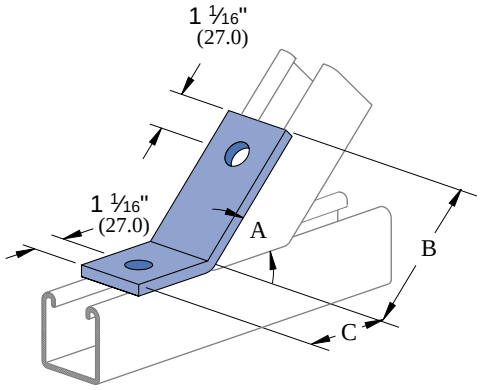
P2484 W



Wt/C 134 Lbs (60.8 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

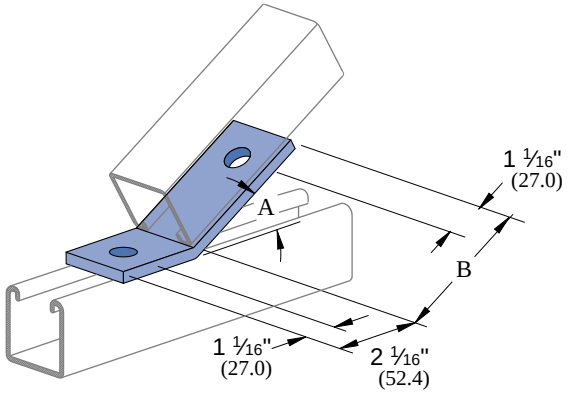
P1546, P2094 thru P2100



Wt/C 58 Lbs (26.3 kg)

Part Number	"A"		"B"		"C"	
	Degree	rad	In	mm	In	mm
P2094	82½°	.46	3⁹⁄16	90.5	1¹¹⁄16	42.9
P2095	75°	.42	3⁹⁄16	90.5	1¹¹⁄16	42.9
P2096	67½°	.38	3½	88.9	1¾	44.5
P2097	60°	.33	3⅜	85.7	1⅞	47.6
P2098	52½°	.29	3¼	82.6	2⅛16	52.4
P1546	45°	.25	3	76.2	2⅝16	58.7
P2099	37½°	.21	3½	88.9	1¹³⁄16	46.0
P2100	37½°	.21	2¹¹⁄16	68.3	2⅝	66.7

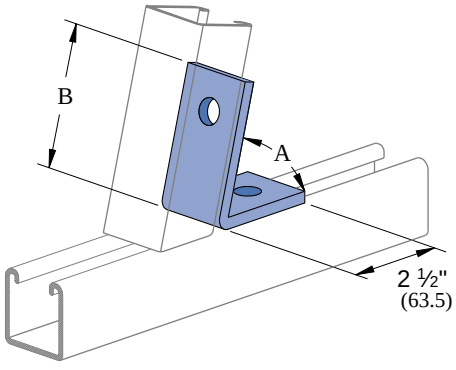
P2101 thru P2104



Wt/C 58 Lbs (26.3 kg)

Part Number	"A"		"B"	
	Degree	rad	In	mm
P2101	30°	.17	3¼	82.6
P2102	22½°	.13	3⁵⁄16	84.1
P2103	15°	.08	3⁵⁄16	84.1
P2104	7½°	.04	3⁵⁄16	84.1

P1186, P2105 thru P2110



Wt/C 58 Lbs (26.3 kg)

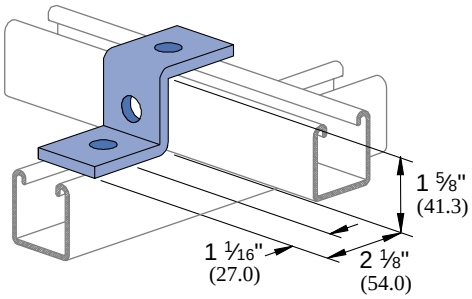
Part Number	"A"		"B"	
	Degree	rad	In	mm
P2105	82½°	.46	3⅜16	81.0
P2106	75°	.42	3⅜16	81.0
P2107	67½°	.38	3⅛	79.4
P2108	60°	.33	3⅛	79.4
P2109	52½°	.29	3⅛16	77.8
P1186	45°	.25	3⅛	79.4
P2110	37½°	.21	3	76.2

Hole Size	Hole Spacing	Width	Thickness
⁹⁄16" Diameter 14.3 mm	¹³⁄16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

"Z" SHAPE FITTINGS

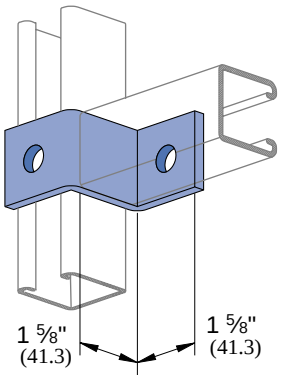
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1045



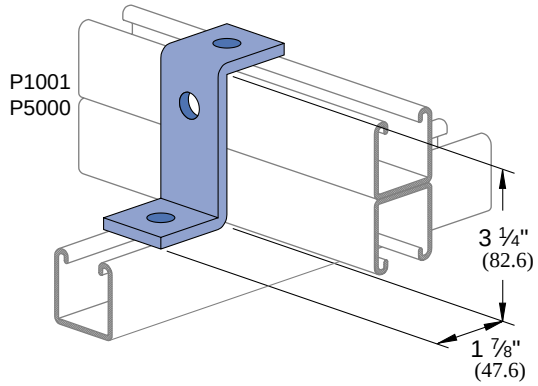
Wt/C 55 Lbs (24.9 kg)

P1347



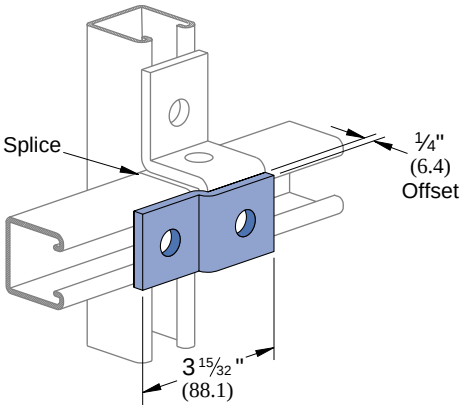
Wt/C 55 Lbs (24.9 kg)

P1453



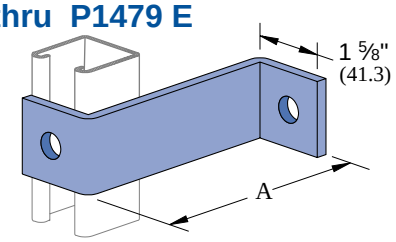
Wt/C 70 Lbs (31.8 kg)

P1454



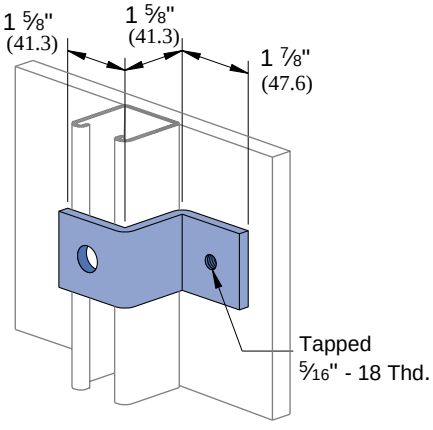
Wt/C 38 Lbs (17.2 kg)

P1479 A thru P1479 E



Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P1479 A	4	101.6	81	36.7
P1479 B	5	127.0	92	41.7
P1479 C	6	152.4	104	47.2
P1479 D	7	177.8	115	52.2
P1479 E	8	203.2	127	57.6

P1730

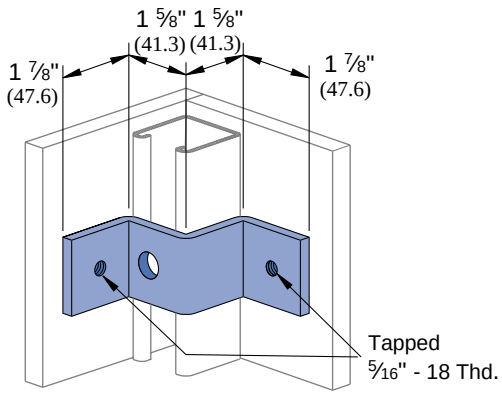


Wt/C 54 Lbs (24.5 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

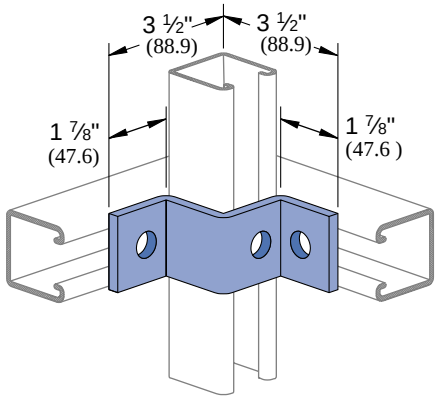
"Z" SHAPE FITTINGS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1734



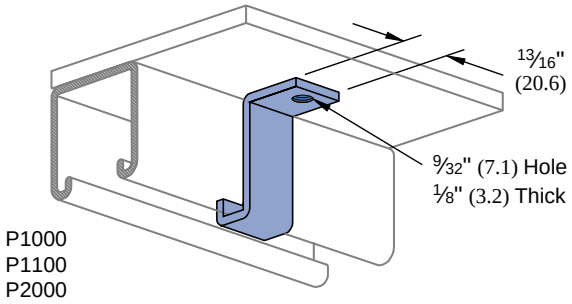
Wt/C 70 Lbs (31.8 kg)

P1736



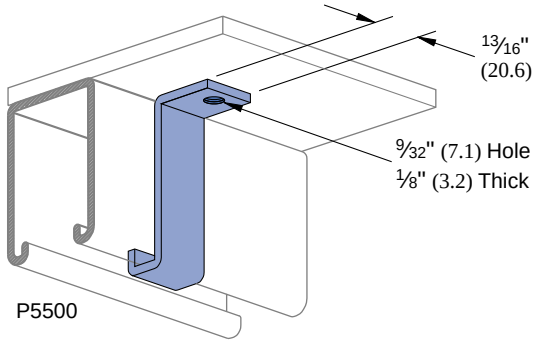
Wt/C 70 Lbs (31.8 Kg)

P2360



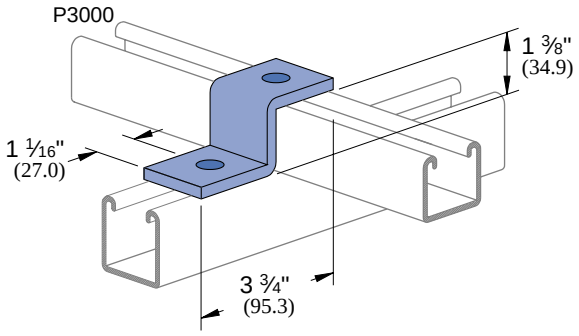
Wt/C 9 Lbs (4.1 kg)

P5560



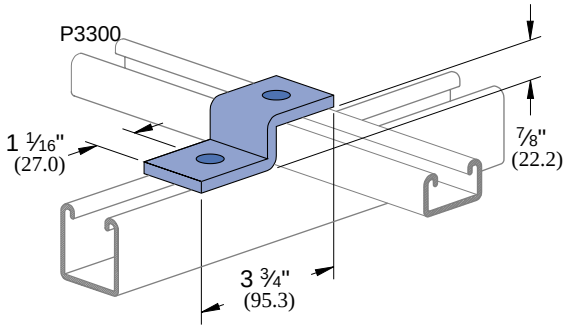
Wt/C 11 Lbs (5.0 kg)

P3045



Wt/C 53 Lbs (24.0 kg)

P3345



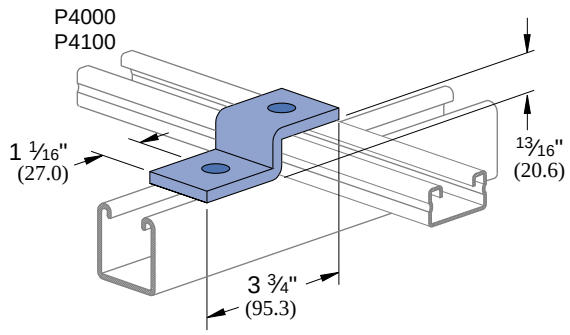
Wt/C 47 Lbs (21.3 kg)

Hole Size	Hole Spacing	Width	Thickness
⅜16" Diameter 14.3 mm	13⁄16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

"Z" & "U" SHAPE FITTINGS

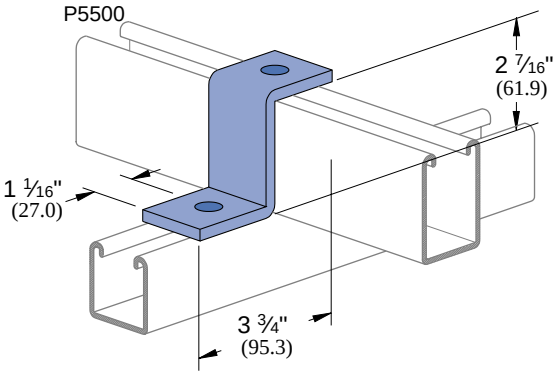
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P4045



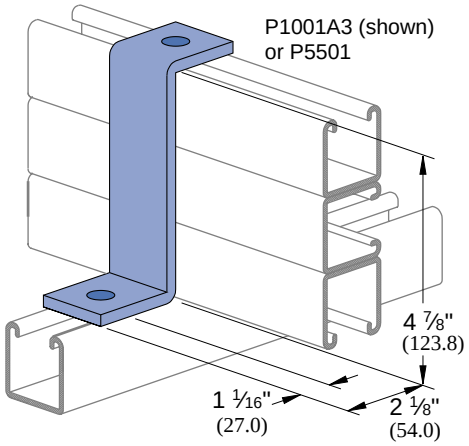
Wt/C 47 Lbs (21.3 kg)

P5545



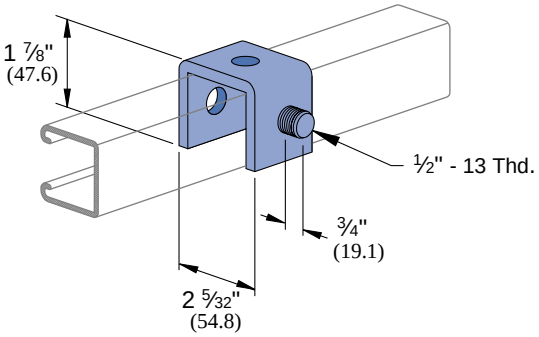
Wt/C 67 Lbs (30.4 kg)

P2469



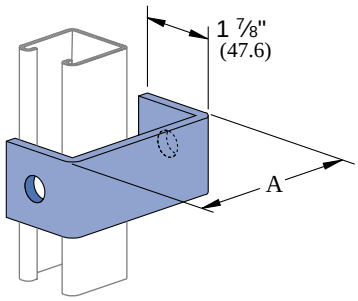
Wt/C 93 Lbs (42.2 kg)

P1320



Wt/C 63 Lbs (28.6 kg)

P1363 A thru P1363 E

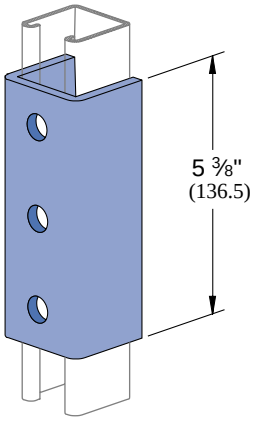


Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P1363 A	4	101.6	78	35.4
P1363 B	5	127.0	89	40.4
P1363 C	6	152.4	101	45.8
P1363 D	7	177.8	112	50.8
P1363 E	8	203.2	124	56.2

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

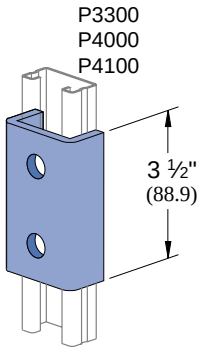
"U" SHAPE FITTINGS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1376



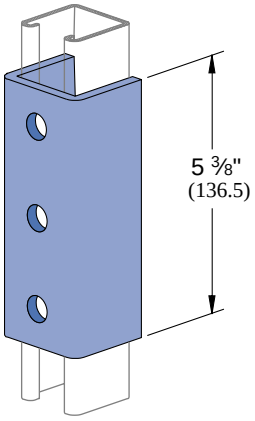
Wt/C 128 Lbs (58.1 kg)

P4376



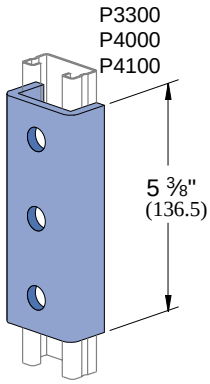
Wt/C 85 Lbs (38.6 kg)

P1376 A



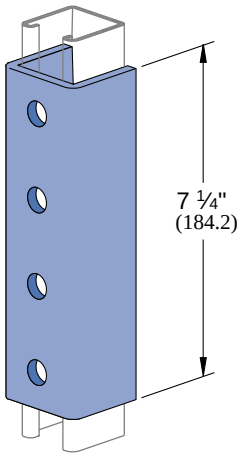
Wt/C 197 Lbs (89.4 kg)

P4376 A



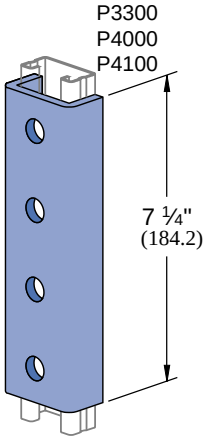
Wt/C 130 Lbs (59.0 kg)

P1377



Wt/C 265 Lbs (120.2 kg)

P4377



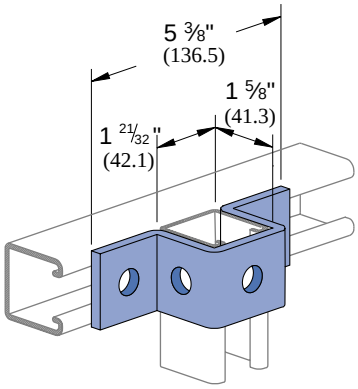
Wt/C 176 Lbs (79.8 kg)

Hole Size	Hole Spacing	Width	Thickness
⁹⁄₁₆" Diameter 14.3 mm	¹³⁄₁₆" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

"U" SHAPE FITTINGS

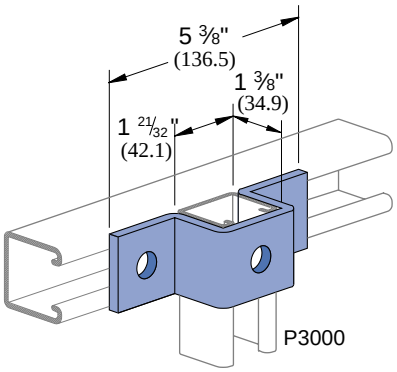
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1047



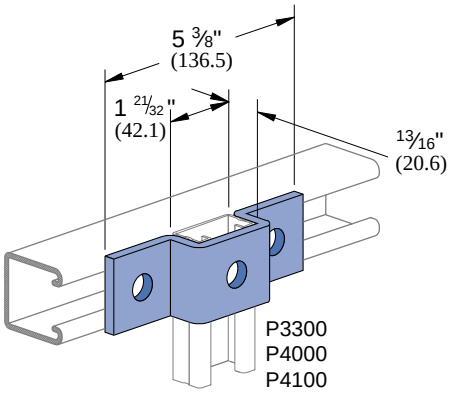
Wt/C 88 Lbs (39.9 kg)

P3047



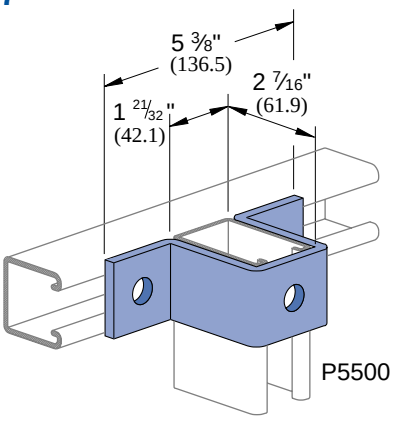
Wt/C 84 Lbs (38.1 kg)

P4047



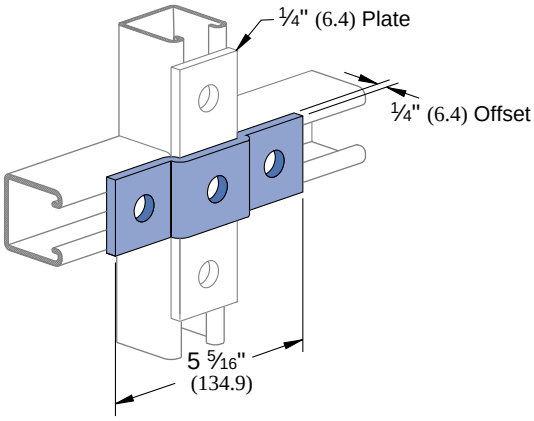
Wt/C 71 Lbs (32.2 kg)

P5547



Wt/C 108 Lbs (49.0 kg)

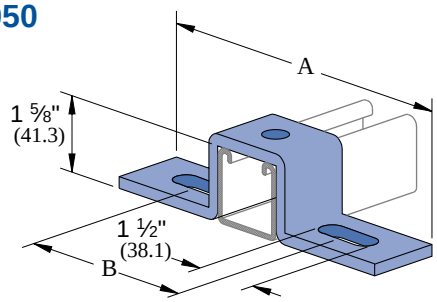
P1455



Wt/C 58 Lbs (26.3 kg)

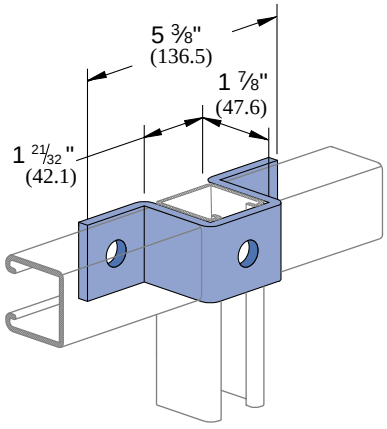
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P1048
P1049
P1050



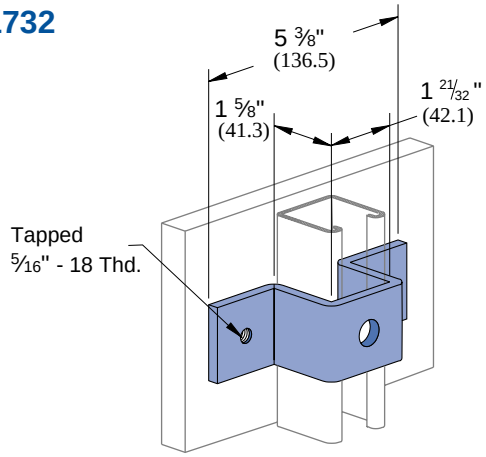
Part Number	"A"		"B"		Weight/C	
	In	mm	In	mm	Lbs	kg
P1048	7¼	184.2	4⅛	104.8	105	47.6
P1049	8½	215.9	5⅜	136.5	120	54.4
P1050	10⅜	263.5	7¼	184.2	130	59.0

P1383



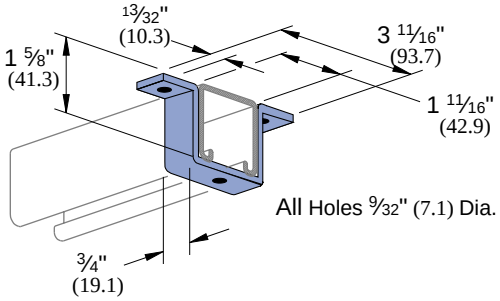
Wt/C 95 Lbs (43.1 kg)

P1732



Wt/C 88 Lbs (39.9 kg)

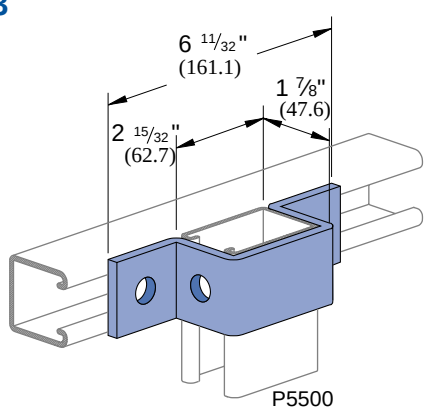
P2237



Material : ⅛" (3.2) thick.

Wt/C 18 Lbs (8.2 kg)

P5543



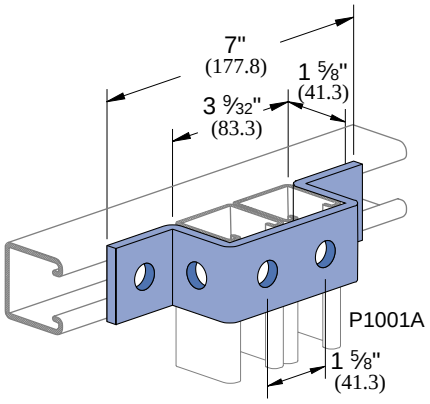
Wt/C 97 Lbs (44.0 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

"U" SHAPE FITTINGS

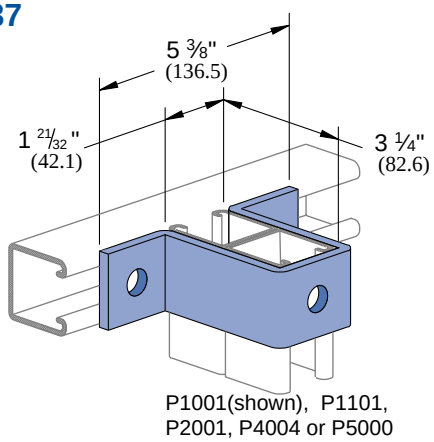
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1043 A



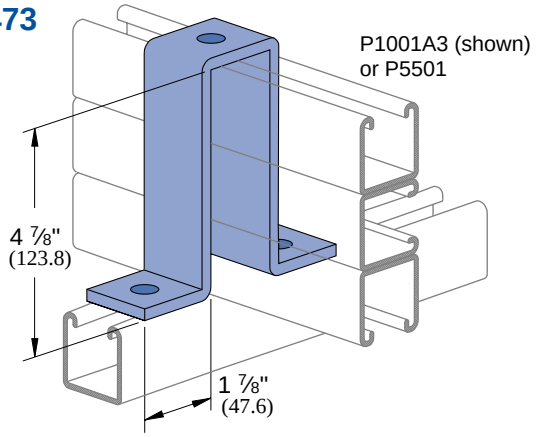
Wt/C 105 Lbs (47.6 kg)

P1737



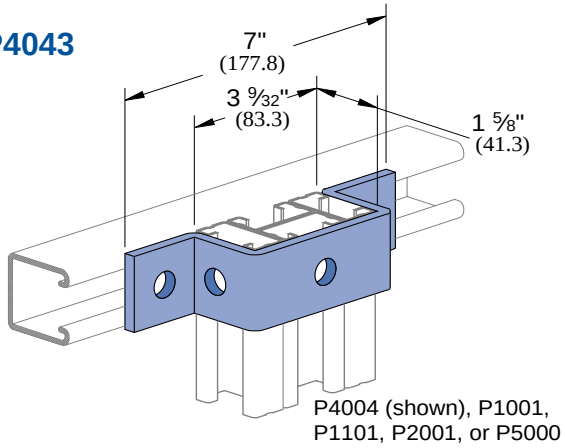
Wt/C 128 Lbs (58.1 kg)

P2473



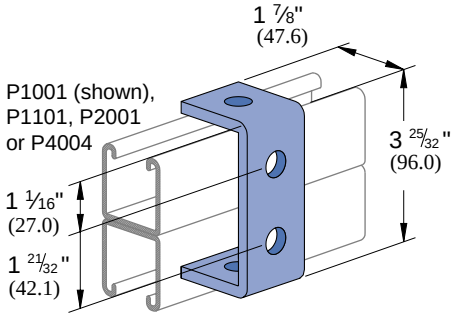
Wt/C 197 Lbs (89.4 kg)

P4043



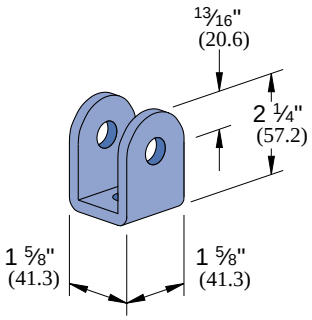
Wt/C 106 Lbs (48.1 kg)

P1044



Wt/C 70 Lbs (31.8 kg)

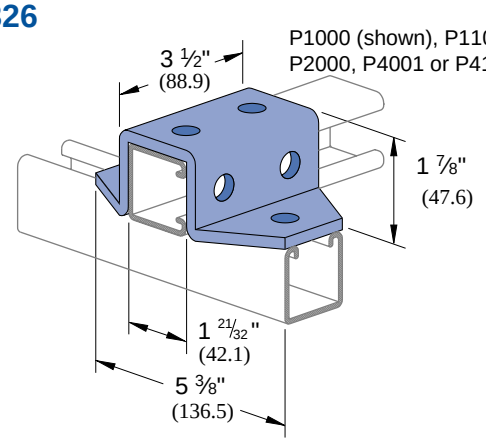
P1973



Wt/C 53 Lbs (24.0 kg)

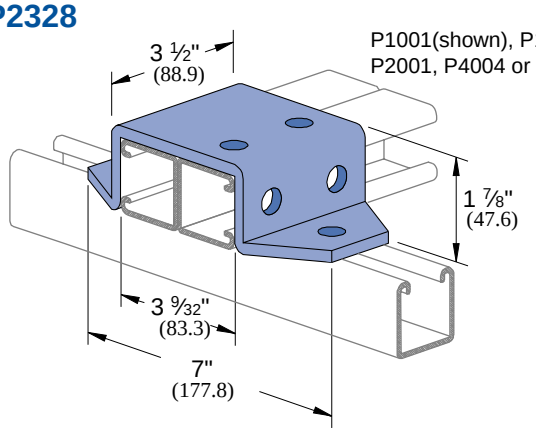
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P2326



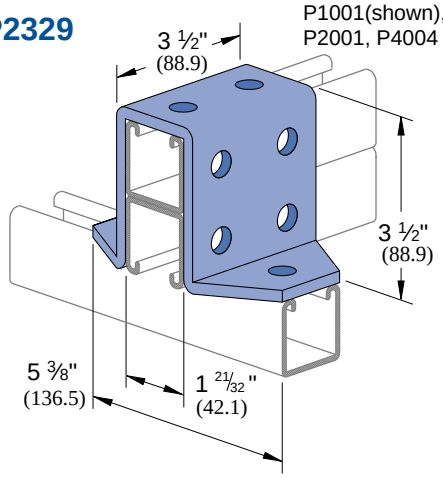
Wt/C 171 Lbs (77.6 kg)

P2328



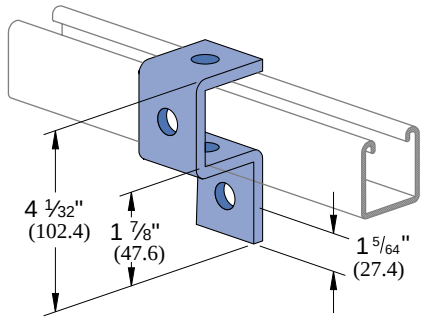
Wt/C 209 Lbs (94.8 kg)

P2329



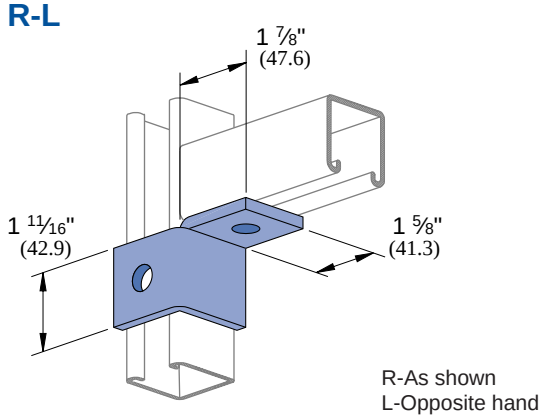
Wt/C 257 Lbs (116.6 kg)

P1046 A



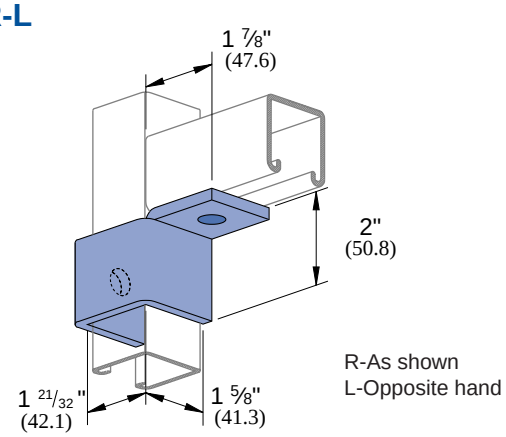
Wt/C 76 Lbs (34.5 kg)

P2341 R-L



Wt/C 60 Lbs (27.2 kg)

P2472 R-L



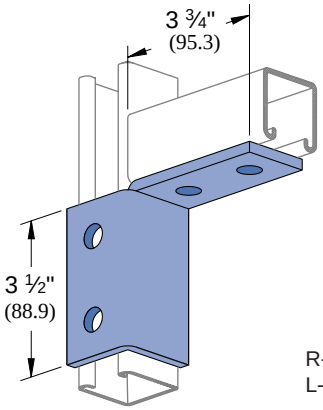
Wt/C 75 Lbs (34.0 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

WING SHAPE FITTINGS

FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

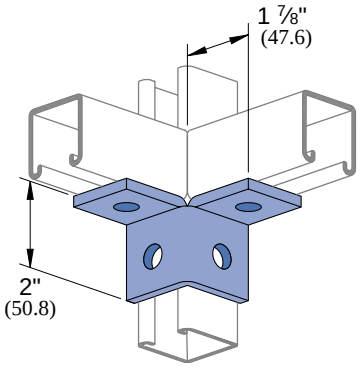
P2343 R-L



R-As shown
L-Opposite hand

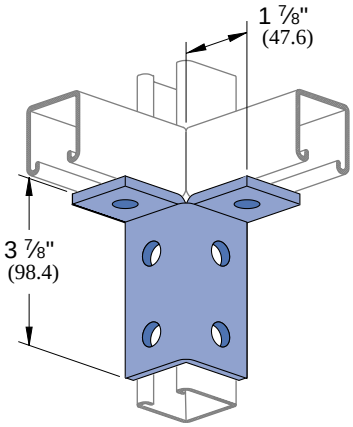
Wt/C 119 Lbs (54.0 kg)

P2223



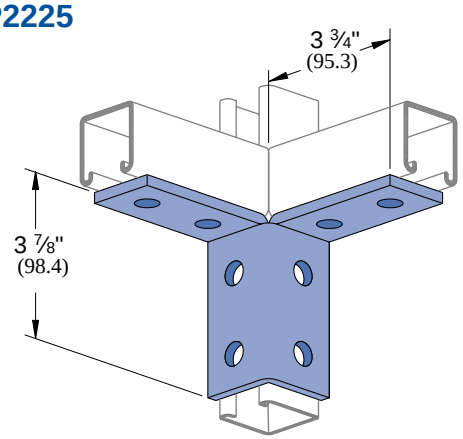
Wt/C 76 Lbs (34.5 kg)

P2224



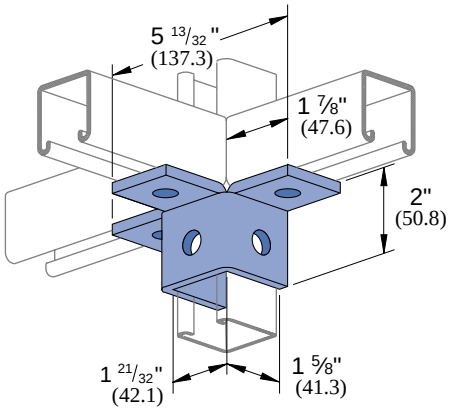
Wt/C 115 Lbs (52.2 kg)

P2225



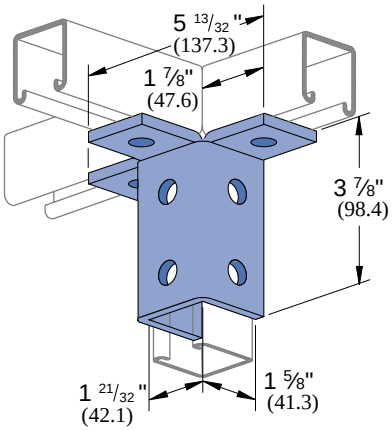
Wt/C 155 Lbs (70.3 kg)

P2227



Wt/C 113 Lbs (51.3 kg)

P2228

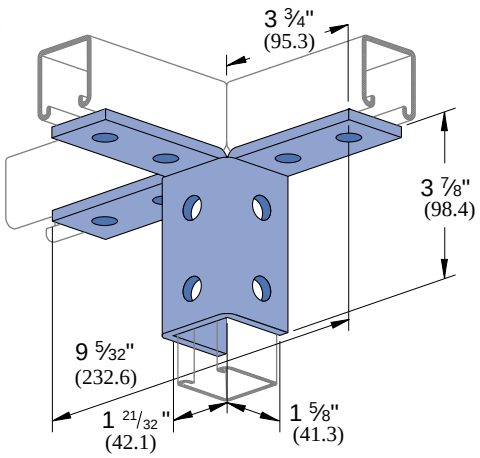


Wt/C 177 Lbs (80.3 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

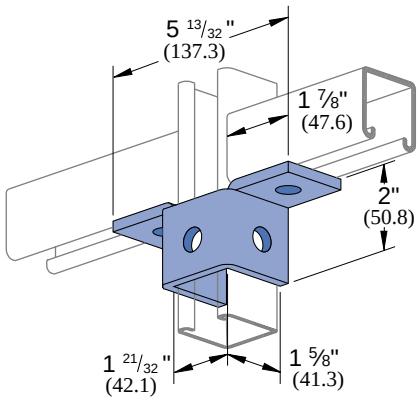
WING SHAPE FITTINGS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P2229



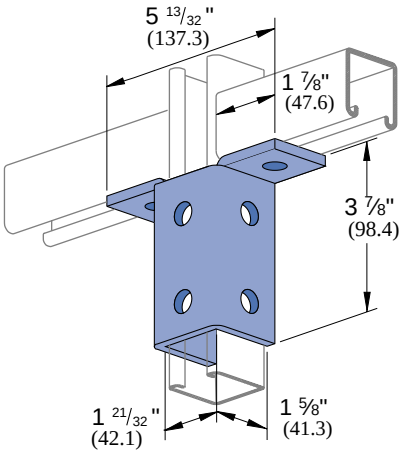
Wt/C 230 Lbs (104.3 kg)

P2345



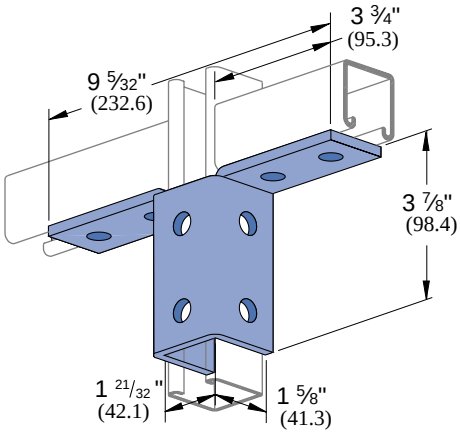
Wt/C 93 Lbs (42.2 kg)

P2346



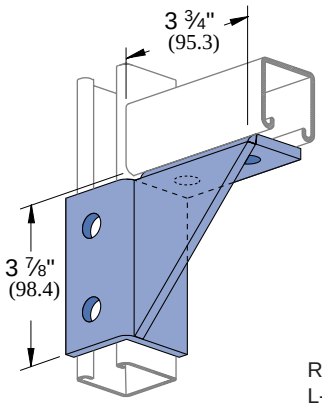
Wt/C 150 Lbs (68.0 kg)

P2347



Wt/C 193 Lbs (87.5 kg)

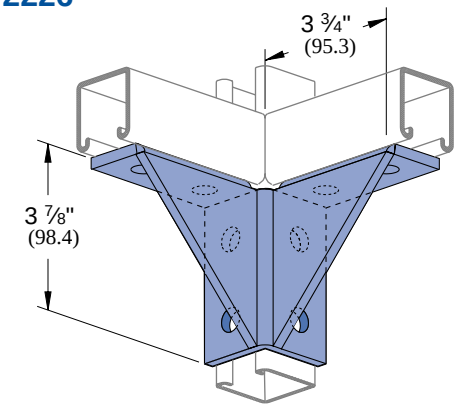
P2344 R-L



R-As shown
L-Opposite hand

Wt/C 176 Lbs (79.8 kg)

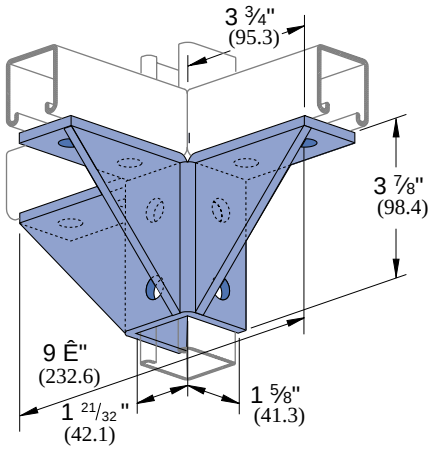
P2226



Wt/C 217 Lbs (98.4 kg)

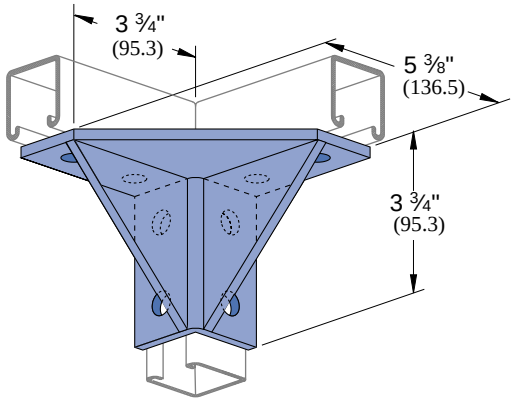
Hole Size	Hole Spacing	Width	Thickness
9⁄16" Diameter 14.3 mm	13⁄16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P2230



Wt/C 310 Lbs (140.6 kg)

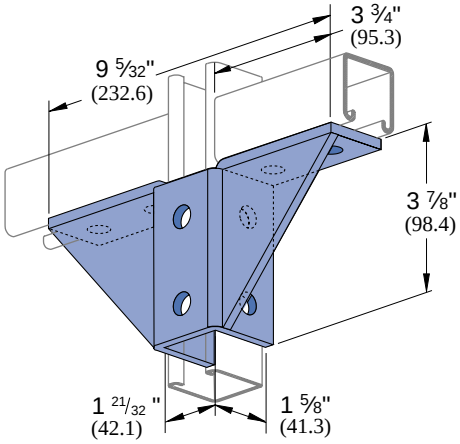
P2245



Fitting notched for continuous vertical.

Wt/C 315 Lbs (142.9 kg)

P2348

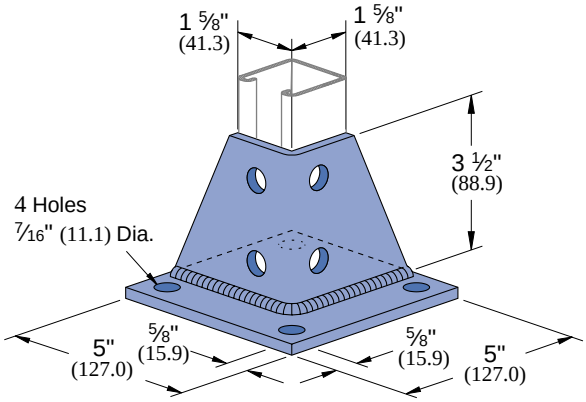


Wt/C 274 Lbs (124.3 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

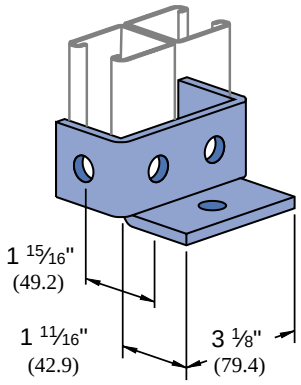
POST BASES
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P1887



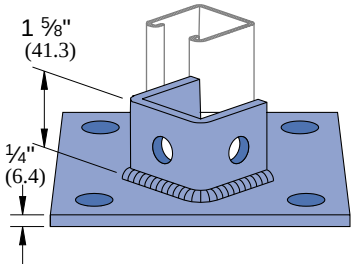
Wt/C 297 Lbs (134.8 kg)

P2453



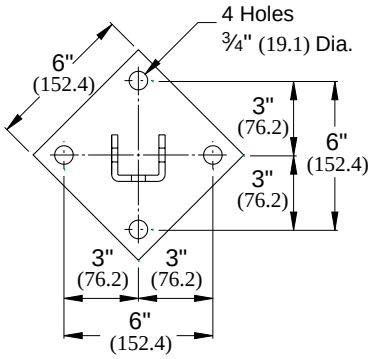
Wt/C 116 Lbs (52.6 kg)

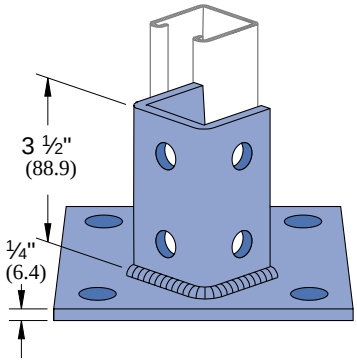
P2072



Wt/C 307 Lbs (139.3 kg)

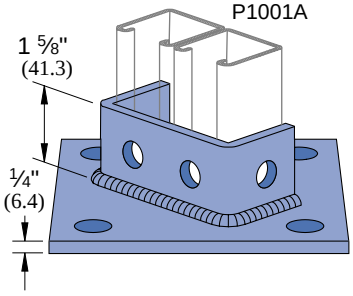
P2072 A





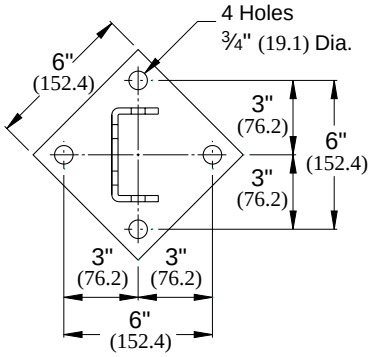
Wt/C 373 Lbs (169.2 kg)

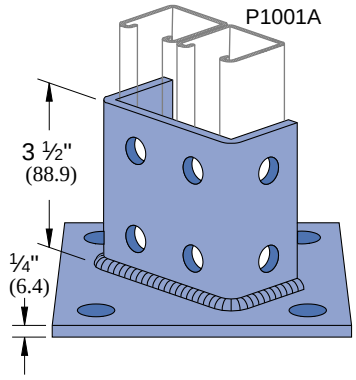
P2073



Wt/C 325 Lbs (147.4 kg)

P2073 A

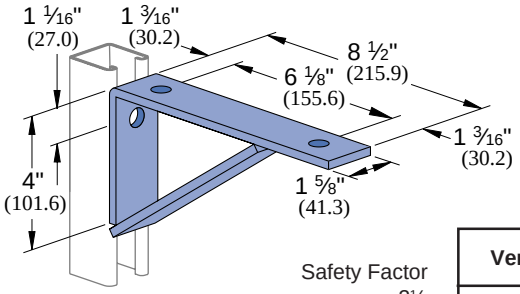




Wt/C 408 Lbs (185.1 kg)

Hole Size	Hole Spacing	Width	Thickness
9⁄16" Diameter 14.3 mm	13⁄16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P1769



Material:¼" (6.4) thick steel.

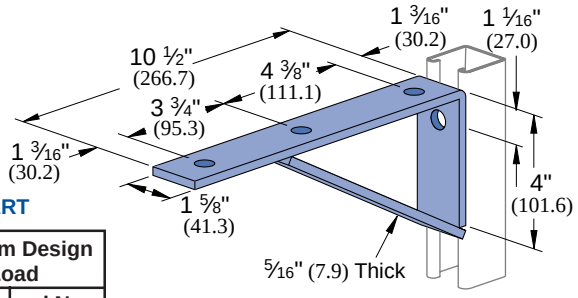
Wt/C 174 Lbs (78.9 kg)

P1769, P1771 LOAD CHART

Safety Factor 2½

Vertical Channel		Uniform Design Load	
Part No.	Gage	Lbs	kN
P1000	12	800	3.6
P1100	14	600	2.7
P2000	16	400	1.8

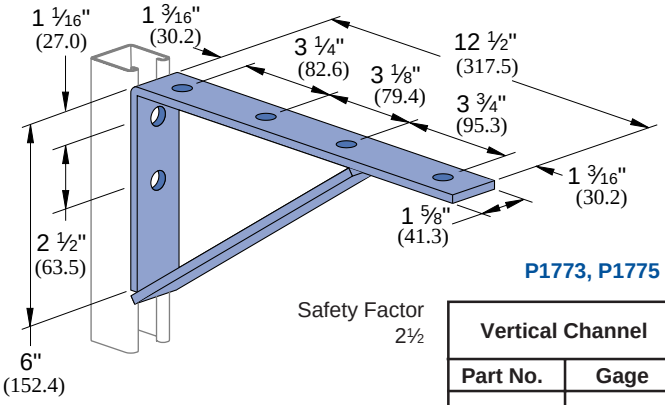
P1771



Material:¼" (6.4) thick steel.

Wt/C 206 Lbs (93.4 kg)

P1773



Material:¼" (6.4) thick steel.

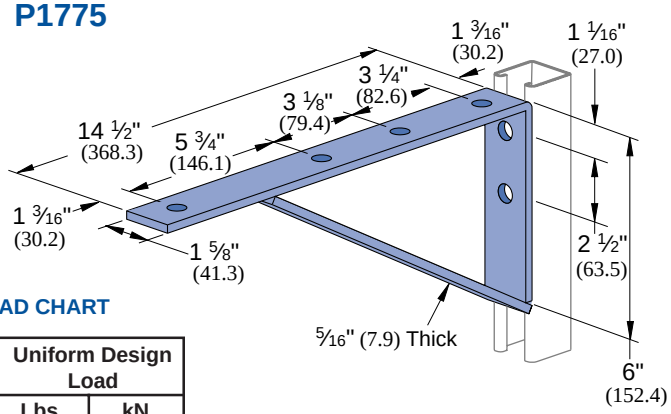
Wt/C 264 Lbs (119.7 kg)

P1773, P1775 LOAD CHART

Safety Factor 2½

Vertical Channel		Uniform Design Load	
Part No.	Gage	Lbs	kN
P1000	12	900	4.0
P1100	14	800	3.6
P2000	16	450	2.0

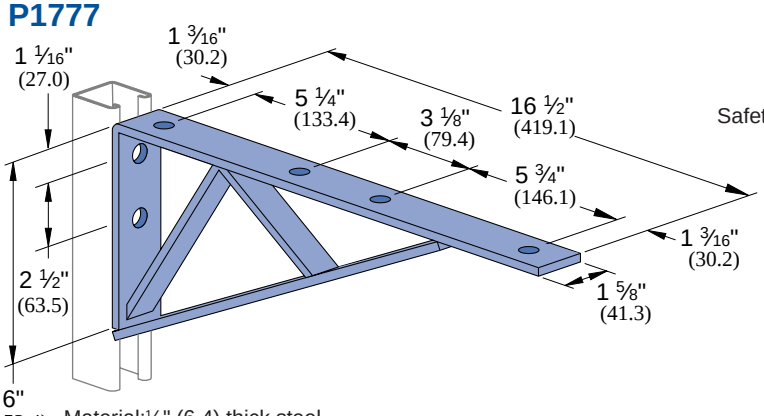
P1775



Material:¼" (6.4) thick steel.

Wt/C 295 Lbs (133.8 kg)

P1777



Material:¼" (6.4) thick steel.

Wt/C 385 Lbs (174.6 kg)

P1777 LOAD CHART

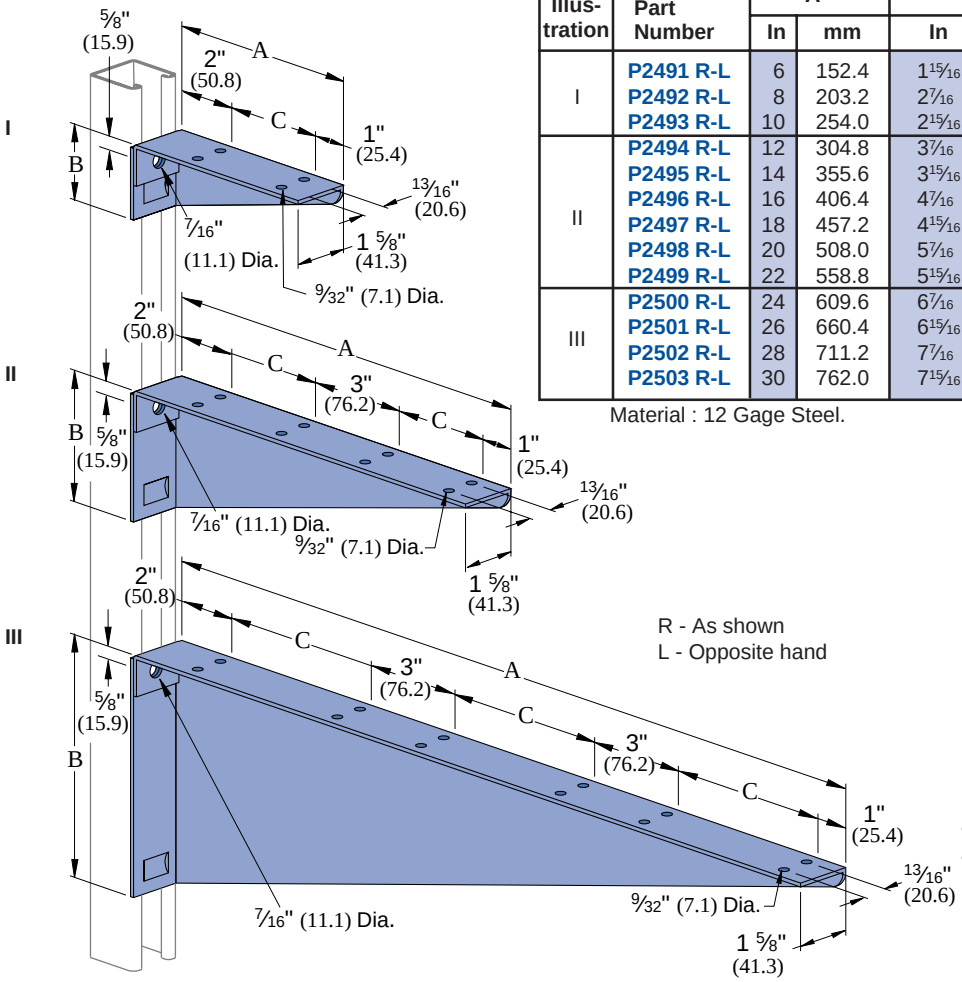
Safety Factor 2½

Vertical Channel		Uniform Design Load	
Part No.	Gage	Lbs	kN
P1000	12	1200	5.3
P1100	14	900	4.0
P2000	16	600	2.7

NOTE

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

P2491 R-L thru P2503 R-L



Illus-tration	Part Number	A		B		C		Weight/C	
		In	mm	In	mm	In	mm	Lbs	kg
I	P2491 R-L	6	152.4	1 15/16	49.2	3	76.2	67	30.4
	P2492 R-L	8	203.2	2 7/16	61.9	5	127.0	92	41.7
	P2493 R-L	10	254.0	2 15/16	74.6	7	177.8	120	54.4
II	P2494 R-L	12	304.8	3 7/16	87.3	3	76.2	152	68.9
	P2495 R-L	14	355.6	3 15/16	100.0	4	101.6	173	78.5
	P2496 R-L	16	406.4	4 7/16	112.7	5	127.0	223	101.2
	P2497 R-L	18	457.2	4 15/16	125.4	6	152.4	266	120.7
	P2498 R-L	20	508.0	5 7/16	138.1	7	177.8	308	139.7
	P2499 R-L	22	558.8	5 15/16	150.8	8	203.2	355	161.0
III	P2500 R-L	24	609.6	6 7/16	163.5	5	127.0	400	181.4
	P2501 R-L	26	660.4	6 15/16	176.2	5 11/16	144.5	445	201.8
	P2502 R-L	28	711.2	7 7/16	188.9	6 5/16	160.3	493	223.6
	P2503 R-L	30	762.0	7 15/16	201.6	7	177.8	545	247.2

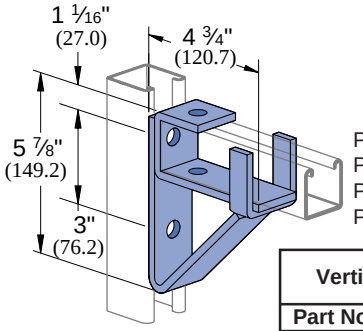
Material : 12 Gage Steel.

R - As shown
L - Opposite hand

Vertical Channel		Uniform Design Load	
Part No.	Gage	Lbs	kN
P1000	12	300	1.3
P1100	14	250	1.1
P2000	16	200	0.9

Safety Factor - 2½

P1075



P1000
P1100
P2000
P4001

* Allowable moment for fitting only. Channel may determine overall capacity.

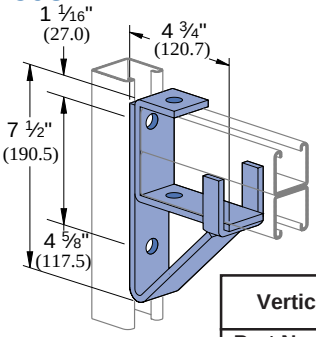
Vertical Channel		Allowable Moment*	
Part No.	Gage	In-Lbs	N•m
P1000	12	5100	576
P1100	14	4400	500
P2000	16	3200	360

Material: ¼" (6.4) thick steel.

Wt/C 229 Lbs (103.9 kg)

Safety Factor - 2½

P1593



P1001
P1101
P5000
P2001

* Allowable moment for fitting only. Channel may determine overall capacity.

Vertical Channel		Allowable Moment*	
Part No.	Gage	In-Lbs	N•m
P1000	12	13000	1470
P1100	14	9100	1030
P2000	16	6500	730

Material: ¼" (6.4) thick steel.

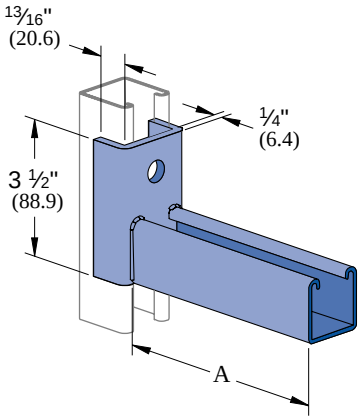
Wt/C 272 Lbs (123.4 kg)

Safety Factor - 2½

NOTE

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

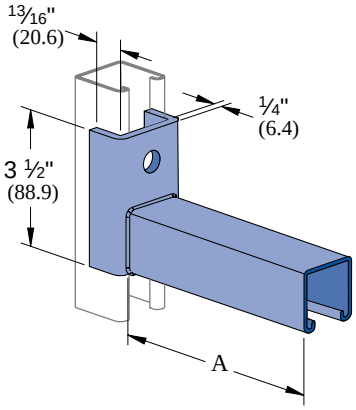
P2231
P2232



Safety Factor 2½

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2231	6	152.4	191	86.6	P1000 P1100 P2000	12 14 16	1600 1200 800	7.1 5.3 3.6
P2232	12	304.8	292	132.4	P1000 P1100 P2000	12 14 16	800 600 400	3.6 2.7 1.8

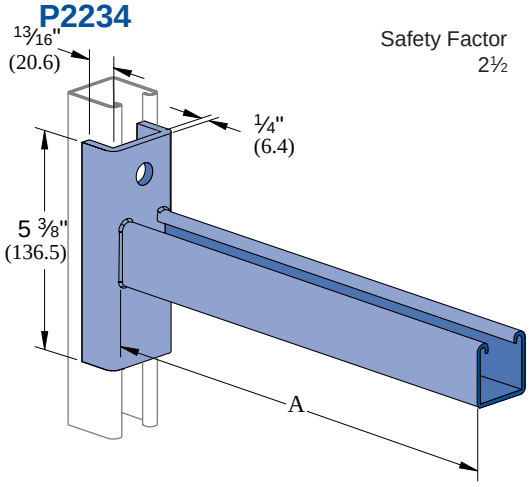
P2231 A
P2232 A



Safety Factor 2½

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2231A	6	152.4	191	86.6	P1000 P1100 P2000	12 14 16	1600 1200 800	7.1 5.3 3.6
P2232A	12	304.8	292	132.4	P1000 P1100 P2000	12 14 16	800 600 400	3.6 2.7 1.8

P2233
P2234



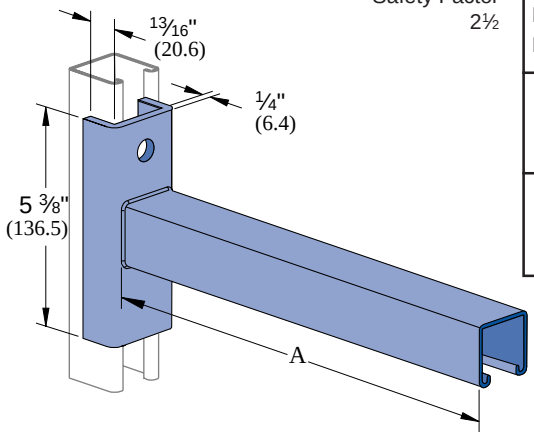
Safety Factor 2½

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2233	18	457.2	436	197.8	P1000 P1100 P2000	12 14 16	600 450 300	2.7 2.0 1.3
P2234	24	609.6	536	243.1	P1000 P1100 P2000	12 14 16	450 330 220	2.0 1.5 1.0

NOTE

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

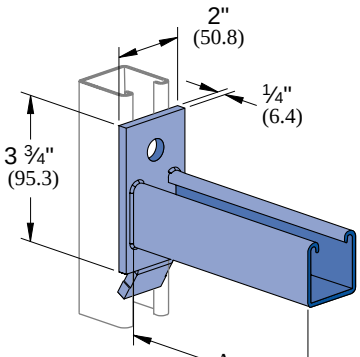
P2233 A
P2234 A



Safety Factor 2½

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2233A	18	457.2	436	197.8	P1000 P1100 P2000	12 14 16	600 450 300	2.7 2.0 1.3
P2234A	24	609.6	536	243.1	P1000 P1100 P2000	12 14 16	450 330 220	2.0 1.5 1.0

P2513 thru P2516

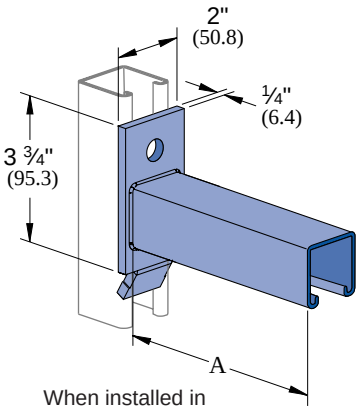


When installed in inverted position use 60% of loads shown.

Safety Factor 2½

Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2513	6	152.4	161	73.0	P1000 P1100 P2000	12 14 16	1200 800 600	5.3 3.6 2.7
P2514	12	304.8	261	118.4	P1000 P1100 P2000	12 14 16	600 400 300	2.7 1.8 1.3
P2515	18	457.2	361	163.7	P1000 P1100 P2000	12 14 16	400 270 200	1.8 1.2 0.9
P2516	24	609.6	461	209.1	P1000 P1100	12 14	300 200	1.3 0.9

P2513 A thru P2516 A



When installed in inverted position use 60% of loads shown.

