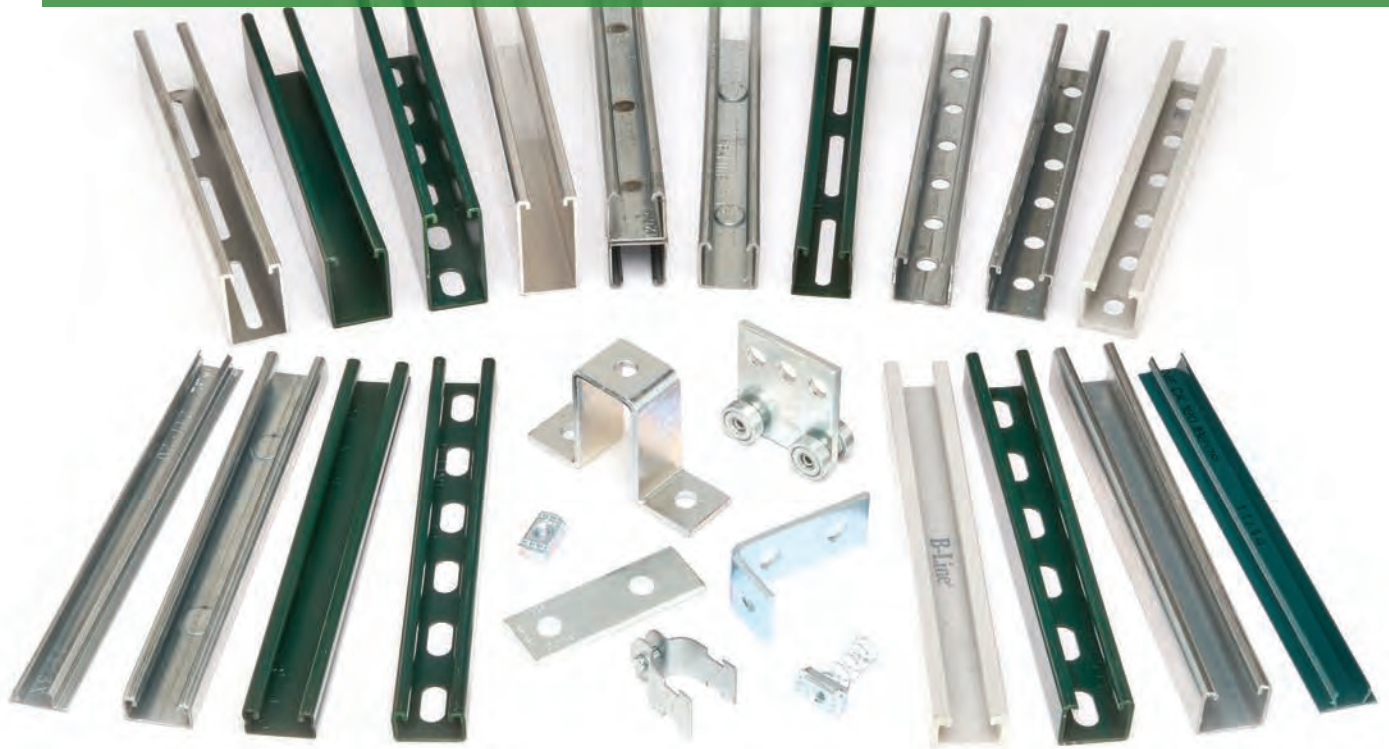




# Strut systems





Eaton is a leading manufacturer and fabricator of steel and aluminum B-Line series products which are used in support of equipment for industrial, commercial, utility, and OEM installations. We are proud of the exacting standards of research, design, engineering, and manufacturing that go into each and every product that comprise our strut product line. Our customers have access to one of the most complete support systems offered in the industry, including metal framing, cable tray, pipe hangers, slotted angle, and fasteners.

Many of our products are listed by the Underwriter's Laboratories, Inc. All of our strut system products are manufactured to meet or exceed Metal Framing Manufacturers Association (MFMA) and other industry standards set for their design and manufacture.



Metal Framing Manufacturers Association

CoSPEC™ specifier center is designed to help you easily SELECT, VIEW and DOWNLOAD Eaton's B-Line Series product design content in any one of nearly one hundred non-proprietary and proprietary CAD, BIM, PDMS, and graphics formats, which helps speed the integration of the content into your design project.

## Features

- Easy integration and configuration
- Comprehensive library of 2D drawings and 3D models for CAD, BIM, PDMS, SP3D, and graphics output
- Up-to-date software versions and product data information
- Submittals and specification sheets in PDF format
- Proprietary file format outputs are native to the chosen software

## Nearly a Hundred Download Options

- Aveva PDMS and Intergraph SmartPlant SP3D (on select products) content
- Autodesk Revit output available
- Proprietary formats from AutoCAD to SolidWorks to Catia
- Non-proprietary formats like DXF and STEP, and more
- Graphics files in a number of formats including EPS

## NOTICE

*Eaton reserves the right to change the specifications, materials, equipment, prices or the availability of products at any time without prior notice. While every effort has been made to assure the accuracy of information contained in this catalog at the time of publication, we are not responsible for inaccuracies resulting from undetected errors or omissions.*

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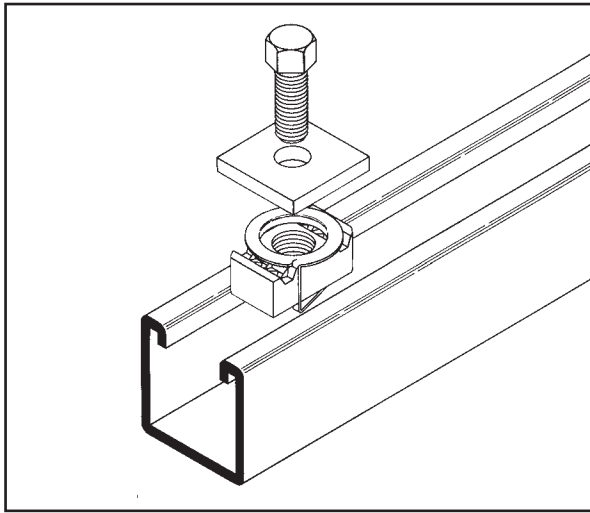
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# Introduction

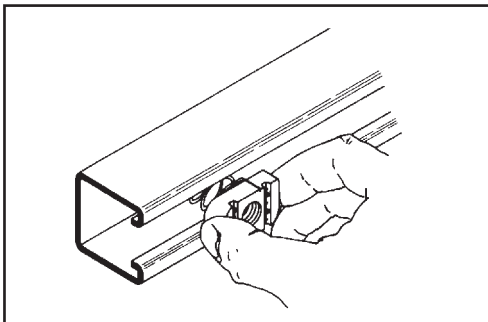
Our strut support system is designed with many time-saving features. They are fully adjustable and reusable, with a complete line of channels, fittings and accessories for multi-purpose applications.



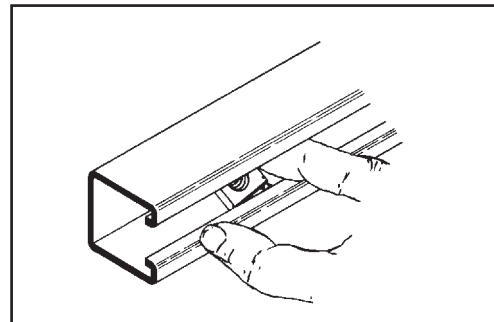
- **No Welding**
- **No Drilling**
- **Use Your Imagination**

The strut system installs quickly, with no need for special tools. All you need is a wrench and hacksaw.

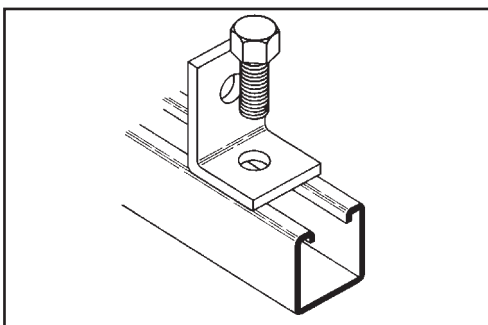
Channels and parts can be taken apart for reuse as quickly as they were assembled, yet help provide the strength of welded construction. This eliminates welding and drilling which can have substantial savings in time and labor.



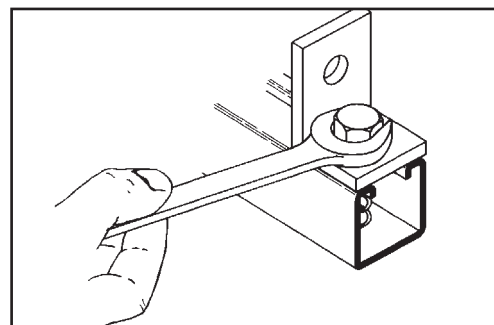
1. Channel nut may be inserted anywhere along continuous slot. Designed for easy insertion and self-alignment.



2. A 90° turn aligns channel nut grooves with inturned lips of the channel.



3. Position fitting over channel nut and insert bolt to start any connection.

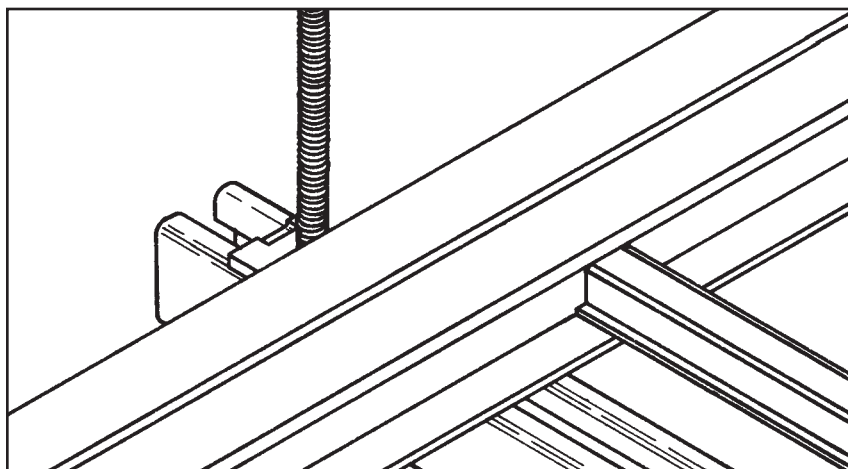
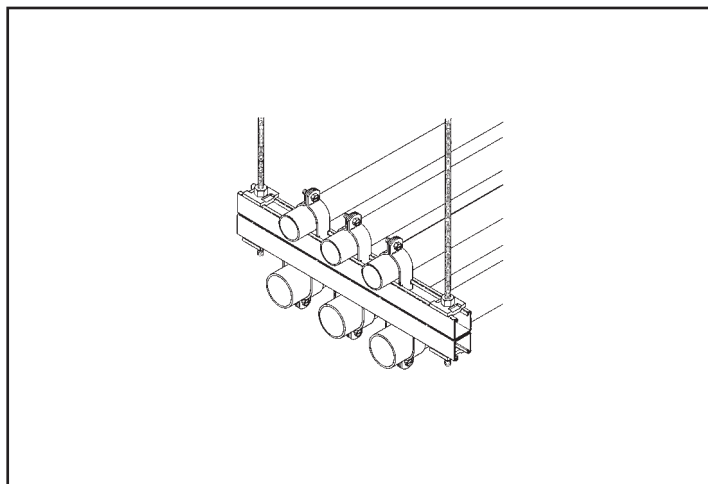


4. With the twist of a wrench, channel nut locks its teeth firmly against inturned lips.

Our strut system provides an economical solution for electrical, mechanical and industrial supports with an unlimited variety of applications in the construction industry.

## Electrical Applications

- Lighting Fixture Supports
- Raceway Systems
- Trapeze Hangers
- Pipe and Conduit Supports
- Cable Tray Supports
- Beam Adjustments

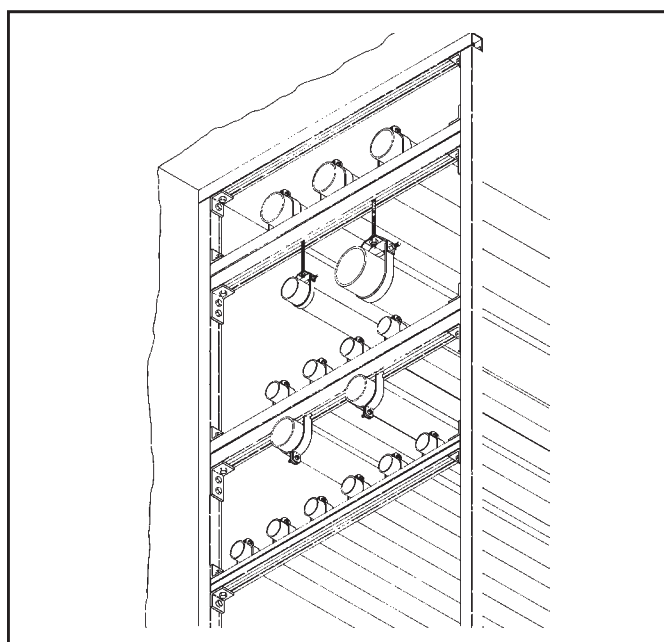


## Mechanical Applications

- Piping Racks
- Tunnel Pipe Stanchions
- Concrete Inserts
- Beam Attachments
- Pipe Risers

## Industrial Applications

- Racks and Shelving
- Partitions
- Production Line Supports
- Trolley Systems
- Wall Framing



## Materials

### Carbon Steel

Channels made from high-quality carbon steel are continuously roll formed to precise dimensions. By cold working the steel mechanical properties are increased, allowing lightweight structures to carry the required load. Corrosion resistance of carbon steel varies widely with coating and alloy. See "Finishes" for more detailed information.

### Stainless Steel

Stainless steel channel is available in AISI Type 304 or 316 material. Both are non-magnetic and belong to the austenitic stainless steels group, based on alloy content and crystallographic structure. Like carbon steel, stainless steel exhibits increased strength when cold worked by roll-forming.

Several conditions make the use of stainless steel ideal. These include reducing long term maintenance costs, high ambient temperatures, appearance, and stable structural properties such as yield strength, and high creep strength.

Type 304 resists most organic chemicals, dyestuffs and a wide variety of inorganic chemicals at elevated or cryogenic temperatures. Type 316 contains slightly more nickel and adds molybdenum to give it better corrosion resistance in chloride and sulfuric acid environments. For more information concerning the differences between types 304 and 316, visit Eaton.bline.com.

### Aluminum

Standard aluminum channel is extruded from aluminum alloy 6063-T6. Strut fittings are made from aluminum alloy 5052-H32.

The high strength to weight ratio of channel made of aluminum helps greatly reduce the overall cost of installation through ease of handling and field cutting.

Aluminum owes its excellent corrosion resistance to its ability to form an aluminum oxide film that immediately reforms when scratched or cut. In most outdoor applications, aluminum has excellent resistance to "weathering". The resistance to chemicals, indoor or outdoor, can best be determined by tests conducted by the user with exposure to the specific conditions for which it is intended. The corrosion resistance of aluminum to some commonly known chemicals is shown in the Corrosion Chart on page 10. For further information, contact us or the Aluminum Association.

### Fiberglass

We offer two fire retardant (FR) resins for strut systems, polyester and vinyl ester. Both resins are ideal for corrosive environments or nonconductive applications with moderate strength requirements. Some common types of environments where Vinyl Ester Resins are recommended, that Poly Esters are not, are paper mills, most any metal plating operation and any condition with

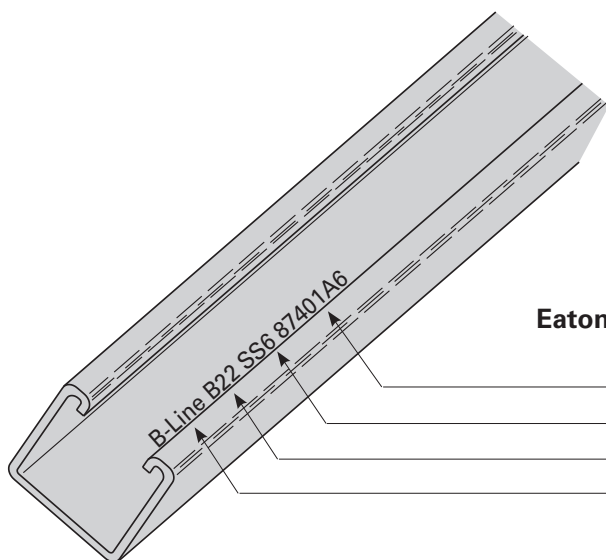
concentrated levels of Chlorine, [Cl<sup>-</sup>]. Please consult our fiberglass corrosion resistance charts on page 184 for specific chemical recommendation data.

Unlike other base materials depicted in this catalog, fiberglass exhibits unique physical property changes when operating in elevated temperature conditions that are a fraction of increase compared to steel or aluminum. Thus, it is advised against using fiberglass in temperatures greater than 200° F.

Please refer to the "Corrosion Resistance Guid" on page 184 for specific applications.

The fiberglass strut systems are manufactured from glass fiber-reinforced plastic shapes that meet ASTM E-84, Class 1 Flame Rating and self-extinguishing requirements of ASTM D-635. A surface veil is applied during pultrusion to insure a resin-rich surface and ultraviolet resistance.

While polyester is sufficient for most uses, vinyl ester is suitable for a broader range of environments.



### Eaton's B-Line series steel strut is stamped with:

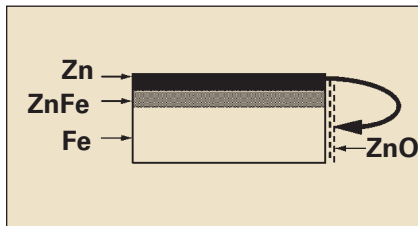
- Traceable to the steel's origin
- Material/Finish
- Part number designation
- Company Name

## Finishes

### Zinc Coatings

Zinc protects steel in two ways. First it protects the steel as a coating, and second acts as a sacrificial anode to repair bare areas such as cut edges, scratches, and gouges. The corrosion protection of zinc is directly related to its thickness and the environment. This means a .2 mil coating will last twice as long as a .1 mil coating in the same environment.

Galvanizing also protects cut and drilled edges.



### Electrogalvanized Zinc

Electrogalvanized Zinc (also known as zinc plated or electroplated) is the process by which a coating of zinc is deposited on the steel by electrolysis from a bath of zinc salts.

A rating of SC3, our standard, provides a minimum zinc coating thickness of .5 mils (excluding hardware, which is SC1 = .2 mils).

When exposed to air and moisture, zinc forms a tough, adherent, protective film consisting of a mixture of zinc oxides, hydroxides, and carbonates. This film is a barrier coating which helps slow subsequent corrosive attack on the zinc. This coating is usually recommended for indoor use in relatively dry areas, as it provides ninety-six hours protection in salt spray testing per ASTM B117.

### Chromium / Zinc

Chromium / Zinc is a corrosion resistant composition, which was developed to protect fasteners and small bulk items for automotive use. The coating applications have since been extended to larger parts and other markets.

Chromium/Zinc composition is an aqueous coating dispersion containing chromium, proprietary organics, and zinc flake.

This finish provides 720 hours protection in salt spray testing per ASTM B117.

### Pre-Galvanized Zinc

(Mill galvanized, hot dip mill galvanized or continuous hot dip galvanized) Pre-galvanized steel is produced by coating coils of sheet steel with zinc by continuously rolling the material through molten zinc at the mills. This is also known as mill galvanized or hot dip mill galvanized. These coils are then slit to size and fabricated by roll forming, shearing, punching, or forming to produce our pre-galvanized strut products.

The G90 specification calls for a coating of .90 ounces of zinc per square foot of steel. This results in a coating of .45 ounces per square foot on each side of the sheet. This is important when comparing this finish to hot dip galvanized after fabrication.

During fabrication, cut edges and welded areas are not normally zinc coated; however, the zinc near the uncoated metal becomes a sacrificial anode to protect the bare areas after a short period of time.

### Hot Dip Galvanized After Fabrication (Hot dip galvanized or batch hot dip galvanized)

Hot dip galvanized strut products are fabricated from steel and then completely immersed in a bath of molten zinc. A metallic bond occurs resulting in a zinc coating that completely coats all surfaces, including edges and welds.

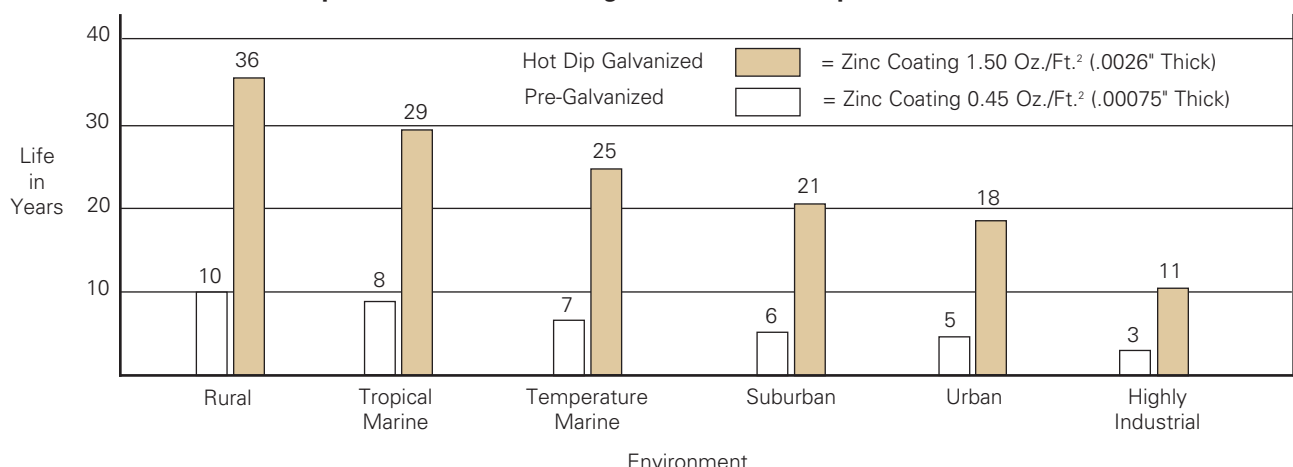
Another advantage of this method is coating thickness. Strut products that are hot dip galvanized after fabrication have a minimum thickness of 1.50 ounces per square foot on each side, or a total 3.0 ounces per square foot of steel, according to ASTM A123.

The zinc thickness is controlled by the amount of time each part is immersed in the molten zinc bath as well as the speed at which it is removed. The term "double dipping" refers to parts too large to fit into the galvanizing kettle and must be dipped one end at a time. It does not refer to extra coating thickness.

The layer of zinc which bonds to steel provides a dual protection against corrosion. It protects first as an overall barrier coating. If this coating happens to be scratched or gouged, zinc's secondary defense is called upon to protect the steel by galvanic action.

Hot-Dip Galvanized After Fabrication is recommended for prolonged outdoor exposure and will usually protect steel for 20 years or more in most atmospheric environments and in many industrial environments. For best results, a zinc rich paint (available from Eaton's B-Line Division) should be applied to field cuts. The zinc rich paint will provide immediate protection for these areas and eliminate the short time period for galvanic action to "heal" the damaged coating.

**Anticipated Life of Zinc Coatings In Various Atmospheric Environments**





## DURA GREEN and DURA-COPPER Epoxy Coatings

DURA GREEN™ and DURA-COPPER™ epoxy coatings are water borne epoxy coatings applied to B-Line series products by a precisely controlled cathodic electro-deposition process. This process is accomplished using a conveyor to transport channel and fittings through several cleaning, phosphatizing and application stages prior to being baked (See diagram below).

This custom-designed paint system is used for painting all channels, channel combinations, slotted angle, and fittings.

Samples are selected on a routine basis for salt spray (fog) testing to verify the quality of the finish. These tests are performed in accordance with ASTM B117 and evaluated and related according to ASTM D1654 (Tables 1 and 2).

The DURA GREEN and DURA-COPPER epoxy coatings have been tested and listed by Underwriters Laboratories in

accordance with “Standard for Surface Metal Raceway and Fittings, UL5” and “Standard for Pipe Hanger Equipment for Fire Protection Service, UL203”.

Due to DURA GREEN’s organically based composition, it seats itself into porous surfaces more completely and efficiently than zinc coatings. As these porous caverns are filled along the material profile, the outer finished surface demonstrates an increased smooth uniform plane which produces considerably less off-gasing when tested.

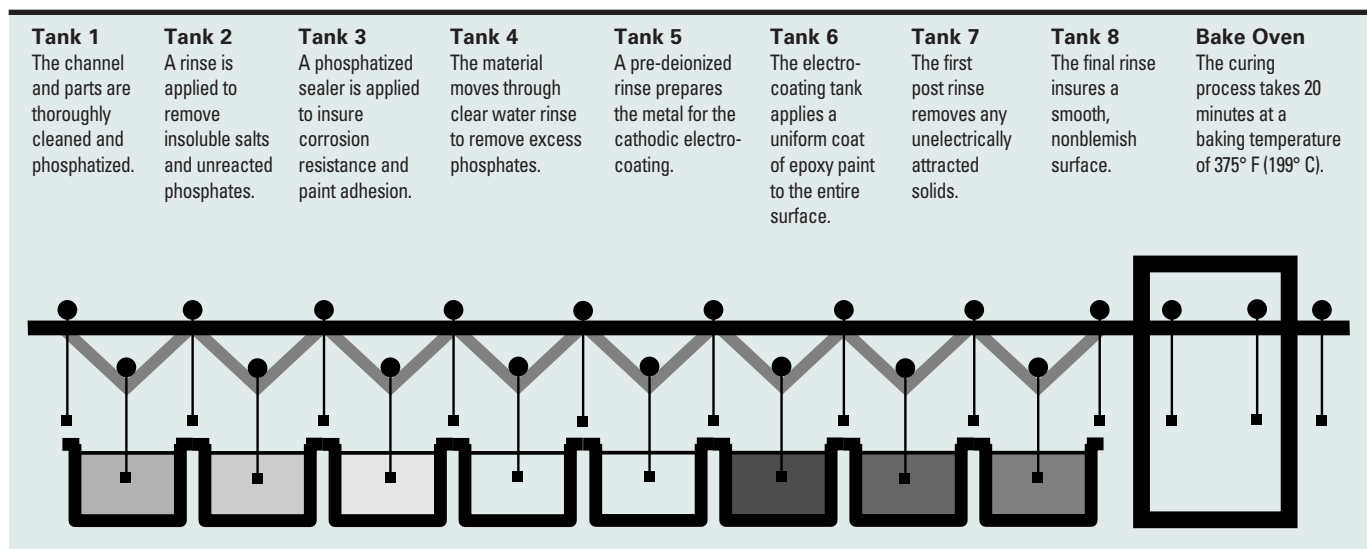
DURA GREEN channel meets or exceeds 100 level clean room standards. This was confirmed by testing the channel in accordance with Boeing (PCL) Standards, which are more stringent and complete than ASTM E595-93. DURA GREEN was found to be a superior finish, due in part to its proven application process.

## Salt Spray Test Results

| Type of Finish             | Unscribed<br>5% Failure (1) | Scribed 1/8" (3.2) Creepage<br>from Scribe (1) |
|----------------------------|-----------------------------|------------------------------------------------|
| DURA GREEN Epoxy           | 1000 Hours                  | 312 Hours                                      |
| Mill Galv. (Pre-Galv.) G90 | 192 Hours                   | 288 Hours                                      |
| Perma-Green                | 438 Hours                   | 231 Hours                                      |
| Zinc Chromate              | 36 Hours                    | 96 Hours                                       |
| Industry Green (Range)     | 10 to 36 Hours              | 4 to 30 Hours                                  |

(1) All salt spray (fog) tests conducted in accordance with ASTM B117 and evaluated and rated according to ASTM D1654 Tables 1 and 2. Tests are performed and certified by an independent testing laboratory.

## DURA GREEN / DURA-COPPER Epoxy Coating Process



## Welding

The welding procedures used in the fabrication of our steel products are in accordance with American Welding Society (AWS) Standards. To help achieve the highest quality in our manufacturing processes, our welders follow standards set by AWS Code.

### Spot Welding

Spot welded back-to-back channel is manufactured using a modern DC powered resistance welder controlled by a microprocessor. This produces a series of spot welds with speed and consistency. Consistency is one of the most important advantages in specifying back-to-back channel. Variables such

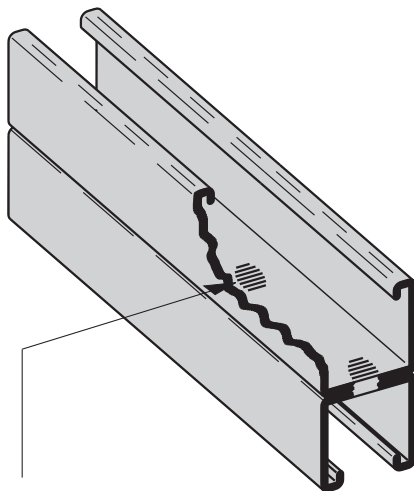
as weld sequence, speed and duration are carefully controlled and monitored by a sophisticated electronic control system. A statistical quality control program, combining destructive and non-destructive testing, is used to help ensure high quality welds.

### MIG Welding

MIG welded, more properly called gas metal arc welded (GMAW) combination channels and fittings, are produced when physical dimensions or certain combinations require a weld process other than automatic spot welding. The same quality control requirements are imposed on MIG welded and spot-welded products.

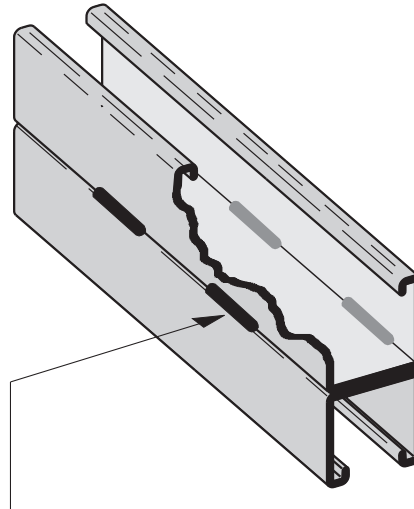
## Quality Assurance

Our Quality Assurance Program has been developed and implemented for compliance with ISO9001:2008. We also comply with various industry standards and specifications. We have extensive experience in supplying metal framing components for the nuclear power generating industry, and upon request can provide products in compliance with 10CFR50 Appendix B, NQA-1 and 10CFR21. For more information, contact us.



### Spot Weld

$\frac{1}{2}$ " (12.7mm) spot welds every 4" (101.6mm) on center



### MIG Weld

$\frac{3}{4}$ " (9.0mm) long MIG welds every 6" (152.4mm) on center

## Corrosion

All metal surfaces are affected by corrosion. Depending on the physical properties of the metal and the environment to which it is exposed, chemical or electromechanical corrosion may occur.

### Atmospheric Corrosion

Atmospheric corrosion occurs when metal is exposed to airborne liquids, solids or gases. Some sources of atmospheric corrosion are moisture, salt, dirt and sulphuric acid. This form of corrosion is typically more severe outdoors, especially near marine environments.

### Chemical Corrosion

Chemical corrosion takes place when metal comes in direct contact with a corrosive solution. Some factors which affect the severity of chemical corrosion include: chemical concentration level, duration of contact, frequency of washing, and operating temperature.

### Storage Corrosion

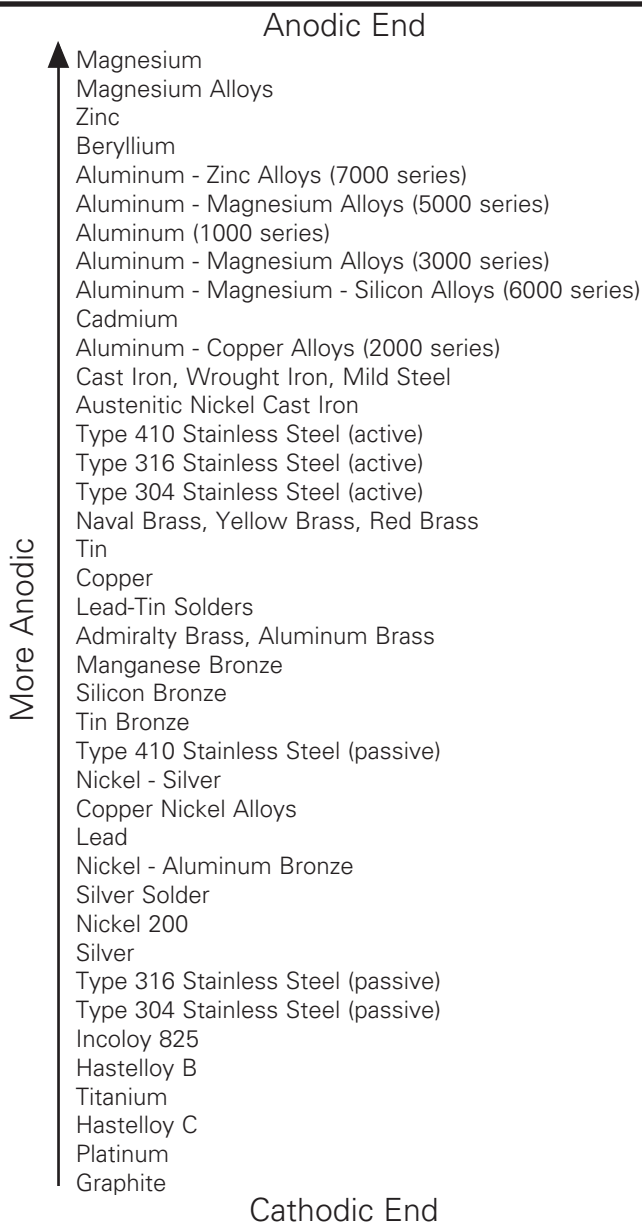
Wet storage stain (white rust) is caused by the entrapment of moisture between surfaces of closely packed and poorly ventilated material for an extended period. Wet storage stain is usually superficial, having no affect on the properties of the metal.

Light staining normally disappears with weathering. Medium to heavy buildup should be removed in order to allow the formation of normal protective film. Proper handling and storage will help to assure stain-free material. If product arrives wet, it should be unpacked and dried before storage. Dry material should be stored in a well ventilated "low moisture" environment to avoid condensation formation. Outdoor storage is undesirable, and should be avoided whenever possible.

### Galvanic Corrosion

Galvanic corrosion occurs when two or more dissimilar metals are in contact in the presence of an electrolyte (i.e.: moisture). An electrolytic cell is created and the metals form an anode or a cathode depending on their relative position on the Galvanic Series Table. The anodic material will be the one to corrode. Anodic or cathodic characteristics of two dissimilar metals will depend on the type of each material. For example: If zinc and steel are in contact, the zinc acts as the anode and will corrode; the steel acts

## Galvanic Series in Sea Water



Metals in descending order of activity in the presence of an electrolyte.

as the cathode, and will be protected. If steel and copper are in contact, the steel is now the anode and will corrode.

The rate at which galvanic corrosion occurs depends on several factors:

1. The relative position on the Galvanic Series Table - the further apart materials are in the Galvanic Series Table, the greater the potential for corrosion of the anodic material.

2. The amount and concentration of electrolyte present - an indoor, dry environment will have little or no galvanic corrosion compared to a wet atmosphere.

3. The relative size of the materials - a small amount of anodic material in contact with a large cathodic material will result in greater corrosion. Likewise, a large anode in contact with a small cathode will decrease the rate of attack.

| Chemical                        | Aluminum | DURA GREEN™ | PVC | Type 304 Stainless | Type 316 Stainless | Zinc Coated Steel |
|---------------------------------|----------|-------------|-----|--------------------|--------------------|-------------------|
| Acetic Acid 10%                 | R        | NR          | R   | R                  | R                  | NR                |
| Acetic Acid 2%                  | R        | F           | R   | R                  | R                  | NR                |
| Acetone                         | R        | R           | NR  | R                  | R                  | R                 |
| Ammonium Hydroxide-Conc.        | R        | R           | R   | R                  | R                  | —                 |
| Ammonium Hydroxide 10%          | F        | R           | R   | R                  | R                  | —                 |
| Ammonium Hydroxide 2%           | R        | R           | R   | R                  | R                  | —                 |
| Benzene                         | R        | R           | NR  | R                  | R                  | —                 |
| Bromine Water                   | NR       | R           | R   | NR                 | NR                 | —                 |
| Butanol (Butyl Alcohol)         | R        | R           | R   | R                  | R                  | R                 |
| Carbon Disulfide                | R        | R           | NR  | R                  | R                  | —                 |
| Carbon Tetrachloride            | F        | R           | F   | R                  | R                  | —                 |
| Chlorine Water                  | R        | R           | R   | NR                 | F                  | R                 |
| Cutting Oil                     | —        | R           | —   | —                  | —                  | —                 |
| Diethanolamine                  | R        | R           | NR  | —                  | —                  | NR                |
| Ethanol                         | R        | R           | R   | R                  | R                  | R                 |
| Ethyl Acetate                   | R        | R           | NR  | —                  | —                  | R                 |
| Ethylene Dichloride             | F        | R           | NR  | —                  | —                  | R                 |
| Formaldehyde 20%                | R        | R           | R   | R                  | R                  | R                 |
| Gasoline                        | R        | R           | R   | R                  | R                  | R                 |
| Glycerine                       | R        | R           | R   | R                  | R                  | R                 |
| Household Detergent 10%         | F        | R           | R   | R                  | R                  | —                 |
| Hydrochloric Acid 40%           | NR       | NR          | R   | NR                 | NR                 | NR                |
| Hydrochloric Acid 10%           | NR       | F           | —   | NR                 | NR                 | NR                |
| Hydrochloric Acid 2%            | NR       | F           | —   | NR                 | NR                 | NR                |
| Hydrogen Peroxide 30%           | R        | NR          | R   | R                  | R                  | —                 |
| Hydrogen Peroxide 3%            | R        | R           | —   | R                  | R                  | —                 |
| Hydrogen Sulfide (Gas)          | R        | R           | R   | F                  | R                  | —                 |
| JP-4 Jet Fuel                   | R        | R           | R   | R                  | R                  | —                 |
| Lactic Acid 85%                 | F        | R           | R   | NR                 | —                  | —                 |
| Latex                           | R        | R           | —   | R                  | R                  | NR                |
| Linseed Oil Fatty Acid          | R        | F           | R   | R                  | R                  | —                 |
| Methanol                        | R        | R           | R   | R                  | R                  | R                 |
| Methyl Ethyl Ketone             | R        | R           | NR  | —                  | —                  | R                 |
| Methyl Isobutyl Ketone          | R        | R           | NR  | —                  | —                  | R                 |
| Mineral Spirits                 | R        | R           | —   | —                  | —                  | —                 |
| Motor Oil-10W                   | R        | R           | R   | R                  | R                  | R                 |
| Naphtha, VMandP                 | R        | R           | R   | R                  | R                  | R                 |
| Nitric Acid 2%                  | F        | NR          | R   | R                  | R                  | —                 |
| Perchloroethylene               | R        | R           | —   | —                  | —                  | NR                |
| Petroleum Ether                 | —        | R           | —   | R                  | R                  | R                 |
| Phenol 10%                      | R        | R           | NR  | R                  | R                  | R                 |
| Phosphoric Acid 2%              | F        | NR          | R   | R                  | R                  | NR                |
| Potassium Hydroxide 50%         | NR       | R           | R   | R                  | R                  | —                 |
| Potassium Hydroxide 10%         | NR       | R           | R   | R                  | R                  | —                 |
| Potassium Hydroxide 2%          | NR       | R           | R   | R                  | R                  | —                 |
| Sodium Chloride 25%             | F        | R           | R   | R                  | R                  | F                 |
| Sodium Hydroxide 50%            | NR       | R           | R   | R                  | R                  | NR                |
| Sodium Hydroxide 10%            | NR       | R           | R   | R                  | R                  | F                 |
| Sodium Hydroxide 2%             | NR       | R           | R   | —                  | —                  | —                 |
| Sodium Hypochlorite-C1. 10%     | F        | R           | R   | —                  | —                  | —                 |
| Sodium Hypochlorite-C1. 6%      | F        | R           | R   | NR                 | R                  | —                 |
| Sulfuric Acid 2%                | F        | NR          | R   | NR                 | R                  | NR                |
| Tall Oil Fatty Acid (Syfate 94) | R        | R           | R   | —                  | —                  | —                 |
| Tannic Acid 50%                 | F        | R           | R   | R                  | R                  | —                 |
| Water-Deionized                 | R        | R           | R   | R                  | R                  | F                 |
| Water-Sea                       | F        | F           | R   | R                  | R                  | F                 |
| Water-Tap                       | R        | R           | R   | F                  | F                  | R                 |
| Xyol                            | R        | R           | NR  | —                  | —                  | —                 |

For fiberglass corrosion chart see page 225.

The corrosion data given in this table is for general comparison only.

The presence of contaminants and the effect of temperature in chemical environments can greatly affect the corrosion of any material. We strongly suggest that field service tests or simulated laboratory tests using actual environmental conditions be conducted in order to determine the proper materials and finishes to be selected.

- R = Recommended
- F = May be used under some conditions
- NR = Not Recommended
- = Information not available

## Design of B-Line series Strut Systems

### Beams

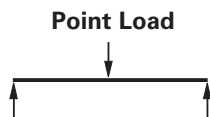
Beams are usually defined as horizontal members which are subjected to vertical loads such as shelves, platforms or supports for pipes, conduits or cable trays.

The following is a brief overview of common beam configurations:

### Simple Beam

An example of a simple beam is a length of channel placed across two cylinders. When a load is applied, the channel will support the load because of its stiffness. The cylinders serve to support the channel, but do not interfere with its natural tendency to flex or bend. Simple beam analysis is used almost universally for beam comparisons, even though it is seldom practical in field installations.

A cable tray or conduit trapeze hanger closely resembles a simple beam.



### Fixed Beam

This type of fixed support restricts the movement of the ends of the channel when a load is applied. Because of this, the stiffness of the channel at the ends and center is employed to resist the load. The result is a load capability which is greater than that of an identical simple beam.

The fixed beam can be approximated by bolting or welding a length of channel to rigid supports.



### Cantilever Beam

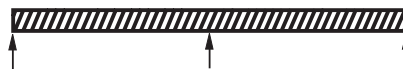
Cantilever beams are often viewed as variations of a fixed beam, but they have special characteristics of their own. One end of the channel is firmly attached to a rigid support while the other end remains completely free.

A shelf bracket is an example of a cantilever beam.



### Continuous Beam

This beam configuration is commonly used in lighting installations. The continuous beam possesses traits of both the simple and fixed beams. When equal loads are applied to all spans simultaneously, the counter-balancing effect of the loads on both sides of a support restricts the movement of the channel at the support, similar to that of the fixed beam. The end spans behave substantially like simple beams.

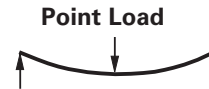


Continuous beam installations can typically support 20% more load than a simple beam of the same span with approximately half the deflection.

Therefore, simple beam data should be used for a general comparison only. An example of this configuration is found in a long run of channel when installed across several supports to form a number of spans.

### Deflection

Deflection, commonly referred to as "sag", is inherent in applying a load to a beam and cannot be avoided. Any and all beams will deflect when loaded. The amount of deflection will vary depending upon the material and the stiffness or moment of inertia. The deflection equations in this section show that increasing the stiffness can be increased by a variety of methods. Increasing the depth of the channel is the most direct method.



The material used affects deflection in a manner which is significantly different from the way in which it affects load capacity. The deflection under load is inversely proportional to a material property known as the "modulus of elasticity" designated by "E".

The modulus of elasticity is dependent upon the basic composition of the material and is not necessarily related to the material's strength.



## Safety Factor

The design loads given for strut beam loads are based on a simple beam condition using allowable stress of 25,000 psi. This allowable stress results in a safety factor of 1.68. This is based upon a virgin steel minimum yield strength of 33,000 psi cold worked during rolling to an average yield stress of 42,000 psi.

Aluminum typically has an elastic modulus which is  $\frac{1}{3}$  that of steel even though they may have identical strength. As a result, the deflection of aluminum channel will be three times that of steel channel under equal loading. In areas where structures will be subject to general viewing, deflection can produce a displeasing effect. To the untrained eye, a sagging channel may appear to be a result of poor design or excessive loading. This is not usually the case. Many properly designed channel installations will show a noticeable deflection at their designed loads. In areas where cosmetics are not important, deflection should not be a factor. Designing an entire installation based on minimal deflection could result in an over designed structure. This translates into increased material and installation cost. Where cosmetics are important, it may be necessary to limit the deflection to an aesthetically pleasing amount. This "acceptable deflection" amount is typically given as a fraction of the span.

**1/240 span** deflection is typically the limit where the amount of deflection appears negligible. For example, a beam span of 240" would be allowed 1" (240/240) of deflection at the mid point. A 120" span would only be allowed  $\frac{1}{2}$ " (120/240) of deflection. The maximum load for the channel must be limited in order to remain under these deflection requirements. The allowable load resulting in 1/240 span deflection is posted in the beam load chart for each channel size.

For even more stringent deflection requirements, an allowable load is listed in the beam load charts which results in 1/360 span deflection. This amount of deflection is sometimes used for beams in finished ceilings that are to be plastered.

## Twisting and Lateral Bracing

Loading of strut on long spans can cause torsional stress, resulting in the tendency of the strut to twist or bend laterally. This phenomenon reduces the allowable beam loads as shown in the beam loading charts. It is recommended that long spans be supported in a manner to prevent twisting (fixed ends), and that the channel have adequate lateral bracing. Many typical strut applications provide this support and bracing inherently. Piping,

tubing, cable trays, or conduits mounted to the strut with straps and clamps prevent twisting or lateral movement. If no such lateral support exists, contact the factory for loading recommendations.

## Columns

Columns are vertical members which carry loads in compression. One common example of a channel column is the vertical members of a storage rack.

In theory, a column will carry a load equal to its cross sectional area multiplied by the ultimate compressive stress of the material of which the column is made. In reality, there are many factors affecting the load capacity of a column, such as the tendency to buckle or twist laterally (torsional-flexural buckling), the type of connection at the top or bottom, the eccentricity of the load application, and material imperfections. Several of these failure modes have been considered in the allowable column load tables shown in the "Channel" section of this catalog.

We strongly recommends that the engineer perform a detailed study of the many variable conditions before the selection process begins.

## Design Factors to be Considered

The loading capacity of channel depends primarily on the material, its cross-sectional design, and the beam or column loading configuration. It should be noted that if two lengths of channel have identical designs and configurations, the one made of the stronger base material will support a larger load. Therefore, any comparison of channel should begin by determining whether the materials are approximately equal in strength.

The column loading chart for each channel lists the allowable load for each channel in compression. This load varies depending on the support condition or "K-factor".

Several "K-factors" are listed, which correspond to the following support conditions:

- K = .8 pinned top - fixed bottom
- K = .65 fixed top - fixed bottom
- K = 1.0 pinned top - pinned bottom
- K = 1.2 free top - fixed bottom

There are a number of physical properties which are important to the complete design of a channel member; the "section modulus" designated as "Sx" or "Sy", "moment of inertia" designated by "Ix" or "Iy", and the "radius of gyration" which is given as "rx" or "ry".

Every structural material has its own maximum or ultimate stress, which is usually expressed in "pounds per square inch" (pascals). Any load which causes a member to fail is referred to as its "ultimate" load. In order to prevent channel from being accidentally loaded up to or beyond its ultimate load, a safety factor is included into the design. The ultimate load is divided by the safety factor to obtain the "recommended" or "allowable" working load.

When evaluating channel under various beam conditions, it is often more convenient to compare in terms of the ultimate or recommended "bending moment". Simple equations show the stress is directly proportional to the bending moment.

Therefore, comparing bending moments can save time in repeated calculations. The chart containing Formulas on Common Beam Loadings (following page) shows how to calculate the bending moment for various configurations and load conditions. It should be noted that the bending moment is usually not constant, but varies along the length of the span. However, the channel must be designed for a single point, which is the point of maximum bending moment.

For information regarding dynamic or seismic design, contact us.

## General Information

### Torque

The torque values given throughout the catalog are to be used as a guide only.

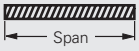
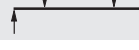
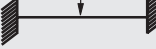
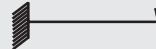
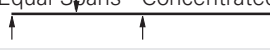
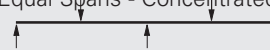
The relationship between the applied torque or torque wrench reading and the actual tension created in the bolt may be substantially different. For example, a dry non-lubricated bolt with a heavy plating may rate 50% as efficient as a bolt which is lubricated with a mixture of heavy oil and graphite. Other important factors affecting torque-tension relationships include friction under the bolt head or nut, hole tolerances, and torque wrench tolerances. Accuracy of many commercial torque wrenches may vary as much as plus or minus 25%.

### Charts and Tables

Charts and tables in this section are compiled from information published by nationally recognized organizations and are intended for use as a guide only. We recommend that users of this information determine the validity of such information as applied to their own application.

# Technical data

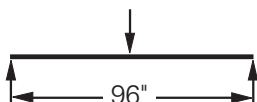
The data shown in the beam load charts for appropriate channels on pages 50 thru 71 is for simply supported, single span beams with a uniformly distributed load. For other loading and/or support conditions, use the appropriate factor from the chart below.

| Load and Support Condition                                                                                                                                           | Load Factor | Deflection Factor |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------|
| Simple Beam - Uniform Load<br>                                                      | 1.00        | 1.00              |
| Simple Beam - Concentrated Load at Center<br>                                       | .50         | .80               |
| Simple Beam - Two Equal Concentrated Loads at 1/4 Points<br>                        | 1.00        | 1.10              |
| Beam Fixed at Both Ends - Uniform Load<br>                                          | 1.50        | .30               |
| Beam Fixed at Both Ends - Concentrated Load at Center<br>                           | 1.00        | .40               |
| Cantilever Beam - Uniform Load<br>                                                  | .25         | 2.40              |
| Cantilever Beam - Concentrated Load at End<br>                                      | .12         | 3.20              |
| Continuous Beam - Two Equal Spans - Uniform Load on One Span<br>                  | 1.30        | .92               |
| Continuous Beam - Two Equal Spans - Concentrated Load on Both Spans<br>           | 1.00        |                   |
| Continuous Beam - Two Equal Spans - Concentrated Load at Center of One Span<br>   | .62         | .71               |
| Continuous Beam - Two Equal Spans - Concentrated Load at Center of Both Spans<br> | .67         | .48               |

## Examples:

### Problem:

Calculate the maximum allowable load and corresponding deflection of a simply supported B22 beam with a concentrated load at midspan as shown.



### Solution :

From beam load chart for B22 (page 56), maximum allowable Load is A and the corresponding deflection is B.  
Multiplying by the appropriate factors shown in the chart above.

$$\text{LOAD} = \underline{A} \times \text{load factor} = \underline{\hspace{2cm}}$$

$$\text{DEFLECTION} = \underline{B} \times \text{deflection factor} = \underline{\hspace{2cm}}$$

### Problem:

Calculate the maximum allowable load and corresponding deflection of a cantilever B52 beam with a uniformly distributed load.



### Solution:

From beam load chart for B52 (page 67), maximum allowable load is A and the corresponding deflection is B.  
Multiplying by the appropriate factors shown in chart above.

$$\text{LOAD} = \underline{A} \times \text{load factor} = \underline{\hspace{2cm}}$$

$$\text{DEFLECTION} = \underline{B} \times \text{deflection factor} = \underline{\hspace{2cm}}$$

## Recommended Bolted Metal Framing (Strut System) Specification

Brackets [ ] indicate alternative specifications which may be substituted by the project engineer.

### Part 1 - General

#### 1.01 Work Included

- A.** Continuous slot, bolted framing channels and all associated fittings and hardware.
- B.** Trapeze type supports for cable tray, conduit, pipe and other similar systems.
- C.** Use of bolted metal framing as a surface metal raceway.

#### 1.02 References

- A.** ASTM A108 - Specification for Steel Bars, Carbon, Cold Finished, Structural Quality.
- B.** ASTM A123 - Specification for Zinc (hot-dip galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars and Strips.
- C.** ASTM A1011, 33,000 PSI min. yield - Specification for Steel, Sheet and Strip, Carbon, Hot-Rolled, Structural Quality.
- D.** ASTM B633 - Specification for Electrodeposited Coatings of Zinc on Iron and Steel.
- E.** ASTM A653 33,000 PSI min. yield G90 - Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process, Structural Quality.
- F.** ASTM A1018 - Standard Specification for Steel, Sheet and Strip, Heavy-Thickness Coils, Carbon, Hot-Rolled, Structural Quality.
- G.** MFMA - Metal Framing Standards Publication, MFMA-4.

#### 1.03 Quality Assurance

- A.** Manufacturers: Firms regularly engaged in the manufacture of bolted metal framing of the types required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B.** A material heat code number shall be stamped on all strut and fittings. This is required to maintain traceability of the product to the material test reports to the ASTM standard.
- C.** For stainless steel items, the part number shall contain a material designator (EXAMPLE: B-Line B22SS6 for type 316 or B22SS4 for type 304), or a separate stamp shall be included to reference the type of material used.
- D.** MFMA Compliance: comply with the latest revision of MFMA Standard Publication Number MFMA-4, "Metal Framing".

**E.** NEC Compliance: Comply with the latest revision NFPA 70 - Article 352 "Surface Metal Raceways and Surface Nonmetallic Raceways".

**F.** UL Compliance: Comply with UL "Standard for Surface Metal Raceway and Fittings".

#### 1.04 Submittals

- A.** Submit drawings of strut and accessories including clamps, brackets, hanger rods and fittings.
- B.** Submit manufacturer's product data on strut channels including, but not limited to, types, materials, finishes, gauge thickness and hole patterns. For each different strut cross section, submit cross sectional properties including Section Modulus (S<sub>x</sub>) and Moment of Inertia (I<sub>x</sub>).

#### 1.05 Delivery, Storage and Handling

- A.** Deliver strut systems and components carefully to avoid breakage, denting, and scoring finishes. Do not install damaged equipment.
- B.** Store strut systems and components in original cartons and in clean dry space; protect from weather and construction traffic.

### Part 2 - Products

#### 2.01 Acceptable Manufacturers

- A.** Manufacturer: Subject to compliance with these specifications, strut systems to be installed shall be as manufactured by Eaton's B-Line Business [or engineer approved equal.]

#### 2.02 Strut Channels and Components

- A.** General: Strut shall be 1<sup>5</sup>/<sub>8</sub>" wide in varying heights and welded combinations as required to meet load capacities and designs indicated on the drawings.
- B.** Material and Finish: Material and finish specifications for each strut type are as follows:
  - 1.** Aluminum: Strut shall be manufactured of extruded aluminum alloy 6063-T6. All fittings and hardware shall be zinc plated according to ASTM B633. For outdoor use, all fittings and hardware shall be stainless steel Type 316 [Type 304] or chromium zinc, ASTM F1136 Gr. 3.
  - 2.** Epoxy Painted: Strut shall be made from steel meeting the minimum mechanical properties of ASTM A1011 33,000 PSI min yield, then painted with water borne epoxy applied by a cathodic electro-deposition

process. Fittings shall be manufactured from steel meeting the minimum requirements of ASTM A1018 33,000 PSI min. yield. The fittings shall have the same epoxy finish as the strut. Threaded hardware shall be zinc plated in accordance with ASTM B633 Service Class 1 (SC1). Service Class 1 is not an acceptable coating for fittings or components other than threaded hardware.

**3.** Pre-Galvanized Steel: Strut shall be made from structural quality steel meeting the minimum mechanical properties of ASTM A653 33,000 PSI min. yield, mill galvanized coating designation G90. Fittings shall be manufactured from steel meeting the minimum requirements of ASTM A1018 33,000 PSI min. yield and zinc plated in accordance with ASTM B633 service class 3 (SC3). Threaded hardware shall be zinc plated in accordance with ASTM B633 Service Class 1 (SC1). Service Class 1 is not an acceptable coating for fittings or components other than threaded hardware.

**4.** Hot-Dip Galvanized Steel: Strut shall be made from structural quality steel meeting the minimum mechanical properties of ASTM A1011 33,000 PSI min. yield and shall be hot-dip galvanized after fabrication in accordance with ASTM A123. Fittings shall be manufactured from steel meeting the minimum requirements of ASTM A1018 33,000 PSI min. yield, and hot-dip galvanized after fabrication in accordance with ASTM A123. All hardware shall be stainless steel Type 316 [Type 304] or chromium zinc ASTM F1136 Gr. 3. All hot-dip galvanized after fabrication products must be returned to point of manufacture after coating for inspection and removal of all sharp burrs.

**5.** Stainless Steel: All strut, fittings and hardware shall be made of AISI Type 316 [Type 304] stainless steel as indicated. Channels must be identified as required in previous section 1.03 Quality Assurance.

### Part 3 - Execution

#### 3.01 Installation

- A.** Install strut as indicated; in accordance with equipment manufacturer's recommendations, and with recognized industry practices.
- B.** All nuts and bolts shall be tightened to the following values.

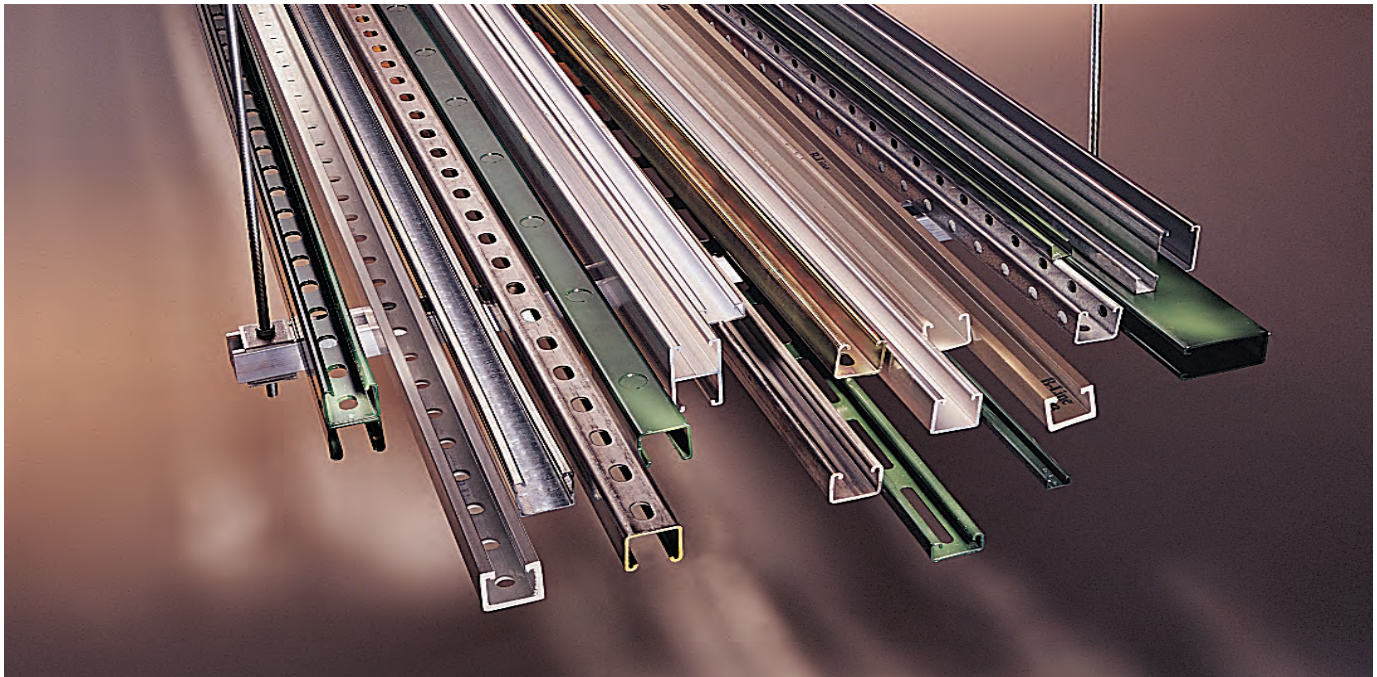
| Bolt Size | Torque (ft-lbs) |
|-----------|-----------------|
| 1/4-20    | 6               |
| 5/16-18   | 11              |
| 3/8-16    | 19              |
| 1/2-13    | 50              |

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The 4Dimension strut system has been discontinued.  
Therefore, pages 16 to 47 have been removed from  
this catalog.



# Metal framing channels



## Channel

Metal framing channel is cold formed on our modern rolling mills from 12 Ga. (2.6mm) and 14 Ga. (1.9mm) low carbon steel strips. A continuous slot with inturned lips provides the ability to make attachments at any point.

## Lengths & Tolerances

All channels excluding 'SH' style  $\pm \frac{1}{8}$ " (3.2mm) on 10' (3.05m) and  $\pm \frac{3}{16}$ " (4.76mm) on 20' (6.09m)

All 'SH' channels only  $\pm \frac{1}{4}$ " (6.35mm) on 10' (3.05m) and  $\pm \frac{1}{2}$ " (12.70mm) on 20' (6.09m)

Custom lengths are available upon request.

## Slots

Slotted series of channels offer full flexibility. A variety of pre-punched slot patterns eliminate the need for precise field measuring for hole locations. Slots offer wide adjustments in the alignment and bolt sizing.

## Holes

A variety of pre-punched  $\frac{9}{16}$ " (14.3 mm) diameter hole patterns are available in our channels. These hole patterns provide an economical alternative to costly field drilling required for many applications.

## Knockouts

When used with series B217-20 Closure Strips, knockout channels can be used to provide an economical U.L. listed surface raceway. Channels are furnished with  $\frac{7}{8}$ " (22.2 mm) knockouts on 6" (152 mm) centers, allowing for perfect fixture alignment on spans up to 20' (6.09 m).

## Materials & Finishes (Unless otherwise noted)

### Steel: Plain & Pre-galvanized

12 Ga. (2.6) and 14 Ga. (1.9)

Note: A minimum order may apply on special material and finishes.

## Design Load (Steel & Stainless Steel)

The design loads given for strut beam loads are based on a simple beam condition using an allowable stress of 25,000 psi. This allowable stress results in a safety factor of 1.68. This is based upon virgin steel minimum yield strength of 33,000 psi cold worked during rolling to an average yield stress of 42,000 psi. For aluminum channel loading multiply steel loading by a factor of 0.38.

## Welding

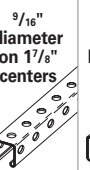
Weld spacing is maintained between 2½ inches (63.5 mm) and 4 inches (101.6 mm) on center. Through high quality control testing of welded channels and continuous monitoring of welding equipment, we provide the most consistent combination channels available today.

## Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

| Finish Code | Finish                   | Specification                     |
|-------------|--------------------------|-----------------------------------|
| PLN         | Plain                    | ASTM A1011, 33,000 PSI min. yield |
| GRN         | DURA GREEN™              |                                   |
| GLV         | Pre-Galvanized           | ASTM A653 33,000 PSI min. yield   |
| HDG         | Hot-Dipped Galvanized    | ASTM A123                         |
| YZN         | Yellow Zinc Chromate     | ASTM B633 SC3 Type II             |
| SS4         | Stainless Steel Type 304 | ASTM A240                         |
| SS6         | Stainless Steel Type 316 | ASTM A240                         |
| AL          | Aluminum                 | Aluminum 6063-T6                  |

## Selection Chart for Channels, Materials and Hole Patterns

| Channel Type | Channel Dimensions                                                                |                                                                                   | Material & Thickness* |          |          |          | Channel Hole Pattern**                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|--------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------|----------|----------|----------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|              | Height                                                                            | Width                                                                             | Stainless Steel       |          |          |          | SH                                                                                 | S                                                                                   | H1 <sup>7</sup> / <sub>8</sub>                                                      | TH                                                                                  | KO6                                                                                 |
|              |  |  | Steel                 | Alum.    | Type 304 | Type 316 |  |  |  |  |  |
|              |                                                                                   |                                                                                   | <u>1</u>              | <u>2</u> | <u>3</u> | <u>4</u> |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| <b>B11</b>   | 3 <sup>1</sup> / <sub>4</sub> " (82.5)                                            | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 12 Ga.                | .105     | —        | —        | <u>1</u>                                                                           | <u>1</u>                                                                            | <u>1</u>                                                                            | —                                                                                   | <u>1</u>                                                                            |
| <b>B12</b>   | 2 <sup>7</sup> / <sub>16</sub> " (61.9)                                           | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 12 Ga.                | .105     | —        | —        | <u>1</u> <u>2</u>                                                                  | <u>1</u>                                                                            | <u>1</u> <u>2</u>                                                                   | —                                                                                   | <u>1</u> <u>2</u>                                                                   |
| <b>B22</b>   | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 12 Ga.                | .105     | 12 Ga.   | 12 Ga.   | <u>1</u> <u>2</u> <u>3</u> <u>4</u>                                                | <u>1</u> <u>3</u>                                                                   | <u>1</u> <u>2</u> <u>3</u> <u>4</u>                                                 | <u>1</u>                                                                            | <u>1</u> <u>2</u>                                                                   |
| <b>B24</b>   | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 14 Ga.                | —        | 14 Ga.   | 14 Ga.   | <u>1</u> <u>2</u> <u>3</u> <u>4</u>                                                | <u>1</u>                                                                            | <u>1</u> <u>2</u> <u>3</u> <u>4</u>                                                 | —                                                                                   | <u>1</u> <u>2</u>                                                                   |
| <b>B32</b>   | 1 <sup>3</sup> / <sub>8</sub> " (34.9)                                            | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 12 Ga.                | —        | 12 Ga.   | —        | <u>1</u> <u>3</u>                                                                  | <u>1</u>                                                                            | <u>1</u> <u>3</u>                                                                   | —                                                                                   | <u>1</u>                                                                            |
| <b>B42</b>   | 1" (25.4)                                                                         | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 12 Ga.                | —        | 12 Ga.   | —        | <u>1</u> <u>3</u>                                                                  | <u>1</u>                                                                            | <u>1</u> <u>3</u>                                                                   | —                                                                                   | <u>1</u>                                                                            |
| <b>B52</b>   | 1 <sup>3</sup> / <sub>16</sub> " (20.6)                                           | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 12 Ga.                | —        | 12 Ga.   | 12 Ga.   | <u>1</u> <u>3</u> <u>4</u>                                                         | <u>1</u>                                                                            | <u>1</u>                                                                            | —                                                                                   | <u>1</u>                                                                            |
| <b>B54</b>   | 1 <sup>3</sup> / <sub>16</sub> " (20.6)                                           | 1 <sup>5</sup> / <sub>8</sub> " (41.3)                                            | 14 Ga.                | .080     | 14 Ga.   | 14 Ga.   | <u>1</u> <u>2</u> <u>3</u> <u>4</u>                                                | <u>1</u>                                                                            | <u>1</u> <u>2</u> <u>3</u> <u>4</u>                                                 | —                                                                                   | <u>1</u> <u>2</u>                                                                   |
| <b>B62</b>   | 1 <sup>3</sup> / <sub>16</sub> " (20.6)                                           | 1 <sup>3</sup> / <sub>16</sub> " (20.6)                                           | 18 Ga.                | —        | —        | —        | —                                                                                  | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   |
| <b>B72</b>   | 1 <sup>3</sup> / <sub>32</sub> " (10.3)                                           | 1 <sup>3</sup> / <sub>16</sub> " (20.6)                                           | 18 Ga.                | —        | —        | —        | —                                                                                  | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   |

The selection has been prepared to provide a reference for available channel, materials and hole patterns. Material types available for various hole patterns are defined by numbers 1 thru 4.

Some stainless steel channels with hole patterns are available on special order only.

\* Metric equivalent for thicknesses shown in chart.

12 Ga. = 2.6 mm

18 Ga. = 1.2 mm

14 Ga. = 1.9 mm

.105 = 2.6 mm

16 Ga. = 1.5 mm

.080 = 2.0 mm

\*\* 1 - Steel

2 - Aluminum

3 - Type 304 Stainless Steel

4 - Type 316 Stainless Steel

Properties may vary due to commercial tolerances of the material.

| Channel Part Numbering                                              |                                 |        |                        |
|---------------------------------------------------------------------|---------------------------------|--------|------------------------|
| Example:                                                            |                                 |        |                        |
| <b>B22 SH - 120 SS4</b>                                             |                                 |        |                        |
| Channel Type                                                        | Hole Patterns                   | Length | Material/Finish        |
| B11                                                                 | SH (pg. 74)                     | 120    | GRN                    |
| B12                                                                 | S (pg. 74)                      | 240    | GLV                    |
| B22                                                                 | H178 (pg. 74)                   |        | HDG                    |
| B24                                                                 | TH (pg. 75)                     |        | PLN                    |
| B32                                                                 | KO6 (pg. 75)                    |        | YZN                    |
| B42                                                                 | SHA (pg. 75)                    |        | SS4 (See page 222)     |
| B52                                                                 | S58 (pg. 76)                    |        | SS6 (See page 222)     |
| B54                                                                 | M (pg. 76)                      |        | AL (See pages 219-220) |
| B62 <sup>D</sup>                                                    | H25 (pg. 76)                    |        |                        |
| B72 <sup>D</sup>                                                    | Leave blank for no hole pattern |        |                        |
| <sup>D</sup> Hole patterns are not available on these channel sizes |                                 |        |                        |

Reference page 48 for general fitting and standard finish specifications.



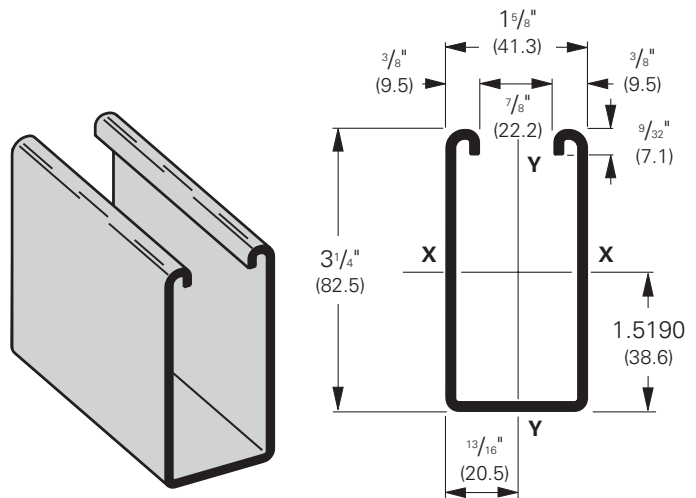
# B11 Channel, combinations & load data

## B11

- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Aluminum
- Weight: 3.05 Lbs./Ft. (4.54 kg/m)

### Note:

Aluminum loading, for B11, can be determined by multiplying load data times a factor of 0.38



| Section Properties |                         |                                                | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|--------------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B11</b>         | 3.059 (4.55)            | .900 (5.81)                                    | 1.1203(46.63)                                                | .6472 (10.61)                                              | 1.116 (2.83)                        | .4357 (18.14)                                                | .5362 (8.79)                                               | .696 (1.77)                         |
| <b>B11A</b>        | 6.119 (9.11)            | 1.800(11.61)                                   | 6.3931(266.10)                                               | 1.9671(32.24)                                              | 1.885 (4.79)                        | .8714(36.27)                                                 | 1.0725(17.58)                                              | .696 (1.77)                         |

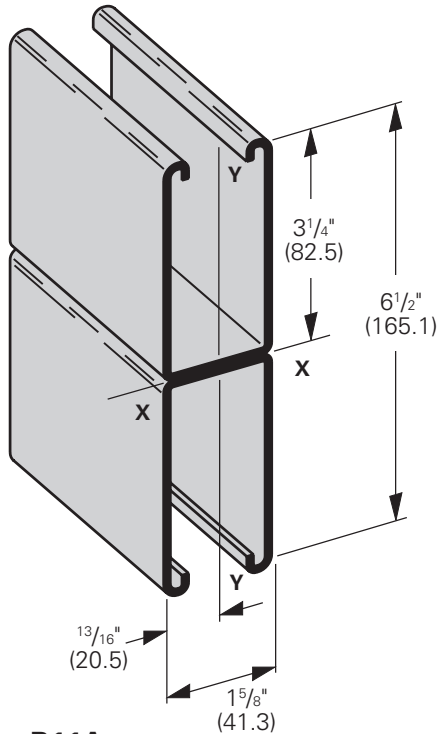
Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.

## Beam Loading

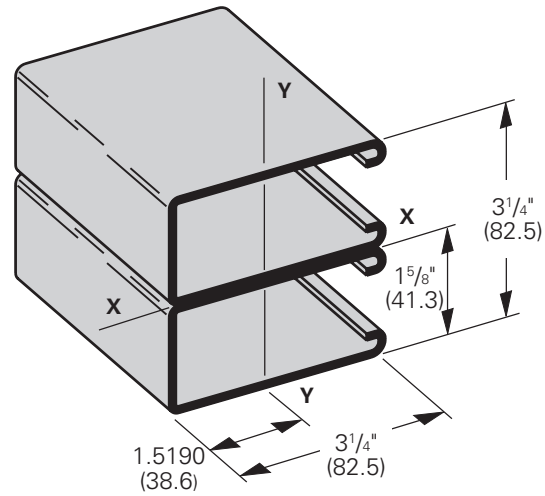
| Beam Span |        | Channel<br>Style | Uniform Load and Deflection |         |       |         | Uniform Load @ Deflection = |            |        |         |
|-----------|--------|------------------|-----------------------------|---------|-------|---------|-----------------------------|------------|--------|---------|
| In.       | mm     |                  | Lbs.                        | kN      | In.   | mm      | 1/40 Span                   | 1/360 Span | Lbs.   | kN      |
| 24        | (609)  | <b>B11</b>       | 5130                        | (22.82) | .029  | (.73)   | 5130                        | (22.82)    | 5130   | (22.82) |
|           |        | <b>B11A</b>      | 5130 *                      | (22.82) | .005  | (.13)   | 5130 *                      | (22.82)    | 5130 * | (22.82) |
| 36        | (914)  | <b>B11</b>       | 3488                        | (15.51) | .065  | (1.65)  | 3488                        | (15.51)    | 3488   | (15.51) |
|           |        | <b>B11A</b>      | 5130 *                      | (22.82) | .017  | (.43)   | 5130 *                      | (22.82)    | 5130 * | (22.82) |
| 48        | (1219) | <b>B11</b>       | 2616                        | (11.63) | .117  | (2.97)  | 2616                        | (11.63)    | 2616   | (11.63) |
|           |        | <b>B11A</b>      | 5130 *                      | (22.82) | .040  | (1.01)  | 5130 *                      | (22.82)    | 5130 * | (22.82) |
| 60        | (1524) | <b>B11</b>       | 2093                        | (9.31)  | .183  | (4.65)  | 2093                        | (9.31)     | 1908   | (8.49)  |
|           |        | <b>B11A</b>      | 5130 *                      | (22.82) | .079  | (2.00)  | 5130 *                      | (22.82)    | 5130 * | (22.82) |
| 72        | (1829) | <b>B11</b>       | 1744                        | (7.76)  | .263  | (6.68)  | 1744                        | (7.76)     | 1325   | (5.89)  |
|           |        | <b>B11A</b>      | 5130 *                      | (22.82) | .136  | (3.45)  | 5130 *                      | (22.82)    | 5130 * | (22.82) |
| 84        | (2133) | <b>B11</b>       | 1495                        | (6.65)  | .358  | (9.09)  | 1460                        | (6.49)     | 974    | (4.33)  |
|           |        | <b>B11A</b>      | 4552                        | (20.25) | .191  | (4.85)  | 4552                        | (20.25)    | 4552   | (20.25) |
| 96        | (2438) | <b>B11</b>       | 1308                        | (5.82)  | .468  | (11.89) | 1118                        | (4.97)     | 745    | (3.31)  |
|           |        | <b>B11A</b>      | 3983                        | (17.72) | .250  | (6.35)  | 3983                        | (17.72)    | 3983   | (17.72) |
| 108       | (2743) | <b>B11</b>       | 1163                        | (5.17)  | .592  | (15.03) | 884                         | (3.93)     | 589    | (2.62)  |
|           |        | <b>B11A</b>      | 3541                        | (15.75) | .317  | (8.05)  | 3541                        | (15.75)    | 3353   | (14.91) |
| 120       | (3048) | <b>B11</b>       | 1046                        | (4.65)  | .731  | (18.57) | 716                         | (3.18)     | 477    | (2.12)  |
|           |        | <b>B11A</b>      | 3187                        | (14.17) | .391  | (9.93)  | 3187                        | (14.17)    | 2716   | (12.08) |
| 144       | (3657) | <b>B11</b>       | 872                         | (3.88)  | 1.053 | (26.74) | 497                         | (2.21)     | 331    | (1.47)  |
|           |        | <b>B11A</b>      | 2656                        | (11.81) | .563  | (14.30) | 2656                        | (11.81)    | 1886   | (8.39)  |
| 168       | (4267) | <b>B11</b>       | 747                         | (3.32)  | 1.433 | (36.40) | 365                         | (1.62)     | 243    | (1.08)  |
|           |        | <b>B11A</b>      | 2276                        | (10.12) | .766  | (19.45) | 2078                        | (9.24)     | 1386   | (6.16)  |
| 192       | (4877) | <b>B11</b>       | 654                         | (2.91)  | 1.871 | (47.52) | 280                         | (1.24)     | 186    | (0.83)  |
|           |        | <b>B11A</b>      | 1992                        | (8.86)  | 1.001 | (25.42) | 1591                        | (7.08)     | 1061   | (4.72)  |
| 216       | (5486) | <b>B11</b>       | 581                         | (2.58)  | 2.368 | (60.15) | 221                         | (0.98)     | 147    | (0.65)  |
|           |        | <b>B11A</b>      | 1770                        | (7.87)  | 1.267 | (32.18) | 1257                        | (5.59)     | 838    | (3.73)  |
| 240       | (6096) | <b>B11</b>       | 523                         | (2.32)  | 2.924 | (74.27) | 179                         | (0.79)     | 119    | (0.53)  |
|           |        | <b>B11A</b>      | 1593                        | (7.08)  | 1.564 | (39.72) | 1018                        | (4.53)     | 679    | (3.02)  |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi (289 MPa). To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

Reference page 48 for general fitting and standard finish specifications.



**B11A**  
Wt. 6.10 Lbs./Ft. (9.08 kg/m)



**B11B**  
Wt. 6.10 Lbs./Ft. (9.08 kg/m)

## Column Loading

| Unbraced Height | Channel Style | Max. Column Loading K = .80 |         |                    |         | Max. Column Loading (Loaded @ C.G.) |         |         |         |         |         |
|-----------------|---------------|-----------------------------|---------|--------------------|---------|-------------------------------------|---------|---------|---------|---------|---------|
|                 |               | Loaded @ C.G.               |         | Loaded @ Slot Face |         | K = .65                             |         | K = 1.0 |         | K = 1.2 |         |
|                 |               | Lbs.                        | kN      | Lbs.               | kN      | Lbs.                                | kN      | Lbs.    | kN      | Lbs.    | kN      |
| 24 (609)        | <b>B11</b>    | 8190                        | (36.43) | 4477               | (19.91) | 8446                                | (37.57) | 7783    | (34.62) | 7311    | (32.52) |
|                 | <b>B11A</b>   | 17701                       | (78.74) | 8267               | (36.77) | 17778                               | (79.08) | 17572   | (78.16) | 17416   | (77.47) |
| 36 (914)        | <b>B11</b>    | 7311                        | (32.52) | 4183               | (18.61) | 7838                                | (34.86) | 6503    | (28.93) | 5612    | (24.96) |
|                 | <b>B11A</b>   | 17416                       | (77.47) | 8189               | (36.42) | 17590                               | (78.24) | 17127   | (76.18) | 16774   | (74.61) |
| 48 (1219)       | <b>B11</b>    | 6214                        | (27.64) | 3783               | (16.83) | 7053                                | (31.37) | 4988    | (22.19) | 3816    | (16.97) |
|                 | <b>B11A</b>   | 17016                       | (75.69) | 8079               | (35.94) | 17327                               | (77.07) | 16503   | (73.41) | 15876   | (70.62) |
| 60 (1524)       | <b>B11</b>    | 4988                        | (22.19) | 3279               | (14.58) | 6140                                | (27.31) | 3595    | (15.99) | 2790    | (12.41) |
|                 | <b>B11A</b>   | 16503                       | (73.41) | 7727               | (34.37) | 16988                               | (75.56) | 15701   | (69.84) | 14721   | (65.48) |
| 72 (1829)       | <b>B11</b>    | 3816                        | (16.97) | 2444               | (10.87) | 5146                                | (22.89) | 2790    | (12.41) | 2213    | (9.84)  |
|                 | <b>B11A</b>   | 15876                       | (70.62) | 6160               | (27.40) | 16574                               | (73.72) | 14721   | (65.48) | 13310   | (59.20) |
| 84 (2133)       | <b>B11</b>    | 3063                        | (13.62) | 1897               | (8.44)  | 4133                                | (18.38) | 2291    | (10.19) | 1846    | (8.21)  |
|                 | <b>B11A</b>   | 15135                       | (67.32) | 4961               | (22.07) | 16084                               | (71.54) | 13563   | (60.33) | 11642   | (51.78) |
| 96 (2438)       | <b>B11</b>    | 2564                        | (11.40) | 1532               | (6.81)  | 3398                                | (15.11) | 1953    | (8.69)  | 1591    | (7.08)  |
|                 | <b>B11A</b>   | 14279                       | (63.51) | 4045               | (17.99) | 15520                               | (69.03) | 12226   | (54.38) | 9717    | (43.22) |
| 108 (2743)      | <b>B11</b>    | 2213                        | (9.84)  | 1273               | (5.66)  | 2886                                | (12.84) | 1708    | (7.60)  | 1401    | (6.23)  |
|                 | <b>B11A</b>   | 13310                       | (59.20) | 3337               | (14.84) | 14880                               | (66.19) | 10712   | (47.65) | 7725    | (34.36) |
| 120 (3048)      | <b>B11</b>    | 1953                        | (8.69)  | 1081               | (4.81)  | 2514                                | (11.18) | 1522    | (6.77)  | 1251**  | (5.56)  |
|                 | <b>B11A</b>   | 12226                       | (54.38) | 2784               | (12.38) | 14164                               | (63.00) | 9019    | (40.12) | 6257**  | (27.83) |
| 144 (3657)      | <b>B11</b>    | 1591                        | (7.08)  | 816                | (3.63)  | 2011                                | (8.94)  | 1251**  | (5.56)  | 1026**  | (4.56)  |
|                 | <b>B11A</b>   | 9717                        | (43.22) | 1990               | (8.85)  | 12508                               | (55.64) | 6257**  | (27.83) | 4345**  | (19.33) |
| 168 (4267)      | <b>B11</b>    | 1347                        | (5.99)  | 642                | (2.85)  | 1687                                | (7.50)  | 1058**  | (4.70)  | 859**   | (3.82)  |
|                 | <b>B11A</b>   | 7183                        | (31.95) | 1464               | (6.51)  | 10550                               | (46.93) | 4597**  | (20.45) | 3192**  | (14.20) |
| 192 (4877)      | <b>B11</b>    | 1167**                      | (5.19)  | 519                | (2.31)  | 1459                                | (6.49)  | 910**   | (4.05)  | —       | —       |
|                 | <b>B11A</b>   | 5499**                      | (24.46) | 1121               | (4.98)  | 8330                                | (37.05) | 3520**  | (15.66) | —       | —       |
| 216 (5486)      | <b>B11</b>    | 1026**                      | (4.56)  | 429                | (1.91)  | 1285**                              | (5.71)  | —       | —       | —       | —       |
|                 | <b>B11A</b>   | 4345**                      | (19.33) | 885                | (3.93)  | 6582**                              | (29.28) | —       | —       | —       | —       |
| 40 (6096)       | <b>B11</b>    | 910**                       | (4.05)  | 360                | (1.60)  | 1148**                              | (5.10)  | —       | —       | —       | —       |
|                 | <b>B11A</b>   | 3520**                      | (15.66) | 717                | (3.19)  | 5331**                              | (23.71) | —       | —       | —       | —       |

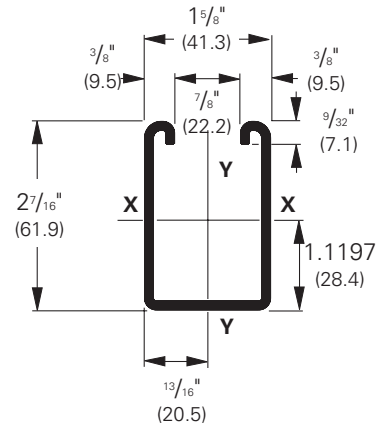
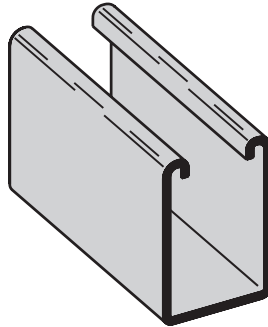
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B12 Channel, combinations

## B12

- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Aluminum
- Weight: 2.47 Lbs./Ft. (3.67 kg/m)

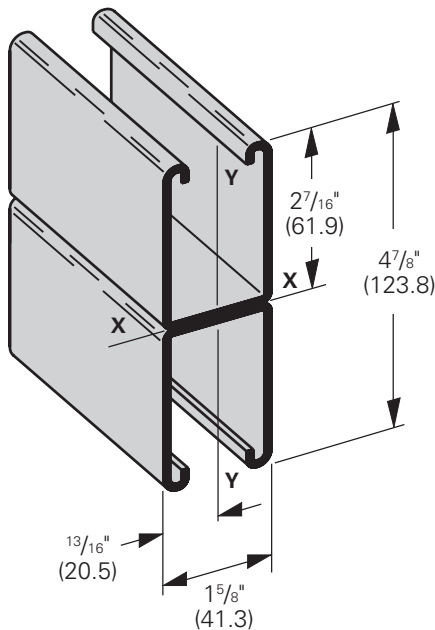


### Note:

Aluminum loading, for B12, can be determined by multiplying load data times a factor of 0.38

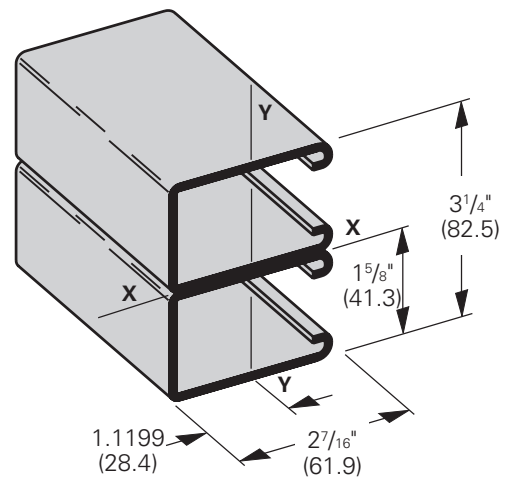
| Section Properties |                         |                                                | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|--------------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B12</b>         | 2.484 (3.70)            | .731 (4.71)                                    | .5349 (22.26)                                                | .4061 (6.65)                                               | .856 (2.17)                         | .3377 (14.06)                                                | .4156 (6.81)                                               | .680 (1.73)                         |
| <b>B12A</b>        | 4.969 (7.40)            | 1.462 (9.43)                                   | 2.9036 (120.86)                                              | 1.1915 (19.52)                                             | 1.409 (3.58)                        | .6756 (28.12)                                                | .8315 (13.63)                                              | .680 (1.73)                         |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



### B12A

Wt. 4.94 Lbs./Ft. (7.35 kg/m)



### B12B

Wt. 4.94 Lbs./Ft. (7.35 kg/m)

# B12 Beam & column loading data

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |         |        |         | Uniform Load @ Deflection = |         |            |         |
|---------------------|------------------|-----------------------------|---------|--------|---------|-----------------------------|---------|------------|---------|
|                     |                  | Lbs. kN                     |         | In. mm |         | 1/240 Span                  |         | 1/360 Span |         |
|                     |                  |                             |         |        |         | Lbs. kN                     |         | Lbs. kN    |         |
| 12 (305)            | <b>B12</b>       | 3880                        | (17.26) | .009   | (.23)   | 3880                        | (17.26) | 3880       | (17.26) |
|                     | <b>B12A</b>      | 3880*                       | (17.26) | .001   | (.02)   | 3880*                       | (17.26) | 3880*      | (17.26) |
| 24 (609)            | <b>B12</b>       | 3273                        | (14.56) | .038   | (.96)   | 3273                        | (14.56) | 3273       | (14.56) |
|                     | <b>B12A</b>      | 3880*                       | (17.26) | .008   | (.20)   | 3880*                       | (17.26) | 3880*      | (17.26) |
| 36 (914)            | <b>B12</b>       | 2182                        | (9.70)  | .086   | (2.18)  | 2182                        | (9.70)  | 2182       | (9.70)  |
|                     | <b>B12A</b>      | 3880*                       | (17.26) | .028   | (.71)   | 3880*                       | (17.26) | 3880*      | (17.26) |
| 48 (1219)           | <b>B12</b>       | 1636                        | (7.28)  | .153   | (3.88)  | 1636                        | (7.28)  | 1421       | (6.32)  |
|                     | <b>B12A</b>      | 3880*                       | (17.26) | .067   | (1.70)  | 3880*                       | (17.26) | 3880*      | (17.26) |
| 60 (1524)           | <b>B12</b>       | 1309                        | (5.82)  | .240   | (6.09)  | 1309                        | (5.82)  | 909        | (4.04)  |
|                     | <b>B12A</b>      | 3847*                       | (17.11) | .130   | (3.30)  | 3847*                       | (17.11) | 3847*      | (17.11) |
| 72 (1829)           | <b>B12</b>       | 1091                        | (4.85)  | .345   | (8.76)  | 947                         | (4.21)  | 632        | (2.81)  |
|                     | <b>B12A</b>      | 3206                        | (14.26) | .188   | (4.77)  | 3206                        | (14.26) | 3206       | (14.26) |
| 84 (2133)           | <b>B12</b>       | 935                         | (4.16)  | .470   | (11.94) | 696                         | (3.09)  | 464        | (2.06)  |
|                     | <b>B12A</b>      | 2748                        | (12.22) | .255   | (6.48)  | 2748                        | (12.22) | 2509       | (11.16) |
| 96 (2438)           | <b>B12</b>       | 818                         | (3.64)  | .614   | (15.59) | 533                         | (2.37)  | 355        | (1.58)  |
|                     | <b>B12A</b>      | 2404                        | (10.69) | .334   | (8.48)  | 2404                        | (10.69) | 1921       | (8.54)  |
| 108 (2743)          | <b>B12</b>       | 727                         | (3.23)  | .777   | (19.73) | 421                         | (1.87)  | 281        | (1.25)  |
|                     | <b>B12A</b>      | 2137                        | (9.50)  | .422   | (10.72) | 2137                        | (9.50)  | 1518       | (6.75)  |
| 120 (3048)          | <b>B12</b>       | 655                         | (2.93)  | .959   | (24.36) | 341                         | (1.52)  | 227        | (1.01)  |
|                     | <b>B12A</b>      | 1924                        | (8.56)  | .521   | (13.23) | 1844                        | (8.20)  | 1229       | (5.47)  |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \* Failure determined by weld shear.

## Column Loading

| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80 |         |                    |         | Max. Column Loading (Loaded @ C.G.) |         |         |         |         |         |
|------------------------------|------------------|-----------------------------|---------|--------------------|---------|-------------------------------------|---------|---------|---------|---------|---------|
|                              |                  | Loaded @ C.G.               |         | Loaded @ Slot Face |         | K = .65                             |         | K = 1.0 |         | K = 1.2 |         |
|                              |                  | Lbs. kN                     |         | Lbs. kN            |         | Lbs. kN                             |         | Lbs. kN |         | Lbs. kN |         |
| 12 (305)                     | <b>B12</b>       | 10140                       | (45.10) | 4752               | (21.14) | 10247                               | (45.58) | 9965    | (44.32) | 9756    | (43.40) |
|                              | <b>B12A</b>      | 20820                       | (92.61) | 8023               | (35.69) | 20854                               | (92.76) | 20763   | (92.36) | 20694   | (92.05) |
| 24 (609)                     | <b>B12</b>       | 9244                        | (41.12) | 4514               | (20.08) | 9639                                | (42.87) | 8629    | (38.38) | 7933    | (35.29) |
|                              | <b>B12A</b>      | 20519                       | (91.27) | 7956               | (35.39) | 20655                               | (91.88) | 20293   | (90.27) | 20017   | (89.04) |
| 36 (914)                     | <b>B12</b>       | 7933                        | (35.29) | 4137               | (18.40) | 8711                                | (35.75) | 6786    | (30.18) | 5572    | (24.78) |
|                              | <b>B12A</b>      | 20017                       | (89.04) | 7844               | (34.89) | 20324                               | (90.40) | 19509   | (86.78) | 18889   | (84.02) |
| 48 (1219)                    | <b>B12</b>       | 6386                        | (28.40) | 3638               | (16.18) | 7562                                | (33.64) | 4785    | (21.28) | 3717    | (16.53) |
|                              | <b>B12A</b>      | 19315                       | (85.92) | 7688               | (34.20) | 19861                               | (88.34) | 18412   | (81.90) | 17309   | (76.99) |
| 60 (1524)                    | <b>B12</b>       | 4785                        | (21.28) | 2963               | (13.18) | 6285                                | (27.96) | 3523    | (15.67) | 2806    | (12.48) |
|                              | <b>B12A</b>      | 18412                       | (81.90) | 6941               | (30.87) | 19265                               | (85.69) | 17002   | (75.63) | 15278   | (67.96) |
| 72 (1829)                    | <b>B12</b>       | 3717                        | (16.53) | 2197               | (9.77)  | 4964                                | (22.08) | 2806    | (12.48) | 2271    | (10.10) |
|                              | <b>B12A</b>      | 17309                       | (76.99) | 5334               | (23.73) | 18536                               | (82.45) | 15278   | (67.96) | 12795   | (56.91) |
| 84 (2133)                    | <b>B12</b>       | 3052                        | (13.57) | 1717               | (7.64)  | 3994                                | (17.76) | 2345    | (10.43) | 1913    | (8.51)  |
|                              | <b>B12A</b>      | 16005                       | (71.19) | 4176               | (18.57) | 17675                               | (78.62) | 13240   | (58.89) | 9884    | (43.96) |
| 96 (2438)                    | <b>B12</b>       | 2600                        | (11.56) | 1391               | (6.19)  | 3350                                | (14.90) | 2019    | (8.98)  | 1650    | (7.34)  |
|                              | <b>B12A</b>      | 14500                       | (64.50) | 3328               | (14.80) | 16682                               | (74.20) | 10889   | (48.43) | 7567    | (33.66) |
| 108 (2743)                   | <b>B12</b>       | 2271                        | (10.10) | 1155               | (5.14)  | 2893                                | (12.87) | 1773    | (7.88)  | 1446    | (6.43)  |
|                              | <b>B12A</b>      | 12795                       | (56.91) | 2692               | (11.97) | 15556                               | (69.19) | 8610    | (38.30) | 5979    | (26.59) |
| 120 (3048)                   | <b>B12</b>       | 2019                        | (8.98)  | 977                | (4.34)  | 2553                                | (11.35) | 1577    | (7.01)  | 1279**  | (5.69)  |
|                              | <b>B12A</b>      | 10889                       | (48.43) | 2202               | (9.79)  | 14298                               | (63.60) | 6974    | (31.02) | 4843**  | (21.54) |

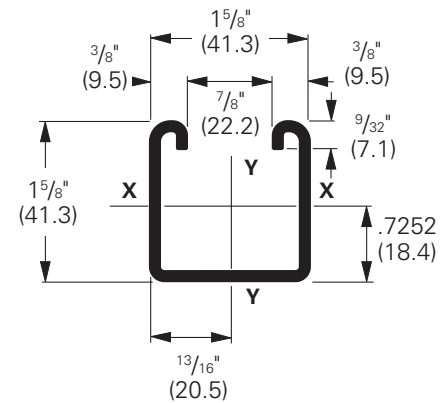
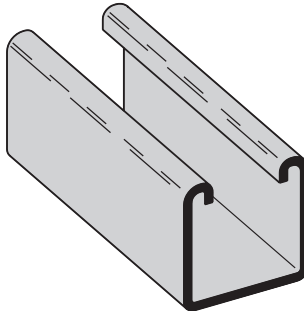
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B22 Channel

## B22

- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Stainless Steel Type 304 or 316, Aluminum
- Weight: 1.90 Lbs./Ft. (2.83 kg/m)

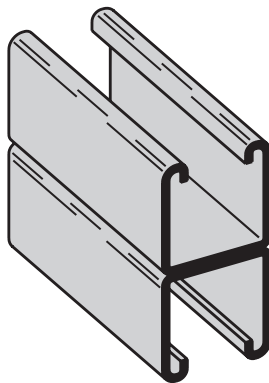


### Note:

Aluminum loading, for B22 & B22A, can be determined by multiplying load data times a factor of 0.38

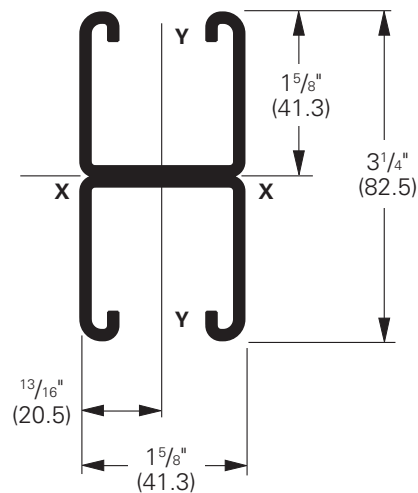
| Section Properties |                         |                                                | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|--------------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B22</b>         | 1.910 (2.84)            | .562 (3.62)                                    | .1912 (7.96)                                                 | .2125 (3.48)                                               | .583 (1.48)                         | .2399 (9.99)                                                 | .2953 (4.84)                                               | .653 (1.66)                         |
| <b>B22A</b>        | 3.820 (5.69)            | 1.124 (7.25)                                   | .9732 (40.51)                                                | .5989 (9.81)                                               | .931 (2.36)                         | .4798 (19.97)                                                | .5905 (9.68)                                               | .653 (1.66)                         |
| <b>B22X</b>        | 6.649 (9.89)            | 1.956 (12.62)                                  | 4.1484 (172.67)                                              | 1.7019 (27.89)                                             | 1.456 (3.70)                        | 1.1023 (45.88)                                               | 1.2027 (19.71)                                             | .751 (1.91)                         |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



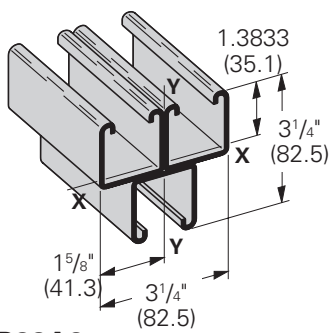
## B22A

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



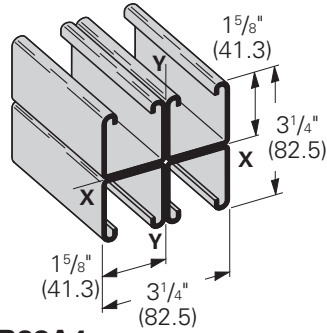


# B22 Combinations



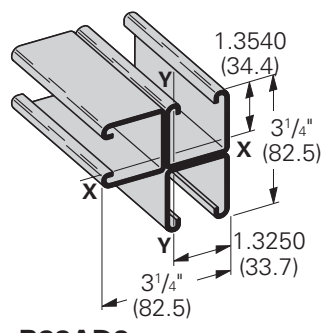
**B22A3**

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



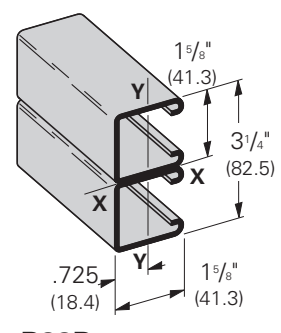
**B22A4**

Wt. 7.60 Lbs./Ft. (11.31 kg/m)



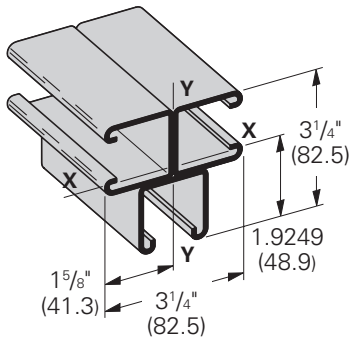
**B22AD3**

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



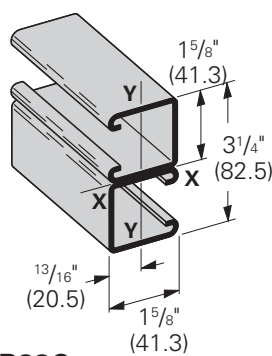
**B22B**

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



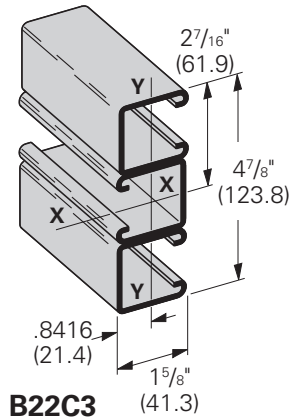
**B22B3**

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



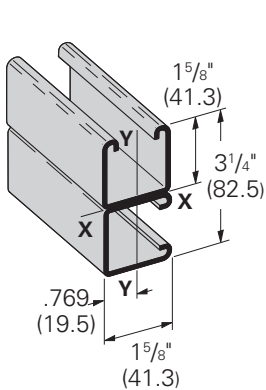
**B22C**

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



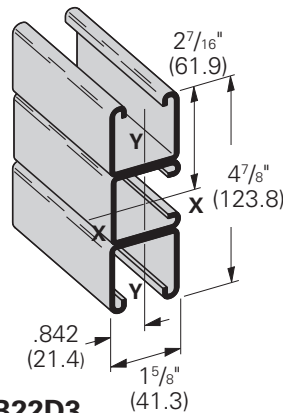
**B22C3**

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



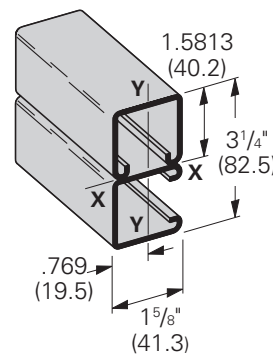
**B22D**

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



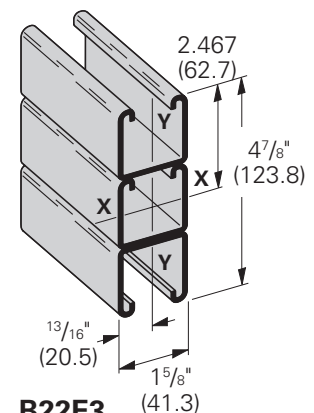
**B22D3**

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



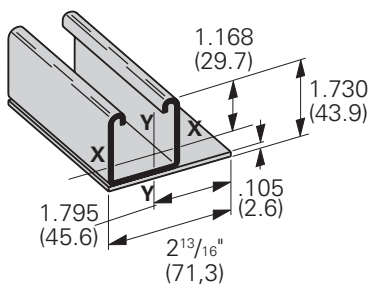
**B22E**

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



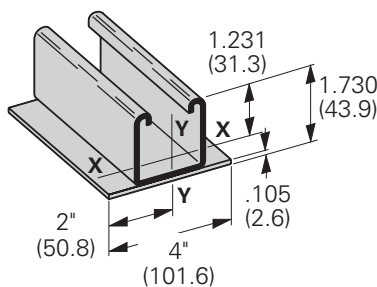
**B22E3**

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



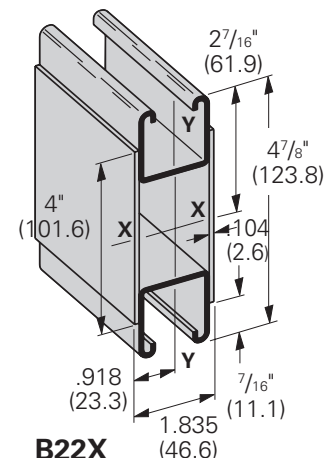
**B22LPL**

Wt. 2.90 Lbs./Ft. (4.31 kg/m)



**B22PL**

Wt. 3.35 Lbs./Ft. (4.98 kg/m)



**B22X**

Wt. 6.70 Lbs./Ft. (9.97 kg/m)

Reference page 48 for general fitting and standard finish specifications.

# B22 Beam loading data

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |         |       |         | Uniform Load @ Deflection = |                       |       |         |
|---------------------|------------------|-----------------------------|---------|-------|---------|-----------------------------|-----------------------|-------|---------|
|                     |                  | Lbs.                        | kN      | In.   | mm      | 1/240 Span<br>Lbs. kN       | 1/360 Span<br>Lbs. kN |       |         |
| 12 (305)            | B22              | 2610                        | (11.61) | .014  | (.35)   | 2610                        | (11.61)               | 2610  | (11.61) |
|                     | B22A             | 2610*                       | (11.61) | .002  | (.05)   | 2610*                       | (11.61)               | 2610* | (11.61) |
|                     | B22X             | 5790*                       | (25.75) | .001  | (.02)   | 5790*                       | (25.75)               | 5790* | (25.75) |
| 18 (457)            | B22              | 2269                        | (10.09) | .031  | (.79)   | 2269                        | (10.09)               | 2269  | (10.09) |
|                     | B22A             | 2610*                       | (11.61) | .007  | (.18)   | 2610*                       | (11.61)               | 2610* | (11.61) |
|                     | B22X             | 5790*                       | (25.75) | .003  | (.07)   | 5790*                       | (25.75)               | 5790* | (25.75) |
| 24 (609)            | B22              | 1702                        | (7.57)  | .056  | (1.42)  | 1702                        | (7.57)                | 1702  | (7.57)  |
|                     | B22A             | 2610*                       | (11.61) | .017  | (.43)   | 2610*                       | (11.61)               | 2610* | (11.61) |
|                     | B22X             | 5790*                       | (25.75) | .008  | (.20)   | 5790*                       | (25.75)               | 5790* | (25.75) |
| 30 (762)            | B22              | 1361                        | (6.05)  | .087  | (2.21)  | 1361                        | (6.05)                | 1294  | (5.75)  |
|                     | B22A             | 2610*                       | (11.61) | .033  | (.84)   | 2610*                       | (11.61)               | 2610* | (11.61) |
|                     | B22X             | 5790*                       | (25.75) | .017  | (.73)   | 5790*                       | (25.75)               | 5790* | (25.75) |
| 36 (914)            | B22              | 1135                        | (5.05)  | .126  | (3.20)  | 1135                        | (5.05)                | 899   | (4.00)  |
|                     | B22A             | 2610*                       | (11.61) | .057  | (1.45)  | 2610*                       | (11.61)               | 2610* | (11.61) |
|                     | B22X             | 5790*                       | (25.75) | .029  | (.73)   | 5790*                       | (25.75)               | 5790* | (25.75) |
| 42 (1067)           | B22              | 972                         | (4.32)  | .172  | (4.37)  | 972                         | (4.32)                | 660   | (2.93)  |
|                     | B22A             | 2610*                       | (11.61) | .091  | (2.31)  | 2610*                       | (11.61)               | 2610* | (11.61) |
|                     | B22X             | 5790*                       | (25.75) | .046  | (1.17)  | 5790*                       | (25.75)               | 5790* | (25.75) |
| 48 (1219)           | B22              | 851                         | (3.78)  | .224  | (5.69)  | 758                         | (3.37)                | 505   | (2.24)  |
|                     | B22A             | 2405                        | (10.70) | .125  | (3.17)  | 2405                        | (10.70)               | 2405  | (10.70) |
|                     | B22X             | 5790*                       | (25.75) | .068  | (1.73)  | 5790*                       | (25.75)               | 5790* | (25.75) |
| 54 (1371)           | B22              | 756                         | (3.36)  | .284  | (7.21)  | 599                         | (2.66)                | 399   | (1.77)  |
|                     | B22A             | 2138                        | (9.51)  | .158  | (4.01)  | 2138                        | (9.51)                | 2024  | (9.00)  |
|                     | B22X             | 5790*                       | (25.75) | .097  | (2.46)  | 5790*                       | (25.75)               | 5790* | (25.75) |
| 60 (1524)           | B22              | 681                         | (3.03)  | .351  | (8.91)  | 485                         | (2.16)                | 323   | (1.44)  |
|                     | B22A             | 1924                        | (8.56)  | .195  | (4.95)  | 1924                        | (8.56)                | 1640  | (7.29)  |
|                     | B22X             | 5645                        | (25.11) | .130  | (3.30)  | 5645                        | (25.11)               | 5645  | (25.11) |
| 66 (1676)           | B22              | 619                         | (2.75)  | .424  | (10.77) | 401                         | (1.78)                | 267   | (1.19)  |
|                     | B22A             | 1749                        | (7.78)  | .236  | (5.99)  | 1749                        | (7.78)                | 1355  | (6.03)  |
|                     | B22X             | 5132                        | (22.83) | .158  | (4.01)  | 5132                        | (22.83)               | 5132  | (22.83) |
| 72 (1829)           | B22              | 567                         | (2.52)  | .505  | (12.83) | 337                         | (1.50)                | 225   | (1.00)  |
|                     | B22A             | 1603                        | (7.13)  | .281  | (7.14)  | 1603                        | (7.13)                | 1139  | (5.06)  |
|                     | B22X             | 4704                        | (20.92) | .188  | (4.77)  | 4704                        | (20.92)               | 4704  | (20.92) |
| 78 (1981)           | B22              | 524                         | (2.33)  | .593  | (15.06) | 287                         | (1.27)                | 191   | (0.85)  |
|                     | B22A             | 1480                        | (6.58)  | .330  | (8.38)  | 1455                        | (6.47)                | 970   | (4.31)  |
|                     | B22X             | 4342                        | (19.31) | .220  | (5.59)  | 4342                        | (19.31)               | 4270  | (18.99) |
| 84 (2133)           | B22              | 486                         | (2.16)  | .687  | (17.45) | 248                         | (1.10)                | 165   | (0.73)  |
|                     | B22A             | 1374                        | (6.11)  | .383  | (9.73)  | 1255                        | (5.58)                | 837   | (3.72)  |
|                     | B22X             | 4032                        | (17.93) | .255  | (6.48)  | 4032                        | (17.93)               | 3682  | (16.38) |
| 90 (2286)           | B22              | 454                         | (2.02)  | .789  | (20.04) | 216                         | (0.96)                | 144   | (0.64)  |
|                     | B22A             | 1283                        | (5.71)  | .440  | (11.17) | 1093                        | (4.86)                | 729   | (3.24)  |
|                     | B22X             | 3763                        | (16.74) | .293  | (7.44)  | 3763                        | (16.74)               | 3207  | (14.26) |
| 96 (2438)           | B22              | 425                         | (1.89)  | .898  | (22.81) | 190                         | (0.84)                | 126   | (0.56)  |
|                     | B22A             | 1202                        | (5.35)  | .500  | (12.70) | 961                         | (4.27)                | 640   | (2.85)  |
|                     | B22X             | 3528                        | (15.69) | .334  | (8.48)  | 3528                        | (15.69)               | 2819  | (12.54) |
| 102 (2591)          | B22              | 400                         | (1.78)  | 1.013 | (25.73) | 168                         | (0.75)                | 112   | (0.50)  |
|                     | B22A             | 1132                        | (5.03)  | .565  | (14.35) | 851                         | (3.78)                | 567   | (2.52)  |
|                     | B22X             | 3320                        | (14.77) | .377  | (9.57)  | 3320                        | (14.77)               | 2497  | (11.11) |
| 108 (2743)          | B22              | 378                         | (1.68)  | 1.136 | (28.85) | 150                         | (0.67)                | 100   | (0.44)  |
|                     | B22A             | 1069                        | (4.75)  | .633  | (16.08) | 759                         | (3.37)                | 506   | (2.25)  |
|                     | B22X             | 3136                        | (13.95) | .422  | (10.72) | 3136                        | (13.95)               | 2227  | (9.90)  |
| 114 (2895)          | B22              | 358                         | (1.59)  | 1.266 | (32.15) | 134                         | (0.59)                | 90    | (0.40)  |
|                     | B22A             | 1013                        | (4.50)  | .706  | (17.93) | 681                         | (3.03)                | 454   | (2.02)  |
|                     | B22X             | 2971                        | (13.21) | .471  | (11.96) | 2971                        | (13.21)               | 1999  | (8.89)  |
| 120 (3048)          | B22              | 340                         | (1.51)  | 1.403 | (35.63) | 121                         | (0.54)                | 81    | (0.36)  |
|                     | B22A             | 962                         | (4.28)  | .782  | (19.86) | 615                         | (2.73)                | 410   | (1.82)  |
|                     | B22X             | 2822                        | (12.55) | .521  | (13.23) | 2706                        | (12.04)               | 1804  | (8.02)  |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

Reference page 48 for general fitting and standard finish specifications.

## Column Loading

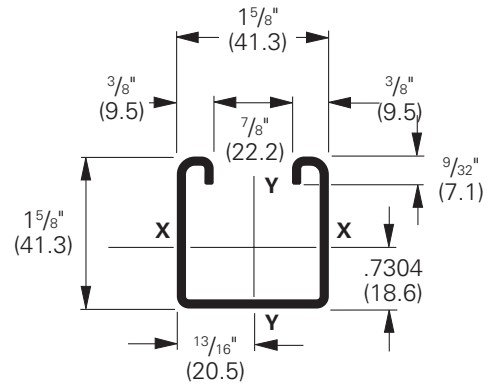
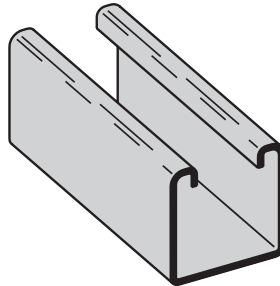
| Unbraced Height |        | Channel Style | Max. Column Loading K = .80 |          |                    |         | Max. Column Loading (Loaded @ C.G.) |          |         |          |         |          |
|-----------------|--------|---------------|-----------------------------|----------|--------------------|---------|-------------------------------------|----------|---------|----------|---------|----------|
|                 |        |               | Loaded @ C.G.               |          | Loaded @ Slot Face |         | K = .65                             |          | K = 1.0 |          | K = 1.2 |          |
|                 |        |               | Lbs.                        | kN       | Lbs.               | kN      | Lbs.                                | kN       | Lbs.    | kN       | Lbs.    | kN       |
| 12              | (305)  | <b>B22</b>    | 10454                       | (46.50)  | 4276               | (19.12) | 10598                               | (47.14)  | 10222   | (45.47)  | 9950    | (44.26)  |
|                 |        | <b>B22A</b>   | 21625                       | (96.19)  | 7002               | (31.14) | 21677                               | (96.42)  | 21539   | (95.81)  | 21433   | (95.34)  |
|                 |        | <b>B22X</b>   | 46948                       | (208.83) | 18975              | (84.40) | 47061                               | (209.34) | 46761   | (208.00) | 46531   | (206.98) |
| 18              | (457)  | <b>B22</b>    | 9950                        | (44.26)  | 4153               | (18.47) | 10253                               | (45.62)  | 9481    | (42.17)  | 8955    | (39.83)  |
|                 |        | <b>B22A</b>   | 21433                       | (95.34)  | 6959               | (30.95) | 21551                               | (95.86)  | 21239   | (94.47)  | 21001   | (93.42)  |
|                 |        | <b>B22X</b>   | 46531                       | (206.98) | 18859              | (83.90) | 46787                               | (208.12) | 46110   | (205.11) | 45593   | (202.81) |
| 24              | (609)  | <b>B22</b>    | 9311                        | (41.42)  | 3993               | (17.76) | 9801                                | (43.60)  | 8582    | (38.17)  | 7801    | (34.70)  |
|                 |        | <b>B22A</b>   | 21164                       | (94.14)  | 6898               | (30.68) | 21373                               | (95.07)  | 20819   | (92.61)  | 20397   | (90.73)  |
|                 |        | <b>B22X</b>   | 45947                       | (204.38) | 18693              | (84.44) | 46401                               | (206.40) | 45198   | (201.05) | 44282   | (196.97) |
| 30              | (762)  | <b>B22</b>    | 8582                        | (38.17)  | 3802               | (16.91) | 9268                                | (41.22)  | 7601    | (33.81)  | 6595    | (29.33)  |
|                 |        | <b>B22A</b>   | 20819                       | (92.61)  | 6821               | (30.34) | 21145                               | (94.06)  | 20279   | (90.20)  | 19619   | (87.27)  |
|                 |        | <b>B22X</b>   | 45198                       | (201.05) | 18485              | (82.22) | 45906                               | (204.20) | 44026   | (195.84) | 42593   | (189.46) |
| 36              | (914)  | <b>B22</b>    | 7801                        | (34.70)  | 3589               | (15.96) | 8676                                | (38.59)  | 6595    | (28.33)  | 5392    | (23.98)  |
|                 |        | <b>B22A</b>   | 20397                       | (90.73)  | 6728               | (29.93) | 20866                               | (92.81)  | 19619   | (87.27)  | 18669   | (83.04)  |
|                 |        | <b>B22X</b>   | 44282                       | (196.97) | 18233              | (81.10) | 45300                               | (201.50) | 42593   | (189.46) | 40530   | (180.28) |
| 42              | (1067) | <b>B22</b>    | 6998                        | (31.13)  | 3360               | (14.94) | 8048                                | (35.80)  | 5595    | (24.89)  | 4444    | (19.77)  |
|                 |        | <b>B22A</b>   | 19898                       | (88.51)  | 6620               | (29.45) | 20537                               | (91.33)  | 18840   | (83.80)  | 17546   | (78.05)  |
|                 |        | <b>B22X</b>   | 43198                       | (192.15) | 17940              | (79.80) | 44586                               | (198.33) | 40901   | (181.94) | 38092   | (169.44) |
| 48              | (1219) | <b>B22</b>    | 6193                        | (27.55)  | 3118               | (13.87) | 7401                                | (32.92)  | 4718    | (20.99)  | 3791    | (16.86)  |
|                 |        | <b>B22A</b>   | 19322                       | (85.95)  | 6496               | (28.89) | 20157                               | (89.66)  | 17940   | (79.80)  | 16251   | (72.29)  |
|                 |        | <b>B22X</b>   | 41948                       | (186.59) | 17604              | (78.30) | 43761                               | (194.57) | 38948   | (173.25) | 35281   | (156.94) |
| 54              | (1371) | <b>B22</b>    | 5392                        | (23.98)  | 2864               | (12.74) | 6746                                | (30.01)  | 4090    | (18.19)  | 3310    | (14.72)  |
|                 |        | <b>B22A</b>   | 18669                       | (83.04)  | 6263               | (27.86) | 19276                               | (87.74)  | 16920   | (75.26)  | 14782   | (65.75)  |
|                 |        | <b>B22X</b>   | 40530                       | (180.28) | 16973              | (75.50) | 42825                               | (190.49) | 36733   | (163.39) | 32092   | (142.75) |
| 60              | (1524) | <b>B22</b>    | 4718                        | (20.99)  | 2631               | (11.70) | 6093                                | (27.10)  | 3616    | (16.08)  | 2936    | (13.06)  |
|                 |        | <b>B22A</b>   | 17940                       | (79.80)  | 5340               | (23.75) | 19244                               | (85.60)  | 15781   | (70.20)  | 13141   | (58.45)  |
|                 |        | <b>B22X</b>   | 38948                       | (173.25) | 14471              | (64.37) | 41779                               | (185.84) | 34260   | (152.39) | 28529   | (126.90) |
| 66              | (1676) | <b>B22</b>    | 4202                        | (18.69)  | 2434               | (10.83) | 5441                                | (24.20)  | 3242    | (14.42)  | 2634    | (11.71)  |
|                 |        | <b>B22A</b>   | 17134                       | (76.21)  | 4587               | (20.40) | 18712                               | (83.23)  | 14521   | (64.59)  | 11328   | (50.39)  |
|                 |        | <b>B22X</b>   | 37198                       | (165.46) | 12431              | (55.29) | 40624                               | (180.70) | 31525   | (140.23) | 24593   | (109.39) |
| 72              | (1829) | <b>B22</b>    | 3791                        | (16.86)  | 2264               | (10.07) | 4869                                | (21.66)  | 2936    | (13.06)  | 2381    | (10.59)  |
|                 |        | <b>B22A</b>   | 16251                       | (72.29)  | 3968               | (17.65) | 18129                               | (80.64)  | 13141   | (58.45)  | 9524    | (42.36)  |
|                 |        | <b>B22X</b>   | 35281                       | (156.94) | 10753              | (47.83) | 39358                               | (175.07) | 28529   | (126.90) | 20676   | (91.97)  |
| 78              | (1981) | <b>B22</b>    | 3456                        | (15.37)  | 2116               | (9.41)  | 4412                                | (19.62)  | 2680    | (11.92)  | 2166    | (9.63)   |
|                 |        | <b>B22A</b>   | 15291                       | (68.02)  | 3456               | (15.37) | 17496                               | (77.82)  | 11642   | (51.78)  | 8115    | (36.10)  |
|                 |        | <b>B22X</b>   | 33197                       | (147.67) | 9366               | (41.66) | 37984                               | (168.96) | 25275   | (112.43) | 17617   | (78.36)  |
| 84              | (2133) | <b>B22</b>    | 3176                        | (14.13)  | 1984               | (8.82)  | 4037                                | (17.96)  | 2461    | (10.95)  | 1980    | (8.81)   |
|                 |        | <b>B22A</b>   | 14255                       | (63.41)  | 3028               | (13.47) | 16812                               | (74.78)  | 10076   | (44.82)  | 6998    | (31.13)  |
|                 |        | <b>B22X</b>   | 30947                       | (137.66) | 8206               | (36.50) | 36499                               | (162.35) | 21875   | (97.30)  | 15192   | (67.58)  |
| 90              | (2286) | <b>B22</b>    | 2936                        | (13.06)  | 1867               | (8.30)  | 3724                                | (16.56)  | 2270    | (10.10)  | 1816    | (8.08)   |
|                 |        | <b>B22A</b>   | 13141                       | (58.45)  | 2667               | (11.86) | 16077                               | (71.51)  | 8778    | (39.04)  | 6096    | (27.11)  |
|                 |        | <b>B22X</b>   | 28529                       | (126.90) | 7227               | (32.15) | 34903                               | (155.25) | 19057   | (84.77)  | 13234   | (58.87)  |
| 96              | (2438) | <b>B22</b>    | 2728                        | (16.58)  | 1761               | (7.83)  | 3456                                | (15.37)  | 2101    | (9.34)   | 1671    | (7.43)   |
|                 |        | <b>B22A</b>   | 11951                       | (53.16)  | 2359               | (10.49) | 15291                               | (68.02)  | 7715    | (34.32)  | 5357    | (23.83)  |
|                 |        | <b>B22X</b>   | 25945                       | (115.41) | 6393               | (28.44) | 33197                               | (147.67) | 16749   | (74.50)  | 11630   | (51.73)  |
| 102             | (2591) | <b>B22</b>    | 2545                        | (11.32)  | 1664               | (7.40)  | 3225                                | (14.34)  | 1951    | (8.68)   | 1542**  | (6.34)   |
|                 |        | <b>B22A</b>   | 10678                       | (47.50)  | 2093               | (9.31)  | 14455                               | (64.30)  | 6834    | (30.40)  | 4746    | (21.11)  |
|                 |        | <b>B22X</b>   | 23182                       | (103.12) | 5672               | (25.23) | 31382                               | (139.59) | 14836   | (65.99)  | 10303   | (45.83)  |
| 108             | (2743) | <b>B22</b>    | 2381                        | (10.59)  | 1575               | (7.00)  | 3022                                | (13.44)  | 1816    | (8.08)   | 1426**  | (68.60)  |
|                 |        | <b>B22A</b>   | 9524                        | (42.36)  | 1867               | (8.30)  | 13568                               | (60.35)  | 6096    | (27.11)  | 4233    | (18.83)  |
|                 |        | <b>B22X</b>   | 20676                       | (91.97)  | 5059               | (22.50) | 29456                               | (131.03) | 13234   | (58.87)  | 9190    | (40.88)  |
| 114             | (2895) | <b>B22</b>    | 2234                        | (9.94)   | 1494               | (6.64)  | 2842                                | (12.64)  | 1694    | (7.53)   | 1322**  | (5.88)   |
|                 |        | <b>B22A</b>   | 8548                        | (38.02)  | 1675               | (7.45)  | 12630                               | (56.18)  | 5471    | (24.33)  | 3799**  | (16.90)  |
|                 |        | <b>B22X</b>   | 18558                       | (82.55)  | 4539               | (20.19) | 27420                               | (121.97) | 11877   | (52.83)  | 8247    | (36.68)  |
| 120             | (3048) | <b>B22</b>    | 2101                        | (9.34)   | 1418               | (6.31)  | 2680                                | (11.92)  | 1583**  | (7.04)   | 1228**  | (5.46)   |
|                 |        | <b>B22A</b>   | 7715                        | (34.32)  | 1512               | (6.72)  | 11642                               | (51.78)  | 4937    | (21.96)  | 3429**  | (15.25)  |
|                 |        | <b>B22X</b>   | 16749                       | (74.50)  | 4097               | (18.22) | 25275                               | (112.43) | 10718   | (47.67)  | 7444    | (33.11)  |

\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

# B24 Channel & combinations

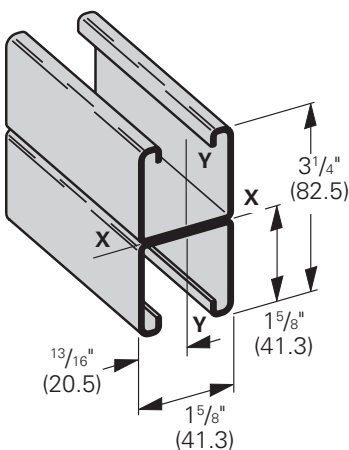
## B24

- Thickness: 14 Gauge (1.9 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Stainless Steel Type 304 or 316
- Weight: 1.40 Lbs./Ft. (2.08 kg/m)

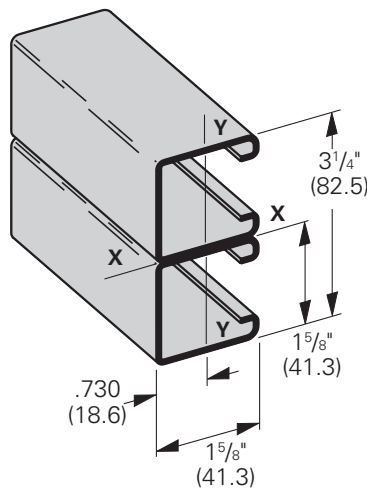


| Section Properties |                         |                                                | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|--------------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B24</b>         | 1.442 (2.15)            | .424 (2.74)                                    | .1494 (6.22)                                                 | .1670 (2.74)                                               | .594 (1.51)                         | .1857 (7.73)                                                 | .2286 (3.75)                                               | .662 (1.68)                         |
| <b>B24A</b>        | 2.884 (4.29)            | .848 (5.47)                                    | .7514 (31.28)                                                | .4624 (7.58)                                               | .941 (2.39)                         | .3713 (15.45)                                                | .4570 (7.49)                                               | .662 (1.68)                         |

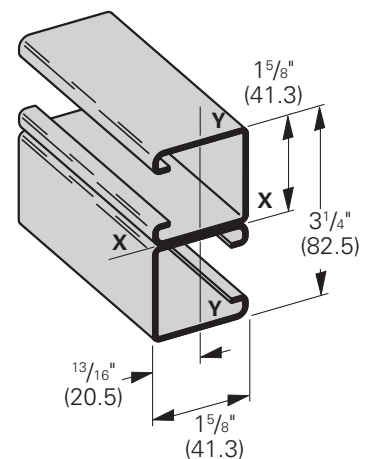
Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



**B24A**  
Wt. 2.80 Lbs./Ft. (4.16 kg/m)



**B24B**  
Wt. 2.80 Lbs./Ft. (4.16 kg/m)



**B24C**  
Wt. 2.80 Lbs./Ft. (4.16 kg/m)

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |  |               |  | Uniform Load @ Deflection =        |  |                                    |  |
|---------------------|------------------|-----------------------------|--|---------------|--|------------------------------------|--|------------------------------------|--|
|                     |                  | Lbs. kN                     |  | In. mm        |  | <sup>1</sup> / <sub>240</sub> Span |  | <sup>1</sup> / <sub>360</sub> Span |  |
|                     |                  |                             |  |               |  | Lbs. kN                            |  | Lbs. kN                            |  |
| 12 (305)            | B24              | 1750 (7.78)                 |  | .014 (.35)    |  | 1750 (7.78)                        |  | 1750 (7.78)                        |  |
|                     | B24A             | 1750* (7.78)                |  | .002 (.05)    |  | 1750* (7.78)                       |  | 1750* (7.78)                       |  |
| 24 (609)            | B24              | 1379 (6.13)                 |  | .057 (1.45)   |  | 1379 (6.13)                        |  | 1379 (6.13)                        |  |
|                     | B24A             | 1750* (7.78)                |  | .014 (.35)    |  | 1750* (7.78)                       |  | 1750* (7.78)                       |  |
| 36 (914)            | B24              | 919 (4.09)                  |  | .128 (3.25)   |  | 919 (4.09)                         |  | 720 (3.20)                         |  |
|                     | B24A             | 1750* (7.78)                |  | .048 (1.22)   |  | 1750* (7.78)                       |  | 1750* (7.78)                       |  |
| 48 (1219)           | B24              | 689 (3.06)                  |  | .227 (5.76)   |  | 607 (2.70)                         |  | 405 (1.80)                         |  |
|                     | B24A             | 1750* (7.78)                |  | .115 (2.92)   |  | 1750* (7.78)                       |  | 1750* (7.78)                       |  |
| 60 (1524)           | B24              | 551 (2.45)                  |  | .355 (9.02)   |  | 389 (1.73)                         |  | 259 (1.15)                         |  |
|                     | B24A             | 1518 (6.75)                 |  | .195 (4.95)   |  | 1518 (6.75)                        |  | 1294 (5.75)                        |  |
| 72 (1829)           | B24              | 460 (2.04)                  |  | .511 (12.98)  |  | 270 (1.20)                         |  | 180 (0.80)                         |  |
|                     | B24A             | 1265 (5.63)                 |  | .281 (7.14)   |  | 1265 (5.63)                        |  | 898 (3.99)                         |  |
| 84 (2133)           | B24              | 394 (1.75)                  |  | .695 (17.65)  |  | 198 (0.88)                         |  | 132 (0.59)                         |  |
|                     | B24A             | 1084 (4.82)                 |  | .383 (9.73)   |  | 990 (4.40)                         |  | 660 (2.93)                         |  |
| 96 (2438)           | B24              | 345 (1.53)                  |  | .908 (23.06)  |  | 152 (0.67)                         |  | 101 (0.45)                         |  |
|                     | B24A             | 949 (4.22)                  |  | .500 (12.70)  |  | 758 (3.37)                         |  | 505 (2.24)                         |  |
| 108 (2743)          | B24              | 306 (1.36)                  |  | 1.149 (29.18) |  | 120 (0.53)                         |  | 80 (0.35)                          |  |
|                     | B24A             | 843 (3.75)                  |  | .633 (16.08)  |  | 599 (2.66)                         |  | 399 (1.77)                         |  |
| 120 (3048)          | B24              | 276 (1.23)                  |  | 1.419 (36.04) |  | 97 (0.43)                          |  | 65 (0.29)                          |  |
|                     | B24A             | 759 (3.37)                  |  | .782 (19.86)  |  | 485 (2.16)                         |  | 323 (1.44)                         |  |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

## Column Loading

| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80 |  |                      |  | Max. Column Loading (Loaded @ C.G.) |  |               |  |                |  |
|------------------------------|------------------|-----------------------------|--|----------------------|--|-------------------------------------|--|---------------|--|----------------|--|
|                              |                  | Loaded@<br>C.G.             |  | Loaded@<br>Slot Face |  | K = .65                             |  | K = 1.0       |  | K = 1.2        |  |
|                              |                  | Lbs. kN                     |  | Lbs. kN              |  | Lbs. kN                             |  | Lbs. kN       |  | Lbs. kN        |  |
| 12 (305)                     | B24              | 6441 (28.65)                |  | 3077 (13.69)         |  | 6509 (28.95)                        |  | 6330 (28.16)  |  | 6198 (27.57)   |  |
|                              | B24A             | 13212 (58.77)               |  | 4988 (22.19)         |  | 13237 (58.88)                       |  | 13171 (58.59) |  | 13121 (58.36)  |  |
| 24 (609)                     | B24              | 5874 (26.13)                |  | 2896 (12.88)         |  | 6124 (27.24)                        |  | 5483 (24.39)  |  | 5038 (22.41)   |  |
|                              | B24A             | 12993 (57.79)               |  | 4924 (21.90)         |  | 13092 (58.23)                       |  | 12828 (57.06) |  | 12627 (56.17)  |  |
| 36 (914)                     | B24              | 5038 (22.41)                |  | 2619 (11.65)         |  | 5535 (24.62)                        |  | 4302 (19.13)  |  | 3516 (15.64)   |  |
|                              | B24A             | 12627 (56.17)               |  | 4819 (21.43)         |  | 12851 (57.16)                       |  | 12256 (54.52) |  | 11804 (52.51)  |  |
| 48 (1219)                    | B24              | 4043 (17.98)                |  | 2272 (10.10)         |  | 4800 (21.35)                        |  | 3008 (13.38)  |  | 2324 (10.34)   |  |
|                              | B24A             | 12115 (53.89)               |  | 4675 (20.79)         |  | 12512 (55.65)                       |  | 11456 (50.96) |  | 10651 (47.38)  |  |
| 60 (1524)                    | B24              | 3008 (13.38)                |  | 1873 (8.33)          |  | 3978 (17.69)                        |  | 2200 (9.78)   |  | 1740 (7.74)    |  |
|                              | B24A             | 11456 (50.96)               |  | 4020 (17.88)         |  | 12078 (53.72)                       |  | 10427 (46.38) |  | 9169 (40.78)   |  |
| 72 (1829)                    | B24              | 2324 (10.34)                |  | 1562 (6.95)          |  | 3123 (13.89)                        |  | 1740 (7.74)   |  | 1397 (6.21)    |  |
|                              | B24A             | 10651 (47.38)               |  | 3048 (13.56)         |  | 11546 (51.36)                       |  | 9169 (40.78)  |  | 7358 (32.73)   |  |
| 84 (2133)                    | B24              | 1898 (8.44)                 |  | 1340 (5.96)          |  | 2502 (11.13)                        |  | 1444 (6.42)   |  | 1168 (5.19)    |  |
|                              | B24A             | 9700 (43.15)                |  | 2362 (10.50)         |  | 10918 (48.56)                       |  | 7683 (34.17)  |  | 5464 (24.30)   |  |
| 96 (2438)                    | B24              | 1608 (7.15)                 |  | 1175 (5.22)          |  | 2089 (9.29)                         |  | 1236 (5.50)   |  | 1000 (4.45)    |  |
|                              | B24A             | 8602 (38.26)                |  | 1866 (8.30)          |  | 10194 (45.34)                       |  | 6024 (26.79)  |  | 4184 (18.61)   |  |
| 108 (2743)                   | B24              | 1397 (6.21)                 |  | 1046 (4.65)          |  | 1796 (7.99)                         |  | 1078 (4.79)   |  | 870** (3.87)   |  |
|                              | B24A             | 7358 (32.73)                |  | 1498 (6.66)          |  | 9373 (41.69)                        |  | 4760 (21.17)  |  | 3306 (14.70)   |  |
| 120 (3048)                   | B24              | 1236 (5.50)                 |  | 942 (4.19)           |  | 1578 (7.02)                         |  | 953** (4.24)  |  | 764** (3.40)   |  |
|                              | B24A             | 6024 (26.79)                |  | 1216 (5.41)          |  | 8455 (37.61)                        |  | 3856 (17.15)  |  | 2677** (11.91) |  |

\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

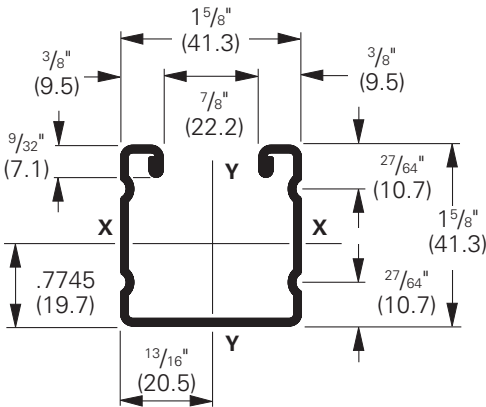
Reference page 48 for general fitting and standard finish specifications.



# B26 Channel & combinations

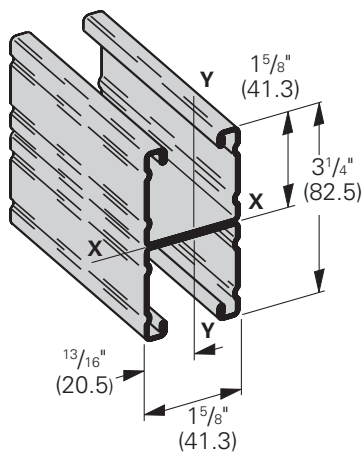
## B26

- Thickness: 16 Gauge (1.5 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized
- Weight: 1.12 Lbs./Ft. (1.66 kg/m)

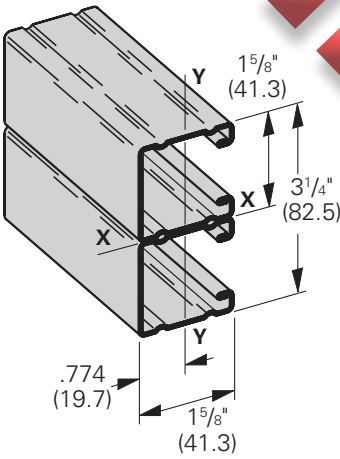


| Section Properties |                         |                                                | X - X Axis               |                 |                        |                 | Y - Y Axis                |             |                          |                 |
|--------------------|-------------------------|------------------------------------------------|--------------------------|-----------------|------------------------|-----------------|---------------------------|-------------|--------------------------|-----------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I) |                 | Section<br>Modulus (S) |                 | Radius of<br>Gyration (r) |             | Moment of<br>Inertia (I) |                 |
|                    |                         |                                                | in. <sup>4</sup>         | cm <sup>4</sup> | in. <sup>3</sup>       | cm <sup>3</sup> | in.                       | cm          | in. <sup>4</sup>         | cm <sup>4</sup> |
| B26                | 1.234 (1.84)            | .363 (2.34)                                    | .1337 (5.57)             | .1581 (2.59)    | .607 (1.54)            | .1564 (6.51)    | .1925 (3.15)              | .656 (1.67) | .1564 (6.51)             | .1925 (3.15)    |
| B26A               | 2.467 (3.67)            | .726 (4.68)                                    | .7086 (29.49)            | .4364 (7.15)    | .988 (2.51)            | .3128 (13.02)   | .3850 (6.31)              | .656 (1.67) | .3128 (13.02)            | .3850 (6.31)    |

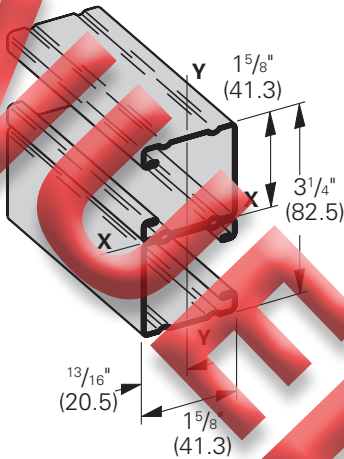
Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



**B26A**  
Wt. 2.24 Lbs./Ft. (3.33 kg/m)



**B26B**  
Wt. 2.24 Lbs./Ft. (3.33 kg/m)



**B26C**  
Wt. 2.24 Lbs./Ft. (3.33 kg/m)



# B26 Beam & column loading data

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |  |               |  | Uniform Load @ Deflection = |  |              |  |
|---------------------|------------------|-----------------------------|--|---------------|--|-----------------------------|--|--------------|--|
|                     |                  | Lbs. kN                     |  | In. mm        |  | 1/240 Span                  |  | 1/360 Span   |  |
|                     |                  |                             |  |               |  | Lbs. kN                     |  | Lbs. kN      |  |
| 12 (305)            | B26              | 1220 (5.43)                 |  | .014 (.35)    |  | 1220 (5.43)                 |  | 1220 (5.43)  |  |
|                     | B26A             | 1220* (5.43)                |  | .001 (.02)    |  | 1220* (5.43)                |  | 1220* (5.43) |  |
| 24 (609)            | B26              | 1163 (5.17)                 |  | .057 (1.45)   |  | 1163 (5.17)                 |  | 1163 (5.17)  |  |
|                     | B26A             | 1220* (5.43)                |  | .012 (.30)    |  | 1220* (5.43)                |  | 1220* (5.43) |  |
| 36 (914)            | B26              | 775 (3.45)                  |  | .128 (3.25)   |  | 775 (3.45)                  |  | 603 (2.68)   |  |
|                     | B26A             | 1220* (5.43)                |  | .040 (1.01)   |  | 1220* (5.43)                |  | 1220* (5.43) |  |
| 48 (1219)           | B26              | 581 (2.58)                  |  | .228 (5.79)   |  | 509 (2.264)                 |  | 339 (1.51)   |  |
|                     | B26A             | 1220* (5.43)                |  | .096 (2.44)   |  | 1220* (5.43)                |  | 1220* (5.43) |  |
| 60 (1524)           | B26              | 465 (2.07)                  |  | .357 (9.07)   |  | 326 (1.45)                  |  | 217 (0.96)   |  |
|                     | B26A             | 1220* (5.43)                |  | .188 (4.77)   |  | 1220* (5.43)                |  | 1076 (4.78)  |  |
| 72 (1829)           | B26              | 388 (1.72)                  |  | .514 (13.05)  |  | 226 (1.45)                  |  | 151 (0.96)   |  |
|                     | B26A             | 1052 (4.68)                 |  | .281 (7.14)   |  | 1052 (4.68)                 |  | 747 (3.32)   |  |
| 84 (2133)           | B26              | 332 (1.48)                  |  | .699 (17.75)  |  | 166 (0.74)                  |  | 111 (0.49)   |  |
|                     | B26A             | 902 (4.01)                  |  | .383 (9.73)   |  | 824 (3.66)                  |  | 549 (2.44)   |  |
| 96 (2438)           | B26              | 291 (1.29)                  |  | .913 (23.19)  |  | 127 (0.56)                  |  | 85 (0.38)    |  |
|                     | B26A             | 789 (3.51)                  |  | .500 (12.70)  |  | 631 (2.81)                  |  | 420 (1.87)   |  |
| 108 (2743)          | B26              | 258 (1.15)                  |  | 1.156 (29.36) |  | 101 (0.45)                  |  | 67 (0.30)    |  |
|                     | B26A             | 702 (3.12)                  |  | .633 (16.08)  |  | 498 (2.21)                  |  | 332 (1.48)   |  |
| 120 (3048)          | B26              | 233 (1.03)                  |  | 1.427 (36.24) |  | 81 (0.36)                   |  | 54 (0.24)    |  |
|                     | B26A             | 631 (2.17)                  |  | .782 (19.86)  |  | 404 (1.80)                  |  | 269 (1.19)   |  |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. Failure determined by weld shear.

## Column Loading

| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80 |  |              |  | Max. Column Loading (Loaded @ C.G.) |  |              |  |
|------------------------------|------------------|-----------------------------|--|--------------|--|-------------------------------------|--|--------------|--|
|                              |                  | Loaded@                     |  | Loaded@      |  | K = .65                             |  | K = 1.0      |  |
|                              |                  | C.G.                        |  | Slot Face    |  | Lbs. kN                             |  | Lbs. kN      |  |
|                              |                  | Lbs. kN                     |  | Lbs. kN      |  | Lbs. kN                             |  | Lbs. kN      |  |
| 12 (305)                     | B26              | 4002 (17.80)                |  | 2216 (9.86)  |  | 4032 (17.93)                        |  | 3952 (17.58) |  |
|                              | B26A             | 8151 (36.26)                |  | 3630 (16.15) |  | 8163 (36.31)                        |  | 8133 (36.18) |  |
| 24 (609)                     | B26              | 3740 (16.63)                |  | 2109 (9.38)  |  | 3857 (17.16)                        |  | 3554 (15.81) |  |
|                              | B26A             | 8051 (35.81)                |  | 3591 (15.97) |  | 8096 (36.04)                        |  | 7975 (35.47) |  |
| 36 (914)                     | B26              | 3336 (14.49)                |  | 1941 (8.63)  |  | 3579 (15.92)                        |  | 2962 (13.17) |  |
|                              | B26A             | 7883 (35.06)                |  | 3528 (15.69) |  | 7986 (35.52)                        |  | 7713 (34.31) |  |
| 48 (1219)                    | B26              | 2828 (12.58)                |  | 1725 (7.61)  |  | 3217 (14.31)                        |  | 2251 (10.01) |  |
|                              | B26A             | 7648 (34.02)                |  | 3441 (15.30) |  | 7831 (34.83)                        |  | 7346 (32.67) |  |
| 60 (1524)                    | B26              | 2251 (10.01)                |  | 1469 (6.53)  |  | 2793 (12.42)                        |  | 1603 (7.13)  |  |
|                              | B26A             | 7346 (32.67)                |  | 3066 (13.64) |  | 7631 (33.94)                        |  | 6874 (30.58) |  |
| 72 (1829)                    | B26              | 1705 (7.58)                 |  | 1203 (5.35)  |  | 2326 (10.34)                        |  | 1233 (5.48)  |  |
|                              | B26A             | 6977 (31.03)                |  | 2385 (10.61) |  | 7388 (32.86)                        |  | 6298 (28.01) |  |
| 84 (2133)                    | B26              | 1358 (6.04)                 |  | 1011 (4.50)  |  | 1851 (8.23)                         |  | 1003 (4.46)  |  |
|                              | B26A             | 6541 (29.09)                |  | 1884 (8.38)  |  | 7100 (31.58)                        |  | 5616 (24.98) |  |
| 96 (2438)                    | B26              | 1129 (5.02)                 |  | 871 (3.87)   |  | 1513 (6.73)                         |  | 847 (3.77)   |  |
|                              | B26A             | 6038 (26.86)                |  | 1512 (6.72)  |  | 6767 (30.10)                        |  | 4830 (21.48) |  |
| 108 (2743)                   | B26              | 967 (4.30)                  |  | 766 (3.41)   |  | 1277 (5.68)                         |  | 734 (3.26)   |  |
|                              | B26A             | 5467 (24.32)                |  | 1231 (5.47)  |  | 6391 (28.43)                        |  | 3940 (17.52) |  |
| 120 (3048)                   | B26              | 847 (3.77)                  |  | 684 (3.04)   |  | 1105 (4.91)                         |  | 648 (2.88)   |  |
|                              | B26A             | 4830 (21.48)                |  | 1015 (4.51)  |  | 5970 (26.55)                        |  | 3192 (14.20) |  |

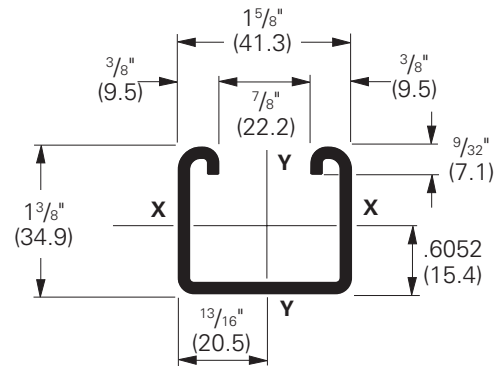
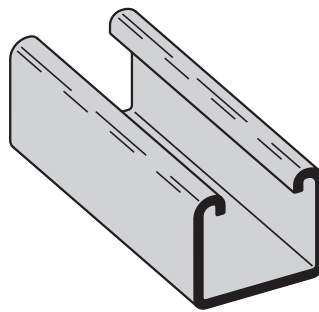
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B32 Channel & combinations

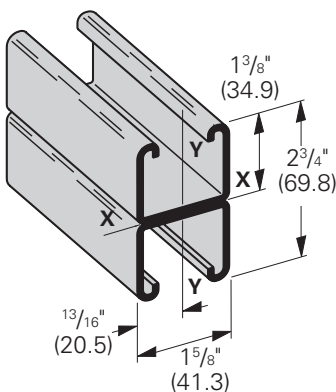
## B32

- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Stainless Steel Type 304
- Weight: 1.70 Lbs./Ft. (2.53 kg/m)



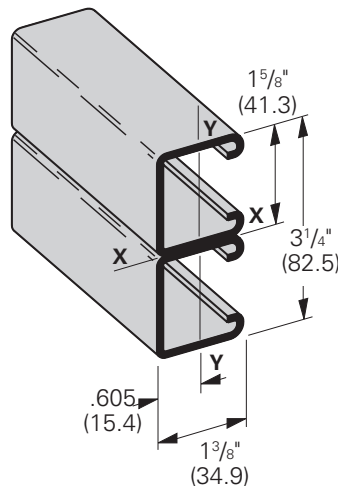
| Section Properties |                         |                                                | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|--------------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B32</b>         | 1.733 (2.58)            | .510 (3.29)                                    | .1252 (5.21)                                                 | .1626 (2.67)                                               | .496 (1.26)                         | .2098 (8.73)                                                 | .2582 (4.23)                                               | .642 (1.63)                         |
| <b>B32A</b>        | 3.467 (5.16)            | 1.020 (6.58)                                   | .6238 (25.96)                                                | .4537 (7.43)                                               | .782 (1.99)                         | .4195 (17.46)                                                | .5163 (8.46)                                               | .642 (1.63)                         |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



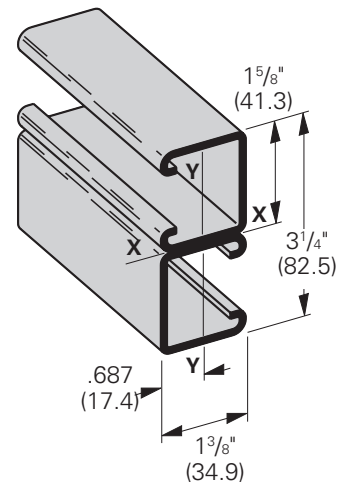
### B32A

Wt. 3.40 Lbs./Ft. (5.06 kg/m)



### B32B

Wt. 3.40 Lbs./Ft. (5.06 kg/m)



### B32C

Wt. 3.40 Lbs./Ft. (5.06 kg/m)

# B32 Beam & column loading data

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |  |               |  | Uniform Load @ Deflection = |  |              |  |
|---------------------|------------------|-----------------------------|--|---------------|--|-----------------------------|--|--------------|--|
|                     |                  | Lbs. kN                     |  | In. mm        |  | 1/240 Span                  |  | 1/360 Span   |  |
|                     |                  |                             |  |               |  | Lbs. kN                     |  | Lbs. kN      |  |
| 12 (305)            | <b>B32</b>       | 2210 (9.83)                 |  | .016 (.40)    |  | 2210 (9.83)                 |  | 2210 (9.83)  |  |
|                     | <b>B32A</b>      | 2210* (9.83)                |  | .003 (.07)    |  | 2210* (9.83)                |  | 2210* (9.83) |  |
| 24 (609)            | <b>B32</b>       | 1299 (5.78)                 |  | .065 (1.65)   |  | 1299 (5.78)                 |  | 1299 (5.78)  |  |
|                     | <b>B32A</b>      | 2210* (9.83)                |  | .022 (.56)    |  | 2210* (9.83)                |  | 2210* (9.83) |  |
| 36 (914)            | <b>B32</b>       | 866 (3.85)                  |  | .147 (3.73)   |  | 866 (3.85)                  |  | 587 (2.61)   |  |
|                     | <b>B32A</b>      | 2210* (9.83)                |  | .076 (1.93)   |  | 2210* (9.83)                |  | 2210* (9.83) |  |
| 48 (1219)           | <b>B32</b>       | 649 (2.89)                  |  | .262 (6.65)   |  | 495 (2.20)                  |  | 330 (1.47)   |  |
|                     | <b>B32A</b>      | 1817 (8.08)                 |  | .148 (3.76)   |  | 1817 (8.08)                 |  | 1638 (7.28)  |  |
| 60 (1524)           | <b>B32</b>       | 520 (2.31)                  |  | .410 (10.41)  |  | 317 (1.41)                  |  | 211 (0.94)   |  |
|                     | <b>B32A</b>      | 1454 (6.47)                 |  | .231 (5.87)   |  | 1454 (6.47)                 |  | 1048 (4.66)  |  |
| 72 (1829)           | <b>B32</b>       | 433 (1.92)                  |  | .590 (14.98)  |  | 220 (0.98)                  |  | 147 (0.65)   |  |
|                     | <b>B32A</b>      | 1211 (5.39)                 |  | .333 (8.46)   |  | 1092 (4.86)                 |  | 728 (3.24)   |  |
| 84 (2133)           | <b>B32</b>       | 371 (1.65)                  |  | .803 (20.39)  |  | 162 (0.72)                  |  | 108 (0.48)   |  |
|                     | <b>B32A</b>      | 1038 (4.62)                 |  | .453 (11.50)  |  | 802 (3.57)                  |  | 535 (2.38)   |  |
| 96 (2438)           | <b>B32</b>       | 325 (1.44)                  |  | 1.049 (26.64) |  | 124 (0.55)                  |  | 83 (0.37)    |  |
|                     | <b>B32A</b>      | 909 (4.04)                  |  | .591 (15.01)  |  | 614 (2.73)                  |  | 410 (1.82)   |  |
| 108 (2743)          | <b>B32</b>       | 289 (1.28)                  |  | 1.327 (33.70) |  | 98 (0.43)                   |  | 65 (0.29)    |  |
|                     | <b>B32A</b>      | 808 (3.59)                  |  | .749 (19.02)  |  | 485 (2.16)                  |  | 324 (1.44)   |  |
| 120 (3048)          | <b>B32</b>       | 260 (1.15)                  |  | 1.639 (41.63) |  | 79 (0.35)                   |  | 53 (0.23)    |  |
|                     | <b>B32A</b>      | 727 (3.23)                  |  | .924 (23.47)  |  | 393 (1.75)                  |  | 262 (1.16)   |  |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \* Failure determined by weld shear.

## Column Loading

| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80 |  |                      |  | Max. Column Loading (Loaded @ C.G.) |  |               |  |                |  |
|------------------------------|------------------|-----------------------------|--|----------------------|--|-------------------------------------|--|---------------|--|----------------|--|
|                              |                  | Loaded@<br>C.G.             |  | Loaded@<br>Slot Face |  | K = .65                             |  | K = 1.0       |  | K = 1.2        |  |
|                              |                  | Lbs. kN                     |  | Lbs. kN              |  | Lbs. kN                             |  | Lbs. kN       |  | Lbs. kN        |  |
| 12 (305)                     | <b>B32</b>       | 10278 (4.572)               |  | 4036 (17.95)         |  | 10432 (46.40)                       |  | 10035 (44.64) |  | 9753 (43.38)   |  |
|                              | <b>B32A</b>      | 21320 (94.83)               |  | 6557 (29.17)         |  | 21378 (95.09)                       |  | 21224 (94.41) |  | 21106 (93.88)  |  |
| 24 (609)                     | <b>B32</b>       | 9104 (40.49)                |  | 3732 (16.60)         |  | 9600 (42.70)                        |  | 8387 (37.31)  |  | 7640 (33.98)   |  |
|                              | <b>B32A</b>      | 20806 (92.55)               |  | 6431 (28.60)         |  | 21039 (93.58)                       |  | 20421 (90.84) |  | 19950 (88.74)  |  |
| 36 (914)                     | <b>B32</b>       | 7640 (33.98)                |  | 3323 (14.78)         |  | 8479 (37.71)                        |  | 6520 (29.00)  |  | 5425 (24.13)   |  |
|                              | <b>B32A</b>      | 19950 (88.74)               |  | 6228 (27.70)         |  | 20474 (91.07)                       |  | 19083 (84.88) |  | 18023 (80.17)  |  |
| 48 (1219)                    | <b>B32</b>       | 6151 (27.36)                |  | 2877 (12.80)         |  | 7265 (32.31)                        |  | 4778 (21.25)  |  | 3870 (17.21)   |  |
|                              | <b>B32A</b>      | 18751 (83.41)               |  | 5954 (26.48)         |  | 19682 (87.55)                       |  | 17210 (76.55) |  | 15326 (68.17)  |  |
| 60 (1524)                    | <b>B32</b>       | 4778 (21.25)                |  | 2435 (10.83)         |  | 6060 (26.95)                        |  | 3693 (16.43)  |  | 2994 (13.32)   |  |
|                              | <b>B32A</b>      | 17210 (76.55)               |  | 4692 (20.87)         |  | 18665 (83.02)                       |  | 14801 (65.84) |  | 11858 (52.75)  |  |
| 72 (1829)                    | <b>B32</b>       | 3870 (17.21)                |  | 2089 (9.29)          |  | 4923 (21.90)                        |  | 2994 (13.32)  |  | 2403 (10.68)   |  |
|                              | <b>B32A</b>      | 15326 (68.17)               |  | 3448 (15.34)         |  | 17421 (77.49)                       |  | 11858 (52.75) |  | 8316 (36.99)   |  |
| 84 (2133)                    | <b>B32</b>       | 3243 (14.42)                |  | 1817 (8.08)          |  | 4114 (18.30)                        |  | 2489 (11.07)  |  | 1807** (8.04)  |  |
|                              | <b>B32A</b>      | 13100 (58.27)               |  | 2609 (11.60)         |  | 15951 (70.95)                       |  | 8798 (39.13)  |  | 6110 (27.18)   |  |
| 96 (2438)                    | <b>B32</b>       | 2774 (12.34)                |  | 1594 (7.09)          |  | 3531 (15.70)                        |  | 1993 (8.86)   |  | 1384** (6.15)  |  |
|                              | <b>B32A</b>      | 10525 (46.82)               |  | 2014 (8.96)          |  | 14256 (63.41)                       |  | 6736 (29.96)  |  | 4678 (20.81)   |  |
| 108 (2743)                   | <b>B32</b>       | 2403 (10.69)                |  | 1407 (6.26)          |  | 3083 (13.71)                        |  | 1574** (7.00) |  | 1093** (4.86)  |  |
|                              | <b>B32A</b>      | 8316 (36.99)                |  | 1592 (7.08)          |  | 12334 (54.86)                       |  | 5322 (23.67)  |  | 3696** (16.44) |  |
| 120 (3048)                   | <b>B32</b>       | 1993 (8.86)                 |  | 1221 (5.43)          |  | 2723 (12.11)                        |  | 1275** (5.67) |  | 886** (3.94)   |  |
|                              | <b>B32A</b>      | 6736 (29.96)                |  | 1289 (5.73)          |  | 10203 (45.38)                       |  | 4311 (19.17)  |  | 2994** (13.32) |  |

\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

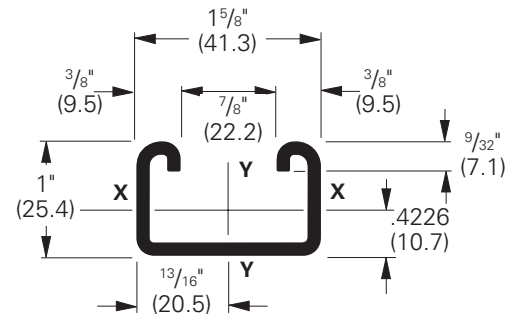
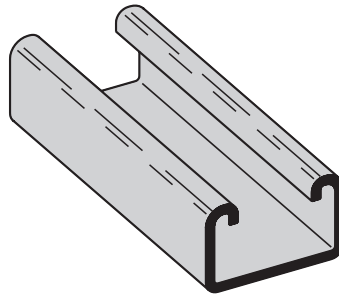
Reference page 48 for general fitting and standard finish specifications.

# B42 Channel & combinations

## B42

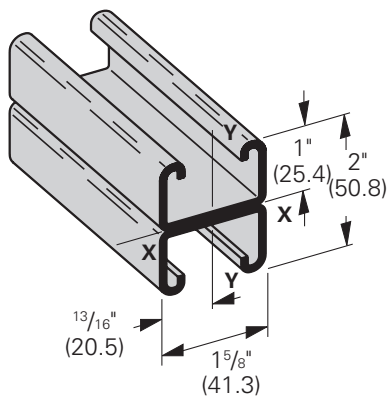
- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Stainless Steel Type 304
- Weight: 1.44 Lbs./Ft. (2.14 kg/m)

**Note:** Also available in 14 gauge (1.9mm) material as B44



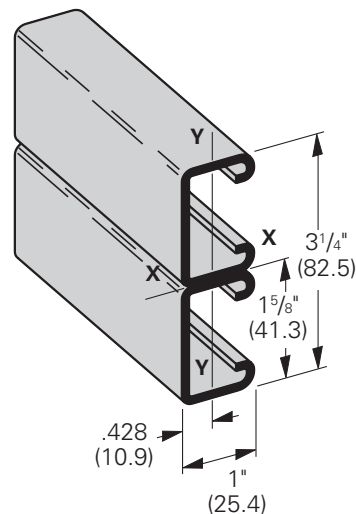
| Section Properties |                         |                                                | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|--------------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B42</b>         | 1.468 (2.18)            | .432 (2.79)                                    | .0554 (2.31)                                                 | .0968 (1.59)                                               | .358 (.91)                          | .1645 (6.85)                                                 | .2025 (3.32)                                               | .617 (1.57)                         |
| <b>B42A</b>        | 2.936 (4.37)            | .864 (5.57)                                    | .2689 (11.19)                                                | .2689 (4.41)                                               | .558 (1.42)                         | .3292 (13.70)                                                | .4052 (6.64)                                               | .617 (1.57)                         |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



## B42A

Wt. 2.88 Lbs./Ft. (4.28 kg/m)



## B42B

Wt. 2.88 Lbs./Ft. (4.28 kg/m)

# B42 Beam & column loading data

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |        |        |         | Uniform Load @ Deflection =                   |        |                                               |        |
|---------------------|------------------|-----------------------------|--------|--------|---------|-----------------------------------------------|--------|-----------------------------------------------|--------|
|                     |                  | Lbs. kN                     |        | In. mm |         | <sup>1</sup> / <sub>240</sub> Span<br>Lbs. kN |        | <sup>1</sup> / <sub>360</sub> Span<br>Lbs. kN |        |
| 12 (305)            | <b>B42</b>       | 1538                        | (6.84) | .022   | (.56)   | 1538                                          | (6.84) | 1538                                          | (6.84) |
|                     | <b>B42A</b>      | 1590*                       | (7.07) | .005   | (.13)   | 1590*                                         | (7.07) | 1590*                                         | (7.07) |
| 24 (609)            | <b>B42</b>       | 769                         | (3.42) | .088   | (2.23)  | 769                                           | (3.42) | 582                                           | (2.59) |
|                     | <b>B42A</b>      | 1590*                       | (7.07) | .038   | (.96)   | 1590*                                         | (7.07) | 1590*                                         | (7.07) |
| 36 (914)            | <b>B42</b>       | 513                         | (2.28) | .198   | (5.03)  | 388                                           | (1.72) | 259                                           | (1.15) |
|                     | <b>B42A</b>      | 1428                        | (6.35) | .114   | (2.89)  | 1428                                          | (6.35) | 1248                                          | (5.55) |
| 48 (1219)           | <b>B42</b>       | 384                         | (1.71) | .352   | (8.94)  | 218                                           | (0.97) | 145                                           | (0.64) |
|                     | <b>B42A</b>      | 1071                        | (4.76) | .203   | (5.15)  | 1053                                          | (4.68) | 702                                           | (3.12) |
| 60 (1524)           | <b>B42</b>       | 308                         | (1.37) | .550   | (13.97) | 140                                           | (0.62) | 93                                            | (0.41) |
|                     | <b>B42A</b>      | 857                         | (3.81) | .318   | (8.08)  | 674                                           | (3.00) | 449                                           | (2.00) |
| 72 (1829)           | <b>B42</b>       | 256                         | (1.14) | .792   | (20.11) | 97                                            | (0.43) | 65                                            | (0.29) |
|                     | <b>B42A</b>      | 714                         | (3.17) | .457   | (11.61) | 468                                           | (2.08) | 312                                           | (1.39) |
| 84 (2133)           | <b>B42</b>       | 220                         | (0.98) | 1.079  | (27.40) | 71                                            | (0.31) | 48                                            | (0.21) |
|                     | <b>B42A</b>      | 612                         | (2.72) | .623   | (15.82) | 344                                           | (1.53) | 229                                           | (1.02) |
| 96 (2438)           | <b>B42</b>       | 192                         | (0.85) | 1.409  | (35.79) | 55                                            | (0.24) | 36                                            | (0.16) |
|                     | <b>B42A</b>      | 535                         | (2.38) | .813   | (20.65) | 263                                           | (1.17) | 176                                           | (0.78) |
| 108 (2743)          | <b>B42</b>       | 171                         | (0.76) | 1.783  | (45.29) | 43                                            | (0.19) | 29                                            | (0.13) |
|                     | <b>B42A</b>      | 476                         | (2.12) | 1.029  | (26.13) | 208                                           | (0.92) | 139                                           | (0.62) |
| 120 (3048)          | <b>B42</b>       | 154                         | (0.68) | 2.202  | (55.93) | 35                                            | (0.15) | 23                                            | (0.10) |
|                     | <b>B42A</b>      | 428                         | (1.90) | 1.271  | (32.28) | 168                                           | (0.75) | 112                                           | (0.50) |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

## Column Loading

| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80 |         |                      |         | Max. Column Loading (Loaded @ C.G.) |         |         |         |         |         |
|------------------------------|------------------|-----------------------------|---------|----------------------|---------|-------------------------------------|---------|---------|---------|---------|---------|
|                              |                  | Loaded@<br>C.G.             |         | Loaded@<br>Slot Face |         | K = .65                             |         | K = 1.0 |         | K = 1.2 |         |
|                              |                  | Lbs.                        | kN      | Lbs.                 | kN      | Lbs.                                | kN      | Lbs.    | kN      | Lbs.    | kN      |
| 12 (305)                     | <b>B42</b>       | 9138                        | (40.65) | 3493                 | (15.54) | 9283                                | (41.23) | 8916    | (39.66) | 8670    | (38.56) |
|                              | <b>B42A</b>      | 21094                       | (93.83) | 5834                 | (25.95) | 21304                               | (94.76) | 20793   | (92.49) | 20469   | (91.05) |
| 24 (609)                     | <b>B42</b>       | 8137                        | (36.19) | 3145                 | (13.99) | 8540                                | (37.99) | 7589    | (33.76) | 7050    | (31.36) |
|                              | <b>B42A</b>      | 19757                       | (87.88) | 5585                 | (24.84) | 20299                               | (90.29) | 18964   | (84.35) | 18094   | (80.48) |
| 36 (914)                     | <b>B42</b>       | 7050                        | (31.36) | 2722                 | (12.11) | 7657                                | (34.06) | 5925    | (26.35) | 4335    | (19.28) |
|                              | <b>B42A</b>      | 18094                       | (80.48) | 5237                 | (23.29) | 19067                               | (84.81) | 16654   | (74.08) | 15057   | (66.98) |
| 48 (1219)                    | <b>B42</b>       | 5405                        | (24.04) | 2227                 | (9.90)  | 6786                                | (30.18) | 3512    | (15.62) | 2439    | (10.85) |
|                              | <b>B42A</b>      | 16139                       | (71.79) | 4818                 | (21.43) | 17632                               | (78.43) | 13906   | (61.86) | 11387   | (50.65) |
| 60 (1524)                    | <b>B42</b>       | 3512                        | (15.62) | 1718                 | (7.64)  | 5272                                | (23.45) | 2247    | (9.99)  | 1561**  | (6.94)  |
|                              | <b>B42A</b>      | 13906                       | (61.86) | 4352                 | (19.36) | 16008                               | (71.21) | 10710   | (47.64) | 7531    | (33.50) |
| 72 (1829)                    | <b>B42</b>       | 2439                        | (10.85) | 1351                 | (6.01)  | 3694                                | (16.43) | 1561**  | (6.94)  | 1084**  | (4.82)  |
|                              | <b>B42A</b>      | 11387                       | (50.65) | 3856                 | (17.15) | 14200                               | (64.16) | 7531    | (33.50) | 5230    | (23.26) |
| 84 (2133)                    | <b>B42</b>       | 1792                        | (7.97)  | 1087                 | (4.83)  | 2714                                | (12.07) | 1147**  | (5.10)  | 796**   | (3.54)  |
|                              | <b>B42A</b>      | 8645                        | (38.45) | 3332                 | (14.82) | 12206                               | (54.29) | 5533    | (24.61) | 3842    | (17.09) |
| 96 (2438)                    | <b>B42</b>       | 1372**                      | (6.10)  | 891                  | (3.96)  | 2078                                | (9.24)  | 878**   | (3.90)  | —       | —       |
|                              | <b>B42A</b>      | 6619                        | (29.44) | 2873                 | (12.78) | 10012                               | (44.53) | 4236    | (18.84) | 2942**  | (13.08) |
| 108 (2743)                   | <b>B42</b>       | 1084**                      | (4.82)  | 743                  | (3.30)  | 1642                                | (7.30)  | —       | —       | —       | —       |
|                              | <b>B42A</b>      | 5230                        | (23.26) | 2495                 | (11.10) | 7922                                | (35.24) | 3347    | (14.89) | 2324**  | (10.34) |
| 120 (3048)                   | <b>B42</b>       | 878**                       | (3.90)  | 628                  | (2.79)  | 1330**                              | (5.91)  | —       | —       | —       | —       |
|                              | <b>B42A</b>      | 4236                        | (18.84) | 2182                 | (9.70)  | 6417                                | (28.54) | 2711**  | (12.06) | 1883**  | (8.37)  |

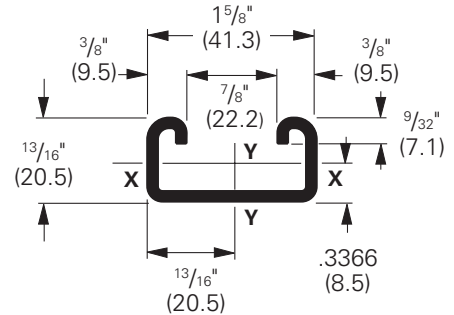
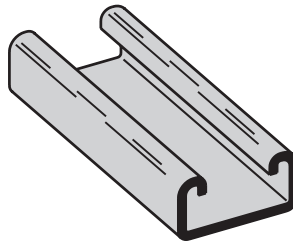
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B52 Channel & combinations

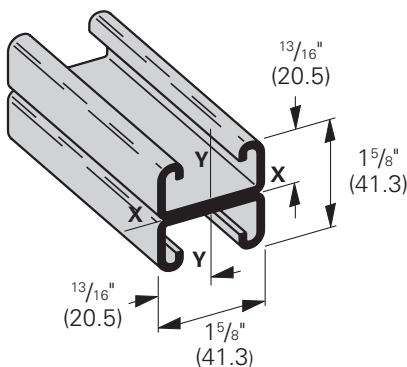
## B52

- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Stainless Steel Type 304 or 316, Hot-Dipped Galvanized
- Weight: 1.27 Lbs./Ft. (1.89 kg/m)



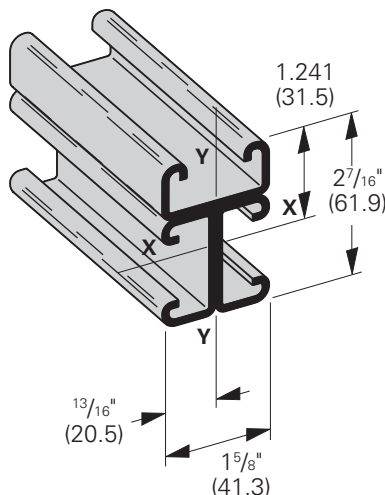
| Section Properties |                         |                                                | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|--------------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B52</b>         | 1.313 (1.95)            | .386 (2.49)                                    | .0320 (1.33)                                                 | .0673 (1.10)                                               | .288 (.73)                          | .1404 (5.84)                                                 | .1728 (2.83)                                               | .603 (1.53)                         |
| <b>B52A</b>        | 2.627 (3.91)            | .773 (4.99)                                    | .1517 (6.31)                                                 | .1868 (3.06)                                               | .443 (1.13)                         | .2809 (11.69)                                                | .3457 (5.67)                                               | .603 (1.53)                         |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



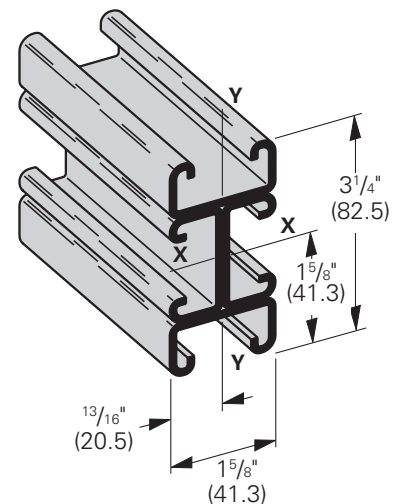
### B52A

Wt. 2.54 Lbs./Ft. (3.78 kg/m)



### B52B3

Wt. 3.81 Lbs./Ft. (5.67 kg/m)



### B52B4

Wt. 5.08 Lbs./Ft. (7.56 kg/m)



## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |        |       |         | Uniform Load @ Deflection = |        |                    |        |
|---------------------|------------------|-----------------------------|--------|-------|---------|-----------------------------|--------|--------------------|--------|
|                     |                  | Lbs.                        | kN     | In.   | mm      | 1/240 Span<br>Lbs.          | kN     | 1/360 Span<br>Lbs. | kN     |
| 12 (305)            | <b>B52</b>       | 1079                        | (4.80) | .026  | (.66)   | 1079                        | (4.80) | 1079               | (4.80) |
|                     | <b>B52A</b>      | 1270*                       | (5.65) | .006  | (.15)   | 1270*                       | (5.65) | 1270*              | (5.65) |
| 24 (609)            | <b>B52</b>       | 539                         | (2.40) | .106  | (2.69)  | 506                         | (2.25) | 337                | (1.50) |
|                     | <b>B52A</b>      | 1270*                       | (5.65) | .052  | (1.32)  | 1270*                       | (5.65) | 1270*              | (5.65) |
| 36 (914)            | <b>B52</b>       | 360                         | (1.60) | .240  | (6.09)  | 225                         | (1.00) | 150                | (0.67) |
|                     | <b>B52A</b>      | 1013                        | (4.50) | .141  | (3.58)  | 1013                        | (4.50) | 719                | (3.20) |
| 48 (1219)           | <b>B52</b>       | 270                         | (1.20) | .427  | (10.84) | 126                         | (0.56) | 84                 | (0.37) |
|                     | <b>B52A</b>      | 759                         | (3.37) | .250  | (6.35)  | 607                         | (2.70) | 404                | (1.80) |
| 60 (1524)           | <b>B52</b>       | 216                         | (0.96) | .667  | (16.94) | 81                          | (0.36) | 54                 | (0.24) |
|                     | <b>B52A</b>      | 608                         | (2.70) | .391  | (9.93)  | 388                         | (1.72) | 259                | (1.15) |
| 72 (1829)           | <b>B52</b>       | 180                         | (0.80) | .960  | (24.38) | 56                          | (0.25) | 37                 | (0.16) |
|                     | <b>B52A</b>      | 506                         | (2.25) | .563  | (14.30) | 270                         | (1.20) | 180                | (0.80) |
| 84 (2133)           | <b>B52</b>       | 154                         | (0.68) | 1.307 | (33.20) | 41                          | (0.18) | 28                 | (0.12) |
|                     | <b>B52A</b>      | 434                         | (1.93) | .766  | (19.45) | 198                         | (0.88) | 132                | (0.59) |
| 96 (2438)           | <b>B52</b>       | 135                         | (0.60) | 1.707 | (43.36) | 32                          | (0.14) | 21                 | (0.09) |
|                     | <b>B52A</b>      | 380                         | (1.69) | 1.001 | (25.42) | 152                         | (0.67) | 101                | (0.45) |
| 108 (2743)          | <b>B52</b>       | 120                         | (0.53) | 2.160 | (54.86) | 25                          | (0.11) | 17                 | (0.07) |
|                     | <b>B52A</b>      | 338                         | (1.50) | 1.267 | (32.18) | 120                         | (0.53) | 80                 | (0.35) |
| 120 (3048)          | <b>B52</b>       | 108                         | (0.48) | 2.667 | (67.74) | 20                          | (0.09) | 13                 | (0.06) |
|                     | <b>B52A</b>      | 304                         | (1.35) | 1.564 | (39.72) | 97                          | (0.43) | 65                 | (0.29) |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

## Column Loading

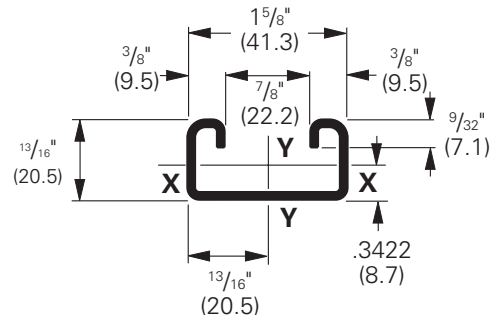
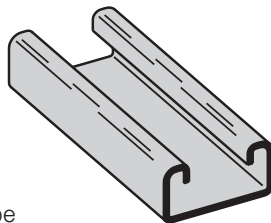
| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80 |         |                      |         | Max. Column Loading (Loaded @ C.G.) |         |         |         |         |         |
|------------------------------|------------------|-----------------------------|---------|----------------------|---------|-------------------------------------|---------|---------|---------|---------|---------|
|                              |                  | Loaded@<br>C.G.             |         | Loaded@<br>Slot Face |         | K = .65                             |         | K = 1.0 |         | K = 1.2 |         |
|                              |                  | Lbs.                        | kN      | Lbs.                 | kN      | Lbs.                                | kN      | Lbs.    | kN      | Lbs.    | kN      |
| 12 (305)                     | <b>B52</b>       | 8407                        | (37.36) | 3162                 | (14.06) | 8543                                | (38.00) | 8205    | (36.50) | 7989    | (35.54) |
|                              | <b>B52A</b>      | 19160                       | (85.23) | 5290                 | (23.53) | 19425                               | (86.41) | 18777   | (83.52) | 18363   | (81.68) |
| 24 (609)                     | <b>B52</b>       | 7519                        | (33.44) | 2755                 | (12.25) | 7879                                | (35.05) | 6521    | (29.01) | 5397    | (24.01) |
|                              | <b>B52A</b>      | 17444                       | (77.59) | 4955                 | (22.04) | 18144                               | (80.71) | 16412   | (73.00) | 15275   | (67.94) |
| 36 (914)                     | <b>B52</b>       | 5397                        | (24.01) | 2152                 | (9.57)  | 6653                                | (29.59) | 3616    | (16.08) | 2511    | (11.17) |
|                              | <b>B52A</b>      | 15275                       | (67.94) | 4496                 | (20.00) | 16547                               | (73.60) | 13376   | (59.50) | 11243   | (50.01) |
| 48 (1219)                    | <b>B52</b>       | 3178                        | (14.13) | 1560                 | (6.94)  | 4785                                | (21.28) | 2034    | (9.05)  | 1412**  | (6.28)  |
|                              | <b>B52A</b>      | 12692                       | (56.46) | 3963                 | (17.63) | 14667                               | (65.24) | 9683    | (43.07) | 6780    | (30.16) |
| 60 (1524)                    | <b>B52</b>       | 2034                        | (9.05)  | 1159                 | (5.15)  | 3081                                | (13.70) | 1302**  | (5.79)  | 904**   | (4.02)  |
|                              | <b>B52A</b>      | 9683                        | (43.07) | 3383                 | (15.05) | 12516                               | (55.67) | 6248    | (27.79) | 4339    | (19.30) |
| 72 (1829)                    | <b>B52</b>       | 1412**                      | (6.28)  | 891                  | (3.96)  | 2139                                | (9.51)  | 904**   | (4.02)  | —       | —       |
|                              | <b>B52A</b>      | 6780                        | (30.16) | 2799                 | (12.45) | 10084                               | (44.85) | 4339    | (19.30) | 3013    | (13.42) |
| 84 (2133)                    | <b>B52</b>       | 1038**                      | (4.62)  | 704                  | (3.13)  | 1572                                | (6.99)  | 664**   | (2.95)  | —       | —       |
|                              | <b>B52A</b>      | 4981                        | (22.15) | 2337                 | (10.39) | 7545                                | (33.56) | 3188    | (14.18) | 2214**  | (9.85)  |
| 96 (2438)                    | <b>B52</b>       | 794**                       | (3.53)  | 570                  | (2.53)  | 1203**                              | (5.35)  | —       | —       | —       | —       |
|                              | <b>B52A</b>      | 3814                        | (16.96) | 1973                 | (8.77)  | 5777                                | (25.70) | 2441**  | (10.86) | 1695**  | (7.54)  |
| 108 (2743)                   | <b>B52</b>       | —                           | —       | 470                  | (2.09)  | 951**                               | (4.23)  | —       | —       | —       | —       |
|                              | <b>B52A</b>      | 3013                        | (13.40) | 1684                 | (7.49)  | 4564                                | (20.30) | 1928**  | (8.57)  | 1339**  | (5.95)  |
| 120 (3048)                   | <b>B52</b>       | —                           | —       | 394                  | (1.75)  | 770**                               | (3.42)  | —       | —       | —       | —       |
|                              | <b>B52A</b>      | 2441**                      | (10.86) | 1452                 | (6.46)  | 3697                                | (16.44) | 1562**  | (6.95)  | —       | —       |

\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

# B54 Channel & combinations

## B54

- Thickness: 14 Gauge (1.9 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Stainless Steel Type 304 or 316, Aluminum
- Weight: .97 Lbs./Ft. (1.44 kg/m)

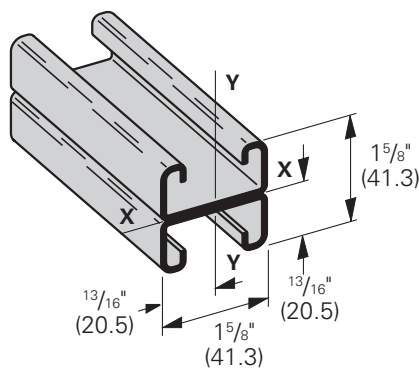


### Note:

Aluminum loading, for B54 & B54A, can be determined by multiplying load data times a factor of 0.38

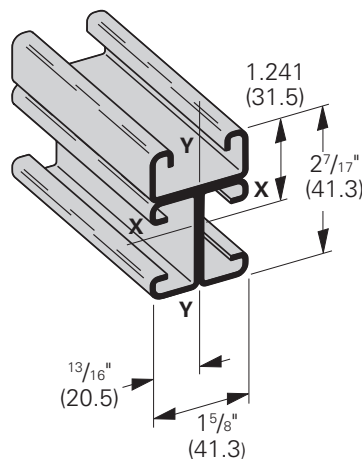
| Section Properties |                         |                                                | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|--------------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
| Channel            | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B54</b>         | 1.016 (1.51)            | .299 (1.93)                                    | .0263 (1.09)                                                 | .0560 (.92)                                                | .297 (.75)                          | .1106 (4.60)                                                 | .1361 (2.23)                                               | .608 (1.55)                         |
| <b>B54A</b>        | 2.032 (3.02)            | .598 (3.86)                                    | .1226 (5.10)                                                 | .1510 (2.47)                                               | .453 (1.15)                         | .2212 (9.12)                                                 | .2722 (4.46)                                               | .608 (1.55)                         |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



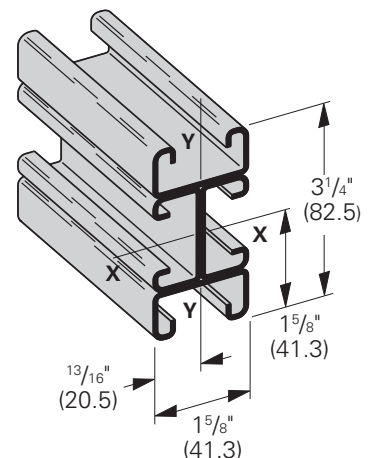
### B54A

Wt. 1.94 Lbs./Ft. (2.89 kg/m)



### B54B3

Wt. 2.91 Lbs./Ft. (4.33 kg/m)



### B54B4

Wt. 3.88 Lbs./Ft. (5.77 kg/m)

# B54 Beam & column loading data

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |        |       |         | Uniform Load @ Deflection = |                       |  |  |
|---------------------|------------------|-----------------------------|--------|-------|---------|-----------------------------|-----------------------|--|--|
|                     |                  | Lbs.                        | kN     | In.   | mm      | 1/240 Span<br>Lbs. kN       | 1/360 Span<br>Lbs. kN |  |  |
| 12 (305)            | <b>B54</b>       | 870                         | (3.87) | .027  | (.68)   | 870 (3.87)                  | 870 (3.87)            |  |  |
|                     | <b>B54A</b>      | 870*                        | (3.87) | .005  | (.13)   | 870* (3.87)                 | 870* (3.87)           |  |  |
| 24 (609)            | <b>B54</b>       | 465                         | (2.07) | .108  | (2.74)  | 430 (1.91)                  | 287 (1.27)            |  |  |
|                     | <b>B54A</b>      | 870*                        | (3.87) | .043  | (1.09)  | 870* (3.87)                 | 870* (3.87)           |  |  |
| 36 (914)            | <b>B54</b>       | 310                         | (1.38) | .243  | (6.17)  | 191 (0.85)                  | 127 (0.56)            |  |  |
|                     | <b>B54A</b>      | 832                         | (3.70) | .141  | (3.58)  | 832 (3.70)                  | 591 (2.63)            |  |  |
| 48 (1219)           | <b>B54</b>       | 233                         | (1.03) | .432  | (10.97) | 108 (0.48)                  | 72 (0.32)             |  |  |
|                     | <b>B54A</b>      | 624                         | (2.77) | .250  | (6.35)  | 499 (2.22)                  | 332 (1.48)            |  |  |
| 60 (1524)           | <b>B54</b>       | 186                         | (0.83) | .676  | (17.17) | 69 (0.31)                   | 46 (0.20)             |  |  |
|                     | <b>B54A</b>      | 499                         | (2.22) | .391  | (9.93)  | 319 (1.42)                  | 213 (0.95)            |  |  |
| 72 (1829)           | <b>B54</b>       | 155                         | (0.69) | .973  | (24.71) | 48 (0.21)                   | 32 (0.14)             |  |  |
|                     | <b>B54A</b>      | 416                         | (1.85) | .563  | (14.30) | 222 (0.99)                  | 148 (0.66)            |  |  |
| 84 (2133)           | <b>B54</b>       | 133                         | (0.59) | 1.324 | (33.63) | 35 (0.15)                   | 23 (0.10)             |  |  |
|                     | <b>B54A</b>      | 357                         | (1.59) | .766  | (19.45) | 163 (0.72)                  | 109 (0.48)            |  |  |
| 96 (2438)           | <b>B54</b>       | 116                         | (0.51) | 1.730 | (43.94) | 27 (0.12)                   | 18 (0.08)             |  |  |
|                     | <b>B54A</b>      | 312                         | (1.39) | 1.001 | (25.42) | 125 (0.55)                  | 83 (0.37)             |  |  |
| 108 (2743)          | <b>B54</b>       | 103                         | (0.46) | 2.189 | (55.60) | 21 (0.09)                   | 14 (0.06)             |  |  |
|                     | <b>B54A</b>      | 277                         | (1.23) | 1.267 | (32.18) | 98 (0.43)                   | 66 (0.29)             |  |  |
| 120 (3048)          | <b>B54</b>       | 93                          | (0.41) | 2.703 | (68.65) | 17 (0.07)                   | 11 (0.05)             |  |  |
|                     | <b>B54A</b>      | 250                         | (1.11) | 1.564 | (39.72) | 80 (0.35)                   | 53 (0.23)             |  |  |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

## Column Loading

| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80 |         |                      |         | Max. Column Loading (Loaded @ C.G.) |         |         |         |         |         |
|------------------------------|------------------|-----------------------------|---------|----------------------|---------|-------------------------------------|---------|---------|---------|---------|---------|
|                              |                  | Loaded@<br>C.G.             |         | Loaded@<br>Slot Face |         | K = .65                             |         | K = 1.0 |         | K = 1.2 |         |
|                              |                  | Lbs.                        | kN      | Lbs.                 | kN      | Lbs.                                | kN      | Lbs.    | kN      | Lbs.    | kN      |
| 12 (305)                     | <b>B54</b>       | 6186                        | (27.51) | 2586                 | (11.50) | 6284                                | (27.95) | 6032    | (26.83) | 5857    | (26.05) |
|                              | <b>B54A</b>      | 12763                       | (56.77) | 4060                 | (18.06) | 12835                               | (57.09) | 12645   | (56.25) | 12501   | (55.61) |
| 24 (609)                     | <b>B54</b>       | 5464                        | (24.30) | 2254                 | (10.02) | 5763                                | (25.63) | 4968    | (22.10) | 4300    | (19.13) |
|                              | <b>B54A</b>      | 12135                       | (53.98) | 3857                 | (17.16) | 12420                               | (55.25) | 11663   | (51.88) | 11087   | (49.32) |
| 36 (914)                     | <b>B54</b>       | 4300                        | (19.13) | 1816                 | (8.08)  | 5043                                | (22.43) | 3076    | (13.68) | 2136    | (9.50)  |
|                              | <b>B54A</b>      | 11087                       | (49.32) | 3549                 | (15.79) | 11728                               | (52.17) | 10026   | (44.60) | 8729    | (38.83) |
| 48 (1219)                    | <b>B54</b>       | 2703                        | (12.02) | 1341                 | (5.96)  | 3920                                | (17.44) | 1730    | (7.69)  | 1201    | (5.34)  |
|                              | <b>B54A</b>      | 9620                        | (42.79) | 3169                 | (14.09) | 10759                               | (47.86) | 7734    | (34.40) | 5571    | (24.78) |
| 60 (1524)                    | <b>B54</b>       | 1730                        | (7.69)  | 995                  | (4.42)  | 2621                                | (11.66) | 1107**  | (4.92)  | 769**   | (3.42)  |
|                              | <b>B54A</b>      | 7734                        | (34.40) | 2745                 | (12.21) | 9514                                | (42.32) | 5134    | (22.84) | 3566    | (15.86) |
| 72 (1829)                    | <b>B54</b>       | 1201                        | (5.34)  | 763                  | (3.39)  | 1820                                | (8.09)  | 769**   | (3.42)  | 534**   | (2.37)  |
|                              | <b>B54A</b>      | 5571                        | (24.78) | 2291                 | (10.19) | 7992                                | (35.50) | 3566    | (15.86) | 2476    | (11.01) |
| 84 (2133)                    | <b>B54</b>       | 883**                       | (3.93)  | 603                  | (2.68)  | 1337                                | (5.95)  | 565**   | (2.51)  | —       | —       |
|                              | <b>B54A</b>      | 4093                        | (18.20) | 1913                 | (8.51)  | 6200                                | (27.58) | 2620    | (11.65) | 1819**  | (8.09)  |
| 96 (2438)                    | <b>B54</b>       | 676**                       | (3.01)  | 487                  | (2.16)  | 1024**                              | (4.55)  | —       | —       | —       | —       |
|                              | <b>B54A</b>      | 3134                        | (13.94) | 1616                 | (7.19)  | 4747                                | (21.11) | 2006**  | (8.92)  | 1393**  | (6.19)  |
| 108 (2743)                   | <b>B54</b>       | 534**                       | (2.37)  | 401                  | (1.78)  | 809**                               | (3.60)  | —       | —       | —       | —       |
|                              | <b>B54A</b>      | 2476                        | (11.01) | 1380                 | (6.14)  | 3751                                | (16.68) | 1585**  | (7.05)  | 1100**  | (4.89)  |
| 120 (3048)                   | <b>B54</b>       | —                           | —       | 336                  | (1.49)  | 655**                               | (2.91)  | —       | —       | —       | —       |
|                              | <b>B54A</b>      | 2006**                      | (8.92)  | 1190                 | (5.29)  | 3038                                | (13.51) | 1284**  | (5.71)  | —       | —       |

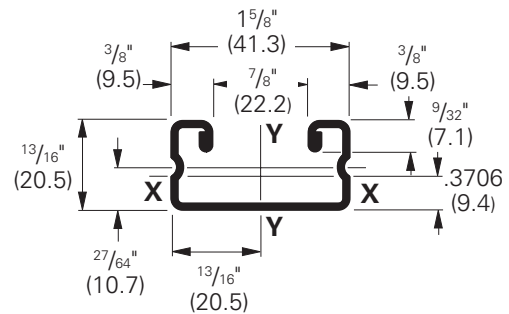
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

## B56 Channel & combinations

### B56

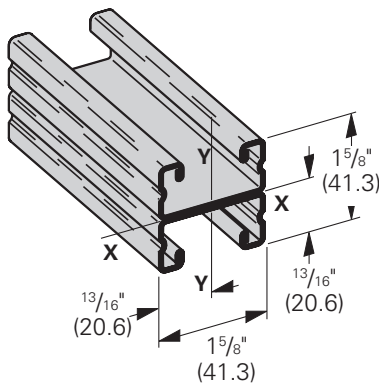
- Thickness: 16 Gauge (1.5 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized
- Weight: .85 Lbs./Ft. (1.26 kg/m)



### Section Properties

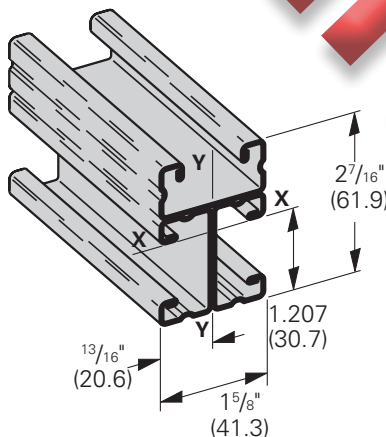
| Section Properties |                         |                                             | X - X Axis                       |                                  |                        | Y - Y Axis                       |                                  |                        |
|--------------------|-------------------------|---------------------------------------------|----------------------------------|----------------------------------|------------------------|----------------------------------|----------------------------------|------------------------|
|                    |                         |                                             | Moment of Inertia (I)            | Section Modulus (S)              | Radius of Gyration (r) | Moment of Inertia (I)            | Section Modulus (S)              | Radius of Gyration (r) |
| Channel            | Weight<br>lbs./ft. kg/m | Areas of Section<br>sq. in. cm <sup>2</sup> | in. <sup>4</sup> cm <sup>4</sup> | in. <sup>3</sup> cm <sup>3</sup> | in. cm                 | in. <sup>4</sup> cm <sup>4</sup> | in. <sup>3</sup> cm <sup>3</sup> | in. cm                 |
| <b>B56</b>         | .894 (1.33)             | .263 (1.70)                                 | .0241 (1.00)                     | .0546 (.89)                      | .303 (.77)             | .0966 (4.02)                     | .1189 (1.95)                     | .606 (1.54)            |
| <b>B56A</b>        | 1.789 (2.66)            | .526 (3.39)                                 | .1205 (5.02)                     | .1484 (2.43)                     | .479 (1.22)            | .1931 (8.04)                     | .2377 (3.89)                     | .606 (1.54)            |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



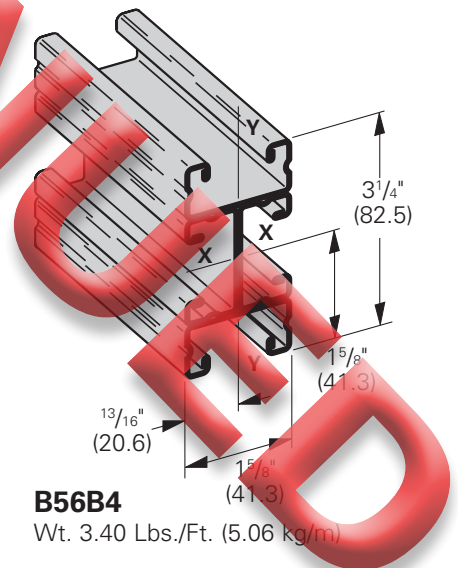
### B56A

Wt. 1.70 Lbs./Ft. (2.53 kg/m)



### B56B3

Wt. 2.55 Lbs./Ft. (3.79 kg/m)



### B56B4

Wt. 3.40 Lbs./Ft. (5.06 kg/m)

# B56 Beam & column loading data

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |        |       |         | Uniform Load @ Deflection = |        |                    |        |
|---------------------|------------------|-----------------------------|--------|-------|---------|-----------------------------|--------|--------------------|--------|
|                     |                  | Lbs.                        | kN     | In.   | mm      | 1/240 Span<br>Lbs.          | kN     | 1/360 Span<br>Lbs. | kN     |
| 12 (305)            | B56              | 610                         | (2.73) | .027  | (.68)   | 610                         | (2.71) | 610                | (2.71) |
|                     | B56A             | 610*                        | (2.71) | .004  | (.10)   | 610*                        | (2.71) | 610*               | (2.71) |
| 24 (609)            | B56              | 405                         | (1.80) | .109  | (2.77)  | 372                         | (1.65) | 248                | (1.10) |
|                     | B56A             | 610*                        | (2.71) | .035  | (.89)   | 610*                        | (2.71) | 610*               | (2.71) |
| 36 (914)            | B56              | 270                         | (1.20) | .245  | (6.22)  | 165                         | (0.73) | 110                | (0.49) |
|                     | B56A             | 610*                        | (2.71) | .121  | (3.07)  | 610*                        | (2.71) | 502                | (2.23) |
| 48 (1219)           | B56              | 202                         | (0.90) | .435  | (11.05) | 93                          | (0.41) | 62                 | (0.27) |
|                     | B56A             | 530                         | (2.36) | .250  | (6.35)  | 423                         | (1.88) | 282                | (1.70) |
| 60 (1524)           | B56              | 162                         | (0.72) | .680  | (17.27) | 59                          | (0.26) | 40                 | (0.18) |
|                     | B56A             | 424                         | (1.88) | .391  | (9.93)  | 271                         | (1.20) | 181                | (0.80) |
| 72 (1829)           | B56              | 135                         | (0.60) | .980  | (24.89) | 41                          | (0.18) | 28                 | (0.12) |
|                     | B56A             | 353                         | (1.57) | .563  | (14.30) | 188                         | (0.83) | 125                | (0.55) |
| 84 (2133)           | B56              | 116                         | (0.51) | 1.334 | (33.88) | 30                          | (0.13) | 20                 | (0.09) |
|                     | B56A             | 303                         | (1.35) | .766  | (19.45) | 138                         | (0.61) | 92                 | (0.41) |
| 96 (2438)           | B56              | 101                         | (0.45) | 1.742 | (44.24) | 23                          | (0.10) | 15                 | (0.07) |
|                     | B56A             | 265                         | (1.18) | 1.001 | (25.42) | 106                         | (0.47) | 71                 | (0.31) |
| 108 (2743)          | B56              | 90                          | (0.40) | 2.205 | (56.01) | 18                          | (0.08) | 12                 | (0.05) |
|                     | B56A             | 236                         | (1.05) | 1.267 | (32.18) | 84                          | (0.37) | 56                 | (0.25) |
| 120 (3048)          | B56              | 81                          | (0.36) | 2.722 | (69.14) | 15                          | (0.07) | 10                 | (0.04) |
|                     | B56A             | 212                         | (0.94) | 1.564 | (39.72) | 68                          | (0.30) | 45                 | (0.20) |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. Failure determined by weld shear.