Safety Factor 2½

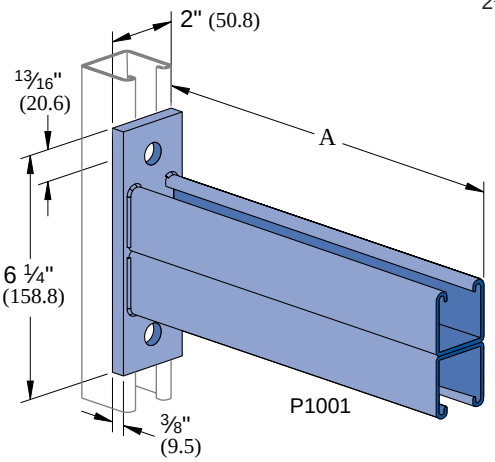
Part Number	"A"		Weight/C		Vertical Channel		Uniform Design Load	
	In	mm	Lbs	kg	Part No.	Gage	Lbs	kN
P2513A	6	152.4	161	73.0	P1000 P1100 P2000	12 14 16	1200 800 600	5.3 3.6 2.7
P2514A	12	304.8	261	118.4	P1000 P1100 P2000	12 14 16	600 400 300	2.7 1.8 1.3
P2515A	18	457.2	361	163.7	P1000 P1100 P2000	12 14 16	400 270 200	1.8 1.2 0.9
P2516A	24	609.6	461	209.1	P1000 P1100 P2000	12 14 16	300 200 150	1.3 0.9 0.7

NOTE

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

P2542 thru P2546

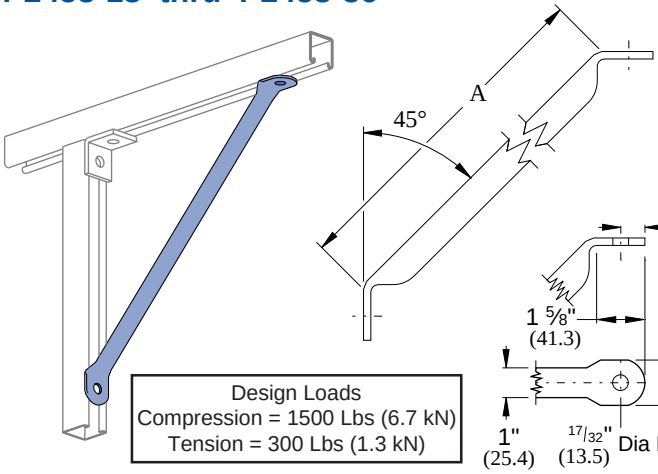
Safety Factor 2½



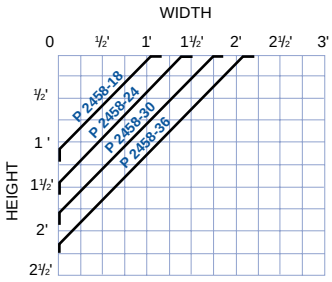
Part Number	"A" Dimension In	"A" Dimension mm	Weight/C Lbs	Weight/C kg	Vertical Channel Part No.	Vertical Channel Gage	Uniform Design Load Lbs	Uniform Design Load kN
P2542	12	304.8	502	227.7	P1000	12	2000	8.9
					P1100	14	1400	6.2
					P2000	16	1000	4.4
P2543	18	457.2	692	313.9	P1000	12	1300	5.8
					P1100	14	900	4.0
					P2000	16	650	2.9
P2544	24	609.6	882	400.1	P1000	12	1000	4.4
					P1100	14	700	3.1
					P2000	16	500	2.2
P2545	30	762.0	1072	486.3	P1000	12	800	3.6
					P1100	14	560	2.5
					P2000	16	400	1.8
P2546	36	914.4	1262	572.4	P1000	12	650	2.9
					P1100	14	450	2.0
					P2000	16	320	1.4

P2458-18 thru P2458-36

TUBULAR KNEE BRACES



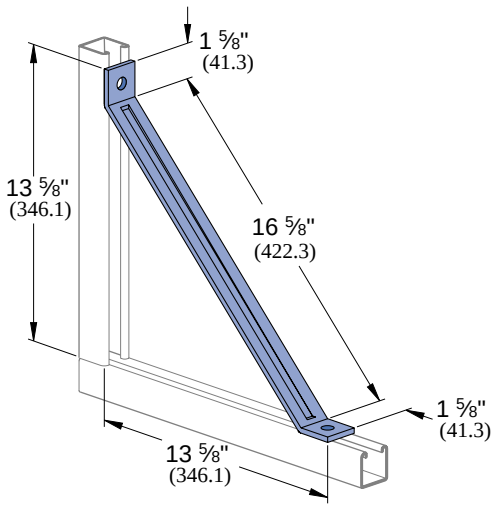
Design Loads
Compression = 1500 Lbs (6.7 kN)
Tension = 300 Lbs (1.3 kN)



Part Number	"A" Dimension In	"A" Dimension mm	Weight/C Lbs	Weight/C kg
P2458-18	18	457.2	116	52.6
P2458-24	24	609.6	149	67.6
P2458-30	30	762.0	181	82.1
P2458-36	36	914.4	214	97.1

P2452

KNEE BRACE



Design Axial Load
1200 Lbs (5.3 kN)

Material: ¼" (6.4) thick steel.

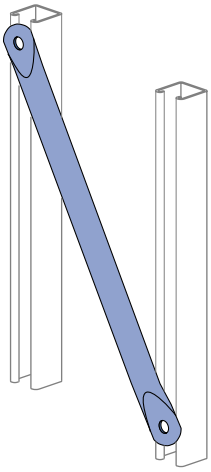
Wt/C 277 Lbs (125.6 kg)

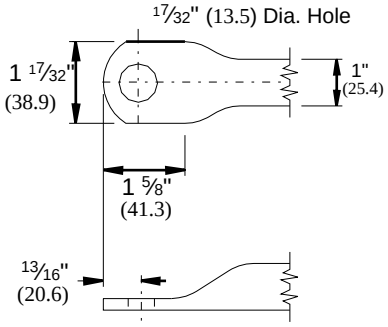
NOTE

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

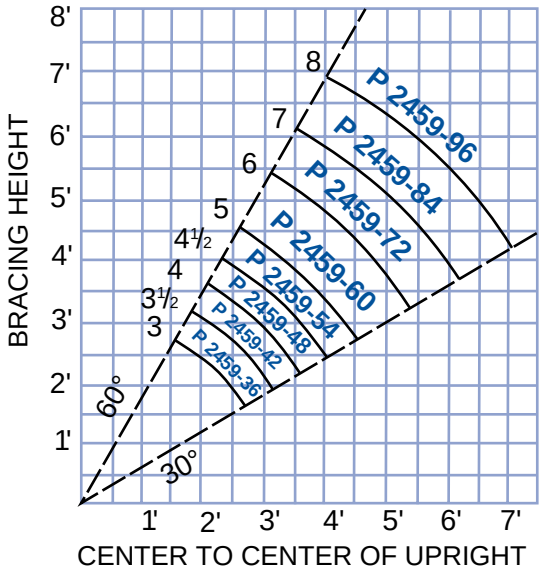
P2459-36 thru P2459-96

TUBULAR BACK BRACES





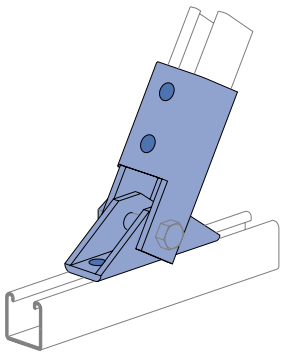
Part Number	"A" Dimension		Weight/C	
	In	mm	Lbs	kg
P2459-36	36	914.4	205	93.0
P2459-42	42	1066.8	237	107.5
P2459-48	48	1219.2	270	122.5
P2459-54	54	1371.6	302	137.0
P2459-60	60	1524.0	334	151.5
P2459-72	72	1828.8	400	181.4
P2459-84	84	2133.6	465	210.9
P2459-96	96	2438.4	530	240.4

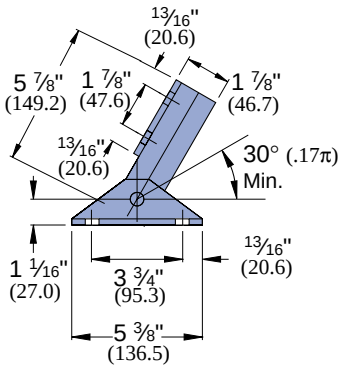


1. The vertical lines of the graph correspond to the center to center line dimension of the uprights.
2. Along this vertical line locate the (maximum useable) horizontal bracing height line.
3. The arc line that intersects the point formed by the intersection of the two lines, indicates the brace required.
4. 60° - 30° maximum, minimum brace angles are indicated for maximum effect.

P2815

ADJUSTABLE BRACE

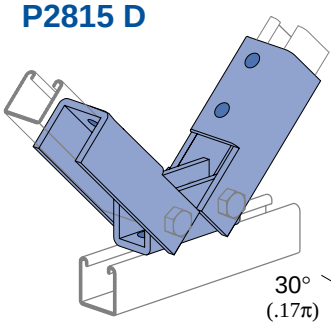


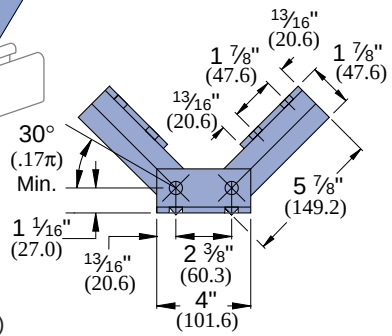


Wt/C 307 Lbs (139.3 kg)

P2815 D

ADJUSTABLE BRACE

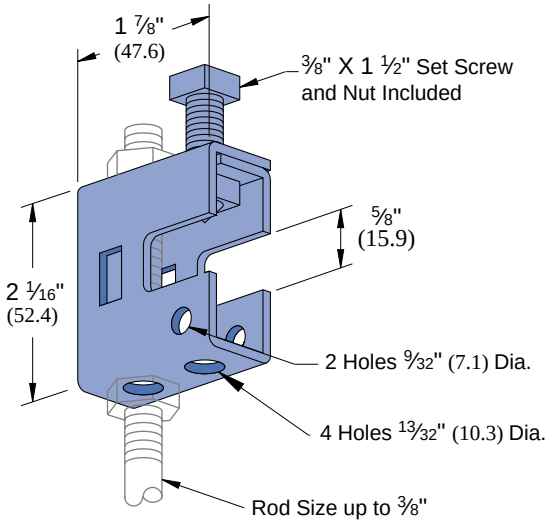


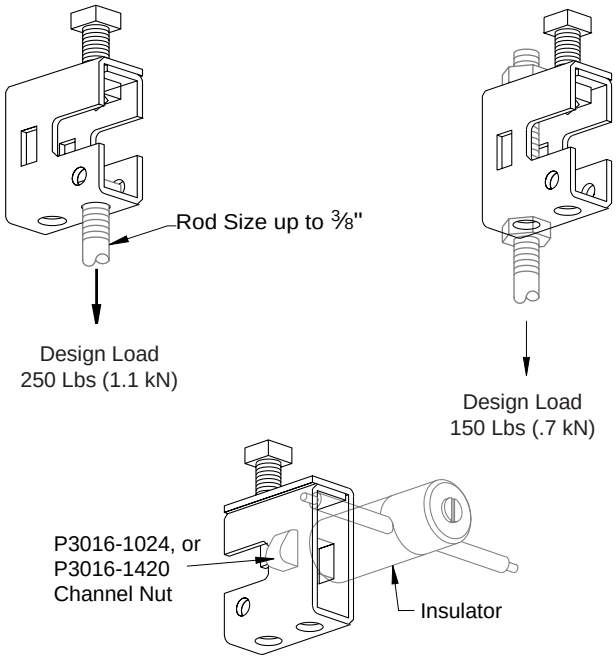


Wt/C 497 Lbs (225.4 kg)

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P2675



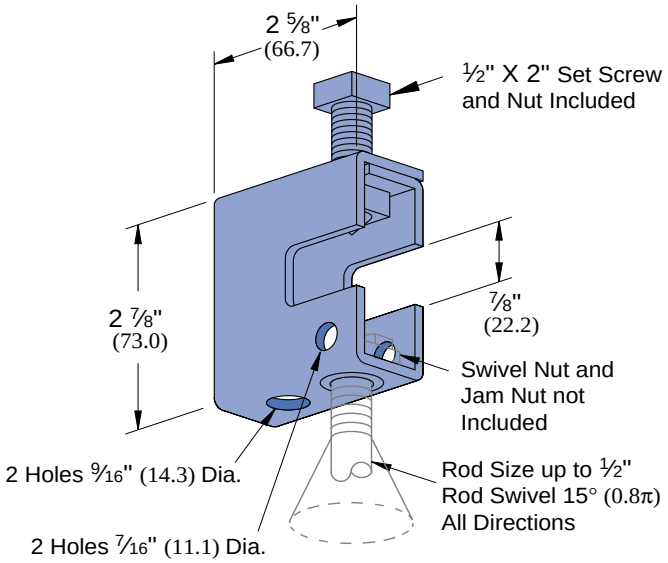


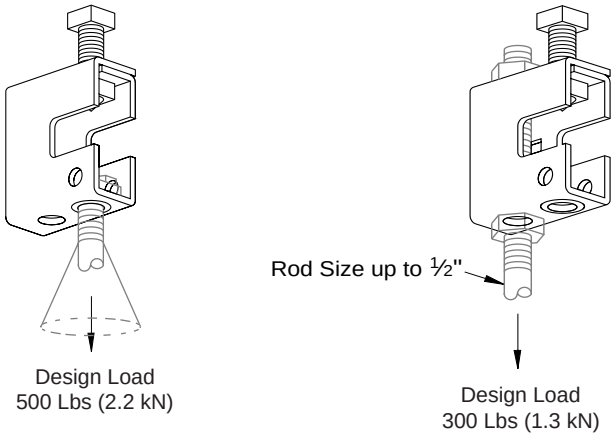
Clamp Materials: .105" (2.7) thick steel.

Wt/C 33 Lbs (15.0 kg)

Clamp P2675 is designed for light duty rod suspension. It also may be used with P3016-1024 or P3016-1420 nut as illustrated above for mounting insulators, etc.

P2676



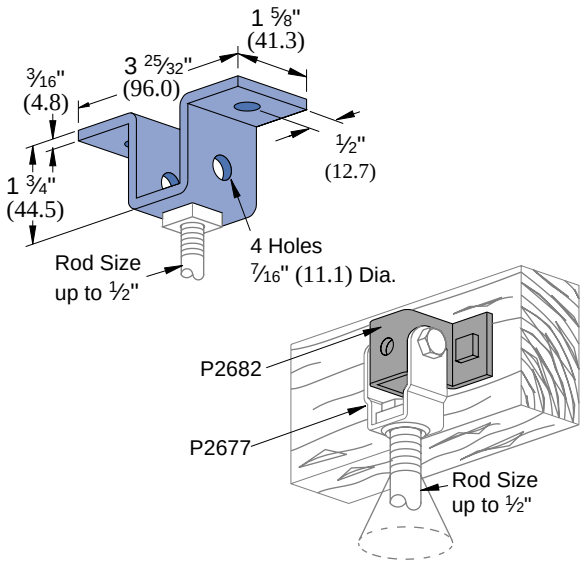


Clamp Materials: ⅛" (3.2) thick steel.

Wt/C 72 Lbs (32.7 kg)

Clamp P2676 provides a means of rod suspension where a free swing of up to 15° (0.8) is required. Clamp will accommodate ¼" (6.4), ⅜" (9.5), or ½" (12.7) rods. Order swivel nuts P2679-4,-6, or -8 as required. Clamp may also be used with P2677 as illustrated in application drawings on page 113.

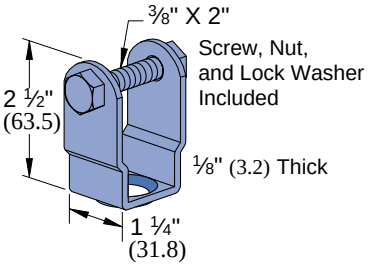
P2682

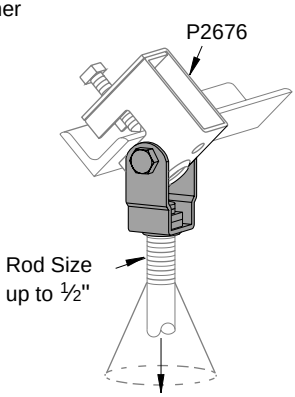


Hanger clevis for up to ½" (12.7) rod suspension from wood ceilings. May also be used with P2677 as illustrated in application drawings.

Wt/C 55 Lbs (24.9 kg)

P2677



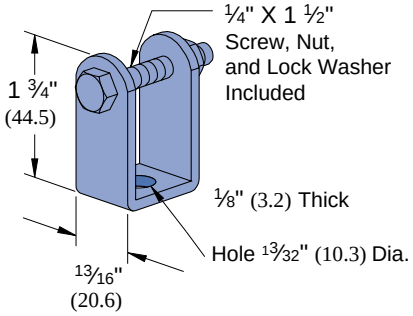


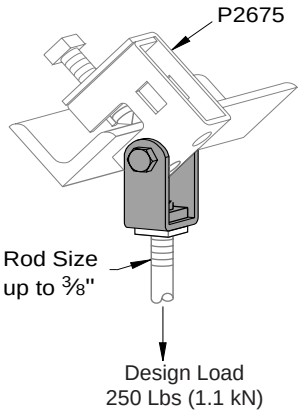
Clevis hanger to be used with P2676 or P2682 to provide angle adjustment and 15° (0.08) free swing for up to ½" (12.7) rod suspension. Order swivel nuts P2679-4, -6, or -8 as required.

Design Load
500 Lbs (2.2 kN)

Wt/C 30 Lbs (13.6 kg)

P2674





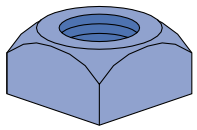
Clevis hanger to be used with P2675 to provide angle adjustment for up to ⅜" rod suspension as illustrated.

Design Load
250 Lbs (1.1 kN)

Wt/C 17 Lbs (7.7 kg)

P2679-4, -6, & -8

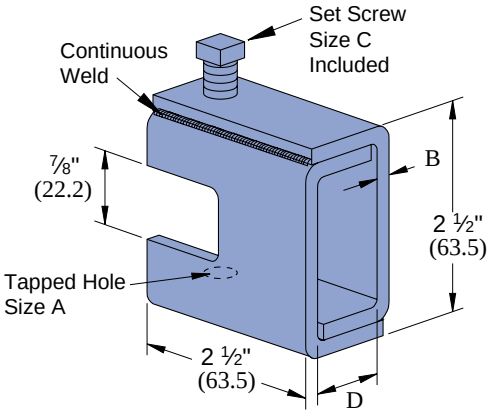
SWIVEL NUT

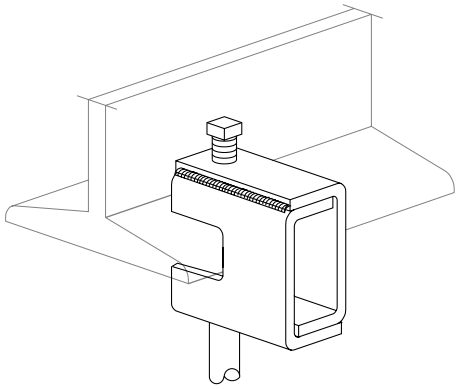


- Use with P2676 and P2677.
- Order size as required.

Part Number	Thread Size	Weight/C	
		Lbs	kg
P2679-4	¼"-20	4	1.8
P2679-6	⅜"-16	5	2.3
P2679-8	½"-13	6	2.7

P1648 S thru P1653 S

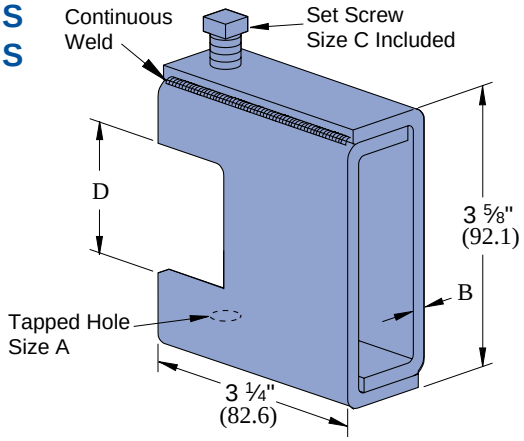


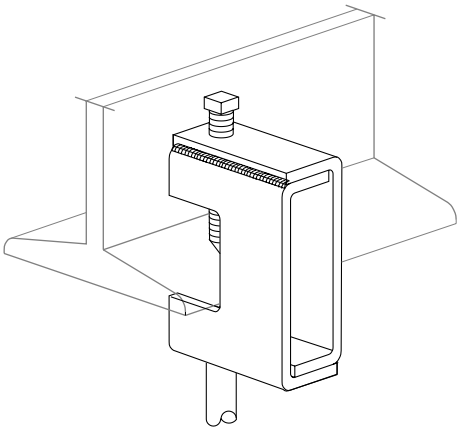


For beams under ⅞" (22.2) thick flange.

Part Number	"A"	"B"		"C"	"D"		Weight/C		Design Load	
	In	In	mm	In	In	mm	Lbs	kg	Lbs	kN
P1648 S	¼ - 20	⅛	3.2	⅜ x 1½	⅞	22.2	67	30.4	650	2.9
P1649 S	5/16 - 18	⅛	3.2	⅜ x 1½	⅞	22.2	67	30.4	650	2.9
P1649 AS	⅜ - 16	⅛	3.2	⅜ x 1½	⅞	22.2	67	30.4	650	2.9
P1650 S	⅜ - 16	3/16	4.8	½ x 1½	15/16	23.8	100	45.4	1100	4.9
P1650 AS	½ - 13	3/16	4.8	½ x 1½	15/16	23.8	100	45.4	1100	4.9
P1651 S	½ - 13	¼	6.4	½ x 1½	15/16	23.8	130	59.0	1600	7.1
P1651 AS	⅝ - 11	¼	6.4	½ x 1½	15/16	23.8	130	59.0	1600	7.1
P1652 S	⅝ - 11	5/16	7.9	⅝ x 1½	1 5/16	33.3	160	72.6	2400	10.7
P1653 S	¾ - 10	5/16	7.9	⅝ x 1½	1 5/16	33.3	160	72.6	2400	10.7

P2398 S
P2401 S
P2403 S



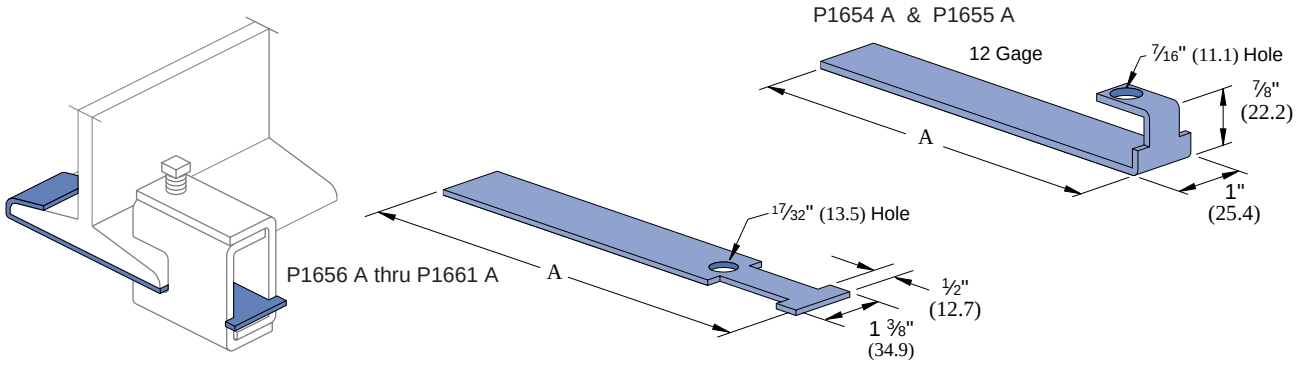


For beams between ¾" (19.1) to 1⅝" (41.3) thick flanges.

Part Number	"A"	"B"		"C"	"D"		Weight/C		Design Load	
	In	In	mm	In	In	mm	Lbs	kg	Lbs	kN
P2398 S	¼ - 20	⅛	3.2	⅜ x 2	1 21/32	42.1	109	49.4	800	3.6
P2401 S	⅜ - 16	3/16	4.8	½ x 2	1 11/16	42.9	156	70.8	1300	5.8
P2403 S	½ - 13	¼	6.4	½ x 2	1 11/16	42.9	201	91.2	1900	8.5

P1654 A thru P1661 A

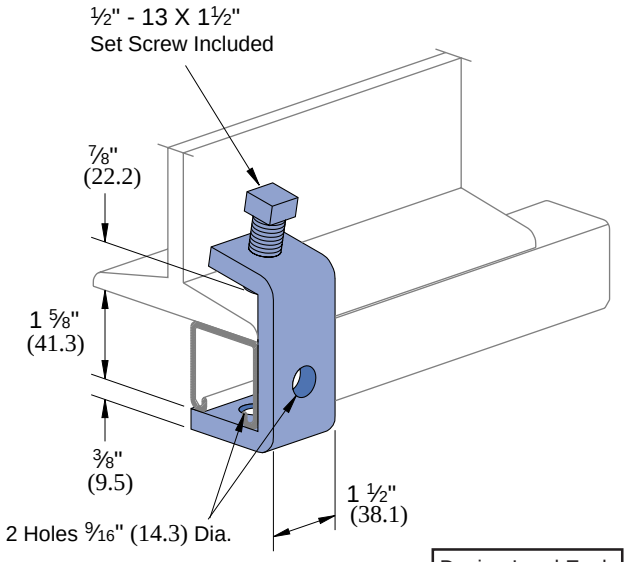
RETAINER STRAP



Strap Part Number	Flange Width		"A"		Weight/C		Beam Clamp Used With
	In	mm	In	mm	Lbs	kg	
P1654 A	6	152.4	7	177.8	25	11.3	P2675
P1655 A	9	228.6	10	254.0	34	15.4	P2675
P1656 A	6	152.4	9	228.6	35	15.9	P1648 S Thru
P1657 A	9	228.6	12	304.8	47	21.3	P1651 AS, and
P1658 A	12	304.8	15	381.0	59	26.8	P2398 S Series
P1659 A	6	152.4	9	228.6	33	15.0	P2676
P1660 A	9	228.6	12	304.8	45	20.4	P2676
P1661 A	12	304.8	15	381.0	57	25.9	P2676

For beams under ⅞" (22.2) thick flange.

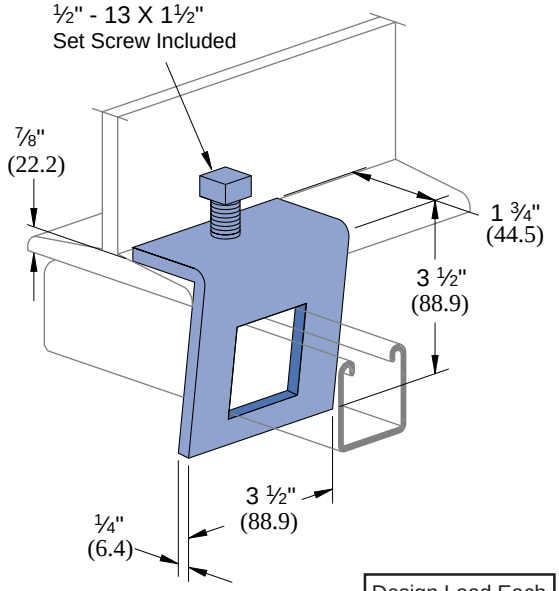
P1271 S



Design Load Each
500 Lbs (2.2 kN)
Use in Pairs Only

Wt/C 95 Lbs (43.1 kg)

P1796 S

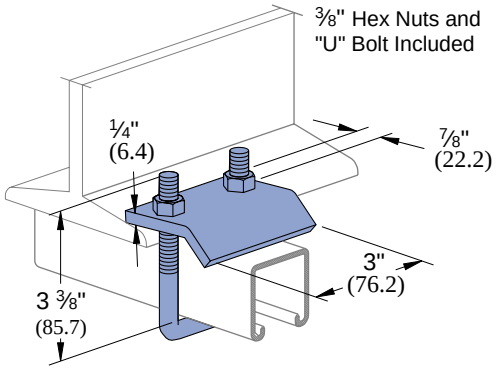


For channel height 1⅝" (41.3).

Design Load Each
480 Lbs (2.1 kN)
Use in Pairs Only

Wt/C 91 Lbs (41.3 kg)

P2785

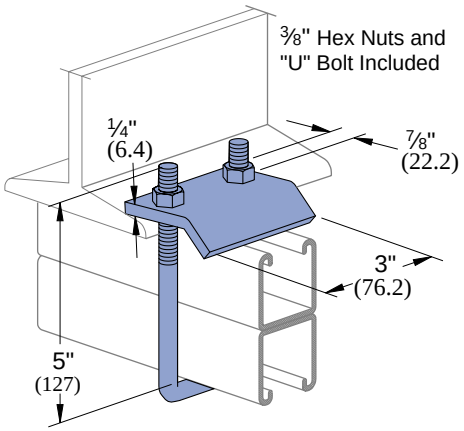


Design Load Each
1000 Lbs (4.4 kN)
Use in Pairs Only

- For use with Beams up to ¾" (19.1) Flanges and with Channels P1000, P1100, P2000, P3000, P3300, P3301, P4000, P4001, P4100, and P4101.

Wt/C 83 Lbs (37.6 kg)

P2786

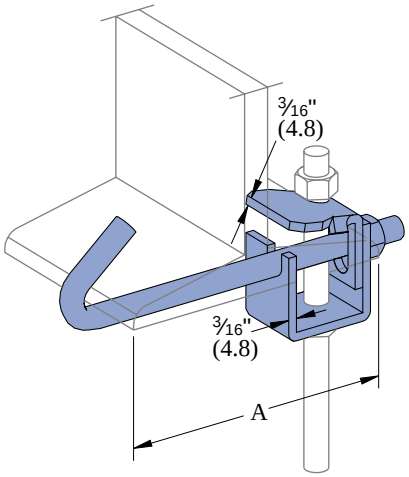


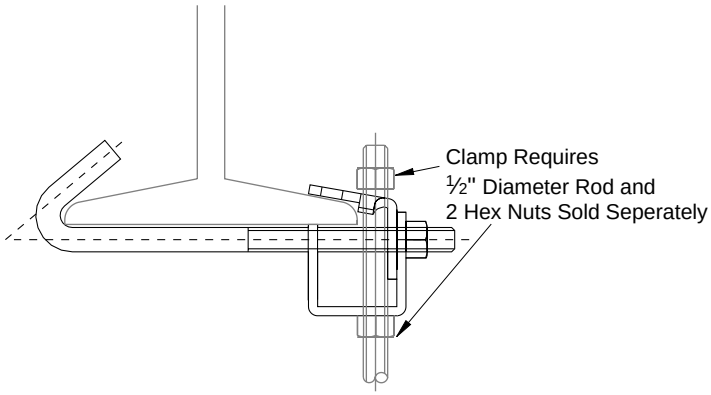
Design Load Each
1000 Lbs (4.4 kN)
Use in Pairs Only

- For use with Beams up to ¾" (19.1) Flanges and with Channels P1001, P1101, P2001, P3001, P5000, and P5500.

Wt/C 92 Lbs (41.7 kg)

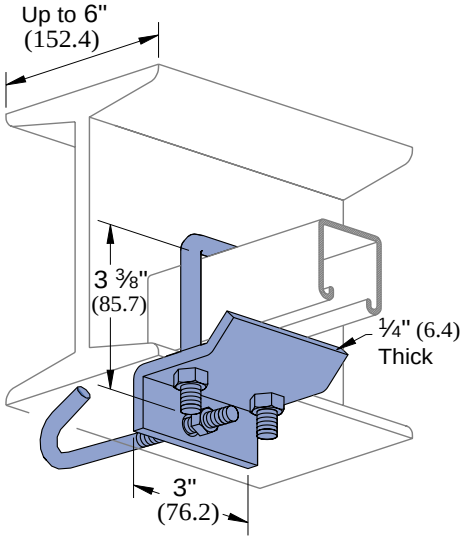
P2824-6,-9,-12





Part Number	"A"		Weight/C		Design Load	
	In	mm	Lbs	kg	Lbs	kN
P2824-6	2½ - 6	63.5 - 152.4	125	56.7	500	2.2
P2824-9	5½ - 9	139.7 - 228.6	140	63.5	500	2.2
P2824-12	8½ -12	215.9 - 304.8	171	77.6	500	2.2

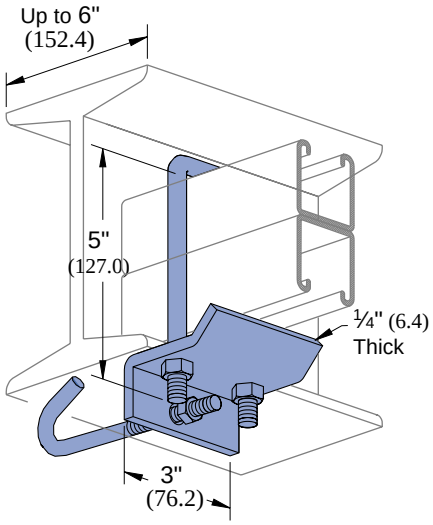
P2867



- Includes: "J" Bolt, "U" Bolt and Hex Nuts.
- For use with Channels P1000, P1100, P2000, P3000, P3300, P3301, P4000, P4001, P4100, and P4101.

Wt/C 134 Lbs (60.8 kg)

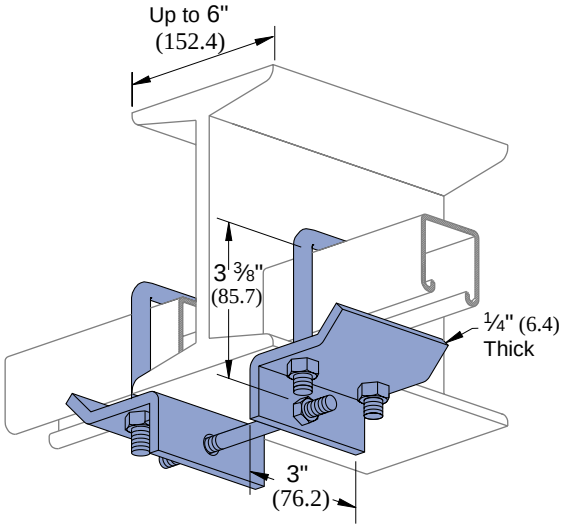
P2867 A



- Includes: "J" Bolt, "U" Bolt and Hex Nuts.
- For use with Channel P1001, P1101, P2001, P3001, P5000, and P5500.

Wt/C 143 Lbs (64.9 kg)

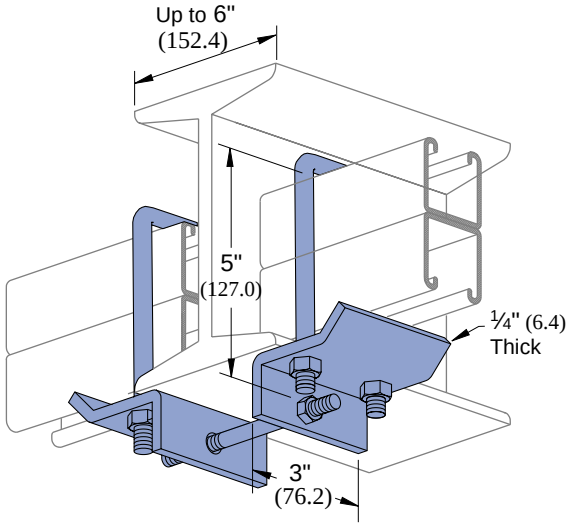
P2868



- Includes: Center Rod, "U" Bolts and Hex Nuts.
- For use with Channels P1000, P1100, P2000, P3000, P3300, P3301, P4000, P4001, P4100, and P4101.

Wt/C 280 Lbs (127.0 kg)

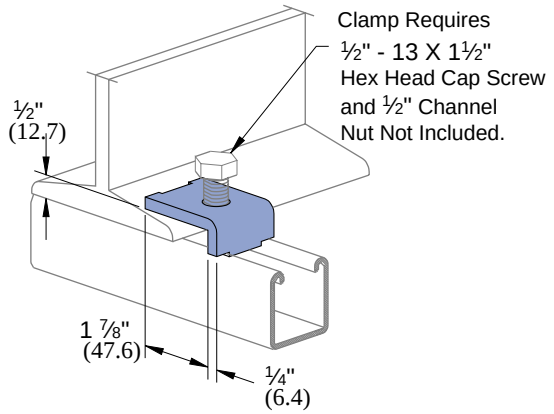
P2868 A



- Includes: Center Rod, "U" Bolts and Hex Nuts.
- For use with Channels P1001, P1101, P2001, P3001, P5000, and P5500.

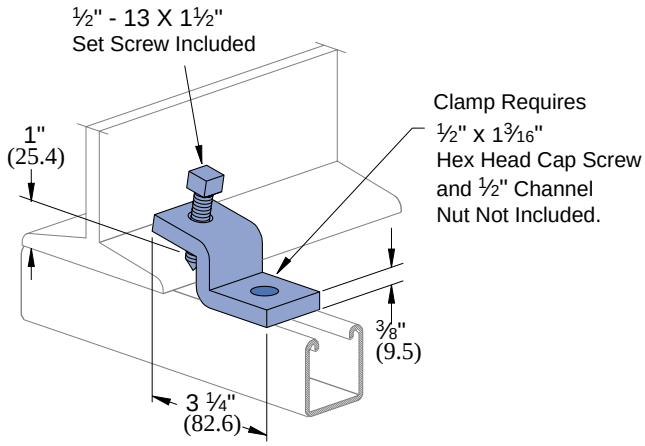
Wt/C 298 Lbs (135.2 kg)

P1386



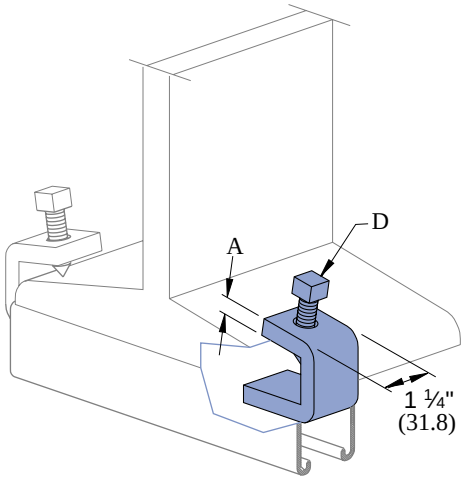
Channel Style	Weight/C		Design Load Each (Use in Pairs Only)	
	Lbs	kg	Lbs	kN
P1000 P1100 P2000	27	12.2	600 500 450	2.7 2.2 2.0

P1379 S



Channel Style	Weight/C		Design Load Each (Use in Pairs Only)	
	Lbs	kg	Lbs	kN
P1000 P1100 P2000	75	34.0	600 500 450	2.7 2.2 2.0

P1272 S
P1985 S
P1986 S

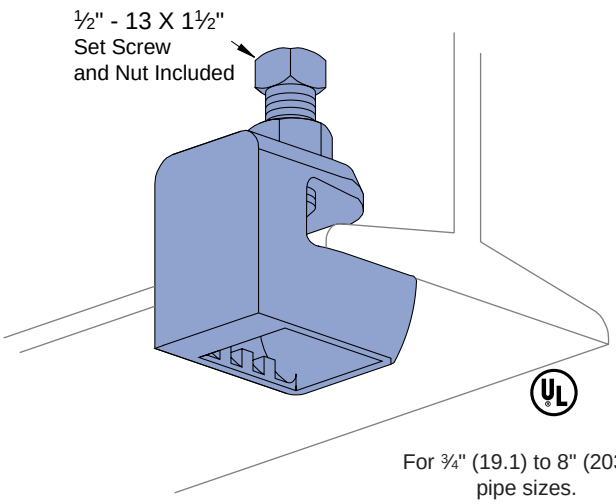


Part Number	"A"		Flange Thickness		Set Screw "D" Included	Weight/C		Design Load Per Pair (Use in Pairs Only)	
	In	mm	In	mm		Lbs	kg	Lbs	kN
P1272 S	¼	6.4	Up to ¾	Up to 19.1	⅜-16 x 1½	39	17.7	450	2.0
P1985 S	⅜	9.5	Up to ¾	Up to 19.1	½-13 x 1½	62	28.1	1000	4.4
P1986 S	⅜	9.5	⅞ to 2	22.2 to 50.8	½-13 x 1½	74	33.6	900	4.0

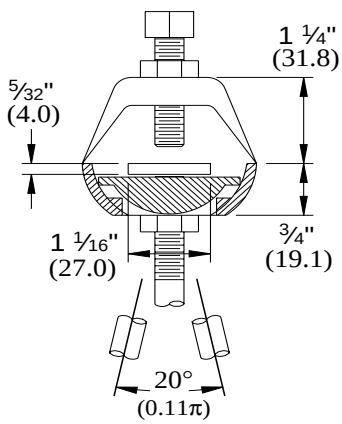
M29

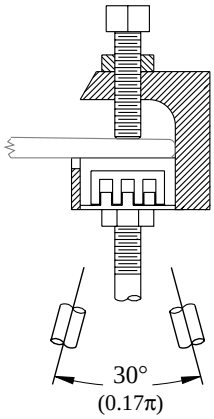
SWIVEL BEAM CLAMP

Supports ⅜", ½", ⅝", ¾", ⅞" hanger rods.



For ¾" (19.1) to 8" (203.2) pipe sizes.





- For use with M2708 series swivel nut. (See page 177.)
- It fits flanges up to 0.8" (20.3) thickness.

Material: Malleable Iron.

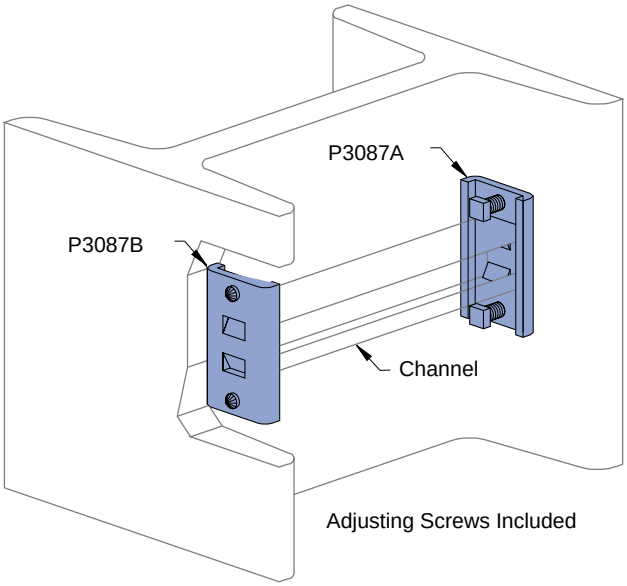
Design Load
750 Lbs (3.3 kN)

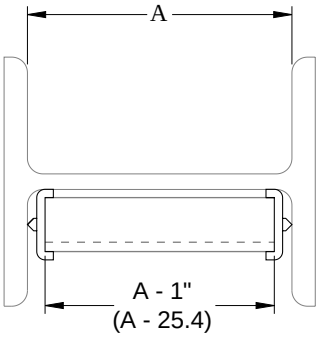
Wt/C 83 Lbs (37.6 kg)

Patent No. 2953874.

P3087

COLUMN INSERT





- Adjusting Screws Included.
- Unistrut channel not included.
- Part number P3087 consists of: 1 piece P3087A and 1 piece P3087B and 2 set screws.

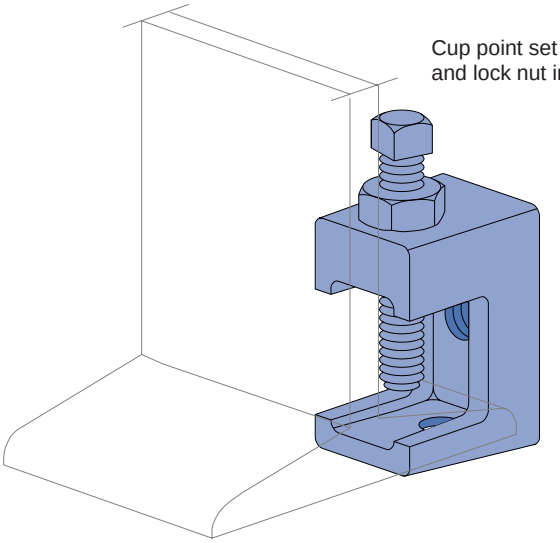
Wt/C 136 Lbs (61.7 kg)

Channel Part Number	Design Pull Out Load		Design Slip Load	
	Lbs	kN	Lbs	kN
P1000	1000	4.4	800	3.6
P1100	700	3.1	500	2.2
P2000	500	2.2	300	1.3

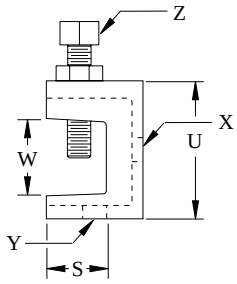
Safety factor of 3.

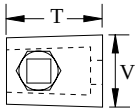
PLLC025

FLANGE CLAMP



Cup point set screw and lock nut included.





X, Y are threaded holes.

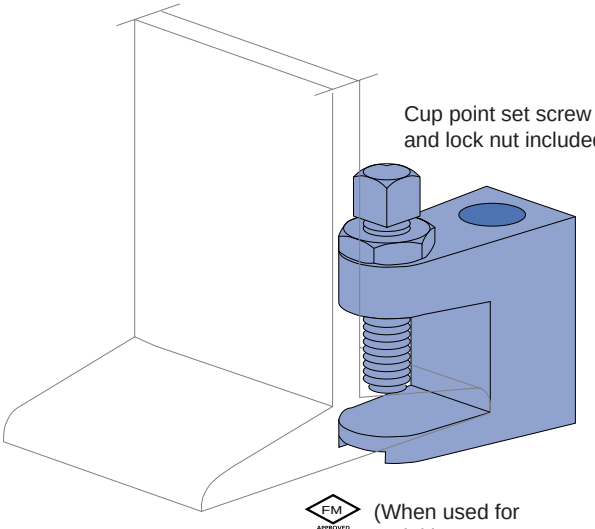
Part Number	Rod Size	Set Screw Size "Z"	Weight/C	
			Lbs	kg
PLLC025	¼"	¼"	16.0	7.3

Material: Malleable Iron.

Part Number	Dimensions								
	"S"		"T"		"U"		"V,W"		"X,Y"
	In	mm	In	mm	In	mm	In	mm	In
PLLC025	⅝	16	1	25	1 1/16	37	¾	19	¼ X 20

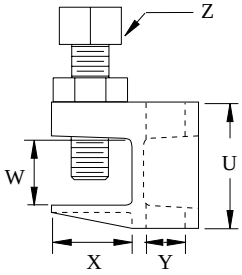
PFL037 thru PFL050 T

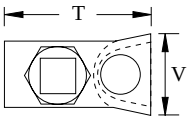
FLANGE CLAMP



Cup point set screw and lock nut included.

(When used for sprinkler systems only.)





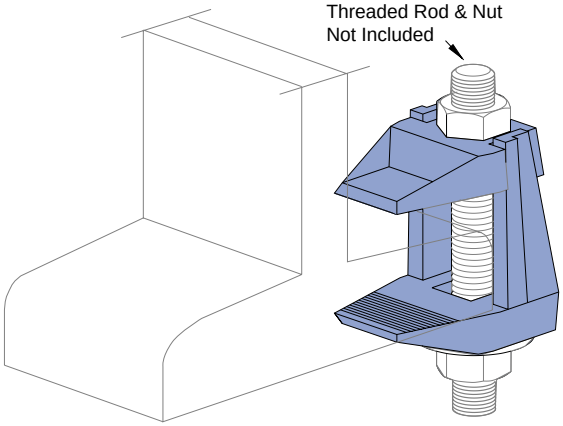
Safety Factor: 5

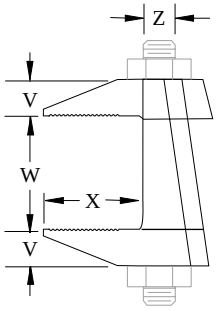
Part Number	Rod Size	Set Screw Size "Z"	Weight/C		Max. Allowable Load	
			Lbs	kg	Lbs	kN
PFL037	⅜"	⅜"	28	12.7	550	2.4
PFL037 T	⅜"	⅜"	28	12.7	550	2.4
PFL050	½"	⅜"	40	18.1	700	3.1
PFL050 T	½"	⅜"	40	18.1	700	3.1

Material: Malleable Iron.

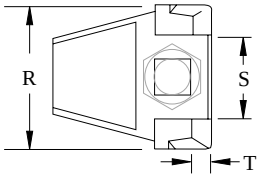
Part Number	Dimensions											
	"T"		"U"		"V"		"W"		"X"		"Y"	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
PFL037	1 11/16	43	1 9/16	40	⅞	22	¾	19	1	25	7/16	11
PFL037 T	1 11/16	43	1 9/16	40	⅞	22	¾	19	1	25	⅜ Tapped Hole	
PFL050	2	51	1 23/32	44	1	25	29/32	23	1 3/32	28	17/32	13
PFL050 T	2	51	1 23/32	44	1	25	29/32	23	1 3/32	28	½ Tapped Hole	

PLF3037 thru PLF3075





FLANGE CLAMP



FM APPROVED (When used for sprinkler systems only.)

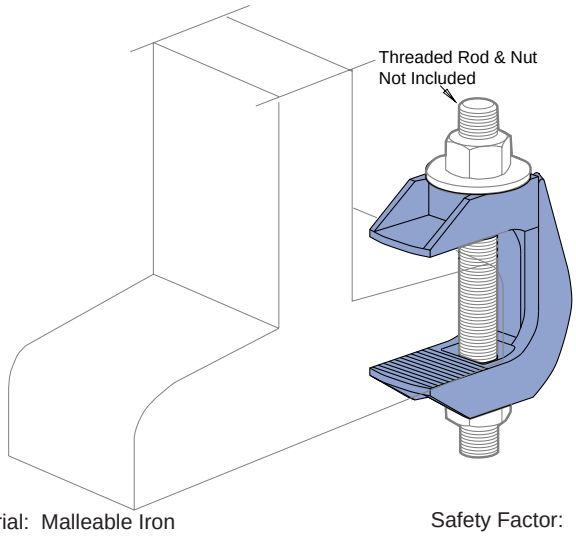
Safety Factor: 5

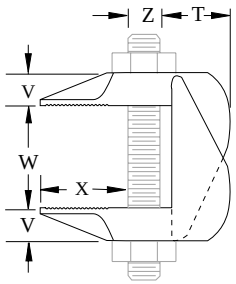
Material: Malleable Iron

Part Number	Rod Size "Z"	Weight/C		Max. Allowable Load	
		Lbs	kg	Lbs	kN
PLF3037	⅜"	53	24.0	440	2.0
PLF3050	½"	91	41.3	630	2.8
PLF3062	⅝"	186	84.4	1200	5.6
PLF3075	¾"	334	151.5	1880	8.4

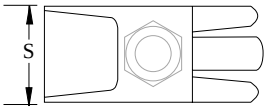
Part Number	Dimensions											
	"X"		"W"		"V"		"T"		"R"		"S"	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
PLF3037	1	25	0 – 1 3/16	0 – 30	⅜	10	9/32	7	1½	38	⅞	22
PLF3050	1⅜	35	0 – 1 9/16	0 – 40	½	13	11/32	9	1 15/16	49	1 5/32	29
PLF3062	1 13/16	46	0 – 2 3/16	0 – 56	⅝	16	½	13	2 11/32	60	1 7/16	37
PLF3075	2 3/16	55	0 – 1¾	0 – 70	¾	19	⅝	16	3	76	1¾	45

PLF9037 thru PLF9100





FLANGE CLAMP



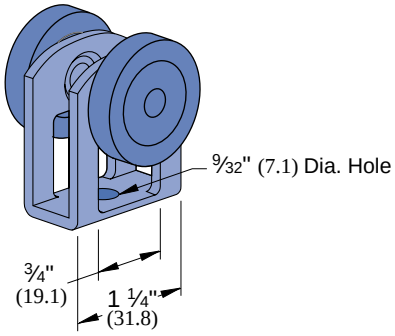
Material: Malleable Iron

Safety Factor: 5

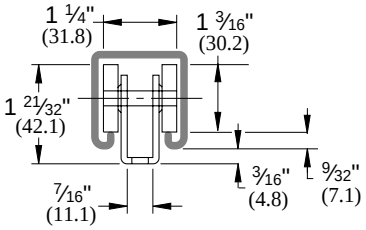
Part Number	Rod Size	Weight/C		Max. Allowable Load	
		Lbs	kg	Lbs	kN
PLF9037	⅜"	55	25.0	440	2.0
PLF9050	½"	122	55.4	630	2.8
PLF9062	⅝"	200	90.7	1260	5.6
PLF9075	¾"	367	166.5	1880	8.4
PLF9100	1"	1101	500.0	3150	14.0

Part Number	Dimensions									
	"X"		"W"		"V"		"T"		"S"	
	In	mm	In	mm	In	mm	In	mm	In	mm
PLF9037	1	25	¾ - 1 11/16	19 - 42	½	13	¾	19	1	25
PLF9050	1⅜	35	1 - 2⅜	26 - 60	21/32	17	15/16	24	1 3/16	30
PLF9062	1 11/16	43	1⅛ - 2¾	29 - 69	13/16	21	1⅛	28	1⅜	35
PLF9075	2	51	1¼ - 3¼	32 - 82	1	25	1⅜	35	1¾	45
PLF9100	3	76	1¾ - 3¾	45 - 95	1½	38	2 3/16	55	2½	63

P2749*
P2749 N †



TROLLEY ASSEMBLY

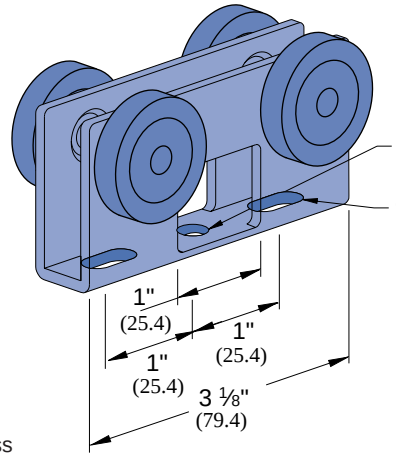


Clevis Material: 12 gage.

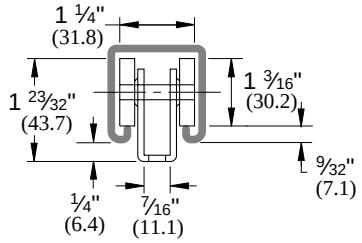
*Wheel bearings are stainless steel, and should not be lubricated.
† "N" indicates acetal wheels.

Part Number	Design Load		Weight/C	
	Lbs	kN	Lbs	kg
P2749	50	.2	21	9.5
P2749 N	10	.04	13	5.9

P2750*
P2750 N †



TROLLEY ASSEMBLY

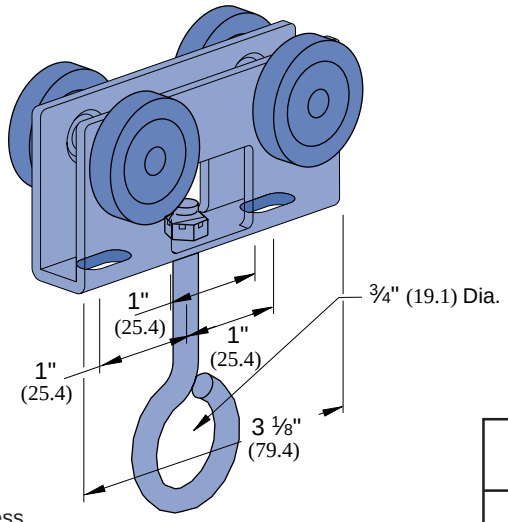


Clevis Material: 12 gage.

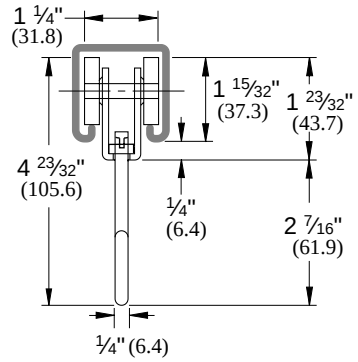
*Wheel bearings are stainless steel, and should not be lubricated.
† "N" indicates acetal wheels.

Part Number	Design Load		Weight/C	
	Lbs	kN	Lbs	kg
P2750	100	.4	55	24.9
P2750 N	20	.1	32	14.5

P2751*
P2751 N †



TROLLEY ASSEMBLY



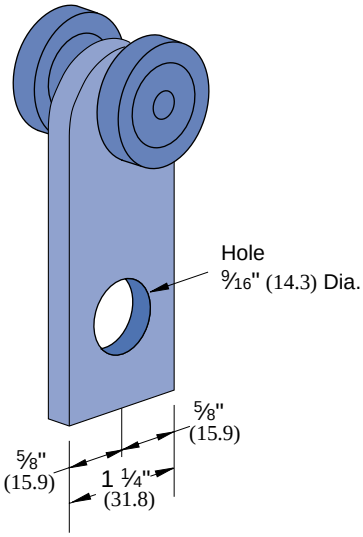
Clevis Material: 12 gage.

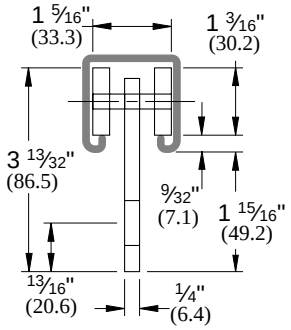
*Wheel bearings are stainless steel, and should not be lubricated.
† "N" indicates acetal wheels.

Part Number	Design Load		Weight/C	
	Lbs	kN	Lbs	kg
P2751	100	.4	63	28.6
P2751 N	20	.1	40	18.1

P2949

TROLLEY ASSEMBLY





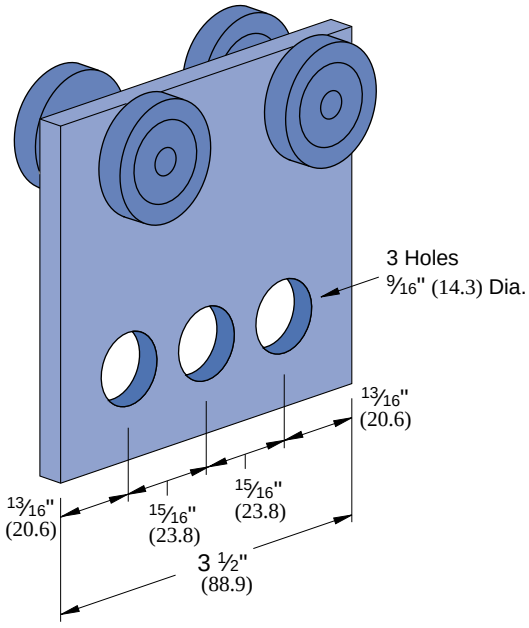
RPM	Design Load In P1000	
	Lbs	kN
600	150	.7
300	225	1.0
100	437	1.9

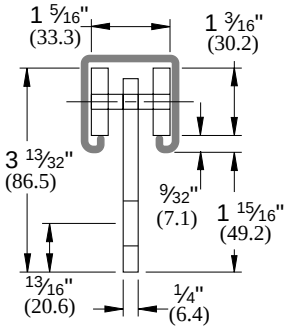
Wheel bearings are stainless steel. Do not lubricate.

Wt/C 46 Lbs (20.9 kg)

P2950

TROLLEY ASSEMBLY



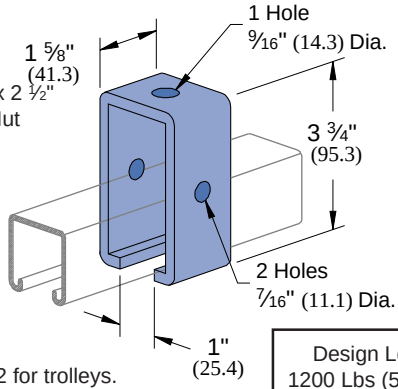


RPM	Design Load In P1000	
	Lbs	kN
600	300	1.3
300	450	2.0
100	600	2.7

Wheel bearings are stainless steel. Do not lubricate.

Wt/C 110 Lbs (49.9 kg)

P1834 — CHANNEL TROLLEY SUPPORT

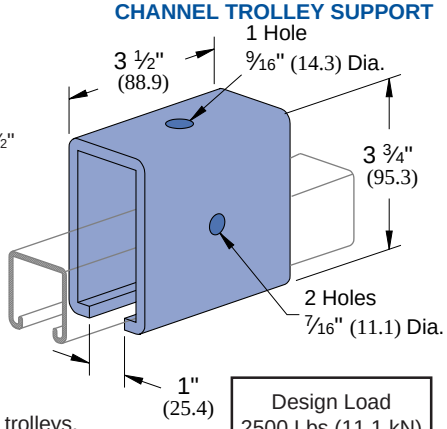


See page 122 for trolleys.

Design Load
1200 Lbs (5.3 kN)

Wt/C 102 Lbs (46.3 kg)

P1834 A — CHANNEL TROLLEY SUPPORT

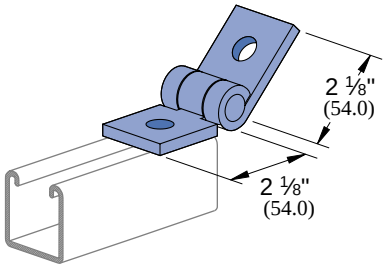


See page 122 for trolleys.