## Column Loading

| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80 |         |                      |         | Max. Column Loading (Loaded @ C.G.) |         |         |         |         |         |
|------------------------------|------------------|-----------------------------|---------|----------------------|---------|-------------------------------------|---------|---------|---------|---------|---------|
|                              |                  | Loaded@<br>C.G.             |         | Loaded@<br>Slot Face |         | K = .65                             |         | K = 1.0 |         | K = 1.2 |         |
|                              |                  | Lbs.                        | kN      | Lbs.                 | kN      | Lbs.                                | kN      | Lbs.    | kN      | Lbs.    | kN      |
| 12 (305)                     | B56              | 4968                        | (22.10) | 2182                 | (9.70)  | 5044                                | (22.44) | 4845    | (21.55) | 4702    | (20.91) |
|                              | B56A             | 10237                       | (45.53) | 3365                 | (14.97) | 10291                               | (45.77) | 10148   | (45.14) | 10039   | (44.65) |
| 24 (609)                     | B56              | 4367                        | (19.42) | 1903                 | (8.46)  | 4624                                | (20.57) | 3985    | (17.72) | 3572    | (15.89) |
|                              | B56A             | 9762                        | (43.42) | 3202                 | (14.24) | 9977                                | (44.38) | 9405    | (41.83) | 8969    | (39.89) |
| 36 (914)                     | B56              | 3572                        | (15.89) | 1557                 | (6.92)  | 4034                                | (17.94) | 2658    | (11.82) | 1845    | (8.21)  |
|                              | B56A             | 8969                        | (39.89) | 2955                 | (13.14) | 9454                                | (42.05) | 8167    | (36.33) | 7186    | (31.96) |
| 48 (1219)                    | B56              | 2335                        | (10.38) | 1164                 | (5.18)  | 3290                                | (14.63) | 1495    | (6.65)  | 1038    | (4.62)  |
|                              | B56A             | 7860                        | (34.96) | 2649                 | (11.78) | 8722                                | (38.80) | 6434    | (28.62) | 4731    | (21.04) |
| 60 (1524)                    | B56              | 1495                        | (6.65)  | 862                  | (3.83)  | 2264                                | (10.07) | 957     | (4.26)  | 664**   | (2.95)  |
|                              | B56A             | 6434                        | (28.62) | 2307                 | (10.26) | 7780                                | (34.61) | 4360    | (19.39) | 3028    | (13.47) |
| 72 (1829)                    | B56              | 1038                        | (4.62)  | 661                  | (2.94)  | 1572                                | (6.99)  | 664**   | (2.95)  | 481**   | (2.05)  |
|                              | B56A             | 4731                        | (21.04) | 1937                 | (8.61)  | 6629                                | (29.49) | 3028    | (13.47) | 2103    | (9.35)  |
| 84 (2133)                    | B56              | 763**                       | (3.39)  | 522                  | (2.32)  | 1155                                | (5.14)  | 488**   | (2.17)  | —       | —       |
|                              | B56A             | 3476                        | (15.46) | 1619                 | (7.20)  | 5269                                | (23.44) | 2224    | (9.89)  | 1545**  | (6.87)  |
| 96 (2438)                    | B56              | 584**                       | (2.60)  | 422                  | (1.88)  | 884**                               | (3.93)  | —       | —       | —       | —       |
|                              | B56A             | 2661                        | (11.84) | 1368                 | (6.08)  | 4031                                | (17.93) | 1703**  | (7.57)  | 1183**  | (5.26)  |
| 108 (2743)                   | B56              | 461**                       | (2.05)  | 348                  | (1.55)  | 699**                               | (3.11)  | —       | —       | —       | —       |
|                              | B56A             | 2103                        | (9.35)  | 1169                 | (5.20)  | 3185                                | (14.17) | 1346**  | (5.99)  | 934**   | (4.15)  |
| 120 (3048)                   | B56              | —                           | —       | 291                  | (1.29)  | 566**                               | (2.42)  | —       | —       | —       | —       |
|                              | B56A             | 1703**                      | (7.57)  | 1008                 | (4.48)  | 2580                                | (11.47) | 1090**  | (4.85)  | —       | —       |

\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

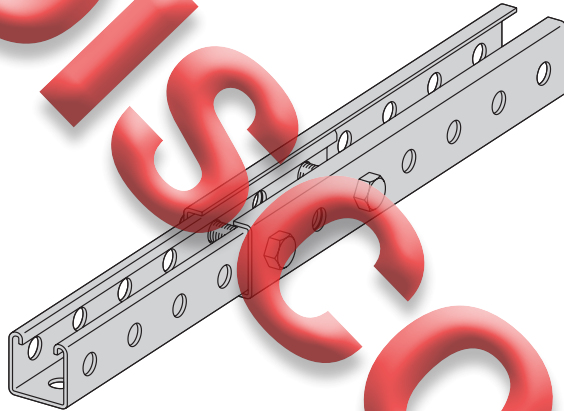
Reference page 48 for general fitting and standard finish specifications.



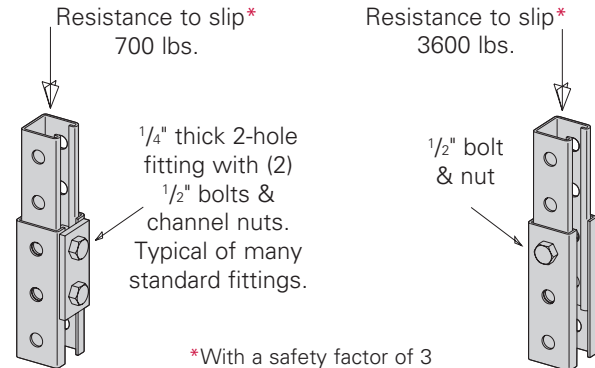
# Telescoping channel

## BTS22TH

- Can be secured at any point of system
- Order BTS22TH & B22TH separately
- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m)
- Standard finishes: DURA GREEN™, Yellow Zinc Dichromate, Hot-Dipped Galvanized



## Slip Load Data

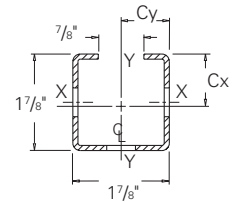


## BTS22TH Telescoping Strut

Fits over all 1 5/8" x 1 5/8" channels 9/16" holes on 1 7/8" centers 12 gauge material thickness

| Section Properties |                 |                      | X-X Axis |                    |                    |        | Y-Y Axis |                    |                    |        |
|--------------------|-----------------|----------------------|----------|--------------------|--------------------|--------|----------|--------------------|--------------------|--------|
| Channel            | Weight lbs./ft. | Area In <sup>2</sup> | Cx In    | Ix In <sup>4</sup> | Sx In <sup>3</sup> | rx In  | Cy In    | Iy In <sup>4</sup> | Sy In <sup>3</sup> | ry In  |
| BTS22TH            | 1.934           | 0.4578               | 1.0009   | 0.2525             | 0.2523             | 0.7426 | 0.9375   | 0.2757             | 0.2941             | 0.7761 |

Section properties are based on nominal metal thickness, and overall dimensions.

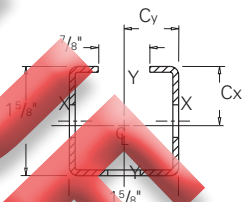


## B22TH Three Hole Strut

9/16" holes on 1 7/8" centers 12 gauge material thickness

| Section Properties |                 |                      | X-X Axis |                    |                    |        | Y-Y Axis |                    |                    |        |
|--------------------|-----------------|----------------------|----------|--------------------|--------------------|--------|----------|--------------------|--------------------|--------|
| Channel            | Weight lbs./ft. | Area In <sup>2</sup> | Cx In    | Ix In <sup>4</sup> | Sx In <sup>3</sup> | rx In  | Cy In    | Iy In <sup>4</sup> | Sy In <sup>3</sup> | ry In  |
| B22TH              | 1.760           | 0.3863               | 0.8245   | 0.1596             | 0.1936             | 0.6400 | 0.8125   | 0.1719             | 0.2116             | 0.6642 |

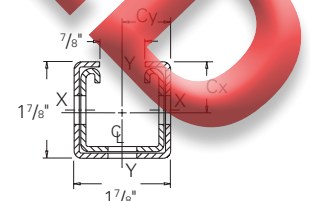
Section properties are based on nominal metal thickness, and overall dimensions.



## Combination of BTS22TH & B22TH

| Section Properties |                 |                      | X-X Axis |                    |                    |        | Y-Y Axis |                    |                    |        |
|--------------------|-----------------|----------------------|----------|--------------------|--------------------|--------|----------|--------------------|--------------------|--------|
| Channel            | Weight lbs./ft. | Area In <sup>2</sup> | Cx In    | Ix In <sup>4</sup> | Sx In <sup>3</sup> | rx In  | Cy In    | Iy In <sup>4</sup> | Sy In <sup>3</sup> | ry In  |
| Combination        |                 |                      |          |                    |                    |        |          |                    |                    |        |
| BTS22TH/B22TH      | 3.597           | 0.8474               | 0.9773   | 0.4126             | 0.4222             | 0.6978 | 0.9375   | 0.4476             | 0.4774             | 0.7268 |

Section properties are based on nominal metal thickness, and overall dimensions.



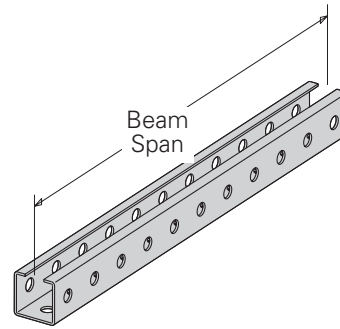
Reference page 48 for general fitting and standard finish specifications.



## Beam Loading Data

### B22TH

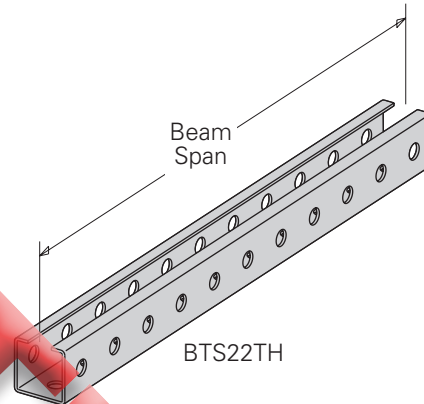
| Beam Load Data x-x Axis |                        |                            |                                                      |         |
|-------------------------|------------------------|----------------------------|------------------------------------------------------|---------|
| Beam Span<br>in         | Allowable Load<br>lbs* | Resulting Deflection<br>in | Allowable Load @<br>Deflection= $\frac{1}{240}$ Span |         |
|                         |                        |                            | Lbs.                                                 | kN      |
| 12                      | 2225                   | 0.015                      | 3225                                                 | (14.34) |
| 24                      | 1610                   | 0.061                      | 1610                                                 | (7.16)  |
| 36                      | 1071                   | 0.136                      | 1071                                                 | (4.76)  |
| 48                      | 800                    | 0.243                      | 658                                                  | (2.92)  |
| 60                      | 637                    | 0.379                      | 417                                                  | (1.85)  |
| 72                      | 528                    | 0.546                      | 286                                                  | (1.27)  |
| 84                      | 449                    | 0.743                      | 206                                                  | (0.91)  |
| 96                      | 390                    | 0.970                      | 153                                                  | (0.68)  |
| 108                     | 344                    | 1.228                      | 116                                                  | (0.51)  |
| 120                     | 306                    | 1.516                      | 90                                                   | (0.40)  |



B22TH

### BTS22TH

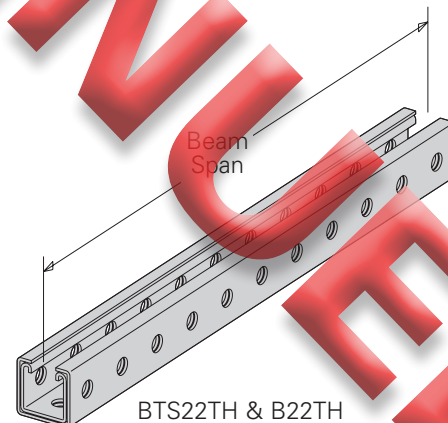
| Beam Load Data x-x Axis |                        |                            |                                                      |         |
|-------------------------|------------------------|----------------------------|------------------------------------------------------|---------|
| Beam Span<br>in         | Allowable Load<br>lbs* | Resulting Deflection<br>in | Allowable Load @<br>Deflection= $\frac{1}{240}$ Span |         |
|                         |                        |                            | Lbs.                                                 | kN      |
| 12                      | 4203                   | 0.012                      | 4203                                                 | (18.69) |
| 24                      | 2099                   | 0.050                      | 2099                                                 | (9.33)  |
| 36                      | 1396                   | 0.112                      | 1396                                                 | (6.21)  |
| 48                      | 1044                   | 0.200                      | 1044                                                 | (4.64)  |
| 60                      | 831                    | 0.312                      | 664                                                  | (2.95)  |
| 72                      | 689                    | 0.450                      | 456                                                  | (2.03)  |
| 84                      | 587                    | 0.612                      | 330                                                  | (1.48)  |
| 96                      | 510                    | 0.799                      | 248                                                  | (1.10)  |
| 108                     | 450                    | 1.012                      | 190                                                  | (0.84)  |
| 120                     | 401                    | 1.249                      | 149                                                  | (0.66)  |



BTS22TH

### BTS22TH & B22TH Telescoping Members of Equal Length

| Beam Load Data x-x Axis |                        |                            |                                                      |         |
|-------------------------|------------------------|----------------------------|------------------------------------------------------|---------|
| Beam Span<br>in         | Allowable Load<br>lbs* | Resulting Deflection<br>in | Allowable Load @<br>Deflection= $\frac{1}{240}$ Span |         |
|                         |                        |                            | Lbs.                                                 | kN      |
| 12                      | 7033                   | 0.013                      | 7033                                                 | (31.28) |
| 24                      | 3511                   | 0.051                      | 3511                                                 | (15.62) |
| 36                      | 2335                   | 0.115                      | 2335                                                 | (10.38) |
| 48                      | 1745                   | 0.205                      | 1705                                                 | (7.58)  |
| 60                      | 1389                   | 0.320                      | 1082                                                 | (4.81)  |
| 72                      | 1151                   | 0.460                      | 742                                                  | (3.30)  |
| 84                      | 980                    | 0.627                      | 536                                                  | (2.38)  |
| 96                      | 851                    | 0.819                      | 401                                                  | (1.78)  |
| 108                     | 749                    | 1.036                      | 307                                                  | (1.36)  |
| 120                     | 668                    | 1.279                      | 239                                                  | (1.06)  |



BTS22TH & B22TH

\*Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) with adequate lateral bracing (see page 12 for further explanation). To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8.

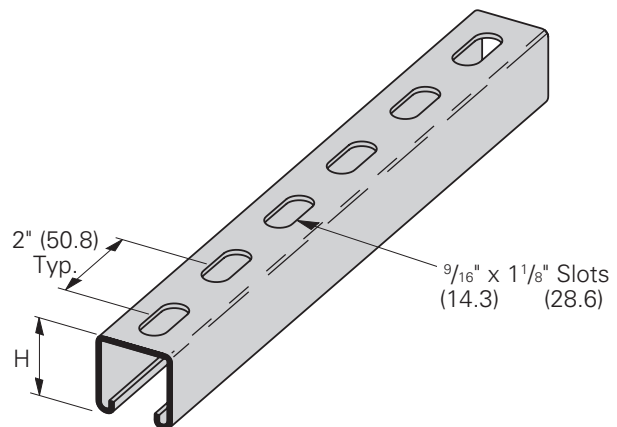
Reference page 48 for general fitting and standard finish specifications.

# Channel hole patterns

## B11SH thru B56SH SH Type Channel

- For beam loads use 90% of Channel Loading Chart

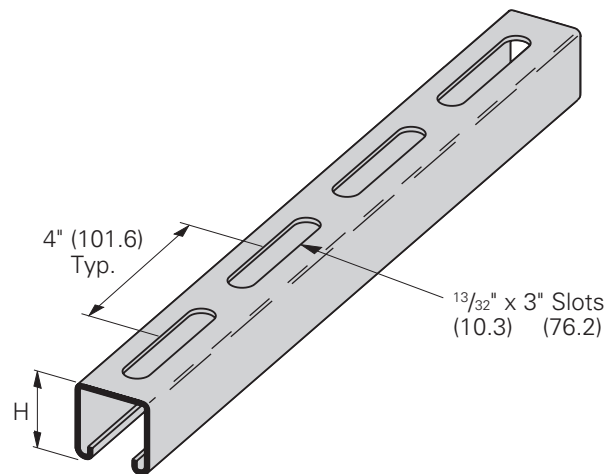
| Part No.     | Thickness    | Height H                         |        | Weight   |        |
|--------------|--------------|----------------------------------|--------|----------|--------|
|              |              | In.                              | mm     | Lbs./Ft. | kg/m   |
| <b>B11SH</b> | 12 Ga. (2.6) | 3 <sup>1</sup> / <sub>4</sub> "  | (82.5) | 2.97     | (4.42) |
| <b>B12SH</b> | 12 Ga.(2.6)  | 2 <sup>7</sup> / <sub>16</sub> " | (61.9) | 2.39     | (3.55) |
| <b>B22SH</b> | 12 Ga.(2.6)  | 1 <sup>5</sup> / <sub>8</sub> "  | (41.3) | 1.82     | (2.71) |
| <b>B24SH</b> | 14 Ga.(1.9)  | 1 <sup>5</sup> / <sub>8</sub> "  | (41.3) | 1.34     | (1.99) |
| <b>B32SH</b> | 12 Ga.(2.6)  | 1 <sup>3</sup> / <sub>8</sub> "  | (34.9) | 1.62     | (2.41) |
| <b>B42SH</b> | 12 Ga.(2.6)  | 1"                               | (25.4) | 1.36     | (2.02) |
| <b>B52SH</b> | 12 Ga.(2.6)  | 1 <sup>3</sup> / <sub>16</sub> " | (20.6) | 1.19     | (1.77) |
| <b>B54SH</b> | 14 Ga.(1.9)  | 1 <sup>3</sup> / <sub>16</sub> " | (20.6) | .91      | (1.35) |



## B11S thru B56S S Type Channel

- For beam loads use 90% of Channel Loading Chart

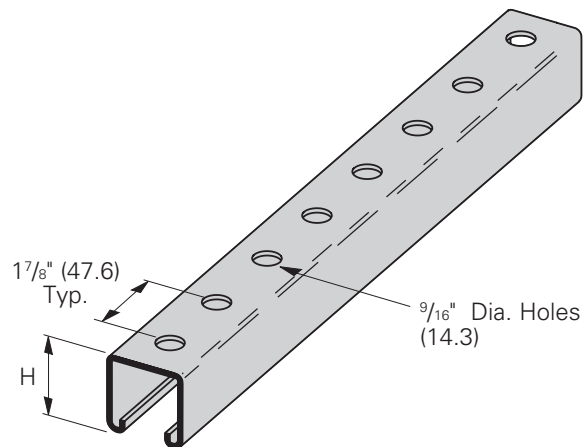
| Part No.    | Thickness    | Height H                         |        | Weight   |        |
|-------------|--------------|----------------------------------|--------|----------|--------|
|             |              | In.                              | mm     | Lbs./Ft. | kg/m   |
| <b>B11S</b> | 12 Ga. (2.6) | 3 <sup>1</sup> / <sub>4</sub> "  | (82.5) | 2.94     | (4.37) |
| <b>B12S</b> | 12 Ga.(2.6)  | 2 <sup>7</sup> / <sub>16</sub> " | (61.9) | 2.36     | (3.51) |
| <b>B22S</b> | 12 Ga.(2.6)  | 1 <sup>5</sup> / <sub>8</sub> "  | (41.3) | 1.79     | (2.66) |
| <b>B24S</b> | 14 Ga.(1.9)  | 1 <sup>5</sup> / <sub>8</sub> "  | (41.3) | 1.32     | (1.96) |
| <b>B32S</b> | 12 Ga.(2.6)  | 1 <sup>3</sup> / <sub>8</sub> "  | (34.9) | 1.59     | (2.36) |
| <b>B42S</b> | 12 Ga.(2.6)  | 1"                               | (25.4) | 1.33     | (1.98) |
| <b>B52S</b> | 12 Ga.(2.6)  | 1 <sup>3</sup> / <sub>16</sub> " | (20.6) | 1.16     | (1.72) |
| <b>B54S</b> | 14 Ga.(1.9)  | 1 <sup>3</sup> / <sub>16</sub> " | (20.6) | .89      | (1.32) |



## B11H17/8 thru B56H17/8 H17/8 Type Channel

- For beam loads use 90% of Channel Loading Chart

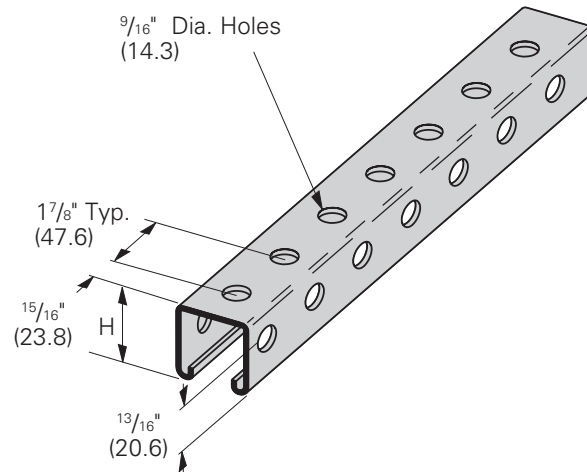
| Part No.        | Thickness    | Height H                         |        | Weight   |        |
|-----------------|--------------|----------------------------------|--------|----------|--------|
|                 |              | In.                              | mm     | Lbs./Ft. | kg/m   |
| <b>B11H17/8</b> | 12 Ga. (2.6) | 3 <sup>1</sup> / <sub>4</sub> "  | (82.5) | 3.00     | (4.46) |
| <b>B12H17/8</b> | 12 Ga.(2.6)  | 2 <sup>7</sup> / <sub>16</sub> " | (61.9) | 2.42     | (3.60) |
| <b>B22H17/8</b> | 12 Ga.(2.6)  | 1 <sup>5</sup> / <sub>8</sub> "  | (41.3) | 1.85     | (2.75) |
| <b>B24H17/8</b> | 14 Ga.(1.9)  | 1 <sup>5</sup> / <sub>8</sub> "  | (41.3) | 1.36     | (2.02) |
| <b>B32H17/8</b> | 12 Ga.(2.6)  | 1 <sup>3</sup> / <sub>8</sub> "  | (34.9) | 1.65     | (2.45) |
| <b>B42H17/8</b> | 12 Ga.(2.6)  | 1"                               | (25.4) | 1.39     | (2.07) |
| <b>B52H17/8</b> | 12 Ga.(2.6)  | 1 <sup>3</sup> / <sub>16</sub> " | (20.6) | 1.22     | (1.81) |
| <b>B54H17/8</b> | 14 Ga.(1.9)  | 1 <sup>3</sup> / <sub>16</sub> " | (20.6) | .93      | (1.38) |



## B22TH TH Type Channel

- For beam loads use 90% of Channel Loading Chart

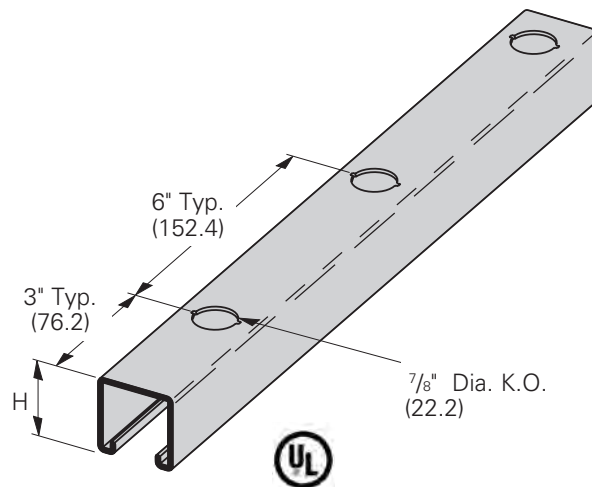
| Part No. | Thickness    | Height H<br>In. mm                     | Weight<br>Lbs./Ft. kg/m |
|----------|--------------|----------------------------------------|-------------------------|
| B22TH    | 12 Ga. (2.6) | 1 <sup>5</sup> / <sub>8</sub> " (41.3) | 1.76 (2.62)             |



## B11KO6 thru B56KO6 KO6 Type Knockout Channel

- For beam loads use 90% of Channel Loading Chart

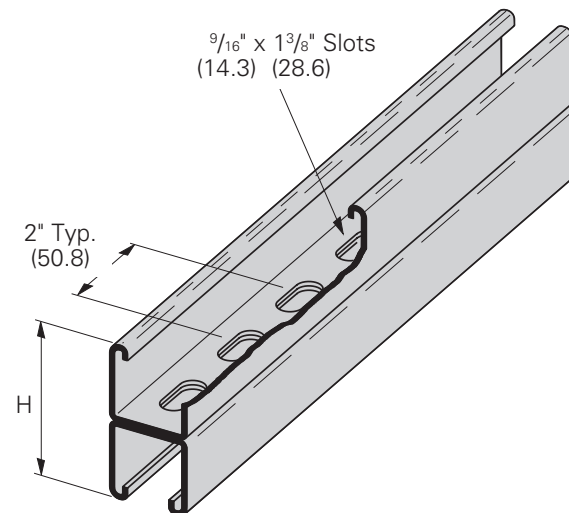
| Part No. | Thickness    | Height H<br>In. mm                      | Weight<br>Lbs./Ft. kg/m |
|----------|--------------|-----------------------------------------|-------------------------|
| B11KO6   | 12 Ga. (2.6) | 3 <sup>1</sup> / <sub>4</sub> " (82.5)  | 3.05 (4.54)             |
| B12KO6   | 12 Ga. (2.6) | 2 <sup>7</sup> / <sub>16</sub> " (61.9) | 2.47 (3.67)             |
| B22KO6   | 12 Ga. (2.6) | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 1.90 (2.83)             |
| B24KO6   | 14 Ga. (1.9) | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 1.40 (2.08)             |
| B32KO6   | 12 Ga. (2.6) | 1 <sup>3</sup> / <sub>8</sub> " (34.9)  | 1.70 (2.53)             |
| B42KO6   | 12 Ga. (2.6) | 1" (25.4)                               | 1.44 (2.14)             |
| B52KO6   | 12 Ga. (2.6) | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | 1.27 (1.89)             |
| B54KO6   | 14 Ga. (1.9) | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | .97 (1.44)              |



## B22SHA Back to Back SH Type Channel

- For beam loads use 90% of Channel Loading Chart

| Part No. | Thickness    | Height H<br>In. mm                     | Weight<br>Lbs./Ft. kg/m |
|----------|--------------|----------------------------------------|-------------------------|
| B22SHA   | 12 Ga. (2.6) | 3 <sup>1</sup> / <sub>4</sub> " (82.5) | 3.64 (5.42)             |
| B52SHA   | 12 Ga. (2.6) | 1 <sup>5</sup> / <sub>8</sub> " (41.3) | 2.38 (1.77)             |
| B54SHA   | 14 Ga. (1.9) | 1 <sup>5</sup> / <sub>8</sub> " (41.3) | 1.82 (1.35)             |



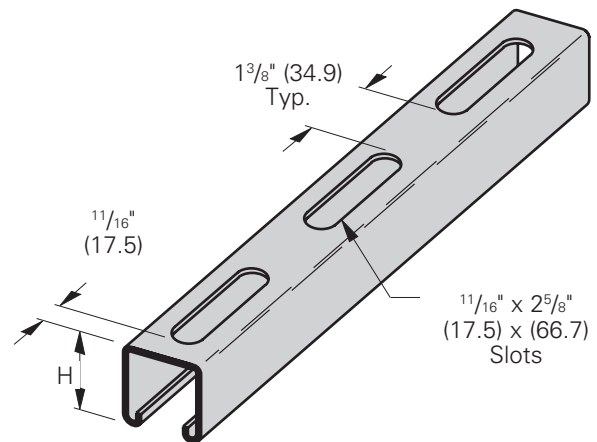
Reference page 48 for general fitting and standard finish specifications.

# Channel hole patterns

## B11S58 thru B56S58 S58 Type Channel

- For beam loads use 90% of Channel Loading Chart

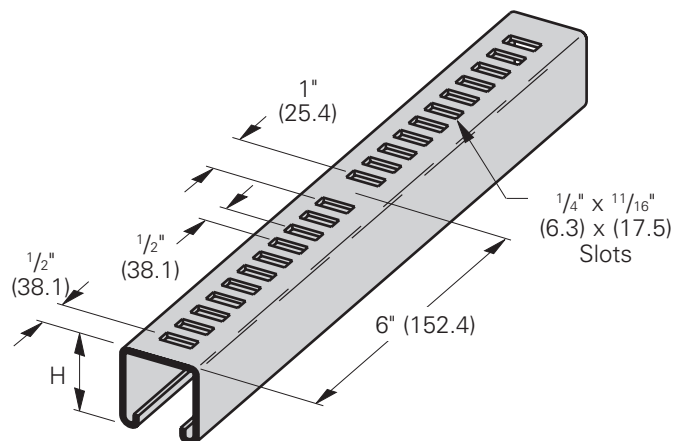
| Part No.      | Thickness    | Height H<br>In. mm                      | Weight<br>Lbs./Ft. kg/m |
|---------------|--------------|-----------------------------------------|-------------------------|
| <b>B11S58</b> | 12 Ga. (2.6) | 3 <sup>1</sup> / <sub>4</sub> " (82.5)  | 2.94 (4.37)             |
| <b>B12S58</b> | 12 Ga. (2.6) | 2 <sup>7</sup> / <sub>16</sub> " (61.9) | 2.36 (3.51)             |
| <b>B22S58</b> | 12 Ga. (2.6) | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 1.79 (2.66)             |
| <b>B24S58</b> | 14 Ga. (1.9) | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 1.32 (1.96)             |
| <b>B32S58</b> | 12 Ga. (2.6) | 1 <sup>3</sup> / <sub>8</sub> " (34.9)  | 1.59 (2.36)             |
| <b>B42S58</b> | 12 Ga. (2.6) | 1" (25.4)                               | 1.33 (1.98)             |
| <b>B52S58</b> | 12 Ga. (2.6) | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | 1.16 (1.72)             |
| <b>B54S58</b> | 14 Ga. (1.9) | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | .89 (1.32)              |



## B22M thru B54M M (Marine Rung) Type Channel

- For beam loads use 90% of Channel Loading Chart

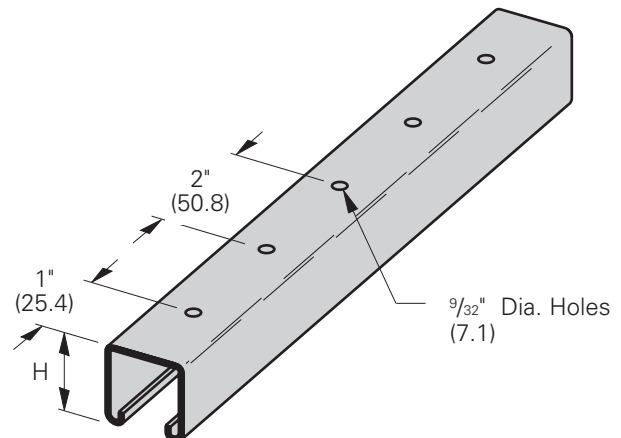
| Part No.    | Thickness    | Height H<br>In. mm                      | Weight<br>Lbs./Ft. kg/m |
|-------------|--------------|-----------------------------------------|-------------------------|
| <b>B22M</b> | 12 Ga. (2.6) | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 1.79 (2.66)             |
| <b>B24M</b> | 14 Ga. (1.9) | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 1.32 (1.96)             |
| <b>B32M</b> | 12 Ga. (2.6) | 1 <sup>3</sup> / <sub>8</sub> " (34.9)  | 1.59 (2.36)             |
| <b>B42M</b> | 12 Ga. (2.6) | 1" (25.4)                               | 1.33 (1.98)             |
| <b>B44M</b> | 14 Ga. (1.9) | 1" (25.4)                               | 0.98 (1.46)             |
| <b>B52M</b> | 12 Ga. (2.6) | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | 1.16 (1.72)             |
| <b>B54M</b> | 14 Ga. (1.9) | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | .89 (1.32)              |



## B22H25 thru B56H25 H25 Type Channel

- For beam loads use 90% of Channel Loading Chart

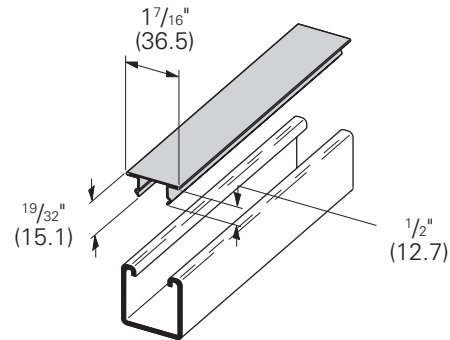
| Part No.      | Thickness    | Height H<br>In. mm                      | Weight<br>Lbs./Ft. kg/m |
|---------------|--------------|-----------------------------------------|-------------------------|
| <b>B22H25</b> | 12 Ga. (2.6) | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 1.85 (2.75)             |
| <b>B24H25</b> | 14 Ga. (1.9) | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 1.36 (2.02)             |
| <b>B32H25</b> | 12 Ga. (2.6) | 1 <sup>3</sup> / <sub>8</sub> " (34.9)  | 1.65 (2.45)             |
| <b>B42H25</b> | 12 Ga. (2.6) | 1" (25.4)                               | 1.39 (2.07)             |
| <b>B52H25</b> | 12 Ga. (2.6) | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | 1.22 (1.81)             |
| <b>B54H25</b> | 14 Ga. (1.9) | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | .93 (1.38)              |



Reference page 48 for general fitting and standard finish specifications.

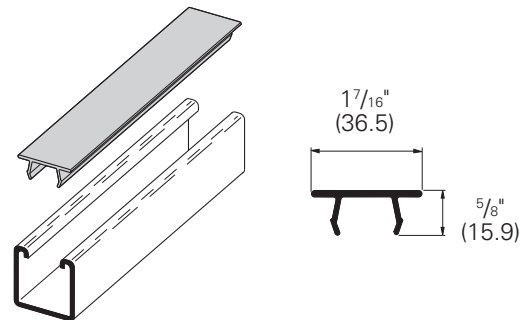
## B217-20 Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- Material: 20 Gauge (.9)
- Standard finishes: GRN, GALV, YZN
- Standard length: 120" (3.05m)
- Wt./CFT 36 Lbs. (16.3 kg)



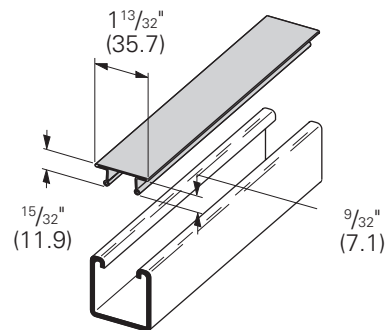
## B217P Plastic Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- Standard finishes: Green (GRN) or Gray (GRY) Plastic
- Length: 120" (3.05m)
- Wt./CFT 9.2 Lbs. (4.2 kg)



## B217-24 Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- For use with 7 or fewer conductors no larger than #12 AWG
- Material: 24 Gauge (.6)
- Standard finishes: GRN, GALV, YZN
- Standard length: 120" (3.05m)
- Wt./CFT 28 Lbs. (12.7 kg)



## Touch Up Paint

- Used to touch up cut ends of channel
- Standard colors: Green for DURA GREEN™ & B999 for Zinc/Galv
- Weight: 12.5 ounce cans

| Part No.        | Description      | Box Qty. |
|-----------------|------------------|----------|
| <b>B999</b>     | Zinc/Galv color  | 1        |
| <b>940-674A</b> | Dura-Green color | 1        |



B999



940-674A

Reference page 48 for general fitting and standard finish specifications.



## Hydraulic Strut Cutter

- Patented **esp**\* hydraulic strut cutter easily cuts a variety of B-Line series strut profiles to size in seconds
- Produces clean cuts without burrs or sharp edges - no post processing necessary
- Lightweight, black anodized 7075-T651 aluminum frame is portable to the jobsite - 65 lbs. (29.4kg)
- Collapsible handle creates a sturdy operations platform
- 10,000psi hydraulic power source and hose with universal coupling (sold separately) required for operation
- Adjustable material rest\* feeds strut sections straight into cutter
- Adjustable backstop\* provides for easy production cutting
- Die sets available for cutting B22, B24, B26, B52, B54, B56 strut profiles
- Die life: thousands of cuts from a single set of blades

\*requires two (2) sections of 1" OD tubing - sold separately



\* **esp** (edwards strut pro)  
is a product logo used by  
Edwards Manufacturing Company

| Part No.                    | Description                                                                                                              | Wt./C |        |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------|-------|--------|
|                             |                                                                                                                          | Lbs.  | kg     |
| <b>BHSC100</b>              | Complete esp set includes cutter, hydraulic pump & hose, material rest, backstop and the three (3) die sets listed below | 173   | (78.5) |
| <b>Die Sets for Channel</b> |                                                                                                                          |       |        |
| <b>BHSC100B22</b>           | B22, B24, B26, B52, B54, B56                                                                                             | 13    | (5.9)  |



# Channel nuts & hardware



## Channel Nuts

Channel nuts are one of the main components of our strut system. It is designed to provide essential gripping power and ease during installation. Channel nuts are press formed, machined and hardened from steel which meets the requirements of ASTM A108 or ASTM A36 for our larger sizes.

## Bolts, Screws, and Nuts

All bolts, screws and nuts meet the physical and chemical requirements of ASTM A307, SAE J429 or ASTM A563, and have unified inch screw threads (coarse, UNC). ISO metric threads are also available on special request.

## Recommended Torque

| Bolt Size | 1/4"-20 | 5/16"-18 | 3/8"-16 | 1/2"-13 |
|-----------|---------|----------|---------|---------|
| Foot/Lbs. | 6       | 11       | 19      | 50      |
| Nm        | 8       | 15       | 26      | 68      |

| Bolt Size | M6x1 | M8 x1.25 | M10 x 1.5 | M12x1.75 |
|-----------|------|----------|-----------|----------|
| Nm        | 12   | 17       | 36        | 62       |
| Foot/Lbs. | 9    | 13       | 27        | 46       |

## Materials & Finishes\*

\* Unless otherwise Noted. Refer to the product page for materials and finishes available by catalog number.

**Note:** Channel nuts are not available in HDG, Aluminum, or Stainless Steel Type 304

| Finish Code | Finish                   | Specification                             |
|-------------|--------------------------|-------------------------------------------|
| PLN         | Plain                    | ASTM A108/A307 Gr. A, ASTM A563, SAE J429 |
| ZN          | Electro-Plated Zinc      | ASTM B633 SC1 Type III                    |
| CZ          | Chromium Zinc            | ASTM F1136 Gr. 3                          |
| HDG         | Hot-Dipped Galvanized    | ASTM A153                                 |
| SS6         | Stainless Steel Type 316 | MPIF 35/ASTM F593                         |
| AL          | Aluminum                 | ASTM F468 S4                              |

## Metric

Metric dimensions are shown in parentheses. Unless Noted, all metric dimensions are in millimeters.

**Note:** Channel nuts and hardware are sold in full box quantities.

## Standard Channel Nuts

Numbering Example:

**N 7 25 - (\*) WO**

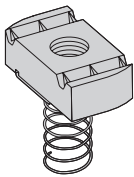
| Nut Type              | Channel Type        | Thread Size   | Stud Length                                                      | Suffix                                               |
|-----------------------|---------------------|---------------|------------------------------------------------------------------|------------------------------------------------------|
| N = Standard Nut      | 7 = Tall Channels   | 21 = #8-32    | * = Specify Length of stud below for Stud Nut or Twirl Stud Nuts | WO = Without Spring                                  |
| TN = Twirl-Nut™       | B11                 | 22 = #10-24   |                                                                  | — = Twirl-Nut or nuts with springs have blank suffix |
| SN = Stud Nut         | B12                 | 27 = #10-32   |                                                                  |                                                      |
| STN = Stud Twirl-Nut  | 2 = Medium Channels | 24 = 1/4"-20  | 3/4 = 3/4"                                                       |                                                      |
| NW = Combo Nut Washer | B22                 | 23 = 5/16"-18 | 1 = 1"                                                           |                                                      |
|                       | B24                 | 28 = 3/8"-16  | 1 1/4 = 1 1/4"                                                   |                                                      |
|                       | B32                 | 26 = 7/16"-14 | 1 1/2 = 1 1/2"                                                   |                                                      |
|                       | 5 = Short Channels  | 25 = 1/2"-13  |                                                                  |                                                      |
|                       | B42                 | 55 = 5/8"-11  |                                                                  |                                                      |
|                       | B52                 | 75 = 3/4"-10  |                                                                  |                                                      |
|                       | B54                 | 78 = 7/8"-9   |                                                                  |                                                      |

## Metric Channel Nuts

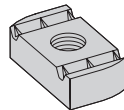
Numbering Example:

**BMS - 6 M**

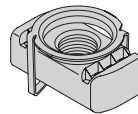
| Nut Type                        | Metric Thread Size | Suffix                                                   |
|---------------------------------|--------------------|----------------------------------------------------------|
| BMS = Spring Nut                | 3 = M3.5           | S = Short Spring                                         |
| BMS-D = Spring Nut (1/2" thick) | 4 = M4             | M = Medium Spring                                        |
| BMT = Twirl-Nut                 | 5 = M5             | L = Long Spring                                          |
| BMT-D = Twirl-Nut (1/2" thick)  | 6 = M6             | — = Twirl-Nut and nuts without springs have blank suffix |
| BMM = Spring Nut (Mini channel) | 8 = M8             |                                                          |
|                                 | 10 = M10           |                                                          |
|                                 | 12 = M12           |                                                          |



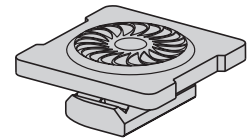
**Spring Nut**



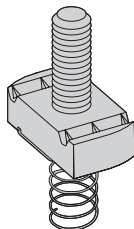
**Nut without Spring**



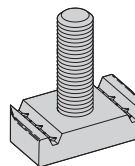
**Twirl-Nut**



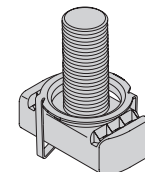
**Combo Nut Washer**



**Stud Nut with Spring**

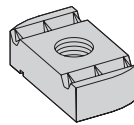


**Stud Nut without Spring**



**Twirl Stud Nut**

Reference page 78 for general fitting and standard finish specifications.



**Note:** See page 84 for resistance to slip & page 85 for pull-out strength. Channel nuts and hardware are sold in full box quantities.

## Nut Without Spring

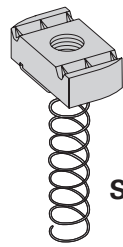
| Part No.      | Thread Size | Fits Channel Sizes         | Nut Thickness |        | Wt./C |        |
|---------------|-------------|----------------------------|---------------|--------|-------|--------|
|               |             |                            | In.           | mm     | Lbs.  | kg     |
| <b>N221WO</b> | #8-32       | All sizes except B62 & B72 | 1/4"          | (6.3)  | 7.0   | (3.17) |
| <b>N227WO</b> | #10-32      | All sizes except B62 & B72 | 1/4"          | (6.3)  | 7.0   | (3.17) |
| <b>N222WO</b> | #10-24      | All sizes except B62 & B72 | 1/4"          | (6.3)  | 7.0   | (3.17) |
| <b>N224WO</b> | 1/4-20      | All sizes except B62 & B72 | 1/4"          | (6.3)  | 6.7   | (3.04) |
| <b>N223WO</b> | 5/16-18     | All sizes except B62 & B72 | 1/4"          | (6.3)  | 6.7   | (3.04) |
| <b>N228WO</b> | 3/8-16      | All sizes except B62 & B72 | 3/8"          | (9.5)  | 9.3   | (4.22) |
| <b>N226WO</b> | 7/16-14     | All sizes except B62 & B72 | 3/8"          | (9.5)  | 8.8   | (3.99) |
| <b>N225WO</b> | 1/2-13      | B11, B12, B22, B24, B32    | 1/2"          | (12.7) | 11.6  | (5.26) |
| <b>N525WO</b> | 1/2-13      | B42, B52, B54              | 3/8"          | (9.5)  | 8.8   | (3.99) |
| <b>N255WO</b> | 5/8-11      | B11, B12, B22, B24, B32    | 1/2"          | (12.7) | 16.4  | (7.44) |
| <b>N555WO</b> | 5/8-11      | B42, B52, B54              | 3/8"          | (9.5)  | 10.2  | (4.62) |
| <b>N275WO</b> | 3/4-10      | B11, B12, B22, B24, B32    | 1/2"          | (12.7) | 14.5  | (6.58) |
| <b>N575WO</b> | 3/4-10      | B42, B52, B54              | 3/8"          | (9.5)  | 8.8   | (3.99) |
| <b>N278WO</b> | 7/8-9       | B11, B12, B22, B24, B32    | 1/2"          | (12.7) | 12.5  | (5.67) |

## Metric Threads

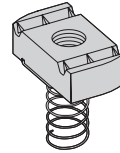
|                 |            |                            |      |        |      |        |
|-----------------|------------|----------------------------|------|--------|------|--------|
| <b>BMS-6</b>    | M6 x 1     | All sizes except B62 & B72 | 1/4" | (6.3)  | 6.9  | (3.13) |
| <b>BMS-8</b>    | M8 x 1.25  | All sizes except B62 & B72 | 1/4" | (6.3)  | 6.7  | (3.04) |
| <b>BMS-10</b>   | M10 x 1.5  | All sizes except B62 & B72 | 3/8" | (9.5)  | 9.6  | (4.35) |
| <b>BMS-12</b>   | M12 x 1.75 | All sizes except B62 & B72 | 3/8" | (9.5)  | 9.2  | (4.17) |
| <b>BMS-D-12</b> | M12 x 1.75 | B11, B12, B22, B24, B32    | 1/2" | (12.7) | 12.2 | (5.53) |

**Note:** For mini channel nut information see page 245.

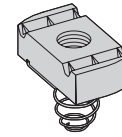
**Note:** See page 84 for resistance to slip & page 85 for pull-out strength.  
Channel nuts and hardware are sold in full box quantities.



**700 Series**



**200 Series**



**500 Series**

## Spring Nut

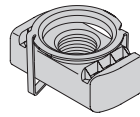
| Part No. | Thread Size | Fits Channel Sizes | Nut Thickness |        | Wt./C |        |
|----------|-------------|--------------------|---------------|--------|-------|--------|
|          |             |                    | In.           | mm     | Lbs.  | kg     |
| N721     | #8-32       | B11 & B12          | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N221     | #8-32       | B22, B24, B32      | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N521     | #8-32       | B42, B52, B54      | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N727     | #10-32      | B11 & B12          | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N227     | #10-32      | B22, B24, B32      | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N527     | #10-32      | B42, B52, B54      | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N722     | #10-24      | B11 & B12          | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N222     | #10-24      | B22, B24, B32      | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N522     | #10-24      | B42, B52, B54      | 1/4"          | (6.3)  | 7.0   | (3.17) |
| N724     | 1/4-20      | B11 & B12          | 1/4"          | (6.3)  | 6.7   | (3.04) |
| N224     | 1/4-20      | B22, B24, B32      | 1/4"          | (6.3)  | 6.7   | (3.04) |
| N524     | 1/4-20      | B42, B52, B54      | 1/4"          | (6.3)  | 6.7   | (3.04) |
| N723     | 5/16-18     | B11 & B12          | 1/4"          | (6.3)  | 6.7   | (3.04) |
| N223     | 5/16-18     | B22, B24, B32      | 1/4"          | (6.3)  | 6.7   | (3.04) |
| N523     | 5/16-18     | B42, B52, B54      | 1/4"          | (6.3)  | 6.7   | (3.04) |
| N728     | 3/8-16      | B11 & B12          | 3/8"          | (9.5)  | 9.3   | (4.22) |
| N228     | 3/8-16      | B22, B24, B32      | 3/8"          | (9.5)  | 9.3   | (4.22) |
| N528     | 3/8-16      | B42, B52, B54      | 3/8"          | (9.5)  | 9.3   | (4.22) |
| N726     | 7/16-14     | B11 & B12          | 3/8"          | (9.5)  | 8.8   | (3.99) |
| N226     | 7/16-14     | B22, B24, B32      | 3/8"          | (9.5)  | 8.8   | (3.99) |
| N526     | 7/16-14     | B42, B52, B54      | 3/8"          | (9.5)  | 8.8   | (3.99) |
| N725     | 1/2-13      | B11 & B12          | 1/2"          | (12.7) | 11.6  | (5.26) |
| N225     | 1/2-13      | B22, B24, B32      | 1/2"          | (12.7) | 11.6  | (5.26) |
| N525     | 1/2-13      | B42, B52, B54      | 3/8"          | (9.5)  | 8.8   | (3.99) |
| N755     | 5/8-11      | B11 & B12          | 1/2"          | (12.7) | 16.4  | (7.44) |
| N255     | 5/8-11      | B22, B24, B32      | 1/2"          | (12.7) | 16.4  | (7.44) |
| N555     | 5/8-11      | B42, B52, B54      | 3/8"          | (9.5)  | 10.2  | (4.62) |
| N775     | 3/4-10      | B11 & B12          | 1/2"          | (12.7) | 14.5  | (6.58) |
| N275     | 3/4-10      | B22, B24, B32      | 1/2"          | (12.7) | 14.5  | (6.58) |
| N575     | 3/4-10      | B42, B52, B54      | 3/8"          | (9.5)  | 8.8   | (3.99) |
| N778     | 7/8-9       | B11 & B12          | 1/2"          | (12.7) | 12.5  | (5.67) |
| N278     | 7/8-9       | B22, B24, B32      | 1/2"          | (12.7) | 12.5  | (5.67) |

## Metric Threads

|           |            |               |      |        |      |        |
|-----------|------------|---------------|------|--------|------|--------|
| BMS-6L    | M6 x 1     | B11 & B12     | 1/4" | (6.3)  | 6.9  | (3.13) |
| BMS-6M    | M6 x 1     | B22, B24, B32 | 1/4" | (6.3)  | 6.9  | (3.13) |
| BMS-6S    | M6 x 1     | B42, B52, B54 | 1/4" | (6.3)  | 6.9  | (3.13) |
| BMS-8L    | M8 x 1.25  | B11 & B12     | 1/4" | (6.3)  | 6.7  | (3.04) |
| BMS-8M    | M8 x 1.25  | B22, B24, B32 | 1/4" | (6.3)  | 6.7  | (3.04) |
| BMS-8S    | M8 x 1.25  | B42, B52, B54 | 1/4" | (6.3)  | 6.7  | (3.04) |
| BMS-10L   | M10 x 1.5  | B11 & B12     | 3/8" | (9.5)  | 9.6  | (4.35) |
| BMS-10M   | M10 x 1.5  | B22, B24, B32 | 3/8" | (9.5)  | 9.6  | (4.35) |
| BMS-10S   | M10 x 1.5  | B42, B52, B54 | 3/8" | (9.5)  | 9.6  | (4.35) |
| BMS-12M   | M12 x 1.75 | B22, B24, B32 | 3/8" | (9.5)  | 9.2  | (4.17) |
| BMS-12S   | M12 x 1.75 | B42, B52, B54 | 3/8" | (9.5)  | 9.2  | (4.17) |
| BMS-D-12L | M12 x 1.75 | B11 & B12     | 1/2" | (12.7) | 12.2 | (5.53) |
| BMS-D-12M | M12 x 1.75 | B22, B24, B32 | 1/2" | (12.7) | 12.2 | (5.53) |

**Note:** For mini channel nut information see page 245.

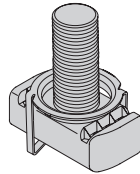
Reference page 78 for general fitting and standard finish specifications.



**Note:** See page 84 for resistance to slip & page 85 for pull-out strength. Channel nuts and hardware are sold in full box quantities.

## Twirl-Nut

| Part No.              | Thread Size     | Fits Channel Sizes         | Nut Thickness |        | Wt./C |        |
|-----------------------|-----------------|----------------------------|---------------|--------|-------|--------|
|                       |                 |                            | In.           | mm     | Lbs.  | kg     |
| <b>TN221</b>          | #8-32           | All sizes except B62 & B72 | 1/4"          | (6.3)  | 7.0   | (3.17) |
| <b>TN227</b>          | #10-32          | All sizes except B62 & B72 | 1/4"          | (6.3)  | 7.0   | (3.17) |
| <b>TN222</b>          | #10-24          | All sizes except B62 & B72 | 1/4"          | (6.3)  | 7.0   | (3.17) |
| <b>TN224</b>          | 1/4-20          | All sizes except B62 & B72 | 1/4"          | (6.3)  | 6.7   | (3.04) |
| <b>TN223</b>          | 5/16-18         | All sizes except B62 & B72 | 1/4"          | (6.3)  | 6.7   | (3.04) |
| <b>TN228</b>          | 3/8-16          | All sizes except B62 & B72 | 3/8"          | (9.5)  | 9.3   | (4.22) |
| <b>TN226</b>          | 7/16-14         | All sizes except B62 & B72 | 3/8"          | (9.5)  | 8.8   | (3.99) |
| <b>TN225</b>          | 1/2-13          | B11, B12, B22, B24, B32    | 1/2"          | (12.7) | 11.6  | (5.26) |
| <b>TN525</b>          | 1/2-13          | B42, B52, B54              | 3/8"          | (9.5)  | 8.8   | (3.99) |
| <b>TN255</b>          | 5/8-11          | B11, B12, B22, B24, B32    | 1/2"          | (12.7) | 11.0  | (4.99) |
| <b>Metric Threads</b> | <b>BMT-6</b>    | M6 x 1                     | 1/4"          | (6.3)  | 6.9   | (3.13) |
|                       | <b>BMT-8</b>    | M8 x 1.25                  | 1/4"          | (6.3)  | 6.7   | (3.04) |
|                       | <b>BMT-10</b>   | M10 x 1.5                  | 3/8"          | (9.5)  | 9.6   | (4.35) |
|                       | <b>BMT-12</b>   | M12 x 1.75                 | 3/8"          | (9.5)  | 9.2   | (4.17) |
|                       | <b>BMT-D-12</b> | M12 x 1.75                 | 1/2"          | (12.7) | 12.2  | (5.53) |



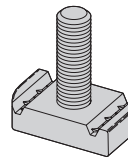
**Note:** See page 84 for resistance to slip & page 85 for pull-out strength. Channel nuts and hardware are sold in full box quantities.

## Twirl Stud Nut

| Part No.        | Thread Size | Fits Channel Sizes         | Nut Thickness |        | Wt./C |        |
|-----------------|-------------|----------------------------|---------------|--------|-------|--------|
|                 |             |                            | In.           | mm     | Lbs.  | kg     |
| <b>STN224-*</b> | 1/4-20      | All sizes except B62 & B72 | 1/4"          | (6.3)  | 8.1   | (3.66) |
| <b>STN228-*</b> | 3/8-16      | All sizes except B62 & B72 | 3/8"          | (9.5)  | 12.9  | (5.85) |
| <b>STN225-*</b> | 1/2-13      | B11, B12, B22, B24, B32    | 1/2"          | (12.7) | 18.2  | (8.23) |
| <b>STN525-*</b> | 1/2-13      | B42, B52, B54              | 3/8"          | (9.5)  | 15.4  | (6.96) |

\*Note: Add stud length in inches (3/4, 1, 1 1/4, 1 1/2)

**Note:** See page 84 for resistance to slip & page 85 for pull-out strength. Channel nuts and hardware are sold in full box quantities.



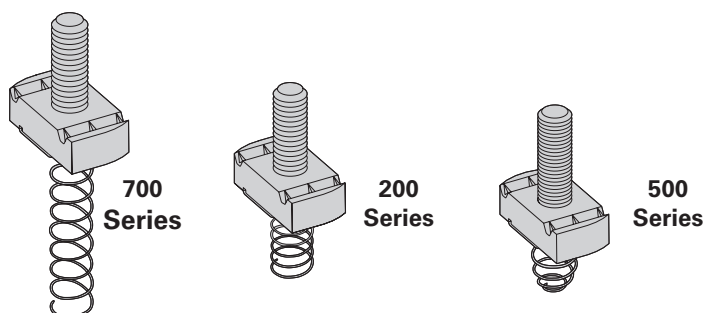
## Stud Nut Without Spring

| Part No.         | Thread Size | Fits Channel Sizes         | Nut Thickness |        | Wt./C |        |
|------------------|-------------|----------------------------|---------------|--------|-------|--------|
|                  |             |                            | In.           | mm     | Lbs.  | kg     |
| <b>SN224-*WO</b> | 1/4-20      | All sizes except B62 & B72 | 1/4"          | (6.3)  | 8.1   | (3.66) |
| <b>SN228-*WO</b> | 3/8-16      | All sizes except B62 & B72 | 3/8"          | (9.5)  | 12.9  | (5.85) |
| <b>SN225-*WO</b> | 1/2-13      | B11, B12, B22, B24, B32    | 1/2"          | (12.7) | 18.2  | (8.23) |
| <b>SN525-*WO</b> | 1/2-13      | B42, B52, B54              | 3/8"          | (9.5)  | 15.4  | (6.96) |

\*Note: Add stud length in inches (3/4, 1, 1 1/4, 1 1/2)



**Note:** See page 84 for resistance to slip & page 85 for pull-out strength.  
Channel nuts and hardware are sold in full box quantities.