Design Load
2500 Lbs (11.1 kN)

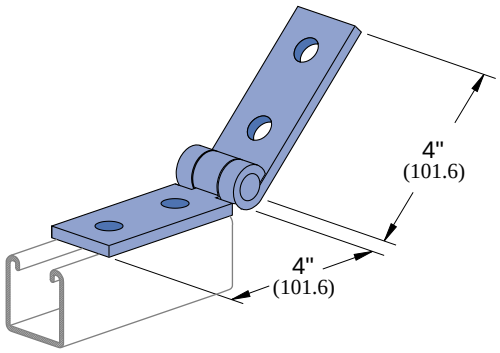
Wt/C 220 Lbs (99.8 kg)

P1843 — ADJUSTABLE HINGE CONNECTION



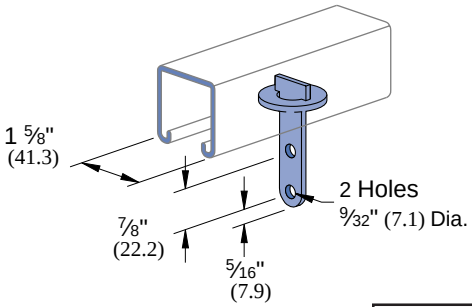
Wt/C 68 Lbs (30.8 kg)

P1354 — ADJUSTABLE HINGE CONNECTION



Wt/C 109 Lbs (49.4 kg)

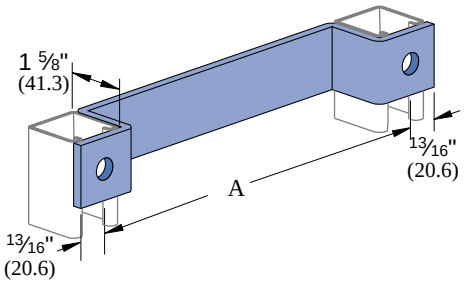
P5349 — CURTAIN SLIDER



Design Load
20 Lbs (.1 kN)

Wt/C 6.5 Lbs (2.9 kg)

P1201 P1202 P1203 — LADDER RUNG

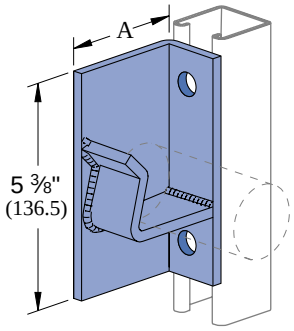


Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P1201	12	304.8	186	84.4
P1202	15	381.0	221	100.2
P1203	18	457.2	254	115.2

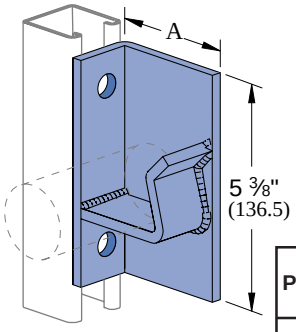
Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P2354 R-L
P2355 R-L

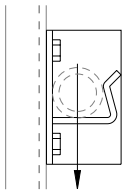
REEL RACK SUPPORTS FOR 1¼" AND 2 " PIPE



Left Hand



Right Hand

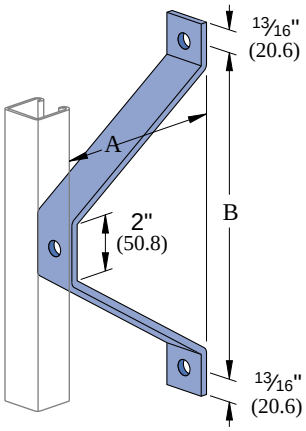


Vertical Channel		Max. Allowable Load	
Part No.	Gage	Lbs	kN
P1000	12	3000	13.3
P1100	14	2000	8.9
P2000	16	2000	8.9

Part Number	"A"		Std. Pipe Size		Weight/C	
	In	mm	In	mm	Lbs	kg
P2354 R-L	3	76.2	1¼	31.8	220	99.8
P2355 R-L	3⅝	92.1	2	50.8	252	114.3

P1204 thru P1208

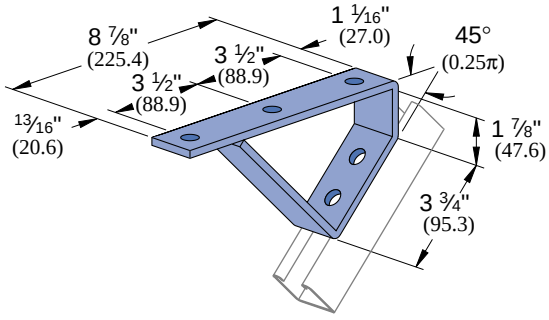
WALL LADDER BRACKET



Part Number	"A"		"B"		Weight/C	
	In	mm	In	mm	Lbs	kg
P1204	2⅜	60.3	6	152.4	113	51.3
P1205	4⅜	111.1	8	203.2	164	74.4
P1206	6⅜	161.9	10	254.0	216	98.0
P1207	8⅜	212.7	12	304.8	267	121.1
P1208	10⅜	263.5	14	355.6	318	144.2

P1944

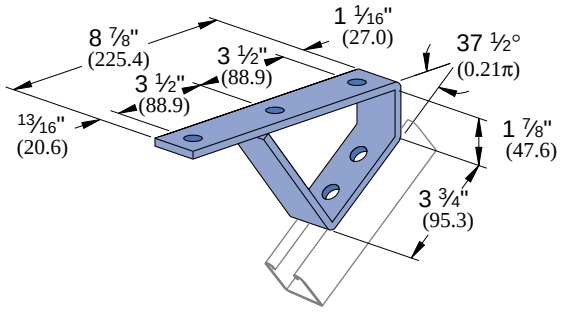
45° (.25π) STAIR TREAD SUPPORT



Wt/C 220 Lbs (99.8 kg)

P2655

37½° (.21π) STAIR TREAD SUPPORT



Wt/C 213 Lbs (96.6 kg)

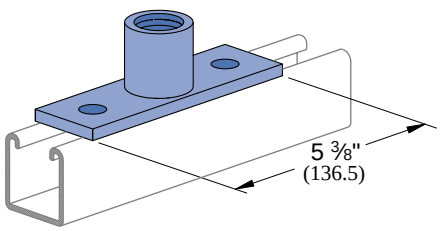
Hole Size	Hole Spacing	Width	Thickness
9⁄16" Diameter 14.3 mm	13⁄16" (20.6 mm) From End 1 7⁄8" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

SPECIAL APPLICATION FITTINGS & END CAPS

FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P2470-50 P2470-75 P2470-100

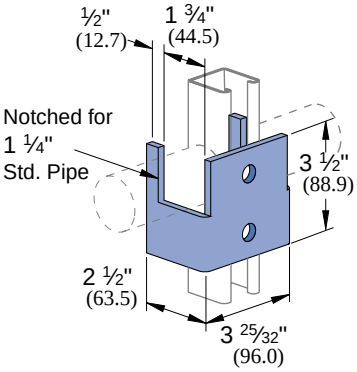
PIPE COUPLING FITTING

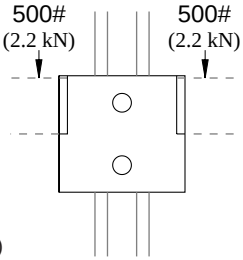


Part Number	Pipe Coupling Size In	Weight/C	
		Lbs	kg
P2470-50	½	77	34.9
P2470-75	¾	93	42.2
P2470-100	1	103	46.7

P2454

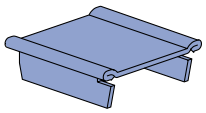
AXLE SUPPORT FOR 1¼" (31.8) STANDARD PIPE





Wt/C 148 Lbs (67.1 kg)

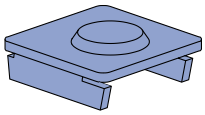
P1280, P2280



Material: .060" (1.5)

Part Number	Use With Channel	Weight/C	
		Lbs	kg
P1280	P1000	11	5.0
P2280	P2000	11	5.0

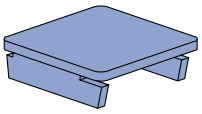
P1280 A, P2280 A



Material: .075" (1.9)

Part Number	Use With Channel	Weight/C	
		Lbs	kg
P1280 A	P1000	11	5.0
P2280 A	P2000	11	5.0

P1180, P4280, P5280, P5580

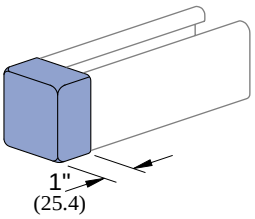


Material: .075" (1.9)

Part Number	Use With Channel	Weight/C	
		Lbs	kg
P1180	P1100	12	5.4
P4280	P4000	5	2.3
P5280	P5000	22	10.0
P5580	P5500	17	7.7

PLASTIC WHITE END CAPS

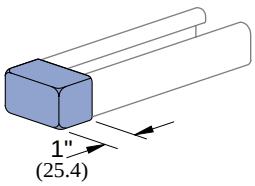
P2860-10



Use with P1000, P1100, P2000 channels & P9000 Telestrut.

Wt/C 3.4 Lbs (1.5 kg)

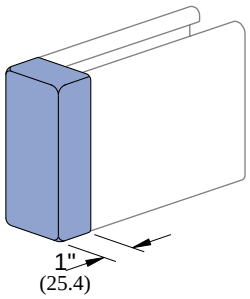
P2860-33



Use with P3300 channel.

Wt/C 2.5 Lbs (1.1 kg)

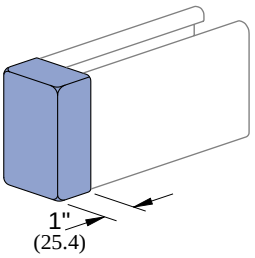
P2860-50



Use with P5000 & P1001 channels.

Wt/C 5 Lbs (2.3 kg)

P2860-55

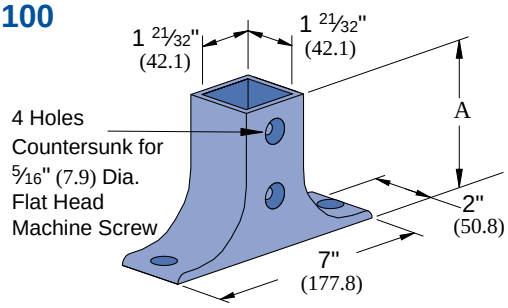


Use with P5500 channel.

Wt/C 4.7 Lbs (2.1 kg)

K2099
K2100

PARTITION BASE PLATE

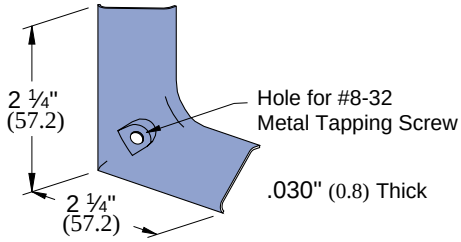


Material: Cast iron.

Part Number	Dimension "A"		Weight/C	
	In	mm	Lbs	kg
K2099	4	101.6	250	113.4
K2100	6¾	171.5	500	226.8

P2571
P2573
P2575

CORNER COVER



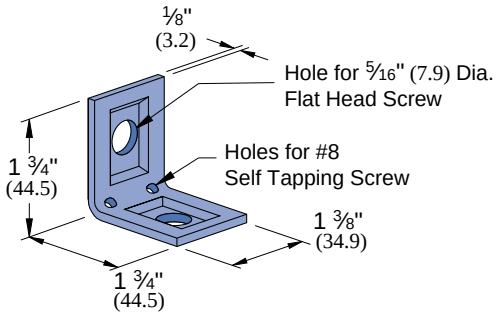
Finish: Electro-galvanized and stainless steel.

Patent Number 3075621

Part Number	Panel Thickness		Weight/C	
	In	mm	Lbs	kg
P2571	¼	6.4	4	1.8
P2573	⅜	9.5	4	1.8
P2575	½	12.7	4	1.8

P2582

CORNER ANGLE



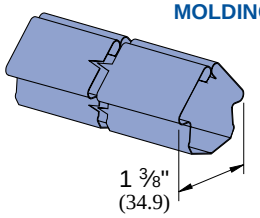
Finish: Electro-galvanized.

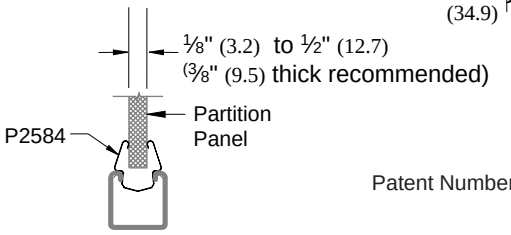
Patent Number 3075621

Wt/C 15 Lbs (6.8 kg)

P2584

MOLDING





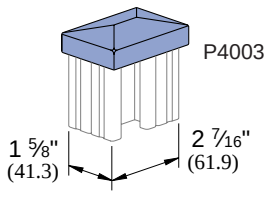
Patent Number 3075621

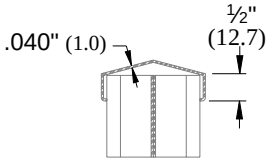
Finish: Stainless steel and zinc bonderized.
Standard lengths of 12' (3.7 m) and 14' (4.3 m).

Wt/C/Ft 20 Lbs (29.8 kg/100 m)

P2661

POST CAP



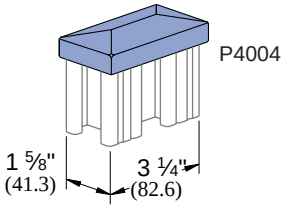


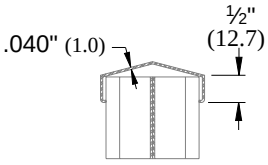
Finish: Electro-galvanized.

Wt/C 15 Lbs (6.8 kg)

P2662

POST CAP

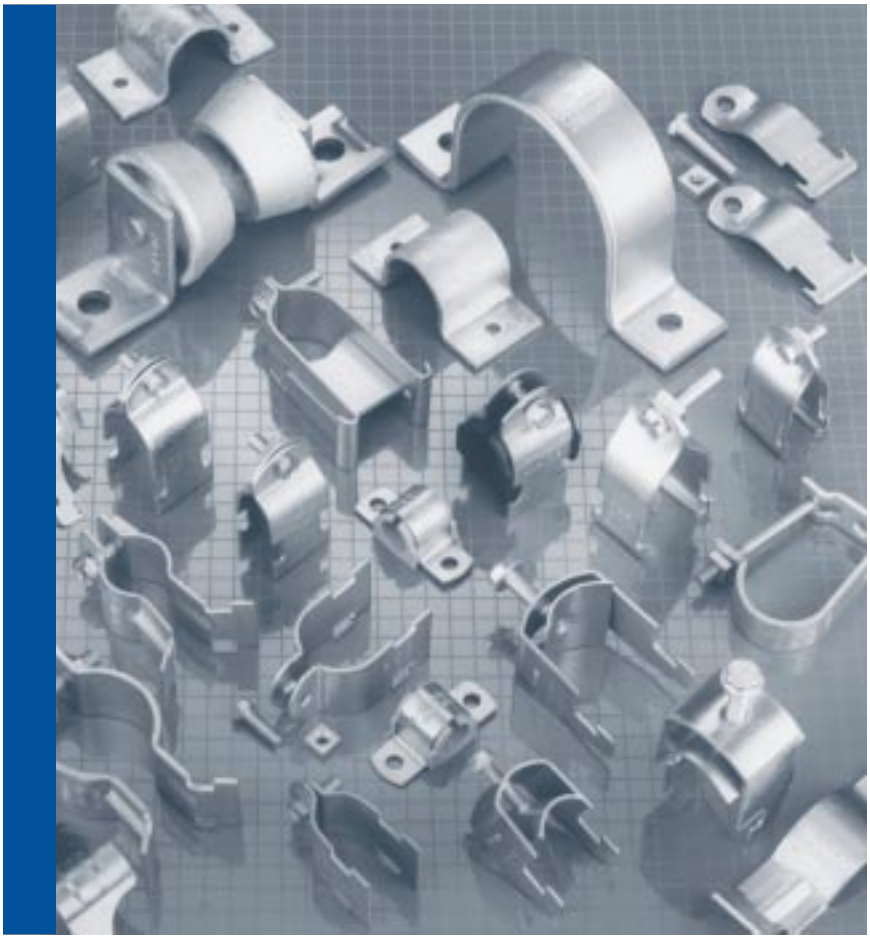




Finish: Electro-galvanized.

Wt/C 17 Lbs (7.7 kg)

	Page
Pipe/Conduit Clamps	129
Pipe Hangers	139
Pipe Rollers	140
Pipe Brackets	143
Reference Tables	144



MATERIAL
Unistrut pipe supports, unless noted, are punch-press made from hot-rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A366, A575, A576, A635, or A36. The fitting steel also meets the physical requirements of ASTM A570 GR 33. The pickling of the steel produces a smooth surface free from scale.

Many items are also available in stainless steel. Consult factory for ordering information.

FINISHES
Pipe supports are available in: electro-galvanized (EG), conforming to ASTM B633 Type III SC1; Hot-dipped galvanized (HG), conforming to ASTM A123 or A153; Perma-Green II (GR), and plain (PL).

APPLICATION
Unistrut pipe clamps, pipe hangers, brackets and rollers are designed for the support of electrical and mechanical services. Supports to meet nearly every requirement can be attained using Unistrut Metal Framing components.

DIMENSIONS
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

DESIGN BOLT TORQUE

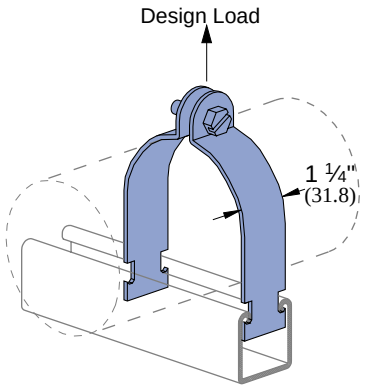
BOLT SIZE	¼" 20	5/16" 18	⅜" 16	½" 13	⅝" 11	¾" 10
FOOT LBS.	6	11	19	50	100	125
N·m	8	15	25	70	135	170

Note: When tightening ¼" screws used with a two piece pipe clamp, a torque of 5 foot pounds (60 inch-pounds) should be used.

DESIGN LOAD
Design load data, where shown, is based on the ultimate strength of the connection with a safety factor of 5.0, unless otherwise noted.

P1109 thru P1126

PIPE CLAMPS FOR RIGID STEEL CONDUIT



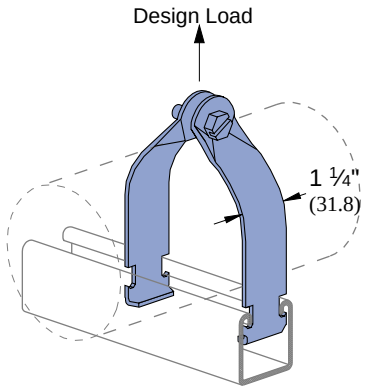
Slotted hex head screw and nut included.

Finish: Electro-galvanized.

Part Number	Pipe Size	O.D. Size		Thickness		Weight/C		Design Load	
	In	In	mm	Gage	mm	Lbs	kg	Lbs	kN
P1109	⅜	.675	17.1	16	1.5	10	4.5	400	1.8
P1111	½	.840	21.3	16	1.5	11	5.0	400	1.8
P1112	¾	1.050	26.7	14	1.9	15	6.8	600	2.7
P1113	1	1.315	33.4	14	1.9	17	7.7	600	2.7
P1114	1¼	1.660	42.2	14	1.9	19	8.6	600	2.7
P1115	1½	1.900	48.3	12	2.7	29	13.2	800	3.6
P1117	2	2.375	60.3	12	2.7	34	15.4	800	3.6
P1118	2½	2.875	73.0	12	2.7	40	18.1	800	3.6
P1119	3	3.500	88.9	12	2.7	47	21.3	800	3.6
P1120	3½	4.000	101.6	11	3.0	62	28.1	1000	4.4
P1121	4	4.500	114.3	11	3.0	67	30.4	1000	4.4
P1123	5	5.563	141.3	11	3.0	80	36.3	1000	4.4
P1124	6	6.625	168.3	10	3.4	102	46.3	1000	4.4
P1126	8	8.625	219.1	10	3.4	130	59.0	1000	4.4

P1211 thru P1217

UNIVERSAL CLAMPS FOR RIGID OR THINWALL CONDUIT



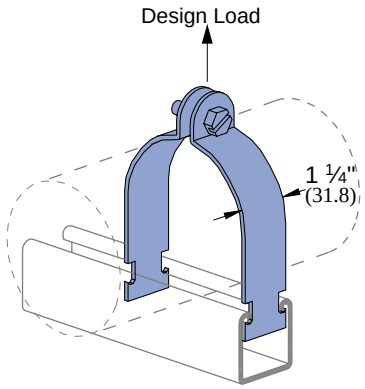
Slotted hex head screw and nut included.

Finish: Electro-galvanized.

Part Number	Pipe/Conduit Size	Thickness		Weight/C		Design Load	
	In	Gage	mm	Lbs	kg	Lbs	kN
P1211	½	16	1.5	10	4.5	400	1.8
P1212	¾	16	1.5	11	5.0	400	1.8
P1213	1	16	1.5	12	5.4	400	1.8
P1214	1¼	14	1.9	18	8.2	600	2.7
P1215	1½	14	1.9	20	9.1	600	2.7
P1217	2	14	1.9	22	10.0	600	2.7

P1425 thru P1431

PIPE CLAMPS FOR THIN WALL CONDUIT (E.M.T.)

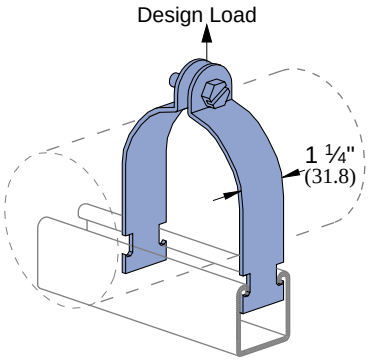


Slotted hex head screw and nut included.

Finish: Electro-galvanized.

Part Number	Pipe Size	O.D. Size		Thickness		Weight/C		Design Load	
	In	In	mm	Gage	mm	Lbs	kg	Lbs	kN
P1425	⅜	.577	14.7	16	1.5	9	4.1	400	1.8
P1426	½	.706	17.9	16	1.5	11	5.0	400	1.8
P1427	¾	.922	23.4	16	1.5	12	5.4	400	1.8
P1428	1	1.163	29.5	14	1.9	15	6.8	600	2.7
P1429	1¼	1.510	38.4	14	1.9	18	8.2	600	2.7
P1430	1½	1.740	44.2	12	2.7	29	13.2	800	3.6
P1431	2	2.197	55.8	12	2.7	33	15.0	800	3.6
P1118	2½	2.875	73.0	12	2.7	40	18.1	800	3.6
P1119	3	3.500	88.9	12	2.7	47	21.3	800	3.6
P1120	3½	4.000	101.6	11	3.0	62	28.1	1000	4.4
P1121	4	4.500	114.3	11	3.0	67	30.4	1000	4.4

P2024 thru P2070-84



PIPE CLAMPS FOR O.D. TUBING

Slotted hex head screw and nut included.

P2024 - P2029	16 ga.
P2030 - P2035	14 ga.
P2037 - P2052	12 ga.
P2053 - P2066	11 ga.
P2067 - P2070-84	10 ga.

Finish: Electro-galvanized.

Part Number	O.D. Size		Weight/C		Design Load Lbs (kN)
	In	mm	Lbs	kg	
P2024	¼	6.4	8	3.6	400 (1.8)
P2025	⅜	9.5	8	3.6	
P2026	½	12.7	9	4.1	
P2027	⅝	15.9	10	4.5	
P2028	¾	19.1	11	5.0	
P2029	⅞	22.2	12	5.4	
P2030	1	25.4	14	6.4	600 (2.7)
P2031	1⅛	28.6	15	6.8	
P2032	1¼	31.8	16	7.3	
P2033	1⅜	34.9	17	7.7	
P2034	1½	38.1	18	8.2	
P2035	1⅝	41.3	19	8.6	
P1430	1¾	44.5	29	13.2	800 (3.6)
P2037	1⅞	47.6	28	12.7	
P2038	2	50.8	31	14.1	
P2039	2⅛	54.0	32	14.5	
P2040	2¼	57.2	33	15.0	
P1117	2⅜	60.3	34	15.4	
P2042	2½	63.5	35	15.9	
P2043	2⅝	66.7	37	16.8	
P2044	2¾	69.9	38	17.2	
P1118	2⅞	73.0	40	18.1	
P2046	3	76.2	41	18.6	
P2047	3⅛	79.4	43	19.5	
P2048	3¼	82.6	45	20.4	
P2049	3⅜	85.7	46	20.9	
P1119	3½	88.9	47	21.3	
P2051	3⅝	92.1	56	25.4	1000 (4.4)
P2052	3¾	95.3	58	26.3	
P2053	3⅞	98.4	60	27.2	
P1120	4	101.6	62	28.1	
P2055	4⅛	104.8	62	28.1	
P2056	4¼	108.0	64	29.0	
P2057	4⅜	111.1	66	29.9	

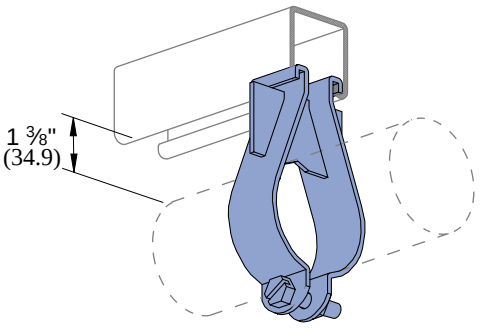
Part Number	O.D. Size		Weight/C		Design Load Lbs (kN)
	In	mm	Lbs	kg	
P1121	4½	114.3	67	30.4	1000 (4.4)
P2059	4⅝	117.5	70	31.8	
P2060	4¾	120.7	72	32.7	
P2061	4⅞	123.8	73	33.1	
P2062	5	127.0	74	33.6	
P2063	5⅛	130.2	76	34.5	
P2064	5¼	133.4	77	34.9	
P2065	5⅜	136.5	78	35.4	
P2066	5½	139.7	79	35.8	
P2067	5⅝	142.9	88	39.9	
P2068	5¾	146.1	90	40.8	
P2069	5⅞	149.2	92	41.7	
P2070	6	152.4	94	42.6	
P2070-61	6⅛	155.6	96	43.5	
P2070-62	6¼	158.8	98	44.5	
P2070-63	6⅜	161.9	99	44.9	
P2070-64	6½	165.1	100	45.4	
P1124	6⅝	168.3	102	46.3	
P2070-66	6¾	171.5	104	47.2	
P2070-67	6⅞	174.6	106	48.1	
P2070-70	7	177.8	108	49.0	
P2070-71	7⅛	181.0	110	49.9	
P2070-72	7¼	184.2	112	50.8	
P2070-73	7⅜	187.3	114	51.7	
P2070-74	7½	190.5	116	52.6	
P2070-75	7⅝	193.7	117	53.1	
P2070-76	7¾	196.9	119	54.0	
P2070-77	7⅞	200.0	121	54.9	
P2070-80	8	203.2	123	55.8	
P2070-81	8⅛	206.4	125	56.7	
P2070-82	8¼	209.6	126	57.2	
P2070-83	8⅜	212.7	128	58.1	
P2070-84	8½	215.9	129	58.5	
P1126	8⅝	219.1	130	59.0	

PIPE CLAMPS IN SPECIAL MATERIALS P1109, P1211, P1425, P2024 SERIES

Material	Add Suffix To "P" Number	Example
Steel Strap, Everdur Hardware	E	P1109 E
Copper Coated Steel Strap & Hardware	CC	P1109 CC
Aluminum	AL	P1109 AL
Stainless Steel 304 or 316	SS or ST	P1109 SS
Plastic Coated Steel Straps	PC	P1109 PC

P1563 thru P1573

PARALLEL CLAMPS FOR RIGID CONDUIT AND PIPE



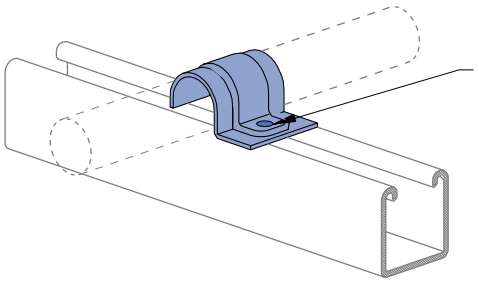
Slotted hex head screw and nut included.

Part Number	Pipe Size	O.D. Size		Thickness		Weight/C	
	In	In	mm	Gage	mm	Lbs	kg
P1563	⅜	.675	17.1	14	1.9	27	12.2
P1564	½	.840	21.3	14	1.9	29	13.2
P1565	¾	1.050	26.7	14	1.9	30	13.6
P1566	1	1.315	33.4	14	1.9	31	14.1
P1567	1¼	1.660	42.2	14	1.9	38	17.2
P1568	1½	1.900	48.3	12	2.7	40	18.1
P1569	2	2.375	60.3	12	2.7	47	21.3
P1570	2½	2.875	73.0	12	2.7	66	29.9
P1571	3	3.500	88.9	12	2.7	78	35.4
P1572	3½	4.000	101.6	12	2.7	87	39.5
P1573	4	4.500	114.3	12	2.7	90	40.8

Finish: Electro-galvanized.

P2008 thru P2020

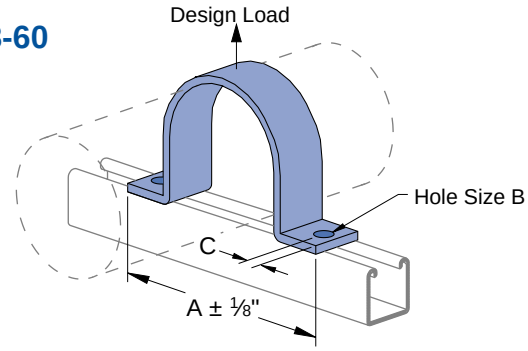
ONE HOLE CLAMP FOR O.D. TUBING



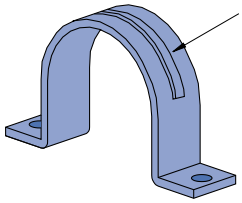
Part Number	O.D. Tube Size		Thickness		Weight/C	
	In	mm	Gage	mm	Lbs	kg
P2008	¼	6.4	16	1.5	4	1.8
P2009	5/16	7.9	16	1.5	5	2.3
P2010	⅜	9.5	16	1.5	5	2.3
P2012	½	12.7	16	1.5	6	2.7
P2014	⅝	15.9	14	1.9	8	3.6
P2016	¾	19.1	14	1.9	9	4.1
P2018	⅞	22.2	14	1.9	10	4.5
P2020	1	25.4	14	1.9	11	5.0

Finish: Electro-galvanized.

P2558-5 thru P2558-60



SINGLE PIECE PIPE STRAP

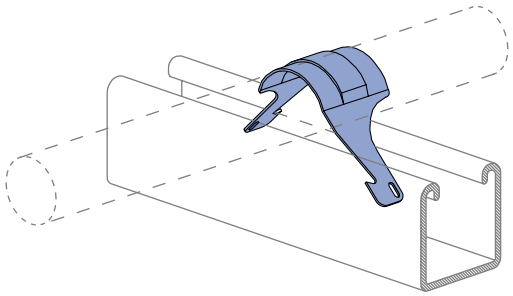


Hardware sold separately.

Part Number	Nominal Pipe Size	"A"		"B"		"C"		Thickness	Weight/C		Design Load
	In	In	mm	In	mm	In	mm	In (mm)	Lbs	kg	Lbs (kN)
P2558-05	½	2⅞	73.0						23	10.4	
P2558-07	¾	3⅛	79.4					⅛"	26	11.8	500
P2558-10	1	3⅜	85.7	9/32	7.1	7/16	11.1	(3.2)	31	14.1	(2.2)
P2558-12	1¼	3¾	95.3						35	15.9	
P2558-15	1½	3⅞	98.4						39	17.7	
P2558-20	2	5¾	146.1						94	42.6	
P2558-25	2½	6¼	158.8						114	51.7	
P2558-30	3	6⅞	174.6						133	60.3	
P2558-35	3½	7⅜	187.3	7/16	11.1	11/16	17.5	¼"	152	68.9	1000
P2558-40	4	7⅞	200.0					(6.4)	176	79.8	(4.4)
P2558-50	5	9	228.6						198	89.8	
P2558-60	6	10	254.0						225	102.1	

P2609 thru P2617
P2426 thru P2431

UNI-CLIP SUPPORT



The Uni-Clip supports exceed load requirements for American Standard Code for Pressure Piping (1967), and National Electric Code (1971). Patent No. 2863625.

Material: Stainless steel type 301.

UNI-CLIP SUPPORTS FOR RIGID STEEL CONDUIT

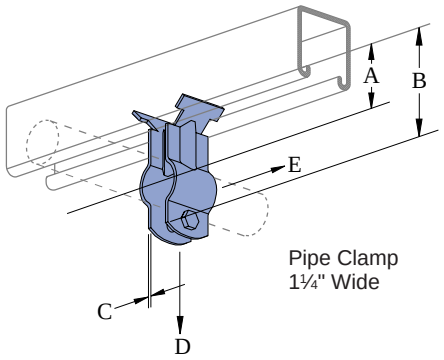
Part Number	Conduit Size	O.D. Size		Weight/C	
	In	In	mm	Lbs	kg
P2609	⅜	.675	17.1	1.6	0.7
P2611	½	.840	21.3	2.3	1.0
P2612	¾	1.050	26.7	3.2	1.5
P2613	1	1.315	33.4	4.1	1.9
P2614	1¼	1.660	42.2	5.1	2.3
P2615	1½	1.900	48.3	6.3	2.9
P2617	2	2.375	60.3	10.0	4.5

UNI-CLIP SUPPORTS FOR THINWALL CONDUIT (E.M.T.)

Part Number	Conduit Size	O.D. Size		Weight/C	
	In	In	mm	Lbs	kg
P2426	½	.706	17.9	1.7	0.8
P2427	¾	.922	23.4	2.4	1.1
P2428	1	1.163	29.5	3.6	1.6
P2429	1¼	1.510	38.4	4.6	2.1
P2430	1½	1.740	44.2	5.9	2.7
P2431	2	2.197	55.8	8.0	3.6

P3409 thru P3417

STAND-OFF PIPE CLAMPS



Part Number	Load "D"		Load "E"	
	Lbs	kN	Lbs	kN
P3409	100	0.4	25	0.1
P3411	150	0.7	35	0.2
P3412	175	0.8	40	0.2
P3413	200	0.9	50	0.2
P3414	300	1.3	70	0.3
P3415	400	1.8	80	0.4
P3417	500	2.2	120	0.5

Hardware included.

Finish: Electro-galvanized.

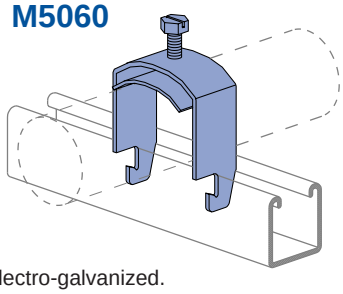
Patent No. 3417951.

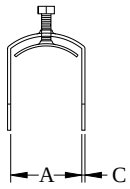
Safety factor of 5

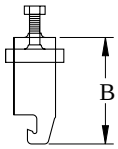
Part Number	Pipe Size	O.D. Size		"A"		"B"		"C"		Weight/C	
	In	In	mm	In	mm	In	mm	Gage	mm	Lbs	kg
P3409	⅜	.675	17.1	1⅛	28.6	2⅛	54.0	14	1.9	14	6.4
P3411	½	.840	21.3	1¼	31.8	2 5/16	58.7	14	1.9	15	6.8
P3412	¾	1.050	26.7	1 5/16	33.3	2½	63.5	14	1.9	19	8.6
P3413	1	1.315	33.4	1½	38.1	2¾	69.9	14	1.9	22	10.0
P3414	1¼	1.660	42.2	1 11/16	42.9	3¼	82.6	12	2.7	34	15.4
P3415	1½	1.900	48.3	1¾	44.5	3½	88.9	11	3.2	49	22.2
P3417	2	2.375	60.3	2	50.8	4	101.6	10	3.4	55	24.9

M5025 thru M5060

ONE-PIECE CABLE & CONDUIT CLAMPS



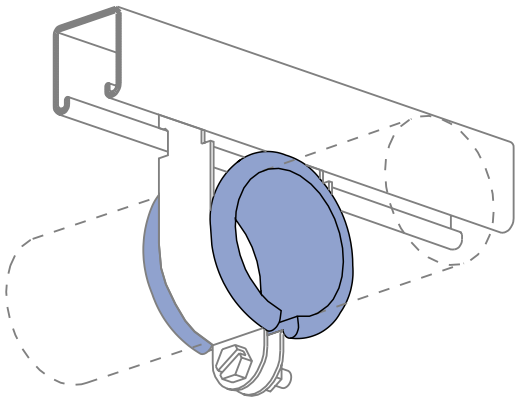




Finish: Electro-galvanized.

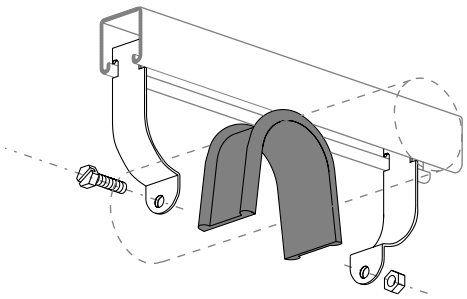
Part Number	Max O.D. Size		"A"		"B"		"C"		Weight/C	
	In	mm	In	mm	In	mm	Gage	mm	Lbs	kg
M5025	⅜	9.5	7/16	11.1	1⅝	41.3	14	1.9	6	2.7
M5026	½	12.7	9/16	14.3	1¾	44.5	14	1.9	7	3.2
M5028	¾	19.1	13/16	20.6	2	50.8	14	1.9	12	5.4
M5030	1	25.4	1 1/16	27.0	2¼	57.2	14	1.9	15	6.8
M5032	1¼	31.8	1 5/16	33.3	2½	63.5	14	1.9	19	8.6
M5034	1½	38.1	1 9/16	39.7	2¾	69.9	14	2.7	20	9.1
M5036	1¾	44.5	1 13/16	46.0	3	76.2	12	2.7	25	11.3
M5038	2	50.8	2 1/16	52.4	3¼	82.6	12	2.7	35	15.9
M5041	2⅜	60.3	2 7/16	61.9	3⅝	92.1	12	2.7	41	18.6
M5044	2¾	69.9	2 13/16	71.4	4	101.6	12	2.7	60	27.2
M5048	3¼	82.6	3 5/16	84.1	4½	114.3	12	2.7	74	33.6
M5052	3¾	95.3	3 13/16	96.8	5	127.0	12	2.7	91	41.3
M5054	4	101.6	4 1/16	103.2	5¼	133.4	12	2.7	100	45.4
M5057	4⅜	111.1	4 7/16	112.7	5⅝	142.9	12	2.7	115	52.2
M5060	4¾	120.7	4 13/16	122.2	6	152.4	12	2.7	125	56.7

P2600



Wt/Carton 2.5 Lbs (1.1 kg)

UNICUSHION®: ISOLATION MATERIAL



- 25 feet per carton.
- Cut to length as shown in charts.

CLAMP SELECTION & CUTTING GUIDE

EMT CONDUIT

Nominal Size	Use with Clamp	Unicushion Length	
		In	mm
⅜"	P1426	1¾	44
½"	P1111	2⅛	54
¾"	P1112	2¾	70
1"	P2032	3⅝	92
1¼"	P2035	4¾	120
1½"	P2037	5½	140
2"	P1117	6¾	171

STANDARD PIPE OR RIGID CONDUIT

Nominal Size	Use with Clamp	Unicushion Length	
		In	mm
⅜"	P1111	2⅛	54
½"	P2030	3	76
¾"	P2031	3¼	83
1"	P2034	4¼	108
1¼"	P2037	5¼	133
1½"	P2038	6	152
2"	P2042	7½	190
2½"	P2046	9	228
3"	P2051	11	280
3½"	P2055	12¼	310
4"	P2059	14	355
5"	P2067	17½	445
6"	P2070-66	20¾	527

UNICUSHION FEATURES

- Shock absorption
- Protection from corrosion and abrasion
- Allowance for expansion and contraction
- Sound and vibration isolation
- Stability in use from - 50° F (-47° C) to + 350°F (+177° C)
- Flexible elastomer material
- Will not support combustion

COPPER TUBING TYPE K OR L

Nominal Size	Use with Clamp	Unicushion Length	
		In	mm
¼"	P2026	1 1/16	27
⅜"	P2027	1½	38
½"	P2028	2⅛	54
⅝"	P2029	2¼	57
¾"	P2030	3	76
1"	P2032	3⅝	92
1¼"	P2034	4½	114
1½"	P1430	5¼	133
2"	P2040	6¾	171
2½"	P2044	8¼	210
3"	P2048	10	254
3½"	P2052	11¼	286
4"	P2056	12½	318
5"	P2064	16	406
6"	P2070-62	19	483
8"	P2070-82	25	635

CLAMP SELECTION & CUTTING GUIDE

O. D.TUBE

O. D. Size		Use With Clamp	Unicushion Length	
In	mm		In	mm
¼	6.4	P2025	⅞	22
⅜	9.5	P2026	1 1/16	27
½	12.7	P2027	1½	38
⅝	15.9	P2028	2⅛	54
¾	19.1	P2029	2¼	57
⅞	22.2	P2030	3	76
1	25.4	P2031	3¼	83
1⅛	28.6	P2032	3⅝	92
1¼	31.8	P2033	4	101
1⅜	34.9	P2034	4½	114
1½	38.1	P2035	4⅞	124
1⅝	41.3	P1430	5¼	133
1¾	44.5	P2037	5½	140
1⅞	47.6	P2038	6	152
2	50.8	P2039	6½	165
2⅛	54.0	P2040	6¾	171
2¼	57.2	P1117	7¼	184
2⅜	60.3	P2042	7½	190
2½	63.5	P2043	8	203
2⅝	66.7	P2044	8¼	209
2¾	69.9	P1118	8¾	222
2⅞	73.0	P2046	9¼	235
3	76.2	P2047	9½	241
3⅛	79.4	P2048	10	254
3¼	82.6	P2049	10½	267
3⅜	85.7	P1119	10¾	273
3½	88.9	P2051	11	280
3⅝	92.1	P2052	11¼	286
3¾	95.3	P2053	11½	292
3⅞	98.4	P1120	11¾	298
4	101.6	P2055	12	305
4⅛	104.8	P2056	12½	318
4¼	108.0	P2057	13	330
4⅜	111.1	P1121	13½	343

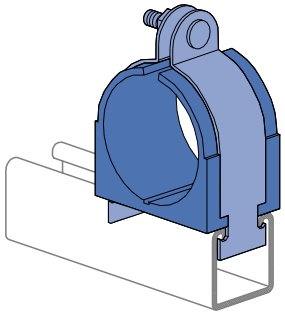
O. D.TUBE

O. D. Size		Use With Clamp	Unicushion Length	
In	mm		In	mm
4½	114.3	P2059	14	355
4⅝	117.5	P2060	14¼	362
4¾	120.7	P2061	14¾	375
4⅞	123.8	P2062	15	381
5	127.0	P2063	15½	394
5⅛	130.2	P2064	16	406
5¼	133.4	P2065	16¼	413
5⅜	136.5	P2066	16½	419
5½	139.7	P2067	17	432
5⅝	142.9	P2068	17½	445
5¾	146.1	P2069	17¾	451
5⅞	149.2	P2070	18¼	464
6	152.4	P2070-61	18½	470
6⅛	155.0	P2070-62	19	483
6¼	158.8	P2070-63	19¼	489
6⅜	168.9	P2070-64	19¾	502
6½	165.1	P1124	20	508
6⅝	168.3	P2070-66	20½	521
6¾	171.5	P2070-67	21	533
6⅞	174.6	P2070-70	21¼	540
7	177.8	P2070-71	21¾	552
7⅛	181.0	P2070-72	22	559
7¼	184.2	P2070-73	22½	572
7⅜	187.3	P2070-74	22¾	578
7½	190.5	P2070-75	23¼	591
7⅝	193.7	P2070-76	23½	597
7¾	196.9	P2070-77	24	610
7⅞	200.0	P2070-80	24½	622
8	203.2	P2070-81	24¾	629
8⅛	206.4	P2070-82	25	635
8¼	209.6	P2070-83	25½	648
8⅜	215.9	P2070-84	26	660
8½	219.1	P1126	26¼	667

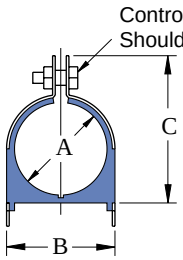
004T008 thru 098N106
009N012 thru 106N114

Includes cushion, clamp and hardware.

Materials:
Clamp: Electro-galvanized or stainless steel.
Cushion: Thermoplastic elastomer.



CUSH-A-CLAMP® ASSEMBLY



TUBE SERIES			PIPE SERIES		DIMENSIONS							
Assembly Part Number	Copper & Steel Tube O. D. Size	Copper Water Pipe (Nominal)	Assembly Part Number	Nominal Pipe Size	"A"		"B"		"C"		Weight/C	
					In	mm	In	mm	In	mm	Lbs	kg
004T008	¼				.25	6.4	.62	15.7	.98	24.9	10	4.5
006T010	⅜	¼			.37	9.4	.82	20.8	1.13	28.7	11	5.0
008T012	½	⅜			.50	12.7	.94	23.9	1.34	34.0	13	5.9
			009N012	¼	.54	13.7	.98	24.9	1.34	34.0	13	5.9
010T014	⅝	½			.62	15.7	1.06	26.9	1.54	39.1	14	6.4
			011N014	⅜	.67	17.0	1.13	28.7	1.54	39.1	14	6.4
012T016	¾	⅝			.75	19.1	1.20	30.5	1.68	42.7	14	6.4
			014N018	½	.84	21.3	1.29	32.8	1.82	46.2	15	6.8
014T018	⅞	¾			.87	22.1	1.31	33.3	1.82	46.2	15	6.8
016T020	1				1.00	25.4	1.44	36.6	1.95	49.5	17	7.7
			017N022	¾	1.05	26.7	1.50	38.1	1.95	49.5	17	7.7
018T022	1⅛	1			1.12	28.4	1.57	39.9	2.08	52.8	18	8.2
020T024	1¼				1.25	31.8	1.70	43.2	2.21	56.1	18	8.2
			021N026	1	1.31	33.3	1.76	44.7	2.34	59.4	19	8.6
022T026	1⅜	1¼			1.37	34.8	1.82	46.2	2.34	59.4	20	9.1
024N028	1½				1.50	38.4	1.95	49.5	2.47	62.7	33	15.0
026N030	1⅝	1½			1.62	41.1	2.07	52.6	2.60	66.0	35	15.9
			027N032	1¼	1.66	42.2	2.17	55.1	2.73	69.3	35	15.9
028N032	1¾				1.75	44.5	2.20	55.9	2.73	69.3	37	16.8
030N034	1⅞				1.87	47.5	2.32	58.9	2.86	72.6	39	17.7
			030N034	1½	1.90	48.5	2.35	59.7	2.86	72.6	41	18.6
032N036	2				2.00	50.8	2.45	62.2	3.04	77.2	46	20.9
034N040	2⅛				2.12	53.8	2.57	65.3	3.23	82.0	47	21.3
038N044	2⅜		038N044	2	2.37	60.2	2.82	71.6	3.67	93.2	49	22.2
040N046	2½				2.50	63.5	2.94	74.7	3.79	96.3	51	23.1
042N048	2⅝				2.62	66.5	3.07	78.0	3.92	99.6	55	24.9
046N052	2⅞		046N052	2½	2.87	72.9	3.32	84.3	4.17	105.9	57	25.9
050N056	3⅛				3.12	79.2	3.57	90.7	4.42	112.3	60	27.2
056N062	3½		056N062	3	3.50	88.9	3.95	100.3	4.79	121.7	55	24.9
058N064	3⅝				3.62	91.9	4.20	106.7	4.99	126.7	70	31.8
064N072	4		064N072	3½	4.00	101.6	4.45	113.0	5.42	137.7	88	39.9
066N074	4⅛				4.12	104.6	4.57	116.1	5.54	140.7	94	42.6
072N080	4½		072N080	4	4.50	114.3	4.95	125.3	5.92	150.4	110	49.9
082N090	5⅛				5.12	130.0	5.57	141.5	6.54	166.1	125	56.7
			089N096	5	5.56	141.2	6.01	152.7	6.92	175.8	130	59.0
098N106	6⅛				6.12	155.4	6.57	166.9	7.54	191.5	130	59.0
			106N114	6	6.62	168.1	7.07	179.6	8.23	209.0	140	63.5

Part Numbers are "coded" to designate cushion size and clamp size.

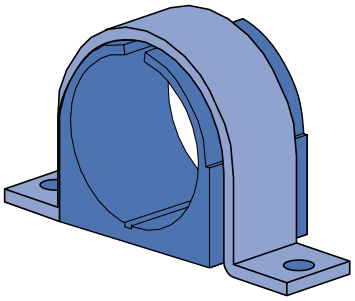
Patent Numbers: 4,516,296; 4,934,635

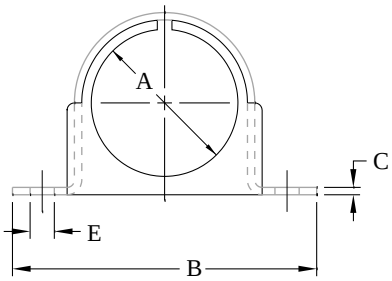
Examples: **004T008** 004 - Cushion Size 4/16" (6.4)
T - With Controlled Squeeze Shoulder Bolt
008 - Clamp Size 8/16" (12.7)

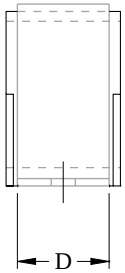
009N012 009 - Cushion Size 9/16" (14.3)
N - With Standard Bolt
012 - Clamp Size 12/16" (19.1)

004M007 thru 034M040

CUSH-A-CLAMP® ASSEMBLY
OMEGA SERIES







Includes clamp and cushion.

Materials: Clamp: Electro-chromate or stainless steel.
Cushion: Thermoplastic elastomer.

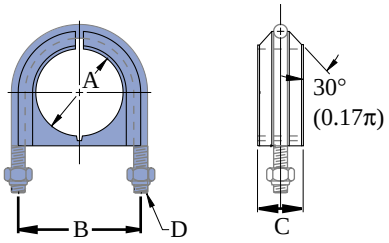
Patent Pending.

Part Number	Copper & Steel Tubing O. D.	Copper Water Pipe (Nominal)	Pipe Size (Nominal)	Dimensions										Weight/C	
				"A"		"B"		"C"		"D"		"E"			
	In	In	In	In	mm	In	mm	In	mm	In	mm	In	mm	Lbs	Kg
004M007	¼			.25	6.4	1.81	46.0	.06	1.5	.62	15.7	.20	5.1	3.4	1.5
006M008	⅜	¼		.37	9.4	1.90	48.3	.06	1.5	.62	15.7	.20	5.1	4	1.8
008M011	½	⅜	¼	.50	12.7	2.20	55.9	.06	1.5	.75	19.1	.26	6.6	5.5	2.5
010M013	⅝	½	⅜	.62	15.7	2.32	58.9	.06	1.5	.75	19.1	.26	6.6	6	2.7
012M015	¾	⅝		.75	19.1	2.41	61.2	.06	1.5	.75	19.1	.26	6.6	6.5	2.9
014M017	⅞	¾	½	.87	22.1	2.56	65.0	.06	1.5	.75	19.1	.26	6.6	7.1	3.2
016M019	1			1.00	25.4	2.68	68.1	.06	1.5	.75	19.1	.26	6.6	7.8	3.5
018M020			¾	1.05	26.7	2.68	68.1	.06	1.5	.75	19.1	.26	6.6	8.1	3.7
018M021	1⅛	1		1.12	28.4	2.82	71.6	.06	1.5	.75	19.1	.26	6.6	8.4	3.8
020M024	1¼			1.25	31.8	3.00	76.2	.08	2.0	1.25	31.8	.26	6.6	17	7.7
021M026			1	1.31	33.3	3.12	79.2	.08	2.0	1.25	31.8	.26	6.6	20	9.1
022M026	1⅜	1¼		1.37	34.8	3.12	79.2	.08	2.0	1.25	31.8	.26	6.6	19	8.6
024M028	1½			1.50	38.1	3.65	92.7	.08	2.0	1.25	31.8	.26	6.6	20	9.1
026M030	1⅝	1½		1.62	41.1	3.77	95.8	.08	2.0	1.25	31.8	.26	6.6	23	10.4
027M032			1¼	1.66	42.2	3.90	99.1	.10	2.5	1.25	31.8	.33	8.4	32	14.5
028M032	1¾			1.75	44.5	3.90	99.1	.10	2.5	1.25	31.8	.33	8.4	32	14.5
030M034	1⅞		1½	1.87	47.5	4.02	102.1	.10	2.5	1.25	31.8	.33	8.4	34	15.4
032M036	2			2.00	50.8	4.15	105.4	.10	2.5	1.25	31.8	.33	8.4	36	16.3
034M040	2⅛			2.12	53.8	4.40	111.8	.10	2.5	1.25	31.8	.33	8.4	41	18.6
038M044			2	2.37	60.2	4.71	119.6	.10	2.5	1.25	31.8	.33	8.4	44	20.0

Note: Not intended for use with metal framing components.
Can be mounted to any flat surface.

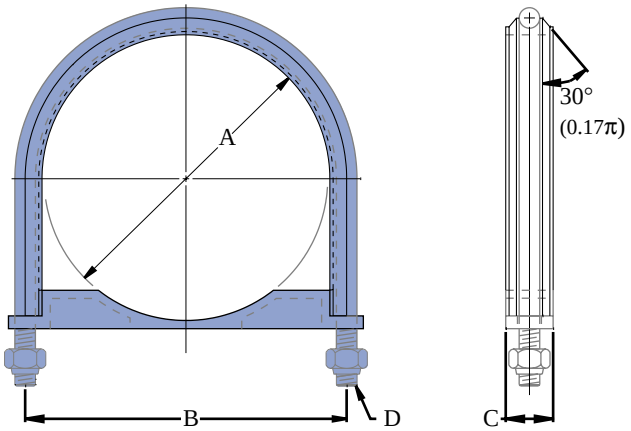
UB½PA thru UB12PA

CUSH–A–CLAMP® ASSEMBLY
U-BOLT SERIES



½" thru 6" assembly.

Includes U bolt, cushion, and hardware.



8" thru 12" assembly.

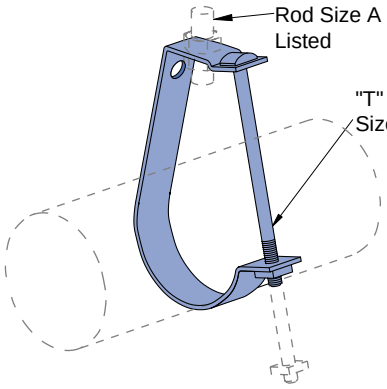
Materials:
U Bolt: Electro-galvanized finish.
Cushion: Thermoplastic elastomer.

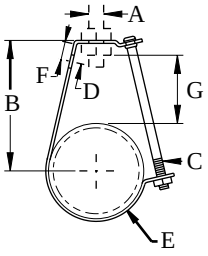
Part Number	Pipe Size (Nominal)	Dimensions						
		"A"		"B"		"C"		"D"
	In	In	mm	In	mm	In	mm	
UB1/2PA	½	.84	21.3	1.60	40.6	.68	17.3	¼-20 UNC-2B
UB3/4PA	¾	1.05	26.7	1.80	45.7	.68	17.3	¼-20 UNC-2B
UB1PA	1	1.31	33.3	2.05	52.1	.68	17.3	¼-20 UNC-2B
UB1-1/4PA	1¼	1.66	42.2	2.54	64.5	1.24	31.5	⅜-16 UNC-2B
UB1-1/2PA	1½	1.90	48.3	2.78	70.6	1.24	31.5	⅜-16 UNC-2B
UB2PA	2	2.37	60.2	3.32	84.3	1.24	31.5	⅜-16 UNC-2B
UB2-1/2PA	2½	2.87	72.9	3.88	98.6	1.24	31.5	½-13 UNC-2B
UB3PA	3	3.50	88.9	4.50	114.3	1.24	31.5	½-13 UNC-2B
UB3-1/2PA	3½	4.00	101.6	5.00	127.0	1.24	31.5	½-13 UNC-2B
UB4PA	4	4.50	114.3	5.50	139.7	1.24	31.5	½-13 UNC-2B
UB5PA	5	5.56	141.2	6.59	167.4	1.24	31.5	½-13 UNC-2B
UB6PA	6	6.62	168.1	7.81	198.4	1.44	36.6	⅝-11 UNC-2B
UB8PA	8	8.62	218.9	9.84	249.2	1.44	36.6	⅝-11 UNC-2B
UB10PA	10	10.75	273.1	12.25	311.2	1.65	41.9	¾-10 UNC-2B
UB12PA	12	12.75	323.9	14.25	362.0	1.65	41.9	¾-10 UNC-2B

Note: Not intended for use with metal framing components.

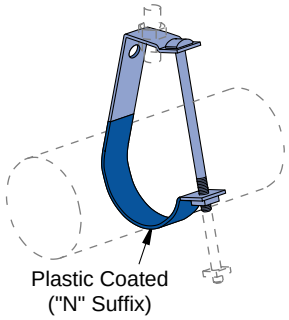
J1205 thru J1280
J1205 N thru J 1280 N (Plastic Coated)

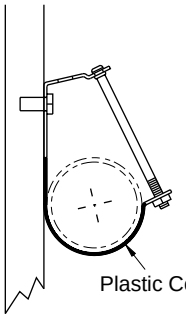
"J" CONDUIT AND PIPE HANGER





Hanger Rod Suspended





"T" Bolt and Nut Included

IMPERIAL

Part Number	Lbs/C	Part Number	Lbs/C	Pipe Size	"A"	"B"	"C"	"D"	"E"	"F"	"G"	Load Lbs
J1205	20	J1205 N	21	½	⅜	1¾	¼ x 2¼	13/32	⅛ x ¾	9/16	⅞	300
J1207	21	J1207 N	22	¾	⅜	1⅞	¼ x 2¼	13/32	⅛ x ¾	9/16	⅞	300
J1210	24	J1210 N*	25	1	⅜	2¼	¼ x 2¾	13/32	⅛ x ¾	9/16	1	300
J1212	27	J1212 N	29	1¼	⅜	2¾	¼ x 3¼	13/32	⅛ x ¾	9/16	1⅜	300
J1215	29	J1215 N*	31	1½	⅜	3	¼ x 3½	13/32	⅛ x ¾	9/16	1½	300
J1220	33	J1220 N*	35	2	⅜	3⅜	¼ x 4	13/32	⅛ x ¾	9/16	1⅝	300
J1225	71	J1225 N	74	2½	½	4	⅜ x 4½	9/16	⅛ x 1¼	¾	1⅞	500
J1230	78	J1230 N*	81	3	½	4¼	⅜ x 5	9/16	⅛ x 1¼	¾	1⅞	500
J1235	85	J1235 N	88	3½	½	4¾	⅜ x 5½	9/16	⅛ x 1¼	¾	2⅛	500
J1240	178	J1240 N*	182	4	⅝	5½	⅜ x 6½	9/16	¼ x 1¼	¾	2¼	600
J1250	199	J1250 N	203	5	⅝	6	⅜ x 7½	9/16	¼ x 1¼	¾	2¼	600
J1260	231	J1260 N*	236	6	¾	7	⅜ x 8½	9/16	¼ x 1¼	¾	2⅝	600
J1280	449	J1280 N	458	8	⅞	10	⅜ x 12	9/16	¼ x 2	1	4⅝	700

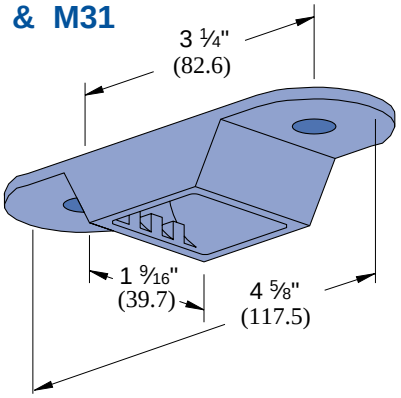
METRIC

Part Number	kg/C	Part Number	kg/C	Pipe Size	"A"	"B"	"C"	"D"	"E"	"F"	"G"	Load kN
J1205	9.1	J1205 N	9.5	½	9.5	44.5	¼ x 2¼	10.3	3.2 x 19.1	14.3	22.2	1.3
J1207	9.5	J1207 N	10.0	¾	9.5	47.6	¼ x 2¼	10.3	3.2 x 19.1	14.3	22.2	1.3
J1210	10.9	J1210 N*	11.3	1	9.5	57.2	¼ x 2¾	10.3	3.2 x 19.1	14.3	25.4	1.3
J1212	12.2	J1212 N	13.2	1¼	9.5	69.9	¼ x 3¼	10.3	3.2 x 19.1	14.3	34.9	1.3
J1215	13.2	J1215 N*	14.1	1½	9.5	76.2	¼ x 3½	10.3	3.2 x 19.1	14.3	38.1	1.3
J1220	15.0	J1220 N*	15.9	2	9.5	85.7	¼ x 4	10.3	3.2 x 19.1	14.3	41.3	1.3
J1225	32.2	J1225 N	33.6	2½	12.7	101.6	⅜ x 4½	14.3	3.2 x 31.8	19.1	47.6	2.2
J1230	35.4	J1230 N*	36.7	3	12.7	108.0	⅜ x 5	14.3	3.2 x 31.8	19.1	47.6	2.2
J1235	38.6	J1235 N	39.9	3½	12.7	120.7	⅜ x 5½	14.3	3.2 x 31.8	19.1	54.0	2.2
J1240	80.7	J1240 N*	82.6	4	15.9	139.7	⅜ x 6½	14.3	6.4 x 31.8	19.1	57.2	2.7
J1250	90.3	J1250 N	92.1	5	15.9	152.4	⅜ x 7½	14.3	6.4 x 31.8	19.1	57.2	2.7
J1260	104.8	J1260 N*	107.0	6	19.1	177.8	⅜ x 8½	14.3	6.4 x 31.8	19.1	66.7	2.7
J1280	203.7	J1280 N	207.7	8	22.2	254.0	⅜ x 12	14.3	6.4 x 50.8	25.4	117.5	3.12

*Standard glass drainline and glass process pipe sizes.
Minimum safety factor of five (5) on ultimate load.

PIPE ROLLERS
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

M30 & M31



For pipe sizes ¾" to 2".

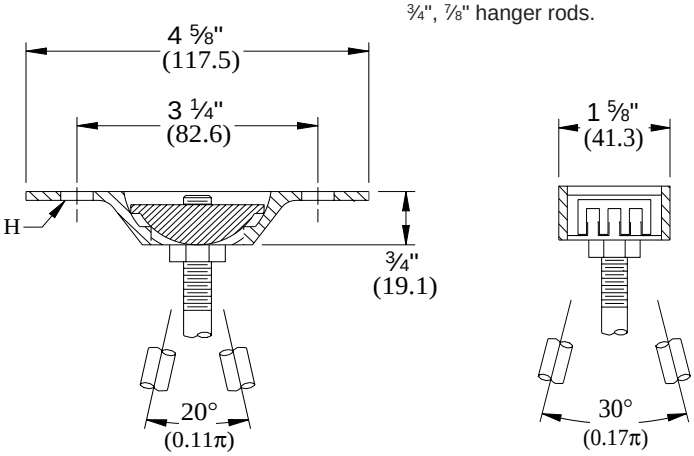
Material: Malleable Iron.

Note: See page 177 for swivel nuts.

Wt/C 40 Lbs (18.1 kg)

SWIVEL CEILING FLANGES

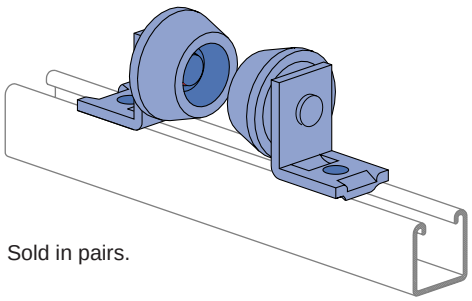
Supports ⅜", ½", ⅝", ¾", ⅞" hanger rods.



Part Number	Mounting Bolt Size	Hole "H" In	Hole "H" mm	Weight/C Lbs	Weight/C kg	Design Load Lbs	Design Load kN
M30	⅜	7/16	18.1	40	18.1	1220	5.4
M31	½	9/16	18.1	40	18.1	1450	6.4

Patent No. 2953874.

P2474



Sold in pairs.

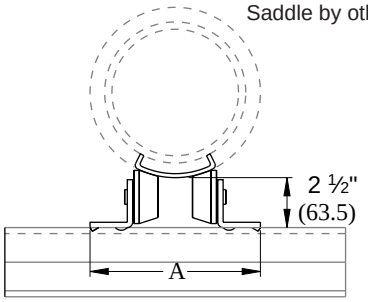
Requires 2 each ½" x 15/16" bolts and ½" channel nuts per assembly. Sold separately.

Design Load
500 Lbs (2.2 kg)

Wt/C 268 Lbs (121.6 kg)

PIPE ROLLER FOR ½" - 4" PIPE

Saddle by others.



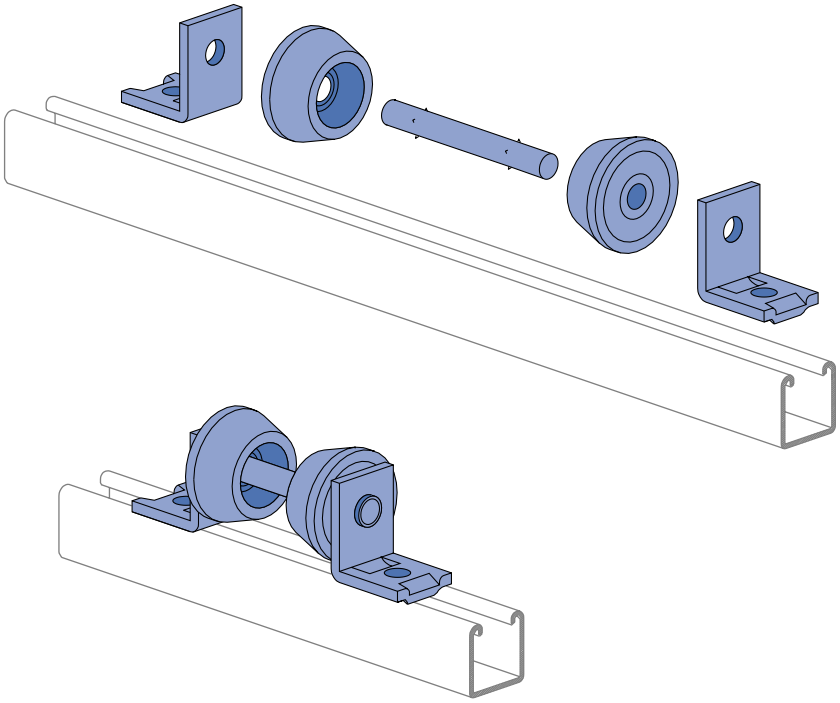
Cast iron rollers.