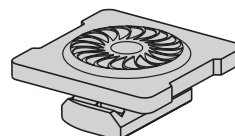
## Stud Nut With Spring

| Part No.       | Thread Size | Fits Channel Sizes | Nut Thickness |        | Wt./C |        |
|----------------|-------------|--------------------|---------------|--------|-------|--------|
|                |             |                    | In.           | mm     | Lbs.  | kg     |
| <b>SN724-*</b> | 1/4-20      | B11 & B12          | 1/4"          | (6.3)  | 8.1   | (3.66) |
| <b>SN224-*</b> | 1/4-20      | B22, B24, B32      | 1/4"          | (6.3)  | 8.1   | (3.66) |
| <b>SN524-*</b> | 1/4-20      | B42, B52, B54      | 1/4"          | (6.3)  | 8.1   | (3.66) |
| <b>SN728-*</b> | 3/8-16      | B11 & B12          | 3/8"          | (9.5)  | 12.9  | (5.85) |
| <b>SN228-*</b> | 3/8-16      | B22, B24, B32      | 3/8"          | (9.5)  | 12.9  | (5.85) |
| <b>SN528-*</b> | 3/8-16      | B42, B52, B54      | 3/8"          | (9.5)  | 12.9  | (5.85) |
| <b>SN725-*</b> | 1/2-13      | B11 & B12          | 1/2"          | (12.7) | 18.2  | (8.23) |
| <b>SN225-*</b> | 1/2-13      | B22, B24, B32      | 1/2"          | (12.7) | 18.2  | (8.23) |
| <b>SN525-*</b> | 1/2-13      | B42, B52, B54      | 3/8"          | (9.5)  | 15.4  | (6.96) |

\*Note: Add stud length in inches (3/4, 1, 1 1/4, 1 1/2)

- Finish: Electrodeposited zinc ASTM B633 SC1
- Available in 316 stainless steel - add SS6 to part number
- To lock combo nut washer in place a hex nut (sold separately) is required

**Note:** See page 84 for resistance to slip & page 85 for pull-out strength.  
Channel nuts and hardware are sold in full box quantities.



## Combo Nut Washer

Patent Number  
7,604,444

| Part No.     | Thread Size | Fits Channel Sizes | Nut Thickness |       | Wt./C |        |
|--------------|-------------|--------------------|---------------|-------|-------|--------|
|              |             |                    | In.           | mm    | Lbs.  | kg     |
| <b>NW524</b> | 1/4-20      | All Channel Sizes  | 1/4"          | (6.3) | 11.9  | (5.40) |
| <b>NW528</b> | 3/8-16      | All Channel Sizes  | 3/8"          | (9.5) | 13.8  | (6.26) |
| <b>NW525</b> | 1/2-13      | All Channel Sizes  | 3/8"          | (9.5) | 13.1  | (5.94) |
| <b>NWM6</b>  | M6          | All Channel Sizes  | 1/4"          | (6.3) | 16.6  | (7.50) |
| <b>NWM8</b>  | M8          | All Channel Sizes  | 1/4"          | (6.3) | 15.4  | (7.00) |
| <b>NWM10</b> | M10         | All Channel Sizes  | 3/8"          | (9.5) | 18.9  | (8.57) |
| <b>NWM12</b> | M12         | All Channel Sizes  | 3/8"          | (9.5) | 17.7  | (8.00) |

Reference page 78 for general fitting and standard finish specifications.

# Channel nuts

## Resistance To Slip

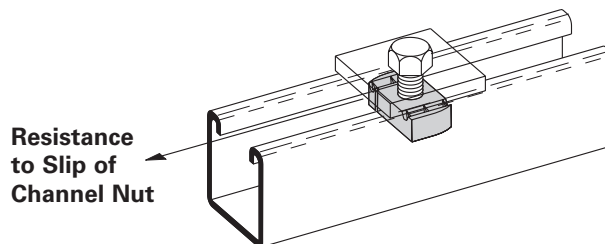
- With Safety Factor of 3

| Thread Size    | Nut Part Numbers                                                              | Resistance to Slip |      |                |      |
|----------------|-------------------------------------------------------------------------------|--------------------|------|----------------|------|
|                |                                                                               | 12 ga. Channel     |      | 14 ga. Channel |      |
|                |                                                                               | Lbs.               | N    | Lbs.           | N    |
| #8-32          | N221, N221WO, N521, N721, TN221                                               | 50                 | 220  | 50             | 220  |
| #10-24         | N222, N222WO, N522, N722, TN222                                               | 100                | 440  | 100            | 440  |
| #10-32         | N227, N227WO, N527, N727, TN227                                               | 100                | 440  | 100            | 440  |
| 1/4"-20        | NW524*, N224, N224WO, N524, N724, TN224, STN224, SN224WO, SN224, SN524, SN724 | 300                | 1330 | 300            | 1330 |
| 5/16"-18       | N223, N223WO, N523, N723, TN223                                               | 450                | 2000 | 450            | 2000 |
| 3/8"-16        | NW528*, N228, N228WO, N528, N728, TN228, STN228, SN228WO, SN228, SN528, SN728 | 800                | 3560 | 600            | 2670 |
| 7/16"-14       | N226, N226WO, N526, N726, TN226                                               | 1000               | 4450 | 800            | 3560 |
|                | N225, N225WO, N725, TN225, STN225, SN225WO, SN225, SN725                      | 1500               | 6670 | 1000           | 4450 |
| 1/2"-13        | NW525*, N525, N525WO, TN525, STN525, SN525WO, SN525                           | 1500               | 6670 | 1000           | 4450 |
| 5/8"-11        | N255, N255WO, N755, TN255                                                     | 1500               | 6670 | 1000           | 4450 |
|                | N555, N555WO                                                                  | 1500               | 6670 | 1000           | 4450 |
| 3/4"-10        | N275, N275WO, N775                                                            | 1500               | 6670 | 1000           | 4450 |
|                | N575, N575WO                                                                  | 1500               | 6670 | 1000           | 4450 |
| 7/8"-9         | N278, N278WO, N778                                                            | 1500               | 6670 | 1000           | 4450 |
| Metric Threads | M6 x 1                                                                        | 300                | 1330 | 300            | 1330 |
|                | M8 x 1.25                                                                     | 450                | 2000 | 450            | 2000 |
|                | M10 x 1.50                                                                    | 800                | 3560 | 600            | 2760 |
|                | M12 x 1.75                                                                    | 1500               | 6670 | 1000           | 4450 |
|                | BMS-12, BMS-12M, BMS-12S, BMT-12                                              | 1500               | 6670 | 1000           | 4450 |

\* Combo Nut Washer (see page 83)

### Note:

Using stainless steel channel nuts in stainless steel channel, reduce slip loads by 50% due to hardness of material.  
Using stainless steel channel nuts in aluminum channel, reduce slip loads by 70% due to hardness of material.



**Note:** For mini channel nut information see page 245.

Reference page 78 for general fitting and standard finish specifications.

**Pull-Out Strength**

- With Safety Factor of 3
- Maximum pullout strength for B11 & B12 channels is limited to 1500 lbs. (6670 N).

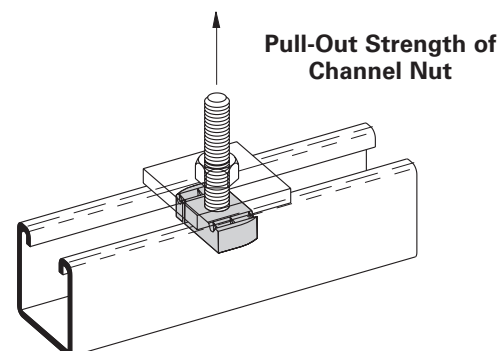
| Thread Size | Nut Part Numbers                                                              | Pull-Out Strength |      |                |      |
|-------------|-------------------------------------------------------------------------------|-------------------|------|----------------|------|
|             |                                                                               | 12 ga. Channel    |      | 14 ga. Channel |      |
|             |                                                                               | Lbs.              | N    | Lbs.           | N    |
| #8-32       | N221, N221WO, N521, N721, TN221                                               | 200               | 890  | 200            | 890  |
| #10-24      | N222, N222WO, N522, N722, TN222                                               | 250               | 1110 | 250            | 1110 |
| #10-32      | N227, N227WO, N527, N727, TN227                                               | 250               | 1110 | 250            | 1110 |
| 1/4"-20     | NW524*, N224, N224WO, N524, N724, TN224, STN224, SN224WO, SN224, SN524, SN724 | 450               | 2000 | 450            | 2000 |
| 5/16"-18    | N223, N223WO, N523, N723, TN223                                               | 750               | 3330 | 750            | 3330 |
| 3/8"-16     | NW528*, N228, N228WO, N528, N728, TN228, STN228, SN228WO, SN228, SN528, SN728 | 1100              | 4890 | 1000           | 4450 |
| 7/16"-14    | N226, N226WO, N526, N726, TN226                                               | 1500              | 6670 | 1200           | 5340 |
| 1/2"-13     | N225, N225WO, N725, TN225, STN225, SN225WO, SN225, SN725                      | 2000              | 8900 | 1400           | 6230 |
|             | NW525*, N525, N525WO, TN525, STN525, SN525WO, SN525                           | 1500              | 6670 | 1400           | 6230 |
| 5/8"-11     | N255, N255WO, N755, TN255                                                     | 2000              | 8900 | 1400           | 6230 |
|             | N555, N555WO                                                                  | 1500              | 6670 | 1400           | 6230 |
| 3/4"-10     | N275, N275WO, N775                                                            | 2000              | 8900 | 1400           | 6230 |
|             | N575, N575WO                                                                  | 1500              | 6670 | 1400           | 6230 |
| 7/8"-9      | N278, N278WO, N778                                                            | 1500              | 6670 | 1400           | 6230 |
| M6 x 1      | BMS-6, BMS-6L, BMS-6M, BMS-6S, BMT-6                                          | 450               | 2000 | 450            | 2000 |
| M8 x 1.25   | BMS-8, BMS-8L, BMS-8M, BMS-8S, BMT-8                                          | 750               | 3330 | 750            | 3330 |
| M10 x 1.50  | BMS-10, BMS-10L, BMS-10M, BMS-10S, BMT-10                                     | 1100              | 4890 | 1000           | 4450 |
| M12 x 1.75  | BMS-D-12, BMS-D-12L, BMS-D-12M, BMT-D-12                                      | 2000              | 8900 | 1400           | 6230 |
|             | BMS-12, BMS-12M, BMS-12S, BMT-12                                              | 1500              | 6670 | 1400           | 6230 |

Metric Threads

\* Combo Nut Washer (see page 83)

**Note:**

Using stainless steel channel nuts in stainless steel channel, use pull-out loads as shown above.  
Using stainless steel channel nuts in aluminum channel, reduce pull-out loads by 70% due to hardness of material.



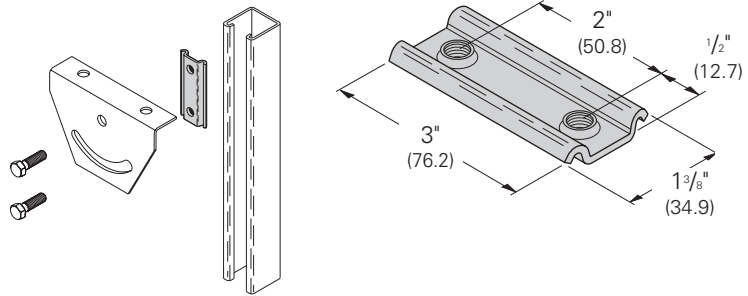
**Note:** For mini channel nut information see page 245.

Reference page 78 for general fitting and standard finish specifications.

## DCN $\frac{3}{8}$

### Double Conveyor Nut

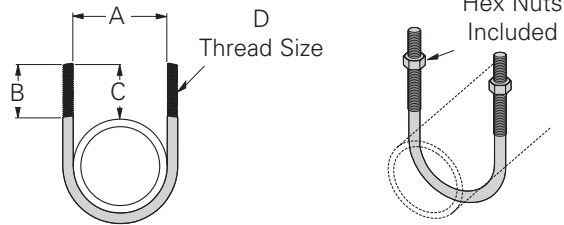
- Recommended torque - 19 ft./Lbs.
- Allowable slip loading - 700 Lbs.(3.11kN)
- Safety Factor of 3
- Material: ASTM 1011SS Gr. 33
- Finish: Electrodeposited zinc ASTM B633 SC1
- Strut ordered separately



## B501 Series

### U-Bolt

- Designed for use with Rigid Conduit or Iron Pipe
- Dimension "C" is dependent on the type of pipe or conduit supported and is a reference only

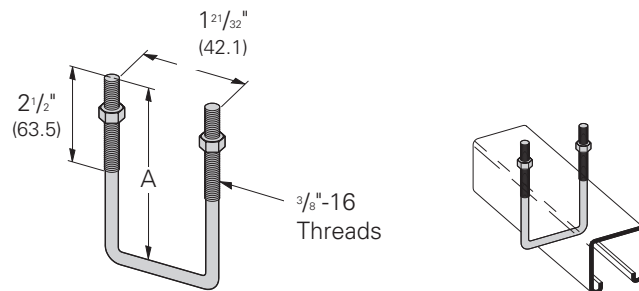


| Part No.                               | A                                 |         | B                                |        | C                                 |        | D        |  | Design Load |         | Wt./C |        |
|----------------------------------------|-----------------------------------|---------|----------------------------------|--------|-----------------------------------|--------|----------|--|-------------|---------|-------|--------|
|                                        | In.                               | mm      | In.                              | mm     | In.                               | mm     |          |  | Lbs.        | kN      | Lbs.  | kg     |
| <b>B501-1/2</b>                        | 1 <sup>5</sup> / <sub>16</sub> "  | (23.8)  | 1 <sup>3</sup> / <sub>4</sub> "  | (44.4) | 1 <sup>1</sup> / <sub>2</sub> "   | (38.1) | 5/16"-18 |  | 600         | (2.67)  | 12    | (5.4)  |
| <b>B501-3/4</b>                        | 1 <sup>1</sup> / <sub>8</sub> "   | (28.6)  | 1 <sup>3</sup> / <sub>4</sub> "  | (44.4) | 1 <sup>5</sup> / <sub>8</sub> "   | (41.3) | 5/16"-18 |  | 600         | (2.67)  | 13    | (5.9)  |
| <b>B501-1</b>                          | 1 <sup>3</sup> / <sub>8</sub> "   | (29.9)  | 1 <sup>7</sup> / <sub>8</sub> "  | (47.6) | 1 <sup>5</sup> / <sub>8</sub> "   | (41.3) | 5/16"-18 |  | 900         | (4.00)  | 14    | (6.3)  |
| <b>B501-1<sup>1</sup>/<sub>4</sub></b> | 1 <sup>23</sup> / <sub>32</sub> " | (43.6)  | 1 <sup>3</sup> / <sub>4</sub> "  | (44.4) | 1 <sup>15</sup> / <sub>32</sub> " | (37.3) | 5/16"-18 |  | 900         | (4.00)  | 15    | (6.8)  |
| <b>B501-1<sup>1</sup>/<sub>2</sub></b> | 2"                                | (50.8)  | 1 <sup>3</sup> / <sub>4</sub> "  | (44.4) | 1 <sup>7</sup> / <sub>16</sub> "  | (36.5) | 5/16"-18 |  | 900         | (4.00)  | 16    | (7.2)  |
| <b>B501-2</b>                          | 2 <sup>7</sup> / <sub>16</sub> "  | (61.9)  | 2 <sup>1</sup> / <sub>16</sub> " | (52.4) | 1 <sup>7</sup> / <sub>8</sub> "   | (47.6) | 3/8"-16  |  | 1200        | (5.34)  | 27    | (12.2) |
| <b>B501-2<sup>1</sup>/<sub>2</sub></b> | 2 <sup>15</sup> / <sub>16</sub> " | (74.6)  | 2 <sup>1</sup> / <sub>16</sub> " | (52.4) | 1 <sup>13</sup> / <sub>16</sub> " | (46.0) | 3/8"-16  |  | 1200        | (5.34)  | 32    | (14.5) |
| <b>B501-3</b>                          | 3 <sup>9</sup> / <sub>16</sub> "  | (90.5)  | 2"                               | (50.8) | 1 <sup>3</sup> / <sub>4</sub> "   | (44.4) | 3/8"-16  |  | 1800        | (8.00)  | 36    | (16.3) |
| <b>B501-3<sup>1</sup>/<sub>2</sub></b> | 4 <sup>3</sup> / <sub>32</sub> "  | (94.6)  | 2"                               | (50.8) | 1 <sup>23</sup> / <sub>32</sub> " | (43.6) | 3/8"-16  |  | 1800        | (8.00)  | 38    | (17.2) |
| <b>B501-4</b>                          | 4 <sup>19</sup> / <sub>32</sub> " | (116.7) | 2 <sup>1</sup> / <sub>4</sub> "  | (57.1) | 1 <sup>21</sup> / <sub>32</sub> " | (50.0) | 3/8"-16  |  | 1800        | (8.00)  | 42    | (19.0) |
| <b>B501-5</b>                          | 5 <sup>21</sup> / <sub>32</sub> " | (143.6) | 2 <sup>1</sup> / <sub>4</sub> "  | (57.1) | 2"                                | (50.8) | 1/2"-13  |  | 2400        | (10.70) | 92    | (41.7) |
| <b>B501-6</b>                          | 6 <sup>3</sup> / <sub>4</sub> "   | (171.4) | 2 <sup>5</sup> / <sub>8</sub> "  | (66.7) | 2 <sup>3</sup> / <sub>8</sub> "   | (60.3) | 5/8"-11  |  | 2400        | (10.70) | 176   | (79.8) |
| <b>B501-8</b>                          | 8 <sup>3</sup> / <sub>4</sub> "   | (222.2) | 2 <sup>5</sup> / <sub>8</sub> "  | (66.7) | 2 <sup>3</sup> / <sub>8</sub> "   | (60.3) | 5/8"-11  |  | 2400        | (10.70) | 191   | (86.6) |

## B500 Series

### Square U-Bolt

- Includes:
  - 1 pc. U-Bolt only
  - 2 pcs. 3/8"-16 Hex Nuts
- Additional sizes available
- Standard finish: ZN, SS4

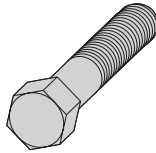


| Part No.          | A                               |         | Channel Size                                                      | Wt./C |        |
|-------------------|---------------------------------|---------|-------------------------------------------------------------------|-------|--------|
|                   | Lbs.                            | kg      |                                                                   | Lbs.  | kg     |
| <b>B500-3-3/8</b> | 3 <sup>3</sup> / <sub>8</sub> " | (85.7)  | 1 <sup>5</sup> / <sub>8</sub> " x 1 <sup>5</sup> / <sub>8</sub> " | 25    | (11.3) |
| <b>B500-5</b>     | 5"                              | (127.0) | 3 <sup>1</sup> / <sub>4</sub> " x 1 <sup>5</sup> / <sub>8</sub> " | 33    | (14.9) |

Reference page 78 for general fitting and standard finish specifications.

**HHCS****Hex Head Cap Screws**

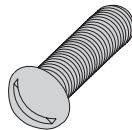
- Standard finish: Zinc-Plated, Stainless Steel
- Channel nuts and hardware are sold in full box quantities



| Part No.            | Wt./C |        |
|---------------------|-------|--------|
|                     | Lbs.  | kg     |
| 1/4" x 1/2" HHCS    | 1.3   | (.59)  |
| 1/4" x 3/4" HHCS    | 1.4   | (.63)  |
| 1/4" x 1" HHCS      | 1.7   | (.77)  |
| 1/4" x 1 1/4" HHCS  | 2.1   | (.95)  |
| 1/4" x 1 1/2" HHCS  | 2.4   | (1.09) |
| 5/16" x 1" HHCS     | 2.8   | (1.27) |
| 5/16" x 1 1/4" HHCS | 3.2   | (1.45) |
| 5/16" x 1 1/2" HHCS | 3.8   | (1.72) |
| 3/8" x 3/4" HHCS    | 3.4   | (1.54) |
| 3/8" x 1" HHCS      | 4.1   | (1.86) |
| 3/8" x 1 1/4" HHCS  | 4.7   | (2.13) |
| 3/8" x 1 1/2" HHCS  | 5.2   | (2.36) |
| 3/8" x 1 3/4" HHCS  | 5.9   | (2.67) |
| 3/8" x 2" HHCS      | 7.0   | (3.17) |
| 3/8" x 2 1/4" HHCS  | 7.8   | (3.54) |
| 3/8" x 2 1/2" HHCS  | 8.5   | (3.85) |
| 1/2" x 7/8" HHCS    | 8.0   | (3.63) |
| 1/2" x 1" HHCS      | 8.4   | (3.81) |
| 1/2" x 1 1/4" HHCS  | 9.2   | (4.17) |
| 1/2" x 1 1/2" HHCS  | 10.1  | (4.58) |
| 1/2" x 1 3/4" HHCS  | 12.0  | (5.44) |
| 1/2" x 2" HHCS      | 13.2  | (5.99) |
| 1/2" x 2 1/2" HHCS  | 16.0  | (7.26) |

**SRHMS****Slotted Round Head Machine Screws**

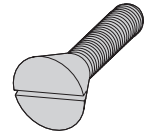
- Standard finish: Zinc-Plated
- Channel nuts and hardware are sold in full box quantities.



| Part No.             | Wt./C |        |
|----------------------|-------|--------|
|                      | Lbs.  | kg     |
| 1/4" x 1/2" SRHMS    | .9    | (.41)  |
| 1/4" x 3/4" SRHMS    | 1.2   | (.54)  |
| 1/4" x 1" SRHMS      | 1.5   | (.68)  |
| 1/4" x 1 1/4" SRHMS  | 1.7   | (.77)  |
| 1/4" x 1 1/2" SRHMS  | 1.9   | (.86)  |
| 5/16" x 1" SRHMS     | 2.5   | (1.13) |
| 5/16" x 1 1/4" SRHMS | 2.9   | (1.31) |
| 5/16" x 1 1/2" SRHMS | 3.3   | (1.49) |
| 3/8" x 1" SRHMS      | 4.0   | (1.81) |
| 3/8" x 1 1/4" SRHMS  | 4.5   | (2.04) |
| 3/8" x 1 1/2" SRHMS  | 5.1   | (2.31) |
| 3/8" x 2" SRHMS      | 6.3   | (2.86) |
| 3/8" x 2 1/4" SRHMS  | 7.1   | (3.22) |
| 3/8" x 2 1/2" SRHMS  | 7.7   | (3.49) |

**SFHMS****Slotted Flat Head Machine Screws**

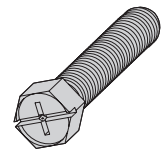
- Standard finish: Zinc-Plated
- Channel nuts and hardware are sold in full box quantities



| Part No.            | Wt./C |        |
|---------------------|-------|--------|
|                     | Lbs.  | kg     |
| 1/4" x 1/2" SFHMS   | 1.1   | (.50)  |
| 1/4" x 5/8" SFHMS   | 1.2   | (.54)  |
| 1/4" x 3/4" SFHMS   | 1.4   | (.63)  |
| 5/16" x 1" SFHMS    | 2.8   | (1.27) |
| 3/8" x 1 1/2" SFHMS | 5.6   | (2.54) |
| 3/8" x 2" SFHMS     | 6.7   | (3.04) |
| 3/8" x 2 1/4" SFHMS | 7.3   | (3.31) |
| 3/8" x 2 1/2" SFHMS | 7.9   | (3.58) |
| 1/2" x 1" SFHMS     | 5.9   | (2.67) |
| 1/2" x 1 1/4" SFHMS | 7.0   | (3.17) |
| 1/2" x 1 1/2" SFHMS | 8.3   | (3.76) |
| 1/2" x 2 1/2" SFHMS | 13.8  | (6.26) |

**SHHMS****Slotted (Combination Recess) Hex Head Machine Screws**

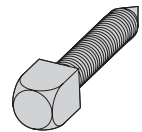
- Standard finish: Zinc-Plated, Stainless Steel
- Channel nuts and hardware are sold in full box quantities



| Part No.             | Wt./C |        |
|----------------------|-------|--------|
|                      | Lbs.  | kg     |
| 1/4" x 3/4" SHHMS    | 1.2   | (.54)  |
| 1/4" x 1" SHHMS      | 1.5   | (.68)  |
| 1/4" x 1 1/4" SHHMS  | 1.8   | (.80)  |
| 1/4" x 1 1/2" SHHMS  | 2.0   | (.91)  |
| 5/16" x 1" SHHMS     | 2.6   | (1.18) |
| 5/16" x 1 1/4" SHHMS | 3.1   | (1.40) |
| 5/16" x 1 1/2" SHHMS | 3.4   | (1.54) |
| 3/8" x 1 1/4" SHHMS  | 4.6   | (2.08) |
| 3/8" x 1 1/2" SHHMS  | 5.3   | (2.40) |

**CNPSS****Square Head Cone Point Set Screw**

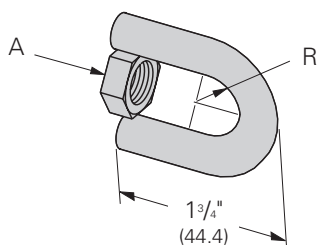
- Standard finish: ZN
- Channel nuts and hardware are sold in full box quantities.



| Part No.            | Wt./C |         |
|---------------------|-------|---------|
|                     | Lbs.  | kg      |
| 3/8" x 1 1/2" CNPSS | 4.7   | (2.13)  |
| 3/8" x 2" CNPSS     | 6.0   | (2.72)  |
| 1/2" x 1 1/2" CNPSS | 9.2   | (4.17)  |
| 1/2" x 2" CNPSS     | 11.4  | (5.17)  |
| 1/2" x 2 1/2" CNPSS | 13.7  | (6.21)  |
| 5/8" x 2" CNPSS     | 19.0  | (8.62)  |
| 5/8" x 2 1/2" CNPSS | 22.6  | (10.25) |

## B446A Swivel Hanger (Female Only)

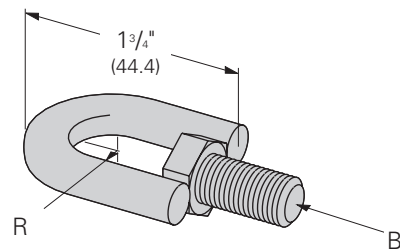
- Design Load:  
(<sup>3</sup>/<sub>8</sub>)-610 Lbs. (2.71 kN)  
(<sup>1</sup>/<sub>2</sub>)-1130 Lbs. (5.02 kN)
- Safety Factor of 3
- Standard finish: ZN



| Part No.                           | A                                   | R                                    | Wt./C    |
|------------------------------------|-------------------------------------|--------------------------------------|----------|
|                                    |                                     | In. mm                               | Lbs. kg  |
| B446A- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 HN | <sup>9</sup> / <sub>32</sub> " (7.1) | 13 (5.9) |
| B446A- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 HN | <sup>3</sup> / <sub>8</sub> " (9.5)  | 15 (6.8) |

## B446B Swivel Hanger (Male Only)

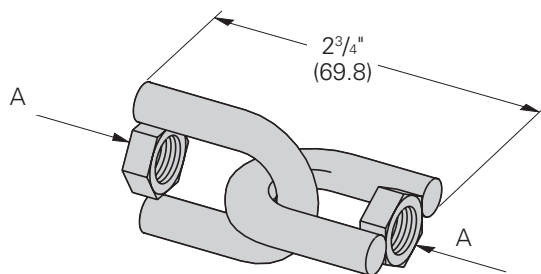
- Design Load:  
(<sup>3</sup>/<sub>8</sub>)-610 Lbs. (2.71 kN)  
(<sup>1</sup>/<sub>2</sub>)-1130 Lbs. (5.02 kN)
- Safety Factor of 3
- Standard finish: ZN



| Part No.                           | A                                   | R                                    | Wt./C    |
|------------------------------------|-------------------------------------|--------------------------------------|----------|
|                                    |                                     | In. mm                               | Lbs. kg  |
| B446B- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 HN | <sup>9</sup> / <sub>32</sub> " (7.1) | 16 (7.2) |
| B446B- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 HN | <sup>3</sup> / <sub>8</sub> " (9.5)  | 20 (9.1) |

## B446C Swivel Hanger (Female-Female)

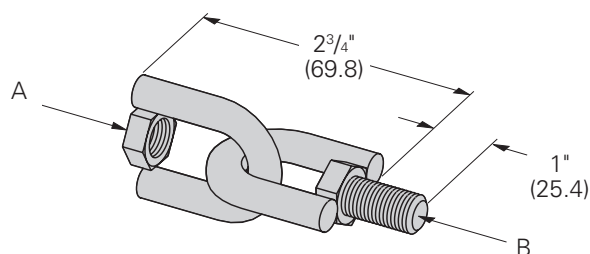
- Design Load:  
(<sup>3</sup>/<sub>8</sub>)-610 Lbs. (2.71 kN)  
(<sup>1</sup>/<sub>2</sub>)-1130 Lbs. (5.02 kN)
- Safety Factor of 3
- Standard finish: ZN



| Part No.                           | A                                   | Wt./C     |
|------------------------------------|-------------------------------------|-----------|
|                                    |                                     | Lbs. kg   |
| B446C- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 HN | 26 (11.8) |
| B446C- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 HN | 31 (14.0) |

## B446 Swivel Hanger (Female-Male)

- Design Load:  
(<sup>3</sup>/<sub>8</sub>)-610 Lbs. (2.71 kN)  
(<sup>1</sup>/<sub>2</sub>)-1130 Lbs. (5.02 kN)
- Safety Factor of 3
- Standard finish: ZN



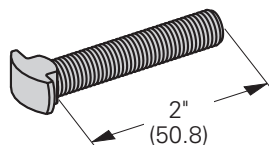
| Part No.                          | A                                   | B                                     | Wt./C     |
|-----------------------------------|-------------------------------------|---------------------------------------|-----------|
|                                   |                                     |                                       | Lbs. kg   |
| B446- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 HN | <sup>3</sup> / <sub>8</sub> "-16 HHCS | 28 (12.7) |
| B446- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 HN | <sup>1</sup> / <sub>2</sub> "-13 HHCS | 36 (16.3) |



### B617 Shoulder Bolt

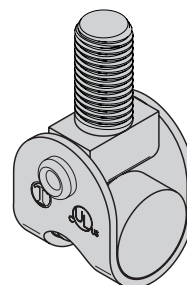
- Standard finish: ZN
- Wt./C 6 Lbs. (2.7 kg)

$\frac{3}{8}$ "-16 Thread Size



### Fig. 75 Swivel Attachment

- Standard finish: ZN
- Sized for  $\frac{3}{8}$ "-16 threaded rods
- UL Listed to support up to 4" Pipe per NFPA 13
- Wt./C 13 Lbs. (5.9 kg)



### HN Hex Nuts

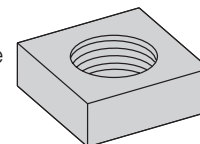
- Standard finish: Zinc-Plated, Stainless Steel
- Channel nuts and hardware are sold in full box quantities.



| Part No.            | Wt./C |         |
|---------------------|-------|---------|
|                     | Lbs.  | kg      |
| $\frac{1}{4}$ " HN  | .7    | (.32)   |
| $\frac{5}{16}$ " HN | 1.0   | (.45)   |
| $\frac{3}{8}$ " HN  | 1.5   | (.68)   |
| $\frac{1}{2}$ " HN  | 3.6   | (1.63)  |
| $\frac{5}{8}$ " HN  | 7.2   | (3.26)  |
| $\frac{3}{4}$ " HN  | 11.1  | (5.03)  |
| $\frac{7}{8}$ " HN  | 17.9  | (8.12)  |
| 1" HN               | 27.2  | (12.34) |

### MSQN Machine Square Nut

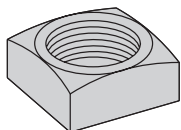
- For use with B755 Beam Clamp
- Standard finish: Zinc-Plated
- Channel nuts and hardware are sold in full box quantities.



| Part No.              | Wt./C |       |
|-----------------------|-------|-------|
|                       | Lbs.  | kg    |
| MSQN $\frac{1}{4}$ "  | .6    | (.27) |
| MSQN $\frac{5}{16}$ " | 1.2   | (.54) |
| MSQN $\frac{3}{8}$ "  | 1.8   | (.81) |

### SQN Square Nuts

- Standard finish: Zinc-Plated
- Channel nuts and hardware are sold in full box quantities.



| Part No.            | Wt./C |        |
|---------------------|-------|--------|
|                     | Lbs.  | kg     |
| $\frac{1}{2}$ " SQN | 5.7   | (2.58) |
| $\frac{5}{8}$ " SQN | 10.1  | (4.58) |

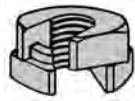
Reference page 78 for general fitting and standard finish specifications.

# Hardware

## SLN

### Slip on Lock Nut

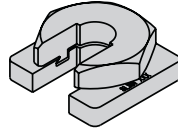
- Material: ASTM A307 Gr. A.
- Safety Factor of 3.
- Standard finish: Zinc-Plated
- Channel nuts and hardware are sold in full box quantities



| Part No. | Thread Size | B       |        | C    |        | Recommended Load |        | Wt./C |       |
|----------|-------------|---------|--------|------|--------|------------------|--------|-------|-------|
|          |             | In.     | mm     | In.  | mm     | Lbs.             | kN     | Lbs.  | kg    |
| SLN-1/2  | 1/2"-13     | 1 1/8"  | (28.6) | 5/8" | (15.9) | 1330             | (5.91) | 6.0   | (2.7) |
| SLN-5/8  | 5/8"-11     | 1 5/16" | (33.3) | 5/8" | (15.9) | 1650             | (7.34) | 7.0   | (3.2) |

## Buzznut™

- Can be installed at any desired position on the ATR, eliminating the need to thread hex nuts up along ATR.
- Loading Safety Factor of 3.
- Torque: 6 ft./lbs (8 Nm)
- Available in Zinc Plated or 316 stainless steel.
- Channel nuts and hardware are sold in full box quantities

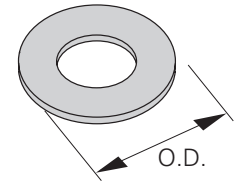


| Part No. | Thread Size | Loading Lbs. kN | Wt./C Lbs. kg |
|----------|-------------|-----------------|---------------|
| SLWN1/4  | 1/4"-20     | 240 (1.07)      | 14.4 (6.5)    |
| SLWN3/8  | 3/8"-16     | 730 (3.24)      | 15.4 (7.0)    |
| SLWN1/2  | 1/2"-13     | 1350 (6.00)     | 18.8 (8.5)    |
| SLWN5/8  | 5/8"-11     | 2100 (9.33)     | 25.4 (11.5)   |
| SLWNM6   | M6          | 200 (0.90)      | 14.1 (6.4)    |
| SLWNM8   | M8          | 380 (1.70)      | 16.3 (7.4)    |
| SLWNM10  | M10         | 584 (2.60)      | 17.2 (7.8)    |
| SLWNM12  | M12         | 840 (3.70)      | 18.9 (8.6)    |

## FW

### Flat Washers

- Standard finish: Zinc-Plated, Stainless Steel
- Channel nuts and hardware are sold in full box quantities

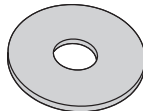


| Part No. | O.D. Outside Dia. |        | Wt./C |        |
|----------|-------------------|--------|-------|--------|
|          | in.               | mm     | Lbs.  | kg     |
| 1/4" FW  | 47/64"            | (18.7) | .7    | (.32)  |
| 5/16" FW | 7/8"              | (22.2) | 1.4   | (.63)  |
| 3/8" FW  | 1"                | (25.4) | 1.7   | (.77)  |
| 1/2" FW  | 1 3/8"            | (34.9) | 3.9   | (1.77) |
| 5/8" FW  | 1 15/32"          | (37.3) | 6.4   | (2.90) |
| 3/4" FW  | 2"                | (50.8) | 10.9  | (4.94) |
| 7/8" FW  | 2 1/4"            | (57.1) | 13.4  | (6.08) |
| 1" FW    | 2 1/2"            | (63.5) | 18.8  | (8.53) |

## FFW

### Flat Fender Washers

- Standard finish: Zinc-Plated
- Channel nuts and hardware are sold in full box quantities

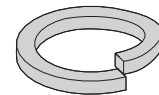


| Part No.          | Wt./C |        |
|-------------------|-------|--------|
|                   | Lbs.  | kg     |
| 1/4" x 1 1/4" FFW | 2.2   | (1.00) |
| 1/4" x 1 1/2" FFW | 3.1   | (1.40) |
| 3/8" x 1 1/4" FFW | 2.0   | (.91)  |
| 3/8" x 1 1/2" FFW | 3.0   | (1.36) |
| 1/2" x 2" FFW     | 5.4   | (2.45) |

## LW

### Lock Washers

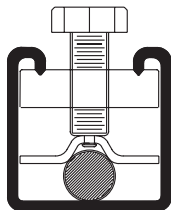
- Standard finish: Zinc-Plated, Stainless Steel
- Channel nuts and hardware are sold in full box quantities



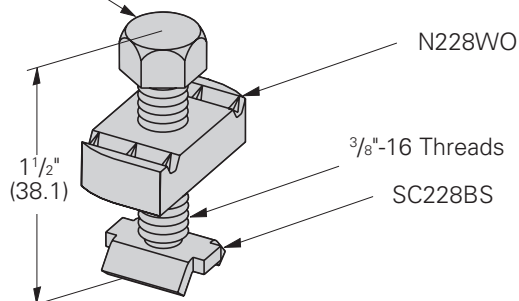
| Part No. | Wt./C |        |
|----------|-------|--------|
|          | Lbs.  | kg     |
| 1/4" LW  | .3    | (.13)  |
| 5/16" LW | .4    | (.18)  |
| 3/8" LW  | .6    | (.27)  |
| 1/2" LW  | 1.3   | (.59)  |
| 5/8" LW  | 2.4   | (1.09) |
| 3/4" LW  | 3.8   | (1.72) |
| 7/8" LW  | 5.9   | (2.67) |
| 1" LW    | 8.8   | (3.99) |

**SC228****Hanger Rod Stiffener**

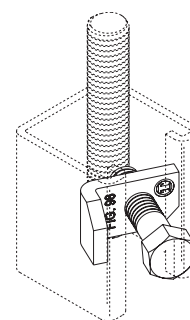
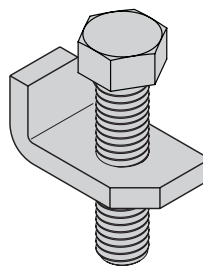
- For  $\frac{3}{8}$ " thru  $\frac{5}{8}$ " ATR
- Strut ordered separately
- Standard finish: ZN
- Wt./C 21 Lbs. (9.5 kg)



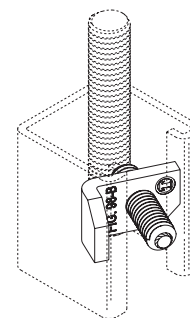
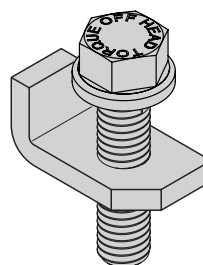
SC228B

**Fig. 98****Rod Stiffener**

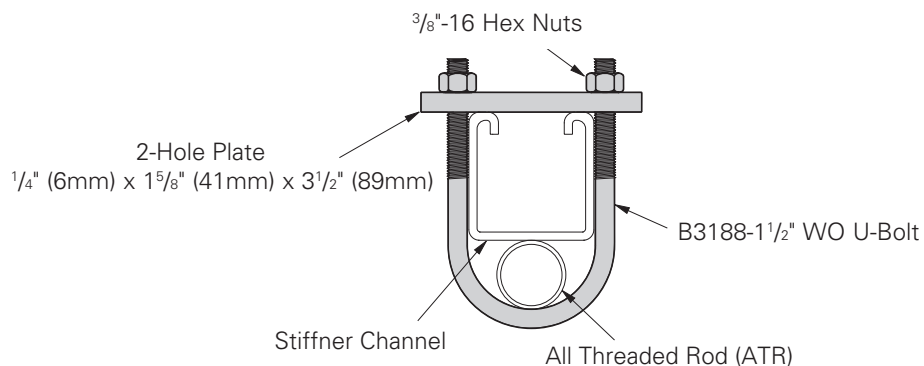
- For  $\frac{3}{8}$ " thru  $\frac{7}{8}$ " ATR
- Use with 12 ga. strut only, ordered separately
- Secures channel to hanger rod for vertical seismic bracing
- Standard finish: ZN
- Wt./C 11 Lbs. (5.0 kg)

**Fig. 98B****Rod Stiffener with Break-Off Bolt Head**

- For  $\frac{3}{8}$ " thru  $\frac{7}{8}$ " ATR
- Use with 12 ga. strut only, ordered separately
- Secures channel to hanger rod for vertical seismic bracing
- Uses a snap-off bolt head
- Standard finish: ZN
- Wt./C 13 Lbs. (5.9 kg)

**SC-UB****Hanger Rod Stiffener**

- For  $\frac{3}{4}$ " thru  $\frac{7}{8}$ " ATR
- Strut ordered separately
- Includes: (1) B3188-1 $\frac{1}{2}$ " WO U-Bolt
- (2)  $\frac{3}{8}$ "-16 Hex Nuts
- (1) 2-Hole Plate
- Standard finish: ZN
- Wt./C 50 Lbs. (22.7 kg)



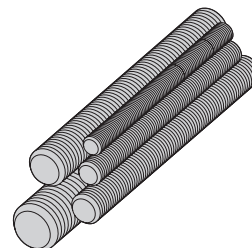
Reference page 78 for general fitting and standard finish specifications.

## ATR

### All Threaded Rod

- Available in 36" (91.4 cm), 72" (182.9 cm), 120" (304.8 cm), 144" (365.7 cm) lengths
- Safety Factor of 5 on recommended load
- Standard finish: Zinc-Plated, Stainless Steel Type 304

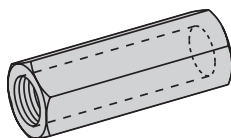
| Part No.<br>& Size | Threads<br>Per Inch | Recommended Load |         | Wt./C Ft. (3048.0 cm) |          |
|--------------------|---------------------|------------------|---------|-----------------------|----------|
|                    |                     | Lbs.             | kN      | Lbs.                  | kg       |
| <b>ATR 1/4"</b>    | 20                  | 240              | (1.07)  | 12                    | (5.44)   |
| <b>ATR 5/16"</b>   | 18                  | 400              | (1.78)  | 19                    | (8.62)   |
| <b>ATR 3/8"</b>    | 16                  | 730              | (3.24)  | 29                    | (13.15)  |
| <b>ATR 1/2"</b>    | 13                  | 1350             | (6.00)  | 53                    | (24.04)  |
| <b>ATR 5/8"</b>    | 11                  | 2160             | (9.60)  | 89                    | (40.37)  |
| <b>ATR 3/4"</b>    | 10                  | 3230             | (14.37) | 123                   | (55.79)  |
| <b>ATR 7/8"</b>    | 9                   | 4480             | (19.93) | 170                   | (77.11)  |
| <b>ATR 1"</b>      | 8                   | 5900             | (26.24) | 225                   | (102.06) |



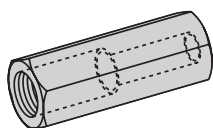
### B655 Rod Coupling

### B656 Reducer Rod Coupling

- Load rating for each coupler meets All Threaded Rod value
- Standard finish: Zinc-Plated, Stainless Steel Type 304
- Channel nuts and hardware are sold in full box quantities



| Part No.         | Size     | Recommended Load |         | Length |        | Wt./C |         |
|------------------|----------|------------------|---------|--------|--------|-------|---------|
|                  |          | Lbs.             | kN      | In.    | mm     | Lbs.  | kg      |
| <b>B655-1/4</b>  | 1/4"-20  | 240              | (1.07)  | 7/8"   | (22.2) | 1.9   | (.86)   |
| <b>B655-5/16</b> | 5/16"-18 | 380              | (1.69)  | 7/8"   | (22.2) | 1.8   | (.81)   |
| <b>B655-3/8</b>  | 3/8"-16  | 730              | (3.24)  | 1 1/8" | (28.6) | 3.6   | (1.63)  |
| <b>B655-1/2</b>  | 1/2"-13  | 1350             | (6.00)  | 1 3/4" | (44.4) | 11.3  | (5.12)  |
| <b>B655-5/8</b>  | 5/8"-11  | 1810             | (8.05)  | 2 1/8" | (54.0) | 17.6  | (7.98)  |
| <b>B655-3/4</b>  | 3/4"-10  | 2710             | (12.05) | 2 1/4" | (57.1) | 28.1  | (12.74) |
| <b>B655-7/8</b>  | 7/8"-9   | 3770             | (16.77) | 2 1/2" | (63.5) | 57.2  | (25.94) |
| <b>B655-1</b>    | 1"-8     | 4960             | (22.06) | 2 3/4" | (69.8) | 73.7  | (33.43) |



| Part No.              | Size              | Recommended Load |         | Length |        | Wt./C |         |
|-----------------------|-------------------|------------------|---------|--------|--------|-------|---------|
|                       |                   | Lbs.             | kN      | In.    | mm     | Lbs.  | kg      |
| <b>B656-3/8 x 1/4</b> | 3/8"-16 & 1/4"-20 | 240              | (1.07)  | 1"     | (25.4) | 3.7   | (1.68)  |
| <b>B656-1/2 x 3/8</b> | 1/2"-13 & 3/8"-16 | 730              | (3.24)  | 1 1/4" | (31.7) | 6.6   | (2.99)  |
| <b>B656-5/8 x 1/2</b> | 5/8"-11 & 1/2"-13 | 1350             | (6.00)  | 1 1/4" | (31.7) | 11.6  | (5.26)  |
| <b>B656-3/4 x 5/8</b> | 3/4"-10 & 5/8"-11 | 1810             | (8.05)  | 1 1/2" | (38.1) | 20.6  | (9.34)  |
| <b>B656-7/8 x 3/4</b> | 7/8"-9 & 3/4"-10  | 2710             | (12.05) | 1 3/4" | (44.4) | 39.4  | (17.87) |

## BHR Series

### Hot Rods for Trapeze Hangers

- 12" length of threaded rod completely assembled with rod coupling, locking hex nuts, square washer, and channel nut.
- Standard finish: Zinc-Plated

| Part No.         | Rod Size | Recommended Load |        | Wt./C |        |
|------------------|----------|------------------|--------|-------|--------|
|                  |          | Lbs.             | kN     | Lbs.  | kg     |
| <b>BHR1225ZN</b> | 1/4"-20  | 240              | (1.07) | 41    | (18.6) |
| <b>BHR1238ZN</b> | 3/8"-16  | 730              | (3.24) | 63    | (28.6) |
| <b>BHR1250ZN</b> | 1/2"-13  | 1350             | (6.00) | 98    | (44.4) |
| <b>BHR1262ZN</b> | 5/8"-11  | 1500             | (6.67) | 148   | (67.1) |

Note: Based on use with 12 ga. channel.

(BHR1225, BHR1238, and BHR1250 use combo nut washers instead of square washers and channel nuts)





**Note:** Channel nuts and hardware are sold in full box quantities.



## KwikWire Clamps

| Part No.      | For Use With Wire Rope Diameters | Box Qty. |
|---------------|----------------------------------|----------|
| <b>BKC100</b> | 1/16" (1.6mm) & 3/32" (2.3mm)    | 100      |
| <b>BKC200</b> | 1/8" (3.2mm) & 3/16" (4.7mm)     | 50       |

See table below for KwikWireClamp Working Loads

### KwikWire Clamp Working Loads\*

| Clamp Part No. | Wire Rope Dia. | Lbs. Safety Factor 5 |
|----------------|----------------|----------------------|
| BKC100         | 1/16"          | 0- 75                |
| BKC100         | 3/32"          | 25-150               |
| BKC200         | 1/8"           | 25-250               |
| BKC200         | 3/16"          | 50-640               |

\* Working loads shown are for hanging vertically.

For suspending at 15°, 30°, 45° or 60°

angles from vertical, use the following percentage of the working loads from the chart:

15° = 96%  
30° = 86%  
45° = 70%  
60° = 50%



7 x 7



7 x 19

## KwikWire Wire Rope (Uncoated Galvanized Wire)

| Part No.                     | Rope Dia.<br>in. mm | Working Load<br>Lbs. kg | Spool   |
|------------------------------|---------------------|-------------------------|---------|
| <b>BKW063</b> <sup>(1)</sup> | 1/16" (1.6)         | 96 (43.5)               | 500 ft. |
| <b>BKW094</b> <sup>(1)</sup> | 3/32" (2.3)         | 184 (83.4)              | 500 ft. |
| <b>BKW125</b> <sup>(1)</sup> | 1/8" (3.2)          | 340 (154.2)             | 500 ft. |
| <b>BKW188</b> <sup>(2)</sup> | 3/16" (4.8)         | 840 (381.0)             | 250 ft. |

<sup>(1)</sup> Wire Rope Construction Type 7 x 7

<sup>(2)</sup> Wire Rope Construction Type 7 x 19

### Instructions for installing the wire rope in the clamp - No tools are required.



1  
Pass the wire rope through the KwikWire Clamp



2  
Loop wire rope through/around support



3  
Pass wire rope back through KwikWire Clamp



4  
Push wire rope through clamp leaving 2" to 3" tail, then apply tension on wire rope



5  
To adjust, remove tension and pull wire rope slightly to disengage teeth, slide adjustment pin in direction shown by arrow to release wire rope.



## KwikPak Wire Rope & Clamps KwikPak

| Part No.        | For Use With Wire Rope Diameters                | Box Qty. |
|-----------------|-------------------------------------------------|----------|
| <b>BKP10063</b> | BKC100 (100 pcs.)<br>1/16"Ø Wire Rope (500 ft.) | 1        |
| <b>BKP10094</b> | BKC100 (100 pcs.)<br>3/32"Ø Wire Rope (500 ft.) | 1        |
| <b>BKP20125</b> | BKC200 (50 pcs.)<br>1/8"Ø Wire Rope (500 ft.)   | 1        |
| <b>BKP20188</b> | BKC200 (50 pcs.)<br>3/16"Ø Wire Rope (250 ft.)  | 1        |

- KwikPak™ include KwikWire clamps and a spool of wire rope.
- KwikPak is shipped in a specially designed dispenser box to ease field cutting of wire.

## KwikWire System Recommendations:

- Do not exceed the safe working load of the products
- KwikWire Clamp load ratings are guaranteed only when used in combination with our supplied wire rope
- Do not use for overhead lifting or hoisting
- Do not use if cable or components are visibly distorted or worn. Remove damaged cable end prior to inserting in KwikWire Clamp
- Do not paint cable near working area of KwikWire Clamp
- Do not apply lubricant
- Keep product clean and free of dirt
- Do not use clamp on coated wire rope
- Do not use in chlorinated or caustic atmospheres
- For use in dry locations
- BKCC tool is recommended for cutting wire rope to prevent fraying



## KwikWire Cable Cutter

| Part No.    | Box Qty. |
|-------------|----------|
| <b>BKCC</b> | 1        |

- Wire rope cutter for cutting all wire rope sizes
- \*\* Never use cutters on energized circuits, wire, or cable.**

**NEVER USE CUTTERS ON ENERGIZED CIRCUITS, WIRE, OR CABLE.**





- KwikWire hanger combines the versatility of a bolt with an adjustable wire rope solution.
- Can be quickly installed in existing anchors or metal brackets with a nut.
- ARS, ARC, and ARW anchors are ideal for use with KwikWire Hangers.
- Ideal for supporting light fixtures, wire basket cable tray, HVAC ducts, and sign/banner supports.
- Allows for tool-less adjustment of wire rope.

## KwikWire Hanger

| Part No.        | Thread Size | Wire Rope Dia. |       | Loading* SF5 |        |
|-----------------|-------------|----------------|-------|--------------|--------|
|                 |             | in.            | mm    | Lbs.         | kg     |
| <b>BKF100-4</b> | 1/4"-20     | 1/16"          | (1.6) | 45           | (20.4) |
|                 |             | 3/32"          | (2.3) | 90           | (40.8) |
| <b>BKF100-6</b> | 3/8"-16     | 1/16"          | (1.6) | 45           | (20.4) |
|                 |             | 3/32"          | (2.3) | 90           | (40.8) |

## KwikWire Hanger installation



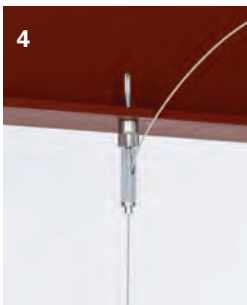
1  
Screw KwikWire Hanger into installed hanger support (ARS anchor pictured)



2  
Push cable wire up through the bottom of KwikWire Hanger



3  
Continue pushing through until 1/4" minimum is extending out the side of the KwikWire Hanger



4  
To adjust up - pull or push more cable wire through KwikWire Hanger



5  
To adjust down - push up on bottom of KwikWire Hanger and allow cable wire to feed down



6  
When hanging the cable wire is complete, cut off any excess cable wire if desired

KwikWire Accessory Features

- Reduces on the job installation time
- Can be installed quickly without drilling into existing structure
- Increases versatility in the field
- KwikWire accessory system reduces inventory and shipping costs
- No more sawing, filing, or fixing nuts
- Designed for use with cable tray, lighting, and HVAC
- Eliminates the need for all threaded rod
- Cost effective solution for jack chain
- “Y” style accessories require 50% less drilling



KwikWire Accessory Numbering System

| Product Line  | Assembly Configuration                         | Leg Termination                                                                                                                                                                                                                  | Leg Length                                                  | Wire Rope Diameter         | Straight Length                                                                                                                      | Assembly or Kit                                            |
|---------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| BK = KwikWire | Blank = Single Leg<br>Y = 2 Legs<br>3 - 3 Legs | A = Angle Bracket w/Pin<br>H = Hook<br>L = Loop<br>T = Toggle<br>W = Fuse Cut<br>B25 = Bolt w/ 1/4"-20 Thread<br>B38 = Bolt w/ 3/8"-16 Thread<br>BM6 = Bolt w/ M6 Thread<br>BM8 = Bolt w/ M8 Thread<br>BM10 = Bolt w/ M10 Thread | Blank = See Straight Length<br>18 = 18" Leg<br>30 = 30" Leg | 063 = 1/16"<br>094 = 3/32" | Blank = Loop w/ Plastic Tube<br>18 = 18"<br>30 = 30"<br>40 = 40"<br>80 = 80"<br>120 = 120"<br>180 = 180"<br>240 = 240"<br>360 = 360" | Blank = Assembly Only<br>K = Kit (Assembly & BKC100 Clamp) |

Examples

BKYT18-094-120K

BK Y T 18 - 063 - 120 K

KwikWire Accessory

2 legs - toggle leg termination - 18" legs - 1/16" diameter wire - 120" straight length - kit with clamp

BKL-063-120K

BK L - 063 - 120 K

KwikWire Accessory

single leg - looped leg termination - 1/16" diameter wire - 120" straight length - kit with clamp

### KwikWire Loop Termination

| Part No.           | Wire Rope Dia. |       | Length |        |
|--------------------|----------------|-------|--------|--------|
|                    | in.            | mm    | in.    | mm     |
| <b>BKL-063-40</b>  | 1/16"          | (1.6) | 40"    | (1016) |
| <b>BKL-063-80</b>  | 1/16"          | (1.6) | 80"    | (2032) |
| <b>BKL-063-120</b> | 1/16"          | (1.6) | 120"   | (3048) |
| <b>BKL-063-180</b> | 1/16"          | (1.6) | 180"   | (4572) |
| <b>BKL-063-240</b> | 1/16"          | (1.6) | 240"   | (6096) |
| <b>BKL-063-360</b> | 1/16"          | (1.6) | 360"   | (9144) |
| <b>BKL-094-40</b>  | 3/32"          | (2.3) | 40"    | (1016) |
| <b>BKL-094-80</b>  | 3/32"          | (2.3) | 80"    | (2032) |
| <b>BKL-094-120</b> | 3/32"          | (2.3) | 120"   | (3048) |
| <b>BKL-094-180</b> | 3/32"          | (2.3) | 180"   | (4572) |
| <b>BKL-094-240</b> | 3/32"          | (2.3) | 240"   | (6096) |
| <b>BKL-094-360</b> | 3/32"          | (2.3) | 360"   | (9144) |



#### Box Quantity - 20

5 bags containing 4 pieces per bag

### KwikWire Loop Termination Kits

| Part No.            | Wire Rope Dia. |       | Length |        |
|---------------------|----------------|-------|--------|--------|
|                     | in.            | mm    | in.    | mm     |
| <b>BKL-063-40K</b>  | 1/16"          | (1.6) | 40"    | (1016) |
| <b>BKL-063-80K</b>  | 1/16"          | (1.6) | 80"    | (2032) |
| <b>BKL-063-120K</b> | 1/16"          | (1.6) | 120"   | (3048) |
| <b>BKL-063-180K</b> | 1/16"          | (1.6) | 180"   | (4572) |
| <b>BKL-063-240K</b> | 1/16"          | (1.6) | 240"   | (6096) |
| <b>BKL-063-360K</b> | 1/16"          | (1.6) | 360"   | (9144) |
| <b>BKL-094-40K</b>  | 3/32"          | (2.3) | 40"    | (1016) |
| <b>BKL-094-80K</b>  | 3/32"          | (2.3) | 80"    | (2032) |
| <b>BKL-094-120K</b> | 3/32"          | (2.3) | 120"   | (3048) |
| <b>BKL-094-180K</b> | 3/32"          | (2.3) | 180"   | (4572) |
| <b>BKL-094-240K</b> | 3/32"          | (2.3) | 240"   | (6096) |
| <b>BKL-094-360K</b> | 3/32"          | (2.3) | 360"   | (9144) |



#### Box Quantity - 20

5 bags containing 4 pieces per bag

- Available as a wire rope with loop termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".

## KwikWire Single Style Hook Termination



### Box Quantity - 20

5 bags containing 4 pieces per bag



| Part No.           | Wire Rope Dia.   |       | Length |        |
|--------------------|------------------|-------|--------|--------|
|                    | in.              | mm    | in.    | mm     |
| <b>BKH-094-40</b>  | $\frac{3}{32}$ " | (2.3) | 40"    | (1016) |
| <b>BKH-094-80</b>  | $\frac{3}{32}$ " | (2.3) | 80"    | (2032) |
| <b>BKH-094-120</b> | $\frac{3}{32}$ " | (2.3) | 120"   | (3048) |
| <b>BKH-094-180</b> | $\frac{3}{32}$ " | (2.3) | 180"   | (4572) |
| <b>BKH-094-240</b> | $\frac{3}{32}$ " | (2.3) | 240"   | (6096) |
| <b>BKH-094-360</b> | $\frac{3}{32}$ " | (2.3) | 360"   | (9144) |

## KwikWire Single Style Hook Termination Kits



### Box Quantity - 20

5 bags containing 4 pieces per bag



| Part No.            | Wire Rope Dia.   |       | Length |        |
|---------------------|------------------|-------|--------|--------|
|                     | in.              | mm    | in.    | mm     |
| <b>BKH-094-40K</b>  | $\frac{3}{32}$ " | (2.3) | 40"    | (1016) |
| <b>BKH-094-80K</b>  | $\frac{3}{32}$ " | (2.3) | 80"    | (2032) |
| <b>BKH-094-120K</b> | $\frac{3}{32}$ " | (2.3) | 120"   | (3048) |
| <b>BKH-094-180K</b> | $\frac{3}{32}$ " | (2.3) | 180"   | (4572) |
| <b>BKH-094-240K</b> | $\frac{3}{32}$ " | (2.3) | 240"   | (6096) |
| <b>BKH-094-360K</b> | $\frac{3}{32}$ " | (2.3) | 360"   | (9144) |

## KwikWire 'Y' Style Hook Termination With Loop

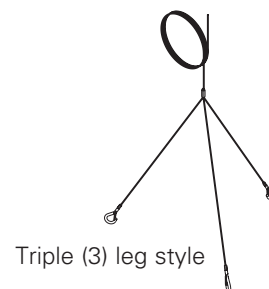


### Box Quantity - 10

5 bags containing 2 pieces per bag



| Part No.          | Wire Rope Dia.   |       | Length |       |
|-------------------|------------------|-------|--------|-------|
|                   | in.              | mm    | in.    | mm    |
| <b>BKYH18-094</b> | $\frac{3}{32}$ " | (2.3) | 18"    | (457) |
| <b>BKYH30-094</b> | $\frac{3}{32}$ " | (2.3) | 30"    | (762) |



- Hook designed to accept up to  $\frac{3}{8}$ " diameter wire.
- Available as a wire rope with hook termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".
- Available in single, double (Y), and triple (3) leg styles

## KwikWire 'Y' Style Hook Termination

| Part No.              | Leg Length |       | Wire Rope Dia.   |       | Length |        |
|-----------------------|------------|-------|------------------|-------|--------|--------|
|                       | in.        | mm    | in.              | mm    | in.    | mm     |
| <b>BKYH18-094-40</b>  | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 40"    | (1016) |
| <b>BKYH18-094-80</b>  | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 80"    | (2032) |
| <b>BKYH18-094-120</b> | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 120"   | (3048) |
| <b>BKYH18-094-180</b> | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 180"   | (4572) |
| <b>BKYH18-094-240</b> | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 240"   | (6096) |
| <b>BKYH18-094-360</b> | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 360"   | (9144) |
| <b>BKYH30-094-40</b>  | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 40"    | (1016) |
| <b>BKYH30-094-80</b>  | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 80"    | (2032) |
| <b>BKYH30-094-120</b> | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 120"   | (3048) |
| <b>BKYH30-094-180</b> | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 180"   | (4572) |
| <b>BKYH30-094-240</b> | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 240"   | (6096) |
| <b>BKYH30-094-360</b> | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 360"   | (9144) |

**Box Quantity - 10**

5 bags containing 2 pieces per bag

## KwikWire 'Y' Style Hook Termination Kits

| Part No.               | Leg Length |       | Wire Rope Dia.   |       | Length |        |
|------------------------|------------|-------|------------------|-------|--------|--------|
|                        | in.        | mm    | in.              | mm    | in.    | mm     |
| <b>BKYH18-094-40K</b>  | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 40"    | (1016) |
| <b>BKYH18-094-80K</b>  | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 80"    | (2032) |
| <b>BKYH18-094-120K</b> | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 120"   | (3048) |
| <b>BKYH18-094-180K</b> | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 180"   | (4572) |
| <b>BKYH18-094-240K</b> | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 240"   | (6096) |
| <b>BKYH18-094-360K</b> | 18"        | (457) | $\frac{3}{32}$ " | (2.3) | 360"   | (9144) |
| <b>BKYH30-094-40K</b>  | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 40"    | (1016) |
| <b>BKYH30-094-80K</b>  | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 80"    | (2032) |
| <b>BKYH30-094-120K</b> | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 120"   | (3048) |
| <b>BKYH30-094-180K</b> | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 180"   | (4572) |
| <b>BKYH30-094-240K</b> | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 240"   | (6096) |
| <b>BKYH30-094-360K</b> | 30"        | (762) | $\frac{3}{32}$ " | (2.3) | 360"   | (9144) |

**Box Quantity - 10**

5 bags containing 2 pieces per bag

- Hook designed to accept up to  $\frac{3}{8}$ " diameter wire.
- Available as a wire rope with loop termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".

## KwikWire Single Style Toggle Termination



### Box Quantity - 20

5 bags containing 4 pieces per bag

| Part No.           | Wire Rope Dia. |       | Length |        |
|--------------------|----------------|-------|--------|--------|
|                    | in.            | mm    | in.    | mm     |
| <b>BKT-063-40</b>  | 1/16"          | (1.6) | 40"    | (1016) |
| <b>BKT-063-80</b>  | 1/16"          | (1.6) | 80"    | (2032) |
| <b>BKT-063-120</b> | 1/16"          | (1.6) | 120"   | (3048) |
| <b>BKT-063-180</b> | 1/16"          | (1.6) | 180"   | (4572) |
| <b>BKT-063-240</b> | 1/16"          | (1.6) | 240"   | (6096) |
| <b>BKT-063-360</b> | 1/16"          | (1.6) | 360"   | (9144) |

## KwikWire Single Style Toggle Termination Kits



### Box Quantity - 20

5 bags containing 4 pieces per bag

| Part No.            | Wire Rope Dia. |       | Length |        |
|---------------------|----------------|-------|--------|--------|
|                     | in.            | mm    | in.    | mm     |
| <b>BKT-063-40K</b>  | 1/16"          | (1.6) | 40"    | (1016) |
| <b>BKT-063-80K</b>  | 1/16"          | (1.6) | 80"    | (2032) |
| <b>BKT-063-120K</b> | 1/16"          | (1.6) | 120"   | (3048) |
| <b>BKT-063-180K</b> | 1/16"          | (1.6) | 180"   | (4572) |
| <b>BKT-063-240K</b> | 1/16"          | (1.6) | 240"   | (6096) |
| <b>BKT-063-360K</b> | 1/16"          | (1.6) | 360"   | (9144) |

## KwikWire 'Y' Style Toggle Termination With Loop



### Box Quantity - 10

5 bags containing 2 pieces per bag

| Part No.          | Wire Rope Dia. |       | Length |       |
|-------------------|----------------|-------|--------|-------|
|                   | in.            | mm    | in.    | mm    |
| <b>BKYT12-063</b> | 1/16"          | (1.6) | 12"    | (305) |
| <b>BKYT18-063</b> | 1/16"          | (1.6) | 18"    | (457) |
| <b>BKYT30-063</b> | 1/16"          | (1.6) | 30"    | (762) |

- Available as a wire rope with toggle termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".
- Available in single, double (Y), and triple (3) leg styles
- All triple (3) leg styles are non-stock, contact us for lead times



Triple (3) leg style



## KwikWire 'Y' Style Toggle Termination

| Part No.       | Leg Length |       | Wire Rope Dia. |       | Length |        |
|----------------|------------|-------|----------------|-------|--------|--------|
|                | in.        | mm    | in.            | mm    | in.    | mm     |
| BKYT12-063-40  | 12"        | (305) | 1/16"          | (1.6) | 40"    | (1016) |
| BKYT12-063-80  | 12"        | (305) | 1/16"          | (1.6) | 80"    | (2032) |
| BKYT12-063-120 | 12"        | (305) | 1/16"          | (1.6) | 120"   | (3048) |
| BKYT12-063-180 | 12"        | (305) | 1/16"          | (1.6) | 180"   | (4572) |
| BKYT12-063-240 | 12"        | (305) | 1/16"          | (1.6) | 240"   | (6096) |
| BKYT12-063-360 | 12"        | (305) | 1/16"          | (1.6) | 360"   | (9144) |
| BKYT18-063-40  | 18"        | (457) | 1/16"          | (1.6) | 40"    | (1016) |
| BKYT18-063-80  | 18"        | (457) | 1/16"          | (1.6) | 80"    | (2032) |
| BKYT18-063-120 | 18"        | (457) | 1/16"          | (1.6) | 120"   | (3048) |
| BKYT18-063-180 | 18"        | (457) | 1/16"          | (1.6) | 180"   | (4572) |
| BKYT18-063-240 | 18"        | (457) | 1/16"          | (1.6) | 240"   | (6096) |
| BKYT18-063-360 | 18"        | (457) | 1/16"          | (1.6) | 360"   | (9144) |
| BKYT30-063-40  | 30"        | (762) | 1/16"          | (1.6) | 40"    | (1016) |
| BKYT30-063-80  | 30"        | (762) | 1/16"          | (1.6) | 80"    | (2032) |
| BKYT30-063-120 | 30"        | (762) | 1/16"          | (1.6) | 120"   | (3048) |
| BKYT30-063-180 | 30"        | (762) | 1/16"          | (1.6) | 180"   | (4572) |
| BKYT30-063-240 | 30"        | (762) | 1/16"          | (1.6) | 240"   | (6096) |
| BKYT30-063-360 | 30"        | (762) | 1/16"          | (1.6) | 360"   | (9144) |

**Box Quantity - 10**

5 bags containing 2 pieces per bag

## KwikWire 'Y' Style Toggle Termination Kits

| Part No.        | Leg Length |       | Wire Rope Dia. |       | Length |        |
|-----------------|------------|-------|----------------|-------|--------|--------|
|                 | in.        | mm    | in.            | mm    | in.    | mm     |
| BKYT12-063-40K  | 12"        | (305) | 1/16"          | (1.6) | 40"    | (1016) |
| BKYT12-063-80K  | 12"        | (305) | 1/16"          | (1.6) | 80"    | (2032) |
| BKYT12-063-120K | 12"        | (305) | 1/16"          | (1.6) | 120"   | (3048) |
| BKYT12-063-180K | 12"        | (305) | 1/16"          | (1.6) | 180"   | (4572) |
| BKYT12-063-240K | 12"        | (305) | 1/16"          | (1.6) | 240"   | (6096) |
| BKYT12-063-360K | 12"        | (305) | 1/16"          | (1.6) | 360"   | (9144) |
| BKYT18-063-40K  | 18"        | (457) | 1/16"          | (1.6) | 40"    | (1016) |
| BKYT18-063-80K  | 18"        | (457) | 1/16"          | (1.6) | 80"    | (2032) |
| BKYT18-063-120K | 18"        | (457) | 1/16"          | (1.6) | 120"   | (3048) |
| BKYT18-063-180K | 18"        | (457) | 1/16"          | (1.6) | 180"   | (4572) |
| BKYT18-063-240K | 18"        | (457) | 1/16"          | (1.6) | 240"   | (6096) |
| BKYT18-063-360K | 18"        | (457) | 1/16"          | (1.6) | 360"   | (9144) |
| BKYT30-063-40K  | 30"        | (762) | 1/16"          | (1.6) | 40"    | (1016) |
| BKYT30-063-80K  | 30"        | (762) | 1/16"          | (1.6) | 80"    | (2032) |
| BKYT30-063-120K | 30"        | (762) | 1/16"          | (1.6) | 120"   | (3048) |
| BKYT30-063-180K | 30"        | (762) | 1/16"          | (1.6) | 180"   | (4572) |
| BKYT30-063-240K | 30"        | (762) | 1/16"          | (1.6) | 240"   | (6096) |
| BKYT30-063-360K | 30"        | (762) | 1/16"          | (1.6) | 360"   | (9144) |

**Box Quantity - 10**

5 bags containing 2 pieces per bag

- Available as a wire rope with loop termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".

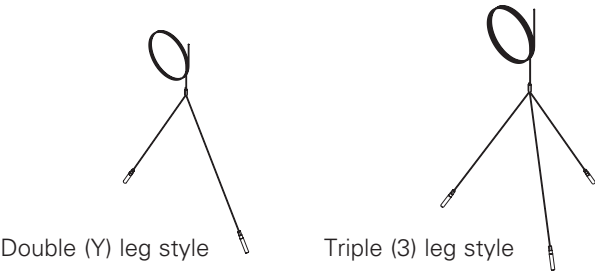
KwikWire Bolt Termination



**Box Quantity - 20**  
5 bags containing 4 pieces per bag

| Part No.      | Thread Size | Wire Rope Dia. |       | Length |        |
|---------------|-------------|----------------|-------|--------|--------|
|               |             | in.            | mm    | in.    | mm     |
| BKB25-063-40  | 1/4"-20     | 1/16"          | (1.6) | 40"    | (1016) |
| BKB25-063-80  | 1/4"-20     | 1/16"          | (1.6) | 80"    | (2032) |
| BKB25-063-120 | 1/4"-20     | 1/16"          | (1.6) | 120"   | (3048) |
| BKB25-063-180 | 1/4"-20     | 1/16"          | (1.6) | 180"   | (4572) |
| BKB25-063-240 | 1/4"-20     | 1/16"          | (1.6) | 240"   | (6096) |
| BKB25-063-360 | 1/4"-20     | 1/16"          | (1.6) | 360"   | (9144) |
| BKB38-094-40  | 3/8"-16     | 3/32"          | (2.3) | 40"    | (1016) |
| BKB38-094-80  | 3/8"-16     | 3/32"          | (2.3) | 80"    | (2032) |
| BKB38-094-120 | 3/8"-16     | 3/32"          | (2.3) | 120"   | (3048) |
| BKB38-094-180 | 3/8"-16     | 3/32"          | (2.3) | 180"   | (4572) |
| BKB38-094-240 | 3/8"-16     | 3/32"          | (2.3) | 240"   | (6096) |
| BKB38-094-360 | 3/8"-16     | 3/32"          | (2.3) | 360"   | (9144) |

- Ideal for use with ARS, ARC, ADI, ACPW, or ACPD anchors.
- Available as a wire rope with bolt termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".
- Available in single, double (Y), and triple leg (3) styles
- All (Y) and triple (3) styles are non-stock, contact us for lead times



KwikWire Bolt Termination Kits

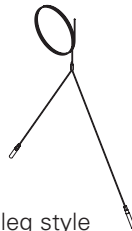
| Part No.              | Thread Size | Wire Rope Dia. |       | Length |        |
|-----------------------|-------------|----------------|-------|--------|--------|
|                       |             | in.            | mm    | in.    | mm     |
| <b>BKB25-063-40K</b>  | 1/4"-20     | 1/16"          | (1.6) | 40"    | (1016) |
| <b>BKB25-063-80K</b>  | 1/4"-20     | 1/16"          | (1.6) | 80"    | (2032) |
| <b>BKB25-063-120K</b> | 1/4"-20     | 1/16"          | (1.6) | 120"   | (3048) |
| <b>BKB25-063-180K</b> | 1/4"-20     | 1/16"          | (1.6) | 180"   | (4572) |
| <b>BKB25-063-240K</b> | 1/4"-20     | 1/16"          | (1.6) | 240"   | (6096) |
| <b>BKB25-063-360K</b> | 1/4"-20     | 1/16"          | (1.6) | 360"   | (9144) |
| <b>BKB38-094-40K</b>  | 3/8"-16     | 3/32"          | (2.3) | 40"    | (1016) |
| <b>BKB38-094-80K</b>  | 3/8"-16     | 3/32"          | (2.3) | 80"    | (2032) |
| <b>BKB38-094-120K</b> | 3/8"-16     | 3/32"          | (2.3) | 120"   | (3048) |
| <b>BKB38-094-180K</b> | 3/8"-16     | 3/32"          | (2.3) | 180"   | (4572) |
| <b>BKB38-094-240K</b> | 3/8"-16     | 3/32"          | (2.3) | 240"   | (6096) |
| <b>BKB38-094-360K</b> | 3/8"-16     | 3/32"          | (2.3) | 360"   | (9144) |



**Box Quantity - 20**

5 bags containing 4 pieces per bag

- Ideal for use with ARS, ARC, ADI, ACPW, or ACPD anchors.
- Available as a wire rope with bolt termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".
- Available in single, double (Y), and triple (3) styles
- All double (Y) and triple (3) styles are non-stock, contact us for lead times



Double (Y) leg style



Triple (3) leg style

## KwikWire Angle Bracket Termination



### Box Quantity - 20

5 bags containing 4 pieces per bag



| Part No.           | Wire Rope Dia. |       | Length |        |
|--------------------|----------------|-------|--------|--------|
|                    | in.            | mm    | in.    | mm     |
| <b>BKA-063-40</b>  | 1/16"          | (1.6) | 40"    | (1016) |
| <b>BKA-063-80</b>  | 1/16"          | (1.6) | 80"    | (2032) |
| <b>BKA-063-120</b> | 1/16"          | (1.6) | 120"   | (3048) |
| <b>BKA-063-180</b> | 1/16"          | (1.6) | 180"   | (4572) |
| <b>BKA-063-240</b> | 1/16"          | (1.6) | 240"   | (6096) |
| <b>BKA-063-360</b> | 1/16"          | (1.6) | 360"   | (9144) |

## KwikWire Angle Bracket Termination Kits



### Box Quantity - 20

5 bags containing 4 pieces per bag



| Part No.            | Wire Rope Dia. |       | Length |        |
|---------------------|----------------|-------|--------|--------|
|                     | in.            | mm    | in.    | mm     |
| <b>BKA-063-40K</b>  | 1/16"          | (1.6) | 40"    | (1016) |
| <b>BKA-063-80K</b>  | 1/16"          | (1.6) | 80"    | (2032) |
| <b>BKA-063-120K</b> | 1/16"          | (1.6) | 120"   | (3048) |
| <b>BKA-063-180K</b> | 1/16"          | (1.6) | 180"   | (4572) |
| <b>BKA-063-240K</b> | 1/16"          | (1.6) | 240"   | (6096) |
| <b>BKA-063-360K</b> | 1/16"          | (1.6) | 360"   | (9144) |

- Available as a wire rope with angle bracket termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".

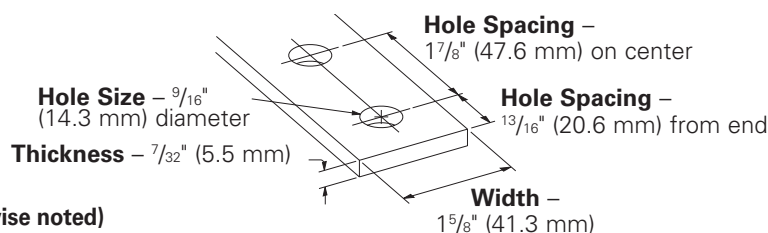




This section offers a full selection of fittings and accessories to complete our strut system. Fittings are made from hot rolled, pickled and oiled plate or strip steel in accordance with ASTM A1018 33,000 PSI min. yield, unless noted.

## Dimensions

The following dimensions apply to all fittings except as noted:



## Materials & Finishes (Unless otherwise noted)

| Finish Code | Finish                   | Specification                          |
|-------------|--------------------------|----------------------------------------|
| PLN         | Plain                    | ASTM A1018<br>33,000 PSI min. yield    |
| ZN          | Electro-Plated Zinc      | ASTM B633 SC3 Type III<br>or ASTM A653 |
| GRN         | DURA GREEN™              |                                        |
| HDG         | Hot-Dipped Galvanized    | ASTM A123                              |
| SS4         | Stainless Steel Type 304 | ASTM A240                              |
| SS6         | Stainless Steel Type 316 | ASTM A240                              |
| AL          | Aluminum                 | ASTM B209                              |

Note: A minimum order may apply on special material and finishes.

## Hardware

Nuts and bolts are not included with the fittings and must be ordered separately, unless noted.

## Pre-Assembled Fittings

Some fittings are available with hex head cap screws and channel nuts pre-assembled. These fittings and finishes will be flagged using the following symbol.



## Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

## Load Data

The load data published includes safety factor of 2.5 when used with 12 ga. (2.6) channel safety factor = ratio of ultimate load to the design load).

Use 1/2"-13 x 7/8" hex head cap screws and 1/2"-13 (N225 or TN225) channel nuts for the rated results.

Note: See page 277 Design Load Data for typical channel - fitting connections.

## Recommended Bolt Torque

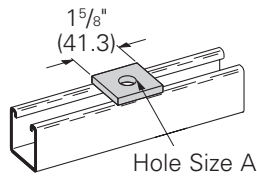
| Bolt Size | 1/4"-20 | 5/16"-18 | 3/8"-16 | 1/2"-13 |
|-----------|---------|----------|---------|---------|
| Foot/Lbs. | 6       | 11       | 19      | 50      |
| Nm        | 8       | 15       | 26      | 68      |

See chart on page 154 for setscrew torque.



## B200-B202-2

- Standard finishes: ZN, GRN, HDG, SS4, SS6, AL

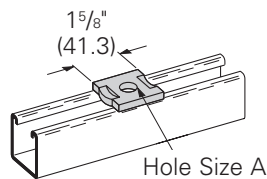


## Square Washer

| Part No. | A      |        | Bolt Size |        | Wt./C |       |
|----------|--------|--------|-----------|--------|-------|-------|
|          | In.    | mm     | In.       | mm     | Lbs.  | kg    |
| B200     | 3/8"   | (9.5)  | 5/16"     | (7.9)  | 18    | (8.1) |
| B201     | 7/16"  | (11.1) | 3/8"      | (9.5)  | 18    | (8.1) |
| B202     | 9/16"  | (14.2) | 1/2"      | (12.7) | 17    | (7.7) |
| B202-1   | 11/16" | (17.4) | 5/8"      | (15.9) | 16    | (7.2) |
| B202-2   | 13/16" | (20.6) | 3/4"      | (19.0) | 15    | (6.8) |
| B202-3   | 15/16" | (23.8) | 7/8"      | (22.2) | 14    | (6.3) |

## B200D-B202-2D

- Standard finishes: ZN, GRN, HDG, SS4, SS6, AL



## No Twist Square Washer

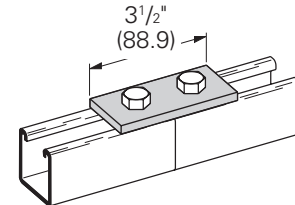
| Part No. | A      |        | Bolt Size |        | Wt./C |       |
|----------|--------|--------|-----------|--------|-------|-------|
|          | In.    | mm     | In.       | mm     | Lbs.  | kg    |
| B200D    | 3/8"   | (9.5)  | 5/16"     | (7.9)  | 18    | (8.1) |
| B201D    | 7/16"  | (11.1) | 3/8"      | (9.5)  | 18    | (8.1) |
| B202D    | 9/16"  | (14.2) | 1/2"      | (12.7) | 17    | (7.7) |
| B202-1D  | 11/16" | (17.4) | 5/8"      | (15.9) | 16    | (7.2) |
| B202-2D  | 13/16" | (20.6) | 3/4"      | (19.0) | 15    | (6.8) |

## B129

### Two Hole Splice Plate

- Standard finishes: ZN, GRN
- Wt./C 37 Lbs. (16.8 kg)

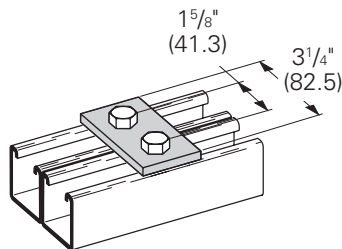
PA ZN  
GRN



## B340

### Two Hole Splice Plate

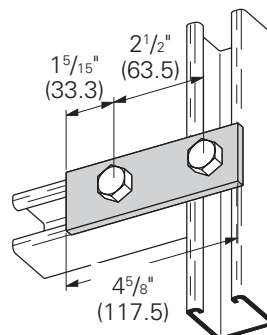
- Standard finishes: ZN, GRN
- Wt./C 34 Lbs. (15.4 kg)



## B528

### Two Hole Splice Plate

- Standard finishes: ZN, GRN
- Wt./C 50 Lbs. (22.7 kg)

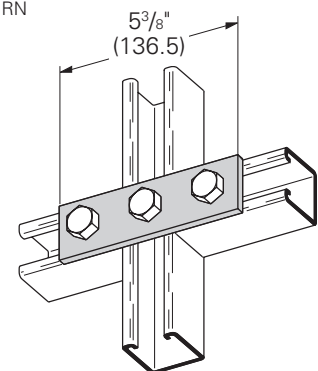


## B141

### Three Hole Splice Plate

- Standard finishes: ZN, GRN
- Wt./C 55 Lbs. (24.9 kg)

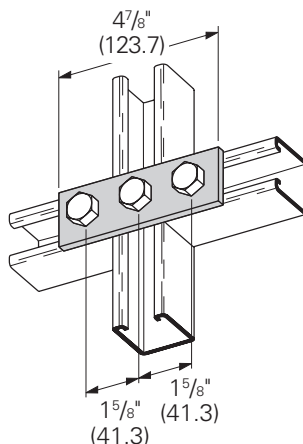
PA ZN  
GRN



## B557

### Three Hole Splice Plate

- Standard finishes: ZN, GRN
- Wt./C 50 Lbs. (22.7 kg)

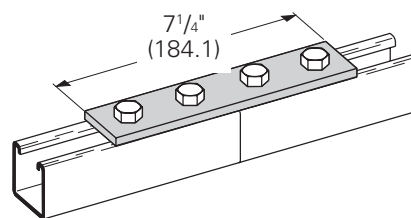


## B341

### Four Hole Splice Plate

- Standard finishes: ZN, GRN, HDG
- Wt./C 76 Lbs. (34.5 kg)

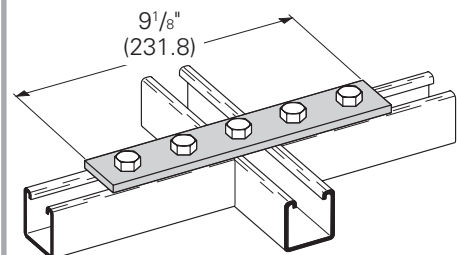
PA ZN  
GRN



## B342

### Five Hole Splice Plate

- Standard finishes: ZN, GRN
- Wt./C 96 Lbs. (43.5 kg)



PA Pre-assembled fitting

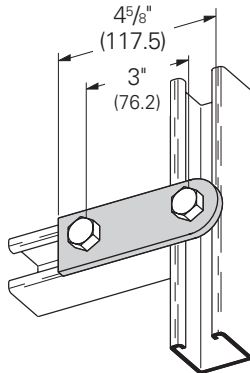
Reference page 106 for general fitting and standard finish specifications.

# Flat plate fittings

## B138

### Two Hole Swivel Plate

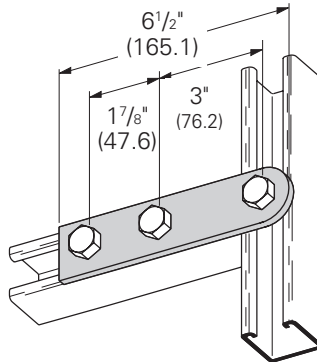
- Standard finishes: ZN, GRN
- Wt./C 48 Lbs. (21.8 kg)



## B139

### Three Hole Swivel Plate

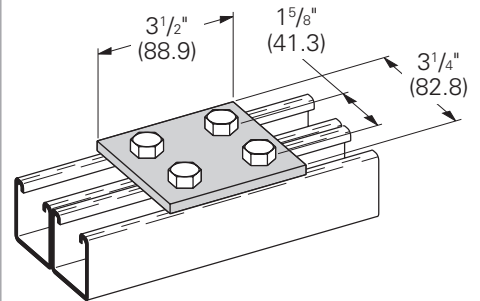
- Standard finishes: ZN, GRN
- Wt./C 69 Lbs. (31.3 kg)



## B504

### Four Hole Splice Plate

- Standard finishes: ZN, GRN
- Wt./C 73 Lbs. (33.1 kg)

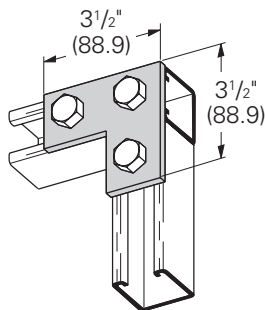


## B140

### Three Hole Corner Plate

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 56 Lbs. (25.4 kg)

PA ZN  
GRN

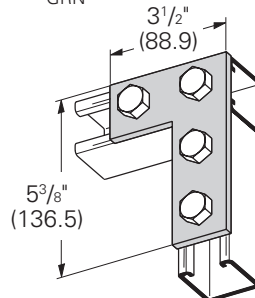


## B143

### Four Hole Corner Plate

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 75 Lbs. (34.0 kg)

PA ZN  
GRN

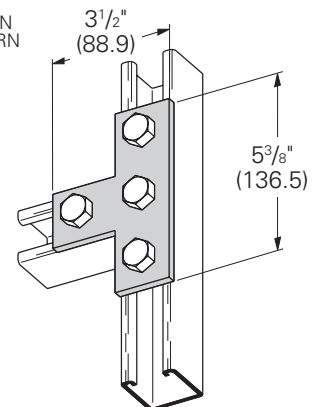


## B133

### Four Hole Tee Plate

- Standard finishes: ZN, GRN, HDG, SS4, AL
- Wt./C 75 Lbs. (34.0 kg)

PA ZN  
GRN

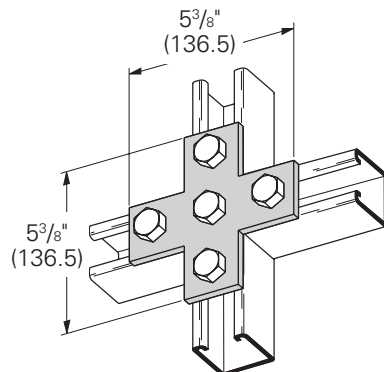


## B132

### Five Hole Cross Plate

- Standard finishes: ZN, GRN, HDG
- Wt./C 100 Lbs. (45.3 kg)

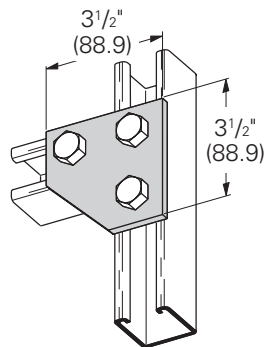
PA ZN  
GRN



## B135

### Three Hole Corner Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 70 Lbs. (31.7 kg)

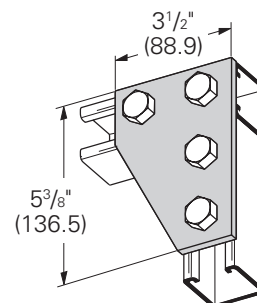


## B142

### Four Hole Corner Gusset Plate

- Standard finishes: ZN, GRN, HDG
- Wt./C 102 Lbs. (46.2 kg)

PA ZN  
GRN

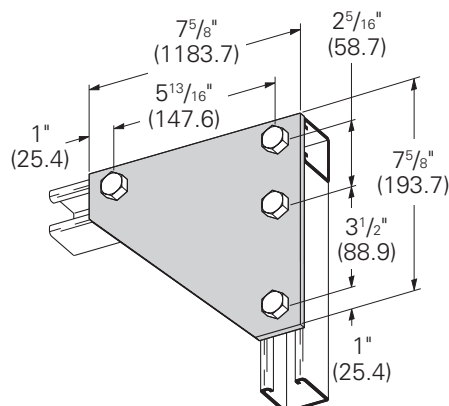


PA Pre-assembled fitting

Reference page 106 for general fitting and standard finish specifications.

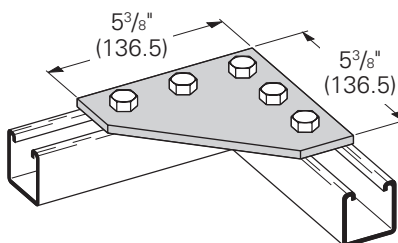
## B137 Four Hole Corner Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 273 Lbs. (123.8 kg)



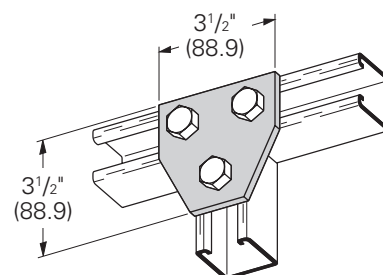
## B556 Five Hole Corner Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 145 Lbs. (65.8 kg)



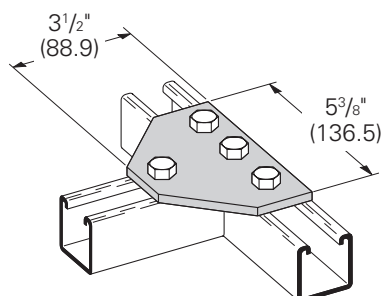
## B337 Three Hole Tee Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 70 Lbs. (31.7 kg)



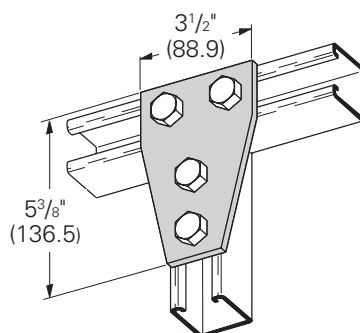
## B432 Four Hole Tee Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 100 Lbs. (45.3 kg)



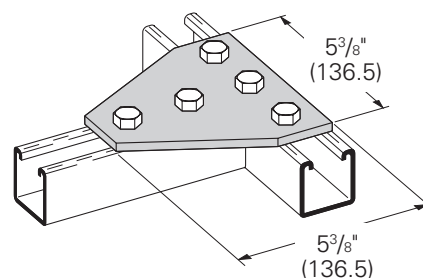
## B136 Four Hole Tee Gusset Plate

- Standard finishes: ZN, GRN, HDG
- Wt./C 100 Lbs. (45.3 kg)



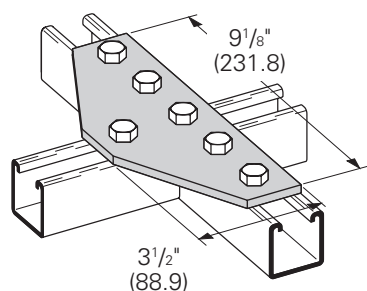
## B532 Five Hole Tee Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 143 Lbs. (64.8 kg)



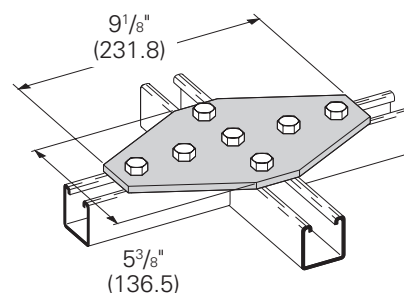
## B339 Six Hole Tee Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 149 Lbs. (67.6 kg)



## B334 Seven Hole Cross Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 232 Lbs. (105.2 kg)



PA Pre-assembled fitting

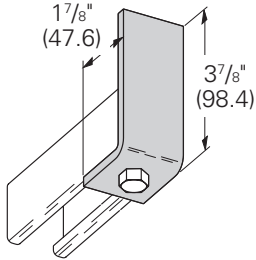
Reference page 106 for general fitting and standard finish specifications.

# 90° Angle fittings

## B420-378

### One Hole Corner Angle

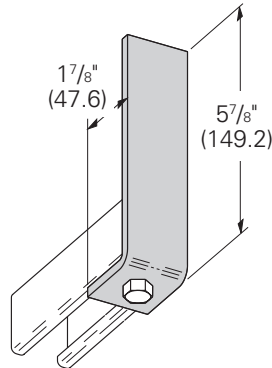
- Standard finishes: ZN, GRN
- Wt./C 60 Lbs. (27.2 kg)



## B420-578

### One Hole Corner Angle

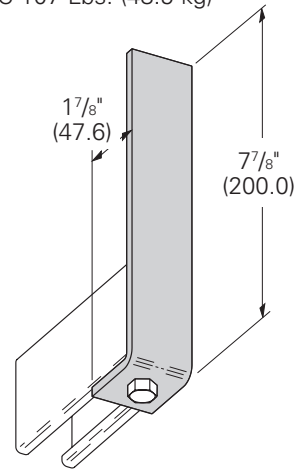
- Standard finishes: ZN, GRN
- Wt./C 85 Lbs. (38.5 kg)



## B420-778

### One Hole Corner Angle

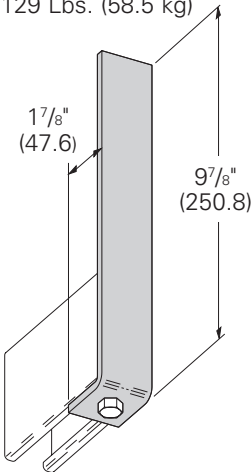
- Standard finishes: ZN, GRN
- Wt./C 107 Lbs. (48.5 kg)



## B420-978

### One Hole Corner Angle

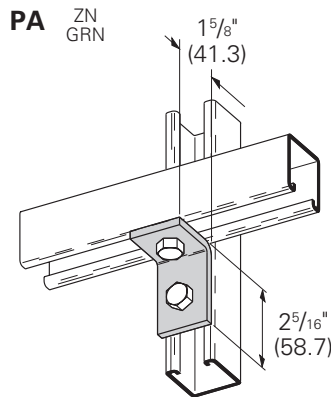
- Standard finishes: ZN, GRN
- Wt./C 129 Lbs. (58.5 kg)



## B101

### Two Hole Corner Angle

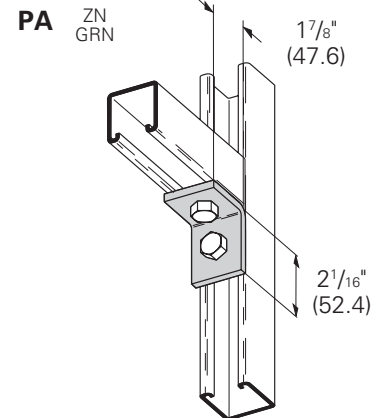
- Standard finishes: ZN, GRN, HDG, SS4, AL
- Wt./C 37 Lbs. (16.8 kg)



## B230

### Two Hole Corner Angle

- Standard finishes: ZN, GRN, HDG, SS4, AL
- Wt./C 37 Lbs. (16.8 kg)

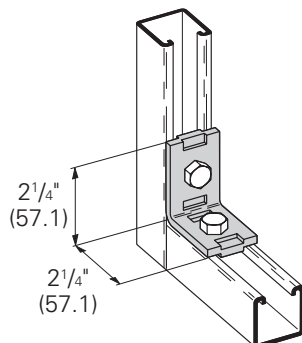


## B231

### Two Hole "No-Twist" Corner Angle

- Standard finishes: ZN, GRN, HDG
- Wt./C 41 Lbs. (18.6 kg)

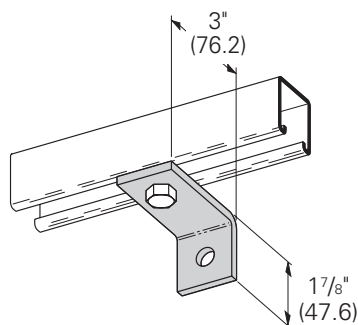
PA ZN  
GRN



## B359

### Two Hole Corner Angle

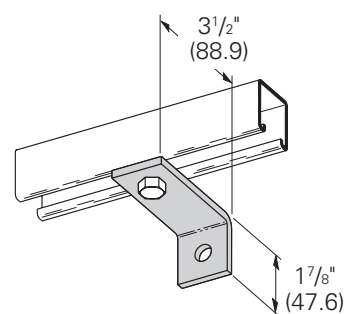
- Standard finishes: ZN, GRN
- Wt./C 48 Lbs. (21.8 kg)



## B360

### Two Hole Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 53 Lbs. (24.0 kg)

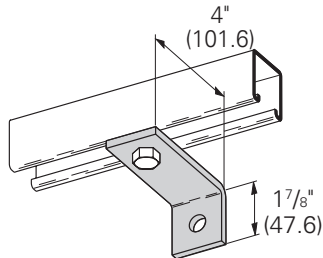


PA Pre-assembled fitting

Reference page 106 for general fitting and standard finish specifications.

## B361 Two Hole Corner Angle

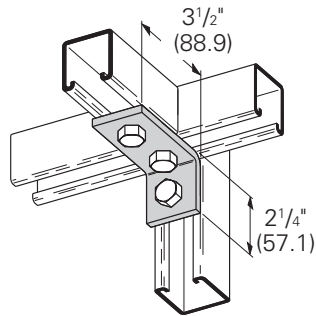
- Standard finishes: ZN, GRN
- Wt./C 60 Lbs. (27.2 kg)



## B102 Three Hole Corner Angle

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 56 Lbs. (25.4 kg)

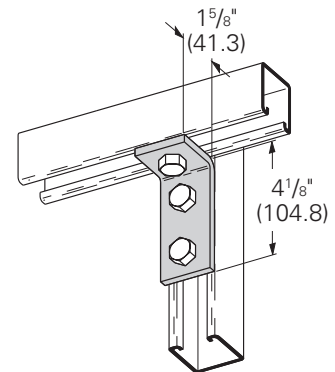
PA ZN  
GRN



## B103 Three Hole Corner Angle

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 56 Lbs. (25.4 kg)

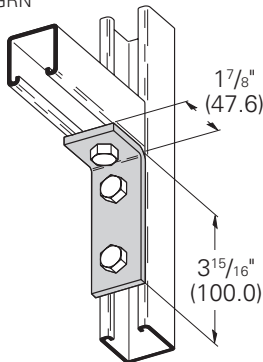
PA ZN  
GRN



## B232 Three Hole Corner Angle

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 56 Lbs. (25.4 kg)

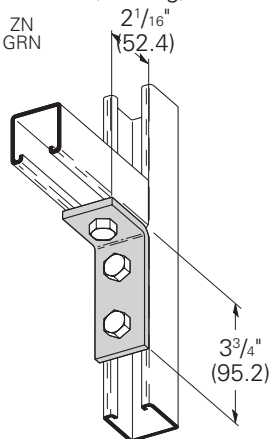
PA ZN  
GRN



## B374 Three Hole Corner Angle

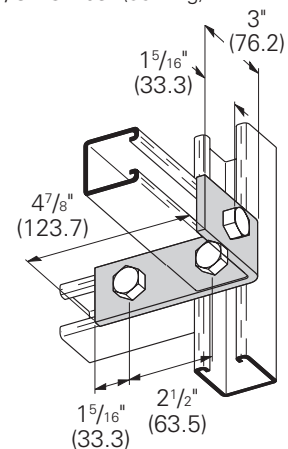
- Standard finishes: ZN, GRN, HDG
- Wt./C 56 Lbs. (25.4 kg)

PA ZN  
GRN



## B529 Three Hole Corner Angle

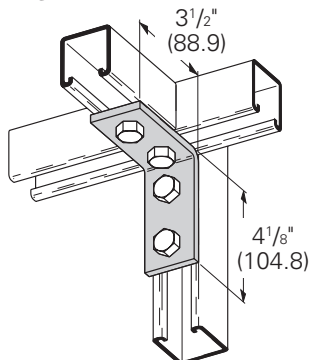
- Standard finishes: ZN, GRN
- Wt./C 78 Lbs. (35.4 kg)



## B104 Four Hole Corner Angle

- Standard finishes: ZN, GRN, HDG, SS4, SS6, AL
- Wt./C 78 Lbs. (35.4 kg)

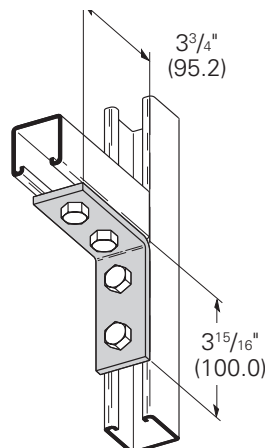
PA ZN  
GRN



## B115 Four Hole Corner Angle

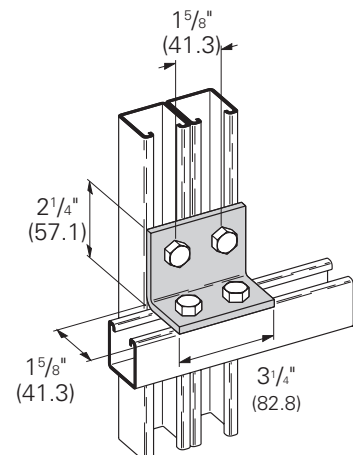
- Standard finishes: ZN, GRN, HDG, SS4, AL
- Wt./C 76 Lbs. (34.5 kg)

PA ZN  
GRN



## B558 Four Hole Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 73 Lbs. (33.1 kg)



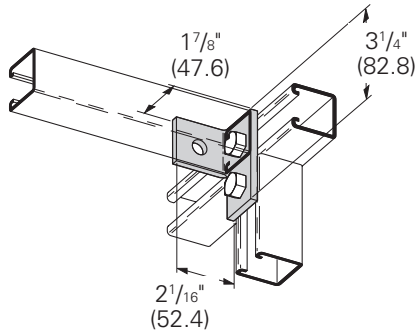
PA Pre-assembled fitting

Reference page 106 for general fitting and standard finish specifications.

# 90° Angle fittings

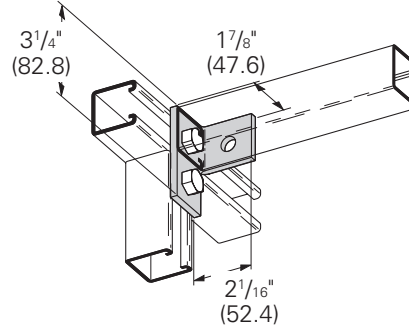
## B235R Three Hole (Right Hand) Offset Bent Angle

- 1<sup>5</sup>/<sub>8</sub>" (41.3) from center to center of the holes that are shown with bolt heads
- Standard finishes: ZN, GRN
- Wt./C 53 Lbs. (24.0 kg)



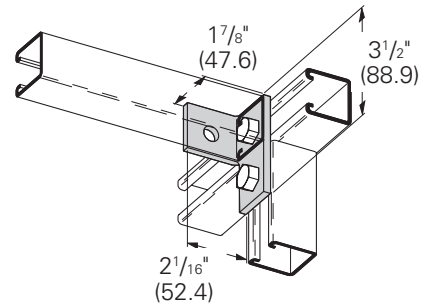
## B235L Three Hole (Left Hand) Offset Bent Angle

- 1<sup>5</sup>/<sub>8</sub>" (41.3) from center to center of the holes that are shown with bolt heads
- Standard finishes: ZN, GRN
- Wt./C 53 Lbs. (24.0 kg)



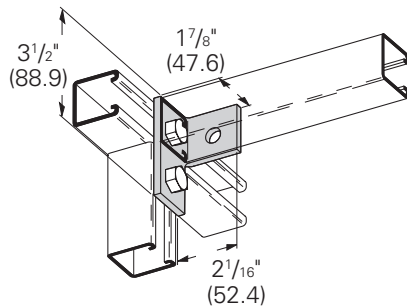
## B236R Three Hole (Right Hand) Offset Bent Angle

- Standard finishes: ZN, GRN
- Wt./C 65 Lbs. (29.5 kg)



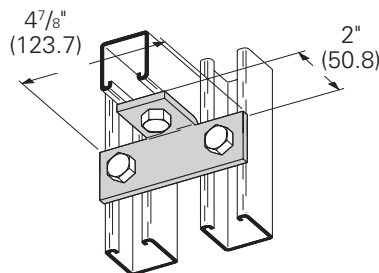
## B236L Three Hole (Left Hand) Offset Bent Angle

- Standard finishes: ZN, GRN
- Wt./C 65 Lbs. (29.5 kg)



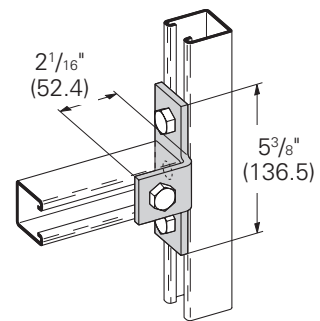
## B237 Three Hole Offset Bent Tee

- Standard finishes: ZN, GRN
- Wt./C 71 Lbs. (32.2 kg)



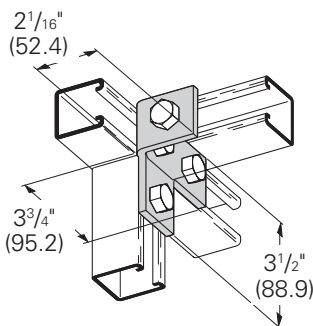
## B357 Four Hole Offset Bent Tee

- Standard finishes: ZN, GRN
- Wt./C 77 Lbs. (34.9 kg)



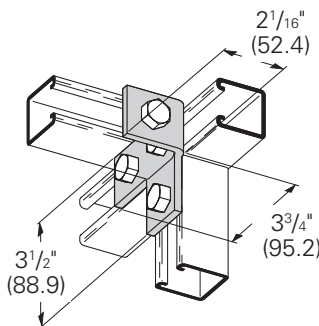
## B238R Four Hole (Right Hand) Offset Bent Tee

- Standard finishes: ZN, GRN
- Wt./C 76 Lbs. (34.5 kg)



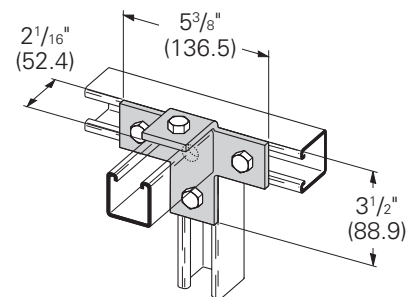
## B238L Four Hole (Left Hand) Offset Bent Tee

- Standard finishes: ZN, GRN
- Wt./C 76 Lbs. (34.5 kg)



## B239 Five Hole Offset Bent Tee

- Standard finishes: ZN, GRN
- Wt./C 96 Lbs. (43.5 kg)

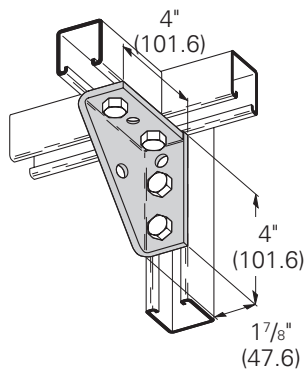


Reference page 106 for general fitting and standard finish specifications.



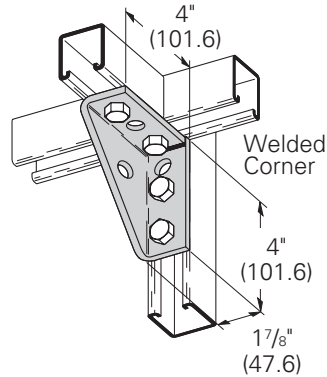
## B844 Universal Shelf Bracket

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 132 Lbs. (59.9 kg)



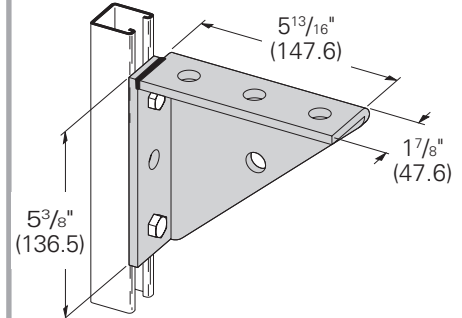
## B844W Universal Shelf Bracket - Welded

- Standard finishes: ZN, GRN
- Wt./C 134 Lbs. (60.8 kg)



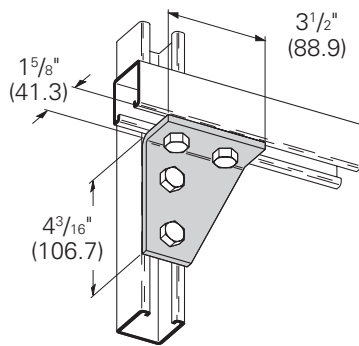
## B888W Universal Shelf Bracket - Welded

- Standard finishes: ZN, GRN
- Wt./C 197 Lbs. (89.4 kg)



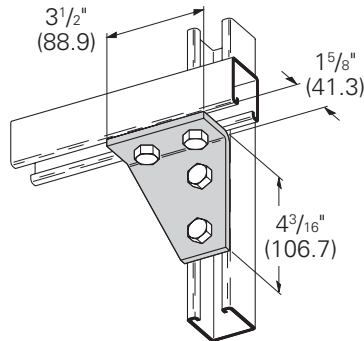
## B234R Four Hole (Right Hand) Corner Gusset

- Standard finishes: ZN, GRN, HDG
- Wt./C 100 Lbs. (45.3 kg)



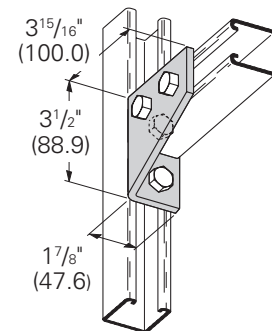
## B234L Four Hole (Left Hand) Corner Gusset

- Standard finishes: ZN, GRN, HDG
- Wt./C 100 Lbs. (45.3 kg)



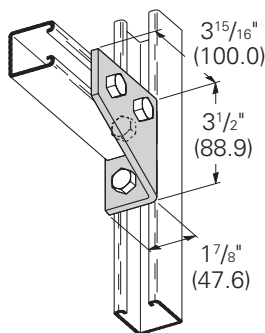
## B134R Four Hole (Right Hand) Corner Gusset

- Standard finishes: ZN, GRN
- Wt./C 100 Lbs. (45.3 kg)



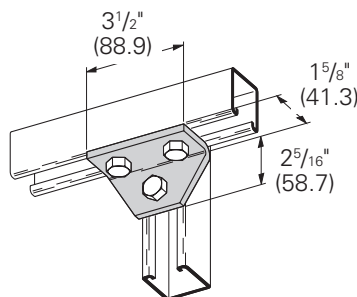
## B134L Four Hole (Left Hand) Corner Gusset

- Standard finishes: ZN, GRN
- Wt./C 100 Lbs. (45.3 kg)



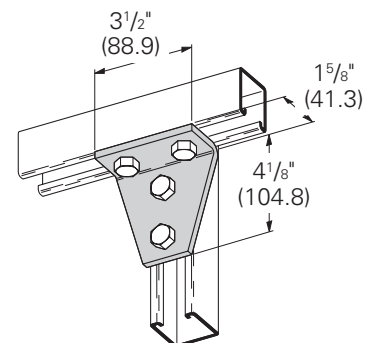
## B125 Three Hole Gussetted Shelf Angle

- Standard finishes: ZN, GRN
- Wt./C 67 Lbs. (30.4 kg)



## B118 Four Hole Gussetted Shelf Angle

- Standard finishes: ZN, GRN, HDG
- Wt./C 102 Lbs. (46.2 kg)



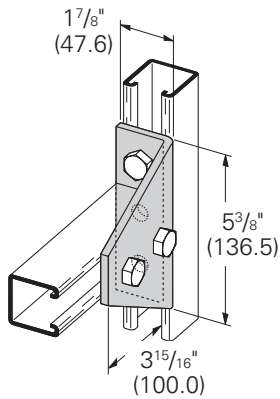
Reference page 106 for general fitting and standard finish specifications.

# 90° Angle fittings

## B485

### Four Hole Gussetted Shelf Angle

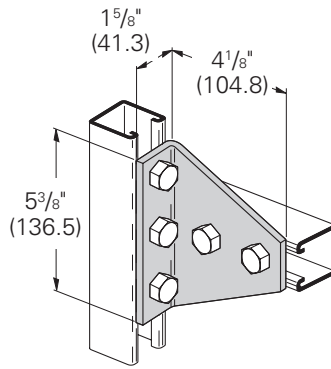
- Standard finishes: ZN, GRN
- Wt./C 148 Lbs. (67.1 kg)



## B533

### Five Hole Gussetted Shelf Angle

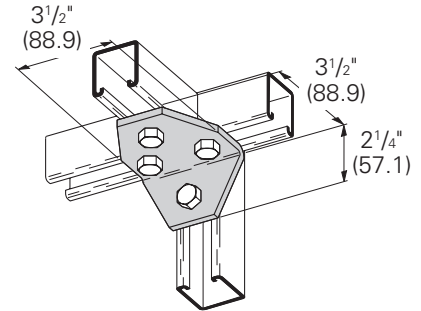
- Standard finishes: ZN, GRN
- Wt./C 141 Lbs. (63.9 kg)



## B126

### Four Hole Gussetted Three Way Shelf Angle

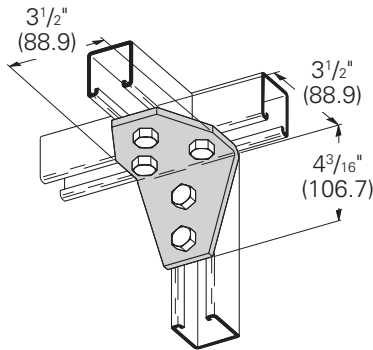
- Standard finishes: ZN, GRN
- Wt./C 101 Lbs. (45.8 kg)



## B127

### Five Hole Gussetted Three Way Shelf Angle

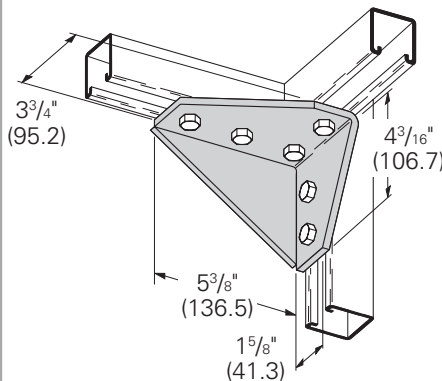
- Standard finishes: ZN, GRN
- Wt./C 135 Lbs. (61.2 kg)



## B503R

### Six Hole (Right Hand) Gussetted Corner Connection

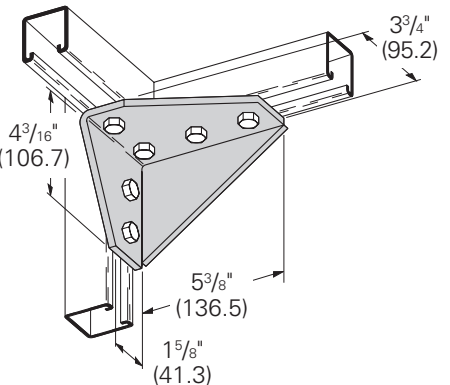
- Standard finishes: ZN, GRN
- Wt./C 229 Lbs. (103.9 kg)



## B503L

### Six Hole (Left Hand) Gussetted Corner Connection

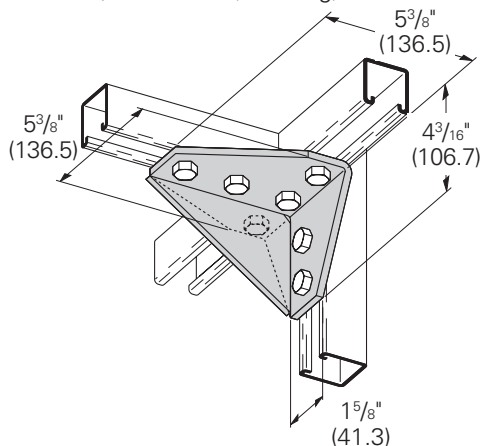
- Standard finishes: ZN, GRN
- Wt./C 229 Lbs. (103.9 kg)



## B663

### Seven Hole Gussetted Corner Connection

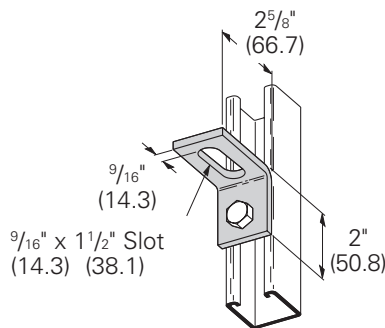
- Standard finishes: ZN, GRN
- Wt./C 289 Lbs. (131.1 kg)



## B371

### Two Hole Adjustable Corner Angle

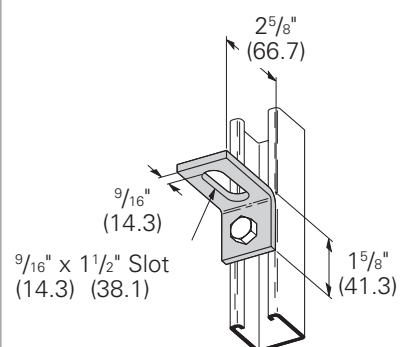
- Standard finishes: ZN, GRN
- Wt./C 41 Lbs. (18.6 kg)



## B372

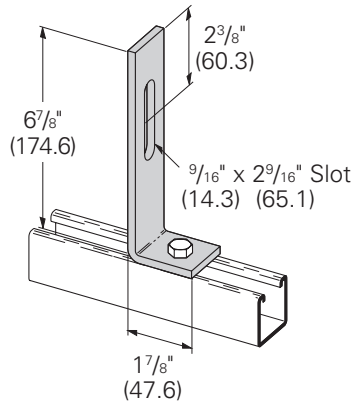
### Two Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 38 Lbs. (17.2 kg)



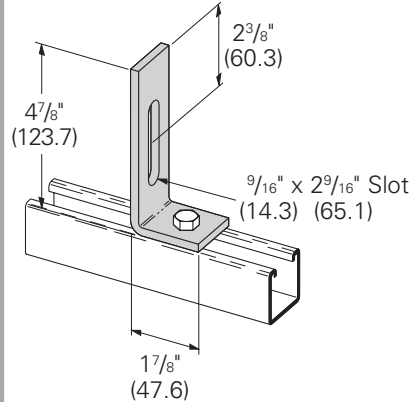
## B496 Two Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 85 Lbs. (38.5 kg)



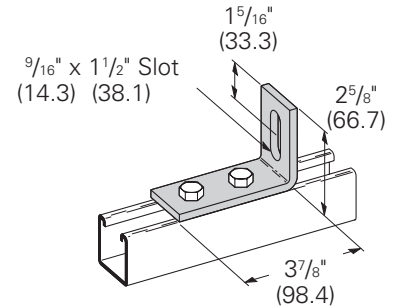
## B496-1 Two Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN, HDG
- Wt./C 58 Lbs. (26.3 kg)



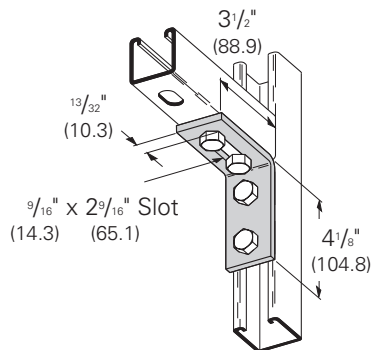
## B371-2 Three Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 61 Lbs. (27.6 kg)



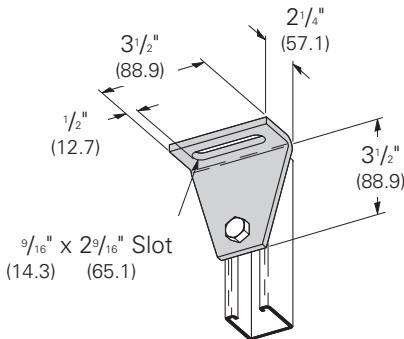
## B104SH Three Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 68 Lbs. (30.8 kg)



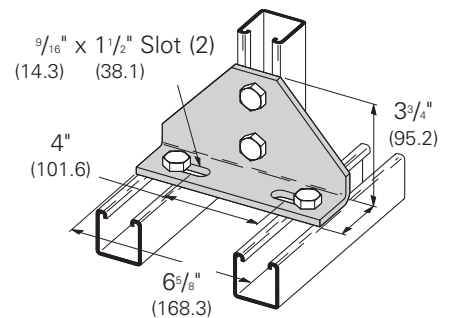
## B461 Two Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 87 Lbs. (39.4 kg)



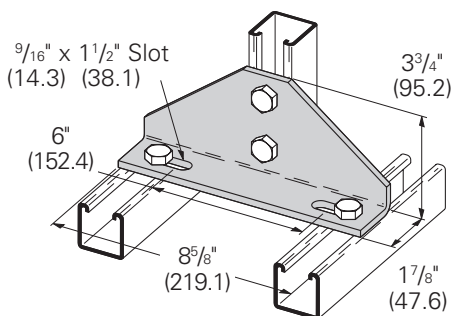
## B112 Four Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 180 Lbs. (81.6 kg)



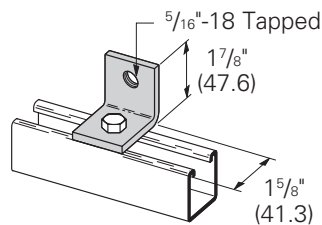
## B113 Four Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 256 Lbs. (116.1 kg)



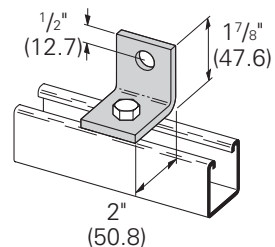
## B109S Two Hole Tapped Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 33 Lbs. (14.9 kg)



## B521 Two Hole Bus Duct Angle

- Standard finishes: ZN, GRN
- Wt./C 37 Lbs. (16.8 kg)



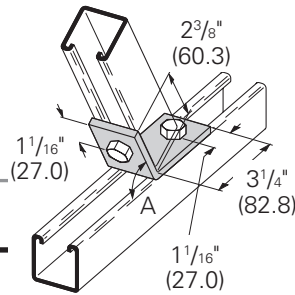
# Angular fittings

## B147-B152

### Two Hole Open Angle

- Standard finishes: ZN, GRN

| Part No. | A    | Wt./C<br>Lbs. kg |
|----------|------|------------------|
| B147     | 82½° | 63 (28.6)        |
| B148     | 75°  |                  |
| B149     | 67½° |                  |
| B150     | 60°  |                  |
| B151     | 52½° |                  |
| B152     | 37½° |                  |

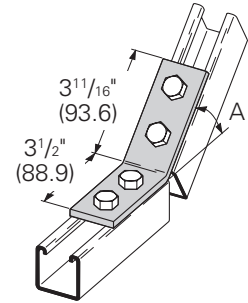


## B243-B253

### Four Hole Open Angle

- Standard finishes: ZN, GRN

| Part No. | A    | Wt./C<br>Lbs. kg |
|----------|------|------------------|
| B243     | 7½°  | 77 (34.9)        |
| B244     | 15°  |                  |
| B245     | 22½° |                  |
| B246     | 30°  |                  |
| B247     | 37½° |                  |
| B248     | 45°  |                  |
| B249     | 52½° |                  |
| B250     | 60°  |                  |
| B251     | 67½° |                  |
| B252     | 75°  |                  |
| B253     | 82½° |                  |

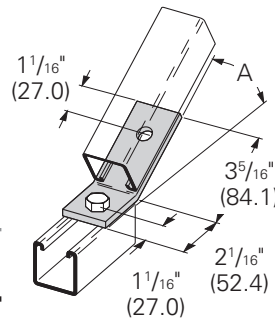


## B162-B165

### Two Hole Open Angle

- Standard finishes: ZN, GRN

| Part No. | A    | Wt./C<br>Lbs. kg |
|----------|------|------------------|
| B162     | 30°  | 59 (26.7)        |
| B163     | 22½° |                  |
| B164     | 15°  |                  |
| B165     | 7½°  |                  |

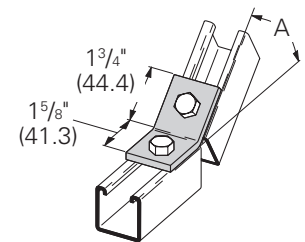


## B322-B332

### Two Hole Open Short Angle

- Standard finishes: ZN, GRN

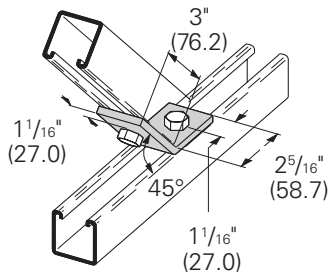
| Part No. | A    | Wt./C<br>Lbs. kg |
|----------|------|------------------|
| B322     | 7½°  | 35 (15.9)        |
| B323     | 15°  |                  |
| B324     | 22½° |                  |
| B325     | 30°  |                  |
| B326     | 37½° |                  |
| B327     | 45°  |                  |
| B328     | 52½° |                  |
| B329     | 60°  |                  |
| B330     | 67½° |                  |
| B331     | 75°  |                  |
| B332     | 82½° |                  |



## B154

### Two Hole Open Angle

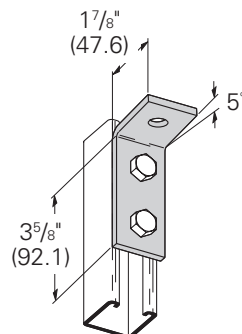
- Standard finishes: ZN, GRN, SS4
- Wt./C 58 Lbs. (26.3 kg)



## B522

### Three Hole 95° Open Angle Fitting

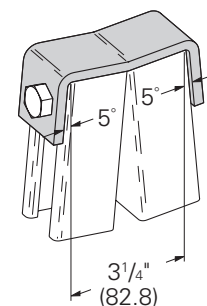
- Standard finishes: ZN, GRN
- Wt./C 54 Lbs. (24.5 kg)



## B488

### Two Hole Leg Connection

- Standard finishes: ZN, GRN
- Wt./C 100 Lbs. (45.3 kg)

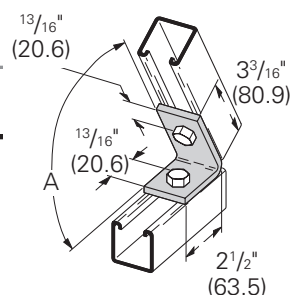


## B156 - B161

### Two Hole Closed Angle

- Standard finishes: ZN, GRN

| Part No. | A       | Wt./C<br>Lbs. kg |
|----------|---------|------------------|
| B156     | 82 1/2° | 56 (25.4)        |
| B157     | 75°     |                  |
| B158     | 67 1/2° |                  |
| B159     | 60°     |                  |
| B160     | 52 1/2° |                  |
| B161     | 37 1/2° |                  |

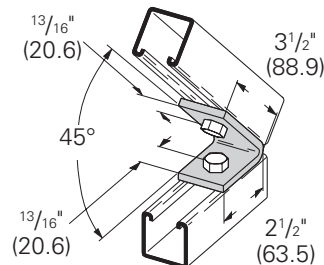


## B155

### Two Hole Closed Angle

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 63 Lbs. (28.6 kg)

PA ZN  
GRN

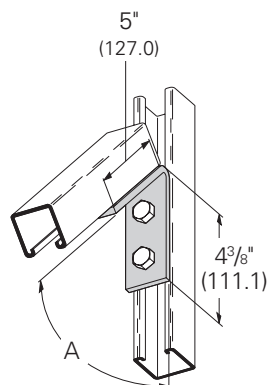


## B363 - B369

### Four Hole Closed Angle

- Standard finishes: ZN, GRN

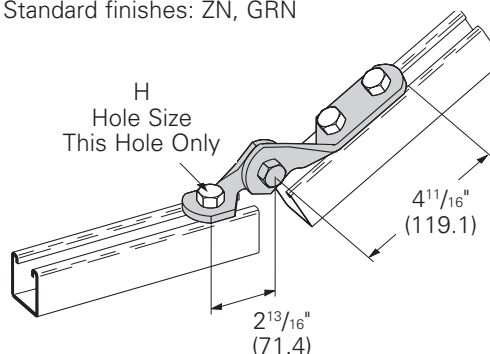
| Part No. | A       | Wt./C<br>Lbs. kg |
|----------|---------|------------------|
| B363     | 82 1/2° | 95 (43.1)        |
| B364     | 75°     |                  |
| B365     | 67 1/2° |                  |
| B366     | 60°     |                  |
| B367     | 52 1/2° |                  |
| B368     | 45°     |                  |
| B369     | 37 1/2° |                  |



## B335-2 SERIES

### Three Hole Adjustable Hinge

- Standard finishes: ZN, GRN

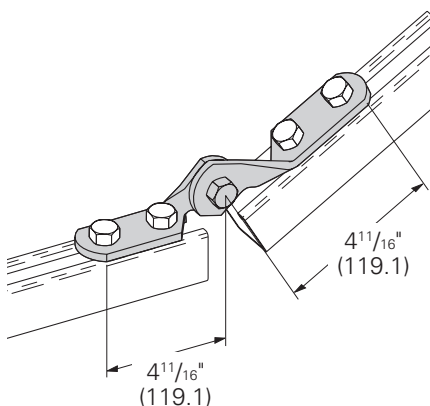


| Part No. & Size | Hole Size H<br>In. mm | Wt./C<br>Lbs. kg |
|-----------------|-----------------------|------------------|
| B335-2-3/8      | 7/16" (11.1)          | 96 (43.2)        |
| B335-2-1/2      | 9/16" (14.3)          | 94 (42.3)        |
| B335-2-5/8      | 11/16" (17.4)         | 92 (41.4)        |
| B335-2-3/4      | 13/16" (20.6)         | 90 (40.5)        |

## B335

### Four Hole Adjustable Hinge

- Standard finishes: ZN, GRN
- Wt./C 110 Lbs. (49.9 kg)

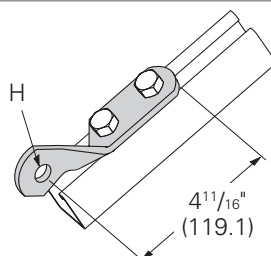


## B335V

### Three Hole Half Hinge

- Standard finishes: ZN, GRN

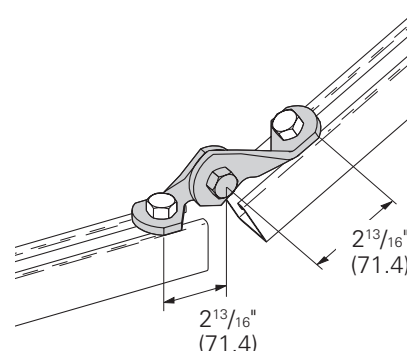
| Part No. & Size | Hole Size H<br>In. mm | Wt./C<br>Lbs. kg |
|-----------------|-----------------------|------------------|
| B335V-1/2       | 9/16" (14.3)          | 53 (24.1)        |
| B335V-5/8       | 11/16" (17.4)         | 54 (24.5)        |
| B335V-3/4       | 13/16" (20.6)         | 55 (24.9)        |



## B335-1

### Two Hole Adjustable Hinge

- Standard finishes: ZN, GRN
- Wt./C 78 Lbs. (35.4 kg)



PA Pre-assembled fitting

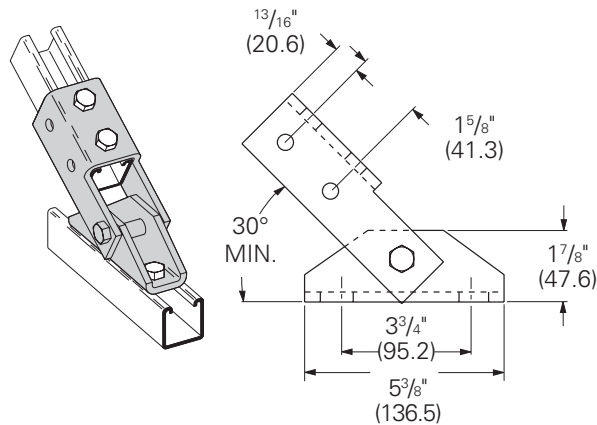
Reference page 106 for general fitting and standard finish specifications.