CHART FOR DIMENSION A

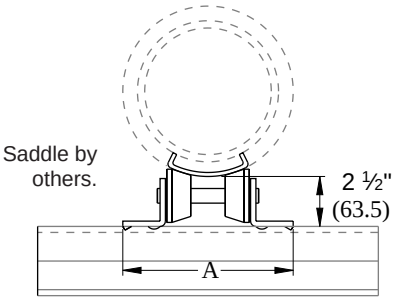
Pipe Size	Insulation Thickness: No Insulation In	No Insulation mm	1" In	1" mm	(25.4) 1½" In	(25.4) 1½" mm	(38.1) 2" In	(38.1) 2" mm	(50.8) 2½" In	(50.8) 2½" mm	(63.5) 3" In	(63.5) 3" mm	(76.2) 4" In	(76.2) 4" mm	(101.6)
½	6½	165	6½	165											
¾	6½	165	6½	165	6⅝	168	6⅞	175							
1	6½	165	6½	165	6⅝	168	6⅞	175							
1¼	6½	165	6½	165	6⅞	175	7⅛	181	7⅜	187					
1½	6½	165	6½	165	6⅞	175	7⅛	181	7⅜	187					
2	6½	165	6⅝	168	7⅛	181	7⅜	187	7½	191	8	203			
2½	6½	165	6⅝	168	7⅛	181	7⅜	187	7½	191	8	203			
3	6½	165	7	178	7½	191	7¾	197	7⅞	200	8⅛	207			
3½	6½	165	7	178	7½	191	7¾	197	7⅞	200	8⅛	207			
4	6⅝	168	7¼	184	7⅝	194	7⅞	200	8	203	8⅜	213	9	229	

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P2474-1 thru P2474-4



PIPE ROLLER FOR 1" - 8" PIPE



- Pipe roller will fit standard saddles.
- Select proper roller from chart.
- Requires 2 each ½" x 15/16" bolts and ½" channel nuts per assembly. Sold separately.

Design Load
750 Lbs (3.3 kN)

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2474-1	6¾	171.5	299	135.6
P2474-2	7½	190.5	304	137.9
P2474-3	8½	215.9	311	141.1
P2474-4	9 9/16	242.9	319	144.7

Parts are shipped loose and are easily assembled when installed.

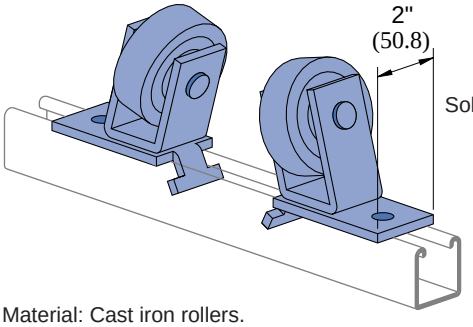
CHART FOR ROLLER PART NUMBER SELECTION

Pipe Size	Insulation Thickness						
In	No Insulation	1" (25.4)	1½" (38.1)	2" (50.8)	2½" (63.5)	3" (76.2)	4" (101.6)
½	P2474-1	P2474-1	P2474-1	P2474-2			
¾	P2474-1	P2474-1	P2474-1	P2474-2			
1	P2474-1	P2474-1	P2474-1	P2474-2			
1¼	P2474-1	P2474-1	P2474-1	P2474-2			
1½	P2474-1	P2474-1	P2474-2	P2474-2	P2474-2		
2	P2474-1	P2474-1	P2474-2	P2474-2	P2474-2		
2½	P2474-1	P2474-1	P2474-2	P2474-2	P2474-2		
3	P2474-1	P2474-2	P2474-2	P2474-3	P2474-3	P2474-3	
3½	P2474-1	P2474-2	P2474-2	P2474-3	P2474-3	P2474-3	
4	P2474-1	P2474-2	P2474-2	P2474-3	P2474-3	P2474-3	
5	P2474-2	P2474-3	P2474-3	P2474-3	P2474-3	P2474-4	P2474-4
6	P2474-2	P2474-3	P2474-3	P2474-3	P2474-3	P2474-4	P2474-4
8	P2474-2	P2474-3	P2474-4	P2474-4	P2474-4	P2474-4	P2474-4

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P2475

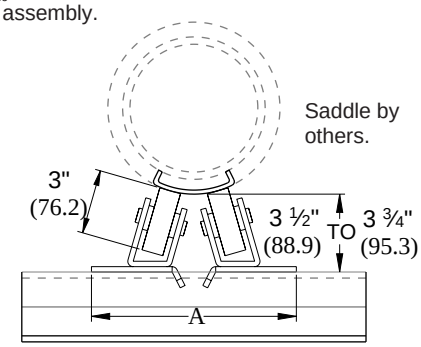
PIPE ROLLER FOR 6" - 16" PIPE



Sold in pairs.

- Requires 2 each ½" x 15/16" bolts and ½" channel nuts per assembly. Sold separately.

Design Load
1500 Lbs (6.7 kN)



Material: Cast iron rollers.

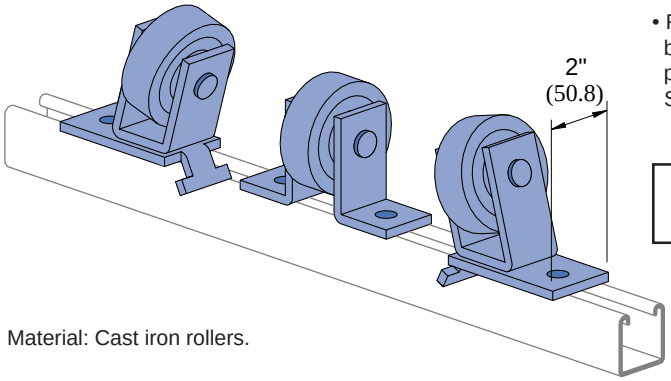
CHART FOR DIMENSION A

Wt/C 680 Lbs (308.4 kg)

Pipe Size In	Insulation Thickness: No Insulation In	No Insulation mm	1" In	(25.4) mm	1½" In	(38.1) mm	2" In	(50.8) mm	2½" In	(63.5) mm	3" In	(76.2) mm	4" In	(101.6) mm
6	9½	241	10¼	260	10½	267	10¾	273	11	279	11⅜	289	11⅞	302
8	10⅛	257			11	279	11⅜	289	11¾	299	12	305	12½	318
10	10¾	273			11⅝	295	12	305	12¼	311	12½	318	13	330
12	11¼	286			12⅛	308	12½	318	12¾	324	13	330	13½	343
14	11⅝	295			12½	318	12⅞	327	13	330	13⅜	340	14	356
16	12⅛	308			13	330	13⅜	340	13⅞	352	14	356	14½	368

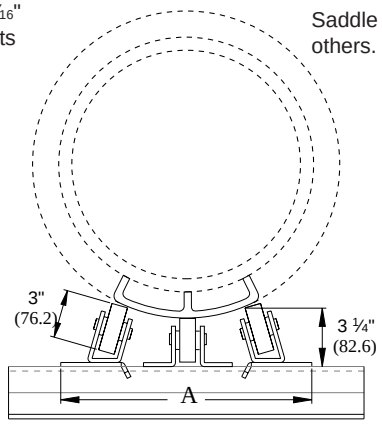
P2476

PIPE ROLLER FOR 16" - 24" PIPE



- Requires 4 each ½" x 15/16" bolts and ½" channel nuts per assembly. Sold separately.

Design Load
2000 Lbs (8.9 kg)



Material: Cast iron rollers.

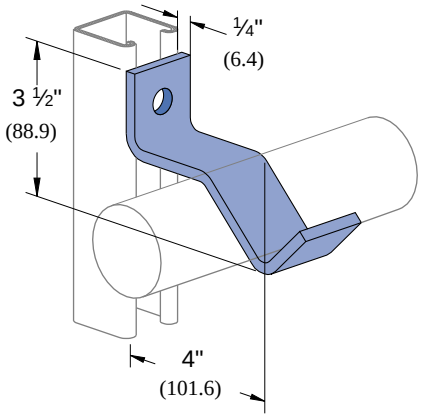
CHART FOR DIMENSION A

Wt/C 1046 Lbs (474.5 kg)

Pipe Size In	Insulation Thickness: 1½" In	(38.1) mm	2" In	(50.8) mm	2½" In	(63.5) mm	3" In	(76.2) mm	4" In	(101.6) mm
16					13⅞	352	14	356	14½	368
18	13⅝	346	14	356	14⅛	359	14½	368	15	381
20	14⅛	359	14½	368	14¾	375	15	381	15½	394
24	15¼	387	15½	393	15⅞	403	16⅛	410	16⅝	422

Hole Size	Hole Spacing	Width	Thickness
9/16" Diameter 14.3 mm	13/16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

P2481

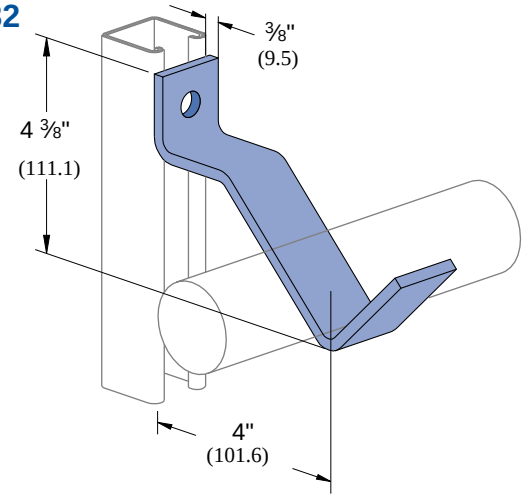


For ½" pipe to 1½" pipe.

Design Load (Channel Upright Listed)

Weight/C		P1000		P1100		P2000	
Lbs	kg	Lbs	kN	Lbs	kN	Lbs	kN
90	40.8	85	.4	85	.4	85	.4

P2482



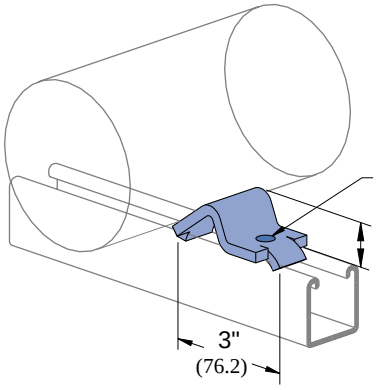
For 2" pipe to 3" pipe.

Design Load (Channel Upright Listed)

Weight/C		P1000		P1100		P2000	
Lbs	kg	Lbs	kN	Lbs	kN	Lbs	kN
139	63.0	185	.8	120	.5	95	.4

P2243

PIPE BLOCK
FOR 2" (50.8) TO 8" (203.2) PIPES



Clamp Requires bolt and channel nut.
Sold seperately

Wt/C 40 Lbs (18.1 kg)

Hole Size	Hole Spacing	Width	Thickness
9⁄16" Diameter 14.3 mm	13⁄16" (20.6 mm) From End 1⅞" (47.6 mm) On Center	1⅝" 41.3 mm	¼" 6.4 mm

ELECTRICAL METALLIC TUBING (EMT) - THIN WALL

Tubing Size (Nominal)	Outside Diameter		Inside Diameter		Weight Of Tubing	
In	In	mm	In	mm	Lbs/Ft	kg/m
⅜	0.577	14.7	0.497	12.6	.23	0.34
½	0.706	17.9	0.626	15.9	.29	0.43
¾	0.922	23.4	0.830	21.1	.44	0.65
1	1.163	29.5	1.055	26.8	.64	0.95
1¼	1.510	38.4	1.388	35.3	.95	1.41
1½	1.740	44.2	1.618	41.1	1.10	1.64
2	2.197	55.8	2.075	52.7	1.40	2.08
2½	2.875	73.0	2.731	69.4	2.30	3.42
3	3.500	188.9	3.356	85.2	2.70	4.02
3½	4.000	101.6	3.834	97.4	3.40	5.06
4	4.500	114.3	4.334	110.1	4.00	5.95

Table furnished by American Iron and Steel Institute, New York.

INTERMEDIATE METALLIC CONDUIT (IMC)

Conduit Size (Nominal)	Outside Diameter		Inside Diameter		Weight Of Conduit		Weight of Conduit and Conductor	
In	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m
½	0.815	20.7	0.745	18.9	.60	.89	0.12	0.37
¾	1.029	26.1	0.954	24.2	.82	1.22	1.13	0.55
1	1.290	32.8	1.205	30.6	1.16	1.72	1.82	0.83
1¼	1.638	41.6	1.553	38.9	1.50	2.23	2.67	1.21
1½	1.883	47.8	1.793	45.5	1.82	2.71	3.42	1.55
2	2.360	59.9	2.266	57.5	2.42	3.60	5.04	2.29
2½	2.857	72.6	2.727	69.2	4.01	5.97	7.75	3.52
3	3.476	88.3	3.346	85.0	4.43	6.59	10.69	4.85
3½	3.971	100.9	3.841	97.5	5.73	8.53	13.46	6.11
4	4.466	113.4	4.336	110.1	6.38	9.49	16.37	7.41

RIGID STEEL (HEAVY DUTY) CONDUIT

Conduit Size (Nominal)	I. D. Of Conduit		O. D. Of Conduit		O. D. Of Coupling		Weight of Conduit		Maximum Weight* Of Conduit And Conductor			
									Lead Covered		Not Lead Covered	
In	In	mm	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m	Lbs/Ft	kg/m
½	0.622	15.8	.840	21.3	1.063	27.0	.85	1.26	1.2	1.79	1.0	1.49
¾	0.824	20.9	1.050	26.6	1.297	32.9	1.13	1.68	1.8	2.68	1.4	2.08
1	1.049	26.6	1.315	33.4	1.563	39.7	1.68	2.50	2.6	3.87	2.3	3.42
1¼	1.380	35.1	1.660	42.2	1.969	50.0	2.28	3.39	4.3	6.40	3.6	5.36
1½	1.610	40.9	1.900	48.3	2.234	56.7	2.73	4.06	5.9	8.79	4.5	6.70
2	2.067	52.5	2.375	60.3	2.719	69.1	3.68	5.48	8.5	12.65	7.2	10.71
2½	2.469	62.5	2.875	73.0	3.313	84.2	5.82	8.66	11.5	17.11	10.2	15.18
3	3.068	77.9	3.500	89.9	3.938	100.0	7.62	11.34	16.5	24.55	14.5	21.56
3½	3.548	90.1	4.000	101.6	4.438	112.7	9.20	13.64	19.0	28.33	17.5	26.04
4	4.026	102.3	4.500	114.3	4.938	125.4	10.89	16.21	24.8	36.91	21.5	32.00
5	5.047	128.2	5.563	141.3	6.296	159.9	14.81	22.04	35.9	53.42	30.8	45.83
6	6.065	154.1	6.625	168.3	7.358	186.9	19.19	28.56	50.7	75.45	43.4	64.59

* Maximum weight equals weight of rigid conduit plus weight of heaviest conductor combination (from the National Electrical Code Handbook.)

346-12. Supports. Rigid metal conduit shall be installed as a complete system as provided in Article 300 and shall be securely fastened in place. Conduit shall be firmly fastened within 3 feet (914 mm) of each outlet box, junction box, cabinet, or fitting. Conduit shall be supported at least every 10 feet (3.05 m).

Exception: If made up with threaded couplings, it shall be permissible to support straight runs of rigid metal conduit in accordance with Table 346-12, provided such supports prevent transmission of stresses to termination where conduit is deflected between supports.

Table 346-12
Support for Rigid Metal Conduit

Conduit Size		Maximum Distance Between Supports	
In	mm	Ft	m
½ - ¾	13 - 19	10	3.05
1	25	12	3.66
1¼ - 1½	32 - 38	14	4.27
2 - 2½	51 - 64	16	4.88
3 & larger	76 & larger	20	6.10

Maximum Spacing Between Pipe Supports					
Nominal Pipe Size	Maximum Span		Nominal Pipe Size	Maximum Span	
In	Ft	m	In	Ft	m
1	7	2.13	8	19	5.79
1½	9	2.74	10	22	6.71
2	10	3.05	12	23	7.01
2½	11	3.35	14	25	7.62
3	12	3.66	16	27	8.23
3½	13	3.96	18	28	8.53
4	14	4.27	20	30	9.14
5	16	4.88	24	32	9.75

The above spacing based on a combined bending and shear stress of 1500 PSI when pipe is filled with water and the pitch of the line is such that a sag of 0.1 in. between supports is permissible.

SCHEDULE 40: STEEL PIPE

Pipe Size (Nominal)	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight	
In	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m
⅜	0.675	17.1	0.493	12.5	0.57	0.85	0.653	0.97
½	0.840	21.3	0.622	15.8	0.85	1.26	0.982	1.46
¾	1.050	26.7	0.824	20.9	1.13	1.68	1.360	2.02
1	1.315	33.4	1.049	26.6	1.68	2.50	2.054	3.06
1¼	1.660	42.2	1.380	35.1	2.27	3.38	2.913	4.34
1½	1.900	48.3	1.610	40.9	2.72	4.05	3.602	5.36
2	2.375	60.3	2.067	52.5	3.65	5.43	5.105	7.60
2½	2.875	73.0	2.469	62.7	5.79	8.62	7.866	11.71
3	3.500	88.9	3.068	77.9	7.58	11.28	10.78	16.04
3½	4.000	101.6	3.548	90.1	9.11	13.56	13.39	19.93
4	4.500	114.3	4.026	102.3	10.80	16.07	16.31	24.27
5	5.563	141.3	5.047	128.2	14.60	21.73	23.26	34.61
6	6.625	168.3	6.065	154.1	19.00	28.27	31.51	46.89
8	8.625	219.1	7.981	202.7	28.60	42.56	50.29	74.84
10	10.750	273.1	10.020	254.5	40.50	60.27	74.65	111.09
12	12.750	324.9	11.938	303.2	53.60	79.76	102.00	151.79
14	14.000	355.6	13.126	333.4	63.30	94.20	122.10	171.70
16	16.000	406.4	15.000	381.0	82.80	123.22	159.30	237.06
18	18.000	457.2	16.876	428.7	105.00	156.26	201.90	300.46
20	20.000	508.0	18.814	477.9	123.00	183.04	243.30	362.07
24	24.000	609.6	22.626	574.7	171.00	254.47	345.50	514.15

SCHEDULE 80: STEEL PIPE

Pipe Size (Nominal)	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight	
In	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m
⅜	0.675	17.1	0.423	10.7	0.74	1.10	0.801	1.19
½	0.840	21.3	0.546	13.9	1.09	1.62	1.191	1.77
¾	1.050	26.7	0.742	18.8	1.47	2.19	1.668	2.48
1	1.315	33.4	0.957	24.3	2.17	3.23	2.481	3.69
1¼	1.660	42.2	1.278	32.5	3.00	4.46	3.555	5.29
1½	1.900	48.3	1.500	38.1	3.63	5.40	4.395	6.57
2	2.375	60.3	1.939	49.3	5.03	7.49	6.309	9.39
2½	2.875	73.0	2.323	59.0	7.66	11.40	9.497	14.13
3	3.500	88.9	2.900	73.7	10.3	15.33	13.16	19.58
3½	4.000	101.6	3.364	85.4	12.5	18.60	16.35	24.33
4	4.500	114.3	3.826	97.2	15.0	22.32	19.98	29.73
5	5.563	141.3	4.813	122.3	20.8	31.00	28.69	42.67
6	6.625	168.3	5.761	146.3	28.6	42.56	39.89	59.36
8	8.625	219.1	7.625	193.7	43.4	64.59	63.20	94.25
10	10.75	273.1	9.564	242.9	64.3	95.69	95.40	141.97
12	12.75	323.9	11.376	289.0	88.5	131.70	132.50	197.18
14	14.00	355.6	12.500	317.5	106.1	157.89	159.30	237.06
16	16.00	406.4	14.314	363.6	136.5	203.13	206.20	306.85
18	18.00	457.2	16.126	409.6	170.8	254.18	259.30	385.88
20	20.00	508.0	17.938	455.6	208.9	310.87	318.30	473.68
24	24.00	609.6	21.564	547.7	296.4	441.09	454.70	676.66

SCHEDULE 40: PVC PLASTIC PIPE

Pipe Size (Nominal)	Outside Diameter		Inside Diameter		Pipe Weight		Pipe and Water Weight	
In	In	mm	In	mm	Lbs/Ft	kg/m	Lbs/Ft	kg/m
¼	.540	13.7	.354	9.0	.081	0.12	0.12	0.18
⅜	.675	17.1	.483	12.3	.109	0.16	0.19	0.28
½	.840	21.3	.608	15.4	.161	0.24	0.29	0.43
¾	1.050	26.7	.810	20.6	.214	0.32	0.44	0.65
1	1.315	33.4	1.033	26.2	.315	0.47	0.68	1.01
1¼	1.660	42.2	1.364	34.6	.426	0.63	1.06	1.58
1½	1.900	48.3	1.592	40.4	.509	0.76	1.37	2.04
2	2.375	60.3	2.049	52.0	.682	1.01	2.11	3.14
2½	2.875	73.0	2.445	62.1	1.076	1.60	3.11	4.63
3	3.500	88.9	3.042	77.3	1.409	2.10	4.55	6.77
4	4.500	114.3	3.998	101.5	2.006	2.99	7.44	11.07
6	6.625	168.3	6.031	153.2	3.535	5.26	15.90	23.66
8	8.625	219.1	7.943	201.8	5.305	7.89	26.75	39.81
10	10.750	273.1	9.976	253.4	7.532	11.21	41.35	61.53

CHANNEL SELECTION FOR SPRINKLER PIPE TRAPEZE HANGERS

Span of Trapeze Ft (mm)	Pipe Size (Nominal)											
	1 In	1¼ In	1½ In	2 In	2½ In	3 In	3½ In	4 In	5 In	6 In	8 In	10 In
1½ (460)	P3000								P1000			
2 (610)						P1000					P1001	
2½ (760)												
3 (910)	P1000				P5500					P1001		
4 (1220)												
5 (1520)												
6 (1830)												
7 (2130)		P1001						P5501		P1004 A		
8 (2440)												
9 (2740)												2-P1004 A
10 (3050)												

- Based on NFPA-13-1989 Section Modulus Table 3-10.1.7(a)
- For Schedule 40 Pipe

Note: The table is based on a maximum allowable bending stress of 15 KSI and a midspan concentrated load from 15 ft of water-filled pipe, plus 250 lb.

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MATERIAL
Unistrut fittings, unless noted, are made from hot-rolled, pickled and oiled steel plates, strip or coil, and conform to ASTM specifications A575, A576, A635, or A36. The fitting steel also meets the physical requirements of ASTM A570 GR 33. The pickling of the steel produces a smooth surface free from scale.

Maple cable saddles, cable clamps and bus bar clamps are made from kiln-dry maple treated with paraffin to a depth of 1/16" (1.6mm). Special sizes of clamps can be fabricated upon request. Porcelain cable clamps are made by the dry process and white glazed. Cable saddles are fiberglass-reinforced polyester.

FINISHES
Components listed in this section are available in: electro-galvanized (EG), conforming to ASTM B633 Type III SC1; Hot-dipped galvanized (HG), conforming to ASTM A123 or A153, Perma-Green II (GR), and plain (PL).

Note: Many Unistrut Metal Framing components, when used with appropriate closures, are UL® listed, and CSA approved.

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

DIMENSIONS
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

UNISTRUT RACEWAY FILL CHARTS

FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

U.L. LISTED

Unistrut channel is listed by **Underwriters' Laboratories** as a surface metal raceway. Snap-in closure strip is used to complete the raceway. Accessory parts listed by Underwriters are noted on drawings.

The following tables represent maximum number of conductors when raceway is not employed with fixtures or where the clearance between fixtures and raceway is greater than ½" (12.7). In all cases the snap-in cover is required to complete raceway enclosure.

P3000, & -KO

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	72	54	34	17	12
XHHW	48	37	29	13	10
T, TW	46	36	28	13	7
THW	30	25	20	10	7
RH	27	22	13	7	5
RHH, RHW	19	16	13	7	5

P3300, P4000

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	40	30	19	9	6
XHHW	26	21	16	7	5
T, TW	26	20	15	7	4
THW	17	14	11	6	4
RH	15	12	7	4	3
RHH, RHW	10	9	7	4	2

P5500, & -KO

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	141	105	66	33	23
XHHW	93	73	57	27	19
T, TW	91	58	55	26	15
THW	59	49	39	20	15
RH	53	44	26	14	10
RHH, RHW	37	32	26	14	10

P1000, & -KO, P1100 & -KO, P2000 & -KO

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	88	66	42	20	14
XHHW	58	46	35	16	12
T, TW	57	44	34	16	9
THW	37	30	24	12	9
RH	33	27	16	9	6
RHH, RHW	23	20	16	9	6

P5000, & -KO

Gage	Number and Conductor Size (AWG)				
	14	12	10	8	6
THWN, THHN	193	105	91	45	32
XHHW	128	101	78	37	27
T, TW	125	98	75	35	20
THW	81	67	54	28	20
RH	73	60	36	19	13
RHH, RHW	51	44	36	19	13

C.S.A. APPROVED

MAXIMUM NUMBER OF WIRES FOR TYPES T, THHN, THW, THWN, TW, R, RH, RHH, RHW OR XHHW

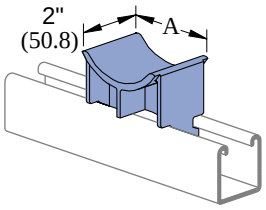
Suitable for number of wires in Column A when installed to support and supply electric discharge type lighting fixtures when raceway wiring is suitable for at least 75° C except wire suitable for 60° C may be used when clearance between fixtures and raceways is at least ½" (12.7). Also suitable for number of wires in column B when installed to support electric discharge type lighting fixtures when raceway wiring is suitable for at least ⅛" (3.2).

Raceway Wire Size AWG	P1000, &-KO P1100, &-KO P2000. &-KO		P3000, &-KO		P3300, P4000		P5000 &-KO		P5500, &-KO	
	A	B	A	B	A	B	A	B	A	B
14	6	10	5	10	4	6	10	10	10	10
12	6	10	4	10	3	6	10	10	10	10
10	5	8	4	6	-	-	8	10	8	10
8	4	6	3	4	-	-	6	9	6	8
6	2	3	2	2	-	-	4	6	4	6

Unistrut channels are also certified by Canadian Standards Association.

P1753 FG
P1754 FG

CABLE SADDLES

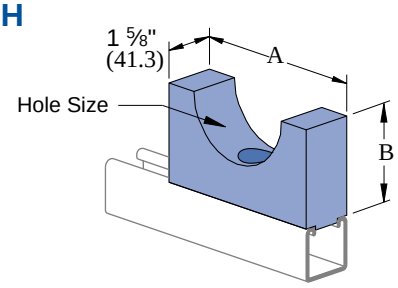


Part Number	"A"		Maximum Cable Diameter		Weight/C	
	In	mm	In	mm	Lbs	kg
P1753 FG	2 13/16	71.4	3	76.2	12	5.4
P1754 FG	3¾	95.3	4½	114.3	17	7.7
P1753 PO	3	76.2	3	76.2	75	34.0
P1754 PO	4	101.6	4½	114.3	95	43.1

Material: FG - Fiberglass Reinforced Polyester,
PO - Dry Process White Glazed Porcelain

P2649 A thru P2649 H

MAPLE CABLE SADDLES



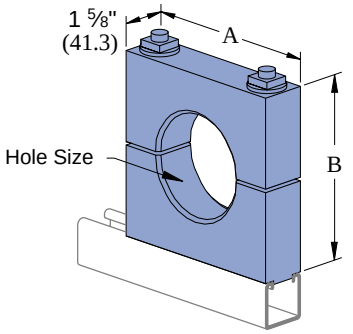
- ⅜" Flat Head Machine Screw included.
- Specify hole size when ordering.
- Order channel nuts as required.

Part Number	Hole Size		"A"		"B"		Weight/C	
	In	mm	In	mm	In	mm	Lbs	kg
P2649 A	0 - 1	0 - 25.4	3	76.2	1¾	44.5	31	14.1
P2649 B	1 - 1½	25.4 - 38.1	3½	88.9	2	50.8	38	17.2
P2649 C	1½ - 2	38.1 - 50.8	4	101.6	2¼	57.2	47	21.3
P2649 D	2 - 2½	50.8 - 63.5	4½	114.3	2½	63.5	57	25.9
P2649 E	2½ - 3	63.5 - 76.2	5	127.0	2¾	69.9	68	30.8
P2649 F	3 - 3½	76.2 - 88.9	5½	139.7	3	76.2	80	36.3
P2649 G	3½ - 4	88.9 - 101.6	6	152.4	3¼	82.6	94	42.6
P2649 H	over 4	over 101.6						

Material:
Maple hardwood
paraffin impregnated.

P2645 A thru P2645 H

MAPLE CABLE CLAMPS



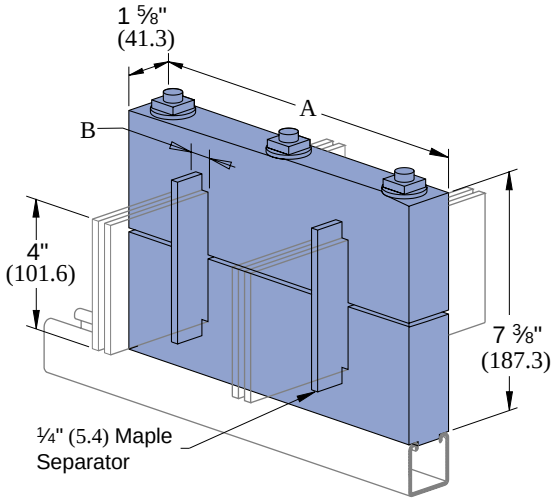
- ⅜" studs, square nuts and washers included.
- Specify hole size when ordering.
- Order channel nuts as required.

Part Number	Hole Size		"A" and "B" Dimensions		Weight/C	
	In	mm	In	mm	Lbs	kg
P2645 A	0 - 1	0 - 25.4	3½	88.9	84	38.1
P2645 B	1 - 1½	25.4 - 38.1	4	101.6	102	46.3
P2645 C	1½ - 2	38.1 - 50.8	4½	114.3	121	54.9
P2645 D	2 - 2½	50.8 - 63.5	5½	139.7	165	74.8
P2645 E	2½ - 3	63.5 - 76.2	6	152.4	189	85.7
P2645 F	3 - 3½	76.2 - 88.9	6½	165.1	215	97.5
P2645 G	3½ - 4	88.9 - 101.6	7	177.8	243	110.2
P2645 H	over 4	over 101.6				

Material:
Maple hardwood
paraffin impregnated.

P2647 A thru P2647 F

4" (101.6) BUS BAR MAPLE CLAMPS



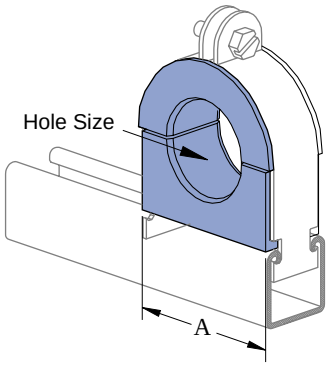
- ½" studs, square nuts and washers are included.
- Channel nuts must be ordered separately.
- Bus bar maple clamps also available in ¼" (6.4) x 2" (50.8) and ¼" (6.4) x 6" (152.4)

Part Number	"A"		"B"		No. Bus Separators	No. Bars Per Leg	Wt/C	
	In	mm	In	mm			Lbs	kg
P2647 A	8½	215.9	9/32	7.1	0	1	421	191.0
P2647 B	9½	241.3	13/16	20.6	2	2	465	210.9
P2647 C	10½	266.7	1 5/16	33.3	4	3	509	230.9
P2647 D	11½	292.1	1 13/16	46.0	6	4	553	250.8
P2647 E	12½	317.5	2⅜	60.3	8	5	597	270.8
P2647 F	13½	342.9	2⅞	73.0	10	6	631	286.2

Material: Paraffin impregnated maple hardwood.

P1690 thru P1697

MAPLE CABLE CLAMPS



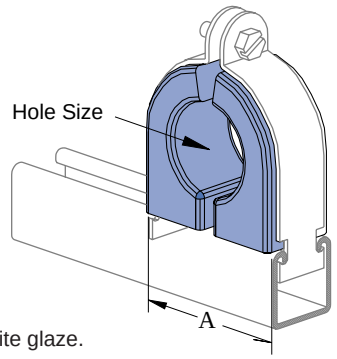
- Use with steel clamp and Everdur hardware. Order clamp separately.
- Specify hole size when ordering.

Part Number	Order Steel Clamp Number	Hole Size		"A"		Wt/C	
		In	mm	In	mm	Lbs	kg
P1690	P1113 E	0 - ⅝	0 - 15.9	1½	38.1	24	10.9
P1691	P1115 E	½ - 1	12.7 - 25.4	2⅛	54.0	42	19.1
P1692	P1117 E	¾ - 1½	19.1 - 38.1	2⅝	66.7	54	24.5
P1693	P1118 E	1¼ - 1¾	31.8 - 44.5	3	76.2	65	29.5
P1694	P1119 E	1½ - 2¼	38.1 - 57.2	3⅝	92.1	84	38.1
P1695	P1120 E	2 - 2½	50.8 - 63.5	4⅛	104.8	107	48.5
P1696	P1121 E	2¼ - 3	57.2 - 76.2	4⅝	117.5	123	55.8
P1697	P1123 E	3 - 4	76.2 - 101.6	5¾	146.1	163	73.9

Material: Paraffin impregnated maple hardwood.

P1787 A thru P1795 B

PORCELAIN CABLE CLAMPS



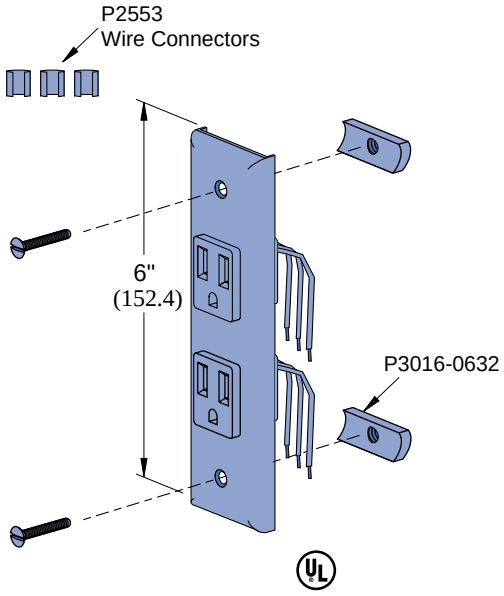
- Use with steel clamp and Everdur hardware.
- Order clamp separately.

Material: Dry process porcelain white glaze.

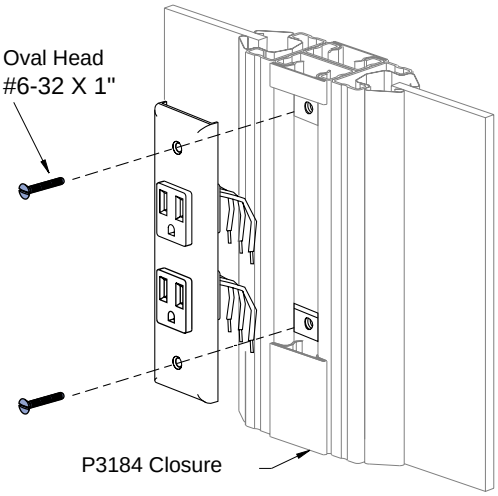
Part Number	Order Steel Clamp Number	Hole Size		"A"		Weight/C	
		In	mm	In	mm	Lbs	kg
P1787 A P1787 B P1787 C	P1113 E	⅜ ½ ⅝	9.5 12.7 15.9	1⅞	47.6	36 32 31	16.3 14.5 14.1
P1788 P1788 A P1788 B P1788 C	P1115 E	¾ ⅞ 1 1⅛	19.1 22.2 25.4 28.6	2⅜	60.3	57 56 55 48	25.9 25.4 24.9 21.8
P1789 P1789 A P1789 B P1789 C	P1117 E	1¼ 1⅜ 1½ 1⅝	31.8 34.9 38.1 41.3	2⅞	73.0	83 82 75 67	37.6 37.2 34.0 30.4
P1790 P1790 A P1790 B P1790 C	P1119 E	1¾ 1⅞ 2 2⅛	44.5 47.6 50.8 54.0	4	101.6	185 180 160 140	83.9 81.6 72.6 63.5
P1791 P1791 A P1791 B P1791 C	P1120 E	2¼ 2⅜ 2½ 2⅝	57.2 60.3 63.5 66.7	4½	114.3	200 200 195 190	90.7 90.7 88.5 86.2
P1792 P1792 A P1792 B P1792 C	P1121 E	2¾ 2⅞ 3 3⅛	69.9 73.0 76.2 79.4	5⅛	130.2	260 240 240 235	117.9 108.9 108.9 106.6
P1793 P1793 A P1793 B P1793 C	P1123 E	3¼ 3⅜ 3½ 3⅝	82.6 85.7 88.9 92.1	6⅛	155.6	387 367 360 350	175.5 166.5 163.3 158.8
P1794 P1794 A P1794 B P1794 C	P1124 E	3¾ 3⅞ 4 4⅛	95.3 98.4 101.6 104.8	7¼	184.2	600 580 550 540	272.2 263.1 249.5 244.9
P1795 P1795 A P1795 B	P1124 E	4¼ 4⅜ 4½	108.0 111.1 114.3	7¼	184.2	550 500 490	249.5 226.8 222.3

P2557

DUPLEX GROUNDED RECEPTACLE



- 125 V, 15 amp receptacle, NEMA configuration S-15R, cover plate.
- #6 screws, nuts and wire connectors included.
- Leads are 14 gage 105°C plastic covered.
- Ground wire is green 16 gage.

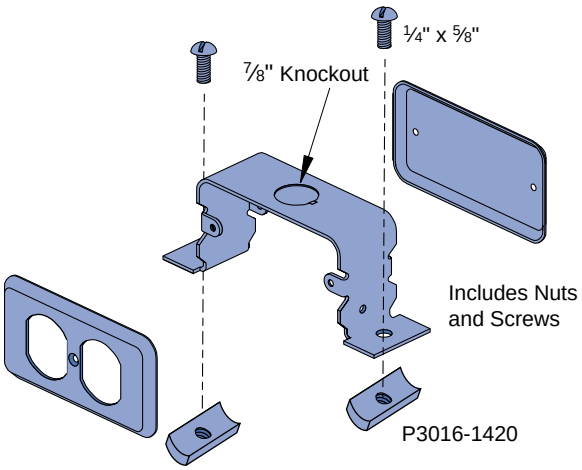


Finish: White powder coat.

Wt/C 38 Lbs (17.2 kg)

P2761
P2762

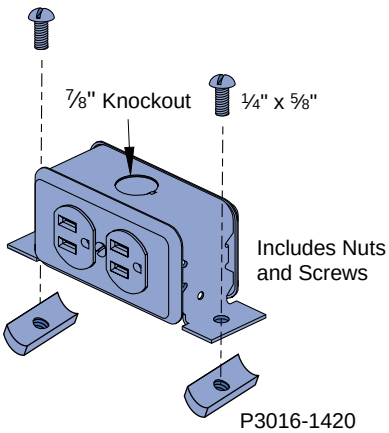
RECEPTACLE BOX



Part Number	Outlet	Weight/C	
		Lbs	kg
P2761	Single	88	39.9
P2762	Duplex	88	39.8

P2763
P2764
P2765

RECEPTACLE UNIT



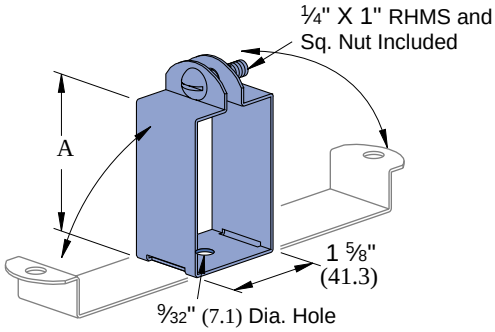
Part Number	Outlet	Weight/C		NEMA Receptacle Configuration
		Lbs	kg	
P2763	125V	108	49	5-15R
P2764	250V	108	49	6-15R
P2765	277V	108	49	7-15R

FLUORESCENT FIXTURE HANGERS

FOR 1 5/8" (41 MM) WIDTH SERIES CHANNEL

P2537
P5537

FLOURESCENT FIXTURE HANGERS



- Hanger provides more than 1/2" (12.7) space between channel and fixtures.

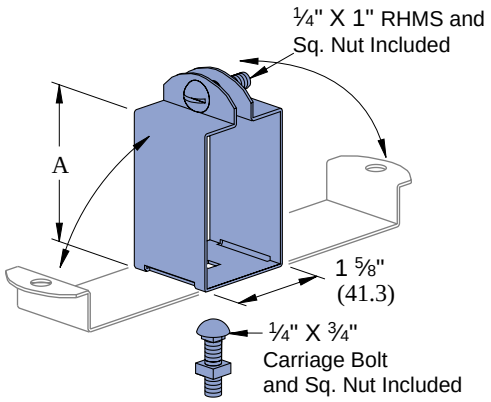
Design Load
120 Lbs (.5 kN)

Materials: 18 gage (1.2).

Part Number	Use With Channel	"A"		Weight/C	
		In	mm	Lbs	kg
P2537	P1000 P1100 P2000 P3000	2 7/16	61.9	19	8.6
P5537	P5500	3 1/4	82.6	22	10.0

P2539
P3539
P5539

FLOURESCENT FIXTURE HANGERS



- Hanger provides 1/8" (3.2) space between channel and fixtures.

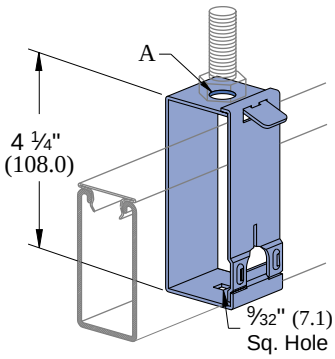
Design Load
120 Lbs (.5 kN)

Materials: 18 gage (1.2).

Part Number	Use With Channel	"A"		Weight/C	
		In	mm	Lbs	kg
P2539	P1000 P1100 P2000	1 3/4	44.5	17	7.7
P3539	P3000	1 1/2	38.1	15	6.8
P5539	P5500	2 9/16	65.1	18	8.2

P2755
P2756
P2757

RACEWAY HANGERS



Use with Channels: P1001, P1101, P2001, P5000, & P5500.

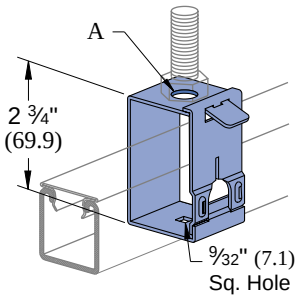
Design Load
120 Lbs (.5 kN)

Material: 14 gage (1.9).

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2755	9/16	14.3	44	20.0
P2756	7/8	22.2	44	20.0
P2757	13/32	10.3	44	20.0

P2855
P2856
P2857

RACEWAY HANGERS



Use with Channels: P1000, P1100, P2000, P3000, P3300, P4000, P4001, P4100, & P4101.

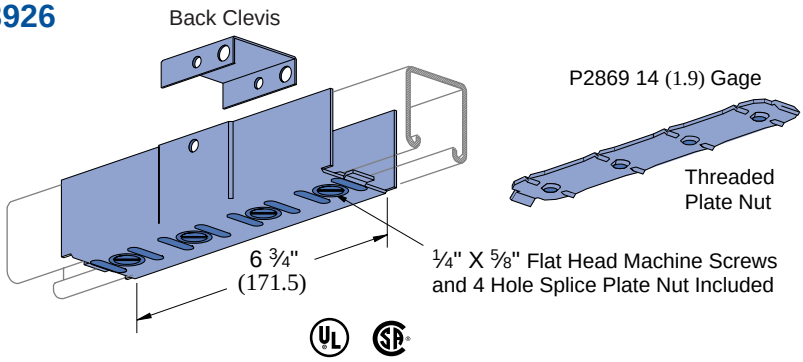
Design Load
120 Lbs (.5 kN)

Material: 14 gage (1.9).

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2855	9/16	14.3	32	14.5
P2856	7/8	22.2	32	14.5
P2857	13/32	10.3	32	14.5

P3922 thru P3926

SPLICE FITTINGS

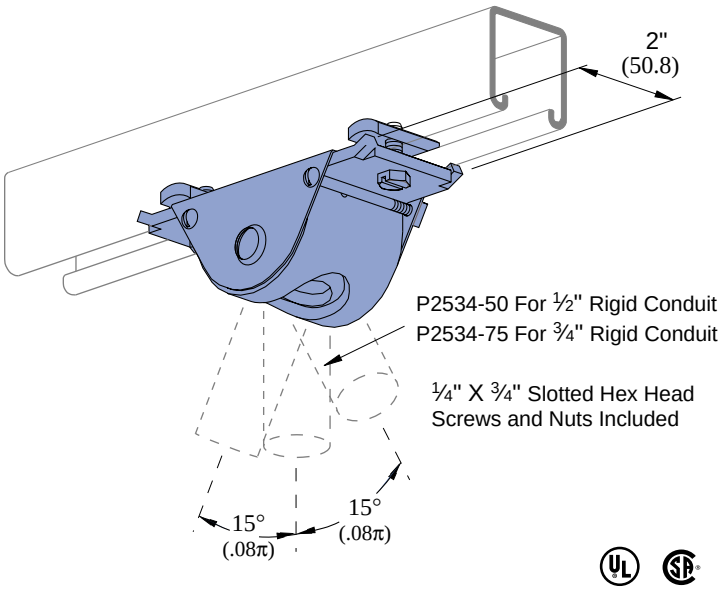


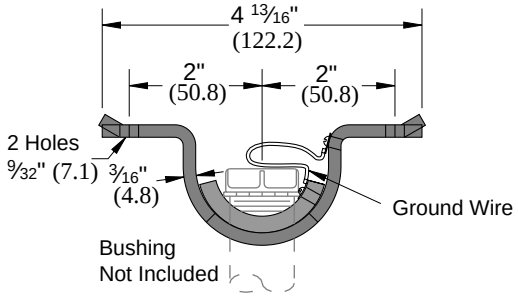
Assembly Number	Use With Channel	"A"		Clevis Number	Back Clevis Number	Plate Nut Number	Weight/C	
		In	mm				Lbs	kg
P3922	P1000 P1100 P2000	1⅝	41.3	P2377	P2517	P2869	100	45.4
P3923	P3000	1⅜	34.9	P3377	P2517	P2869	97	44.0
P3924	P4000	13/16	20.6	P5377	P2517	P2869	80	36.3
P3925	P5500	1⅝	41.3	P2377	P5517	P2869	103	46.7
P3926	P5000	1⅝	41.3	P2377	P5017	P2869	106	48.1

Material:
16 gage (1.6).

P2534-50
P2534-75

CONDUIT SWING FITTING



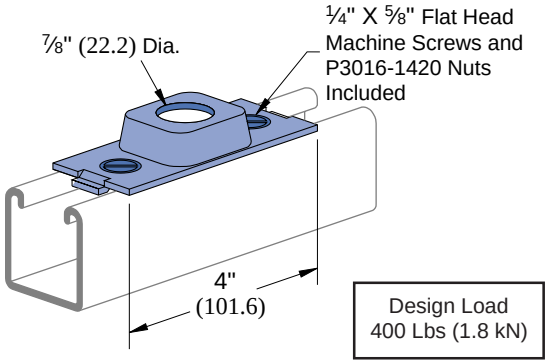


Design Load
300 Lbs (1.3 kN)

- Conduit hanger fittings allow a free swivel of 15° in one direction.
- Fitting may be mounted to the slot side of the Unistrut channel or to the back.

Wt/C 96 Lbs (43.5 kg)

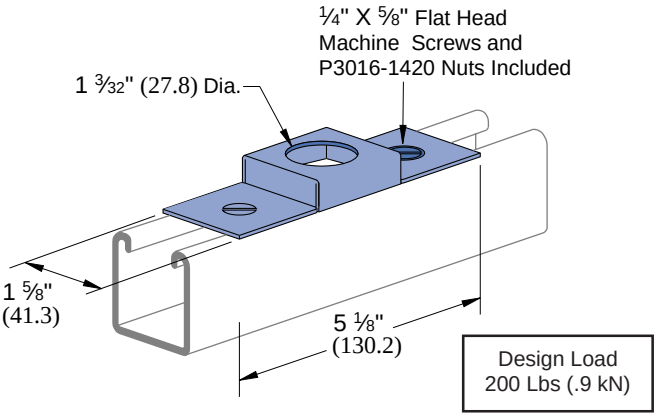
P2535
CONDUIT HANGER CONNECTION FOR ½" CONDUIT



Material: 12 gage (2.7).

Wt/C 28 Lbs (12.7 kg)

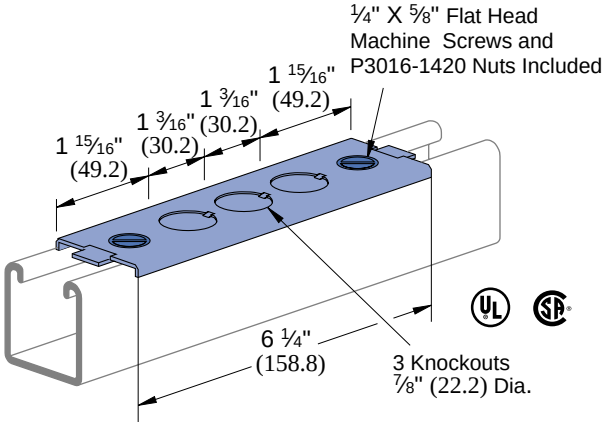
P2536
CONDUIT HANGER CONNECTION FOR ¾" CONDUIT



Material: 16 gage (1.5)

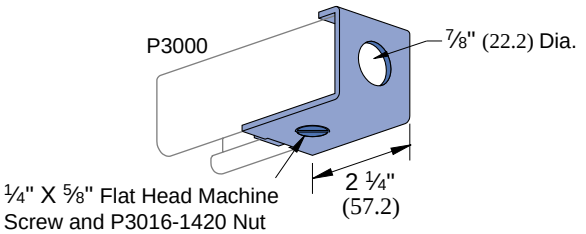
Wt/C 36 Lbs (16.3 kg)

P2522
OUTLET BOX CONNECTION



Wt/C 35 Lbs (15.9 kg)

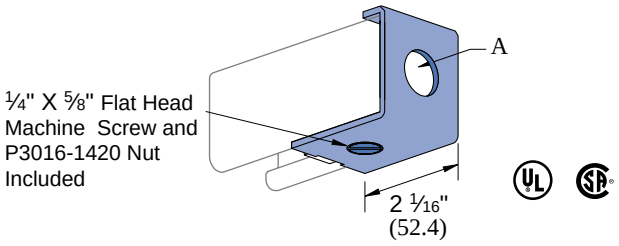
P3521-50
END CONNECTORS FOR ½" CONDUIT



Material: 12 gage (2.7).

Wt/C 27 Lbs (12.2 kg)

P2521-50
P2521-75
END CONNECTORS FOR ½" & ¾" CONDUIT

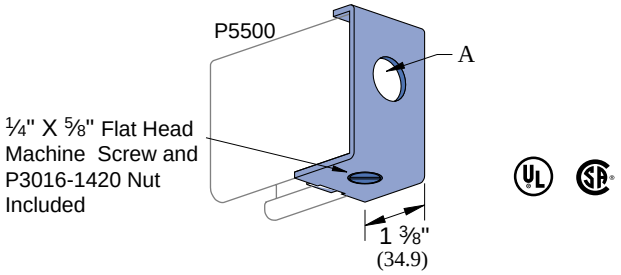


For Unistrut channels P1000, P1100, & P2000.

Material: 12 gage (2.7)

Part Number	Conduit Size A	Weight/C	
	In	Lbs	kg
P2521-50	½	27	12.2
P2521-75	¾	26	11.8

P5521-50
P5521-75
END CONNECTORS FOR ½" & ¾" CONDUIT

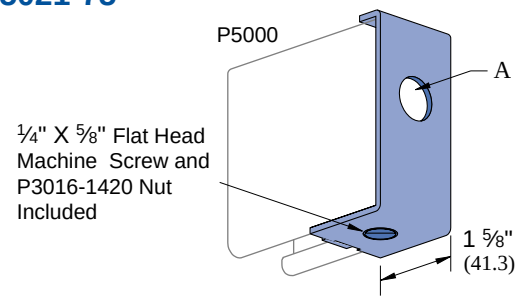


Material: 12 gage (2.7).

Part Number	Conduit Size A	Weight/C	
	In	Lbs	kg
P5521-50	½	27	12.2
P5521-75	¾	26	11.8

P5021-50
P5021-75

END CONNECTOR FOR ½" & ¾" CONDUIT

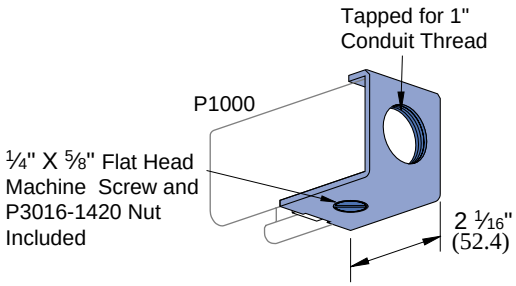


Material: 12 gage (2.7).

Part Number	Conduit Size A In	Weight/C Lbs	Weight/C kg
P5021-50	½	31	14.1
P5021-75	¾	30	13.6

P2521-100

END CONNECTOR FOR 1" CONDUIT

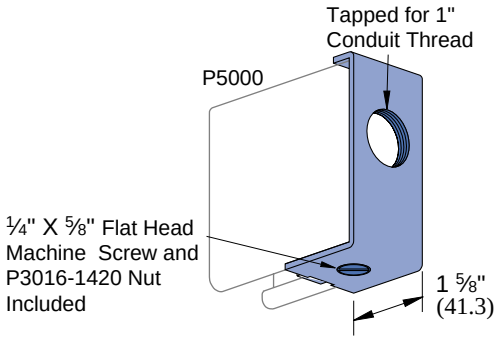


Material: 12 gage (2.7).

Wt/C 24 Lbs (10.9 kg)

P5021-100

END CONNECTOR FOR 1" CONDUIT

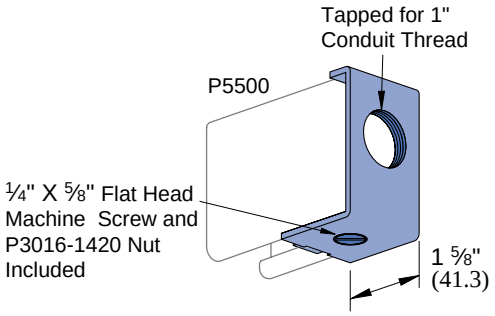


Material: 12 gage (2.7).

Wt/C 28 Lbs (12.7 kg)

P5521-100

END CONNECTOR FOR 1" CONDUIT

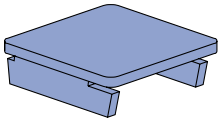


Material: 12 gage (2.7).

Wt/C 24 Lbs (10.9 kg)

P1180 W thru P5580 W

WIREWAY END CAPS

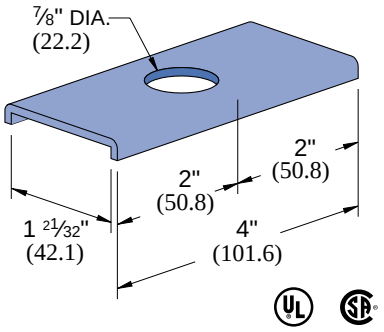


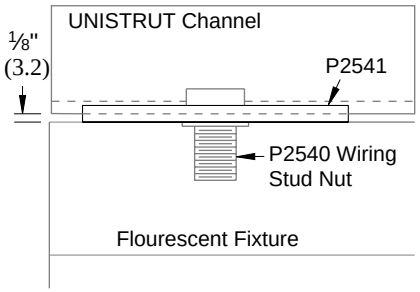
Material: .075" (1.9)

Part Number	Use With	Weight/C Lbs	Weight/C kg
P1180 W	P1100	12	5.4
P1280 W	P1000	11	5.0
P2280 W	P2000	11	5.0
P3280 W	P3000	15	6.8
P4280 W	P4000	5	2.3
P5280 W	P5000	22	10.0
P5580 W	P5500	18	8.2

P2541

SPACER CLEVIS



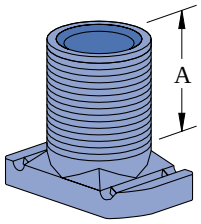


Material: 12 gage (2.7).

Wt/C 24 Lbs (10.9 kg)

P2540
P2540 A

WIRING STUD NUT



½" American Standard Pipe Thread

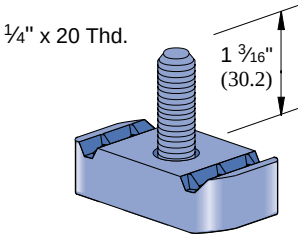
Design Load
320 Lbs (1.4 kN)

Material: Sintered metal.

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2540	1⅛	28.6	10	4.5
P2540 A	⅝	15.9	8	3.6

P3116-125

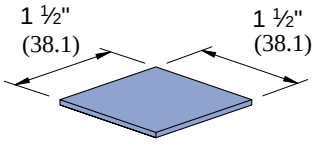
FIXTURE STUD NUT

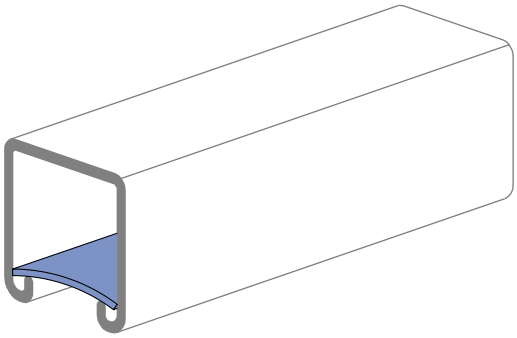


Wt/C 11 Lbs (5.0 kg)

P2552

POLYPROPYLENE WIRE RETAINER



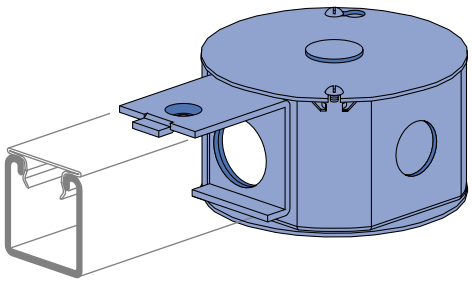


Retainer may be easily pushed into channel to support wires until closure strip is installed.

Wt/C .30 Lbs (.1 kg)

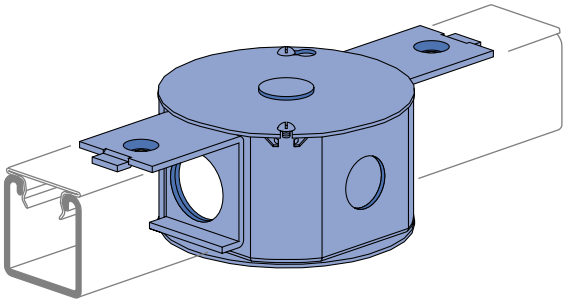
JUNCTION BOXES
FOR 1⅝" (41 MM) WIDTH SERIES CHANNEL

P2810
JUNCTION BOX



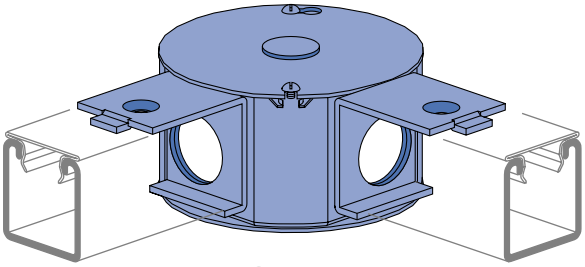
* See note below. Wt/C 135 Lbs (61.2 kg)

P2811
JUNCTION BOX



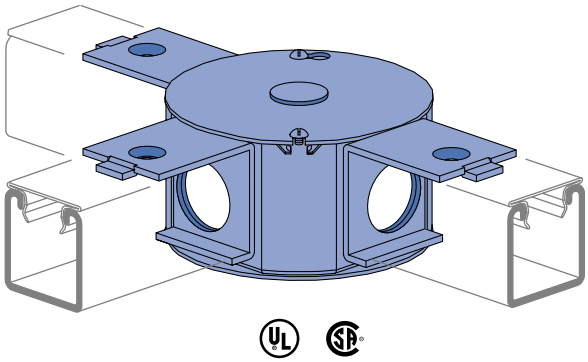
* See note below. Wt/C 155 Lbs (70.3 kg)

P2812
JUNCTION BOX



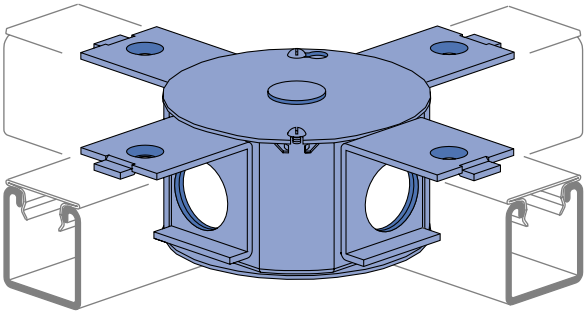
* See note below. Wt/C 155 Lbs (70.3 kg)

P2813
JUNCTION BOX



* See note below. Wt/C 175 Lbs (79.4 kg)

P2814
JUNCTION BOX

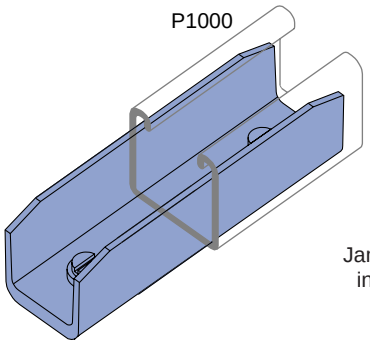


* See note below. Wt/C 195 Lbs (88.5 kg)

* All **Junction Boxes** illustrated on this page are:

- UL listed, CSA approved.
- Junction boxes are for P1000, P1100 or P2000 channels.
- All channel entries in box are 1⅛" (28.6) diameter finished holes with no bushing needed. All knockouts are ⅞" (22.2) diameter.
- ¼" x ⅝" flat head machine screws and P3016-1420 included.

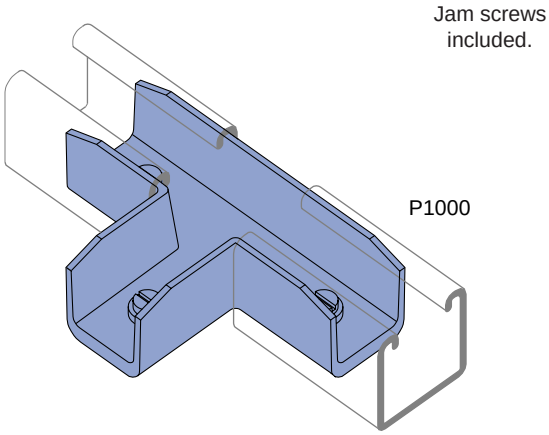
P2900



Material: Cast aluminum.

Wt/C 20 Lbs (9.1 kg)

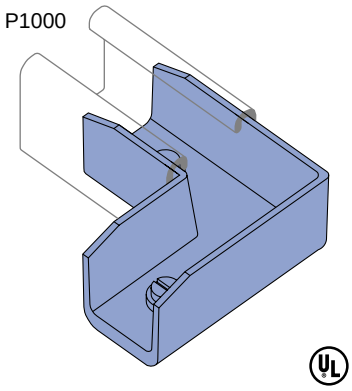
P2901



Material: Cast aluminum.

Wt/C 35 Lbs (15.9 kg)

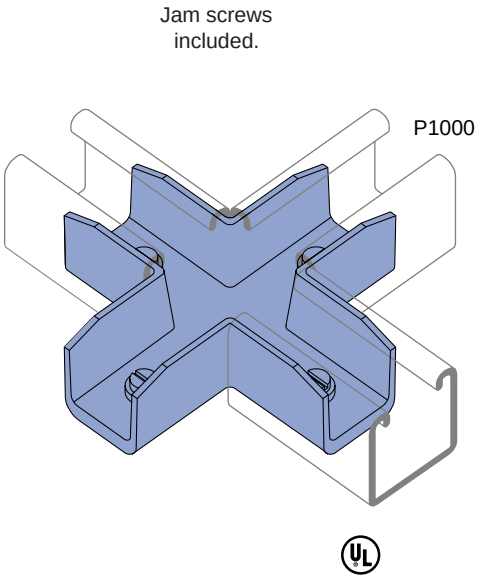
P2902



Material: Cast aluminum.

Wt/C 27 Lbs (12.2 kg)

P2903

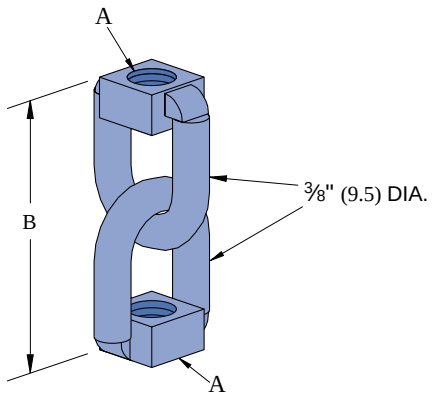


Material: Cast aluminum.

Wt/C 45 Lbs (20.4 kg)

M2037
M2050

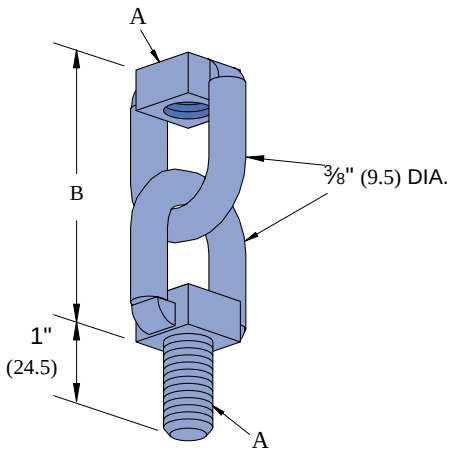
SWIVEL HANGERS



Part Number	"A"	"B"		Weight/C	
		In	mm	Lbs	kg
M2037	⅜" - 16	2 31/32"	67.5	23	10.4
M2050	½" - 13	2¾"	69.9	32	14.5

M2137
M2150

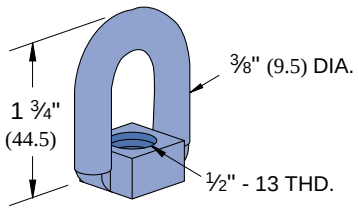
SWIVEL HANGERS



Part Number	"A"	"B"		Weight/C	
		In	mm	Lbs	kg
M2137	⅜" - 16	2 29/32"	67.5	27	12.2
M2150	½" - 13	2¾"	69.9	45	20.4

M2250

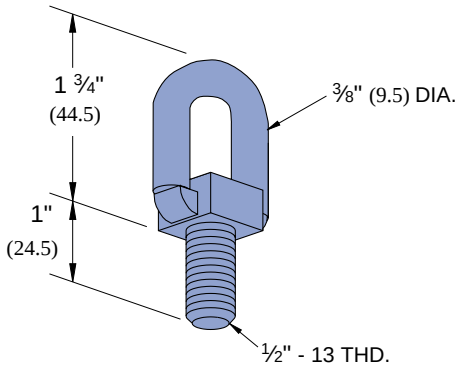
SWIVEL HANGER



Wt/C 18 Lbs (8.2 kg)

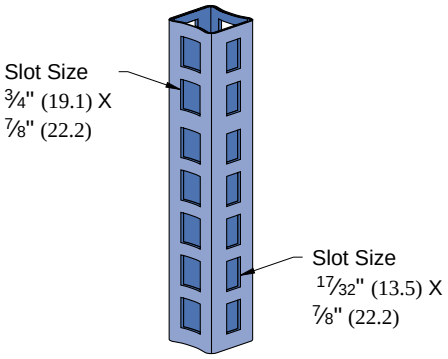
M2350

SWIVEL HANGER

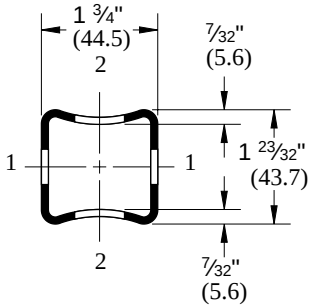


Wt/C 20 Lbs (9.1 kg)

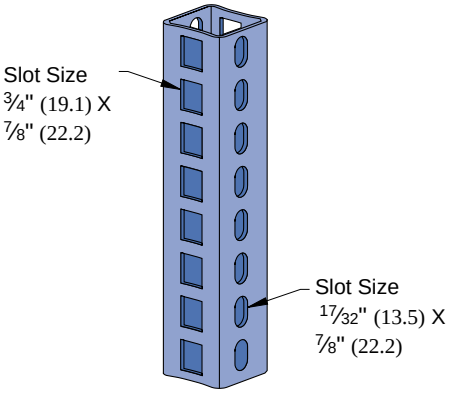
P16F



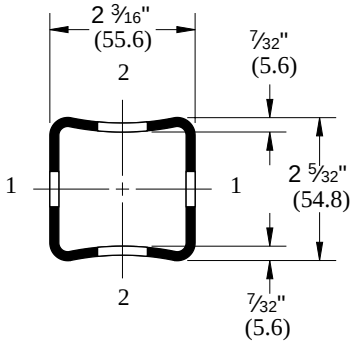
Slot spacing
1 1/4" (31.8)
on center.



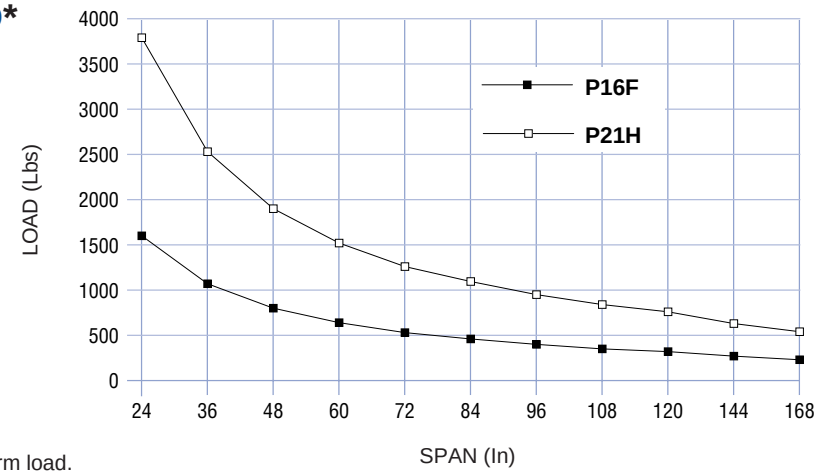
P21H



Slot spacing
1 1/4" (31.8)
on center.



BEAM LOAD*



* Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	AL
P16F	1.78	2.6	4800	540	.105	2.7	■	■	■	■	■	■		
P21H	2.97	4.4	11370	1280	.135	3.4	■	■	■	■	■	■		

DESIGN LOAD DATA

Span		Channel	Beam Data						Column Data			
			Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Load at Deflection Span/240		Max. Column Load Applied at C.G.*		Max. Design Load Applied at Column Face*	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	P16F	1600	7.1	0.06	2	1600	7.1	9600	42.7	3300	14.7
		P21H	3790	16.9	0.05	1	3790	16.9	17700	78.7	6200	27.6
36	914	P16F	1070	4.8	0.13	3	1070	4.8	9000	40.0	3100	13.8
		P21H	2530	11.3	0.11	3	2530	11.3	16900	75.2	6000	26.7
48	1219	P16F	800	3.6	0.23	6	690	3.1	8300	36.9	2900	12.9
		P21H	1900	8.5	0.19	5	1900	8.5	16000	71.2	5700	25.4
60	1524	P16F	640	2.8	0.36	9	440	2.0	7500	33.4	2700	12.0
		P21H	1520	6.8	0.30	8	1280	5.7	15000	66.7	5400	24.0
72	1829	P16F	530	2.4	0.52	13	310	1.4	6600	29.4	2400	10.7
		P21H	1260	5.6	0.42	11	890	4.0	13900	61.8	5100	22.7
84	2134	P16F	460	2.0	0.71	18	220	1.0	5600	24.9	2200	9.8
		P21H	1080	4.8	0.58	15	660	2.9	12600	56.0	4700	20.9
96	2438	P16F	400	1.8	0.93	24	170	0.8	4500	20.0	1900	8.5
		P21H	950	4.2	0.76	19	500	2.2	11300	50.3	4300	19.1
108	2743	P16F	350	1.6	1.18	30	140	0.6	3600	16.0	1600	7.1
		P21H	840	3.7	0.95	24	400	1.8	9900	44.0	3900	17.3
120	3048	P16F	320	1.4	1.45	37	110	0.5	2900	12.9	1400	6.2
		P21H	760	3.4	1.18	30	320	1.4	8300	36.9	3500	15.6
144	3658	P16F	270	1.2	2.09	53	80	0.4	2000	8.9	1100	4.9
		P21H	630	2.8	1.70	43	220	1.0	5800	25.8	2800	12.5
168	4267	P16F	230	1.0	2.85	72	60	0.3	**	**	**	**
		P21H	540	2.4	2.31	59	160	0.7	4230	18.8	2300	10.2

*K = 0.80 **$\frac{KL}{r} > 200$

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.

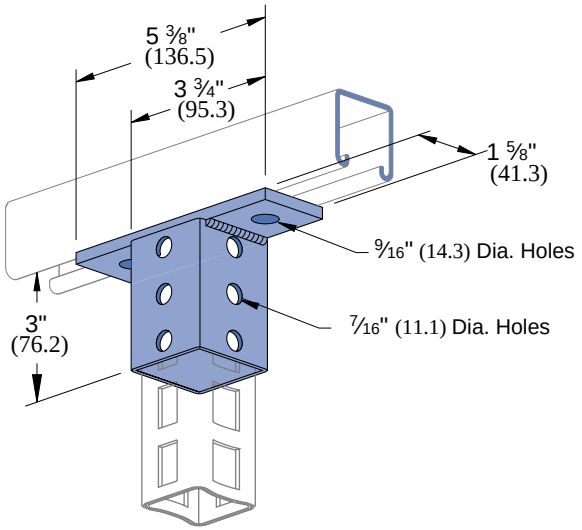
ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P16F	.416	2.68	.168	7.0	.192	3.1	.650	1.7	.210	8.7	.240	3.9	.725	1.8
P21H	.749	4.83	.490	20.4	.455	7.5	.820	2.1	.590	24.6	.540	8.8	.900	2.3

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

P2820 P2940

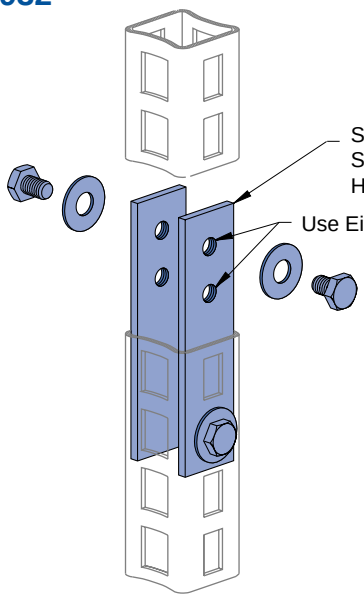
CHANNEL/TUBE CONNECTORS



Part Number	Use With	Weight/C	
		Lbs	kg
P2820	P16F	116	52.6
P2940	P21H	148	67.1

P2822 P2932

SPLICE FITTINGS

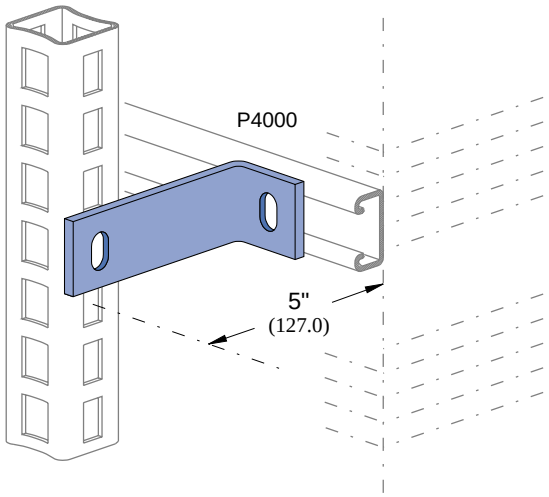


Splicing should occur within the top one quarter of column height.

Part Number	Use With	Weight/C	
		Lbs	kg
P2822	P16F	97	44.0
P2932	P21H	122	55.3

P2823

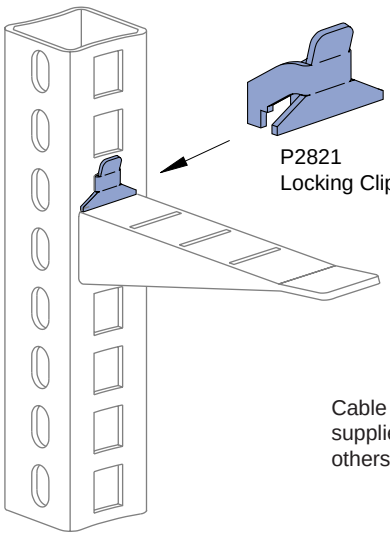
90° RACK FITTING



Wt/C 66 Lbs (29.9 kg)

P2821

LOCKING CLIP



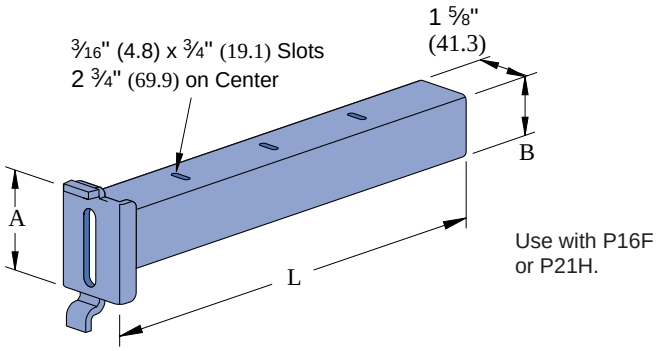
Cable Hook supplied by others.

Exclusive Cable Hook Locking Clip prevents Cable Hook removal.

Wt/C 3 Lbs (1.4 kg)

P2920 thru P2924

CABLE BRACKETS



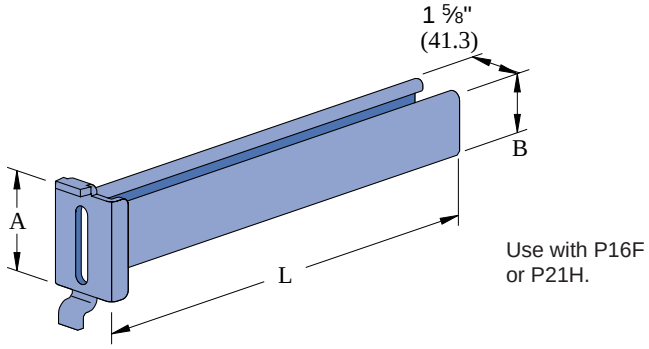
Material: 12 gage steel.

Part Number	"L"		"A"		"B"		Weight/C		Uniform Design Load	
	In	mm	In	mm	In	mm	Lbs	kg	Lbs	kN
P2920	5½	139.7	3½	88.9	⅞	22.2	90	40.8	500	2.2
P2921	8¼	209.6	3½	88.9	⅞	22.2	120	54.4	325	1.4
P2922	11	279.4	3½	88.9	1⅝	41.3	300	136.1	275	1.2
P2923	13¾	349.3	3½	88.9	1⅝	41.3	340	154.2	220	1.0
P2924	19¼	489.0	3½	88.9	1⅝	41.3	430	195.0	160	0.7

Safety factor of 3.

P2928
P2929
P2930

CABLE BRACKETS



Material: 12 gage steel.

Part Number	"L"		"A"		"B"		Weight/C		Uniform Design Load	
	In	mm	In	mm	In	mm	Lbs	kg	Lbs	kN
P2928	6	152.4	3½	88.9	⅞	22.2	92	41.7	500	2.2
P2929	12	304.8	3½	88.9	1⅝	41.3	320	145.1	250	1.1
P2930	18	457.2	3½	88.9	1⅝	41.3	420	190.5	170	0.8

Safety factor of 3.

	Page
Heavy-Duty Inserts	170
Standard-Duty Inserts	172
Light-Duty Inserts	174
Spot Inserts	176
End Caps and Accessories	178
Hardware	179

MATERIAL
Cold-formed inserts are manufactured from standard 12 Gage (2.7 mm) Unistrut channel sections conforming to ASTM A570 GR 33 or ASTM A653 GR 33, unless otherwise noted.

Hot-rolled inserts, as noted, are manufactured from carbon steel meeting physical requirements of ASTM A283 GR D.

To inhibit concrete seepage, all inserts (except spot inserts) are provided with closure and end caps or foam filler, unless otherwise requested.

Most concrete inserts are also available in stainless steel on special order. Consult factory for ordering information.

APPLICATION
A wide range of heavy-duty to light-duty "continuous" and "spot" concrete inserts is available for use in pre-cast, pre-stressed or poured-in-place concrete floors, walls or ceilings.

FINISHES
Cold-formed, standard-duty, light-duty and spot concrete inserts in this section are available in Perma-Green II (GR), hot dipped galvanized (HG), conforming to ASTM A123 or A153; Pre-galvanized (PG), conforming to ASTM A653 GR 33 and plain (PL).

Hot-rolled inserts are hot-dipped galvanized (HG) conforming to ASTM A123 or A153.

DESIGN LOAD
Design loads, where shown, are based on 3,000 PSI concrete, unless noted.

STANDARD LENGTHS
Insert lengths range from 3 inches (76 mm) to 20 feet (6.10m) with a tolerance of ±¼-inch (6.4mm).

DIMENSIONS
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

Custom-designed inserts are available on special order. Consult factory for ordering information.

CONCRETE INSERT SELECTION CHART

HEAVY DUTY CONCRETE INSERTS

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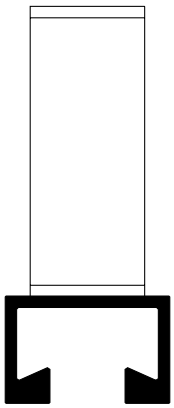
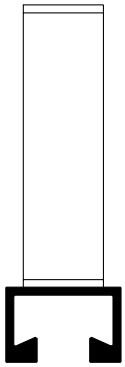
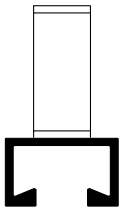


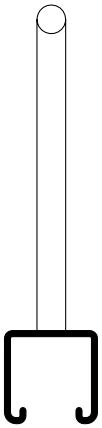
P3780 Series



P3770 Series



P3760 Series



P3754

STANDARD DUTY CONCRETE INSERTS

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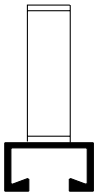
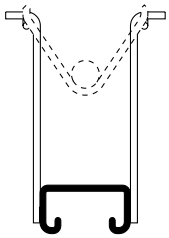
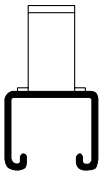


P3740 Series



P3170 Series



P3270 Series

LIGHT DUTY CONCRETE INSERTS

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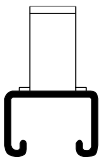

P3370 Series

SPOT INSERTS

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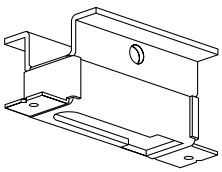
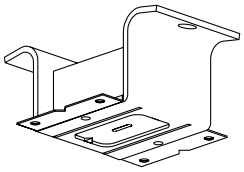
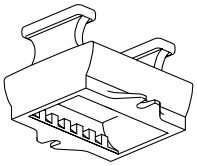


P3245



M24



M26

LOAD CHART BY LENGTH

Insert Length In/mm	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
		Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
Spot Inserts	M26/M2812	54	24.5	–	–	1500	6.6	–	–	1500	6.6
	M3245	52	23.6	–	–	1000	4.4	–	–	1000	4.4
	M24/M2512	52	23.6	–	–	800	3.5	–	–	800	3.5
3" (76)	P3249	85	38.6	3	76	500	2.2	–	–	500	2.2
	P3349	68	30.8	3	76	400	1.8	–	–	400	1.8
4" (102)	P3250	100	45.4	4	102	800	3.6	–	–	800	3.6
	P3350	81	36.7	4	102	500	2.2	–	–	500	2.2
6" (152)	P3782-6	467	211.8	4	102	8000	35.6	–	–	8000	35.6
	P3772-6	307	139.3	4	102	6000	26.7	–	–	6000	26.7
	P3762-6	153	69.4	4	102	2800	12.5	–	–	2800	12.5
	P3742-6	103	46.7	4	102	2500	11.1	–	–	2500	11.1
	P3251	130	59.0	6	152	1000	4.4	–	–	1000	4.4
	P3351	102	46.3	6	152	750	3.3	–	–	750	3.3
8" (203)	P3782-8	569	258.1	6	152	8000	35.6	–	–	8000	35.6
	P3772-8	366	166.0	6	152	6000	26.7	–	–	6000	26.7
	P3762-8	192	87.1	6	152	2800	12.5	–	–	2800	12.5
	P3742-8	128	58.1	6	152	2500	11.1	–	–	2500	11.1
	P3252	159	72.1	8	203	1200	5.4	–	–	1200	5.4
	P3352	122	55.3	8	203	1000	4.4	–	–	1000	4.4
10" (254)	P3783-10	752	341.1	4	102	7700	34.3	4	102	10000	44.5
	P3782-10	671	304.4	8	203	7700	34.3	–	–	7700	34.3
	P3773-10	490	222.3	4	102	5500	24.5	4	102	7000	31.1
	P3772-10	425	192.8	8	203	5500	24.5	–	–	5500	24.5
	P3763-10	249	112.9	4	102	2800	12.5	4	102	5000	22.2
	P3743-10	167	75.8	4	102	2300	10.2	4	102	4500	20.0
	P3762-10	230	104.3	8	203	2800	12.5	–	–	2800	12.5
	P3742-10	152	68.9	8	203	2300	10.2	–	–	2300	10.2
12" (305)	P3783-12	854	387.4	5	127	7700	34.3	5	127	10000	44.5
	P3773-12	549	249.0	5	127	5500	24.5	5	127	8500	37.8
	P3782-12	773	350.6	10	254	7700	34.3	–	–	7700	34.3
	P3772-12	484	219.5	10	254	5500	24.5	–	–	5500	24.5
	P3763-12	288	130.6	5	127	2800	12.5	5	127	5000	22.2
	P3754	210	95.3	8	203	2500	11.1	3	76	5000	22.2
	P3743-12	192	87.1	5	127	2300	10.2	5	127	4500	20.0
	P3762-12	269	122.0	10	254	2800	12.5	–	–	2800	12.5
	P3742-12	177	80.3	10	254	2300	10.2	–	–	2300	10.2
	P3253	227	103.0	4	102	2000	8.9	–	–	2000	8.9
	P3353	174	78.9	4	102	1500	6.7	–	–	1500	6.7
16" (406)	P3254	270	122.5	4	102	2000	8.9	12	305	4000	17.8
	P3354	185	83.9	4	102	1500	6.7	12	305	3000	13.3
18" (457)	P3783-18	1159	525.7	8	203	7700	34.3	8	203	15400	68.5
	P3773-18	725	328.9	8	203	5500	24.5	8	203	11000	48.9
	P3763-18	403	182.8	8	203	2800	12.5	8	203	5500	24.5
	P3743-18	265	120.2	8	203	2300	10.2	8	203	4200	18.7
20" (508)	P3255	357	161.9	4	102	2000	8.9	12	305	4000	17.8
	P3355	231	104.8	4	102	1500	6.7	12	305	3000	13.3

LOAD CHART BY LENGTH (continued)

Insert Length In/mm	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
		Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
24" (610)	P3783-24	1463	663.8	11	279	7700	34.3	10	254	15400	68.5
	P3773-24	903	409.7	11	279	5500	24.5	10	254	11000	48.9
	P3763-24	519	235.5	11	279	2800	12.5	10	254	5500	24.5
	P3743-24	339	153.8	11	279	2300	10.2	10	254	4200	18.7
	P3256	399	181.0	4	102	2000	8.9	12	305	4000	17.8
	P3356	277	125.6	4	102	1500	6.7	12	305	3000	13.3

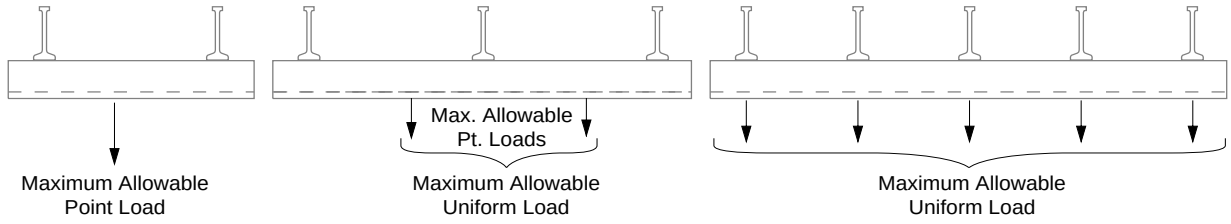
CONTINUOUS CONCRETE INSERT LOAD CHART: Lbs/Ft (kg/m)

Insert Length In/mm	Concrete Insert (Series)	Weight		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
		Lbs/C Ft	kg/100m	In	mm	Lbs	kN	In	mm	Lbs/Ft	kN/m
Continuous Concrete Inserts	P3780	713	1061.1	10	254	7700	34.3	10	254	9400	137.2
	P3770	435	647.5	10	254	5500	24.5	10	254	6700	97.7
	P3760	255	379.5	10	254	2800	12.5	10	254	3400	49.5
	P3740	166	247.0	10	254	2300	10.2	10	254	2800	40.9
	P3270	194	288.6	4	102	2000	8.9	12	305	2000	29.2
	P3370	139	206.6	4	102	1500	6.7	12	305	1500	14.4
	P3170*	165	245.5	8	203	1000	4.4	12	305	1000	22.7

Load data is based on use of 3000 PSI concrete.

*When used in pre-stressed concrete "T" Beam.

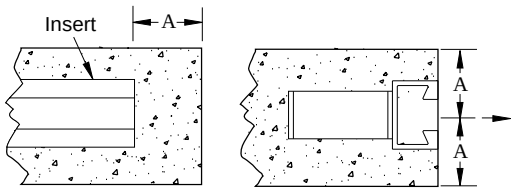
LOADING CONDITIONS



The maximum allowable point load may be placed anywhere along the insert.* The maximum allowable uniform load must be placed as a series of point loads with the minimum spacing between point loads as listed; where no single point load may exceed the maximum allowable point load.

* All loads placed less than 2" from the end of an insert must be reduced by 50%.

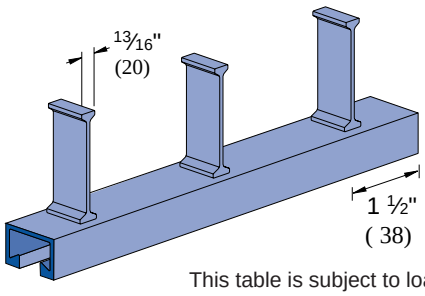
MINIMUM EDGE DISTANCE TO ACHIEVE RATED PULL-OUT CAPACITY

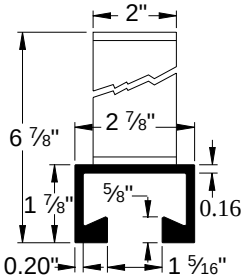


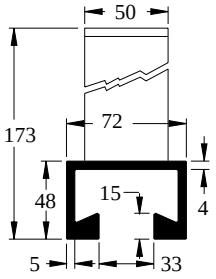
Concrete Insert Series	Edge Distance "A"	
	In	mm
P3170	1⅞	48
P3740	3	76
P3270	3	76
P3370	3	76

Concrete Insert Series	Edge Distance "A"	
	In	mm
P3754	3	76
P3760	4	102
P3770	5	12
P3780	6½	165

P3782-6 thru P3783-24







This table is subject to loading conditions on page 169.

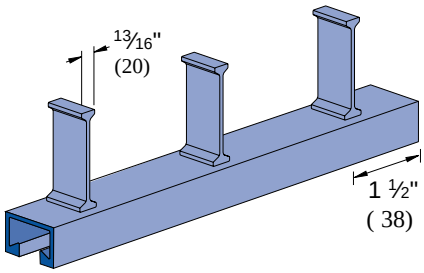
P3780 SERIES
HEAVY DUTY CONCRETE INSERT

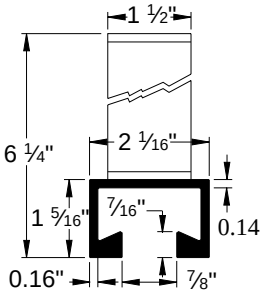
- For all attachments "T" head bolts are required (see page 179).
- Furnished with foam filler in place.
- This insert is not intended for use with metal framing components.
- **Maximum distance between insert end and anchor center must not exceed 1½" (38).**

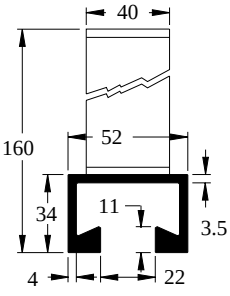
Material: Hot formed steel.

Insert Length		No. of Anchors	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm			Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
6	152	2	P3782-6	467	211.8	4	102	8000	35.6	—	—	8000	35.6
8	203		P3782-8	569	258.1	6	152	8000	35.6	—	—	8000	35.6
10	254		P3782-10	671	304.4	8	203	7700	34.3	—	—	7700	34.3
12	305		P3782-12	773	350.6	10	254	7700	34.3	—	—	7700	34.3
10	254	3	P3783-10	752	341.1	4	102	7700	34.3	4	102	10000	44.5
12	305		P3783-12	854	387.4	5	127	7700	34.3	5	127	10000	44.5
18	457		P3783-18	1159	525.7	8	203	7700	34.3	8	203	15400	68.5
24	610		P3783-24	1463	663.8	11	279	7700	34.3	10	254	15400	68.5
Continuous			P3780 Series	7.1 Lbs/Ft	10.6 kg/m	10	254	7700	34.3	10	254	9400 Lbs/Ft	137.2 kN/m

P3772-6 thru P3773-24







This table is subject to loading conditions on page 169.

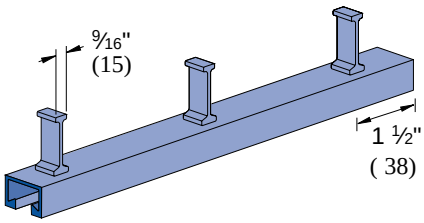
P3770 SERIES
HEAVY DUTY CONCRETE INSERT

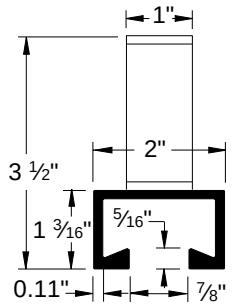
- For all attachments "T" head bolts are required (see page 179).
- Furnished with foam filler in place.
- Many metal framing components are not compatible. Verify before use.
- **Maximum distance between insert end and anchor center must not exceed 1½" (38).**

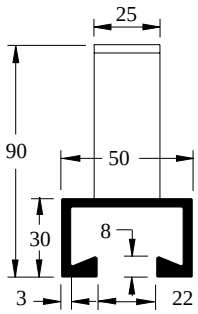
Material: Hot formed steel.

Insert Length		No. of Anchors	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm			Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
6	152	2	P3772-6	307	139.3	4	102	6000	26.7	—	—	6000	26.7
8	203		P3772-8	366	166.0	6	152	6000	26.7	—	—	6000	26.7
10	254		P3772-10	425	192.8	8	203	5500	24.5	—	—	5500	24.5
12	305		P3772-12	484	219.5	10	254	5500	24.5	—	—	5500	24.5
10	254	3	P3773-10	490	222.3	4	102	5500	24.5	4	102	7000	31.1
12	305		P3773-12	549	249.0	5	127	5500	24.5	5	127	8500	37.8
18	457		P3773-18	725	328.9	8	203	5500	24.5	8	203	11000	48.9
24	610		P3773-24	903	409.7	11	279	5500	24.5	10	254	11000	48.9
Continuous			P3770 Series	4.5 Lbs/Ft	6.5 kg/m	10	254	5500	24.5	10	254	6700 Lbs/Ft	97.7 kN/m

P3762-6 thru P3763-24







P3760 SERIES
HEAVY DUTY CONCRETE INSERT

- For all attachments "T" head bolts are required (see page 179).
- Furnished with foam filler in place.
- Many metal framing components are not compatible. Verify before use.
- **Maximum distance between insert end and anchor center must not exceed 1½" (38).**

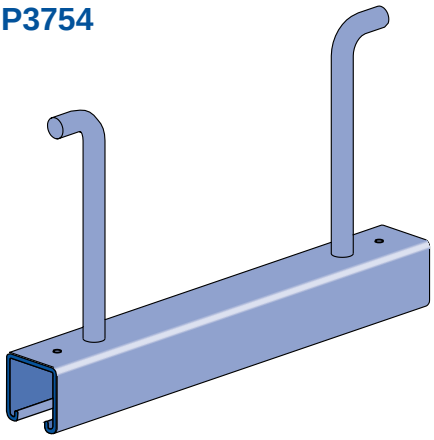
This table is subject to loading conditions on page 169.

Material: Hot formed steel.

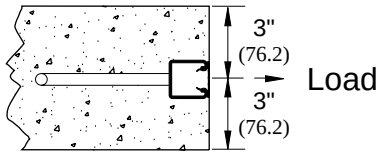
Insert Length		No. of Anchors	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm			Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
6	152	2	P3762-6	153	69.4	4	102	2800	12.5	—	—	2800	12.5
8	203		P3762-8	192	87.1	6	152	2800	12.5	—	—	2800	12.5
10	254		P3762-10	230	104.3	8	203	2800	12.5	—	—	2800	12.5
12	305		P3762-12	269	122.0	10	254	2800	12.5	—	—	2800	12.5
10	254	3	P3763-10	249	112.9	4	102	2800	12.5	4	102	5000	22.2
12	305		P3763-12	288	130.6	5	127	2800	12.5	5	127	5000	22.2
18	457		P3763-18	403	182.8	8	203	2800	12.5	8	203	5500	24.5
24	610		P3763-24	519	235.5	11	279	2800	12.5	10	254	5500	24.5
Continuous			P3760 Series	2.6 Lbs/Ft	3.8 kg/m	10	254	2800	12.5	10	254	3400 Lbs/Ft	49.5 kN/m

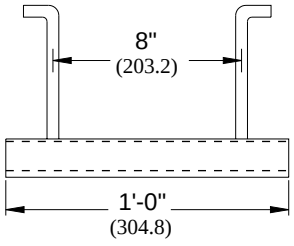
P3754

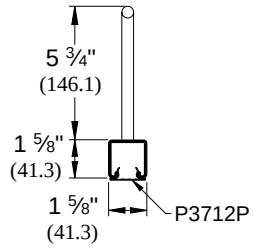
HEAVY DUTY CONCRETE INSERT



- Use with P1010 nuts.
- A styrene bead end cap that fits inside the channel to inhibit concrete seepage included.
- Closure strip P3712 P included.
- All nuts and fittings for P3200 series concrete inserts will fit.
- The recommended design load when used for curtain wall anchorage is 5,000 pounds and is based on use in average, good conrete. The design load includes 1/3 increase in load as permitted by AISI Specifications and Uniform Building Code when stresses are produced by wind or earthquake and other loads..
- The recommended design load is based on using 2 P1010 nuts at no less than 3" O.C. and no closer than 2" to either end of the insert. The distance between the insert centerline and the concrete edge must be a minimum of 3"

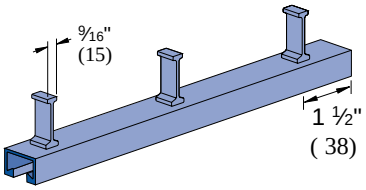


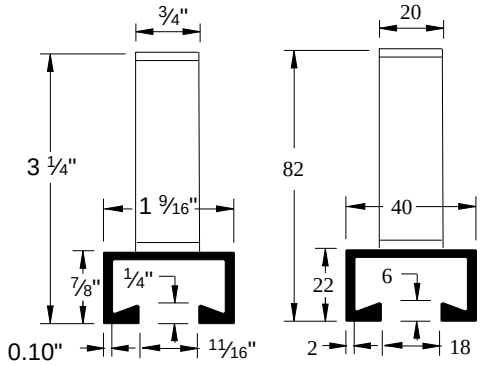




Insert Length		Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm		Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
12	304.8	P3754	210	95.3	8	203.2	2500	11.1	3	76.2	5000	22.2

P3742-6 thru P3743-24





P3740 SERIES
STANDARD DUTY CONCRETE INSERT

- For all attachments "T" head bolts are required (see page 179).
- Furnished with foam filler in place.
- Many metal framing components are not compatible. Verify before use.
- **Maximum distance between insert end and anchor center must not exceed 1½" (38).**

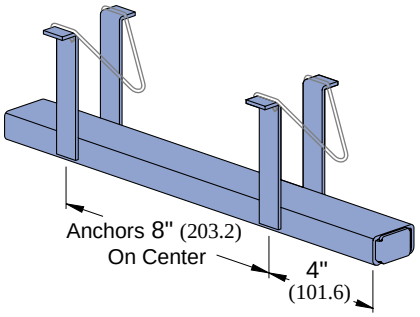
This table is subject to loading conditions on page 169.

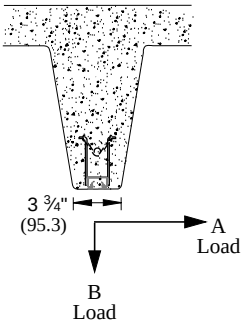
Material: Hot formed steel.

Insert Length		No. of Anchors	Part Number	Weight/C		Anchor Spacing		Max. Allowable Point Load		Min. Spacing Between Point Loads		Max. Allowable Uniform Load	
In	mm			Lbs	kg	In	mm	Lbs	kN	In	mm	Lbs	kN
6	152	2	P3742-6	103	46.7	4	102	2500	11.1	—	—	2500	11.1
8	203		P3742-8	128	58.1	6	152	2500	11.1	—	—	2500	11.1
10	254		P3742-10	152	68.9	8	203	2300	10.2	—	—	2300	10.2
12	305		P3742-12	177	80.3	10	254	2300	10.2	—	—	2300	10.2
10	254	3	P3743-10	167	75.8	4	102	2300	10.2	4	102	4500	20.0
12	305		P3743-12	192	87.1	5	127	2300	10.2	5	127	4500	20.0
18	457		P3743-18	265	120.2	8	203	2300	10.2	8	203	4200	18.7
24	610		P3743-24	339	153.8	11	279	2300	10.2	10	254	4200	18.7
Continuous			P3740 Series	1.7 Lbs/Ft	2.5 kg/m	10	254	2300	10.2	10	254	2800 Lbs/Ft	40.9 kN/m

P3165
P3170

INSERT FOR PRE-STRESSED CONCRETE





- P2865 spring sold separately.
- Use channel nuts designed for P3300. See pages 70 to 74.

Maximum allowable load/Ft.

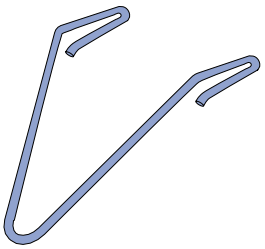
Concrete	A		B	
	Lbs	Kn	Lbs	Kn
Light Weight	425	1.9	800	3.6
Normal Weight	500	2.2	1000	4.4

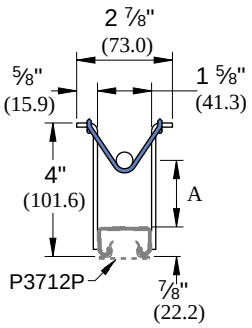
Safety factor 3.

Part Number	Length		Weight/C	
	Ft	mm	Lbs	kg
P3165	10	3048	1650	748.4
P3170	20	6096	3280	1487.8

P2865-10
P2865-15
P2865-20

HOLD DOWN SPRING FOR PRE-STRESSED CONCRETE INSERT

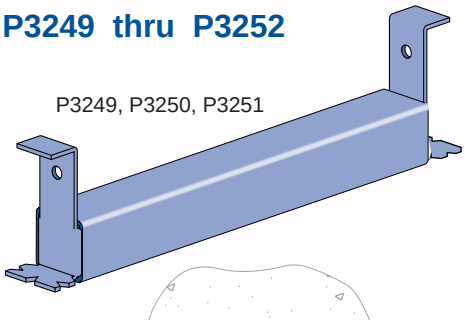


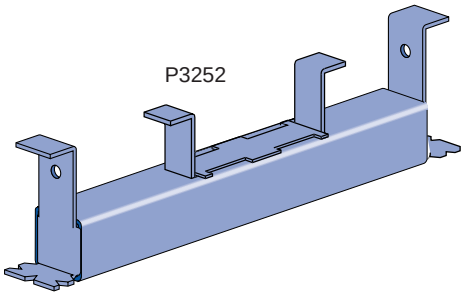


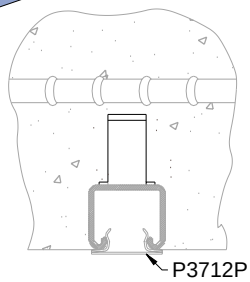
- For use with P3165 and P3170 inserts. Recommended for use on every other anchor to hold inserts in place.

Part Number	"A"		Weight/C	
	In	mm	Lbs	kg
P2865-10	1	25.4	2	.9
P2865-15	1½	38.1	2	.9
P2865-20	2	50.8	2	.9

P3249 thru P3252



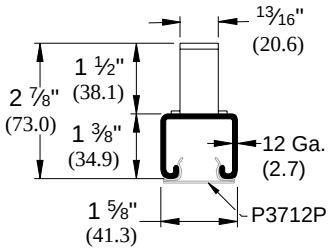




Use channel nuts designed for P3000. See pages 70 to 74.

FM APPROVED (When used for sprinkler systems only.)

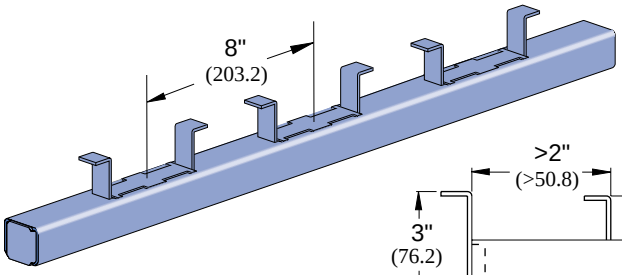
P3270 SERIES CONCRETE INSERTS

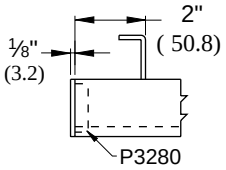


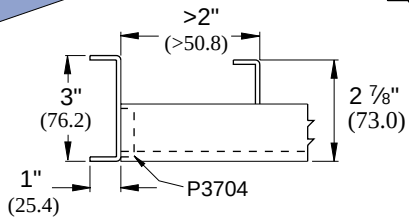
Insert Length		Part Number	Weight/C		Max. Allowable Point Load*		Max. Allowable Uniform Load*	
In	mm		Lbs	kg	Lbs	kN	Lbs	kN
3	76	P3249	85	38.6	500	2.2	500	2.2
4	102	P3250	100	45.4	800	3.6	800	3.6
6	152	P3251	130	59.0	1000	4.4	1000	4.4
8	203	P3252	159	72.1	1200	5.4	1200	5.4

*Safety factor of 3

P3253 thru P3270







FM APPROVED (When used for sprinkler systems only.)

P3270 SERIES CONCRETE INSERTS

- Use channel nuts designed for P3000 channel (See page70 to 74).
- P3280 end cap used when distance to first anchor is up to 2" (50.8 mm).
- P3704 end cap is used when end distance to first anchor is over 2" (50.8 mm).
- Nail or anchor inserts to forms every 16 (406 mm) to 24 (610 mm) inches.
- Includes closure and end caps unless otherwise requested.

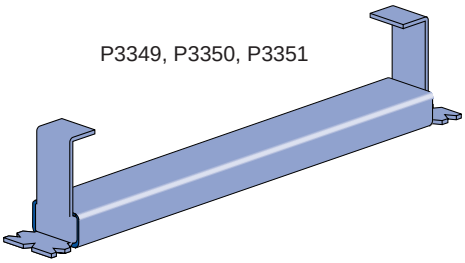
Insert Length		Part Number	Weight/C		Max. Allowable Point Load*		Min. Spacing Between Point Loads		Max. Allowable Uniform Load*	
In/Ft	mm		Lbs	kg	Lbs	kN	In	mm	Lbs	kN
12"	305	P3253	227	103.0	2000	8.9	—	—	2000	8.9
16"	406	P3254	270	122.5	2000	8.9	12	305	4000	17.8
20"	508	P3255	357	161.9	2000	8.9	12	305	4000	17.8
24"	610	P3256	399	181.0	2000	8.9	12	305	4000	17.8
32"	813	P3257	527	239.0						
36"	914	P3257A	616	279.4						
40"	1016	P3258	661	299.8						
4'	1219	P3259	786	356.5						
5'	1524	P3260	1003	455.0						
6'	1829	P3261	1173	532.1						
7'	2134	P3262	1390	630.5	2000	8.9	12	305	2000 Lbs per Ft	29.2 kN per meter
8'	2438	P3263	1560	707.6						
9'	2743	P3264	1741	789.7						
10'	3048	P3265	1947	883.1						
12'	3658	P3266	2334	1058.7						
14'	4267	P3267	2717	1232.4						
16'	4877	P3268	3116	1413.4						
18'	5486	P3269	3530	1601.2						
20'	6096	P3270	3882	1760.8						

*Safety factor of 3

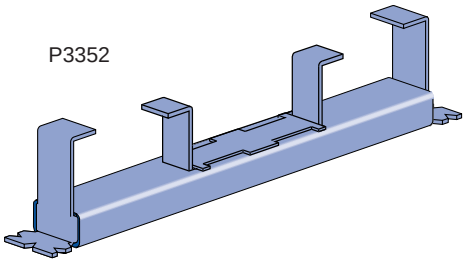
P3349 thru P3352

P3370 SERIES
CONCRETE INSERTS

P3349, P3350, P3351

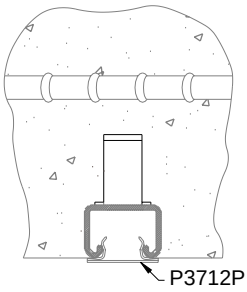


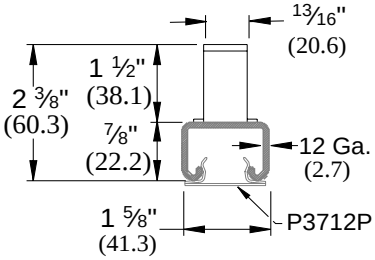
P3352



FM APPROVED (When used for sprinkler systems only.)

Use channel nuts designed for P3300. See pages 70 to 74.



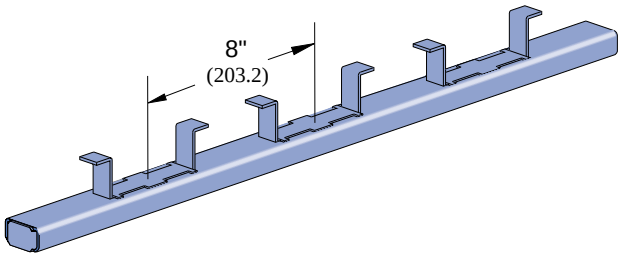


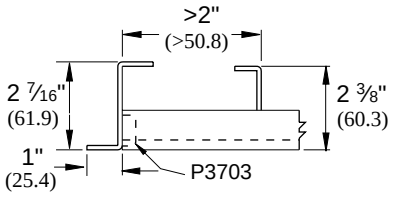
Insert Length		Part Number	Weight/C		Max. Allowable Point Load		Max. Allowable Uniform Load	
In	mm		Lbs	kg	Lbs	kN	Lbs	kN
3	76	P3349	68	30.1	400	1.8	400	1.8
4	102	P3350	81	36.7	500	2.2	500	2.2
6	152	P3351	102	46.3	750	3.3	750	3.3
8	203	P3352*	122	55.3	1000	4.4	1000	4.4

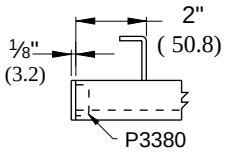
*P3352 has punched out anchors. Safety factor of 3.

P3353 thru P3370

P3370 SERIES CONCRETE INSERTS







- Use channel nuts designed for P3300 channel (See page #70 to 74).
- P3380 end cap used when distance to first anchor is up to 2" (50.8 mm).
- P3703 end cap is used when end distance to first anchor is over 2" (50.8 mm).
- Nail or anchor inserts to forms every 16 (406 mm) to 24 (610 mm) inches.
- Includes closure and end caps unless otherwise requested.

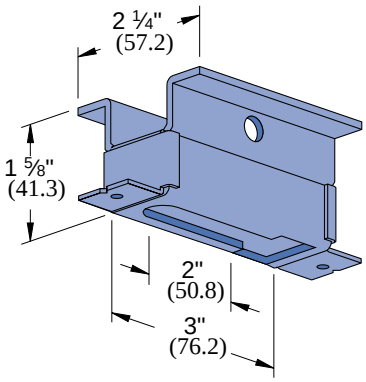
FM APPROVED (When used for sprinkler systems only.)

Insert Length		Part Number	Weight/C		Max. Allowable Point Load*		Min. Spacing Between Point Loads		Max. Allowable Uniform Load*	
In/Ft	mm		Lbs	kg	Lbs	kN	In	mm	Lbs	kN
12"	305	P3353	174	78.9	1500	6.7	—	—	1500	6.7
16"	406	P3354	185	83.9	1500	6.7	12	305	3000	13.3
20"	508	P3355	231	104.8	1500	6.7	12	305	3000	13.3
24"	610	P3356	277	125.6	1500	6.7	12	305	3000	13.3
32"	813	P3357	370	167.8						
36"	914	P3357A	416	188.7						
40"	1016	P3358	463	210.0						
4'	1219	P3359	555	251.7						
5'	1524	P3360	694	314.8						
6'	1829	P3361	832	377.4						
7'	2134	P3362	971	440.4						
8'	2438	P3363	1110	503.5	1500	6.7	12	305	1500	21.9
9'	2743	P3364	1249	566.5					Lbs	kN
10'	3048	P3365	1387	629.1					per	per
12'	3658	P3366	1665	755.2					Ft	meter
14'	4267	P3367	1942	880.9						
16'	4877	P3368	2220	1007.0						
18'	5486	P3369	2497	1132.6						
20'	6096	P3370	2775	1258.7						

*Safety factor of 3.

P3245

SPOT INSERT



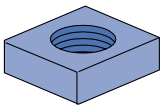
- For ¼", ⅜", or ½" size attachment or hanger rod.
- Insert nuts to be ordered separately.
- Safety factor of 3.

Finish: Pre-galvanized.

Part Number	Weight/C		Max. Allowable Point Load	
	Lbs	kg	Lbs	kN
P3245	54	24.5	1000	4.4

P3245-N4
P3245-N6
HSQN050

SQUARE NUT FOR P3245 INSERT

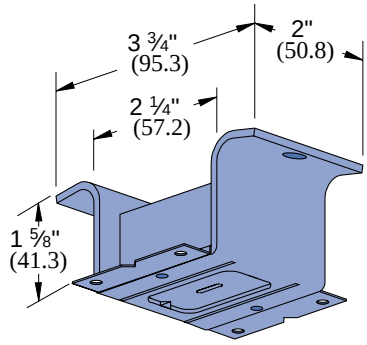


Finish: Electro-galvanized.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
P3245-N4	¼ - 20	6	2.6
P3245-N6	⅜ - 16	5	2.3
HSQN050	½ - 13	6	2.6

M24

SPOT INSERT



(When used for sprinkler systems only.)

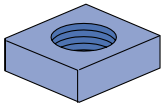
- Ribs along sides of slot give extra strength to case.
- Insert nuts M2506 thru M2524 to be ordered separately.
- Safety factor of 5.

Finish: Electro-galvanized.

Part Number	Weight/C		Max. Allowable Point Load	
	Lbs	kg	Lbs	kN
M24	52	23.6	800	3.6

M2506 thru M2524

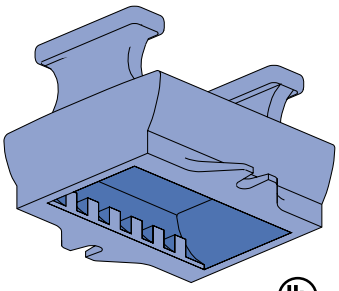
SQUARE NUT FOR M24



Finish: Electro-galvanized.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
M2506	¼ - 20	13	5.9
M2508	⅜ - 16	14	6.4
M2510	½ - 13	14	6.4
M2512	⅝ - 11	12	5.4
M2523	¾ - 10	11	5.0
M2524	⅞ - 9	10	4.5

M26

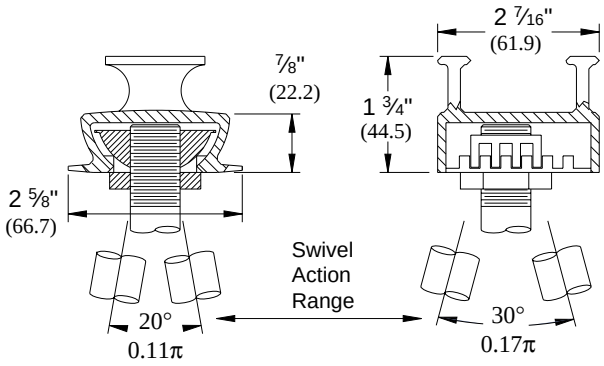


- For use with M2708 thru M2724 and M2808 thru M2824 nuts only.
- See allowable loads below.
- Safety factor of 5.

(When used for sprinkler systems only.)

Material: Malleable iron.

CONCRETE SPOT INSERT FOR SWIVEL OR RIGID CONNECTION

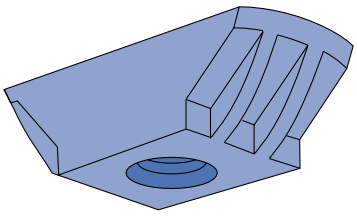


Patent No. 2953874

Part Number	Weight/C		Max. Allowable Point Load*	
	Lbs	kg	Lbs	kN
M26	63	28.6	1500	6.7

M2708 thru M2724

SWIVEL NUT FOR M26, M29, M30, AND M31 INSERT



Finish: Cadmium.

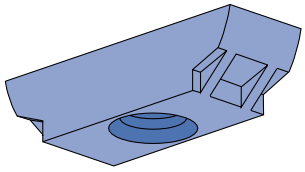
(When used for sprinkler systems only.)

Patent No. 2953874

Part Number	Size/ Thread	Max. Allowable Load Swivel**		Weight/C	
		Lbs	kN	Lbs	kg
M2708	⅜-16	75	0.3	15	6.8
M2710	½-13	180	0.8	15	6.8
M2712	⅝-11	360	1.6	20	9.1
M2723	¾-10	640	2.8	18	8.2
M2724	⅞- 9	1000	4.4	15	6.8

M2808 thru M2824

RIGID NUT FOR M26, M29, M30, AND M31 INSERT



Finish: Cadmium.

(When used for sprinkler systems only.)

Part Number	Size/ Thread	Max. Allowable Load*		Weight/C	
		Lbs	kN	Lbs	kg
M2808	⅜-16	610	2.7	12	5.4
M2810	½-13	950	4.2	11	5.0
M2812	⅝-11	1500	6.7	14	6.4
M2823	¾-10	1500	6.7	13	5.9
M2824	⅞-9	1500	6.7	11	5.0

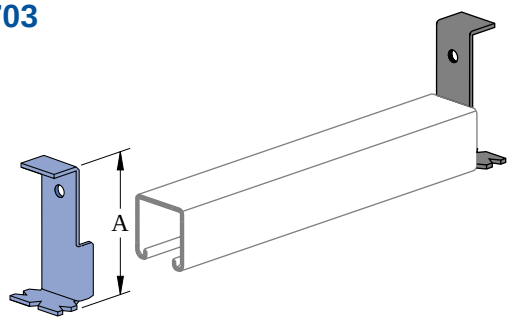
ALLOWABLE LOADS

* The Fixed Position safe load ratings are for inserts and nut only and are based on the minimum of the following two conditions.
  1. Load carrying capacities of threaded hanger rod as listed in the American Standard Code for Pressure Piping, 1967.
  2. Laboratory tests of ultimate strength in any fixed rigid position with a safety factor of 5.

** The Swivel Action safe load ratings assures the swivel movement of the nut before the hanger is subjected to a severe bending stress, in conformance with the American Standard Code for Pressure Piping, 1967.

P1703
P1704
P3704
P4703

END CAP ANCHORS

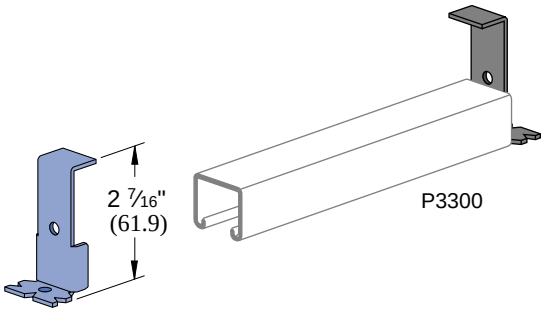


Material: 12 Gage.

Part Number	Channel	"A"		Weight/C	
		In	mm	Lbs	kg
P1703	P1000	2 13/32	61.1	30	13.6
P1704	P1000	3 17/32	89.7	37	16.8
P3704	P3000	3	76.2	20	9.1
P4703	P4000	2⅜	60.3	27	12.2

P3703

END CAP ANCHORS

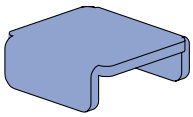


Material: 12 Gage.

Wt/C 17 Lbs (7.7 kg)

P2407
P3280
P3380

SINGLE PIECE END CAPS

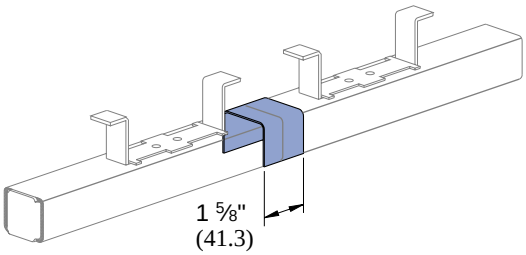


Material: 14 Gage.

Part Number	Channel	Weight/C	
		Lbs	kg
P2407	P1000	10	4.5
P3280	P3000	8	3.6
P3380	P3300	5	2.3

P3663
P4663

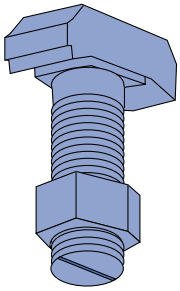
JOINT COVERS

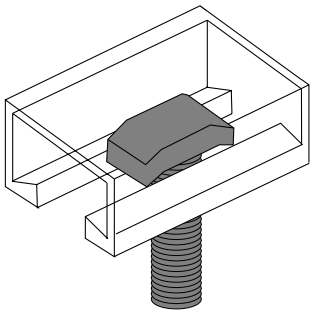


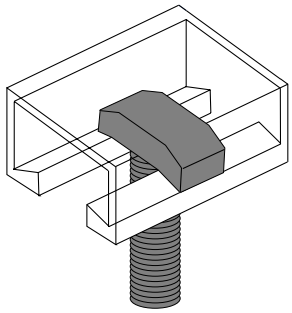
Material: 16 Gage.

Part Number	Use With Insert Series	Weight/C	
		Lbs	kg
P3663	P3270	10	4.5
P4663	P3370 P4270	6	2.7

TEE-HEAD BOLTS





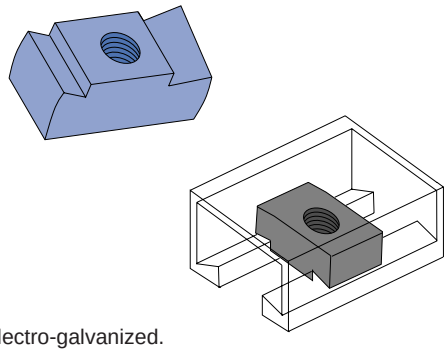


T-head bolts can be inserted anywhere along the channel and turned 90° to lock into postion

For Use With Insert Series	Part Number	Bolt Size (mm)	Bolt Length		Recommended Torque		Maximum Allowable Slip Load		Maximum Allowable Pull-Out*	
			mm	In	(N•m)	Ft-Lbs	kN	Lbs	kN	Lbs
P3740	40TH12125 EG	12	30	1¼	26	19	-	-	9.1	2045
	40TH12150 EG	12	40	1½	26	19	-	-	9.1	2045
	40TH12200 EG	12	50	2	26	19	-	-	9.1	2045
	40TH16125 EG	16	30	1¼	60	44	-	-	17.0	3815
	40TH16150 EG	16	40	1½	60	44	-	-	17.0	3815
	40TH16200 EG	16	50	2	60	44	-	-	17.0	3815
	41TH16150 EG†	16	40	1½	190	140	7.6	1700	41.2	9260
	41TH16231 EG†	16	60	2 5/16	190	140	7.6	1700	41.2	9260
P3760 and P3770	60TH16125 EG	16	30	1¼	60	44	-	-	17.0	3815
	60TH16150 EG	16	40	1½	60	44	-	-	17.0	3815
	60TH16200 EG	16	50	2	60	44	-	-	17.0	3815
	60TH20225 EG	20	55	2¼	119	88	-	-	26.5	5950
	61TH16231 EG†	16	60	2 5/16	190	140	7.6	1700	41.2	9260
	61TH20175 EG†	20	45	1¾	386	285	10.2	2300	64.3	14450
	61TH20231 EG†	20	60	2 5/16	386	285	10.2	2300	64.3	14450
P3780	80TH24200 HG	24	50	2	199	147	-	-	38.0	8550
	81TH24300 HG†	24	75	3	637	470	12.2	2750	92.6	20820

*These loads are based on T-Bolt capacity. For load capacity of installed concrete inserts, refer to appropriate insert load chart.
† High tensile bolts.
Note: Nuts are supplied with T-Bolts. These T-bolts and nuts are available in metric dimensions only.

INSERT NUT



For Use with Insert Series	Part Number	Thread Size/ (UNC)	Maximum Allowance Pull-out	
			Kn	Lbs
P3740	P3736	3/8	5.4	1200
	P3737	½	8.0	1800
P3760 and P3770	P3766	3/8	5.4	1200
	P3767	½	8.0	1800
P3780	P3786	½	8.0	1800
	P3787	5/8	15.1	3400

Finish: Electro-galvanized.

Page

1¼" Width Channels 181

Channel Nuts 187

End Caps & Closure Strips 189

General Fittings 190

MATERIAL

Unistrut channels are accurately and carefully cold formed to size from low-carbon strip steel.

STEEL: PLAIN

14 Gage (1.9 mm), ASTM A570 GR33
19 Gage (1.0 mm) ASTM A366

STEEL: PRE-GALVANIZED

14 Gage (1.9 mm), 19 Gage (1.0 mm) ASTM A653 GR 33

Channel nuts are manufactured from mild steel bars conforming to ASTM A576, GR 1015, and are case hardened.

Fittings are made from hot rolled, pickled and oiled steel plate or strip and conform to ASTM A570 GR 33.

Many framing channels are available in special metal on request. Consult factory for ordering information.

FINISHES

All channels and fittings are available in: Perma-Green II (GR), Pre-galvanized (PG), conforming to ASTM A653 GR 33 and plain (PL). Nuts are available in plain or electro-galvanized (EG) finish. Fittings are available in Perma-Green II or plain.

STANDARD LENGTHS

Standard lengths are 10 feet (3.05M) and 20 feet (6.10M). Tolerances are +⅛" (3.2 mm) to +½" (12.7 mm) to allow for cutting. Special lengths are available for a small cutting charge with a tolerance of ±⅛" (3.2mm).

APPLICATION

A framing system designed for medium loads, the 1¼" series is especially suitable for use in the OEM, commercial and display markets. It maintains a lightness in scale and a clean line that makes it aesthetically pleasing as well as functional.

THREADS

All threads on the nuts and bolts are Unified and American coarse screw threads.