# Angular fittings

## B634

### Single Channel Adjustable Brace

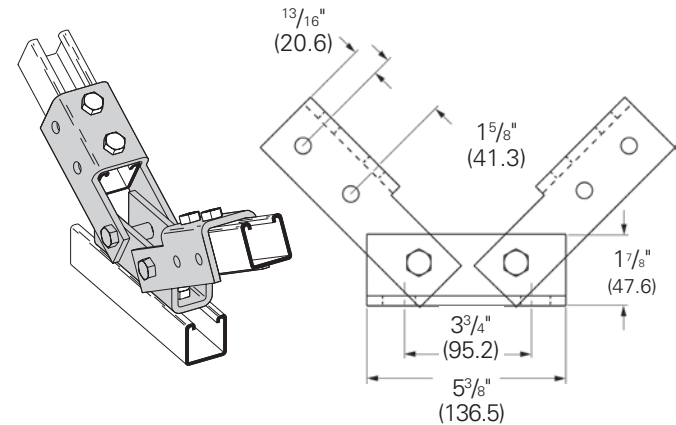
- Standard finishes: ZN, GRN
- Wt./C 306 Lbs. (138.8 kg)



## B635

### Double Channel Adjustable Brace

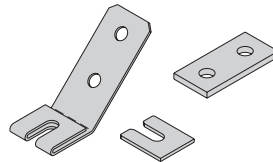
- Standard finishes: ZN, GRN
- Wt./C 518 Lbs. (234.9 kg)



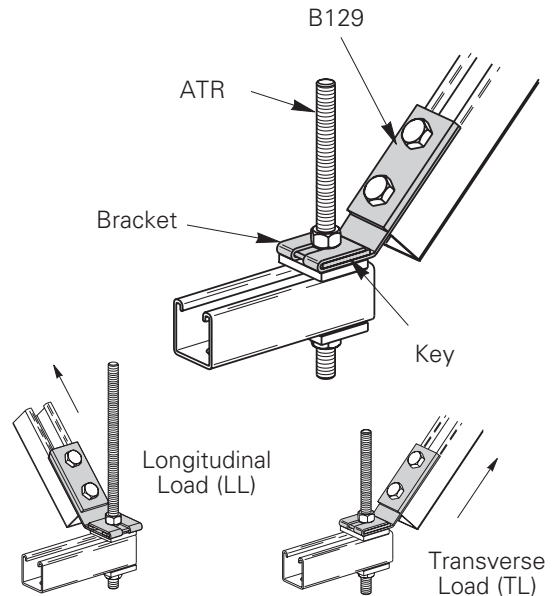
## B650 SERIES

### Seismic Retrofit Bracket

- Available for 3/8", 1/2", 5/8", and 3/4" threaded rods.
- Allows installer to easily brace existing trapeze supports.
- Includes: Bracket, B129 plate, & key. Hardware sold separately.
- Standard finish: ZN, GRN



| Part No.<br>& Size | For<br>Rod Size | TL   |        | LL   |        | Wt./C |        |
|--------------------|-----------------|------|--------|------|--------|-------|--------|
|                    |                 | Lbs. | kN     | Lbs. | kN     | Lbs.  | kg     |
| <b>B650-3/8</b>    | 3/8"            | 1100 | (4.89) | 1100 | (4.89) | 92    | (41.4) |
| <b>B650-1/2</b>    | 1/2"            | 1500 | (6.67) | 1500 | (6.67) | 97    | (43.6) |
| <b>B650-5/8</b>    | 5/8"            | 1500 | (6.67) | 1500 | (6.67) | 95    | (42.7) |
| <b>B650-3/4</b>    | 3/4"            | 1500 | (6.67) | 1500 | (6.67) | 107   | (48.5) |

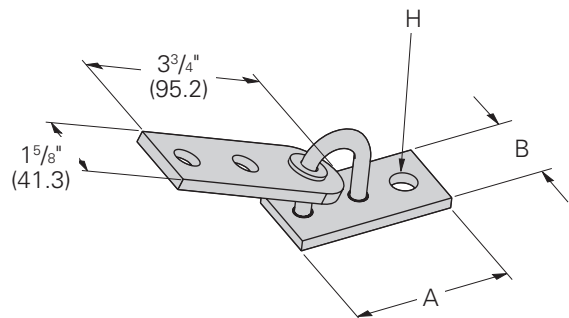


## B633

### Adjustable Seismic Hinge Fitting

- Use 1/2" Bolt & Channel Nut on two hole side of Connector Fitting (Torque to 50 ft.-lbs.)
- Allows for swivel in two planes.
- Standard finish: ZN

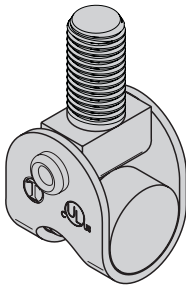
| Part No.<br>& Size | A       |        | B      |        | Hole Size H |        | Wt./C |        |
|--------------------|---------|--------|--------|--------|-------------|--------|-------|--------|
|                    | In.     | mm     | In.    | mm     | In.         | mm     | Lbs.  | kg     |
| <b>B633-1/2</b>    | 3 1/2"  | (82.5) | 1 5/8" | (41.3) | 9/16"       | (14.3) | 92    | (41.4) |
| <b>B633-5/8</b>    | 3 1/2"  | (82.5) | 1 5/8" | (41.3) | 1 1/16"     | (17.4) | 97    | (43.6) |
| <b>B633-3/4</b>    | 3 1/2"  | (82.5) | 1 5/8" | (41.3) | 1 3/16"     | (20.6) | 95    | (42.7) |
| <b>B633-7/8</b>    | 3 3/16" | (90.5) | 2"     | (50.8) | 1 5/16"     | (23.8) | 107   | (48.5) |
| <b>B633-1</b>      | 3 3/16" | (90.5) | 2"     | (50.8) | 1 1/16"     | (27.0) | 120   | (54.0) |
| <b>B633-1 1/8</b>  | 3 3/16" | (90.5) | 2"     | (50.8) | 1 3/16"     | (30.2) | 104   | (47.2) |
| <b>B633-1 1/4</b>  | 3 7/8"  | (98.4) | 2 1/4" | (57.1) | 1 5/16"     | (33.3) | 114   | (51.7) |





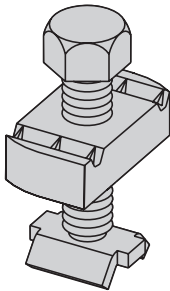
**Fig. 75  
Swivel Attachment**

See page 89 for  
product information



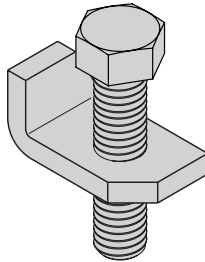
**SC228  
Hanger Rod Stiffener**

See page 91 for  
product information



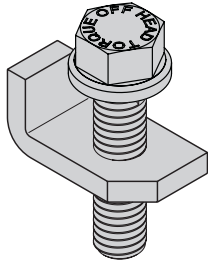
**Fig. 98  
Rod Stiffener**

See page 91 for  
product information



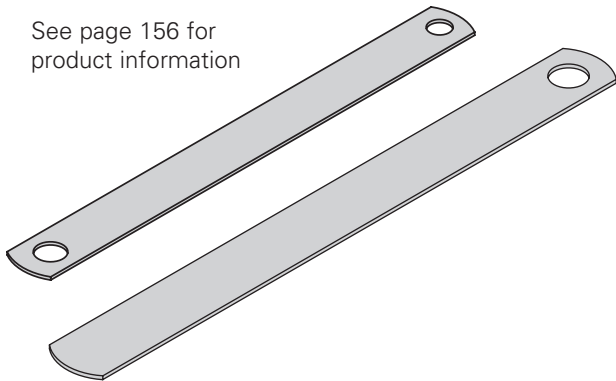
**Fig. 98B  
Rod Stiffener with  
Break-Off Bolt Head**

See page 91 for  
product information



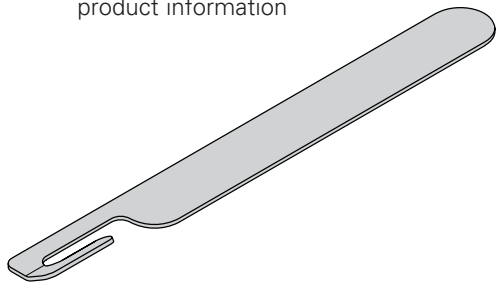
**Fig. 69  
Retaining Strap**

See page 156 for  
product information



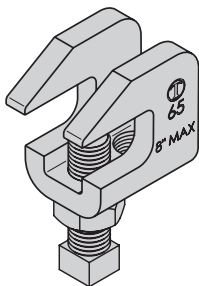
**Fig. 69R  
Retrofit Retaining Strap**

See page 156 for  
product information



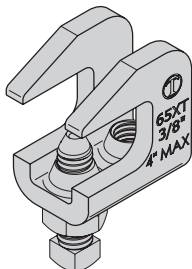
**Fig. 65  
Reversible Steel  
C-Type Beam Clamp - 3/4" (19.0mm) Throat Opening**

See page 157 for  
product information



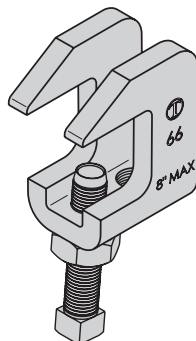
**Fig. 65XT  
Reversible C-Type  
Beam Clamp**

See page 157 for  
product information



**Fig. 66  
Reversible Steel C-Type  
Beam Clamp - 1 1/4" (31.7mm) Throat Opening**

See page 157 for product  
information



Reference page 106 for general fitting and standard finish specifications.

# Miscellaneous seismic fittings

## TOLCO Fig. 825 - bar joist sway brace attachment to steel

**Size Range:** Fits up to  $\frac{3}{8}$ " (9.5mm) thick structural steel member. Accommodates all Fig. 900 Series sway brace attachments.

**Material:** Steel

**Function:** To attach sway brace assemblies and/or hanger assemblies to structural steel members.

**Features:** This product's design incorporates a concentric attachment point which is critical to the performance of structural seismic connections. NFPA 13 indicates the importance of concentric loading of connections and fasteners. Permits secure non-friction connection without drilling or welding. Unique design reinforces point of connection to joist. Break off head set bolt design assures verification of proper installation torque (min. 31 lbs-ft (42.1N•m)).

**Approvals:** Underwriters Laboratories Listed in the USA and Canada (cULus). Approved by Factory Mutual Engineering (FM). Included in our Seismic Engineering Guidelines approved by the State of California Office of Statewide Health Planning and Development (OSHPD). For additional load, spacing and placement information relating to OSHPD projects, please refer to our Seismic Engineering Guidelines, OPM-0052-13.

**Installation:** Fig. 825 is the structural attachment component of a longitudinal or lateral sway brace assembly. It is intended to be combined with a TOLCO transitional attachment, "bracing pipe" and a TOLCO "braced pipe" attachment, to form a complete bracing assembly. NFPA 13, FM DS 2-8, and/or OSHPD guidelines should be followed.

**To Install:** Place the Fig. 825 on the steel beam, tighten the cone point set bolts until heads break off. Attach other TOLCO transitional attachment fitting, Fig. 909, 910, 980, 986, or 990. Transitional fitting attachment can pivot for adjustment to proper brace angle.

**Finish:** Plain or Electro-Galvanized.

**Weight:** Approx. Wt./100 - 247.5 lbs. (112.2kg)

**Order By:** Figure number and finish

US Patent #6,098,942,

Canada Patent #2,286,659

**Note:** Retaining strap not required

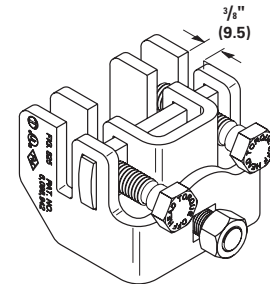
| Maximum Design Load |           |
|---------------------|-----------|
| 825W/909-1370 lbs   | (5.78 kN) |
| 825W/910-1500 lbs   | (7.11 kN) |
| 825W/980-1600 lbs   | (8.45 kN) |

UL Listed as Hanger Attachment for 6" (150mm) pipe at Maximum Spacing

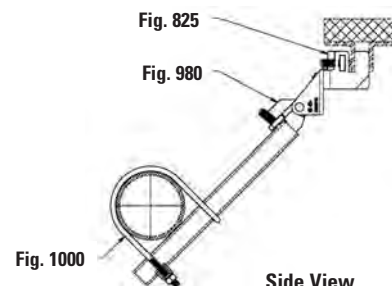
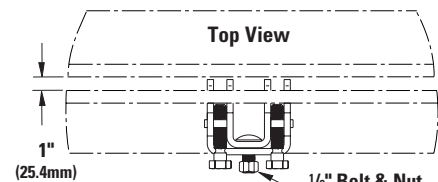
|                                         |                                       | Max. Horizontal Design Loads (FM) |                         |                         |                         |
|-----------------------------------------|---------------------------------------|-----------------------------------|-------------------------|-------------------------|-------------------------|
|                                         |                                       | 30° - 44°<br>lbf / (kN)           | 45° - 59°<br>lbf / (kN) | 60° - 74°<br>lbf / (kN) | 75° - 90°<br>lbf / (kN) |
| Maximum<br>$\frac{3}{8}$ " Thick Flange | Perpendicular to<br>Structural Member | 990<br>(4.40)                     | 1360<br>(6.05)          | 1670<br>(7.43)          | 1860<br>(8.27)          |
| Maximum<br>$\frac{3}{8}$ " Thick Flange | Parallel to<br>Structural Member      | 460<br>(2.04)                     | 630<br>(2.80)           | 770<br>(3.42)           | 860<br>(3.82)           |

FM Approved design loads are based on ASD design method.

Eaton's B-Line series seismic bracing components are designed to be compatible only with other B-Line series bracing components, resulting in a listed seismic bracing assembly. Eaton B-Line Division warranty for seismic bracing components will be the warranty provided in Eaton B-Line Division standard terms and conditions of sale made available by Eaton, except that, in addition to the other exclusions from Eaton B-Line Division warranty, Eaton makes no warranty relating to B-Line series seismic bracing components that are combined with products not provided by Eaton.



Set Bolts & Hardware Included



Side View

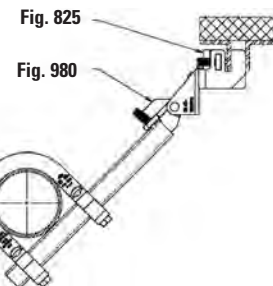
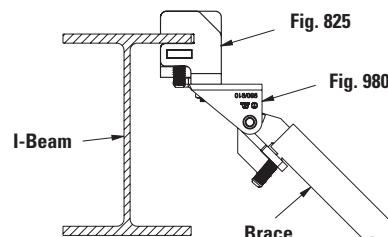


Fig. 1001



## TOLCO Fig. 825A - Bar Joist Sway Brace Attachment

**Size Range:** One size accommodates all Fig. 900 Series sway brace attachments. Maximum Horizontal Design Load 1600 lbs (7.11kN).

**Material:** Steel

**Function:** To attach sway bracing to steel open web structural members.

**Features:** This product's design incorporates a concentric attachment point which is critical to the performance of structural seismic connections. NFPA 13 indicates the importance of concentric loading of connections and fasteners. Permits secure non-friction connection without drilling or welding. Unique design reinforces point of connection to joist. Break off head bolt design assures verification of proper installation.

**Approvals:** Underwriters Laboratories Listed in the USA (UL) and Canada (cUL). For additional load, spacing and placement information relating to OSHPD projects, please refer to the TOLCO Seismic Restraint Systems Guidelines.

**Installation Instructions:** Fig. 825A is the structural attachment component of a longitudinal or lateral sway brace assembly. It is intended to be combined with a TOLCO transitional attachment, "bracing pipe" and a TOLCO "braced pipe" attachment to form a complete bracing assembly. NFPA 13 and/or OSHPD guidelines should be followed.

**To Install:** Place the Fig. 825A on the steel beam, tighten the cone point set screws until heads break off. Attach other TOLCO transitional attachment fitting, Fig. 909, 910, 980 or 986. Transitional fitting attachment can pivot for adjustment to proper brace angle.

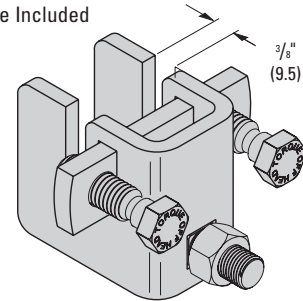
**Finish:** Plain or Electro-Galvanized

**Approx. Wt./100:** 154.5 Lbs. (70.1kg)

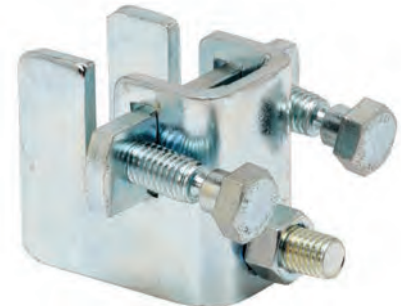
**Order By:** Figure number and finish  
Patent #6,098,942



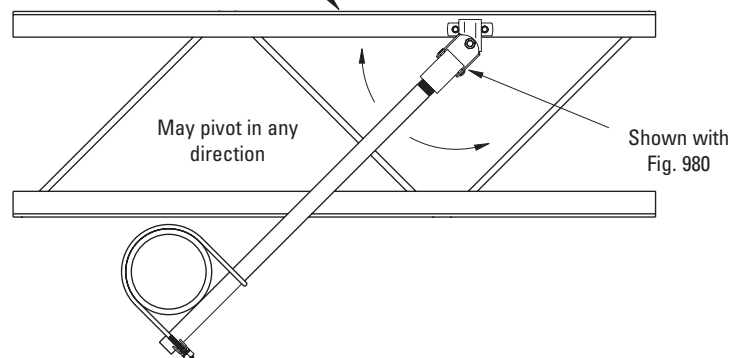
Set Screws &  
Hardware Included



**Maximum Design Load  
1600 lbs.**



Bar joist shown attached to  
various roof materials



Eaton's B-Line series seismic bracing components are designed to be compatible only with other B-Line series bracing components, resulting in a listed seismic bracing assembly. Eaton B-Line Division warranty for seismic bracing components will be the warranty provided in Eaton B-Line Division standard terms and conditions of sale made available by Eaton, except that, in addition to the other exclusions from Eaton B-Line Division warranty, Eaton makes no warranty relating to B-Line series seismic bracing components that are combined with products not provided by Eaton.

# Miscellaneous seismic fittings

## TOLCO Fig. 828 - universal sway brace attachment to steel

**Size Range:** One size accommodates all Fig. 900 Series sway brace attachments. Fits from  $\frac{3}{8}$ " (9.4mm) to  $\frac{7}{8}$ " (22.2mm) thick steel structure. For thicknesses less than  $\frac{3}{8}$ " (9.4mm) refer to Fig. 825 and Fig. 825A.

**Material:** Steel

**Function:** To attach sway bracing and/or hangers to various types of steel structural members.

**Features:** Permits secure non-friction connection without drilling or welding. Unique design allows offset placement on wide flange beam, C-channel, open web, welded steel trusses, etc. Secures brace to structure either across or along the beam. Break-off set bolts allow for visual verification of proper installation torque.

**Approvals:** Underwriters Laboratories Listed in the USA and Canada (cULus). Included in our Seismic Engineering Guidelines approved by the State of California Office of Statewide Health Planning and Development (OSHPD). For additional load, spacing and placement information relating to OSHPD projects, please refer to our Seismic Engineering Guidelines, OPM-0052-13. For FM Approval information refer to FM Approved page 53.

**Installation Instructions:** The Fig. 828 is the structural attachment component of a longitudinal or lateral sway brace assembly. It is intended to be combined with a TOLCO transitional attachment, "bracing pipe" and a TOLCO "braced pipe" attachment to form a complete bracing assembly. NFPA 13 guidelines should be followed.

**To Install:** Slide the Fig. 828 on the flange of the beam, truss, or girder. Be sure the attachment is fully engaged to the rear of the opening. Tighten the cone point set screws until the heads break off. Remove the flange nut from the carriage bolt. Install a TOLCO swivel fitting (Fig. 909, 910, 980, \*986). Use flange nut to secure the swivel fitting.

\*Not UL listed when used in combination with Fig. 986

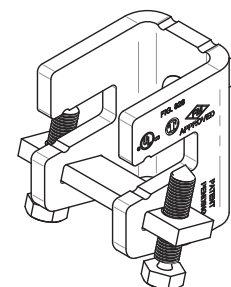
**Finish:** Plain or Electro-Galvanized

**Approx. Weight/100:** 341 Lbs. (154.7 kg)

**Order By:** Figure number and finish

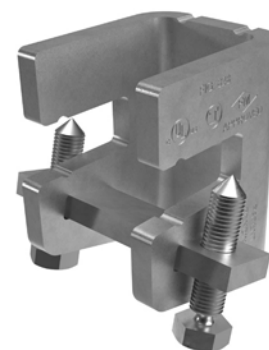
Patent Pending

**Note:** Retaining strap not required.



Set Screws and 1/2" Attachment Bolt and Nut Included

| Flange thickness | Maximum UL Rated load |
|------------------|-----------------------|
| .375" - .499"    | 1090 lbs. (4.84kN)    |
| .500" - .875"    | 1370 lbs. (6.09kN)    |



### FM Approved Allowable Horizontal Load With Brace Perpendicular To Beam

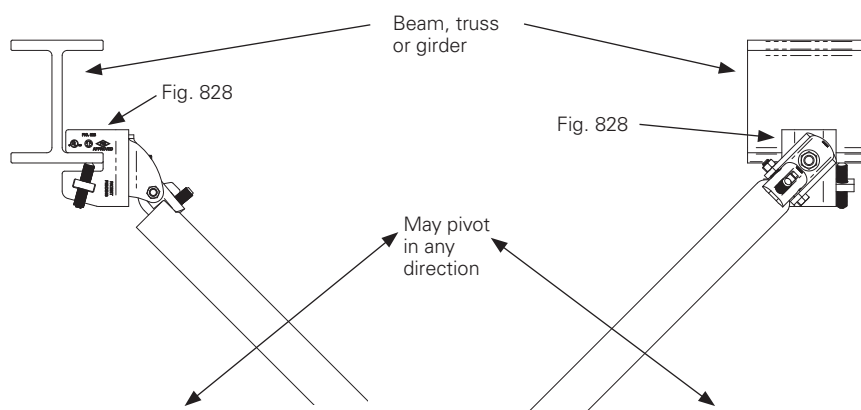
| Brace Angle (degrees from vertical) |                   |                    |                    |
|-------------------------------------|-------------------|--------------------|--------------------|
| 30°-44°                             | 45°-59°           | 60°-74°            | 75°-90°            |
| 980<br>(4.350kN)                    | 2220<br>(9.780kN) | 3340<br>(14.850kN) | 4040<br>(17.970kN) |

### FM Approved Allowable Horizontal Load With Brace Parallel To Beam

| Brace Angle (degrees from vertical) |                   |                   |                   |
|-------------------------------------|-------------------|-------------------|-------------------|
| 30°-44°                             | 45°-59°           | 60°-74°           | 75°-90°           |
| 820<br>(3.640kN)                    | 1270<br>(5.640kN) | 1490<br>(6.620kN) | 1650<br>(7.330kN) |

FM Approved design loads are based on ASD design method.

Eaton's B-Line series seismic bracing components are designed to be compatible only with other B-Line series bracing components, resulting in a listed seismic bracing assembly. Eaton B-Line Division warranty for seismic bracing components will be the warranty provided in Eaton B-Line Division standard terms and conditions of sale made available by Eaton, except that, in addition to the other exclusions from Eaton B-Line Division warranty, Eaton makes no warranty relating to B-Line series seismic bracing components that are combined with products not provided by Eaton.



## TOLCO Fig. 980 - Universal swivel sway brace attachment - 3/8" to 3/4" mounting hardware

## TOLCO Fig. 980H - Universal swivel sway brace attachment - 7/8" to 1 1/4" mounting hardware

**Size Range:** One size fits bracing pipe 1" (25mm) thru 2" (50mm), B-Line series 12 gauge (2.6mm) channel.

**Material:** Carbon steel

**Function:** Multi-functional attachment to structure or braced pipe fitting.

**Features:** This product's design incorporates a concentric attachment opening which is critical to the performance of structural seismic connections and in accordance with NFPA 13, 2019 Section 18.5.11.5. The Fig. 980 mounts to any surface angle and the break off bolt head assures verification of proper installation.

**Installation:** Fig.980 is the structural or transitional attachment component of a longitudinal or lateral sway brace assembly. It is intended to be combined with the "bracing pipe" and TOLCO™ "braced pipe" attachment, Fig. 1001, 2002, 3000, 4L or approved attachment to pipe to form a complete bracing assembly. NFPA 13 guidelines should be followed.

**To Install:** Place the Fig. 980 onto the "bracing pipe". Tighten the set bolt until the head breaks off. Attachment can pivot for adjustment to proper brace angle.

**Approvals:** —Underwriters Laboratories Listed in the USA (UL) and Canada (cUL). UL Listed for the following brace member type pipes: Sch. 40, KSD 3562. Ask the factory for additional information as it may vary by product size. Included in our Seismic Engineering Guidelines approved by the State of California Office of Statewide Health Planning and Development (OSHDP). For additional load, spacing and placement information relating to OSHPD projects, please refer to our Seismic Engineering Guidelines, OPM-0052-13. For FM Approval information refer to FM Approved page 61.

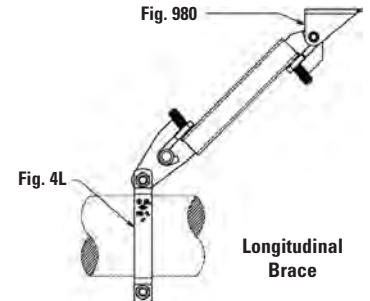
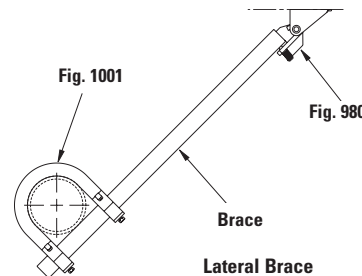
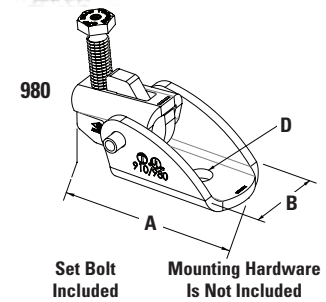
**Note:** Fig. 980 Swivel Attachment and Fig. 1001, 2002, 3000, 4L, or approved attachment to pipe make up a sway brace system of UL Listed attachments and bracing materials which satisfies the requirements of Underwriters Laboratories and the National Fire Protection Association (NFPA)

**Finish:** Plain, Electro-Galvanized or Stainless Steel.

Contact customer service for alternative finishes.

**Order By:** Figure number and finish.

Pat. #6,273,372, Pat. #6,517,030, Pat. #6,953,174,  
Pat. #6,708,930, Pat. #7,191,987, Pat. #7,441,730,  
Pat. #7,669,806



| Catalog #  | A   |      | B   |      | D**           | Max. Design Load (cULus) lbs./ (kN)       | Max. Design Load*** (FM)                  |                    |                    |                    | Approx.Wt./100 lbs. (kg) |         |
|------------|-----|------|-----|------|---------------|-------------------------------------------|-------------------------------------------|--------------------|--------------------|--------------------|--------------------------|---------|
|            | in. | (mm) | in. | (mm) | in.           | (mm)                                      | 30°-44° lbs./ (kN)                        | 45°-59° lbs./ (kN) | 60°-74° lbs./ (kN) | 75°-90° lbs./ (kN) |                          |         |
| 980-3/8    |     |      |     |      | 7/16 (11.1)   | 1600 (7.12)                               |                                           |                    |                    |                    | 149                      | (67.6)  |
| 980-1/2    |     |      |     |      | 9/16 (14.3)   | 2100 (9.34)                               |                                           |                    |                    |                    | 148                      | (67.1)  |
| 980-5/8    |     |      |     |      | 11/16 (17.5)  | 2100 (9.34)                               |                                           |                    |                    |                    | 147                      | (66.7)  |
| 980-3/4    |     |      |     |      | 13/16 (20.6)  | 2100 (9.34)                               |                                           |                    |                    |                    | 146                      | (66.2)  |
| 980H-7/8   |     |      |     |      | 15/16 (23.8)  | Fig. 980H is not UL Listed or FM Approved |                                           |                    |                    |                    | 402                      | (182.3) |
| 980H-1     |     |      |     |      | 1 1/16 (27.0) |                                           | Fig. 980H is not UL Listed or FM Approved |                    |                    |                    | 400                      | (181.4) |
| 980H-1 1/8 |     |      |     |      | 1 3/16 (30.2) |                                           |                                           |                    |                    |                    | 397                      | (180.1) |
| 980H-1 1/4 |     |      |     |      | 1 5/16 (33.3) |                                           |                                           |                    |                    |                    | 390                      | (176.9) |

\* Sizes available in stainless steel (980S-3/8, 980S-1/2, 980S-5/8, and 980S-3/4) and have the same UL rating as what is listed.

\*\* Mounting attachment hole size.

\*\*\* Installed with 1" or 1 1/4" schedule 40 brace pipe.

Eaton's B-Line series seismic bracing components are designed to be compatible only with other B-Line series bracing components, resulting in a listed seismic bracing assembly. Eaton B-Line Division warranty for seismic bracing components will be the warranty provided in Eaton B-Line Division standard terms and conditions of sale made available by Eaton, except that, in addition to the other exclusions from Eaton B-Line Division warranty, Eaton makes no warranty relating to B-Line series seismic bracing components that are combined with products not provided by Eaton.



# Miscellaneous seismic fittings

## TOLCO Fig. 981 - Fast attach – universal swivel sway brace attachment

**Size Range:** Fits bracing pipe 1" (25mm) thru 2" (50mm), 12 gauge (2.6mm) channel and all structural steel up to 1/4" (6.3mm) thick.

Fig. 981-S fits rod sizes 3/8" thru 5/8".

Fig. 981-L fits rod sizes 3/4" thru 7/8".

**Material:** Steel

**Function:** Multi-functional attachment to hanger rod, trapeze rod, structure or braced pipe fitting.

**Features:** Fits multiple sizes of bracing pipe, strut or structural steel. Swivel allows adjustment to various surface angles. Breakaway bolt heads assure verification of proper installation torque. Unique "fast attach" yoke design fits multiple rod sizes; 3/8" thru 5/8" and 3/4" thru 7/8". "Stackable" design allows installation of both lateral and longitudinal braces to be easily installed on a single hanger rod, with no disassembly.

**Installation:** Fig. 981 is the "braced pipe" attachment component of a lateral or longitudinal brace assembly. It is intended to be combined with the pipe hanger, all-thread rod, "bracing pipe" and TOLCO transitional and structural attachment component(s) to form a complete bracing assembly. NFPA 13 and or OSHPD guidelines should be followed.

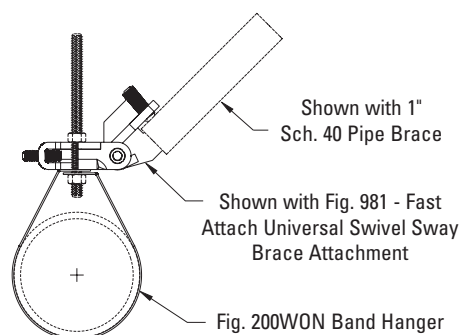
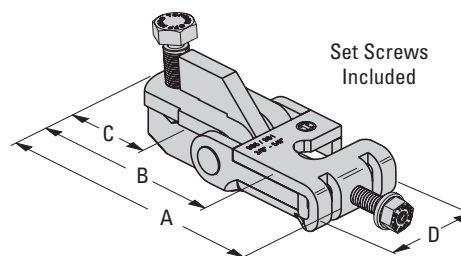
**To Install:** Spin nut on top of hanger counterclockwise to loosen the nut and raise it above the top of the hanger. Attach Fig. 981 by slipping the open side of the 981 yoke onto the all thread rod above the top of the hanger. Tighten 3/8" cone point set screw on yoke until head breaks-off to ensure proper installation torque. Spin the hex nut clockwise and tighten securely. Insert brace pipe into the jaw of the 981 and tighten the cone point set screw until the head breaks off ensuring proper installation torque. Pivot brace pipe to proper angle and attach to structure using a TOLCO swivel structural attachment.

**Finish:** Electro-Galvanized

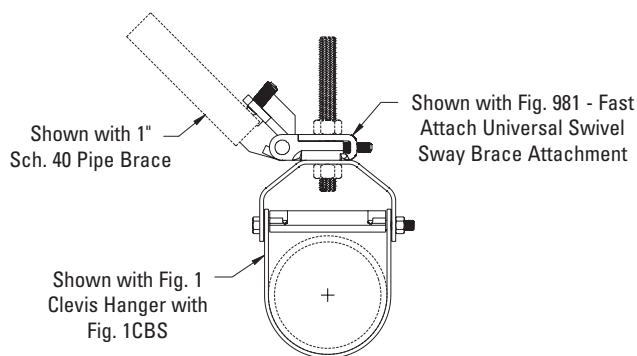
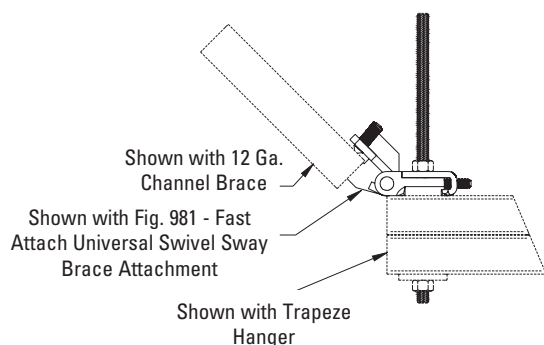
**Order By:** Figure number, rod size

### US Patent Numbers

Pat. #6,273,372, Pat. #7,097,141, Pat. #7,654,043, Pat. #7,654,043 B2



| Part Number | Rod Size Range | A      |         | B      |         | C      |        | D      |        | Max. Horizontal Design Load<br>lbs. (kN) | Approx. Wt./100<br>lbs. (kg) |
|-------------|----------------|--------|---------|--------|---------|--------|--------|--------|--------|------------------------------------------|------------------------------|
|             |                | in.    | (mm)    | in.    | (mm)    | in.    | (mm)   | in.    | (mm)   |                                          |                              |
| 981-S       | 3/8" thru 5/8" | 5 1/8" | (130.2) | 4 1/8" | (104.8) | 1 1/4" | (31.7) | 2 1/4" | (57.1) | 2015 (8.96)                              | 88 (39.9)                    |
| 981-L       | 3/4" & 7/8"    | 5 1/8" | (130.2) | 4 1/8" | (104.8) | 1 1/4" | (31.7) | 2 1/4" | (57.1) | 2015 (8.96)                              | 82 (37.2)                    |



Reference page 106 for general fitting and standard finish specifications.



## TOLCO Fig. 985 - mechanical fast clamp

**Size Range:** Fig. 985-S fits rod sizes  $\frac{3}{8}$ " thru  $\frac{5}{8}$ "  
Fig. 985-L fits rod sizes  $\frac{3}{4}$ " thru  $\frac{7}{8}$ " rod sizes

**Material:** Steel

**Function:** Used for attachment of seismic bracing to pipe hanger or trapeze

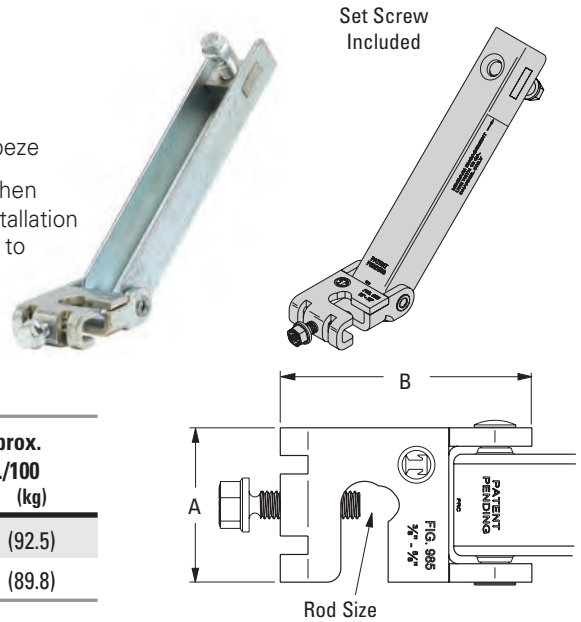
**Features:** Allows up to 12" (304.8mm) of adjustability in brace length, when used with Fig. 986. Break-off set screw heads visually verify required installation torque. Unique "Fast Attach" yoke design allows Fig. 985 to be installed to hanger rods  $\frac{3}{8}$ " thru  $\frac{5}{8}$ " or  $\frac{3}{4}$ " thru  $\frac{7}{8}$ "

**Finish:** Electro-galvanized

**Order By:** Figure number, rod size & finish

Patent Pending

| Part Number | Rod Size                             | A<br>in. (mm) | B<br>in. (mm) | Max. Horizontal<br>Design Load<br>lbs. (kN) | Approx.<br>Wt./100<br>lbs. (kg) |
|-------------|--------------------------------------|---------------|---------------|---------------------------------------------|---------------------------------|
| 985-S       | $\frac{3}{8}$ " thru $\frac{5}{8}$ " | 2" (50.8)     | 1½" (38.1)    | 2015 (8.96)                                 | 204 (92.5)                      |
| 985-L       | $\frac{3}{4}$ " & $\frac{7}{8}$ "    | 2" (50.8)     | 1⅝" (41.3)    | 2015 (8.96)                                 | 198 (89.8)                      |



## TOLCO Fig. 986 - Mechanical Fast Clamp

**Size Range:** Available with holes for  $\frac{1}{2}$ "-13 thru  $\frac{3}{4}$ "-10 fastener attachment.

**Material:** Steel

**Function:** Used for attachment of seismic bracing to structure or hanger.

**Features:** Allows up to 12" (304.8mm) of adjustability in brace length, when used with Fig. 985. Break-off set screw heads visually verify required installation torque. Swivel allows adjustment to various surface angles.

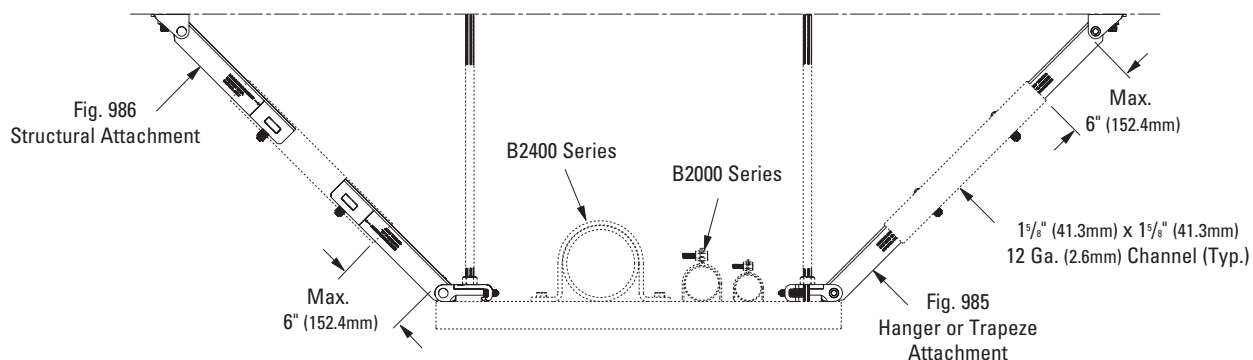
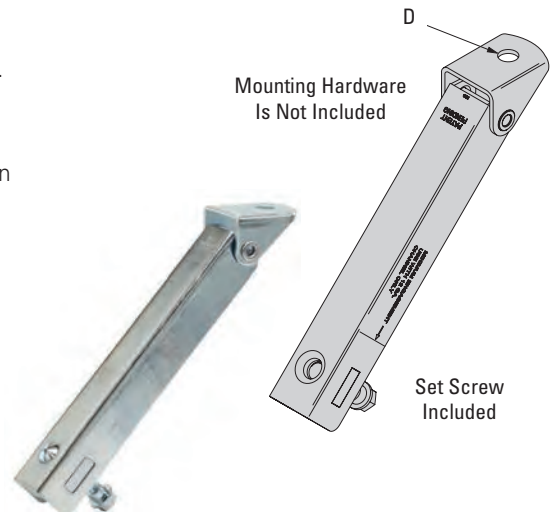
**Finish:** Electro-galvanized

**Order By:** Figure number, rod size & finish

Patent Pending

| Part Number | Rod Size | Hole Dia.<br>D<br>in. (mm) | Max. Horizontal<br>Design Load*<br>lbs. (kN) | Approx.<br>Wt./100<br>lbs. (kg) |
|-------------|----------|----------------------------|----------------------------------------------|---------------------------------|
| 986-½       | ½"       | 9/16" (14.3)               | 2015 (8.96)                                  | 204 (92.5)                      |
| 986-5/8     | 5/8"     | 11/16" (17.5)              | 2015 (8.96)                                  | 203 (92.1)                      |
| 986-¾       | ¾"       | 13/16" (20.6)              | 2015 (8.96)                                  | 202 (91.6)                      |

\* When used with 1⅝" (41.3mm) x 1⅝" (41.3mm) 12 Ga. (2.6mm) channel



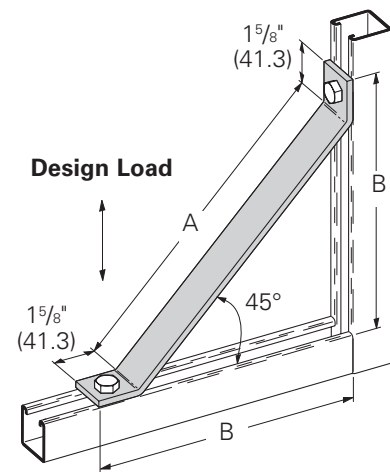
Reference page 106 for general fitting and standard finish specifications.

# Braces

## B261 - Two Hole 45° Knee Brace

- Standard finishes: ZN, GRN
- Design load determined by testing using a B335 hinged corner connection.
- Load ratings are for brace members only. Do not exceed allowable beam or column loads for strut channels.
- Safety Factor of 3

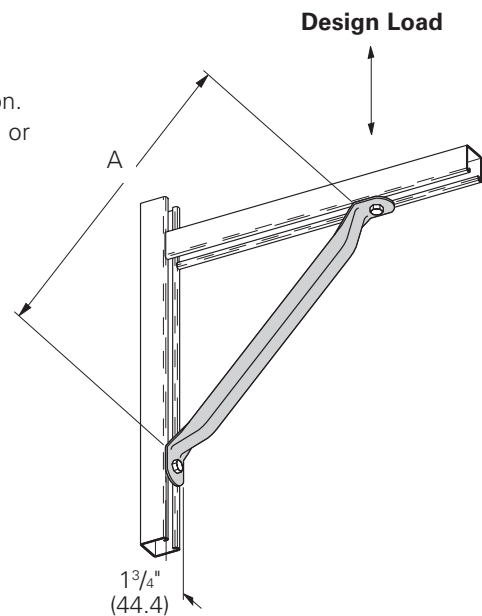
| Part No. | A                                |         | B                                 |         | Design Load |        | Wt./C |         |
|----------|----------------------------------|---------|-----------------------------------|---------|-------------|--------|-------|---------|
|          | In.                              | mm      | In.                               | mm      | Lbs.        | kN     | Lbs.  | kg      |
| B261-8   | 8"                               | (203.2) | 7 <sup>3</sup> / <sub>8</sub> "   | (187.3) | 1500        | (6.67) | 119   | (54.0)  |
| B261-12  | 12"                              | (304.8) | 10 <sup>1</sup> / <sub>8</sub> "  | (257.2) | 1020        | (4.54) | 165   | (74.8)  |
| B261-16  | 16 <sup>5</sup> / <sub>8</sub> " | (422.3) | 13 <sup>3</sup> / <sub>8</sub> "  | (339.7) | 530         | (2.36) | 218   | (98.9)  |
| B261-18  | 18"                              | (457.2) | 14 <sup>7</sup> / <sub>16</sub> " | (366.7) | 450         | (2.00) | 234   | (106.1) |
| B261-24  | 24"                              | (609.6) | 18 <sup>1</sup> / <sub>16</sub> " | (474.7) | 250         | (1.11) | 303   | (137.4) |
| B261-36  | 36"                              | (914.4) | 27 <sup>3</sup> / <sub>16</sub> " | (690.6) | 110         | (.49)  | 441   | (200.0) |



## B631 - Two Hole 45° Tubing Knee Brace

- 1" (25.4) Square steel tubing
- Material: ASTM A513
- Standard finishes: ZN, GRN
- Design load determined by testing using a B335 hinged corner connection.
- Load ratings are for brace members only. Do not exceed allowable beam or column loads for strut channels.
- Safety Factor of 3

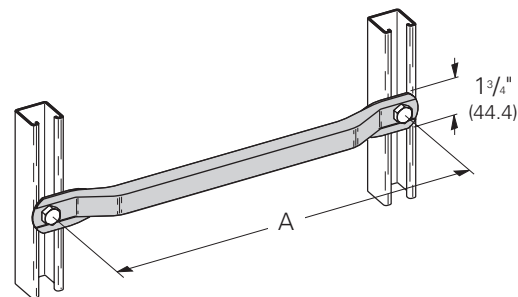
| Part No. | A   |          | Design Load |        | Wt./C |         |
|----------|-----|----------|-------------|--------|-------|---------|
|          | In. | mm       | Lbs.        | kN     | Lbs.  | kg      |
| B631-18  | 18" | (457.2)  | 1500        | (6.67) | 145   | (65.8)  |
| B631-24  | 24" | (609.6)  | 1500        | (6.67) | 186   | (84.4)  |
| B631-30  | 30" | (762.0)  | 1500        | (6.67) | 225   | (102.0) |
| B631-36  | 36" | (914.4)  | 1500        | (6.67) | 266   | (120.6) |
| B631-42  | 42" | (1066.8) | 1230        | (5.47) | 307   | (139.2) |
| B631-48  | 48" | (1219.2) | 940         | (4.18) | 348   | (157.8) |
| B631-54  | 54" | (1371.6) | 740         | (3.29) | 389   | (176.4) |
| B631-60  | 60" | (1524.0) | 600         | (2.67) | 430   | (195.0) |
| B631-72  | 72" | (1828.8) | 420         | (1.87) | 508   | (230.4) |
| B631-84  | 84" | (2133.6) | 310         | (1.38) | 589   | (267.2) |
| B631-96  | 96" | (2438.4) | 240         | (1.07) | 669   | (303.5) |



## B632 - Two Hole Straight Tubing Brace

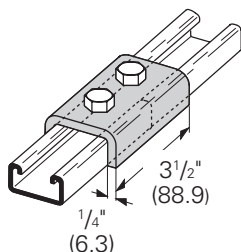
- 1" (25.4) Square steel tubing
- Material: ASTM A513
- Standard finishes: ZN, GRN

| Part No. | A   |          | Wt./C |         |
|----------|-----|----------|-------|---------|
|          | In. | mm       | Lbs.  | kg      |
| B632-18  | 18" | (457.2)  | 133   | (60.3)  |
| B632-24  | 24" | (609.6)  | 174   | (78.9)  |
| B632-30  | 30" | (762.0)  | 215   | (97.5)  |
| B632-36  | 36" | (914.4)  | 256   | (116.1) |
| B632-42  | 42" | (1066.8) | 295   | (133.8) |
| B632-48  | 48" | (1219.2) | 335   | (151.9) |
| B632-54  | 54" | (1371.6) | 380   | (172.3) |
| B632-60  | 60" | (1524.0) | 420   | (190.5) |
| B632-72  | 72" | (1828.8) | 500   | (226.8) |
| B632-84  | 84" | (2133.6) | 585   | (265.3) |
| B632-96  | 96" | (2438.4) | 670   | (303.9) |



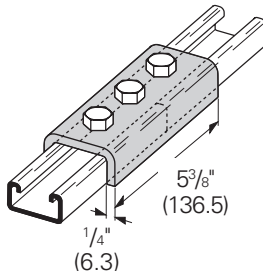
## B169 Two Hole Splice Clevis For B52

- Standard finishes: ZN, GRN
- Wt./C 84 Lbs. (38.1 kg)



## B168 Three Hole Splice Clevis For B52

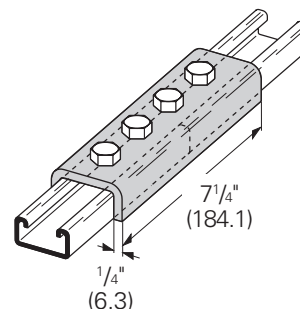
- Standard finishes: ZN, GRN
- Wt./C 126 Lbs. (57.1 kg)



## B167 Four Hole Splice Clevis For B52

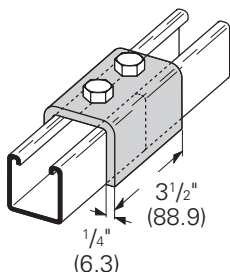
- Standard finishes: ZN, GRN
- Wt./C 178 Lbs. (80.7 kg)

PA GRN



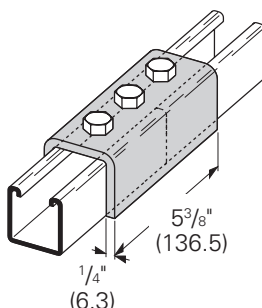
## B170 Two Hole Splice Clevis For B22 or B52A

- Standard finishes: ZN, GRN
- Wt./C 123 Lbs. (55.8 kg)



## B171 Three Hole Splice Clevis For B22 or B52A

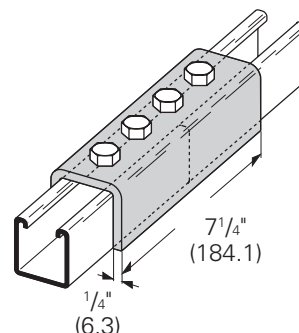
- Standard finishes: ZN, GRN
- Wt./C 195 Lbs. (88.4 kg)



## B172 Four Hole Splice Clevis For B22 or B52A

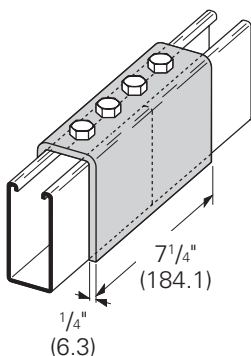
- Standard finishes: ZN, GRN
- Wt./C 266 Lbs. (120.6 kg)

PA ZN  
GRN



## B172-12 Four Hole Splice Clevis For B12

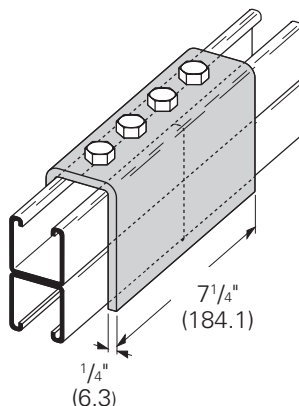
- Standard finishes: ZN, GRN
- Wt./C 326 Lbs. (147.8 kg)



## B172-22A Four Hole Splice Clevis For B11 or B22A

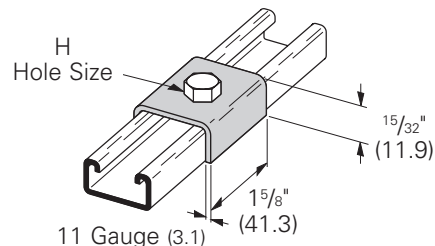
- Standard finishes: ZN, GRN
- Wt./C 406 Lbs. (184.1 kg)

PA GRN



## B450 U-Washer

- Material: ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN



| Part No.<br>& Size | Hole Size H<br>Lbs. kg | Wt./C<br>Lbs. kg |
|--------------------|------------------------|------------------|
| B450-1/4           | 5/16" (7.9)            | 14 (6.3)         |
| B450-3/8           | 7/16" (11.1)           | 14 (6.3)         |
| B450-1/2           | 9/16" (14.3)           | 13 (5.8)         |
| B450-5/8           | 11/16" (17.4)          | 13 (5.8)         |
| B450-3/4           | 13/16" (20.6)          | 13 (5.8)         |

PA Pre-assembled fitting.

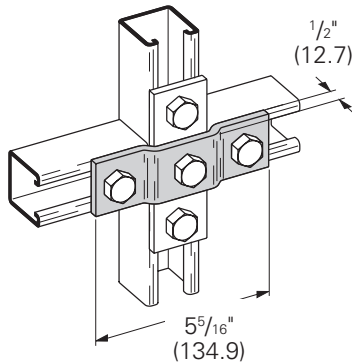
Reference page 106 for general fitting and standard finish specifications.

# 'U' Fittings

## B527

### Three hole offset plate connection

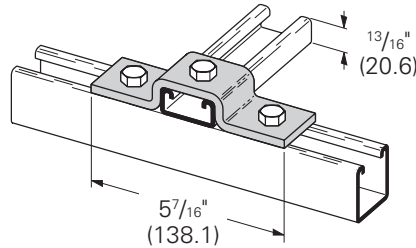
- Standard finishes: ZN, GRN
- Wt./C 54 Lbs. (24.5 kg)



## B116-52

### Three hole u-support

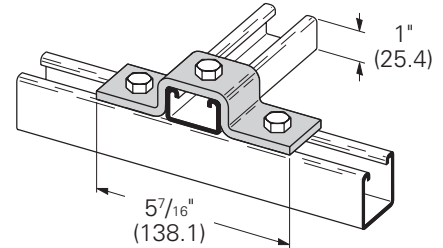
- Standard finishes: ZN, GRN
- Wt./C 70 Lbs. (31.7 kg)



## B116-42

### Three hole U-support

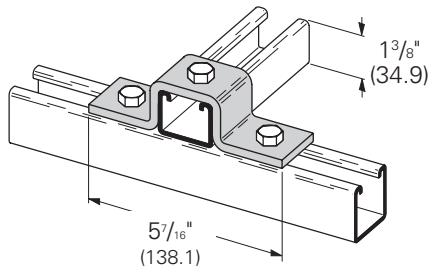
- Standard finishes: ZN, GRN
- Wt./C 75 Lbs. (34.0 kg)



## B116-32

### Three Hole U-Support

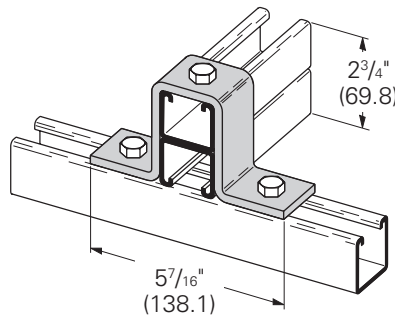
- Standard finishes: ZN, GRN
- Wt./C 84 Lbs. (38.1 kg)



## B116-32A

### Three Hole U-Support

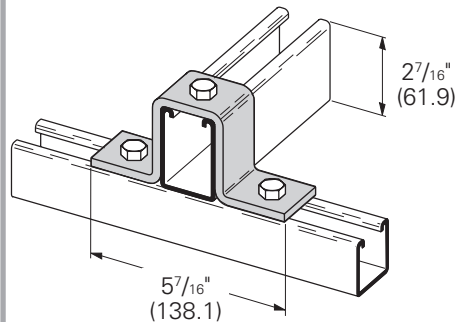
- Standard finishes: ZN, GRN
- Wt./C 116 Lbs. (52.6 kg)



## B116-12

### Three Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 108 Lbs. (49.0 kg)

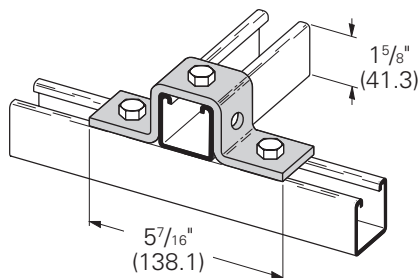


## B107

### Five Hole U-Support

- Standard finishes: ZN, GRN, HDG
- Wt./C 85 Lbs. (38.5 kg)

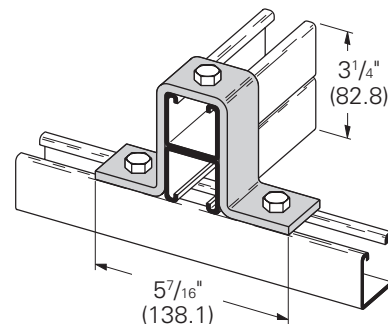
PA ZN  
GRN



## B107-22A

### Three Hole U-Support

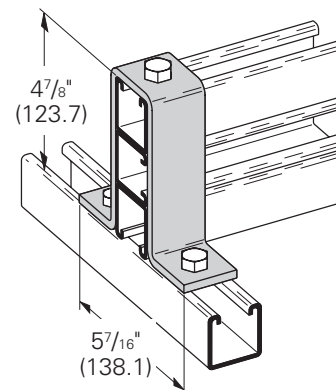
- Standard finishes: ZN, GRN
- Wt./C 126 Lbs. (57.1 kg)



## B588

### Three Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 157 Lbs. (71.2 kg)

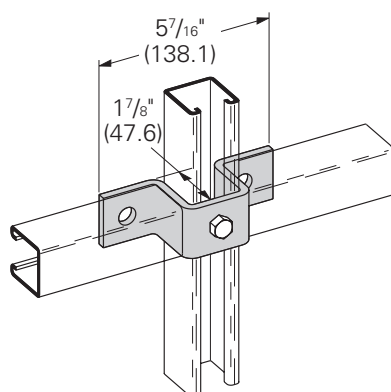


PA Pre-assembled fitting.

Reference page 106 for general fitting and standard finish specifications.

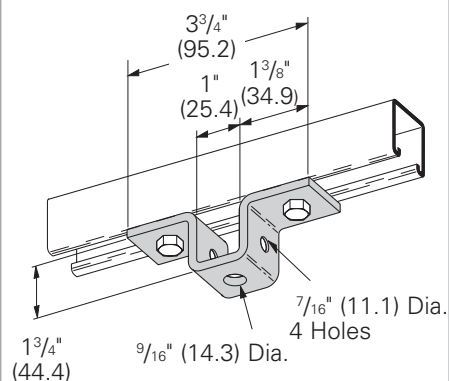
## B412 Three Hole Offset U-Support

- Standard finishes: ZN, GRN
- Wt./C 89 Lbs. (40.3 kg)



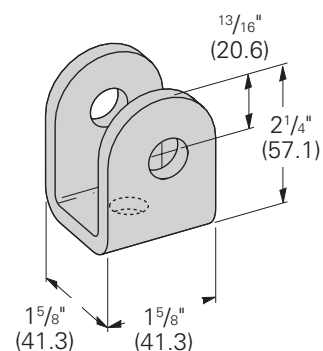
## B107S Five Hole U-Support

- Material: 7 Gauge (4.5)  
ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN, GRN
- Wt./C 51 Lbs. (23.1 kg)



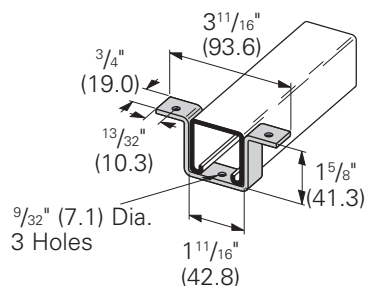
## B596 Three Hole Swivel Clevis

- Material: 7 Gauge (4.5)
- Standard finishes: ZN, GRN
- Wt./C 53 Lbs. (24.0 kg)



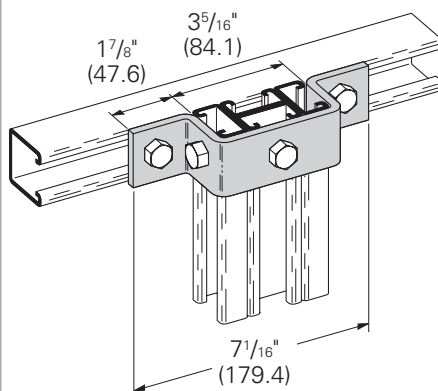
## B578 Three Hole Light-Weight U-Support

- Material: 10 Gauge (3.4)  
ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN
- Wt./C 18 Lbs. (8.1 kg)



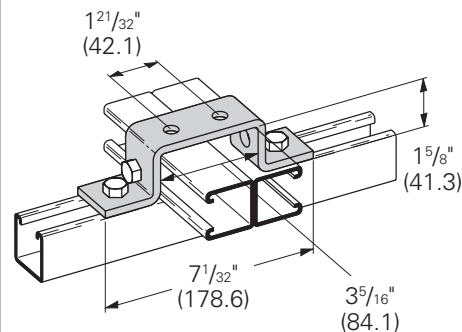
## B594 Five Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 106 Lbs. (48.1 kg)



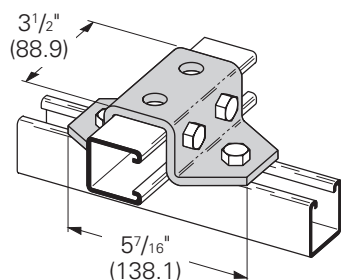
## B266 Six Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 105 Lbs. (47.6 kg)



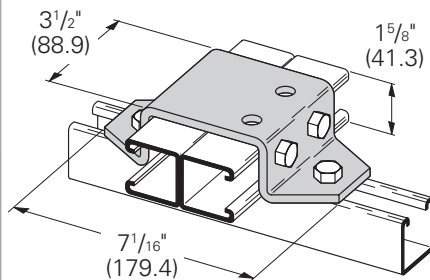
## B425 Six Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 167 Lbs. (75.7 kg)



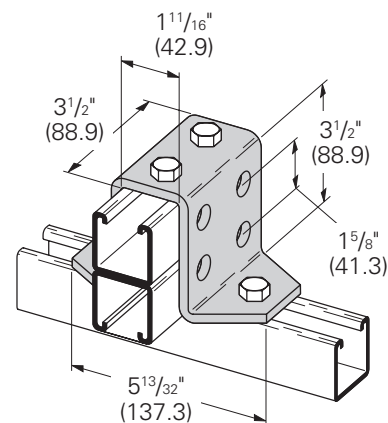
## B581 Eight Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 201 Lbs. (91.2 kg)



## B519 Eight Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 266 Lbs. (102.5 kg)

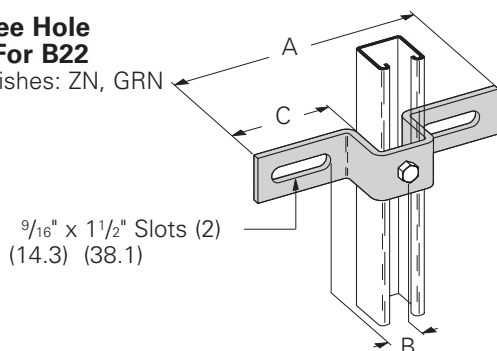


Reference page 106 for general fitting and standard finish specifications.