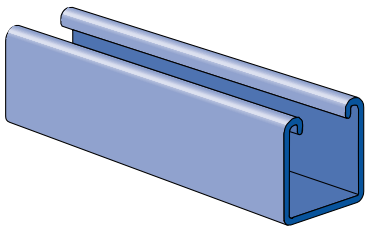
DESIGN BOLT TORQUE

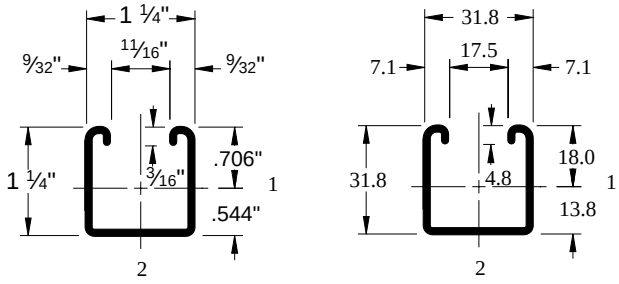
BOLT SIZE	¼" 20	5/16" 18	⅜" 16
FOOT LBS.	6	11	19
N·m	8	15	25

DIMENSIONS

Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

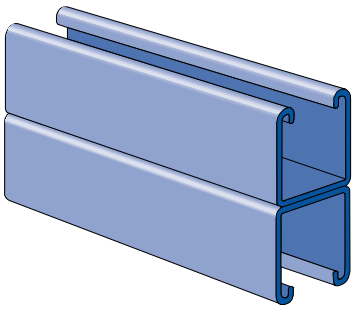
A1000

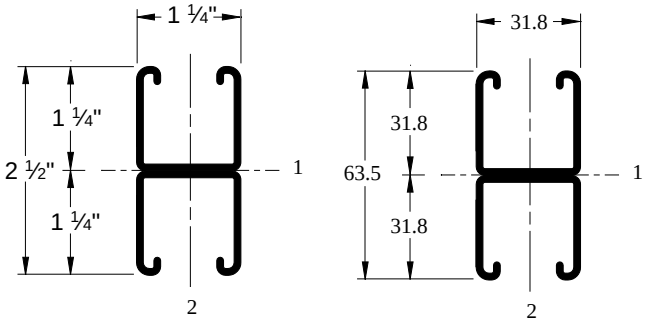




Weight: 104 Lbs/CFt (155 kg/100m)

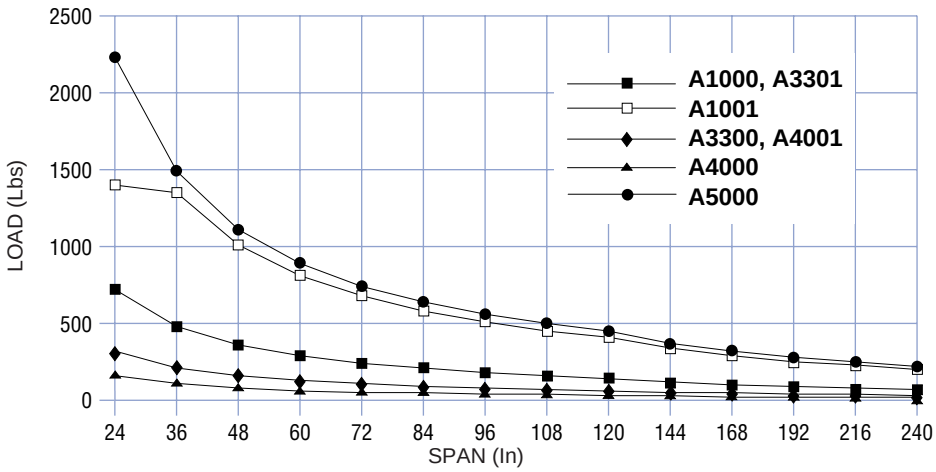
A1001





Weight: 208 Lbs/CFt (310 kg/100m)

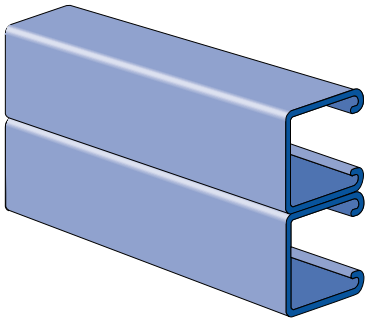
BEAM LOAD*

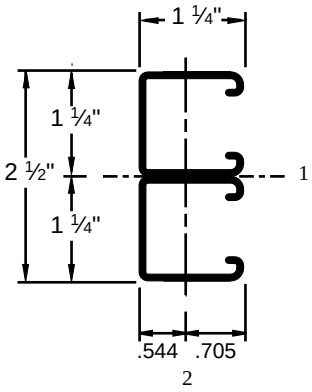


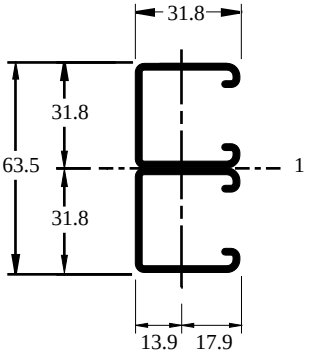
*Maximum allowable uniform load.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
A1000	1.04	1.5	2,160	240	.075	1.9	■	■	■	■	■	■		■
A1001	2.08	3.1	6,090	690	.075	1.9	■	■	■	■	■	■		

A1001 A

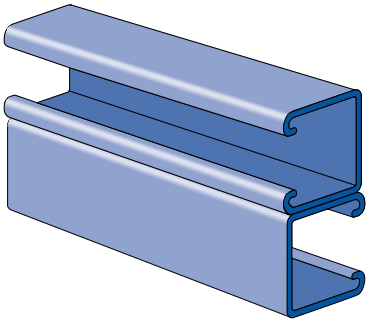


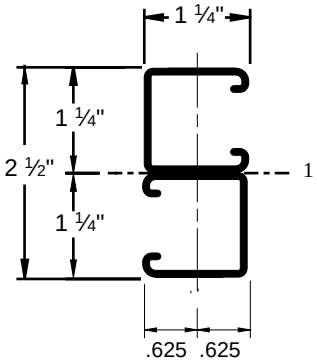


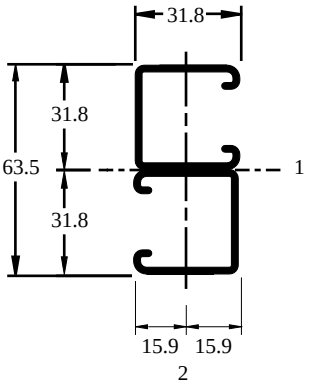


Weight: 208 Lbs/CFt (310 kg/100m)

A1001 B

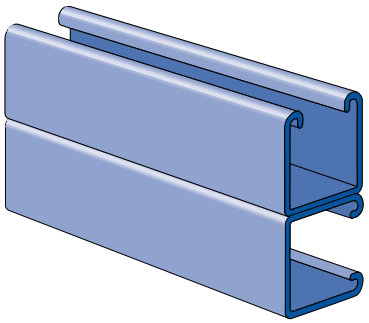


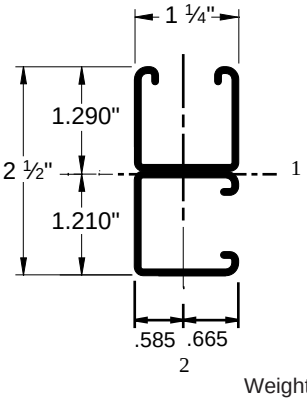


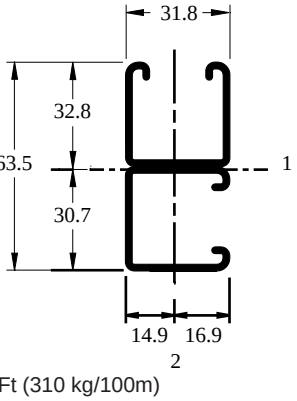


Weight: 208 Lbs/CFt (310 kg/100m)

A1001 C







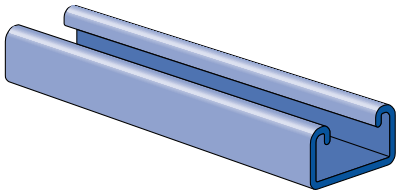
Weight: 208 Lbs/CFt (310 kg/100m)

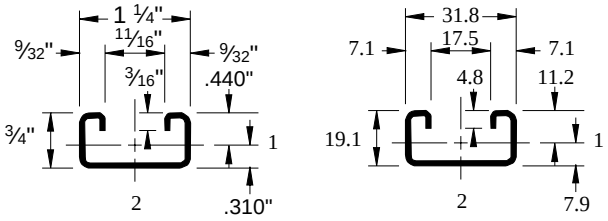
Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm	10'	20'	PL	GR	HG	PG	SS	EA
A1001 A	2.08	3.1	7,920	895	.075	1.9	■	■	■	■	■	■		
A1001 B	2.08	3.1	7,920	895	.075	1.9	■	■	■	■	■	■		
A1001 C	2.08	3.1	6,770	765	.075	1.9	■	■	■	■	■	■		

A3300, A3301, A4000, A4001 & A5000 CHANNELS

FOR 1¼" (32 MM) WIDTH SERIES CHANNEL

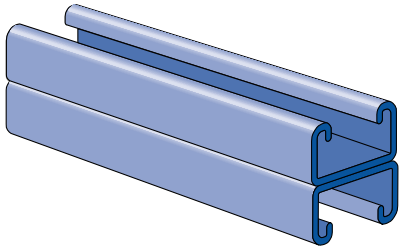
A3300

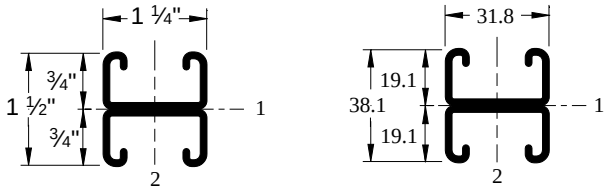




Weight: 78 Lbs/CFt (116 kg/100m)

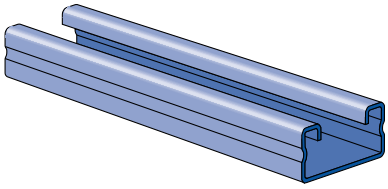
A3301

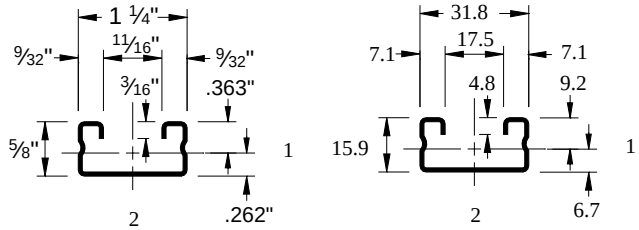




Weight: 156 Lbs/CFt (232 kg/100m)

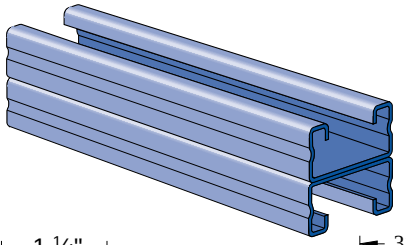
A4000

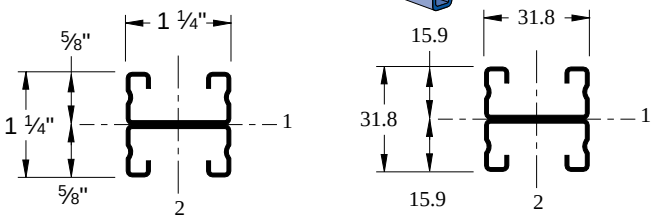




Weight: 45 Lbs/CFt (67 kg/100m)

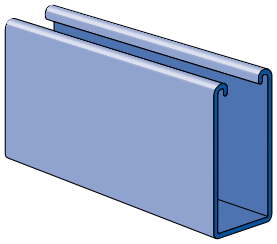
A4001

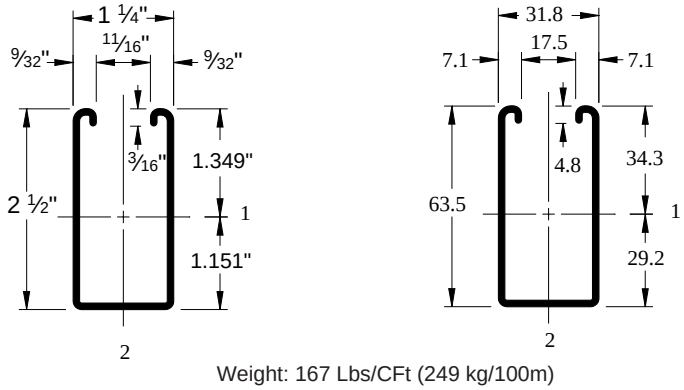




Weight: 90 Lbs/CFt (134 kg/100m)

A5000





Weight: 167 Lbs/CFt (249 kg/100m)

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths		Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm			PL	GR	HG	PG	SS	EA
A3300	.78	1.2	960	110	.075	1.9	16'		■	■	■	■		
A3301	1.56	2.3	2,590	290	.075	1.9	16'		■	■	■	■		
A4000	.45	0.7	480	50	.040	1.0	16'		■	■	■	■		■
A4001	.90	1.3	1,230	140	.040	1.0	16'		■	■	■	■		■
A5000	1.67	2.5	6,690	760	.075	1.9	10'	20'	■	■	■	■		

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
24	610	A1000	720	3.2	0.07	2	720	3.2	720	3.2	670	3.0
		A1001	1400*	6.2	0.03	1	1400*	6.2	1400*	6.2	1400*	6.2
		A3300	320	1.4	0.11	3	320	1.4	280	1.2	190	0.8
		A3301	840*	3.7	0.07	2	840*	3.7	840*	3.7	840*	3.7
		A4000	160	0.7	0.14	4	150	0.7	110	0.5	80	0.4
		A4001	330*	1.5	0.06	2	330*	1.5	330*	1.5	330*	1.5
		A5000	2230	9.9	0.04	1	2230	9.9	2230	9.9	2230	9.9
36	914	A1000	480	2.1	0.16	4	480	2.1	440	2.0	300	1.3
		A1001	1350	6.0	0.09	2	1350	6.0	1350	6.0	1350	6.0
		A3300	210	0.9	0.25	6	170	0.8	120	0.5	80	0.4
		A3301	580	2.6	0.15	4	580	2.6	570	2.5	380	1.7
		A4000	110	0.5	0.32	8	70	0.3	50	0.2	30	0.1
		A4001	270	1.2	0.18	5	270	1.2	230	1.0	150	0.7
		A5000	1490	6.6	0.09	2	1490	6.6	1490	6.6	1490	6.6
48	1219	A1000	360	1.6	0.29	7	330	1.5	250	1.1	170	0.8
		A1001	1010	4.5	0.16	4	1010	4.5	1010	4.5	830	3.7
		A3300	160	0.7	0.46	12	90	0.4	70	0.3	50	0.2
		A3301	430	1.9	0.27	7	430	1.9	320	1.4	210	0.9
		A4000	80	0.4	0.56	14	40	0.2	30	0.1	20	0.1
		A4001	210	0.9	0.33	8	170	0.8	130	0.6	80	0.4
		A5000	1110	4.9	0.15	4	1110	4.9	1110	4.9	980	4.4
60	1524	A1000	290	1.3	0.45	12	210	0.9	160	0.7	110	0.5
		A1001	810	3.6	0.25	6	810	3.6	790	3.5	530	2.4
		A3300	130	0.6	0.73	19	60	0.3	40	0.2	30	0.1
		A3301	350	1.6	0.43	11	270	1.2	200	0.9	140	0.6
		A4001	160	0.7	0.49	12	110	0.5	80	0.4	50	0.2
		A5000	890	4.0	0.24	6	890	4.0	890	4.0	630	2.8
72	1829	A1000	240	1.1	0.65	16	150	0.7	110	0.5	70	0.3
		A1001	680	3.0	0.37	9	680	3.0	550	2.4	370	1.6
		A3301	290	1.3	0.61	16	190	0.8	140	0.6	90	0.4
		A4001	140	0.6	0.74	19	80	0.4	60	0.3	40	0.2
		A5000	740	3.3	0.34	9	740	3.3	650	2.9	440	2.0
84	2134	A1000	210	0.9	0.90	23	110	0.5	80	0.4	50	0.2
		A1001	580	2.6	0.50	13	540	2.4	410	1.8	270	1.2
		A3301	250	1.1	0.84	21	140	0.6	100	0.4	70	0.3
		A4001	120	0.5	1.01	26	60	0.3	40	0.2	30	0.1
		A5000	640	2.8	0.47	12	640	2.8	480	2.1	320	1.4
96	2438	A1000	180	0.8	1.15	29	80	0.4	60	0.3	40	0.2
		A1001	510	2.3	0.66	17	410	1.8	310	1.4	210	0.9
		A3301	220	1.0	1.10	28	110	0.5	80	0.4	50	0.2
		A5000	560	2.5	0.61	15	490	2.2	370	1.6	250	1.1
108	2743	A1000	160	0.7	1.46	37	70	0.3	50	0.2	30	0.1
		A1001	450	2.0	0.83	21	330	1.5	250	1.1	160	0.7
		A5000	500	2.2	0.77	20	390	1.7	290	1.3	190	0.8
120	3048	A1001	410	1.8	1.03	26	260	1.2	200	0.9	130	0.6
		A5000	450	2.0	0.96	24	310	1.4	240	1.1	160	0.7

*Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
24	610	A1000	1790	8.0	4890	21.8	4800	21.4	4630	20.6	4430	19.7
		A1001	3450	15.3	12890	57.3	12650	56.3	12260	54.5	11780	52.4
		A3300	1020	4.5	2330	10.4	2270	10.1	2190	9.7	2080	9.3
		A3301	2380	10.6	9540	42.4	9270	41.2	8830	39.3	8280	36.8
		A4000	610	2.7	1490	6.6	1450	6.4	1400	6.2	1280	5.7
		A4001	1290	5.7	4980	22.2	4790	21.3	4470	19.9	4080	18.1
		A5000	2650	11.8	5970	26.6	5830	25.9	5580	24.8	5280	23.5
36	914	A1000	1550	6.9	3980	17.7	3760	16.7	3380	15.0	2950	13.1
		A1001	3300	14.7	12310	54.8	11780	52.4	10910	48.5	9840	43.8
		A3300	640	2.8	1030	4.6	1010	4.5	970	4.3	930	4.1
		A3301	2160	9.6	8890	39.5	8280	36.8	7280	32.4	6050	26.9
		A4000	380	1.7	670	3.0	650	2.9	620	2.8	570	2.5
		A4001	1140	5.1	4510	20.1	4080	18.1	3360	14.9	2490	11.1
		A5000	1850	8.2	3100	13.8	3000	13.3	2840	12.6	2660	11.8
48	1219	A1000	1320	5.9	3250	14.5	2910	12.9	2460	10.9	2050	9.1
		A1001	3100	13.8	11510	51.2	10570	47.0	9010	40.1	7110	31.6
		A3300	420	1.9	580	2.6	570	2.5	550	2.4	**	**
		A3301	1910	8.5	7970	35.5	6890	30.6	5110	22.7	3550	15.8
		A4000	260	1.2	380	1.7	370	1.6	**	**	**	**
		A4001	950	4.2	3860	17.2	3090	13.7	2020	9.0	1400	6.2
		A5000	1400	6.2	2070	9.2	1980	8.8	1860	8.3	1720	7.7
60	1524	A1000	1130	5.0	2710	12.1	2340	10.4	1890	8.4	1520	6.8
		A1001	2850	12.7	10490	46.7	9010	40.1	6580	29.3	4570	20.3
		A3300	290	1.3	370	1.6	360	1.6	**	**	**	**
		A3301	1620	7.2	6790	30.2	5110	22.7	3270	14.5	2270	10.1
		A4001	770	3.4	3010	13.4	2020	9.0	1290	5.7	**	**
		A5000	1140	5.1	1580	7.0	1500	6.7	1390	6.2	1270	5.6
72	1829	A1000	980	4.4	2320	10.3	1930	8.6	1500	6.7	1170	5.2
		A1001	2550	11.3	9230	41.1	7110	31.6	4570	20.3	3170	14.1
		A3301	1340	6.0	5360	23.8	3550	15.8	2270	10.1	**	**
		A4001	620	2.8	2130	9.5	1400	6.2	**	**	**	**
		A5000	970	4.3	1310	5.8	1230	5.5	1120	5.0	1010	4.5
84	2134	A1000	850	3.8	2000	8.9	1610	7.2	1210	5.4	**	**
		A1001	2210	9.8	7740	34.4	5240	23.3	3360	14.9	2330	10.4
		A3301	1120	5.0	3950	17.6	2610	11.6	**	**	**	**
		A4001	510	2.3	1560	6.9	1030	4.6	**	**	**	**
		A5000	860	3.8	1130	5.0	1060	4.7	950	4.2	840	3.7
96	2438	A1000	740	3.3	1730	7.7	1350	6.0	**	**	**	**
		A1001	1920	8.5	6080	27.0	4020	17.9	2570	11.4	**	**
		A3301	950	4.2	3030	13.5	2000	8.9	**	**	**	**
		A5000	770	3.4	1010	4.5	930	4.1	830	3.7	**	**
108	2743	A1000	650	2.9	1500	6.7	1150	5.1	**	**	**	**
		A1001	1670	7.4	4810	21.4	3170	14.1	**	**	**	**
		A5000	710	3.2	920	4.1	840	3.7	**	**	**	**
120	3048	A1001	1470	6.5	3890	17.3	2570	11.4	**	**	**	**
		A5000	660	2.9	850	3.8	770	3.4	**	**	**	**

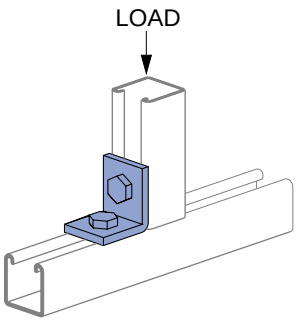
**$\frac{KL}{r} > 200$

ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
A1000	.305	1.97	.061	2.5	.086	1.41	.447	1.1	.078	3.2	.125	2.05	.506	1.3
A1001	.610	3.94	.303	12.6	.242	3.97	.705	1.8	.156	6.5	.250	4.10	.506	1.3
A3300	.230	1.48	.017	.7	.038	.62	.269	0.7	.052	2.2	.084	1.38	.477	1.2
A3301	.460	2.97	.078	3.2	.103	1.69	.411	1.0	.104	4.3	.167	2.74	.477	1.2
A4000	.123	.79	.007	.3	.019	.31	.239	0.6	.028	1.2	.045	.74	.477	1.2
A4001	.245	1.58	.031	1.3	.049	.80	.354	0.9	.056	2.3	.089	1.46	.477	1.2
A5000	.492	3.17	.359	14.9	.266	4.36	.854	2.2	.143	6.0	.229	3.75	.539	1.4

I - Moment of Inertia **S - Section Modulus** **r - Radius of Gyration**

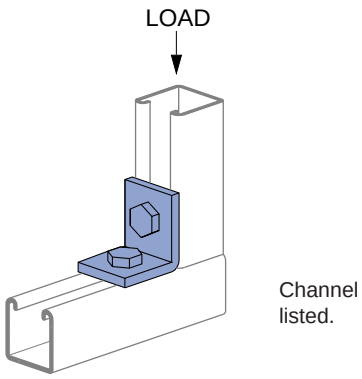
LOAD DATA FOR UNISTRUT SECTIONS SUBJECT TO CRUSHING LOADS



Load at Center of Member.

Channel	Allowable Load	
	Lbs	kN
A1000	3000	13.3
A3300	3000	13.3
A4000	1400	6.2
A5000	2500	11.1

Safety Factor of 2½



Load at End of Member.

Channel	Allowable Load	
	Lbs	kN
A1000	2000	8.9
A3300	2000	8.9
A4000	1000	4.4
A5000	1800	8.0

Safety Factor of 2½

MAXIMUM ALLOWABLE PULL-OUT AND SLIP LOADS

Nut Size/ Thread	Channel	Gage	Max.Allowable Pull-out		Resistance to Slip		Torque	
			Lbs	kN	Lbs	kN	Ft Lbs	N•m
⅜" - 16	A1000	14	900	4.0	500	2.2	19	25
5⁄16" - 18	A3300		900	4.0	500	2.2	11	15
¼" - 20	A5000		900	4.0	500	2.2	6	8
⅜" - 16	A4000	19	300	1.3	400	1.8	19	25

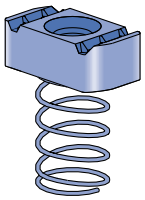
Nut design loads include a minimum safety factor of 3.

NUT SELECTION CHART

Channel Nuts Part Number	Nut Size/ Thread	Use With Channel			
		A1000	A3300	A4000	A5000
A1006-1420	¼" - 20	■			
A1007	5⁄16" - 18	■			
A1008	⅜" - 16	■			
A3006-1420	¼" - 20	■	■	■	■
A3007	5⁄16" - 18	■	■	■	■
A3008	⅜" - 16	■	■	■	■
A3016-0832	#8 - 32	■	■	■	■
A3016-1024	#10 - 24	■	■	■	■
A3016-1032	#10 - 32	■	■	■	■
A3016-1420	¼" - 20	■	■	■	■
A4006-1420	¼" - 20		■	■	
A4007	5⁄16" - 18		■	■	
A4008	⅜" - 16		■	■	
A5006-1420	¼" - 20				■
A5007	5⁄16" - 18				■
A5008	⅜" - 16				■

A1006-1420 A1007 A1008

CHANNEL NUTS WITH SPRINGS

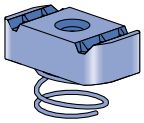


Note: Use with A1000 channel.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
A1006-1420	¼"-20	6	2.7
A1007	5/16"-18	6	2.7
A1008	⅜"-16	6	2.7

A4006-1420 A4007 A4008

CHANNEL NUTS WITH SPRINGS

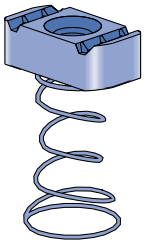


Note: Use with A3300 & A4000 channels.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
A4006-1420	¼"-20	5	2.3
A4007	5/16"-18	5	2.3
A4008	⅜"-16	5	2.3

A5006-1420 A5007 A5008

CHANNEL NUTS WITH SPRINGS

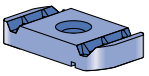


Note: Use with A5000 channel.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
A5006-1420	¼"-20	6	2.7
A5007	5/16"-18	6	2.7
A5008	⅜"-16	6	2.7

A3006-1420 A3007 A3008

CHANNEL NUTS WITHOUT SPRINGS

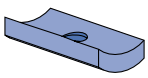


Note: Use with A1000, A3300, A4000 & A5000 channels.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
A3006-1420	¼"-20	5	2.3
A3007	5/16"-18	5	2.3
A3008	⅜"-16	5	2.3

A3016-0832 thru A3016-1420

CHANNEL NUTS WITHOUT SPRINGS



Note: Use with A1000, A3300, A4000 & A5000 channels.

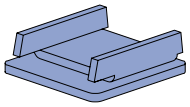
Part Number	Thread Size	Weight per 100	
		Lbs	kg
A3016-0832	#8 - 32	1	0.5
A3016-1024	#10 - 24	1	0.5
A3016-1032	#10 - 32	1	0.5
A3016-1420	¼" - 20	1	0.5

CHANNEL END CAPS & CLOSURE STRIP

FOR 1¼" (32 MM) WIDTH SERIES CHANNEL

A1280

END CAP



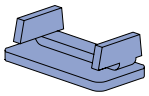
Material: .075" (1.9)

Note: Use with A1000 channel.

Wt/C 7 Lbs (3.2 kg)

A4280

END CAP



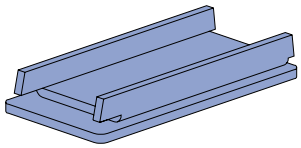
Material: .075" (1.9)

Note: Use with A4000 channel.

Wt/C 3 Lbs (1.4 kg)

A5280

END CAP



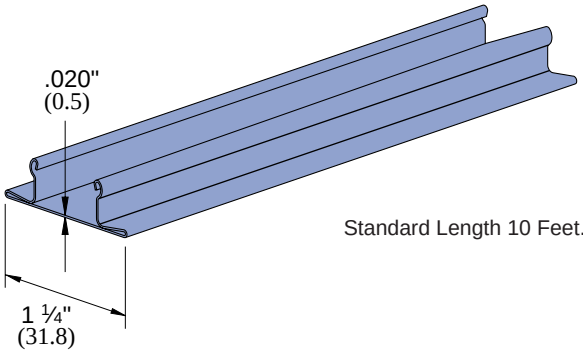
Material: .075" (1.9)

Note: Use with A5000 channel.

Wt/C 14 Lbs (6.4 kg)

A1184

CLOSURE STRIP

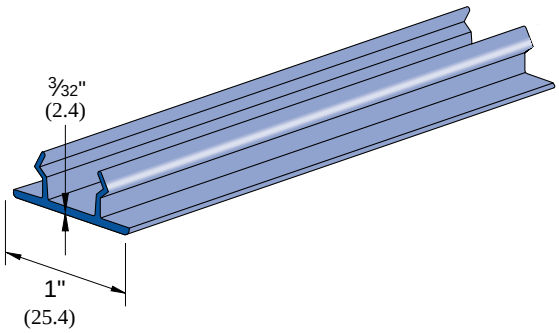


Standard Length 10 Feet.

Wt/C Ft 21 Lbs (31.3 kg/100M)

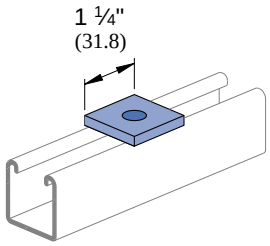
A1184P

CLOSURE STRIP



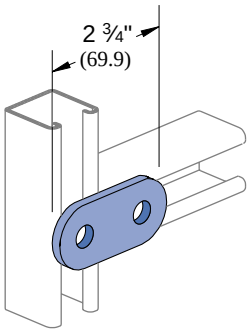
Wt/C Ft 21 Lbs (31.3 kg/100M)

A1063



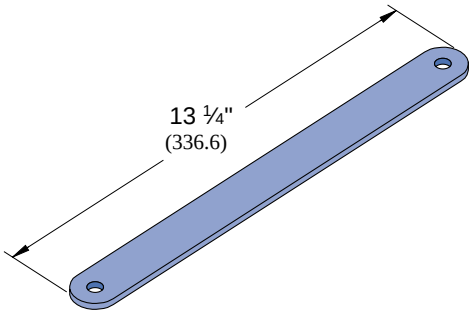
Wt/C 8 Lbs (3.6 kg)

A1065



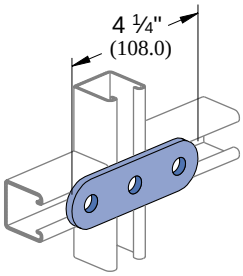
Wt/C 17 Lbs (7.7 kg)

A1191



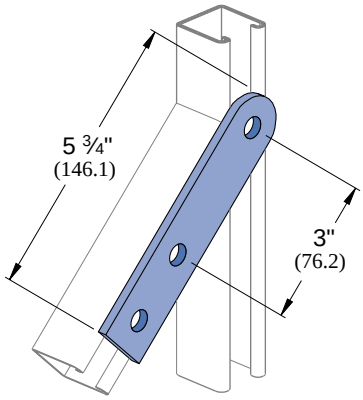
Wt/C 87 Lbs (39.5 kg)

A1066



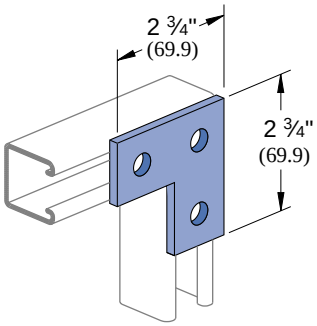
Wt/C 26 Lbs (11.8 kg)

A2324



Wt/C 39 Lbs (17.7 kg)

A1036



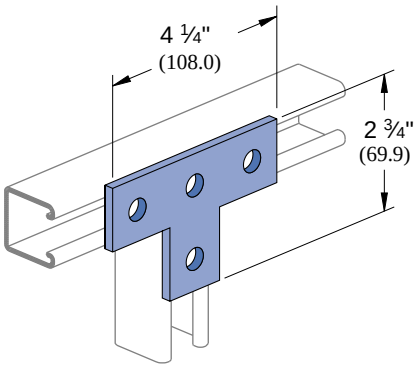
Wt/C 27 Lbs (12.2 kg)

Hole Size	Hole Spacing	Width	Thickness
13/32" Diameter 10.3 mm	5/8" (15.9 mm) From End 1½" (38.1 mm) On Center	1¼" 31.8 mm	3/16" 4.8 mm

FLAT PLATE & NINETY DEGREE FITTINGS

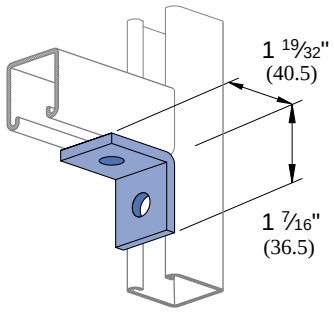
FOR 1¼" (32 MM) WIDTH SERIES CHANNEL

A1031



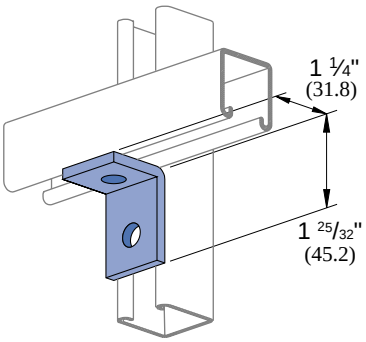
Wt/C 34 Lbs (15.4 kg)

A1026



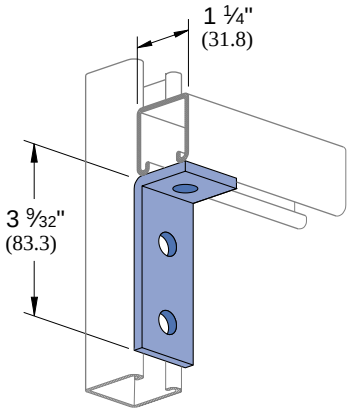
Wt/C 17 Lbs (7.7 kg)

A1068



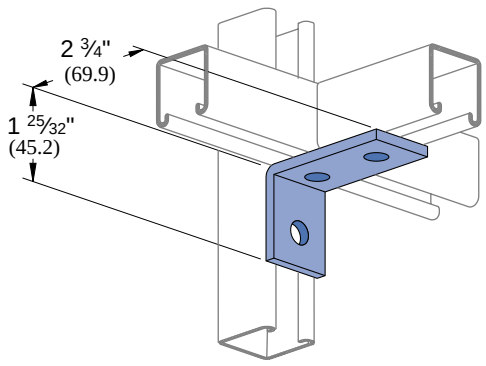
Wt/C 17 Lbs (7.7 kg)

A1326



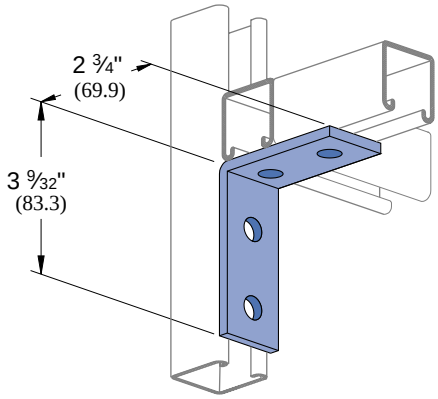
Wt/C 27 Lbs (12.2 kg)

A1458



Wt/C 27 Lbs (12.2 kg)

A1325

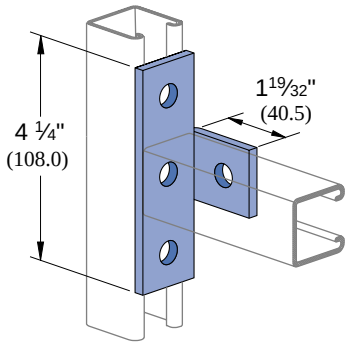


Wt/C 38 Lbs (17.2 kg)

Hole Size	Hole Spacing	Width	Thickness
13/32" Diameter 10.3 mm	5/8" (15.9 mm) From End 1½" (38.1 mm) On Center	1¼" 31.8 mm	3/16" 4.8 mm

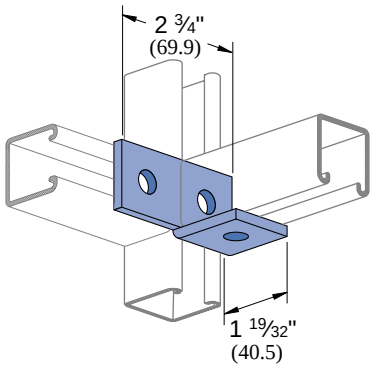
NINETY DEGREE FITTINGS
FOR 1¼" (32 MM) WIDTH SERIES CHANNEL

A1033



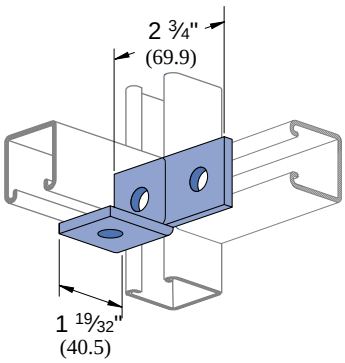
Wt/C 34 Lbs (15.4 kg)

A1037



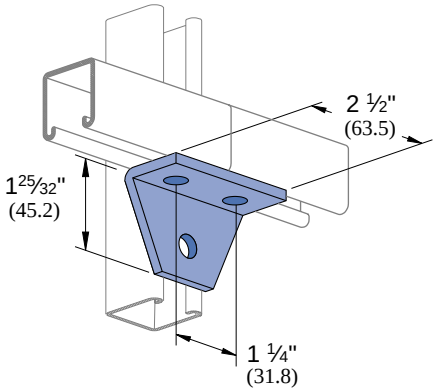
Wt/C 30 Lbs (13.6 kg)

A1038



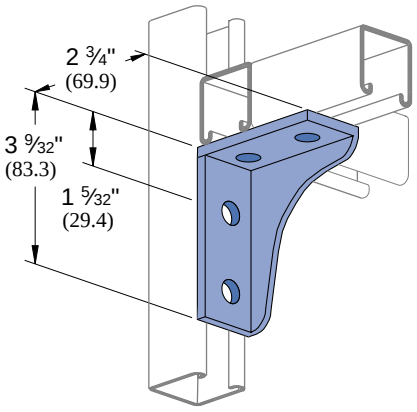
Wt/C 30 Lbs (13.6 kg)

A1357



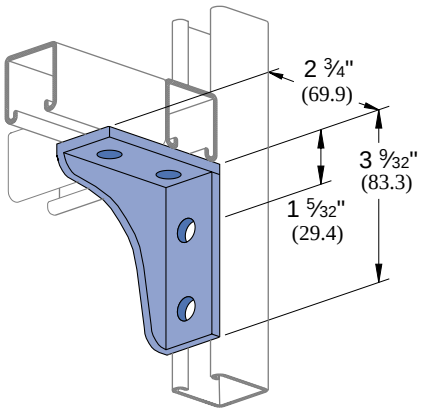
Wt/C 30 Lbs (13.6 kg)

A1331



Wt/C 75 Lbs (34.0 kg)

A1332



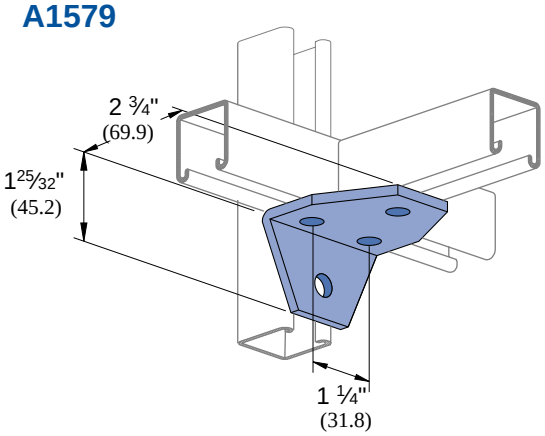
Wt/C 75 Lbs (34.0 kg)

Hole Size	Hole Spacing	Width	Thickness
13/32" Diameter 10.3 mm	5/8" (15.9 mm) From End 1½"" (38.1 mm) On Center	1¼" 31.8 mm	3/16" 4.8 mm

NINETY DEGREE & "Z" SHAPE FITTINGS

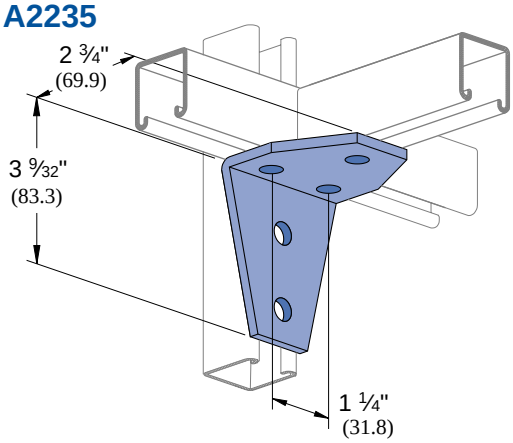
FOR 1¼" (32 MM) WIDTH SERIES CHANNEL

A1579



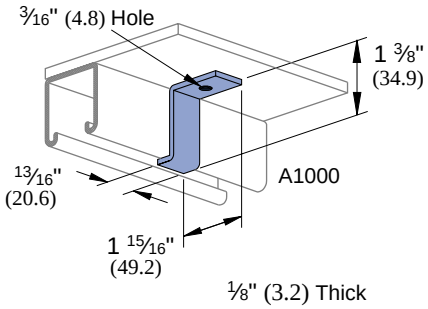
Wt/C 44 Lbs (20.0 kg)

A2235



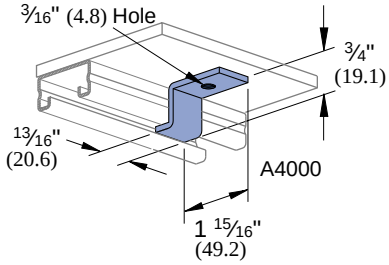
Wt/C 59 Lbs (26.8 kg)

A2120



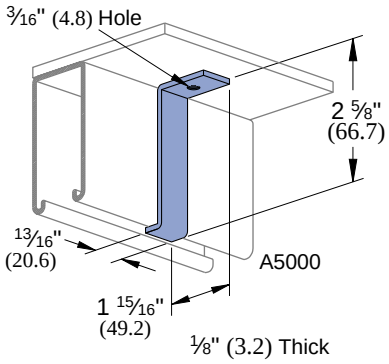
Wt/C 9 Lbs (4.1 kg)

A4120



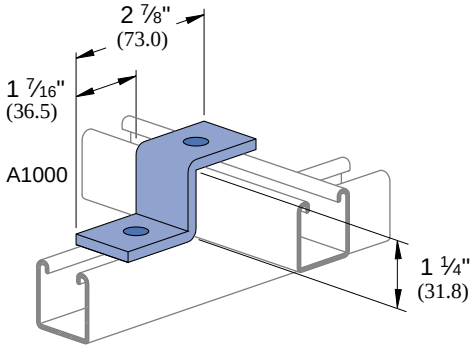
Wt/C 7 Lbs (3.2 kg)

A5120



Wt/C 13 Lbs (5.9 kg)

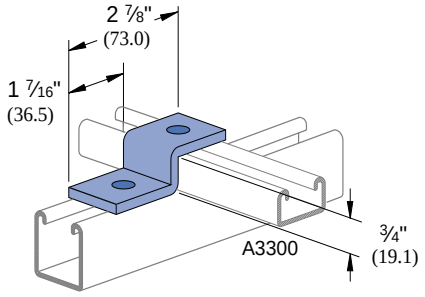
A1045



Wt/C 25 Lbs (11.3 kg)

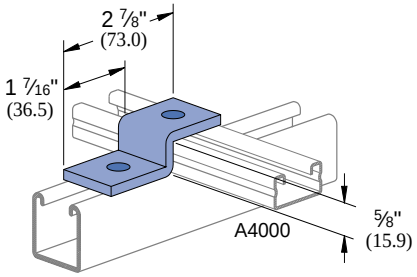
Hole Size	Hole Spacing	Width	Thickness
13⁄32" Diameter 10.3 mm	5⁄8" (15.9 mm) From End 1½" (38.1 mm) On Center	1¼" 31.8 mm	3⁄16" 4.8 mm

A3345



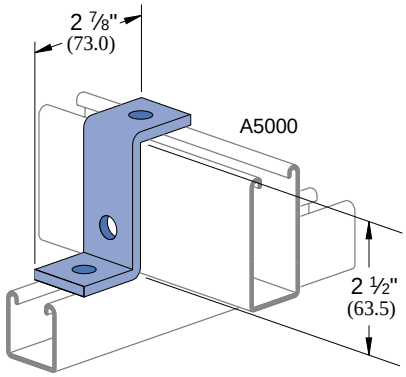
Wt/C 23 Lbs (10.4 kg)

A4045



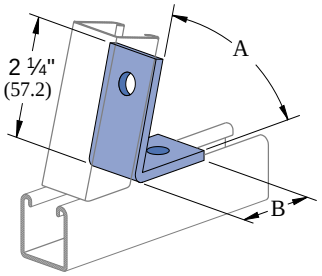
Wt/C 21 Lbs (9.5 kg)

A5045



Wt/C 33 Lbs (15.0 kg)

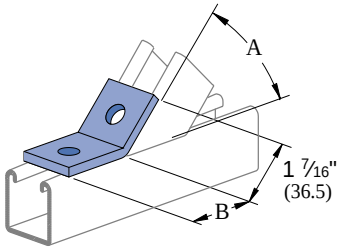
A2109
A2110
A2111



Part Number	"A"		"B"	
	Degree	rad	In	mm
A2109	52½	.29	1 25/32	45.2
A2110	45	.25	1¾	44.5
A2111	37½	.21	1¾	44.5

Wt/C 23 Lbs (10.4 kg)

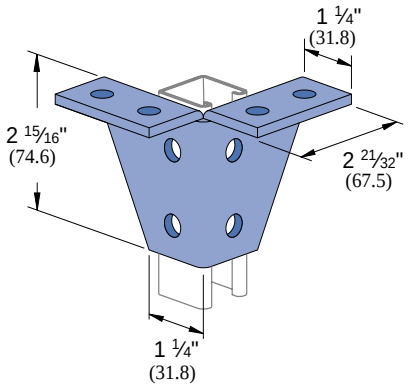
A2125
A2126
A2127



Part Number	"A"		"B"	
	Degree	rad	In	mm
A2125	52½	.29	1¼	31.8
A2126	45	.25	1¼	31.8
A2127	37½	.21	1 9/32	32.5

Wt/C 17 Lbs (7.7 kg)

A2084

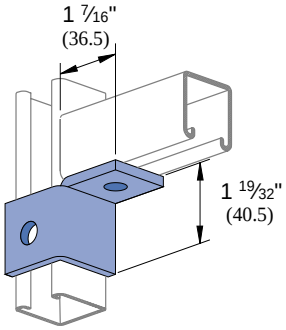


Wt/C 90 Lbs (40.8 kg)

Hole Size	Hole Spacing	Width	Thickness
13/32" Diameter 10.3 mm	5/8" (15.9 mm) From End 1½" (38.1 mm) On Center	1¼" 31.8 mm	3/16" 4.8mm

WING & "U" SHAPE FITTINGS
FOR 1¼" (32 MM) WIDTH SERIES CHANNEL

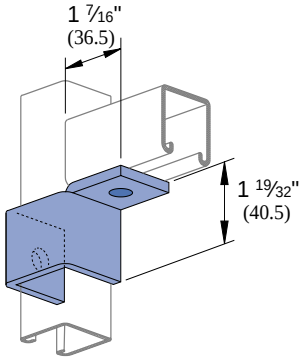
A2341 R-L



R-As shown
L-Opposite hand

Wt/C 26 Lbs (11.8 kg)

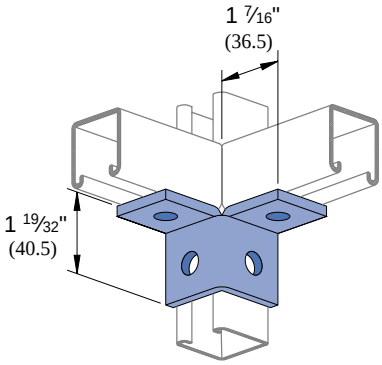
A2472 R-L



R-As shown
L-Opposite hand

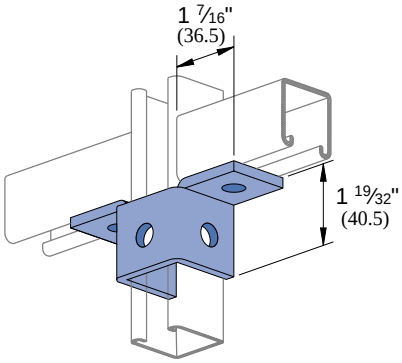
Wt/C 33 Lbs (15.0 kg)

A2223



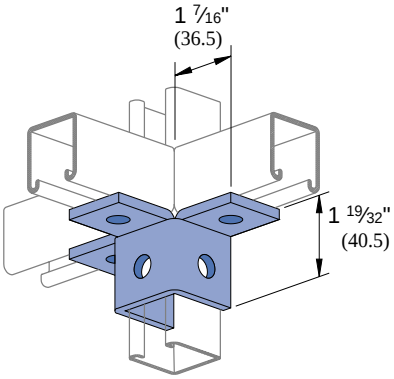
Wt/C 34 Lbs (15.4 kg)

A2345



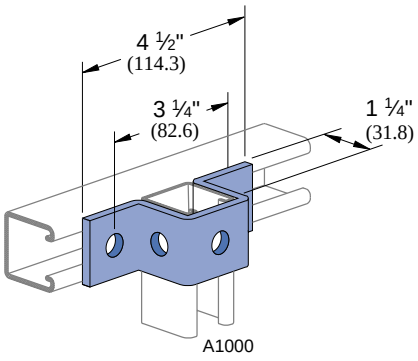
Wt/C 41 Lbs (18.6 kg)

A2227



Wt/C 52 Lbs (23.6 kg)

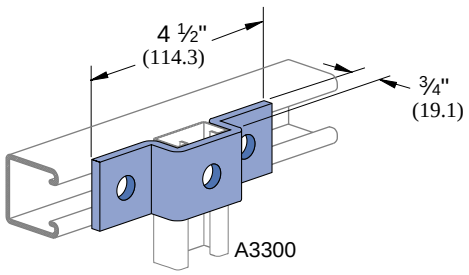
A1047



Wt/C 43 Lbs (19.5 kg)

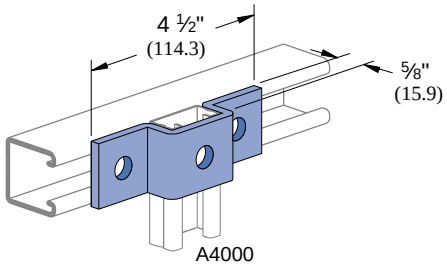
Hole Size	Hole Spacing	Width	Thickness
13⁄32" Diameter 10.3 mm	5⁄8" (15.9 mm) From End 1½"" (38.1 mm) On Center	1¼" 31.8 mm	3⁄16" 4.8 mm

A3347



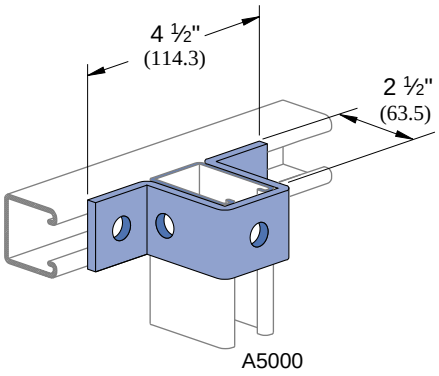
Wt/C 37 Lbs (16.8 kg)

A4047



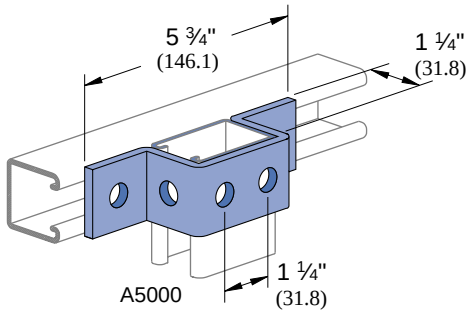
Wt/C 34 Lbs (15.4 kg)

A5047



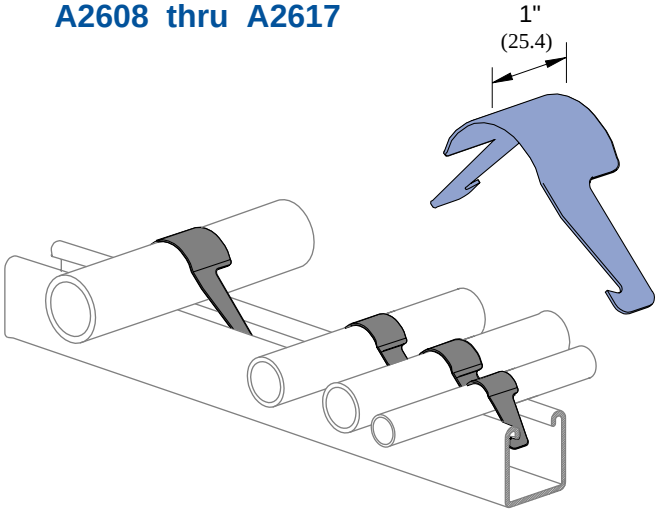
Wt/C 58 Lbs (26.3 kg)

A5043



Wt/C 50 Lbs (22.7 kg)

A2608 thru A2617



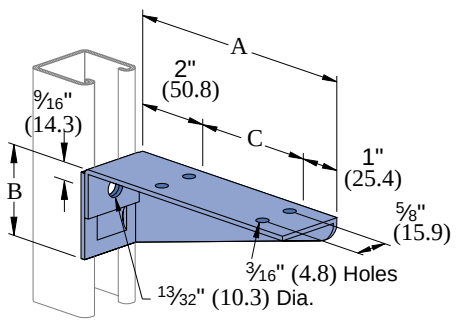
UNI-CLIP®

Part Number	Pipe Size		O.D. Size		Weight/C	
	In	mm	In	mm	Lbs	kg
A2608	¼	6.4	0.540	13.7	0.6	0.3
A2609	⅜	9.5	0.675	17.1	0.7	0.3
A2611	½	12.7	0.840	21.3	1.0	0.5
A2612	¾	19.1	1.050	26.7	1.4	0.6
A2613	1	25.4	1.315	33.4	2.0	0.9
A2614	1¼	31.8	1.660	42.2	2.4	1.1
A2615	1½	38.1	1.900	48.3	3.2	1.5
A2617	2	50.8	2.375	60.3	4.7	2.1

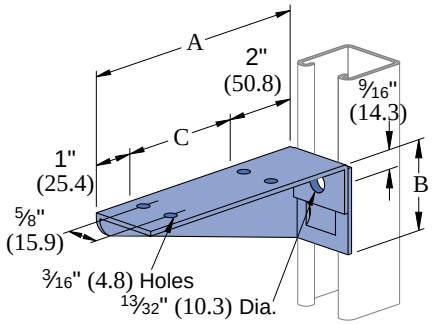
Stainless steel, Type 301.
Patent No. 2863625.

Hole Size	Hole Spacing	Width	Thickness
13/32" Diameter 10.3 mm	⅝" (15.9 mm) From End 1½" (38.1 mm) On Center	1¼" 31.8 mm	3/16" 4.8 mm

A2491 R-L
A2492 R-L
A2493 R-L



Right



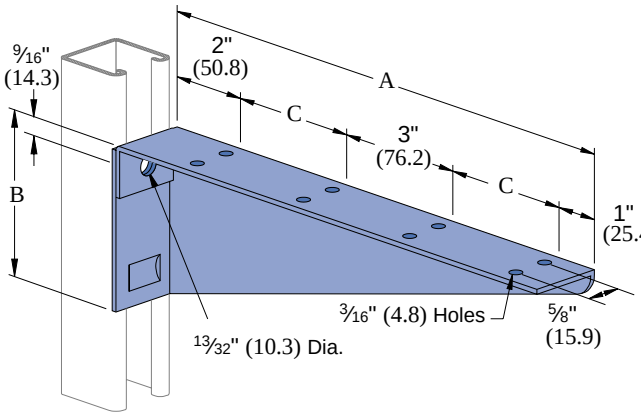
Left

Material: 14 Gage Steel.

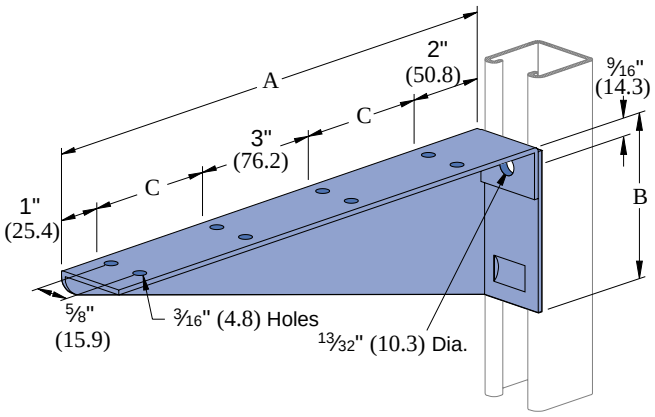
Design Uniform Load (Channel Upright Listed)
A1000 200 Lbs (.9 kN)
A4000 130 Lbs (.6 kN)
Safety Factor of 2½

Part Number	"A"		"B"		"C"		Weight/C	
	In	mm	In	mm	In	mm	Lbs	kg
A2491 R-L	6	152.4	2	50.8	3	76.2	38	17.2
A2492 R-L	8	203.2	2½	63.5	5	127.0	56	25.4
A2493 R-L	10	254.0	3	76.2	7	177.8	73	33.1

A2494 R-L thru A2497 R-L



Right



Left

Material: 14 Gage Steel.

Design Uniform Load (Channel Upright Listed)
A1000 200 Lbs (.9 kN)
A4000 130 Lbs (.6 kN)
Safety Factor of 2½

Part Number	"A"		"B"		"C"		Weight/C	
	In	mm	In	mm	In	mm	Lbs	kg
A2494 R-L	12	304.8	3½	88.9	3	76.2	94	42.6
A2495 R-L	14	355.6	4	101.6	4	101.6	105	47.6
A2496 R-L	16	406.4	4½	114.3	5	127.0	145	65.8
A2497 R-L	18	457.2	5	127.0	6	152.4	175	79.4

	Page
13⁄16" Width Channel Series	199
Channel Nuts	203
End Caps & Closure Strip	203
General Fittings	204

MATERIAL
Channels are accurately and carefully cold formed to size from low-carbon strip steel.

STEEL: PLAIN
19 Gage (1.0 mm) ASTM A366

STEEL: PRE-GALVANIZED
19 Gage (1.0 mm)
ASTM A653 GR 33

All nuts are manufactured from mild steel bars conforming to ASTM A570 GR 33.

Fittings are made from hot rolled, pickled and oiled steel plate or strip and conform to ASTM A570 GR 33.

FINISHES
Channels are available in: Perma-Green II (GR), electro-galvanized (EG), with zinc electrolytically to commercial standards ASTM B633 Type III SC1; Pre-galvanized (PG), conforming to ASTM A653 GR 33 and plain (PL). Nuts are available in plain or electro-galvanized (EG) finish. Fittings are available in Perma-Green II, electrogalvanized (EG) or plain.

STANDARD LENGTHS
P-6000 – 16 Feet (4.88m)
P-7000 – 10 Feet (3.05m)
Tolerances are +⅛" (3.2 mm) to +½" (12.7 mm) to allow for cutting. Special lengths are available for a small cutting charge with a tolerance of ±⅛" (3.2mm).

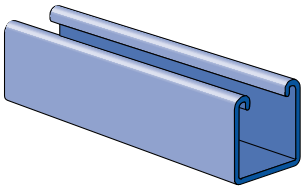
APPLICATION
A unique half-size reduction of the 1⅝" channel width series, this smaller channel size can be used to carry light loads economically in applications such as instrumentation, retail displays and light-duty laboratory supports. It also provides the flexibility found in all Unistrut® framing systems.

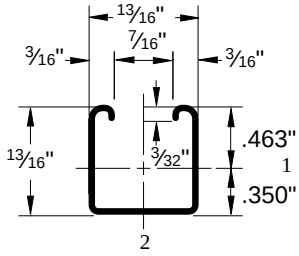
DESIGN BOLT TORQUE

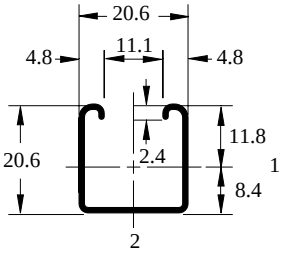
BOLT SIZE	FOOT LBS.	N·m
¼" 20	6	8

DIMENSIONS
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

P6000

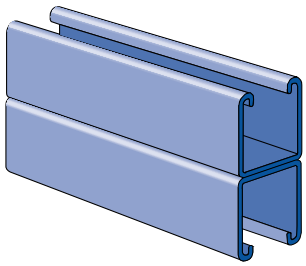


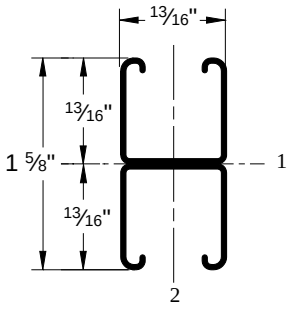


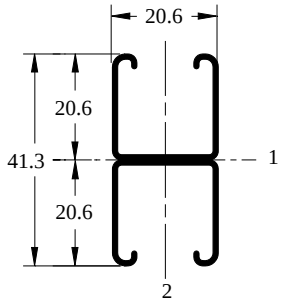


Weight: 37 Lbs/C Ft (55 kg/100m)

P6001

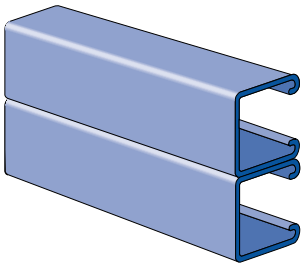




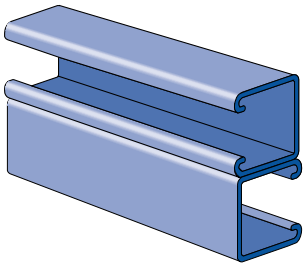


Weight: 73 Lbs/C Ft (109 kg/100m)

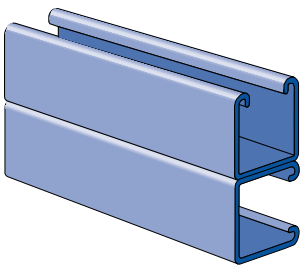
P6001 A



P6001 B

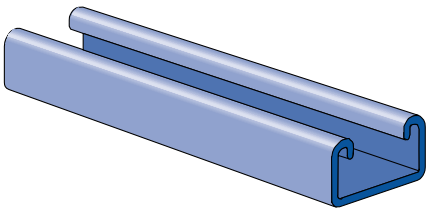


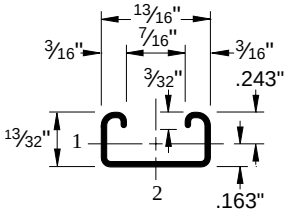
P6001 C

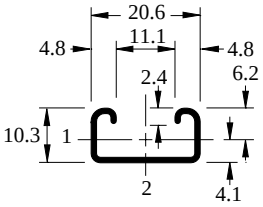


Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths	Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm		PL	GR	HG	PG	SS	EA
P6000	.37	.55	500	60	.040	1.0	16'	■	■		■	■	■
P6001	.73	1.09	1,360	150	.040	1.0	16'	■	■		■		■

P7000

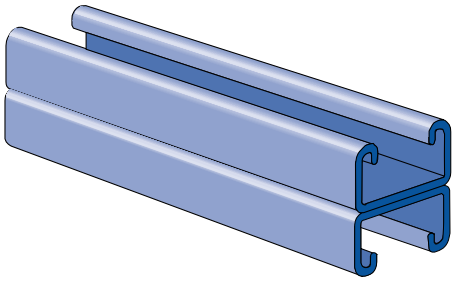


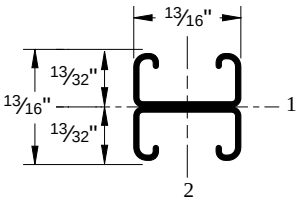


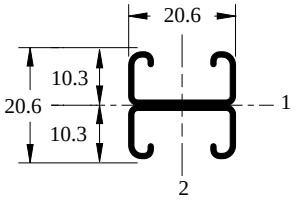


Weight: 26 Lbs/C Ft (39 kg/100m)

P7001

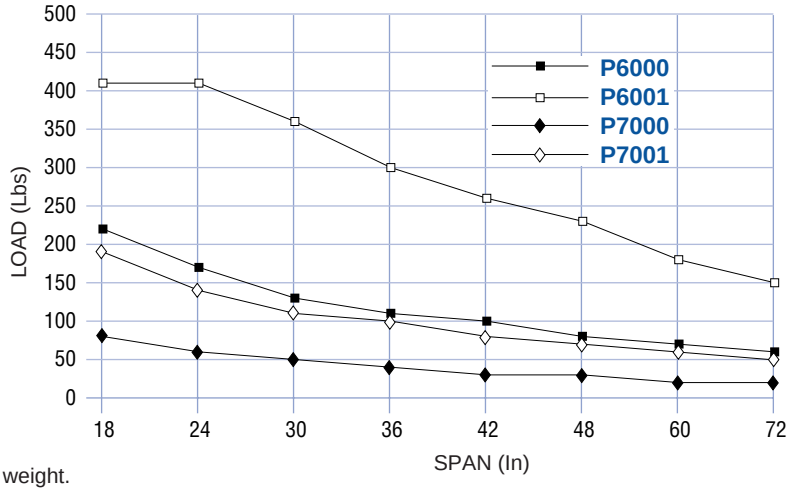






Weight: 52 Lbs/C Ft (77 kg/100m)

LOAD GRAPH*



* Maximum allowable uniform load weight.

Channel	Weight		Allowable Moment		Material Thickness		Standard Lengths	Finishes				Other Materials	
	Lbs/Ft	kg/m	In-Lb	N•m	In	mm		PL	GR	HG	PG	SS	EA
P7000	.260	.39	180	20	.040	1.0	10'	■	■		■	■	■
P7001	.520	.77	430	50	.040	1.0	10'	■	■		■		■

BEAM LOADING DATA

Span		Channel	Max. Allowable Uniform Load		Deflection at Uniform Load		Uniform Loading at Deflections					
							Span/180		Span/240		Span/360	
In	mm		Lbs	kN	In	mm	Lbs	kN	Lbs	kN	Lbs	kN
18	457	P6000	220	1.0	0.06	2	220	1.0	220	1.0	170	0.8
		P6001	410*	1.8	0.02	1	410	1.8	410	1.8	410	1.8
		P7000	80	0.4	0.10	3	80	0.4	60	0.3	40	0.2
		P7001	190	0.8	0.07	2	190	0.8	190	0.8	140	0.6
24	610	P6000	170	0.8	0.12	3	170	0.8	150	0.7	100	0.4
		P6001	410*	1.8	0.06	1	410	1.8	410	1.8	410	1.8
		P7000	60	0.3	0.18	5	40	0.2	30	0.1	20	0.1
		P7001	140	0.6	0.12	3	140	0.6	110	0.5	80	0.4
30	762	P6000	130	0.6	0.17	4	130	0.6	90	0.4	60	0.3
		P6001	360	1.6	0.10	2	360	1.6	360	1.6	310	1.4
		P7001	110	0.5	0.19	5	100	0.4	70	0.3	50	0.2
36	914	P6000	110	0.5	0.25	6	90	0.4	70	0.3	40	0.2
		P6001	300	1.3	0.14	4	300	1.3	300	1.3	210	0.9
		P7001	100	0.4	0.29	7	70	0.3	50	0.2	30	0.1
42	1067	P6000	100	0.4	0.36	9	60	0.3	50	0.2	30	0.1
		P6001	260	1.2	0.19	5	260	1.2	240	1.1	160	0.7
		P7001	80	0.4	0.37	9	50	0.2	40	0.2	20	0.1
48	1219	P6000	80	0.4	0.43	11	50	0.2	40	0.2	20	0.1
		P6001	230	1.0	0.26	6	230	1.0	180	0.8	120	0.5
		P7001	70	0.3	0.49	12	40	0.2	30	0.1	20	0.1
60	1524	P6000	70	0.3	0.74	19	30	0.1	20	0.1	20	0.1
		P6001	180	0.8	0.39	10	150	0.7	120	0.5	80	0.4
72	1829	P6001	150	0.7	0.56	14	110	0.5	80	0.4	50	0.2

* Load limited by spot weld shear.

Notes:

1. Above loads include the weight of the member. This weight must be deducted to arrive at the net allowable load the beam will support.
2. Long span beams should be supported in such a manner as to prevent rotation and twist.
3. Allowable uniformly distributed loads are listed for various simple spans, that is, a beam on two supports. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.

ELEMENTS OF SECTION

Channel	Areas of Section		Axis 1 - 1						Axis 2 - 2					
			I		S		r		I		S		r	
	In^2	cm^2	In^4	cm^4	In^3	cm^3	In	cm	In^4	cm^4	In^3	cm^3	In	cm
P6000	.105	.68	.009	.4	.020	.33	.294	.75	.012	.5	.029	.48	.333	.85
P6001	.211	1.36	.044	1.8	.054	.88	.457	1.16	.023	1.0	.057	.93	.333	.85
P7000	.073	.47	.002	.1	.007	.11	.148	.38	.007	.3	.017	.28	.306	.78
P7001	.146	.94	.007	.3	.017	.28	.220	.56	.014	.6	.034	.56	.306	.78

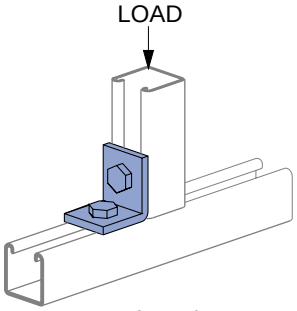
I - Moment of Inertia S - Section Modulus r - Radius of Gyration

COLUMN LOADING DATA

Unbraced Height		Channel	Max. Allowable Load at Slot Face		Maximum Column Load Applied at C.G.							
					K = .65		K = .80		K = 1.0		K = 1.2	
In	mm		Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN	Lbs	kN
18	457	P6000	520	2.3	1120	5.0	1090	4.8	1030	4.6	960	4.3
		P6001	1170	5.2	4410	19.6	4300	19.1	4130	18.4	3920	17.4
		P7000	280	1.2	530	2.4	520	2.3	500	2.2	480	2.1
		P7001	680	3.0	2870	12.8	2700	12.0	2420	10.8	2080	9.3
24	610	P6000	380	1.7	630	2.8	610	2.7	580	2.6	540	2.4
		P6001	1130	5.0	4250	18.9	4060	18.1	3750	16.7	3370	15.0
		P7000	190	0.8	300	1.3	290	1.3	280	1.2	270	1.2
		P7001	610	2.7	2610	11.6	2320	10.3	1820	8.1	1290	5.7
30	762	P6000	280	1.2	400	1.8	390	1.7	370	1.6	350	1.6
		P6001	1080	4.8	4040	18.0	3750	16.7	3260	14.5	2670	11.9
		P7000	140	0.6	190	0.8	190	0.8	**	**	**	**
		P7001	530	2.4	2290	10.2	1820	8.1	1190	5.3	830	3.7
36	914	P6000	210	0.9	280	1.2	270	1.2	260	1.2	240	1.1
		P6001	1020	4.5	3790	16.9	3370	15.0	2670	11.9	1900	8.5
		P7000	100	0.4	130	0.6	130	0.6	**	**	**	**
		P7001	450	2.0	1890	8.4	1290	5.7	830	3.7	570	2.5
42	1067	P6000	160	0.7	210	0.9	200	0.9	190	0.8	180	0.8
		P6001	950	4.2	3500	15.6	2920	13.0	2010	8.9	1400	6.2
		P7001	380	1.7	1440	6.4	950	4.2	610	2.7	**	**
48	1219	P6000	130	0.6	160	0.7	150	0.7	140	0.6	130	0.6
		P6001	860	3.8	3150	14.0	2400	10.7	1540	6.9	1070	4.8
		P7001	320	1.4	1100	4.9	730	3.2	**	**	**	**
60	1524	P6000	90	0.4	100	0.4	100	0.4	**	**	**	**
		P6001	700	3.1	2330	10.4	1540	6.9	990	4.4	**	**
72	1829	P6000	70	0.3	70	0.3	70	0.3	**	**	**	**
		P6001	570	2.5	1620	7.2	1070	4.8	**	**	**	**

**$\frac{KL}{r} > 200$

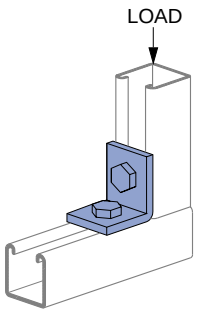
LOAD DATA FOR UNISTRUT SECTIONS SUBJECT TO CRUSHING LOADS



Center of Member.

Channel	Recommended Load	
	Lbs	kN
P6000	1000	4.4
P7000	1300	5.8

Safety Factor of 2½



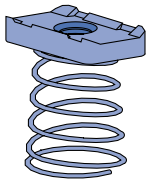
End of Member.

Channel	Recommended Load	
	Lbs	kN
P6000	700	3.1
P7000	900	4.0

Safety Factor of 2½

P6000-0832 thru P6006-1420

CHANNEL NUT WITH SPRING



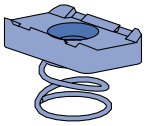
Nut Size/ Thread	Max. Allowable Pull-out		Resistance To Slip		Torque	
	Lbs	kN	Lbs	kN	Ft/Lbs	N•m
¼"-20	250	1.1	150	0.7	6	8

For use with P6000 channels.

Part Number	Thread Size	Weight per 100	
		Lbs	kg
P6006-0836	#8 - 36	1	0.5
P6006-0832	#8 - 32	1	0.5
P6006-1032	#10 - 32	1	0.5
P6006-1024	#10 - 24	1	0.5
P6006-1420	¼"- 20	1	0.5

P7006-0832 thru P7006-1420

CHANNEL NUT WITH SPRING

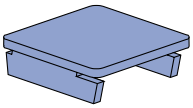


For use with P7000 channels.

Part Number	Thread Size	Weight per 100	
		Lbs	Kg
P7006-0836	#8 - 36	1	0.5
P7006-0832	#8 - 32	1	0.5
P7006-1032	#10 - 32	1	0.5
P7006-1024	#10 - 24	1	0.5
P7006-1420	¼"- 20	1	0.5

P6280

END CAP FOR P6000

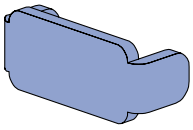


Material: .060" (1.5)

Wt/C 3 Lbs (1.4 kg)

P7280

END CAP FOR P7000

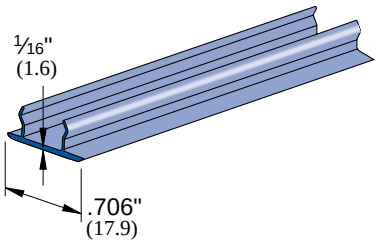


Material: .048" (1.2)

Wt/C 1 Lbs (0.5 kg)

P6184 P

CLOSURE STRIP

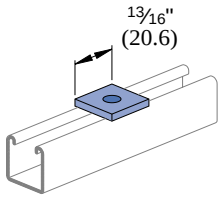


Material: Plastic.

Standard Length:
10 Feet (3.05 m).

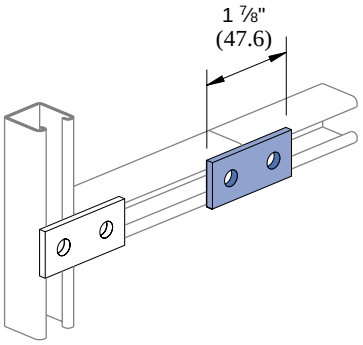
Wt/C Ft 4 Lbs (6.0 kg/100m)

P6062



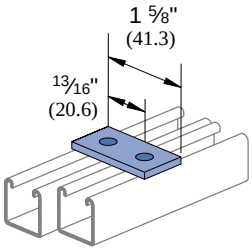
Wt/C 2 Lbs (0.9 kg)

P6065



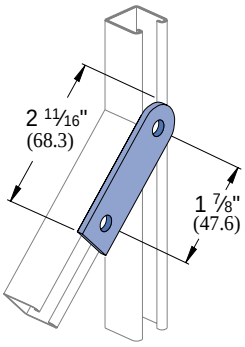
Wt/C 5 Lbs (2.3 kg)

P6924



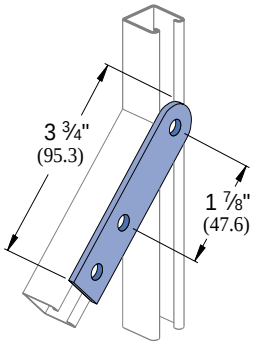
Wt/C 5 Lbs (2.3 kg)

P7325



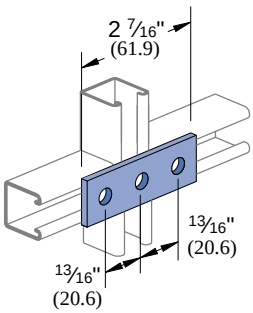
Wt/C 7 Lbs (3.2 kg)

P7324



Wt/C 10 Lbs (4.5 kg)

P6925

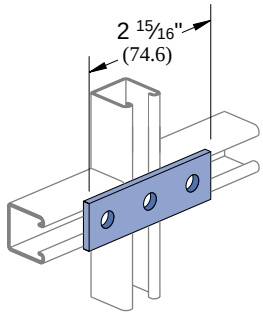


Wt/C 7 Lbs (3.2 kg)

Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

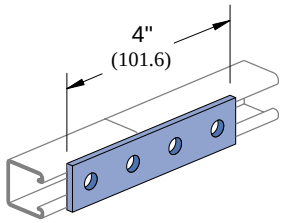
FLAT PLATE FITTINGS
FOR 13⁄16" (21 MM) WIDTH SERIES CHANNEL

P6066



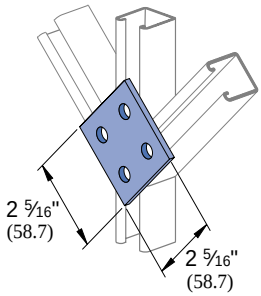
Wt/C 8 Lbs (3.6 kg)

P6067



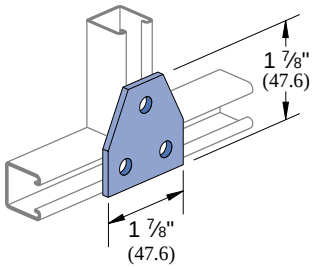
Wt/C 11 Lbs (5.0 kg)

P6962



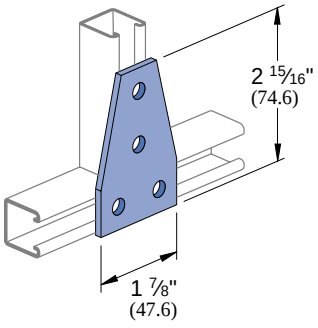
Wt/C 19 Lbs (8.6 kg)

P6356 A



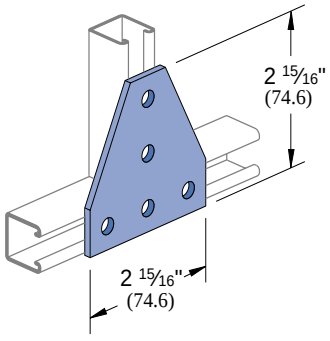
Wt/C 10 Lbs (4.5 kg)

P6358 A



Wt/C 15 Lbs (6.8 kg)

P6726 A



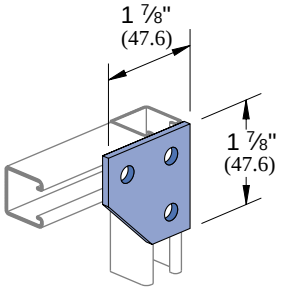
Wt/C 22 Lbs (10.0 kg)

Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

FLAT PLATE FITTINGS

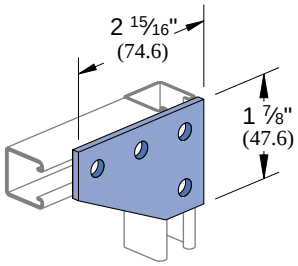
FOR 13/16" (21 MM) WIDTH SERIES CHANNEL

P6334



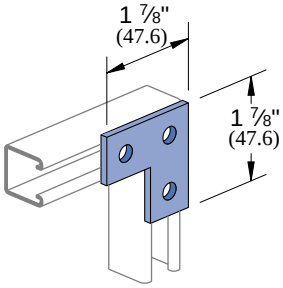
Wt/C 11 Lbs (5.0 kg)

P6380



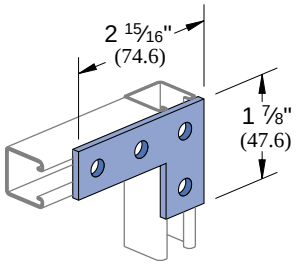
Wt/C 15 Lbs (6.8 kg)

P6036



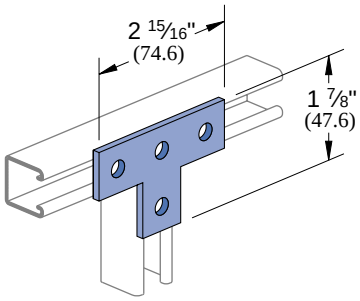
Wt/C 8 Lbs (3.6 kg)

P6380 A



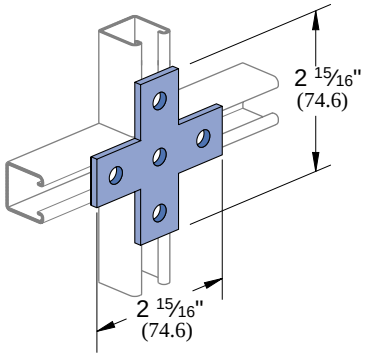
Wt/C 11 Lbs (5.0 kg)

P6031



Wt/C 11 Lbs (5.0 kg)

P6028

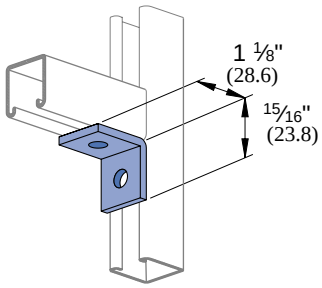


Wt/C 14 Lbs (6.4 kg)

Hole Size	Hole Spacing	Width	Thickness
9/32" Diameter 7.1 mm	13/32" (10.3 mm) From End 1 1/16" (27.0 mm) On Center	13/16" 20.6 mm	1/8" 3.2 mm

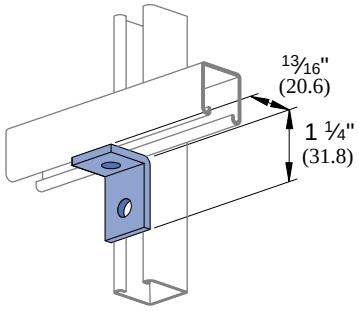
NINETY DEGREE FITTINGS
FOR 13⁄16" (21 MM) WIDTH SERIES CHANNEL

P6026



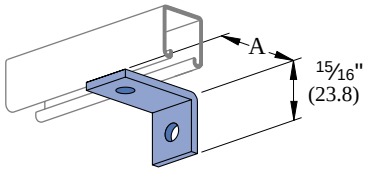
Wt/C 5 Lbs (2.3 kg)

P6068



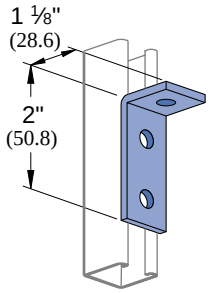
Wt/C 5 Lbs (2.3 kg)

P6281
P6282
P6283



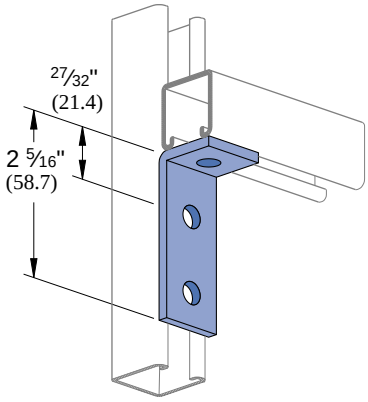
Part Number	"A"		Weight	
	In	mm	Lbs	kg
P6281	2	50.8	8	3.6
P6282	2½	63.5	9	4.1
P6283	3	76.2	10	4.5

P6069



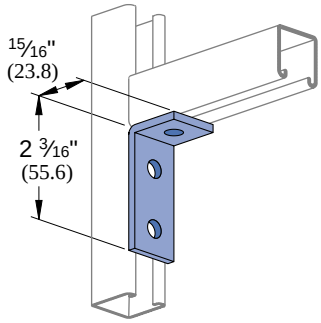
Wt/C 8 Lbs (3.6 kg)

P6326



Wt/C 8 Lbs (3.6 kg)

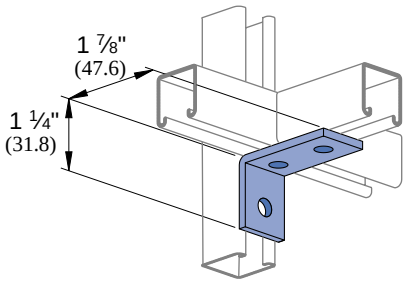
P6346



Wt/C 8 Lbs (3.6 kg)

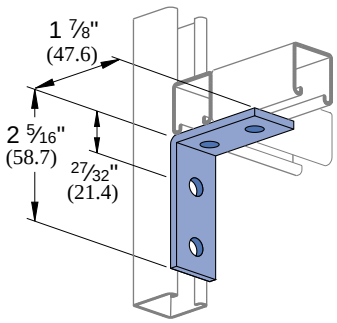
Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

P6458



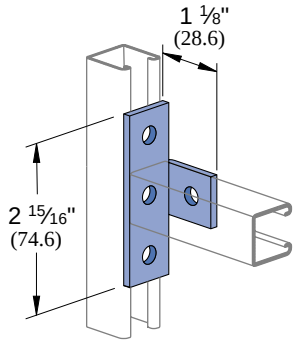
Wt/C 8 Lbs (3.6 kg)

P6325



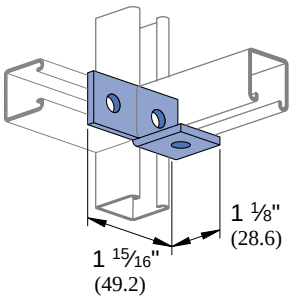
Wt/C 11 Lbs (5.0 kg)

P6033



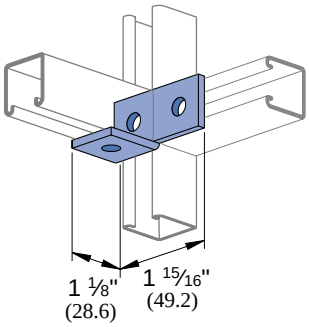
Wt/C 11 Lbs (5.0 kg)

P6037



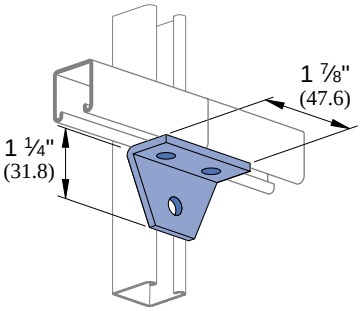
Wt/C 8 Lbs (3.6 kg)

P6038



Wt/C 8 Lbs (3.6 kg)

P6357

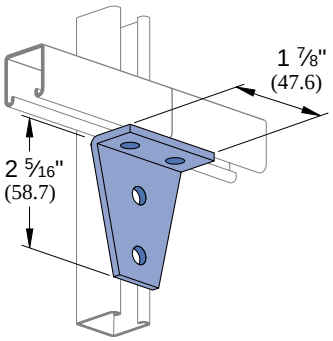


Wt/C 10 Lbs (4.5 kg)

Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	⅛" 3.2 mm

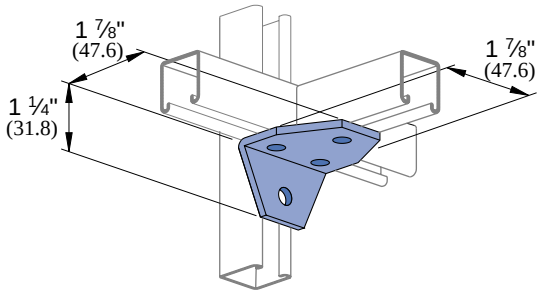
NINETY DEGREE FITTINGS
FOR 13⁄16" (21 MM) WIDTH SERIES CHANNEL

P6359



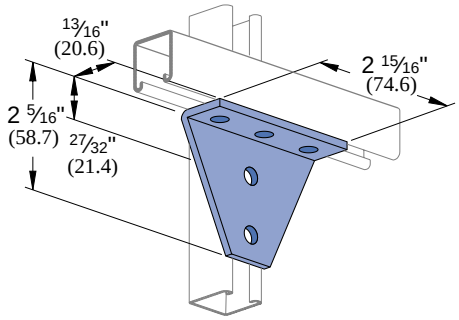
Wt/C 15 Lbs (6.8 kg)

P6579



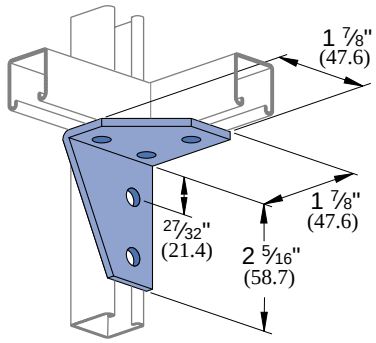
Wt/C 15 Lbs (6.8 kg)

P6728



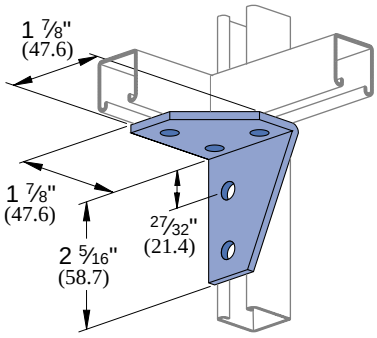
Wt/C 22 Lbs (10.0 kg)

P6917



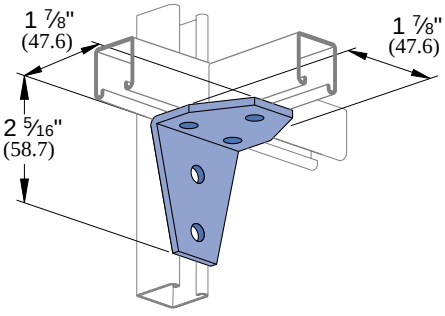
Wt/C 21 Lbs (9.5 kg)

P6918



Wt/C 21 Lbs (9.5 kg)

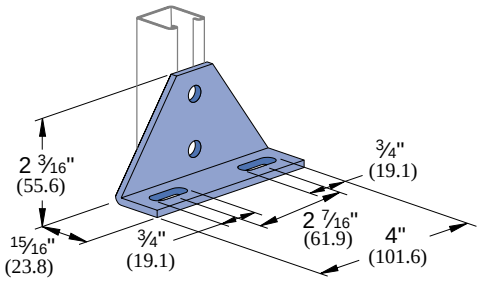
P7235



Wt/C 18 Lbs (8.2 kg)

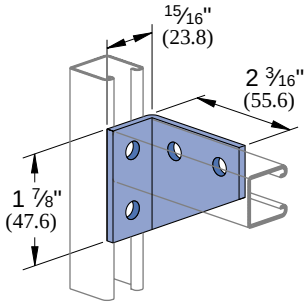
Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

P6130



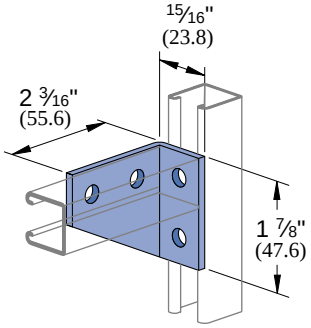
Wt/C 32 Lbs (14.5 kg)

P6290



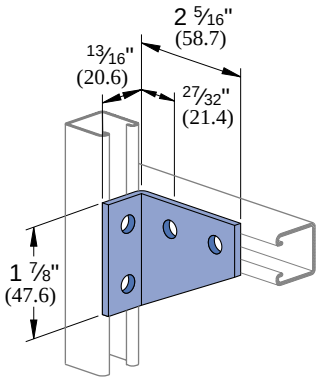
Wt/C 15 Lbs (6.8 kg)

P6291



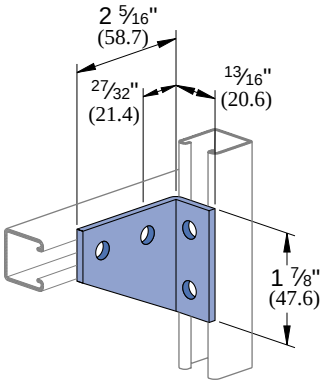
Wt/C 15 Lbs (6.8 kg)

P6381



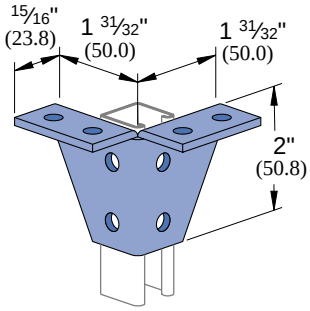
Wt/C 15 Lbs (6.8 kg)

P6382



Wt/C 15 Lbs (6.8 kg)

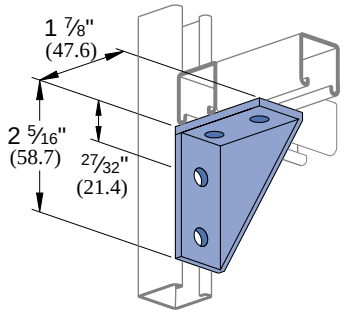
P6887



Wt/C 28 Lbs (12.7 kg)

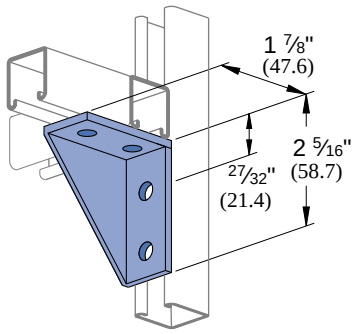
Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

P6331



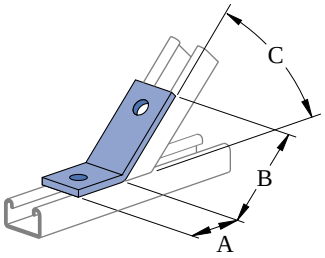
Wt/C 19 Lbs (8.6 kg)

P6332



Wt/C 19 Lbs (8.6 kg)

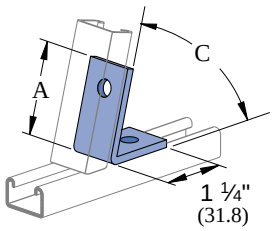
P6546
P7097
P7098
P7100
P7101



Wt/C 8 Lbs (3.6 kg)

Part Number	"A"		"B"		"C"	
	In	mm	In	mm	Degree	rad
P7097	15⁄16	23.8	1 13⁄16	46.0	60°	.33
P7098	1 1⁄32	26.2	1 7⁄8	47.6	52½°	.29
P6546	1 3⁄16	30.2	1 23⁄32	43.7	45°	.25
P7100	1 5⁄16	33.3	1 19⁄32	40.5	37½°	.21
P7101	1 1⁄32	26.2	1 7⁄8	47.6	30°	.17

P6186
P7108
P7109
P7110

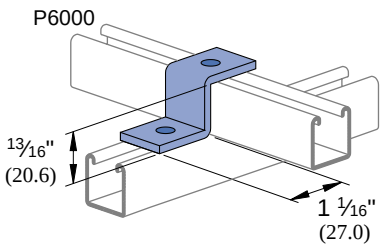


Wt/C 8 Lbs (3.6 kg)

Part Number	"A"		"C"	
	In	mm	Degree	rad
P7108	1 27⁄32	46.8	60°	.33
P7109	1 13⁄16	46.0	52½°	.29
P6186	1 13⁄16	46.0	45°	.25
P7110	1 13⁄16	46.0	37½°	.21

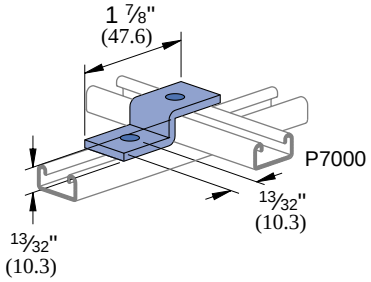
Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

P6045



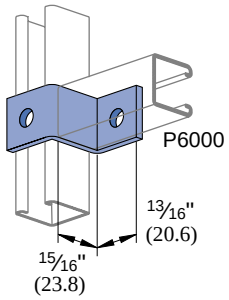
Wt/C 7 Lbs (3.2 kg)

P7045



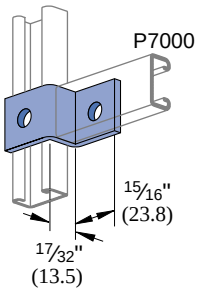
Wt/C 6 Lbs (2.7 kg)

P6347



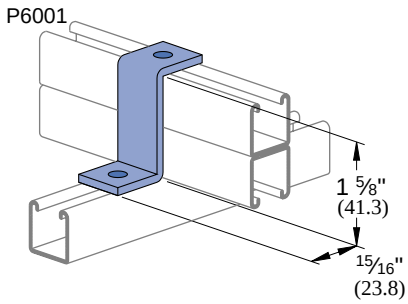
Wt/C 7 Lbs (3.2 kg)

P7347



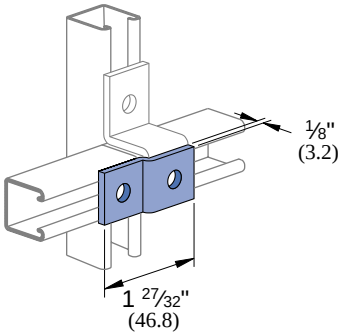
Wt/C 6 Lbs (2.7 kg)

P6453



Wt/C 9 Lbs (4.1 kg)

P6454

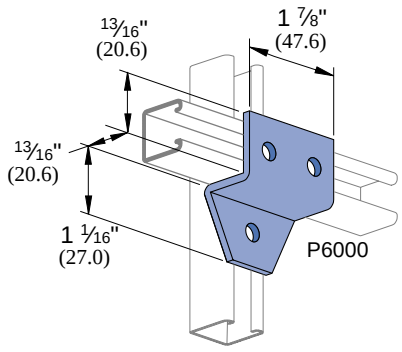


Wt/C 5 Lbs (2.3 kg)

Hole Size	Hole Spacing	Width	Thickness
9/32" Diameter 7.1 mm	13/32" (10.3 mm) From End 1 1/16" (27.0 mm) On Center	13/16" 20.6 mm	1/8" 3.2 mm

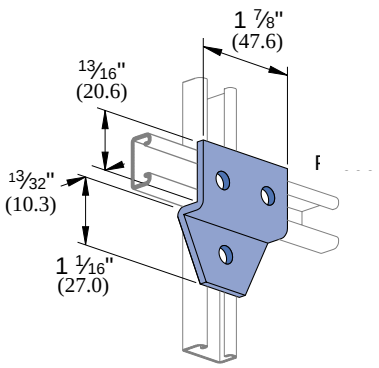
"Z" AND "U" SHAPE FITTINGS
FOR 13⁄16" (21 MM) WIDTH SERIES CHANNEL

P6758



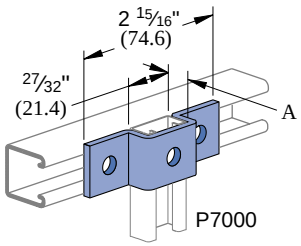
Wt/C13 Lbs (5.9 kg)

P7758



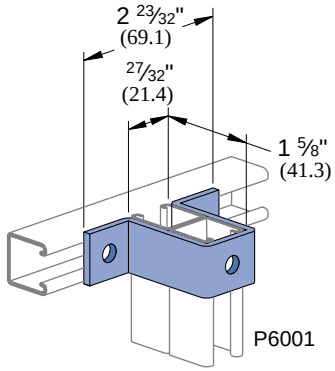
Wt/C 12 Lbs (5.4 kg)

P6047
P7047



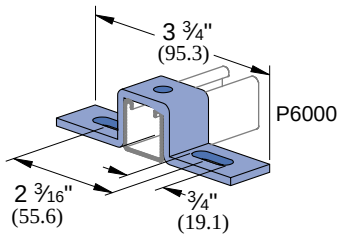
Part Number	"A"		Weight/C		For Use With
	In	mm	Lbs	kg	
P6047	13⁄16	20.6	12	5.4	P6000
P7047	13⁄32	10.3	10	4.5	P7000

P6737



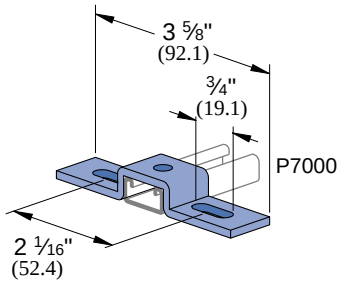
Wt/C 16 Lbs (7.3 kg)

P6048



Wt/C 14 Lbs (6.4 kg)

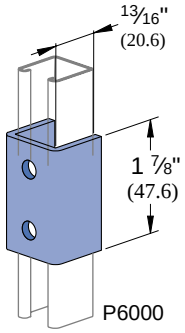
P7048



Wt/C 10 Lbs (4.5 kg)

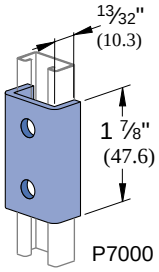
Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

P6376



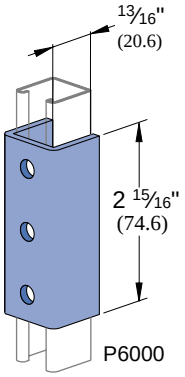
Wt/C 17 Lbs (7.7 kg)

P7376



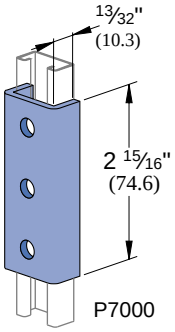
Wt/C 11 Lbs (5.0 kg)

P6376 A



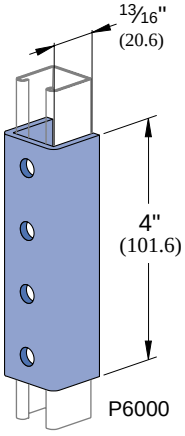
Wt/C 26 Lbs (11.8 kg)

P7376 A



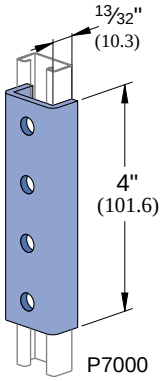
Wt/C 16 Lbs (7.3 kg)

P6377



Wt/C 36 Lbs (16.3 kg)

P7377



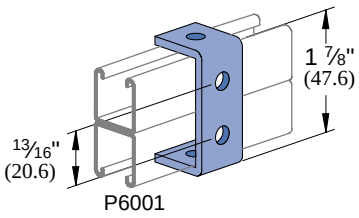
Wt/C 24 Lbs (10.9 kg)

Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

"U" SHAPE FITTINGS & SPECIAL APPLICATIONS

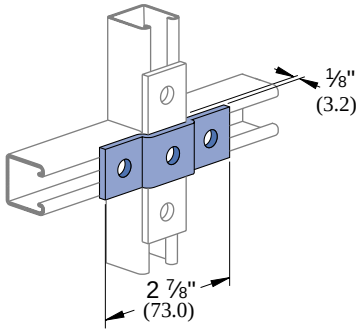
FOR 13⁄16" (21 MM) WIDTH SERIES CHANNEL

P6044



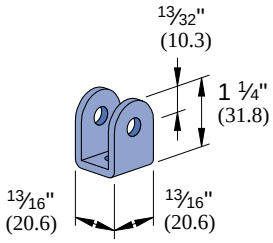
Wt/C 9 Lbs (4.1 kg)

P6455



Wt/C 8 Lbs (3.6 kg)

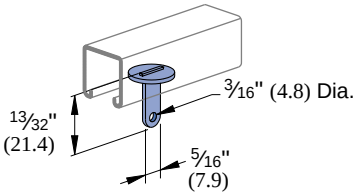
P6973



Wt/C 8 Lbs (3.6 kg)

P6349

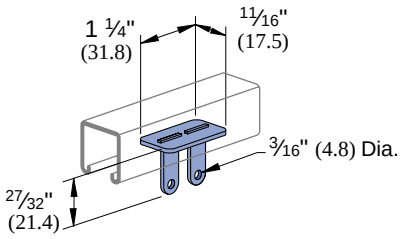
ACETAL SLIDE



Wt/C 1 Lbs (0.5 kg)

P6353

ACETAL SLIDE

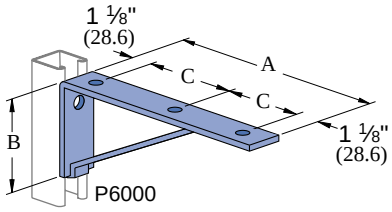


Wt/C 1 Lbs (0.5 kg)

Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

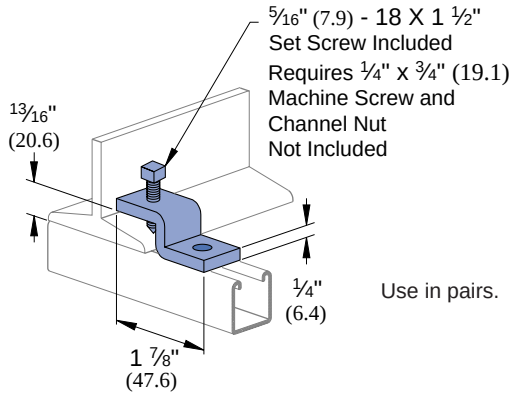
P6127 - P6129

Safety Factor
2½



Part Number	Uniform Design Load		"A"		"B"		"C"		Weight/C	
	Lbs	kN	In	mm	In	mm	In	mm	Lbs	kg
P6127	150	.7	6½	165.1	2½	63.5	2½	63.5	30	13.6
P6128	150	.7	8½	215.9	3¼	82.6	3½	88.9	40	18.1
P6129	130	.6	10½	266.7	4	101.6	4½	114.3	50	22.7

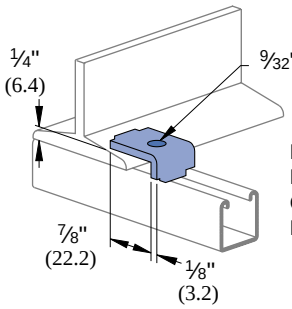
P6379 S



Use in pairs.

Wt/C 13 Lbs (5.9 kg)

P6386



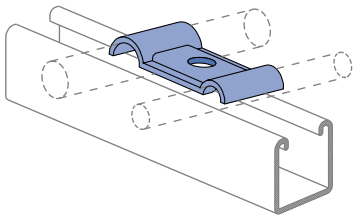
Requires ¼" x ¾" (19.1)
Machine Screw and
Channel Nut
Not Included

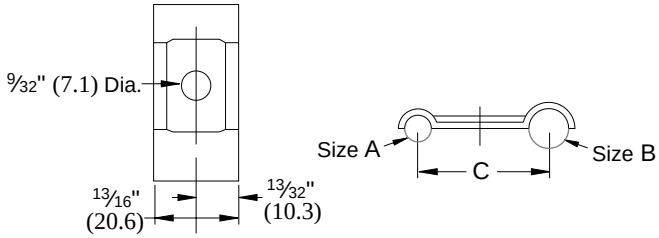
Use in pairs.

Wt/C 4 Lbs (1.8 kg)

Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	1⁄8" 3.2 mm

P6805 thru P6810

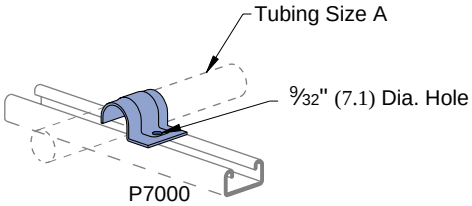




Part Number	O.D. Tube Size "A"		O.D. Tube Size "B"		"C"		Weight/C	
	In	mm	In	mm	In	mm	Lbs	kg
P6805	¼	6.4	¼	6.4	¾	19.1	1	0.5
P6806	⅜	9.5	⅜	9.5	1	25.4	2	0.9
P6807	½	12.7	½	12.7	1¼	31.8	3	1.4
P6808	¼	6.4	⅜	9.5	⅞	22.2	2	0.9
P6809	¼	6.4	½	12.7	1	25.4	2	0.9
P6810	⅜	9.5	½	12.7	1⅛	28.6	3	1.4

Material: 16 Gage (1.5)

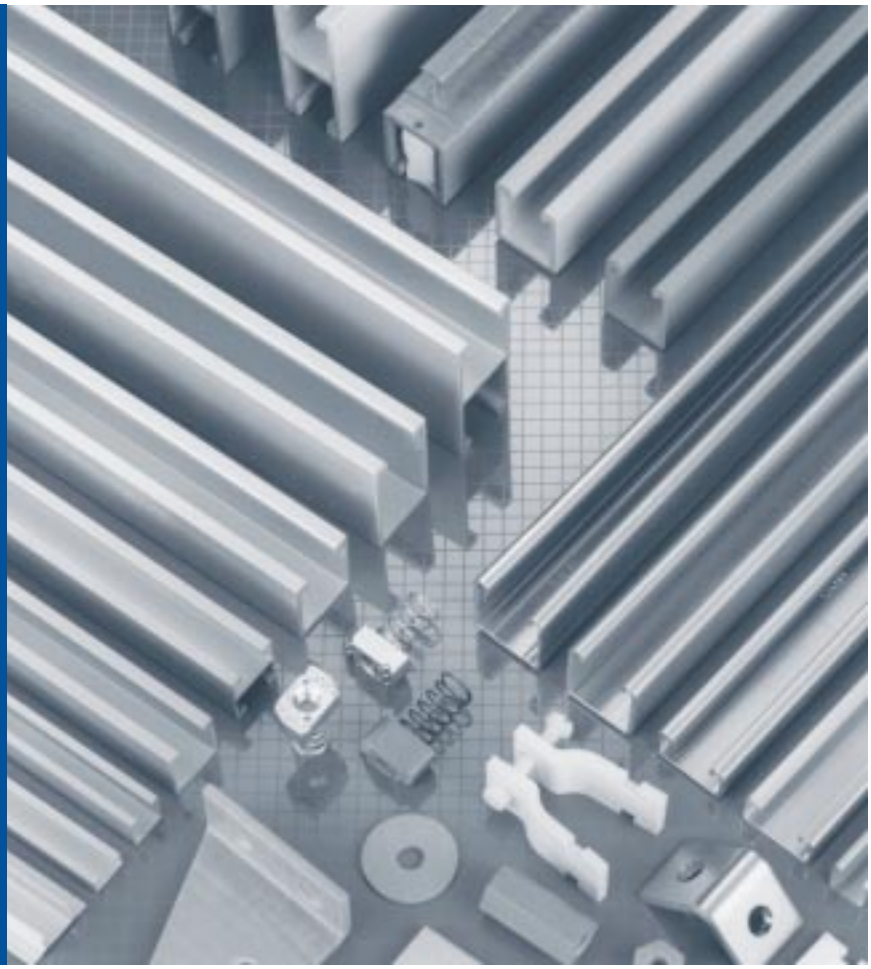
P7008 thru P7020



Part Number	O.D. Tube Size "A"		Weight/C	
	In	mm	Lbs	kg
P7008	¼	6.4	1	.45
P7009	5⁄16	7.9	1	.45
P7010	⅜	9.5	2	.91
P7012	½	12.7	2	.91
P7014	5⁄8	15.9	3	1.4
P7016	¾	19.1	4	1.8
P7018	⅞	22.6	5	2.3
P7020	1	25.4	5	2.3

Hole Size	Hole Spacing	Width	Thickness
9⁄32" Diameter 7.1 mm	13⁄32" (10.3 mm) From End 1 1⁄16" (27.0 mm) On Center	13⁄16" 20.6 mm	⅛" 3.2 mm

	Page
Stainless Steel	220
Aluminum	223
Fiberglass	226



MATERIAL

STAINLESS STEEL
Channels: ASTM A 240 (Type 304)

Sintered nuts: ASTM B783 (Type 316N2-33)

Fittings: ASTM A240 (Type 304) or ASTM A276 (Type 304)

Type 316 stainless also available for most products. Contact factory for specific material availability.

ALUMINUM
Channels (Extruded): ASTM B221 (Type 6063-T6)

Fittings: ASTM B209 (Type 1100F or Type 5052-H32)

Nuts: ASTM B221 (Type 6063-T5)

FIBERGLASS
Components are available in fire-retardent Polyester or Vinylester resin systems, unless otherwise noted.

LOAD DATA (BEAM & COLUMN)
To determine maximum allowable beam and column loading for channels in this section, multiply the load data in the appropriate mild steel channel sections of this catalog by the following factors:

CHANNEL MATERIAL	BEAM LOAD % FACTOR	COLUMN LOAD % FACTOR
EXTRUDED ALUMINUM	33.0%	33.0%
STAINLESS STEEL	100.0%	100.0%
FIBERGLASS	see p. 227	see p. 227

LOAD DATA (SLIP & PULL OUT)

EXTRUDED ALUMINUM
To determine nut slip resistance, multiply load data for appropriate nut by 75%. To determine nut pull-out load, multiply load data for appropriate nut by 50%.

STAINLESS STEEL
For design assistance, consult Unistrut customer engineering.

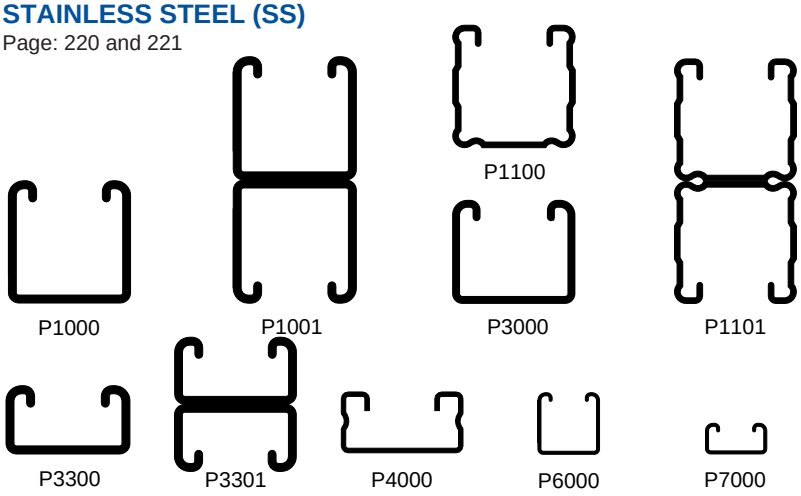
FIBERGLASS
See page 228 for nut slip resistance and pull-out strength.

PRODUCT AVAILABILITY
Most fittings and channels shown in this catalog, are available in aluminum or stainless steel. Consult factory for ordering information.

DIMENSIONS
Imperial dimensions are illustrated in inches. Metric dimensions are shown in parenthesis or as noted. Unless noted, all metric dimensions are in millimeters and rounded to one decimal place.

STAINLESS STEEL (SS)

Page: 220 and 221



CHANNELS

Channels are available in both Type 304 and Type 316 stainless steel materials.

CHANNEL NUTS

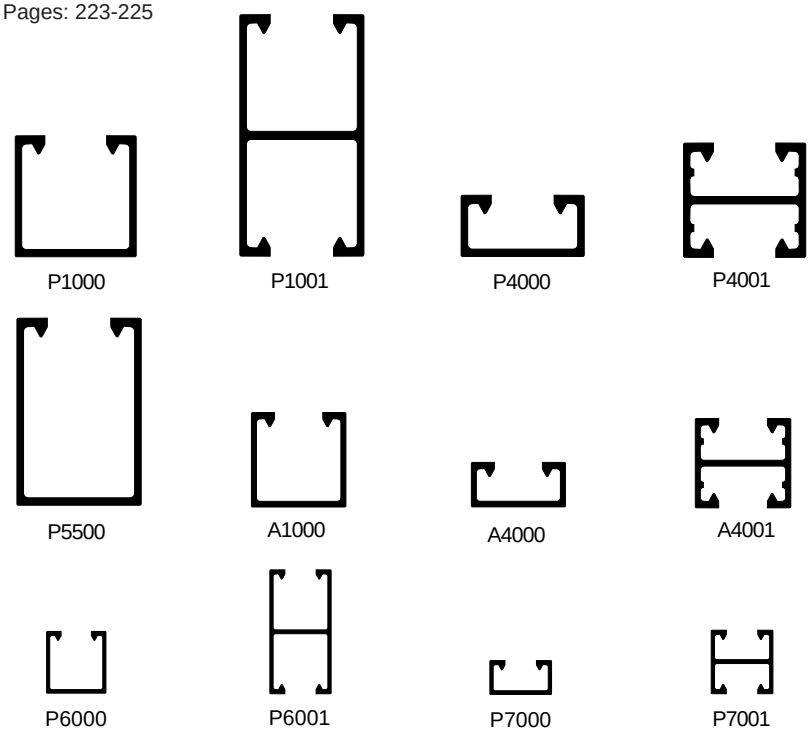
Stainless steel channel nuts are shown on page 222 of this catalog.

FITTINGS

Most fittings as shown in this catalog are available in stainless steel.

ALUMINUM (Extruded-EA)

Pages: 223-225



CHANNELS

Extruded Aluminum channels are made from 6063-T6 material.

CHANNEL NUTS

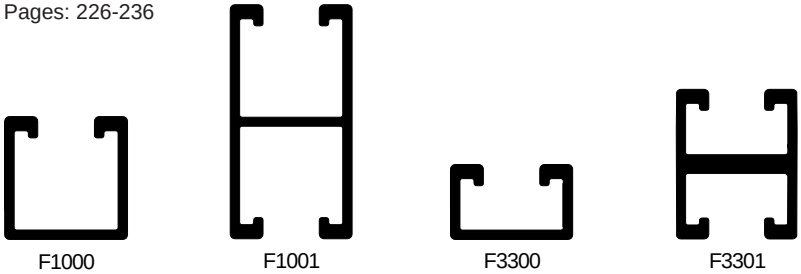
Use stainless steel channel nuts as shown on page 222.

FITTINGS

Most fittings as shown in this catalog are available in aluminum.

FIBERGLASS
Polyester (PE)
Vinyl Ester (VE)

Pages: 226-236



CHANNELS

Fiberglass channels are available with choice of resins. To indicate resin choice for polyester, insert "PE" after the part number and "VE" for vinyl ester.

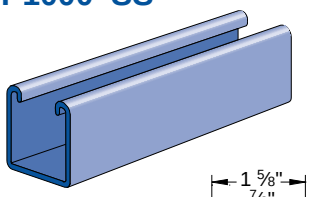
CHANNEL NUTS

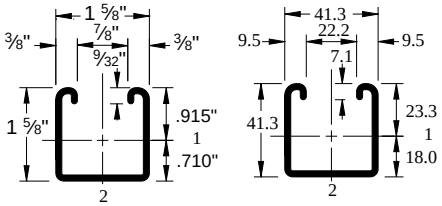
Channel nuts are available in vinyl ester resin only, see page 228.

FITTINGS

Fittings are available in choice of both resins, polyester (PE) and vinyl ester (VE), see page 229.

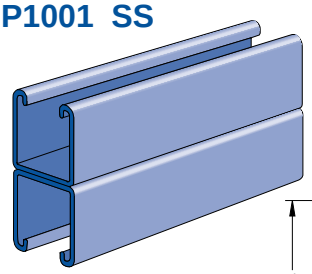
P1000 SS

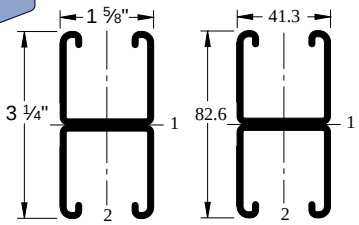




Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	190	283

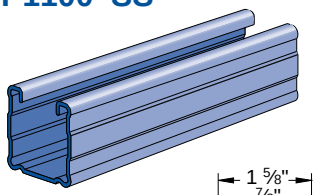
P1001 SS

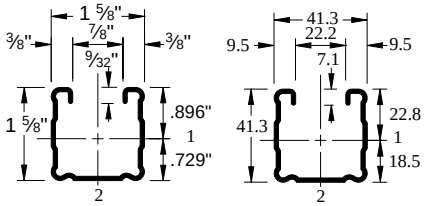




Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	380	566

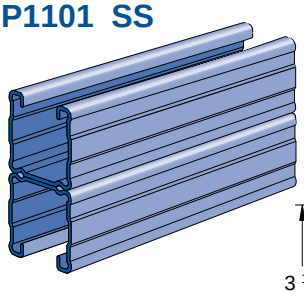
P1100 SS

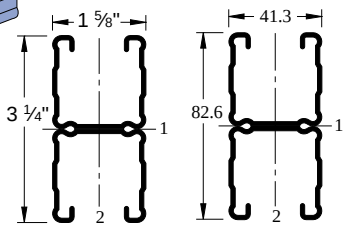




Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.075	1.9	■	■	142	211

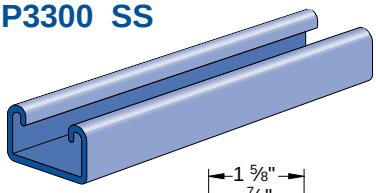
P1101 SS

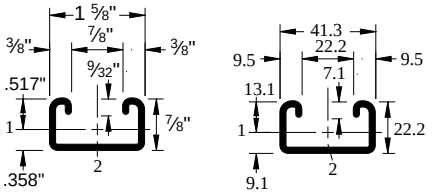




Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.075	1.9	■	■	284	422

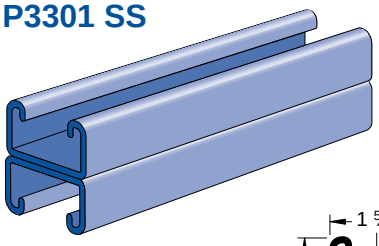
P3300 SS

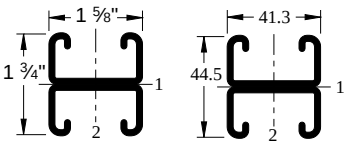




Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	135	201

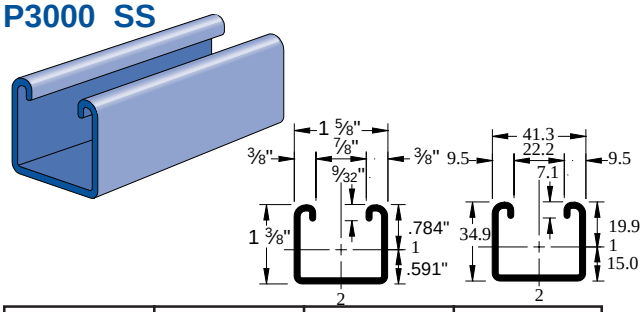
P3301 SS





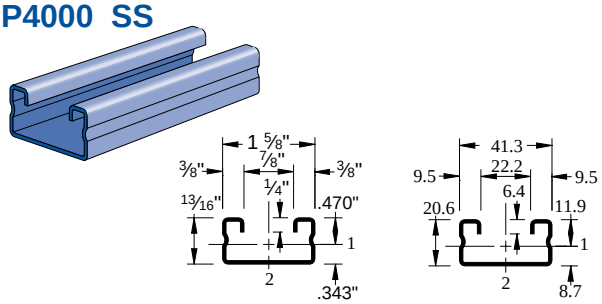
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	270	402

P3000 SS



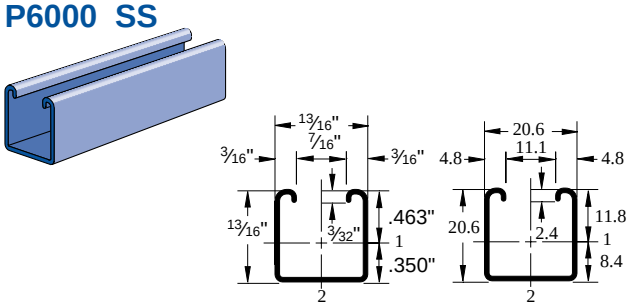
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.105	2.7	■	■	170	253

P4000 SS



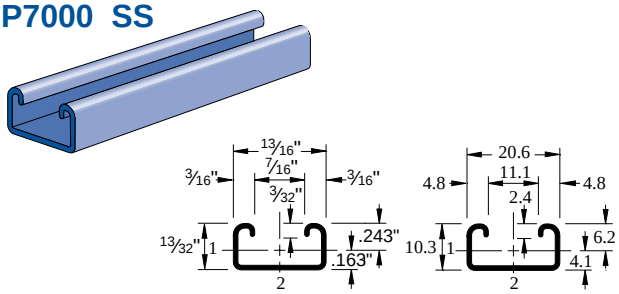
Material Type		Material Thickness		Standard Lengths		Weight/C	
304	316	In	mm	10'	20'	Lbs/Ft	kg/m
■	■	.060	1.5	■	■	82	122

P6000 SS



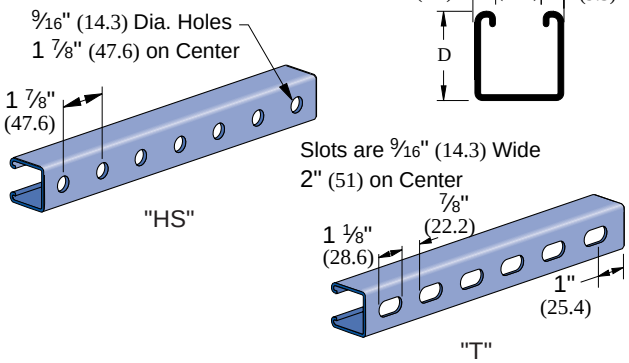
Material Type		Material Thickness		Standard Length	Weight/C	
304	316	In	mm		Lbs/Ft	kg/m
■	■	.040	1.0	16'	37	55

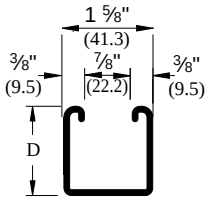
P7000 SS



Material Type		Material Thickness		Standard Length	Weight/C	
304	316	In	mm		Lbs/Ft	kg/m
■	■	.040	1.0	10'	36	39

"HS" SERIES SS, "T" SERIES SS



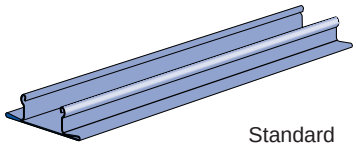


Part Number	Depth "D"		Material Thickness		Weight/C	
	In	mm	In	mm	Lbs/Ft	kg/m
P1000*	1 5/8	41	.105	2.7	185	275
P1100*	1 5/8	41	.075	1.6	136	202
P3000*	1 3/8	35	.105	1.6	165	112
P3300*	7/8	22	.105	2.7	130	193
P4000*	13/16	21	.060	1.5	79	110

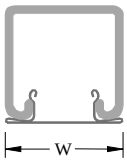
*Add suffix "T SS" or "HS SS" as required. For example: "P1000 T SS"

P1184 SS
P6184 SS

CLOSURE STRIP



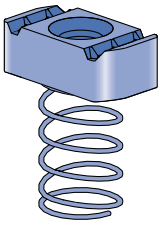
Standard length 10 Ft.



Material: Stainless steel type 304.

Part Number	Use with Channels	Width "W"		Weight/C	
		In	mm	Lbs/Ft	kg/m
P1184 SS	P1000, P1100, P3300, P4000	1 5/8	41	27	40
P6184 SS	P6000, P7000	13/16	21	10	15

P1006 U-1420
P1008 U
P1010 U

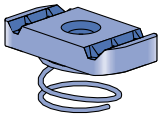


For use with P1000, P1100, P2000, and P3000 channels.

Material: Sintered type 316 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
P1006 U-1420	¼"-20	7	3.2
P1008 U	⅜"-16	10	4.5
P1010 U	½"-13	10	4.5

P4006 U-1420
P4008 U
P4010 U

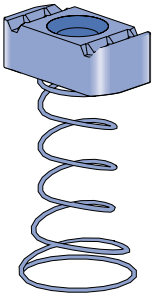


For use with P3300, P3301, P4000 and P4001 channels.

Material: Sintered type 316 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
P4006 U-1420	¼"-20	7	3.2
P4008 U	⅜"-16	9	4.1
P4010 U	½"-13	9	4.1

P5506 U-1420
P5508 U
P5510 U

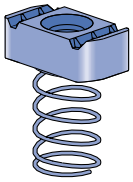


For use with P5500 channels.

Material: Sintered type 316 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
P5506 U-1420	¼"-20	7	3.2
P5508 U	⅜"-16	10	4.5
P5510 U	½"-13	10	4.5

A1006-1420 SS
A1008 SS

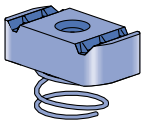


For use with A1000 (1¼") channels.

Material: Wrought type 304 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
A1006-1420 SS	¼"-20	6	2.7
A1008 SS	⅜"-16	6	2.7

A4006-1420 SS
A4008 SS

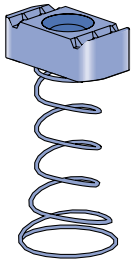


For use with A3300, A3301, A4000 and A4001 (1¼") channels.

Material: Wrought type 304 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
A4006-1420 SS	¼"-20	5	2.3
A4008 SS	⅜"-16	5	2.3

A5006-1420 SS
A5008 SS



For use with A5000 (1¼") channels.

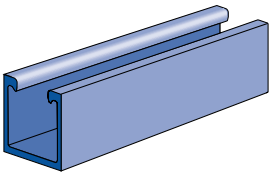
Material: Wrought type 304 stainless steel with pre-galvanized spring.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
A5006-1420 SS	¼"-20	6	2.7
A5008 SS	⅜"-16	6	2.7

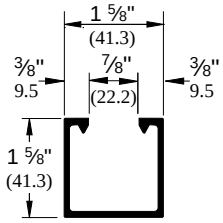
NOTES

Most fittings, as shown in this catalog are available in stainless steel or aluminum. It is recommended that stainless steel channel nuts be used with aluminum channels. For channel nut pull-out and resistance to slip information, refer to page 69 and 218.

P1000 EA

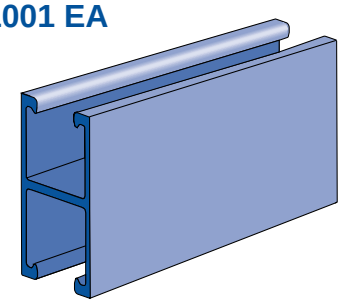


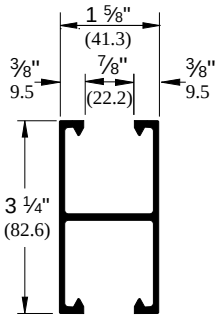
When used with P3184 EA.



Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.109	2.8	■	■	76	113

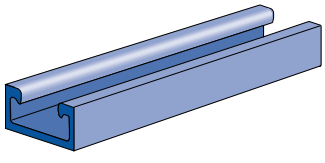
P1001 EA

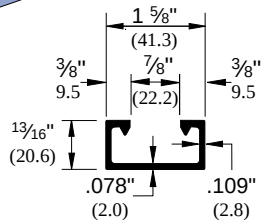




Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.109	2.8	■	■	134	199

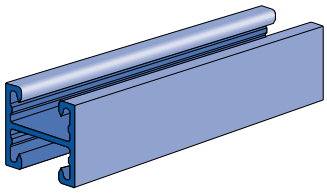
P4000 EA

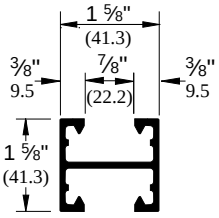




Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.078	2.0	■	■	45	67

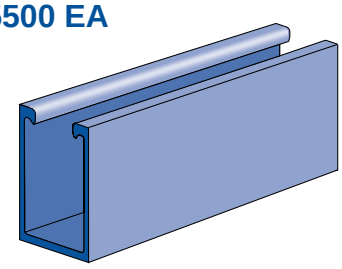
P4001 EA

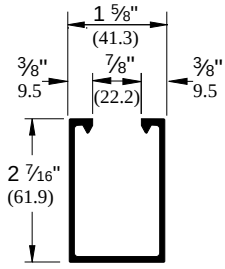




Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.078	1.8	■	■	66	98

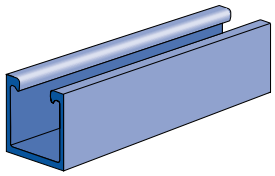
P5500 EA

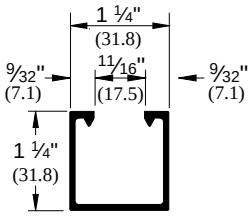




Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.109	2.8	■	■	97	144

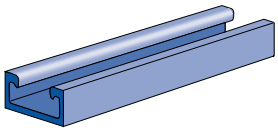
A1000 EA

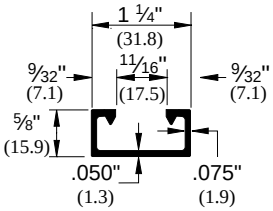




Aluminum Type	Material Thickness		Standard Lengths		Weight/C	
	In	mm	10'	20'	Lbs/Ft	kg/m
6063-T6	.075	1.9	■	■	40	60

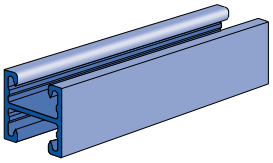
A4000 EA

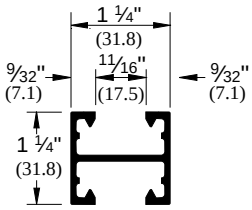




Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.050	1.3	16'	25	37

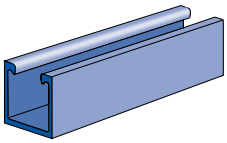
A4001 EA

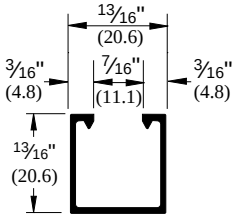




Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.050	1.3	16'	40	60

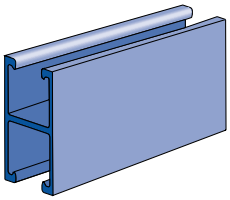
P6000 EA

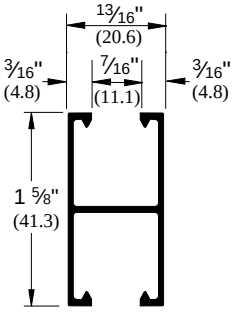




Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.040	1.0	16'	12	18

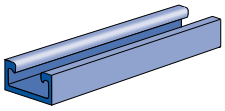
P6001 EA

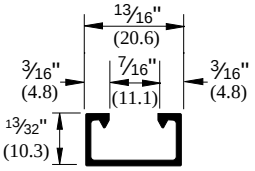




Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.040	1.0	16'	20	30

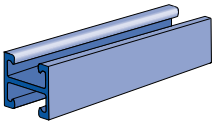
P7000 EA

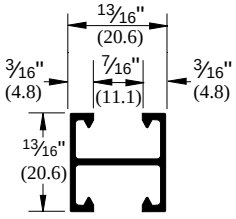




Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.040	1.0	10'	9	13

P7001 EA



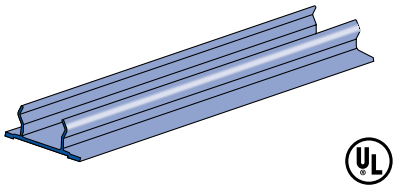


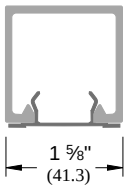
Aluminum Type	Material Thickness		Standard Length	Weight/C	
	In	mm		Lbs/Ft	kg/m
6063-T6	.040	1.0	10'	17	25

EXTRUDED ALUMINUM CLOSURE & END CAPS

P3184 EA

CLOSURE STRIP

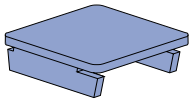




Aluminum Type	Standard Length	Weight/C	
		Lbs/Ft	kg/m
6063-T6	10'	21	31

P1280 EA
P4280 EA
P5580 EA

END CAPS

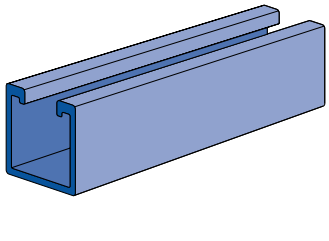


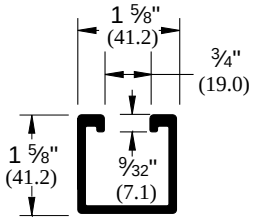
Part Number	Use with Channel	Weight/C	
		Lbs/Ft	kg/m
P1280 EA	P1000 EA	3.5	1.6
P4280 EA	P4000 EA	1.5	0.7
P5500 EA	P5500 EA	4.9	2.2

NOTES

For aluminum channels it is recommended that stainless steel channel nuts shown on page 222 be used. Most fittings shown in the General Fittings Section of this catalog are available in aluminum. Contact your local Unistrut Service Center for assistance.

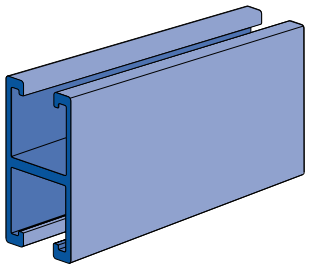
F1000

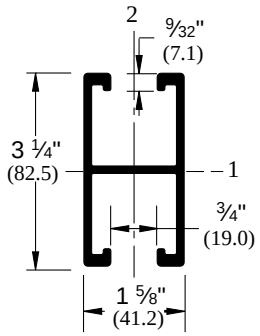




Fiberglass Type		Standard Lengths		Weight/C	
Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
PE	VE	■	■	68	101

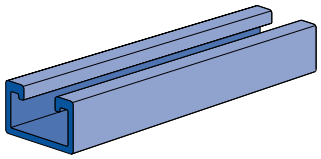
F1001

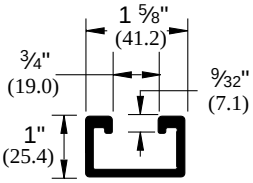




Fiberglass Type		Standard Lengths		Weight/C	
Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
PE	VE	■	■	136	202

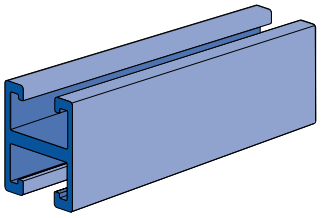
F3300

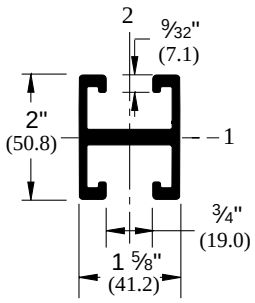




Fiberglass Type		Standard Lengths		Weight/C	
Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
PE	VE	■	■	47	70

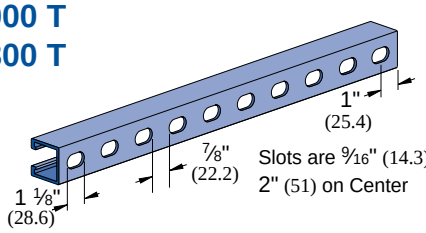
F3301





Fiberglass Type		Standard Lengths		Weight/C	
Polyester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
PE	VE	■	■	94	140

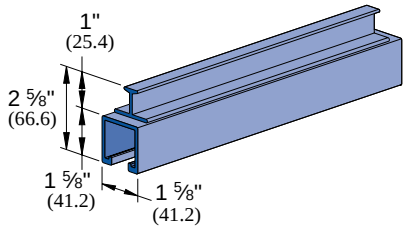
F1000 T
F3300 T



Part Number	Fiberglass Type		Standard Lengths		Weight/C	
	Poly-ester	Vinyl Ester	10'	20'	Lbs/Ft	kg/m
F1000 T	PE	VE	■	■	68	101
P3300 T	PE	VE	■	■	47	70

F1248

CONCRETE INSERT



Fiberglass Type		Standard Length	Weight/C	
Polyester	Vinyl Ester		Lbs/Ft	kg/m
PE	VE	10'	100	149

NOTES

- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

IMPERIAL

Beam Span or Column Height	Part Number	Max. Allowable Uniform Beam Load (Lbs)		Deflection @ Max. Allowable Beam Load (In)		Uniform Load @ Max. Deflection = 0.25 In (Lbs)		Uniform Load @ Max. Deflection = 0.50 In (Lbs)		Max. Allowable Column Load (Lbs)
		Poly	Vinyl	Poly	Vinyl	Poly	Vinyl	Poly	Vinyl	
12"	F1000	1720	2150	0.07	0.07	—	—	—	—	3650
	F1001	5080	6350	0.04	0.04	—	—	—	—	7300
	F3300	790	990	0.11	0.12	—	—	—	—	2550
18"	F1000	1150	1440	0.15	0.17	—	—	—	—	3370
	F1001	3390	4240	0.09	0.10	—	—	—	—	6740
	F3300	530	670	0.24	0.27	—	620	—	—	2350
24"	F1000	860	1080	0.27	0.30	810	910	—	—	2960
	F1001	2540	3180	0.16	0.17	—	—	—	—	5920
	F3300	400	500	0.43	0.48	240	270	—	—	2070
30"	F1000	690	870	0.42	0.48	410	460	—	—	2450
	F1001	2040	2550	0.24	0.27	—	2350	—	—	4900
	F3300	320	400	0.67	0.75	120	140	240	270	1710
36"	F1000	580	730	0.61	0.69	240	270	480	540	1800
	F1001	1700	2130	0.35	0.39	1220	1370	—	—	3600
	F3300	270	340	0.98	1.10	70	80	140	160	1260
48"	F1000	430	540	1.07	1.20	100	115	200	230	1010
	F1001	1270	1590	0.62	0.69	520	590	1040	1170	2020
	F3300	200	250	1.72	1.92	30	35	60	70	700
60"	F1000	350	440	1.70	1.91	60	70	120	135	260
	F1001	1020	1280	0.97	1.09	270	310	540	610	520
	F3300	160	200	2.68	2.99	20	23	40	45	180
72"	F1000	290	370	2.44	2.78	30	34	60	70	NR
	F1001	850	1070	1.40	1.57	160	180	320	360	NR
	F3300	140	180	*	*	10	12	20	23	NR

METRIC

Beam Span or Column Height (mm)	Part Number	Max. Allowable Uniform Beam Load (kN)		Deflection @ Max. Allowable Beam Load (mm)		Uniform Load @ Max. Deflection = 6.4 mm (kN)		Uniform Load @ Max. Deflection = 12.5 mm (kN)		Max. Allowable Column Load (kN)
		Poly	Vinyl	Poly	Vinyl	Poly	Vinyl	Poly	Vinyl	
305	F1000	7.7	9.6	2	2	—	—	—	—	16.2
	F1001	22.6	28.2	1	1	—	—	—	—	32.5
	F3300	3.5	4.4	3	3	—	—	—	—	11.3
457	F1000	5.1	6.4	4	4	—	—	—	—	15.0
	F1001	15.1	18.9	2	3	—	—	—	—	30.0
	F3300	2.4	3.0	6	7	—	2.8	—	—	10.5
610	F1000	3.8	4.8	7	8	3.6	4.0	—	—	13.2
	F1001	11.3	14.1	4	4	—	—	—	—	26.3
	F3300	1.8	2.2	11	12	1.1	1.2	—	—	9.2
762	F1000	3.1	3.9	11	12	1.8	2.0	—	—	10.9
	F1001	9.1	11.3	6	7	—	10.5	—	—	21.8
	F3300	1.4	1.8	17	19	0.5	0.6	1.1	1.2	7.6
914	F1000	2.6	3.2	15	18	1.1	1.2	2.1	2.4	8.0
	F1001	7.6	9.5	9	10	5.4	6.1	—	—	16.0
	F3300	1.2	1.5	25	28	0.3	0.4	0.6	0.7	5.6
1219	F1000	1.9	2.4	27	30	0.4	0.5	0.9	1.0	4.5
	F1001	5.6	7.1	16	18	2.3	2.6	4.6	5.2	9.0
	F3300	0.9	1.1	44	49	0.1	0.2	0.3	0.3	3.1
1524	F1000	1.6	2.0	43	49	0.3	0.3	0.5	0.6	1.2
	F1001	4.5	5.7	25	28	1.2	1.4	2.4	2.7	2.3
	F3300	0.7	0.9	68	76	0.1	0.1	0.2	0.2	0.8
1829	F1000	1.3	1.6	62	71	0.1	0.2	0.3	0.3	NR
	F1001	3.8	4.8	36	40	0.7	0.8	1.4	1.6	NR
	F3300	0.6	0.8	*	*	0.1	0.1	0.1	0.1	NR

BEAM LOADS: Allowable uniformly distributed beam loads are listed for various simple spans, that is, a beam on two supports with a safety factor of 2. If load is concentrated at the center of the span, multiply load from the table by 0.5 and corresponding deflection by 0.8.

COLUMN LOADS: Table lists the total allowable axial load for various unsupported column heights based on a minimum safety factor of 3. Eccentric loads should be reduced according to standard practice.

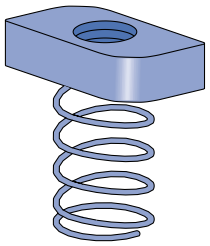
NOTES: Long span beams should be supported in such a manner as to prevent rotation and twist.

* Deflection is in excess of 3.00 inches; mid-span support is recommended.

NR=Not recommended.

F1008 VE
F1010 VE

FRP SPRING NUTS



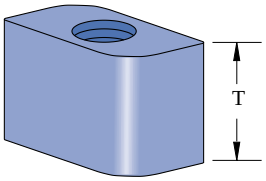
- Designed for use with F1000 only.
- Resistance to slip - 450 Lbs (2.0 kN) per bolt.
- Pull out strength - 700 Lbs (3.1 kN) per bolt.
- Safety factor of 3.

Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size/ Thread	Weight/C	
		Lbs	kg
F1008 VE	3/8"-16 UNC	4.2	1.9
F1010 VE	1/2"-13 UNC	4.0	1.8

F3008 VE
F3010 VE

FRP CHANNEL NUTS

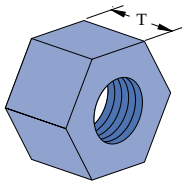


- Channel nuts are self locking and designed for use with F1000 only.
- For strength factors see Spring Nuts at left.

Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size/ Thread	"T"		Weight/C	
		In	mm	Lbs	kg
F3008 VE	3/8"-16 UNC	3/4	19	5.5	2.5
F3010 VE	1/2"-13 UNC	1 1/16	28	5.0	2.3

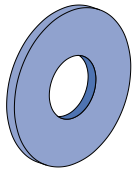
FRP HEX NUTS



Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size/ Thread	"T"		Weight/C	
		In	mm	Lbs	kg
FHXN037 VE	3/8"-16 UNC	5/8	16	2.4	1.1
FHXN050 VE	1/2"-13 UNC	5/8	16	2.2	1.0
FHXN062 VE	5/8"-11 UNC	7/8	22	6.1	2.8
FHXN075 VE	3/4"-10 UNC	7/8	22	5.4	2.5
FHXN100 VE	1" - 8 UNC	1 1/4	32	20.5	9.3

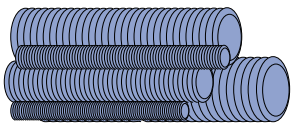
FRP FLAT WASHERS



Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size	Weight/C	
		Lbs	kg
FFLW037 VE	3/8"	1.3	0.6
FFLW050 VE	1/2"		
FFLW062 VE	5/8"		
FFLW075 VE	3/4"		
FFLW100 VE	1"		

FRP THREADED RODS

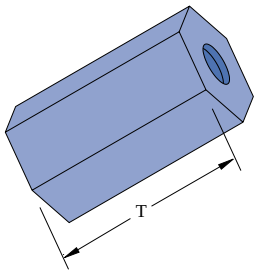


Available in 8 Ft lengths.

- It is NOT recommended that FRP threaded rod be used in conjunction with steel or PCV coated steel beam clamps or nuts.
- Threaded shear could occur due to insufficient thread engagement.
- Seal exposed FRP threads after installation of threaded rod and hex nuts.

Part Number	Size/ Thread	Weight/C	
		Lbs/Ft	kg/m
FTHR037 VE	3/8"-16 UNC	7.0	10.4
FTHR050 VE	1/2"-13 UNC	12.0	17.9
FTHR062 VE	5/8"-11 UNC	18.0	26.8
FTHR075 VE	3/4"-10 UNC	28.0	41.7
FTHR100 VE	1"- 8 UNC	50.0	74.4

FRP ROD COUPLERS



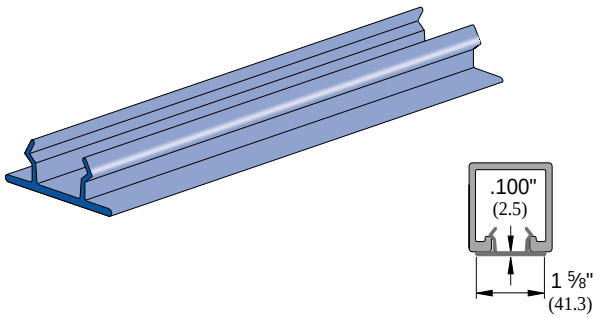
Minimum thread engagement must be 3/4".

Material: Fiberglass reinforced plastic with vinyl ester resin.

Part Number	Size/ Thread	"T"		Weight/C	
		In	mm	Lbs	kg
FRCNO37 VE	3/8"-16 UNC	2	51	7.8	3.5
FRCNO50 VE	1/2"-13 UNC	2	51	7.0	3.2
FRCNO62 VE	5/8"-11 UNC	2	51	13.7	6.2
FRCNO75 VE	3/4"-10 UNC	2	51	12.7	5.8
FRCN100 VE	1"- 8 UNC	2 3/4	70	44.0	20.0

F3712 P

CLOSURE STRIP

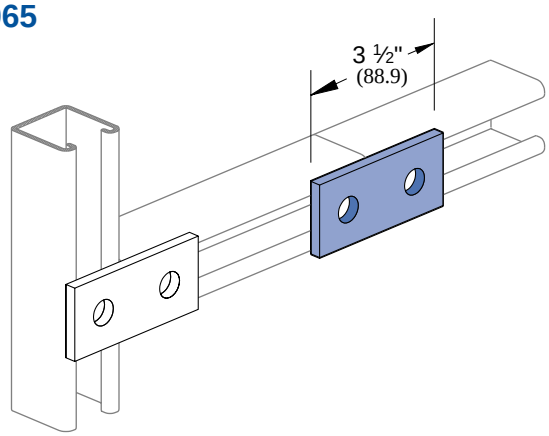


Material: Noryl® Plastic

Standard Length: 10 Ft.

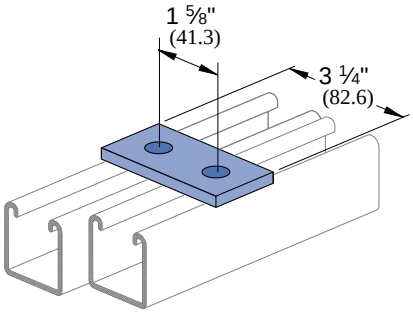
Weight/C Ft: 10.5 Lbs (15.6 kg/100 m)

F1065



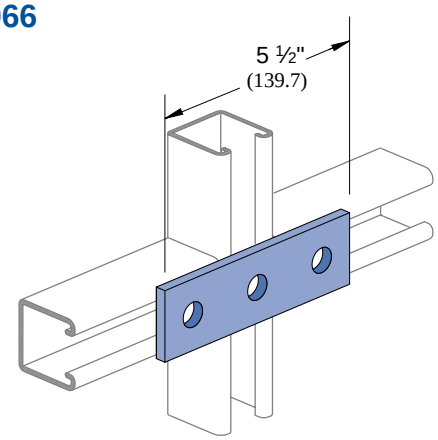
Weight/C: 11.6 Lbs (5.3 kg)

F1924



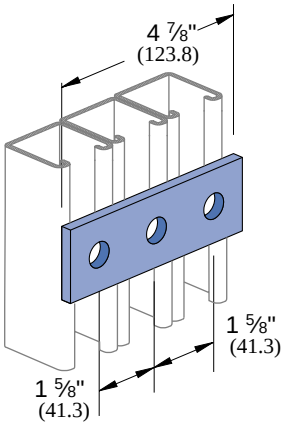
Weight/C: 11.0 Lbs (5.0 kg)

F1066



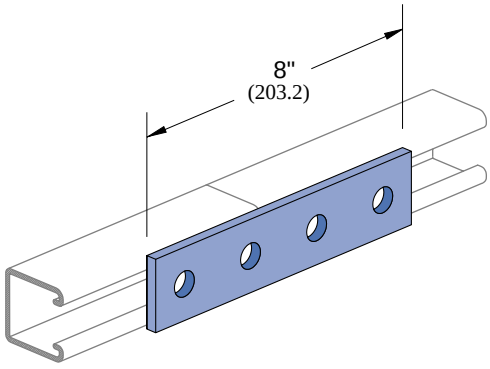
Weight/C: 18.0 Lbs (8.2 kg)

F1925



Weight/C: 16.0 Lbs (7.3 kg)

F1067

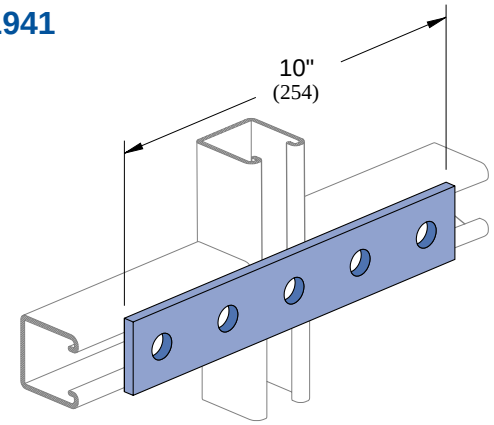


Weight/C: 20.6 Lbs (9.3 kg)

NOTES

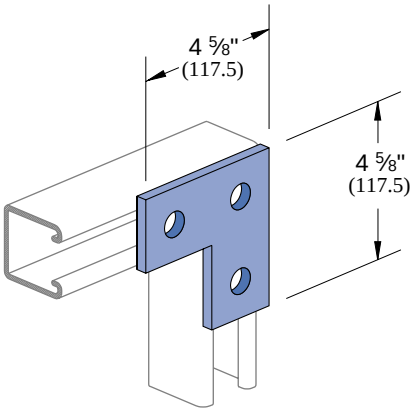
- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

F1941



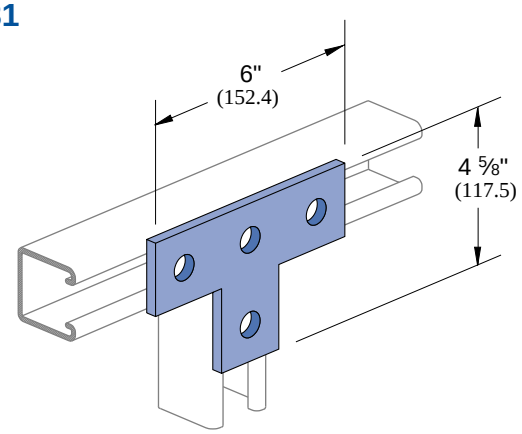
Weight/C: 25.7 Lbs (11.7 kg)

F1036



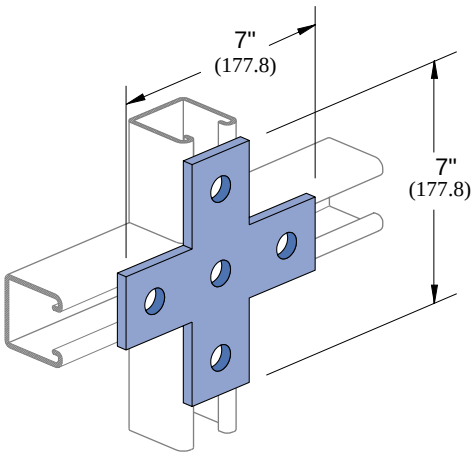
Weight/C: 19.0 Lbs (8.6 kg)

F1031



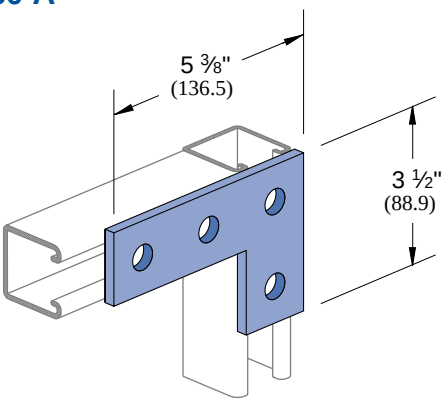
Weight/C: 25.4 Lbs (11.5 kg)

F1028



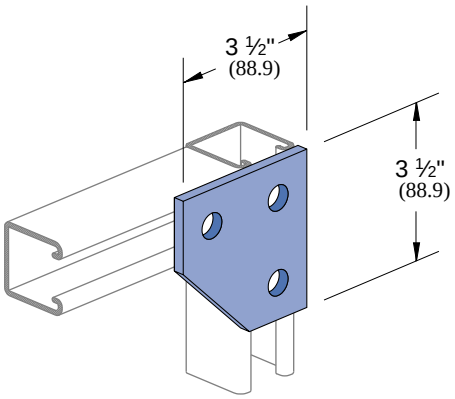
Weight/C: 32.8 Lbs (14.9 kg)

F1380 A



Weight/C: 25.4 Lbs (11.5 kg)

F1334

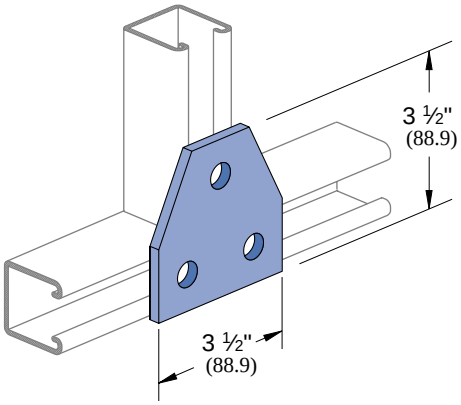


Weight/C: 19.2 Lbs (8.7 kg)

NOTES

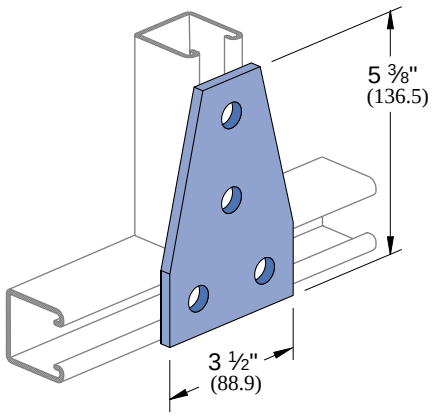
- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

F1356



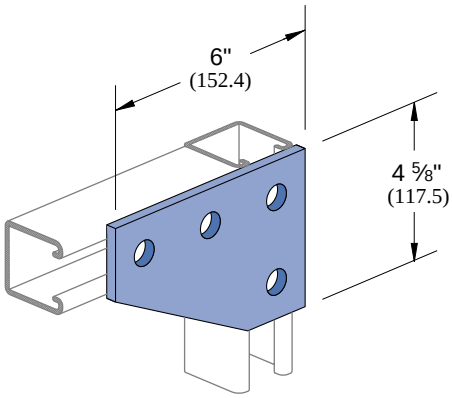
Weight/C: 19.2 Lbs (8.7 kg)

F1358



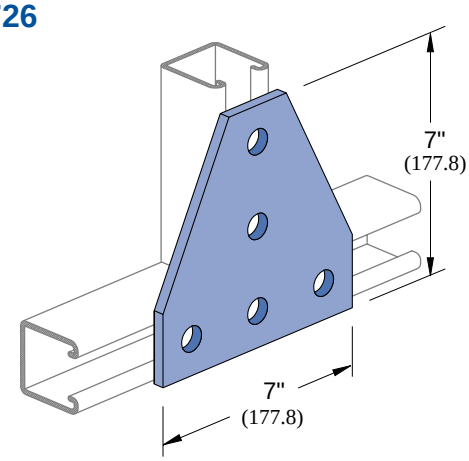
Weight/C: 42.7 Lbs (19.4 kg)

F1380



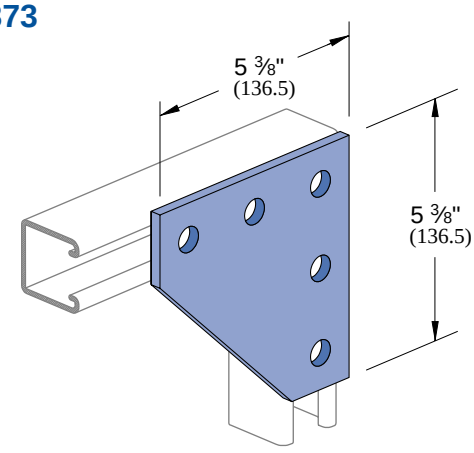
Weight/C: 42.7 Lbs (19.4 kg)

F1726



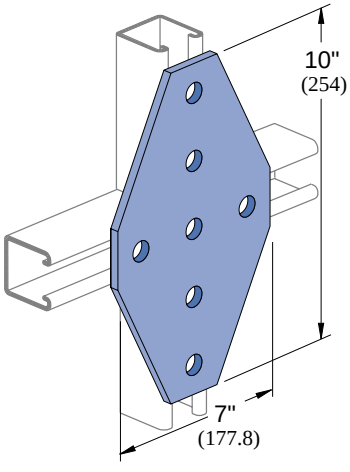
Weight/C: 77.5 Lbs (35.2 kg)

F1873



Weight/C: 77.5 Lbs (35.2 kg)

F1950

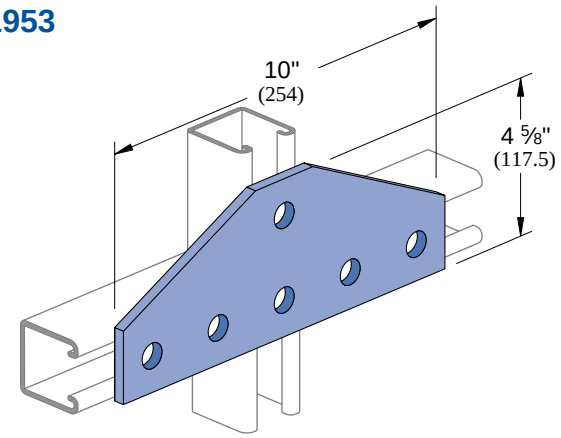


Weight/C: 110.8 Lbs (50.3 kg)

NOTES

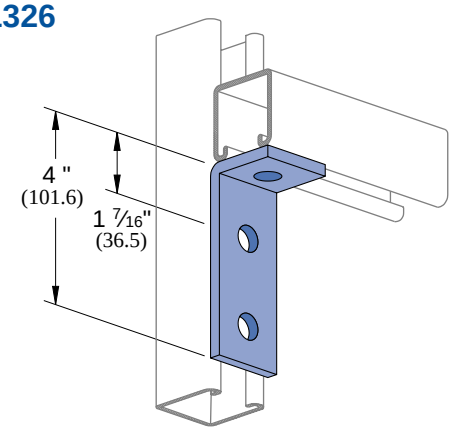
- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

F1953



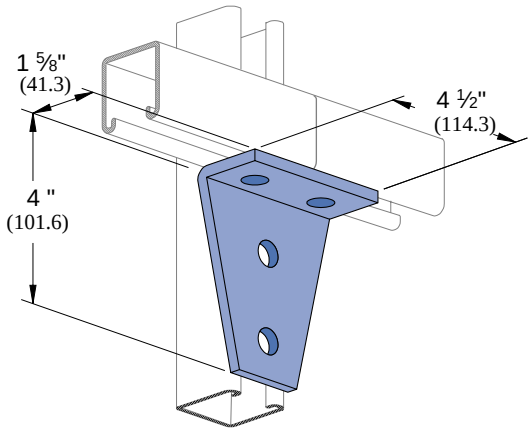
Weight/C: 71.2 Lbs (32.3 kg)

F1326



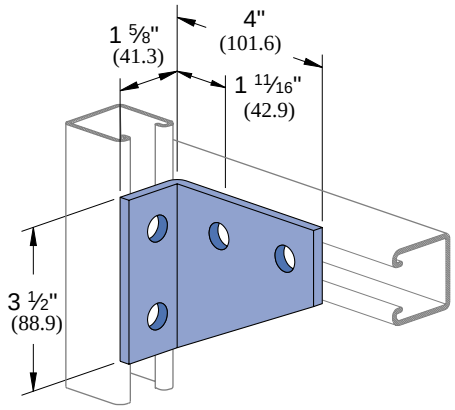
Weight/C: 28.0 Lbs (12.7 kg)

F1359



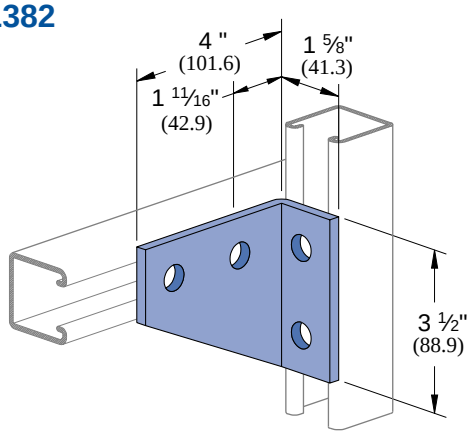
Weight/C: 78.0 Lbs (35.4 kg)

F1381



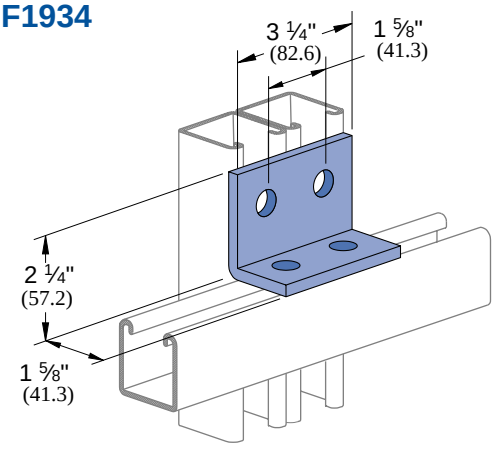
Weight/C: 78.0 Lbs (35.4 kg)

F1382



Weight/C: 78.0 Lbs (35.4 kg)

F1934



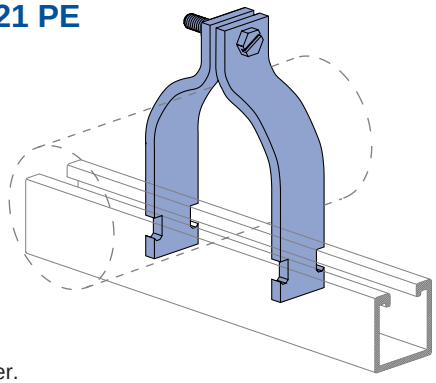
Weight/C: 51.2 Lbs (23.2 kg)

NOTES

- Include suffix of "PE" or "VE" for selected resin. Example: F1000 PE (polyester resin).
- All cut channel ends must be sealed with fiberglass sealant. See page 235.

F1111 PE thru F1121 PE

UNIVERSAL PIPE CLAMPS



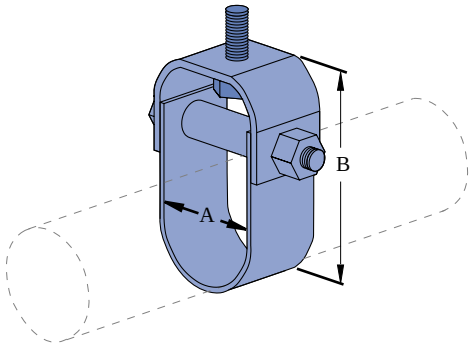
- Standard hardware includes nylon hex bolt and nut.
- If stainless steel hardware is preferred, indicate by adding letter "S" after the part number. Example: F1111 PES.

Material: Thermoplastic Polyester.

Part Number	Pipe Size	Weight/C		Conduit Outside Diameter							
				PVC Schedule 40 & 80		PVC Coated Steel		Rigid Steel		Filament Wound (FRP)	
		Lbs	kg	In	mm	In	mm	In	mm	In	mm
F1111 PE	½"	7.7	3.5	0.840	21	0.920	23	0.840	21	—	—
F1112 PE	¾"	8.3	3.8	1.050	27	1.130	29	1.050	27	0.890	23
F1113 PE	1"	9.4	4.3	1.315	33	1.395	35	1.315	33	1.195	30
F1114 PE	1¼"	10.6	4.8	1.660	42	1.740	44	1.660	42	1.507	38
F1115 PE	1½"	12.2	5.5	1.900	48	1.980	50	1.900	48	1.757	45
F1117 PE	2"	13.4	6.1	2.375	60	2.455	62	2.375	60	2.132	54
F1118 PE	2½"	13.8	6.3	2.875	73	2.955	75	2.875	73	2.650	67
F1119 PE	3"	15.0	6.8	3.500	89	3.580	91	3.500	89	3.132	80
F1120 PE	3½"	20.0	9.1	4.000	102	4.080	104	4.000	102	3.632	92
F1121 PE	4"	21.7	9.8	4.500	114	4.580	116	4.500	114	4.132	105

FC010 VE thru FC120 VE

FIBERGLASS CLEVIS HANGERS



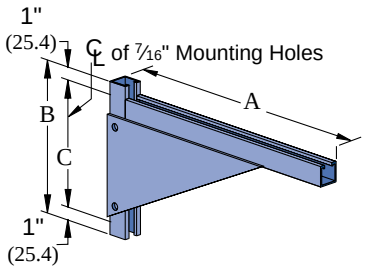
- Hanger rod and hex nut sold separately.

Material: Fiberglass reinforced plastic with vinyl ester resin.

Safety factor 3 at 120°F (49°C).

Part Number	Nominal Diameter	Weight/C		Max. Pipe O.D. "A"		Dimension "B"		Bolt Length		Hanger Rod	Max. Allowable Load	
		Lbs	kg	In	mm	In	mm	In	mm		Lbs	kN
FC010 VE	1"	22	10	1½	38	4	102	3¾	95	½"	200	0.89
FC015 VE	1½"	27	12	2	51	4¼	108	4¼	108	½"	200	0.89
FC020 VE	2"	32	15	2⅝	67	5⅛	130	4⅞	134	½"	200	0.89
FC025 VE	2½"	44	20	3¼	83	5¼	133	5	127	½"	200	0.89
FC030 VE	3"	52	24	3⅞	98	7⅛	181	6¼	159	½"	300	1.33
FC040 VE	4"	75	34	5⅛	130	8¾	222	7¾	197	⅝"	400	1.78
FC060 VE	6"	119	54	7⅛	181	11½	292	9¾	248	⅝"	600	2.67
FC080 VE	8"	199	90	9⅛	235	14⅝	371	12	305	⅝"	600	2.67
FC100 VE	10"	321	146	11⅜	289	18¼	454	13½	343	⅝"	600	2.67
FC120 VE	12"	437	198	13½	343	21⅜	543	16½	419	⅝"	600	2.67

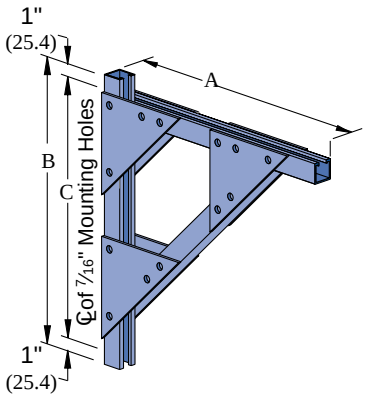
F2493 thru F2501



Part Number	Weight/C		Dimensions						Max. Allowable Uniform Load	
			"A"		"B"		"C"			
	Lbs	kg	In	mm	In	mm	In	mm	Lbs	kN
F2493	386	175	10	254	12	305	10	254	1600	7.12
F2494	406	184	13	330	12	305	10	254	1100	4.89
F2496	429	195	16	406	12	305	10	254	850	3.78
F2499	450	204	22	559	12	305	10	254	725	3.23
F2501	574	260	28	711	12	305	10	254	480	2.14

* Allowable load is based on total load, uniformly distributed over the length of the rack. Safety factor 2.

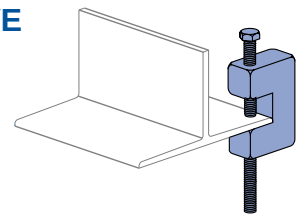
F2502
F2504
F2506



Part Number	Weight/C		Dimensions						Max. Allowable Uniform Load	
			"A"		"B"		"C"			
	Lbs	kg	In	mm	In	mm	In	mm	Lbs	kN
F2502	722	327	28	711	23	584	21	533	750	3.34
F2504	830	376	34	864	26	660	24	610	750	3.34
F2505	955	433	40	1016	29	737	27	686	750	3.34

F5660 VE
F5661 VE

SINGLE BEAM CLAMP



Set screw included.

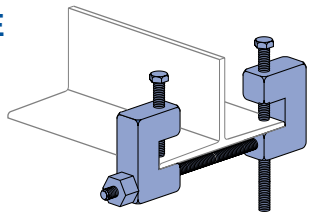
Available in vinyl ester only.

Ultimate load = 300 Lbs (1.3 kN).

Part Number	Use with FRP Rod Size	Weight/C	
		Lbs	kg
F5660 VE	3/8"	43.8	19.9
F5661 VE	1/2"	43.8	19.9

F5662 VE
F5663 VE

DOUBLE BEAM CLAMP



Set screw included.

Ultimate load = 300 Lbs (1.3 kN).

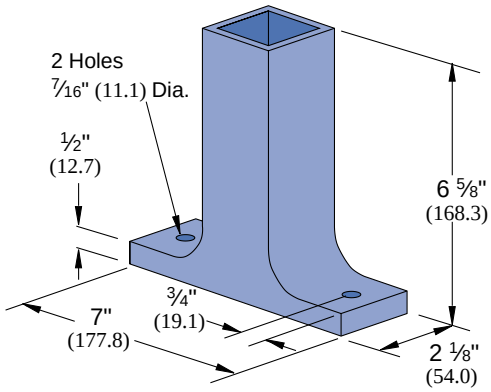
Part Number	Use with FRP Rod Size	Weight/C	
		Lbs	kg
F5662 VE	3/8"	93.3	42.3
F5663 VE	1/2"	93.3	42.3

NOTES

Indicate resin choice by inserting the letters "PE" or "VE".

F5610 VE

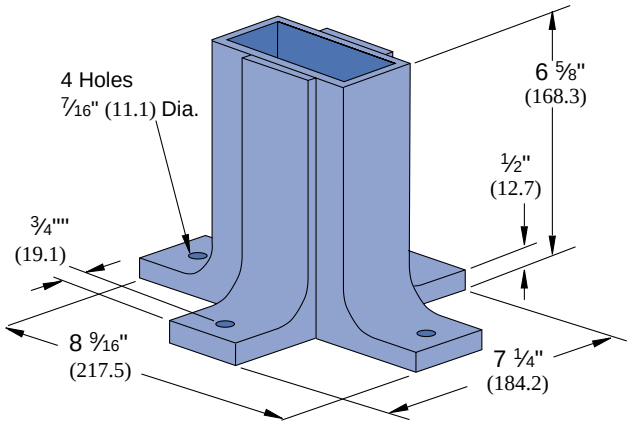
POST BASE FOR F1000



Weight/C: 103 Lbs (46.7 kg)

F5611 VE

POST BASE FOR F1001



Weight/C: 166 Lbs (75.3 kg)

ES-G
ES-Q

SEALANT

- Seals exposed fibers after any field cuts.
- Restores gloss and luster to weathered fiberglass.
- Seals exposed FRP threads after installation of threaded rod and hex nuts.
- Available in quart (ES-Q) or gallon (ES-G) cans

Weight Per Piece: 12 Lbs (5.5 kg)
Weight Per Piece: 3 Lbs (1.4 kg)

TYPICAL PROPERTIES OF FRP THREADED ROD

Properties	3/8-16 UNC	1/2-13 UNC	5/8-11 UNC	3/4-10 UNC	1-8 UNC
Thread shear strength using —fiberglass nut in tensile load	1,250 Lbs (5.6 kN)	2,200 Lbs (9.8 kN)	3,100 Lbs (13.9 kN)	4,500 Lbs (20.0 kN)	6,500 Lbs (28.9 kN)
Transverse shear on threaded rod —double shear ASTM-B-565	3.000 Lbs (13.3 kN)	5,000 Lbs (22.2 kN)	7,500 Lbs (33.4 kN)	12,000 Lbs (53.4 kN)	22,000 Lbs (97.9 kN)
Traverse shear on threaded rod —single shear	1,600 Lbs (7.1 kN)	2,600 Lbs (11.6 kN)	3,800 Lbs (16.9 kN)	6,200 Lbs (27.6 kN)	15,000 Lbs (66.7 kN)
Compressive strength —longitudinal ASTM-D-695	54,000 PSI (37,200 K Pa)	54,000 PSI (37,200 K Pa)	54,000 PSI (37,200 K Pa)	54,000 PSI (37,200 K Pa)	65,000 PSI (44,814 K Pa)
Flexural strength ASTM-D-790	55,000 PSI (37,920 K Pa)	55,000 PSI (37,920 K Pa)	55,000 PSI (37,920 K Pa)	55,000 PSI (37,920 K Pa)	60,000 PSI (41,366 K Pa)
Flexural modulus ASTM-D-790 (10^6)	2.0 PSI (1.4 K Pa)	2.0 PSI (1.4 K Pa)	2.0 PSI (1.4 K Pa)	2.50 PSI (1.7 K Pa)	2.75 PSI (1.9 K Pa)
Torque strength using fiberglass nut —lubricated with SAE 10W30 motor oil	8 Ft Lbs (11 N•m)	18 Ft Lbs (24 N•m)	35 Ft Lbs (48 N•m)	50 Ft Lbs (68 N•m)	110 Ft Lbs (148 N•m)
Dielectric strength ASTM-D-149	35 KV/In (88.9 KV/cm)				
Water absorption 24 hour immersion —threaded ASTM-D-570	1%				
Coefficient of thermal expansion —longitudinal	5×10^{-6} In/In/°F (7.8 cm/cm/°C)				
Max. recommended operation temp. —based on 50% retention of ultimate thread shear strength	200°F (93°C)				
Flammability	Self-extinguishing				

RESIN SYSTEMS

Two standard composite resin systems are available. For most applications, polyester fire-retardant (FR-P) is the more widely used. A vinyl ester composite fire-retardant resin system (FR-VE) is recommended where strong acids such as hydrochloric acid, strong alkalies such as caustic soda, organic solvents and halogenated organic conditions exist. (An abbreviated "Corrosion Resistance Guide" is provided below to guide in the selection of the proper resin system for individual application.)

Corrosion Resistance Guide

Chemicals	75°F (24°C)	160°F (91°C)
Acetic acid 5%	FR-P	FR-P
Acetic acid 25%	FR-P	*FR-VE-210° (99°C)
Aluminum potassium sulfate 5%	FR-P	FR-P
Ammonium hydroxide 10%	FR-P	FR-VE-150° (66°C)
Ammonium nitrate	FR-P	FR-P
Benzenesulfonic acid 5%	FR-P	FR-P
Calcium chloride	FR-P	FR-P
Carbon tetrachloride	FR-VE	*FR-VE-100° (38°C)
Chlorine dioxide 15%	FR-P	*FR-VE-150° (66°C)
Chromic acid 5%	FR-P	*FR-VE-150° (66°C) (Call)
Copper sulfate	FR-P	FR-P
Diesel fuel, No. 1	FR-P	FR-P
Diesel fuel, No. 2	FR-P	FR-P
Ethylene glycol	FR-P	FR-P
Fatty acids 100%	FR-P	FR-P
Ferrous sulfate	FR-P	FR-P
Fluosilicic acid 0-20%	FR-VE	FR-VE (Call)
Hydrochloric acid 1%	FR-P	FR-P
Hydrochloric acid 15%	FR-P	*FR-VE-180° (82°C)
Hydrochloric acid 37%	FR-P	*FR-VE-150° (66°C)
Kerosene	FR-P	FR-P
Magnesium chloride	FR-P	FR-P

Chemicals	75°F (24°C)	160°F (91°C)
Methyl alcohol 10%	FR-P	*FR-VE-150° (66°C)
Naphtha	FR-P	FR-P
Nitric acid 5%	FR-P	FR-P
Nitric acid 20%	FR-VE	*FR-VE-120° (49°C)
Phosphoric acid 10%	FR-P	FR-P
Phosphoric acid 30%	FR-P	FR-P
Phosphoric acid 85%	FR-P	FR-P
Sodium bicarbonate 10%	FR-P	FR-P
Sodium bisulfate	FR-P	FR-P
Sodium carbonate	FR-P	FR-VE
Sodium chloride	FR-P	FR-P
Sodium hydroxide up to 50%	FR-P	*FR-VE-120° (49°C)
Sodium hypochlorite 5%	FR-P	*FR-VE-120° (49°C)
Sodium nitrate	FR-P	FR-P
Sodium silicate	FR-P	*FR-VE-210° (99°C)
Sodium sulfate	FR-P	FR-P
Sulfuric acid 0-30%	FR-P	FR-P
Sulfuric acid 30-50%	FR-VE	FR-VE
Sulfuric acid 50-70%	FR-VE	*FR-VE-180° (82°C)
Trisodium phosphate 25%	FR-P	*FR-VE-210° (99°C)
Trisodium phosphate-All	FR-VE	*FR-VE-210° (99°C)
Water, Distilled	FR-P	FR-P

FR—Fire-retardant P—Polyester resin VE—Vinyl ester resin
* Not recommended to exceed this temperature Call—Call for recommendations

Information contained in this chart is based on data from raw material suppliers and collected from several years of actual industrial applications.

Temperatures are not the minimum nor the maximum (except where specifically stated but represent standard test conditions. The products may be suitable at higher temperatures but individual test data should be required to establish such suitability.

The recommendations or suggestions contained in this chart are made without guarantee or representation as to results. We suggest that you evaluate these recommendations and suggestions in your own laboratory or actual field trial prior to use.

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UNISTRUT® CORPORATION

Send For FREE Product Information

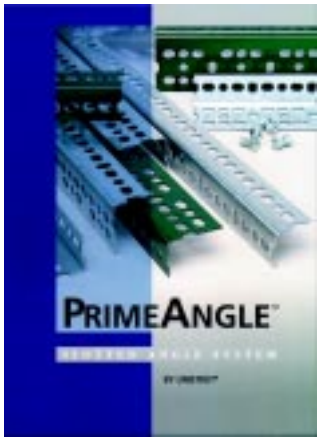
UNISTRUT® METAL FRAMING CD-ROM

The Unistrut CD-ROM Catalog and Design Tool is an electronic version of Uinistrut's definitive General Engineering Catalog with all the interactive features needed to make it an efficient, easy-to-use design tool. Menu icons provide simple point-and-click access to product descriptions, application information, parts cross-reference, technical data and project planning tools.

PRODUCT APPLICATION GUIDE (No. IND 700)

This 54-page highly-illustrated brochure is designed specifically for maintenance-repair-operations professionals. Featuring six different Unistrut support systems, this brochure is filled with full-color photographs of projects completed with one or more Unistrut products. With Unistrut support systems, projects can be made faster, easier, stronger and safer.

PRIMEANGLE™ SLOTTED ANGLE



Versatility and ease of assembly are highlighted in this six-page color brochure describing the PrimeAngle Slotted Angle System. Descriptions, drawings and load tables are provided for each of three basic PrimeAngle sections used alone or in various combinations. System connectors, hardware and accessories are fully described and illustrated.

SEISMIC BRACING SYSTEMS (No. SBS-2)

Use of Unistrut Metal Framing products in seismic bracing applications is the subject of this 52-page engineering catalog. Included are design procedures, detail drawings and load tables for trapeze hangers and single pipe hangers as approved by the California Office of Statewide Health Planning and Development. Also included is specification data for channels, fittings and hardware.

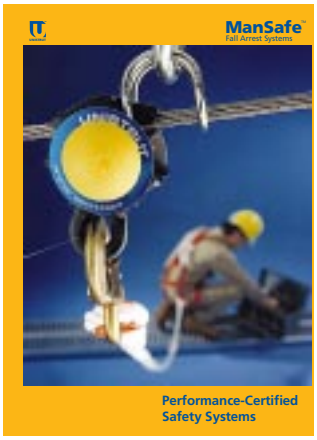
INDUSTRIAL SQUARE TUBING (No. TEL-E8)

Telespar® is a unique system consisting of square perforated telescoping tubing, fittings and accessories. This 8-page color catalog offers specifications, applications, design data and corresponding tube and bolt size chart. Discover the limitless possibilities of Telespar Systems.

MEDICAL SUPPORT SYSTEMS (No. UMMS-300)

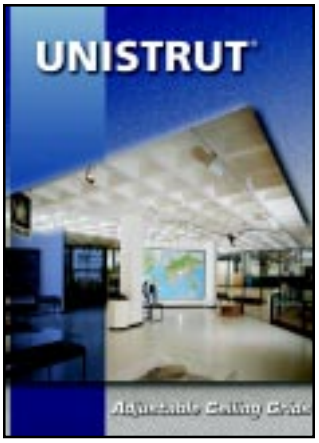
Unistrut Medical Support Systems catalog details general specifications and information highlighting supports for X-ray equipment, gas columns, CRT monitors, microscopes and surgical lighting. This descriptive brochure also serves as a work-sheet for architectural and healthcare professionals to arrive at the optimum installation package.

FALL ARREST SYSTEMS (No. FA-100)



Color application photos and detailed product data highlight this 10-page brochure on the ManSafe Fall Arrest System, designed to help protect those who work in high or hazardous locations. Detail drawings and descriptive text explain use of the unique ManSafe concept in horizontal, vertical and sloping applications. General system specifications and performance-certification information is also included.

ADJUSTABLE CEILING GRIDS (CG-100)



Build support flexibility into any space with ceiling grids from Unistrut. This full-color, brochure details three easy-to-assemble systems and a variety of compatible fittings, fasteners and accessories. These easy-to-install systems create support grids which offer many important advantages, both functional and aesthetic. End-use application photographs compliment illustrations of each system.

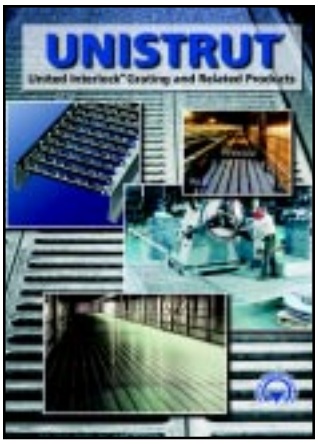
UNISTRUT® ELECTRICAL SUPPORT SYSTEMS

This comprehensive 20-page brochure for users and specifiers includes electrical application tips, descriptions of system components and supporting technical information. Full-color photos, detailed drawings and complete engineering data facilitate design of lighting fixture supports, trapeze hangers, cable-tray supports and related electrical projects.

CONCRETE INSERTS (No. 1)

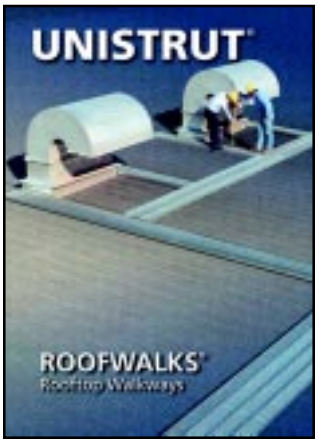
Unistrut offers the broadest range of concrete insert styles and accessories in the industry. This fully-illustrated brochure presents a complete line of cold-formed and hot-formed concrete inserts, featuring a full-range of light-, medium-, and heavy-duty continuous inserts and accessories, plus a selection of spot inserts for both precast and general construction applications.

GRATING SYSTEMS (No. G-3)



Unistrut presents the United Interlock® Plank Grating System. Grating can be used for flooring, walkways, mezzanines, stair treads, architectural wall coverings and more. This 20-page brochure includes applications, installations and product features, with special attention to gauges, surfaces and finishes. Complete with color photos, load tables and charts.

ROOFTOP WALKWAY SYSTEMS (No. RRS-1)



Roofwalks® Rooftop Walkway systems provide access to rooftop equipment, safeguard workers against slipping and protect against roof dishing and puncture. This 4-page full color fold-out describes the various systems available for your roofing needs.

For your convenience, a Business Reply Main card has been included on the following page. To receive any of the literature described on this page, please check the appropriate boxes on the reply card and we will be happy to fill your request.

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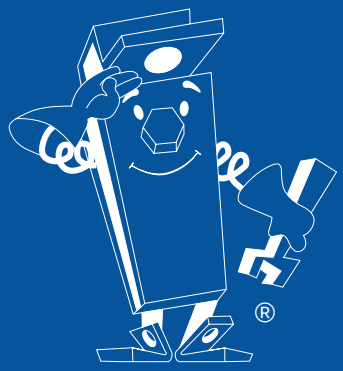

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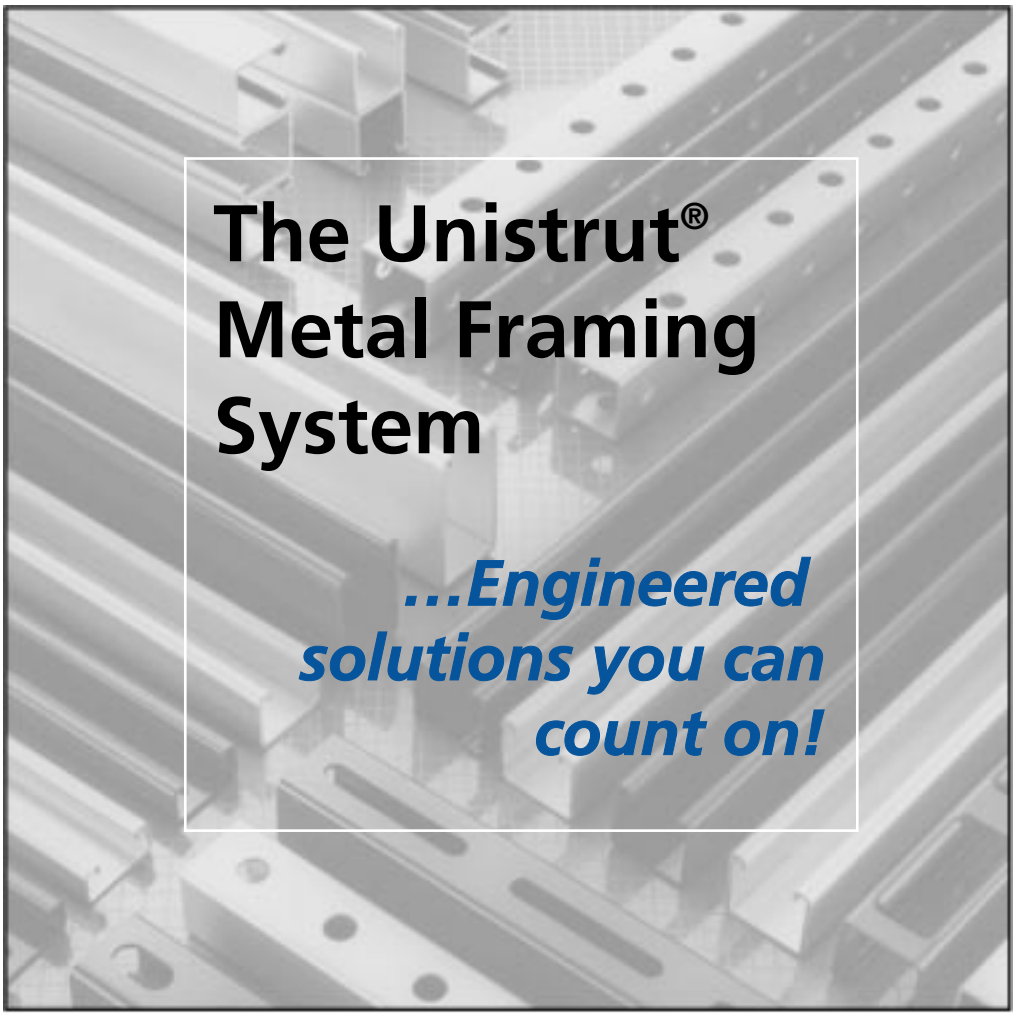

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UNISTRUT systems and products are manufactured under one or more of the following United States and Canadian patents and patent applications.

UNITED STATES PATENTS

3,721,463	3,888,441	3,948,012	4,277,923	4,562,681	4,616,799	4,830,531	4,926,592
3,861,107	3,914,063	3,968,624	4,278,228	4,575,295	4,784,552	4,840,525	5,046,291
3,877,275	3,927,499	3,994,111	4,289,415	4,593,514	4,822,199	4,895,331	DES297,668
3,888,440	3,928,930	4,073,114					

CANADIAN PATENTS

52,439	596,548	1,007,824	1,130,971	1,245,886	1,263,531	1,320,196
57,636	1,007,823	1,039,948	1,135,925	1,255,069	1,267,265	

TRADE NAMES

UNISTRUT systems and products are sold under many protected trade names including the following:
BRITE-LINE, MR STRUT (& DESIGN) N1000, P1000, PERMA GREEN, ROOFWALKS, TELESPAR, TELESTRUT, UNI-CLIP, UNI-CUSHION, UNISTRUT (& DESIGN), UNITED INTERLOCK

METAL FRAMING MANUFACTURERS ASSOCIATION

Publication date December, 1997

UNISTRUT®
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