# 'U' Fittings

## B333 Slotted Three Hole U-Support For B22

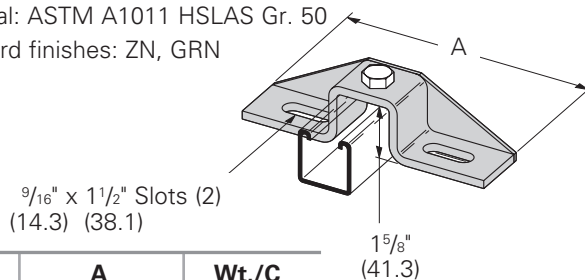
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm                              | B<br>In. mm                             | C<br>In. mm                              | Wt./C<br>Lbs. kg |
|----------|------------------------------------------|-----------------------------------------|------------------------------------------|------------------|
| B333-1   | 7 <sup>1</sup> / <sub>2</sub> " (190.5)  | 1 <sup>5</sup> / <sub>16</sub> " (33.3) | 2 <sup>7</sup> / <sub>8</sub> " (73.0)   | 103 (46.7)       |
| B333-2   | 8 <sup>1</sup> / <sub>2</sub> " (215.9)  | 1 <sup>5</sup> / <sub>16</sub> " (49.2) | 3 <sup>3</sup> / <sub>8</sub> " (85.7)   | 115 (52.1)       |
| B333-3   | 10 <sup>3</sup> / <sub>8</sub> " (263.5) | 2 <sup>7</sup> / <sub>8</sub> " (73.0)  | 4 <sup>5</sup> / <sub>16</sub> " (109.5) | 135 (61.2)       |

## B451 Slotted Three Hole U-Support With Gusset For B22

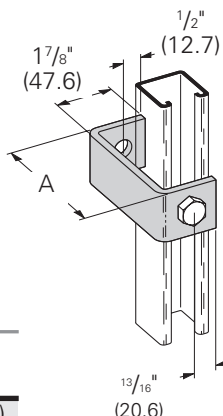
- Consists of B333-1, 2, or 3 with gusset plate welded on back.
- Material: ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm                              | Wt./C<br>Lbs. kg |
|----------|------------------------------------------|------------------|
| B451-1   | 7 <sup>1</sup> / <sub>2</sub> " (190.5)  | 137 (62.1)       |
| B451-2   | 8 <sup>1</sup> / <sub>2</sub> " (215.9)  | 156 (70.7)       |
| B451-3   | 10 <sup>3</sup> / <sub>8</sub> " (263.5) | 172 (78.0)       |

## B408 Two Hole Bus Duct Clevis

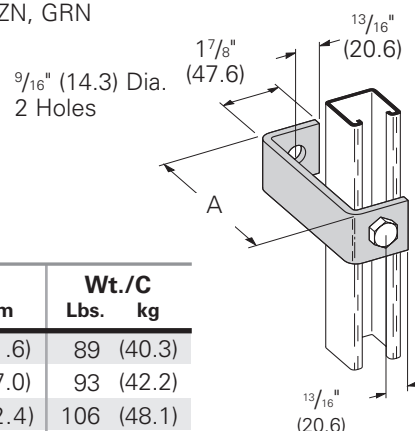
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm                              | Wt./C<br>Lbs. kg |
|----------|------------------------------------------|------------------|
| B408-1   | 2 <sup>13</sup> / <sub>32</sub> " (61.1) | 58 (26.3)        |
| B408-2   | 3 <sup>25</sup> / <sub>32</sub> " (96.0) | 76 (34.5)        |
| B408-3   | 4 <sup>3</sup> / <sub>4</sub> " (762.0)  | 88 (39.9)        |

## B358 Two Hole Clevis

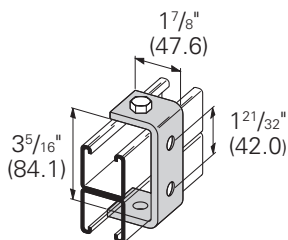
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm | Wt./C<br>Lbs. kg |
|----------|-------------|------------------|
| B358-4   | 4" (101.6)  | 89 (40.3)        |
| B358-5   | 5" (127.0)  | 93 (42.2)        |
| B358-6   | 6" (152.4)  | 106 (48.1)       |
| B358-7   | 7" (177.8)  | 118 (53.5)       |
| B358-8   | 8" (203.2)  | 132 (59.9)       |

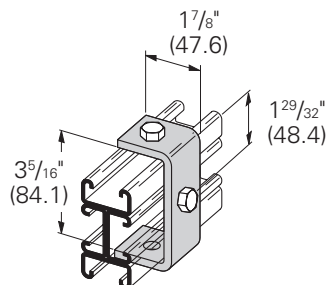
## B173 Four Hole Clevis

- Standard finishes: ZN, GRN
- Wt./C 71 Lbs. (32.2 kg)



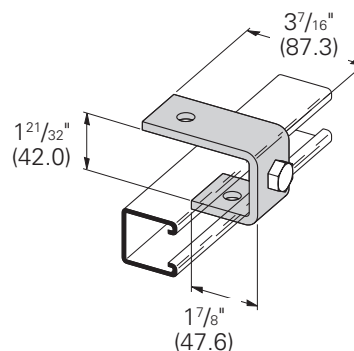
## B595 Three Hole Clevis

- Standard finishes: ZN, GRN
- Wt./C 75 Lbs. (34.0 kg)



## B405 Three Hole Suspension Clevis

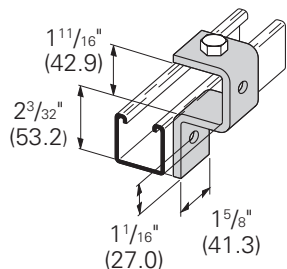
- Standard finishes: ZN, GRN
- Wt./C 75 Lbs. (34.0 kg)





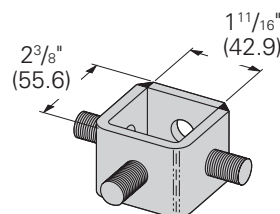
## B398-1 Three Hole Cup Support

- Standard finishes: ZN, GRN
- Wt./C 73 Lbs. (33.1 kg)



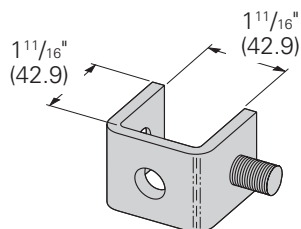
## B400 Three Stud Ring Connection

- 1/2"-13 stud protrudes 1" (25.4mm)
- Standard finishes: ZN
- Wt./C 85 Lbs. (38.5 kg)



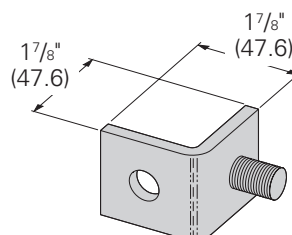
## B400-1 One Stud Ring Connection

- 1/2"-13 stud protrudes 1" (25.4mm)
- Standard finishes: ZN
- Wt./C 53 Lbs. (24.0 kg)



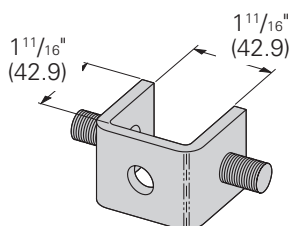
## B400-2 One Stud Ring Connection

- 1/2"-13 stud protrudes 1" (25.4mm)
- Standard finishes: ZN
- Wt./C 40 Lbs. (18.1 kg)



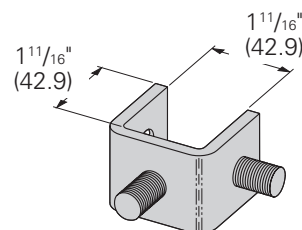
## B400-3 Two Stud Ring Connection

- 1/2"-13 stud protrudes 1" (25.4mm)
- Standard finishes: ZN
- Wt./C 59 Lbs. (26.7 kg)



## B400-4 Two Stud Ring Connection

- 1/2"-13 stud protrudes 1" (25.4mm)
- Standard finishes: ZN
- Wt./C 59 Lbs. (26.7 kg)

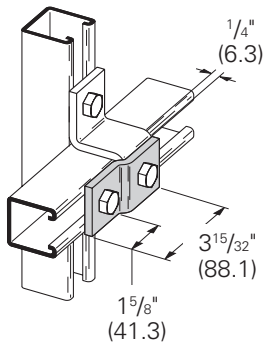


Reference page 106 for general fitting and standard finish specifications.

## B526

### Two Hole Offset Z-Support

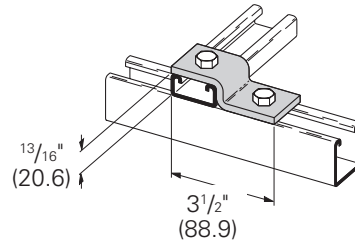
- Standard finishes: ZN, GRN
- Wt./C 38 Lbs. (17.2 kg)



## B106-52

### Two Hole Offset Z-Support for B52

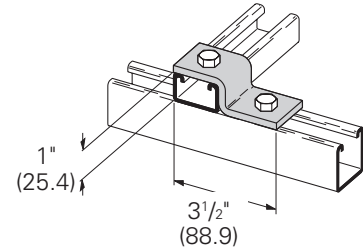
- Standard finishes: ZN, GRN
- Wt./C 40 Lbs. (18.1 kg)



## B106-42

### Two Hole Offset Z-Support for B42

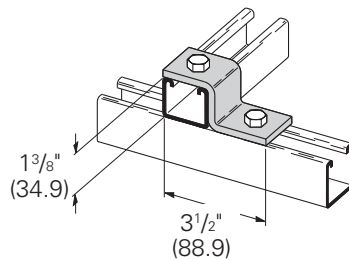
- Standard finishes: ZN, GRN
- Wt./C 44 Lbs. (20.0 kg)



## B106-32

### Two Hole Offset Z-Support for B32

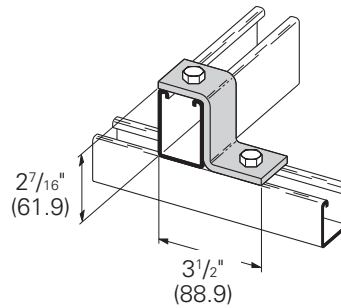
- Standard finishes: ZN, GRN
- Wt./C 51 Lbs. (23.1 kg)



## B106-12

### Two Hole Offset Z-Support for B12

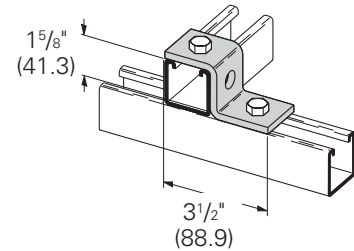
- Standard finishes: ZN, GRN
- Wt./C 63 Lbs. (28.6 kg)



## B105

### Three Hole Offset Z-Support for B22

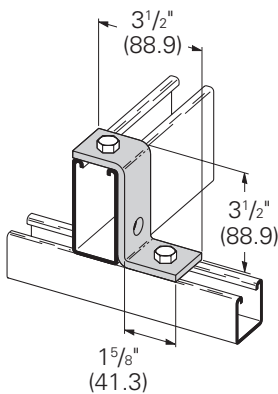
- Standard finishes: ZN, GRN, HDG
- Wt./C 51 Lbs. (23.1 kg)



## B110

### Three Hole Offset Z-Support for B11

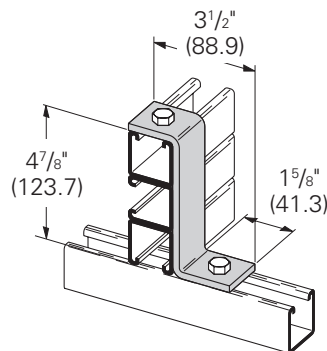
- Standard finishes: ZN, GRN
- Wt./C 70 Lbs. (31.7 kg)



## B586

### Two Hole Z-Support

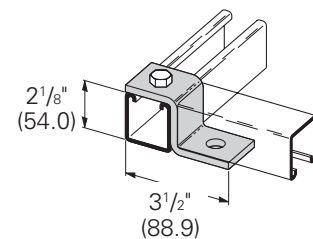
- Standard finishes: ZN, GRN
- Wt./C 90 Lbs. (40.8 kg)



## B108

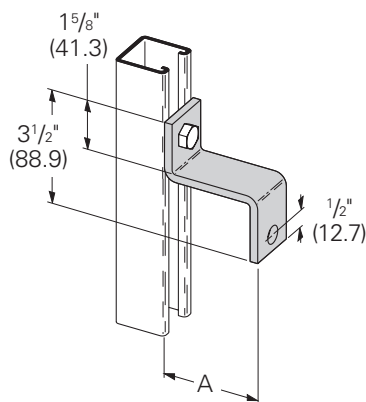
### Two Hole Offset Z-Support

- Standard finishes: ZN, GRN
- Wt./C 55 Lbs. (24.9 kg)



## B387 Two Hole Z-Bus Duct Connection

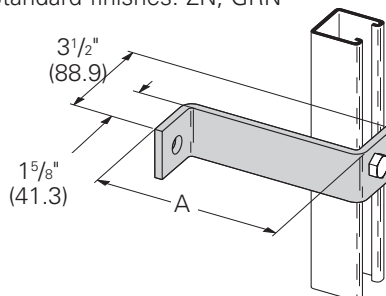
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm     | Wt./C<br>Lbs. kg |
|----------|-----------------|------------------|
| B387     | 4 3/4" (120.6)  | 89 (40.3)        |
| B387-1   | 3 25/32" (96.0) | 78 (35.4)        |
| B387-2   | 2 13/32" (61.1) | 62 (28.1)        |

## B407 Two Hole Z-Support

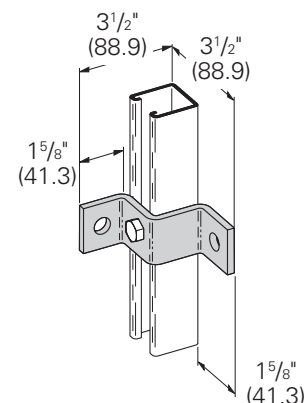
- Standard finishes: ZN, GRN



| Part No.   | A<br>In. mm    | Wt./C<br>Lbs. kg |
|------------|----------------|------------------|
| B407-4     | 4" (101.6)     | 77 (34.9)        |
| B407-5     | 5" (127.0)     | 95 (43.1)        |
| B407-6     | 6" (152.4)     | 98 (44.4)        |
| B407-7     | 7" (177.8)     | 105 (47.6)       |
| B407-8     | 8" (203.2)     | 120 (54.4)       |
| B407-9 5/8 | 9 5/8" (244.5) | 138 (62.6)       |

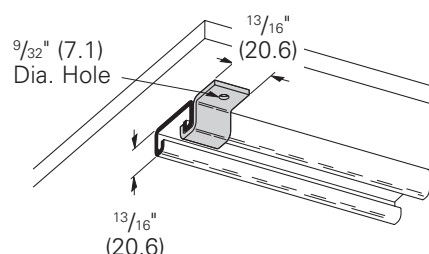
## B111 Three Hole Sheath Corner Connection

- Standard finishes: ZN, GRN
- Wt./C 68 Lbs. (30.8 kg)



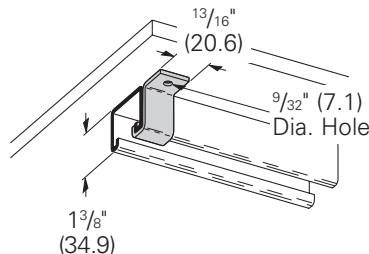
## B410-52 Channel Hanger Bracket for B52

- Material: 11 Gauge (3.0)  
ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN
- Wt./C 6.7 Lbs. (3.0 kg)



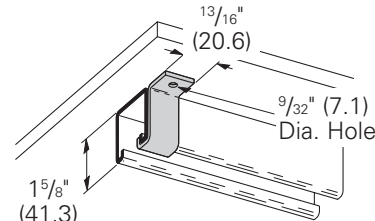
## B410-32 Channel Hanger Bracket for B32

- Material: 11 Gauge (3.0)  
ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN
- Wt./C 8.3 Lbs. (3.7 kg)



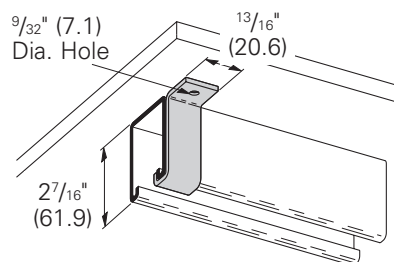
## B410-22 Channel Hanger Bracket for B22

- Material: 11 Gauge (3.0)  
ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN
- Wt./C 9 Lbs. (4.1 kg)



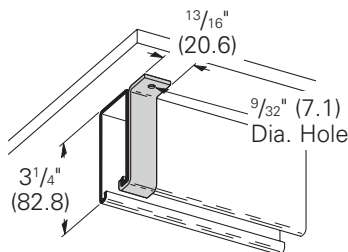
## B410-12 Channel Hanger Bracket for B12

- Material: 11 Gauge (3.0)  
ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN
- Wt./C 11.2 Lbs. (5.1 kg)



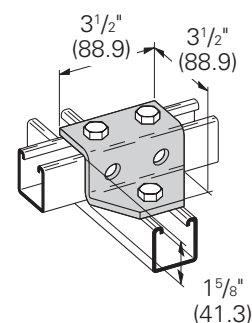
## B410-11 Channel Hanger Bracket for B11

- Material: 11 Gauge (3.0)  
ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN
- Wt./C 13.4 Lbs. (6.1 kg)



## B580 Five Hole Gussetted Z-Support

- Standard finishes: ZN, GRN
- Wt./C 100 Lbs. (45.3 kg)

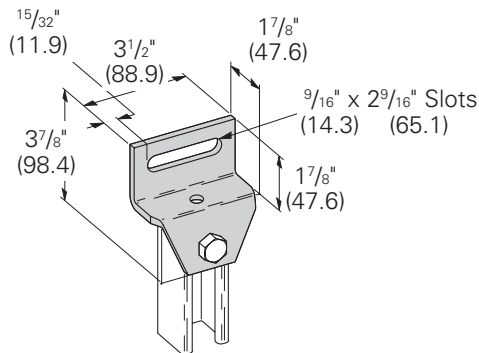


# 'Z' & Wing fittings

## B515

### Adjustable Offset Gusseted Z-Support

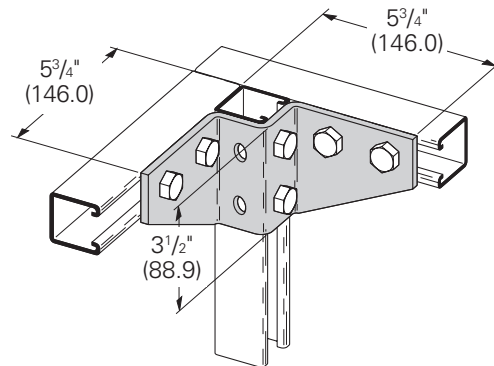
- Standard finishes: ZN, GRN
- Wt./C 93 Lbs. (42.2 kg)



## B428

### Eight Hole Gusseted Corner Connection

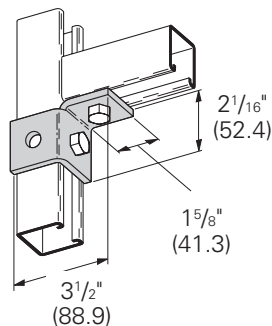
- Standard finishes: ZN, GRN
- Wt./C 203 Lbs. (92.1 kg)



## B267R

### Three Hole Single Corner Connection (Right Hand)

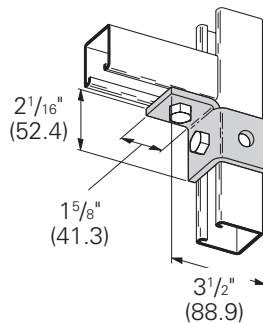
- Standard finishes: ZN, GRN
- Wt./C 54 Lbs. (24.5 kg)



## B267L

### Three Hole Single Corner Connection (Left Hand)

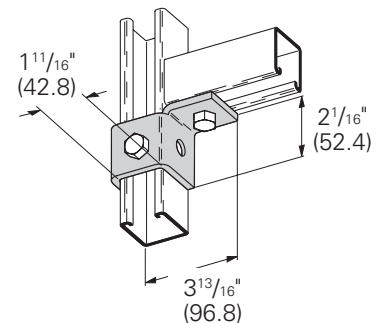
- Standard finishes: ZN, GRN
- Wt./C 54 Lbs. (24.5 kg)



## B270R

### Four Hole Single Corner Connection (Right Hand)

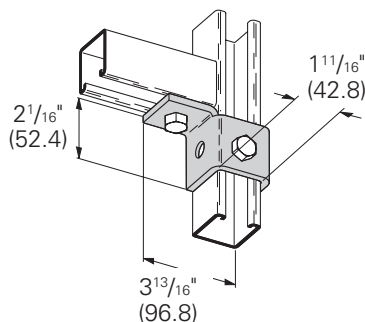
- Standard finishes: ZN, GRN
- Wt./C 77 Lbs. (34.9 kg)



## B270L

### Four Hole Single Corner Connection (Left Hand)

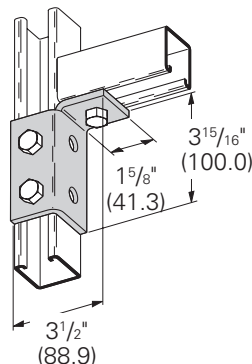
- Standard finishes: ZN, GRN
- Wt./C 77 Lbs. (34.9 kg)



## B268R

### Five Hole Single Corner Connection (Right Hand)

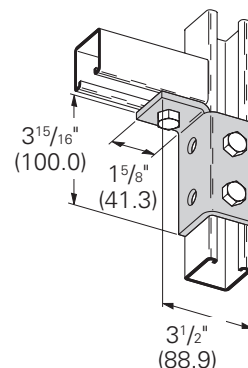
- Standard finishes: ZN, GRN
- Wt./C 100 Lbs. (45.3 kg)



## B268L

### Five Hole Single Corner Connection (Left Hand)

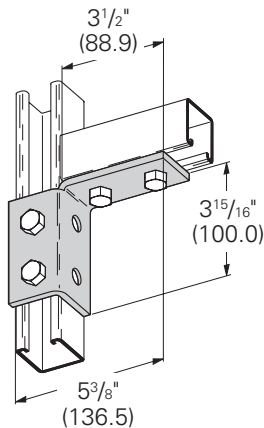
- Standard finishes: ZN, GRN
- Wt./C 100 Lbs. (45.3 kg)



Reference page 106 for general fitting and standard finish specifications.

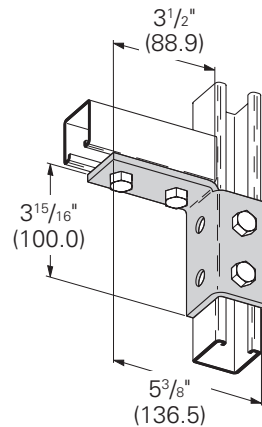
## B269R Six Hole Single Corner Connection (Right Hand)

- Standard finishes: ZN, GRN
- Wt./C 120 Lbs. (54.4 kg)



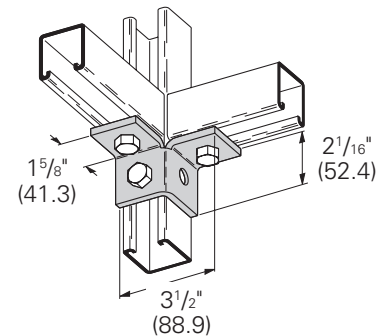
## B269L Six Hole Single Corner Connection (Left Hand)

- Standard finishes: ZN, GRN
- Wt./C 120 Lbs. (54.4 kg)



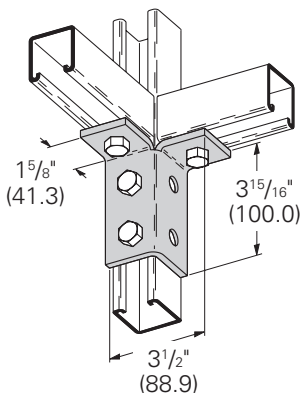
## B119 Six Hole Double Corner Connection

- Standard finishes: ZN, GRN
- Wt./C 71 Lbs. (32.2 kg)



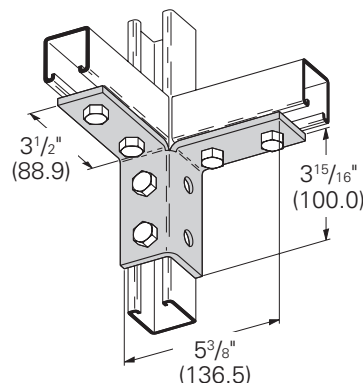
## B120 Six Hole Double Corner Connection

- Standard finishes: ZN, GRN
- Wt./C 110 Lbs. (49.9 kg)



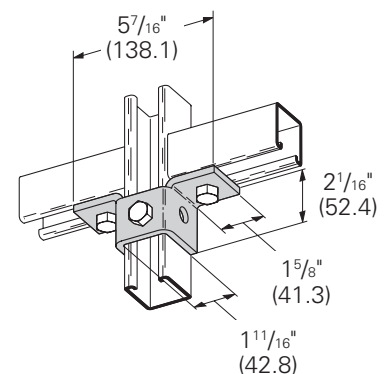
## B121 Eight Hole Double Corner Connection

- Standard finishes: ZN, GRN
- Wt./C 152 Lbs. (68.9 kg)



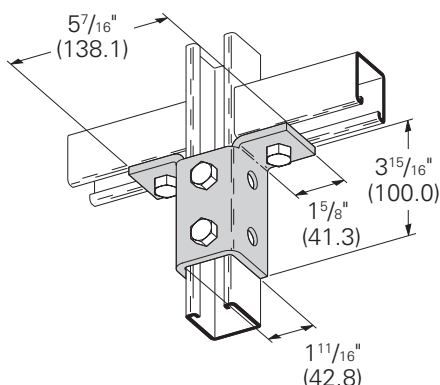
## B271 Five Hole Double Wing Connection

- Standard finishes: ZN, GRN
- Wt./C 95 Lbs. (43.1 kg)



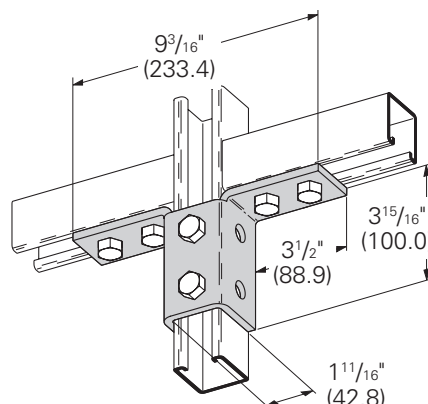
## B272 Eight Hole Double Wing Connection

- Standard finishes: ZN, GRN
- Wt./C 156 Lbs. (70.7 kg)



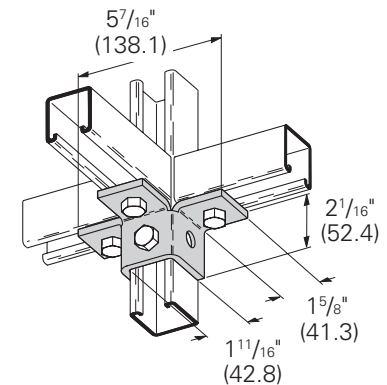
## B273 Ten Hole Double Wing Connection

- Standard finishes: ZN, GRN
- Wt./C 185 Lbs. (83.9 kg)



## B122 Six Hole Triple Wing Connection

- Standard finishes: ZN, GRN
- Wt./C 110 Lbs. (49.9 kg)

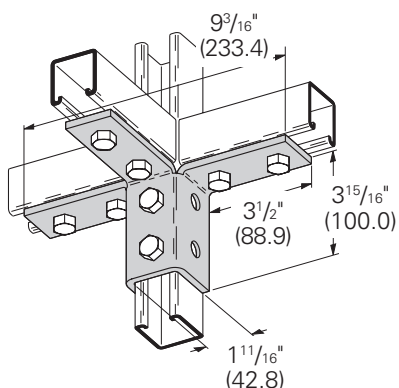


Reference page 106 for general fitting and standard finish specifications.

# Wing fittings

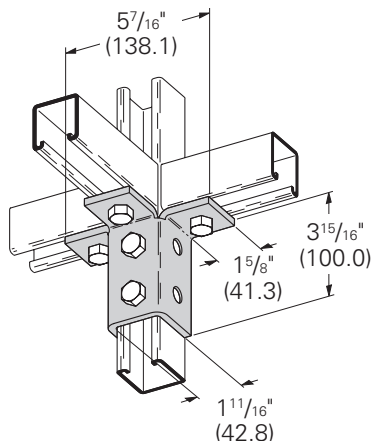
## B123 Twelve Hole Triple Wing Connection

- Standard finishes: ZN, GRN
- Wt./C 234 Lbs. (106.1 kg)



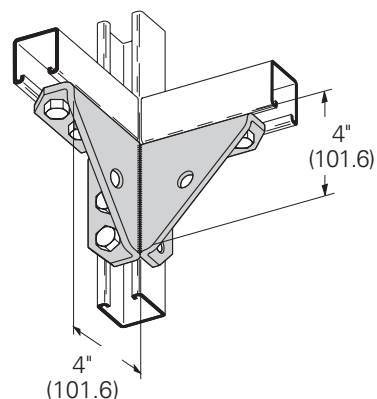
## B124 Nine Hole Triple Wing Connection

- Standard finishes: ZN, GRN
- Wt./C 177 Lbs. (80.3 kg)



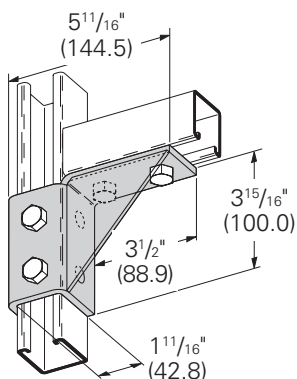
## B276 Fourteen Hole Double Corner Gusseted Connection

- Standard finishes: ZN, GRN
- Wt./C 196 Lbs. (88.9 kg)



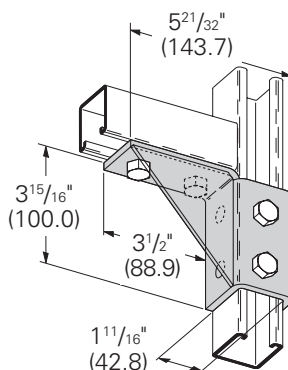
## B274R Eight Hole Single Corner Gusseted Connection (Right Hand)

- Standard finishes: ZN, GRN
- Wt./C 176 Lbs. (79.8 kg)



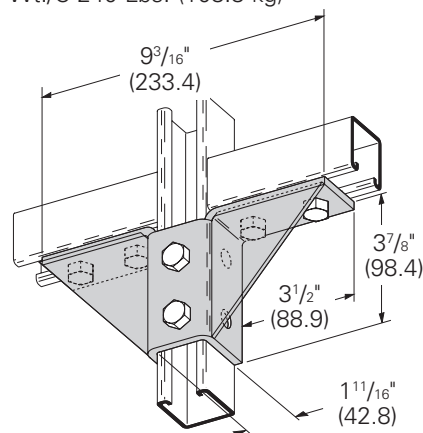
## B274L Eight Hole Single Corner Gusseted Connection (Left Hand)

- Standard finishes: ZN, GRN
- Wt./C 176 Lbs. (79.8 kg)



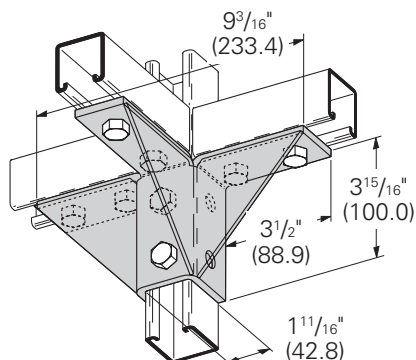
## B495 Ten Hole Double Wing Gusseted Connection

- Standard finishes: ZN, GRN
- Wt./C 240 Lbs. (108.8 kg)



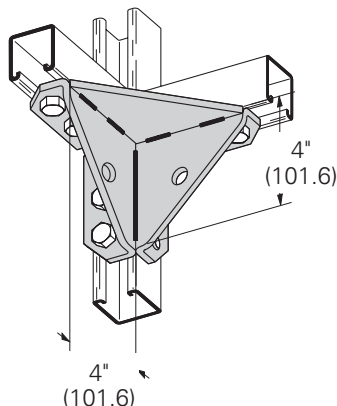
## B277 Twelve Hole Triple Wing Gusseted Connection

- Standard finishes: ZN, GRN
- Wt./C 285 Lbs. (129.3 kg)



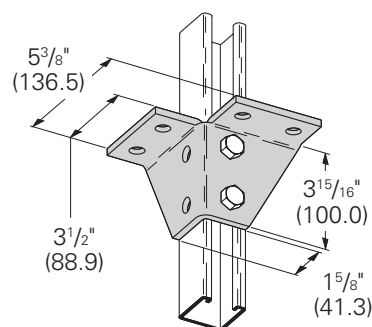
## B362 Eight Hole Double Corner Gusseted Connection

- Standard finishes: ZN, GRN
- Wt./C 226 Lbs. (102.5 kg)



## B571 Eight Hole Wing Connection

- Standard finishes: ZN, GRN
- Wt./C 201 Lbs. (91.2 kg)

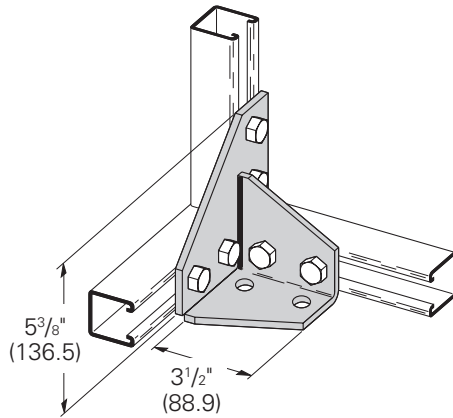


Reference page 106 for general fitting and standard finish specifications.



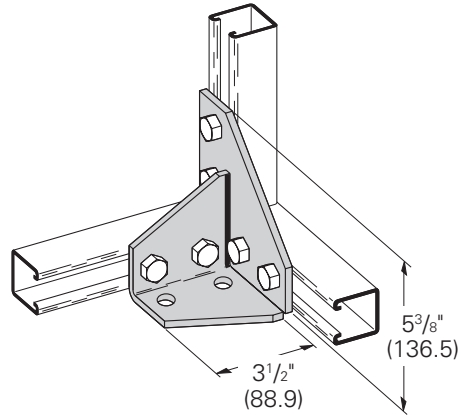
## B346L Eight Hole Double Corner Gussetted Connection (Left Hand)

- Standard finishes: ZN, GRN
- Wt./C 242 Lbs. (109.8 kg)



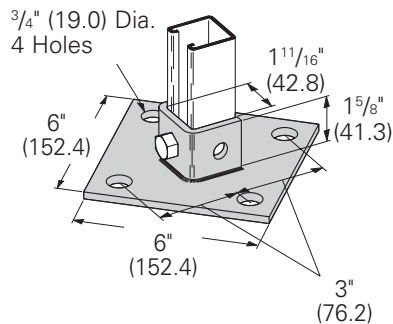
## B346R Eight Hole Double Corner Gussetted Connection (Right Hand)

- Standard finishes: ZN, GRN
- Wt./C 242 Lbs. (109.8 kg)



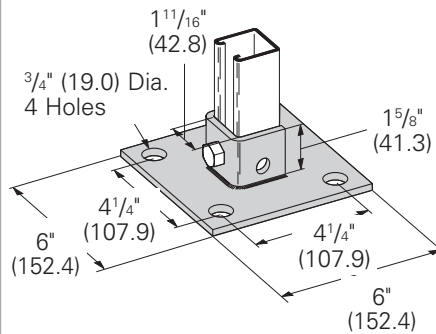
## B279 Post Base for B22

- Standard finishes: ZN, GRN
- Wt./C 314 Lbs. (142.4 kg)



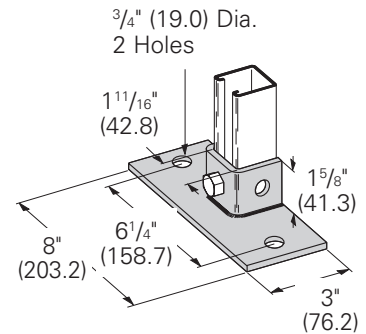
## B279SQ Post Base for B22

- Standard finishes: ZN, GRN
- Wt./C 314 Lbs. (142.4 kg)



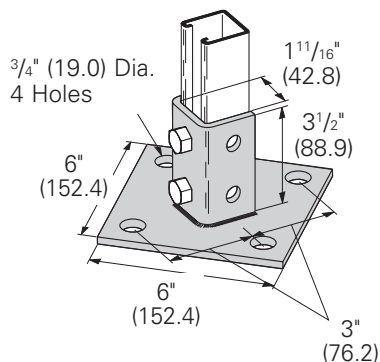
## B279FL Post Base for B22

- Standard finishes: ZN, GRN
- Wt./C 230 Lbs. (104.3 kg)



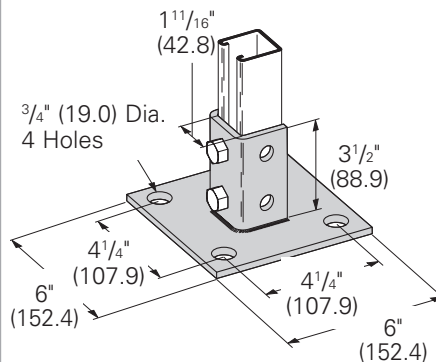
## B280 Post Base for B22

- Standard finishes: ZN, GRN, HDG, SS4, AL
- Wt./C 392 Lbs. (177.8 kg)



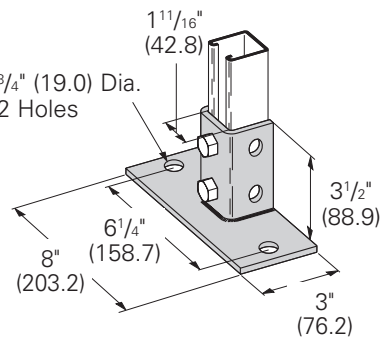
## B280SQ Post Base for B22

- Standard finishes: ZN, GRN, HDG, SS4, AL
- Wt./C 392 Lbs. (177.8 kg)



## B280FL Post Base for B22

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 312 Lbs. (141.5 kg)

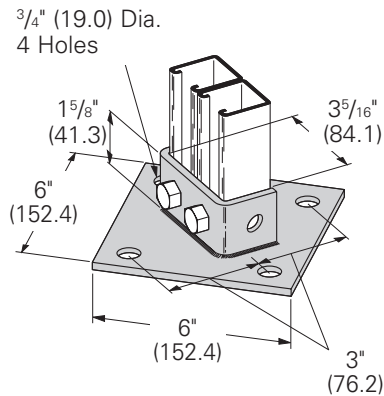


Reference page 106 for general fitting and standard finish specifications.

# Post bases

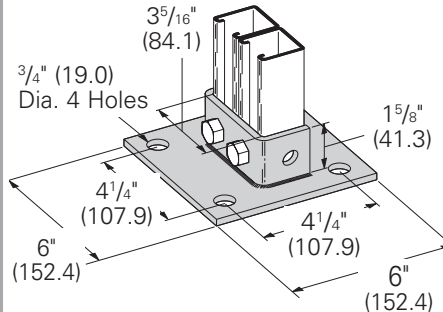
## B281A Post Base for B22A, B, C, ETC.

- Standard finishes: ZN, GRN
- Wt./C 330 Lbs. (149.7 kg)



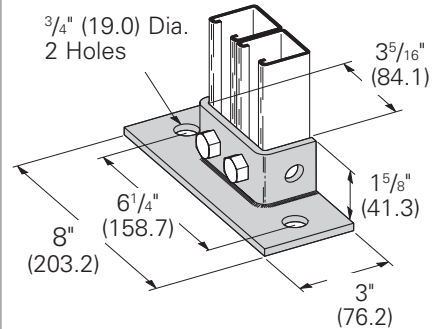
## B281ASQ Post Base for B22A, B, C, Etc.

- Standard finishes: ZN, GRN
- Wt./C 330 Lbs. (149.7 kg)



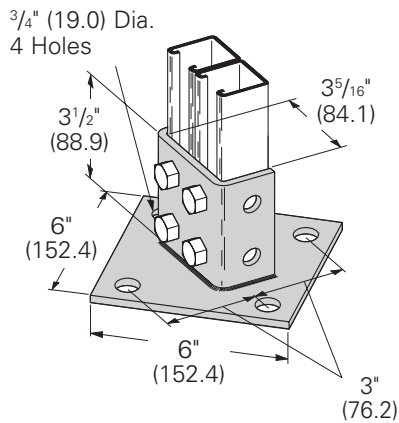
## B281AFL Post Base for B22A, B, C, Etc.

- Standard finishes: ZN, GRN
- Wt./C 250 Lbs. (113.4 kg)



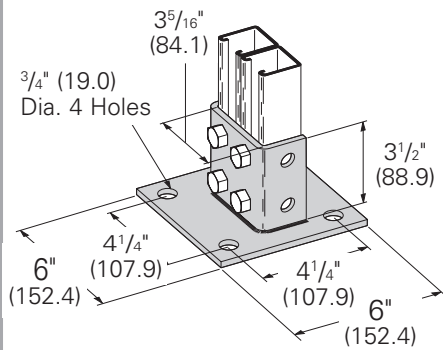
## B281 Post Base for B22A, B, C, Etc.

- Standard finishes: ZN, GRN, HDG
- Wt./C 400 Lbs. (181.4 kg)



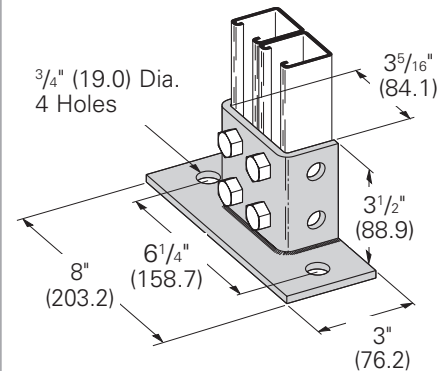
## B281SQ Post Base for B22A, B, C, Etc.

- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 400 Lbs. (181.4 kg)



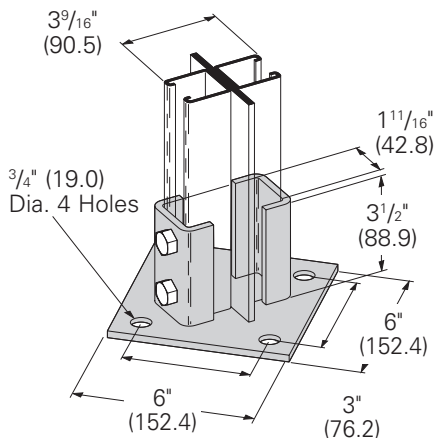
## B281FL Post Base for B22A, B, C, Etc.

- Standard finishes: ZN, GRN
- Wt./C 320 Lbs. (145.1 kg)



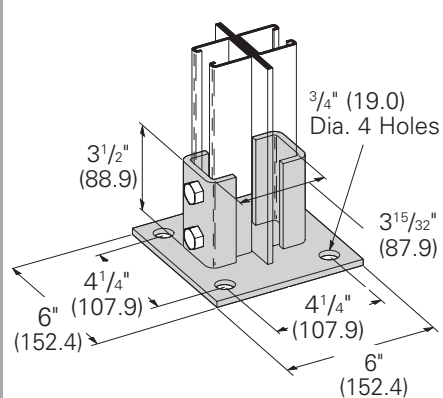
## B281M Post Base for B22-2PL

- Standard finishes: ZN, GRN
- Wt./C 470 Lbs. (213.2 kg)



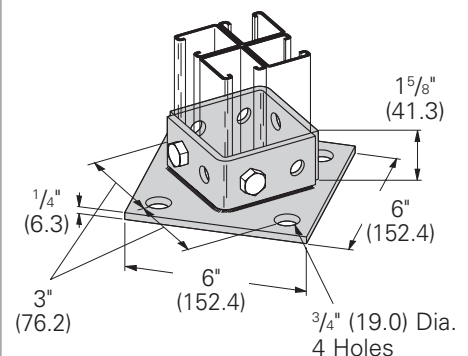
## B281MSQ Post Base for B22-2PL

- Standard finishes: ZN, GRN
- Wt./C 470 Lbs. (213.2 kg)



## B570 Post Base for Four Channel Combinations

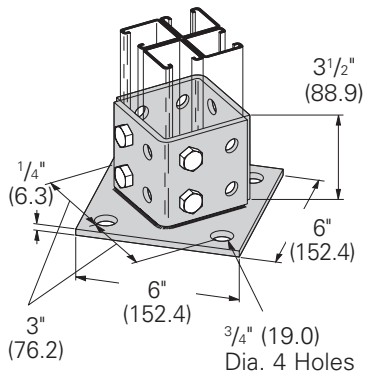
- Standard finishes: ZN, GRN
- Wt./C 397 Lbs. (180.1 kg)



Reference page 106 for general fitting and standard finish specifications.

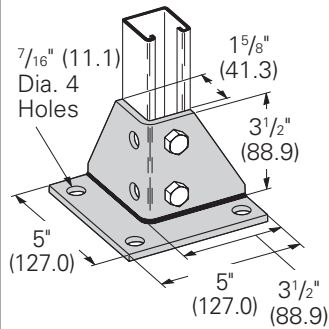
## B570A Post Base for Four Channel Combinations

- Standard finishes: ZN, GRN
- Wt./C 550 Lbs. (249.5 kg)



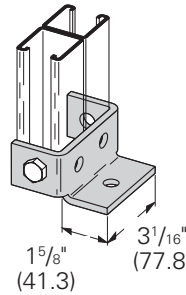
## B278 Post Base for B22

- Standard finishes: ZN, GRN
- Wt./C 288 Lbs. (130.6 kg)



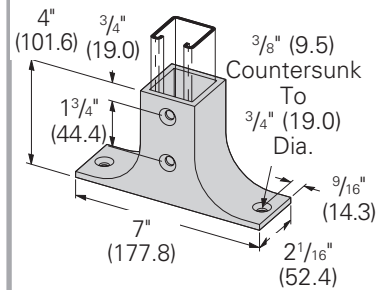
## B585 Post Base for B22A

- Standard finishes: ZN, GRN
- Wt./C 97 Lbs. (44.0 kg)



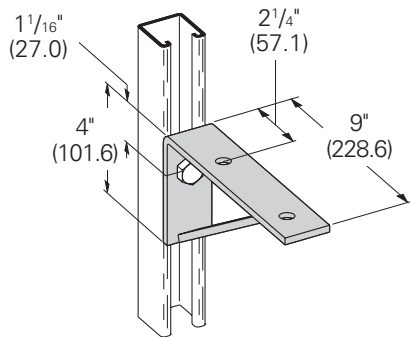
## B300 Post Base

- Material: Malleable Iron
- Standard finishes: ZN, GRN
- Wt./C 259 Lbs. (117.5 kg)



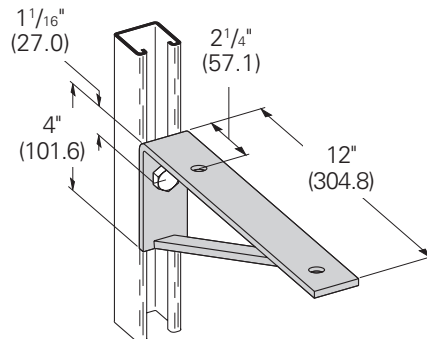
## B187 Bracket

- Uniform Loading 1450 Lbs. (6.45 kN)
- Safety Factor of 2.5
- Hole Spacing on Bracket Top 5 5/16 inch (150.8) Center to Center
- Standard finishes: ZN, GRN
- Wt./C 193 Lbs. (87.5 kg)



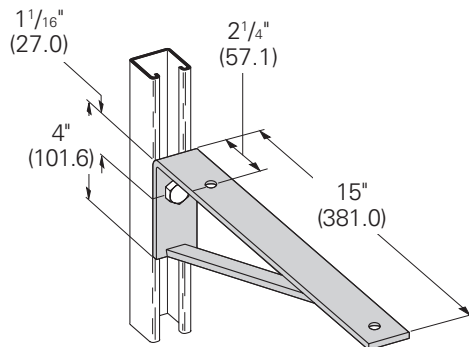
## B188 Bracket

- Uniform Loading 1080 Lbs. (4.80 kN)
- Safety Factor of 2.5
- Hole Spacing on Bracket Top 8 15/16 inch (227.0) Center to Center
- Standard finishes: ZN, GRN
- Wt./C 241 Lbs. (109.3 kg)



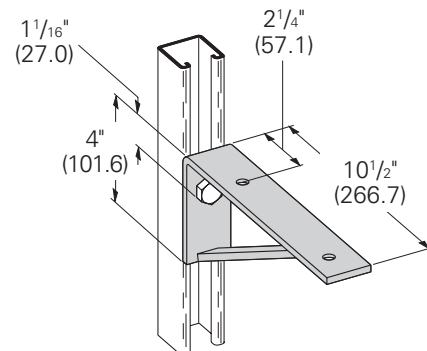
## B189 Bracket

- Uniform Loading 870 Lbs. (3.87 kN)
- Safety Factor of 2.5
- Hole Spacing on Bracket Top 11 15/16 inch (303.2) Center to Center
- Standard finishes: ZN, GRN
- Wt./C 308 Lbs. (139.7 kg)



## B541 Bracket

- Uniform Loading 1240 Lbs. (5.51 kN)
- Safety Factor of 2.5
- Hole Spacing on Bracket Top 7 7/16 inch (188.9) Center to Center
- Standard finishes: ZN, GRN
- Wt./C 201 Lbs. (91.2 kg)

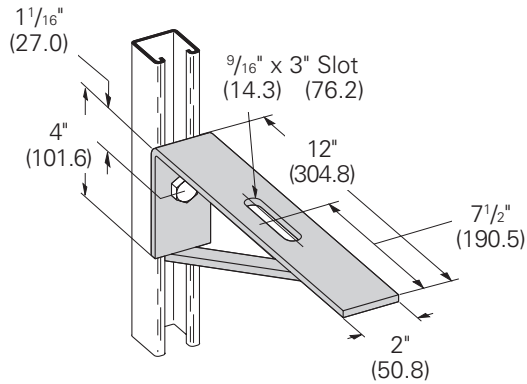


Reference page 106 for general fitting and standard finish specifications.

# Post bases & brackets

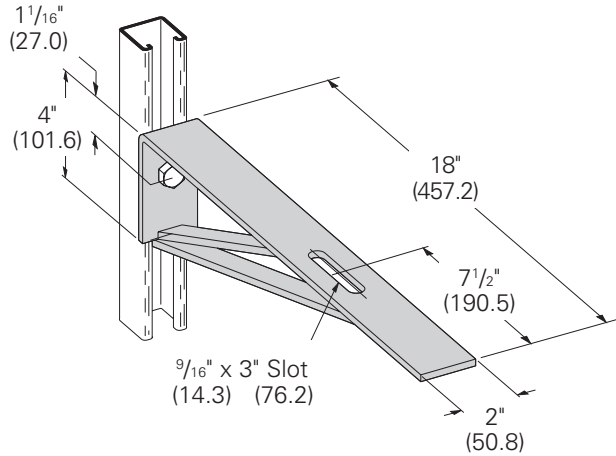
## B190 12" (304.8) Bracket

- Uniform Loading 900 Lbs. (4.00 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN
- Wt./C 260 Lbs. (117.9 kg)



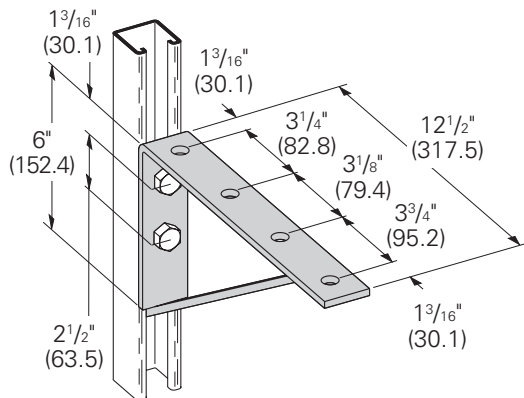
## B191-18 18" (457.2) Bracket

- Uniform Loading 600 Lbs. (2.67 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN
- Wt./C 377 Lbs. (171.0 kg)



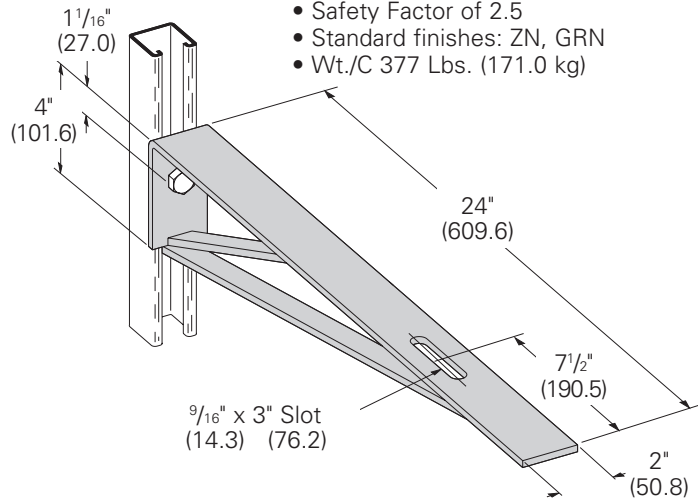
## B289-12 12 1/2" (317.5) Bracket

- Uniform Loading 1040 Lbs. (4.63 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN
- Wt./C 285 Lbs. (129.3 kg)



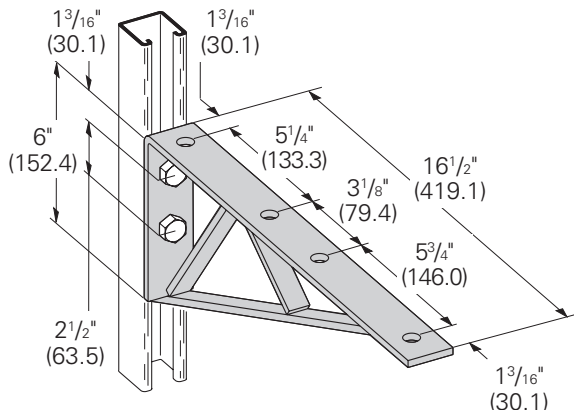
## B191-24 24" (609.6) Bracket

- Uniform Loading 450 Lbs. (2.00 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN
- Wt./C 377 Lbs. (171.0 kg)



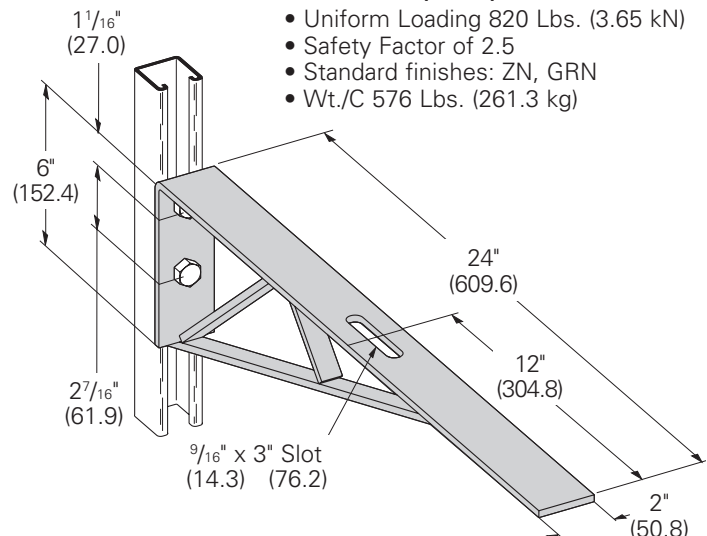
## B290 16 1/2" (419.1) Bracket

- Uniform Loading 1200 Lbs. (5.34 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN
- Wt./C 405 Lbs. (183.7 kg)



## B192 24" (609.6) Bracket

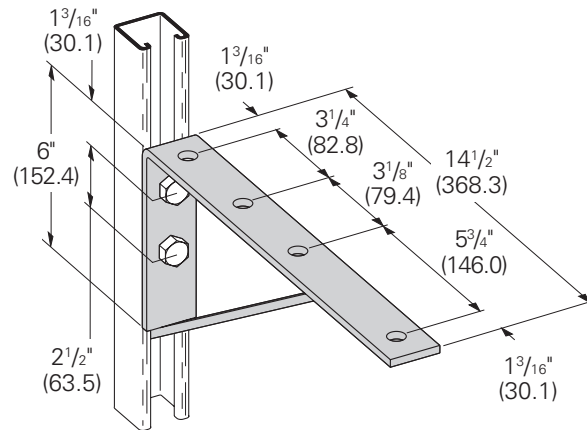
- Uniform Loading 820 Lbs. (3.65 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN
- Wt./C 576 Lbs. (261.3 kg)



Reference page 106 for general fitting and standard finish specifications.

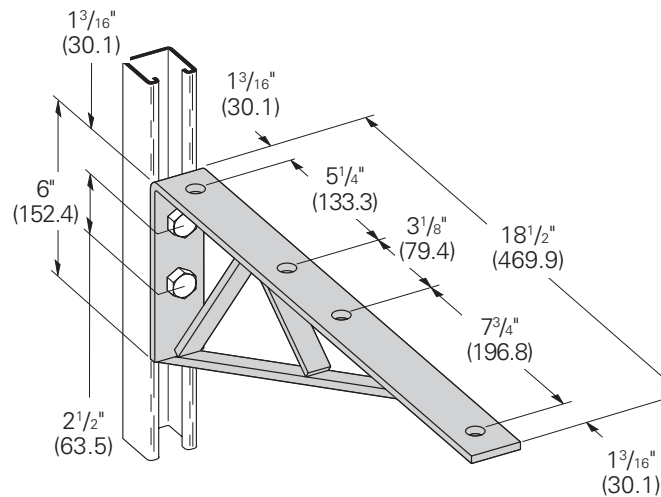
## B289-14 14<sup>1</sup>/<sub>2</sub>" (368.3) Bracket

- Uniform Loading 900 Lbs. (4.00 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN
- Wt./C 295 Lbs. (133.8 kg)



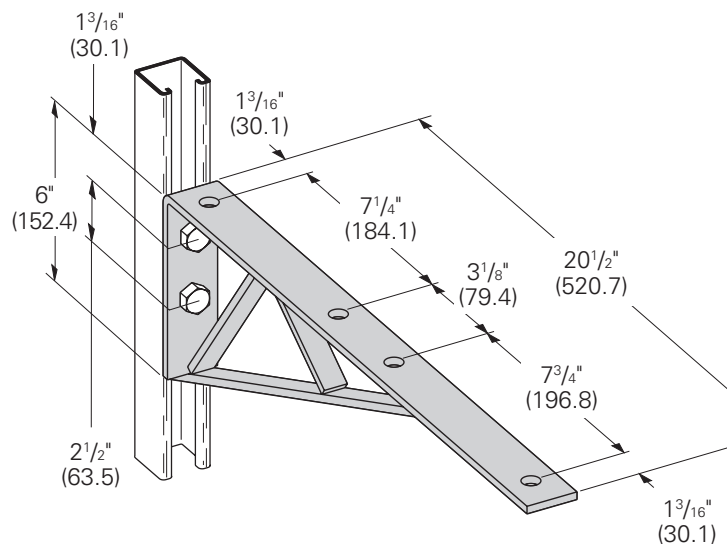
## B291 18<sup>1</sup>/<sub>2</sub>" (469.9) Bracket

- Uniform Loading 1070 Lbs. (4.76 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN
- Wt./C 468 Lbs. (212.3 kg)



## B292 20<sup>1</sup>/<sub>2</sub>" (520.7) Bracket

- Uniform Loading 600 Lbs. (2.67 kN)
- Safety Factor of 2.5
- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 490 Lbs. (222.2 kg)



Reference page 106 for general fitting and standard finish specifications.

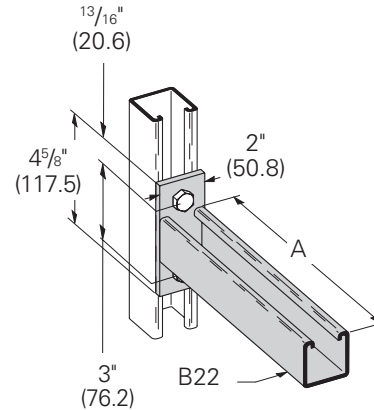
# Brackets

## B409

### Single Channel Bracket

- Safety Factor of 2.5
- Standard finishes: ZN, GRN, SS4

| Part No. | A<br>In. mm | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|-------------|-------------------------|------------------|
| B409-6   | 6" (152.4)  | 1920 (8.54)             | 152 (68.9)       |
| B409-9   | 9" (228.6)  | 1280 (5.69)             | 195 (88.4)       |
| B409-12  | 12" (304.8) | 960 (4.27)              | 232 (105.2)      |
| B409-14  | 14" (355.6) | 800 (3.56)              | 274 (124.3)      |
| B409-16  | 16" (406.4) | 730 (3.25)              | 314 (142.4)      |
| B409-18  | 18" (457.2) | 640 (2.84)              | 347 (157.4)      |
| B409-24  | 24" (609.6) | 480 (2.13)              | 450 (204.1)      |

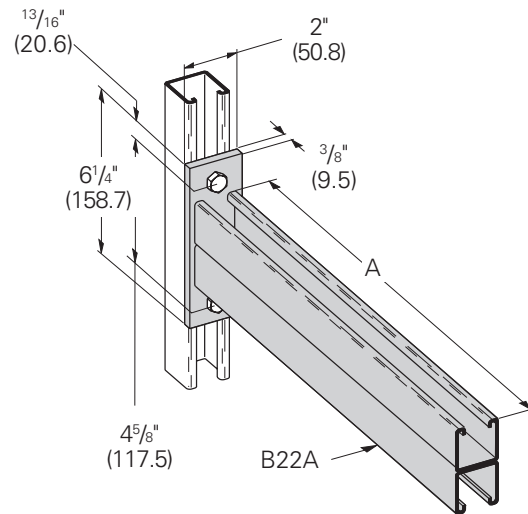


## B297

### Double Channel Bracket

- Safety Factor of 2.5
- Standard finishes: ZN, GRN, HDG

| Part No. | A<br>In. mm  | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|--------------|-------------------------|------------------|
| B297-12  | 12" (304.8)  | 1660 (7.37)             | 485 (220.0)      |
| B297-18  | 18" (457.2)  | 1100 (4.88)             | 668 (303.0)      |
| B297-24  | 24" (609.6)  | 835 (3.71)              | 857 (388.7)      |
| B297-30  | 30" (762.0)  | 665 (2.95)              | 1040 (471.7)     |
| B297-36  | 36" (914.4)  | 550 (2.44)              | 1240 (562.4)     |
| B297-42  | 42" (1066.8) | 465 (2.06)              | 1440 (653.2)     |

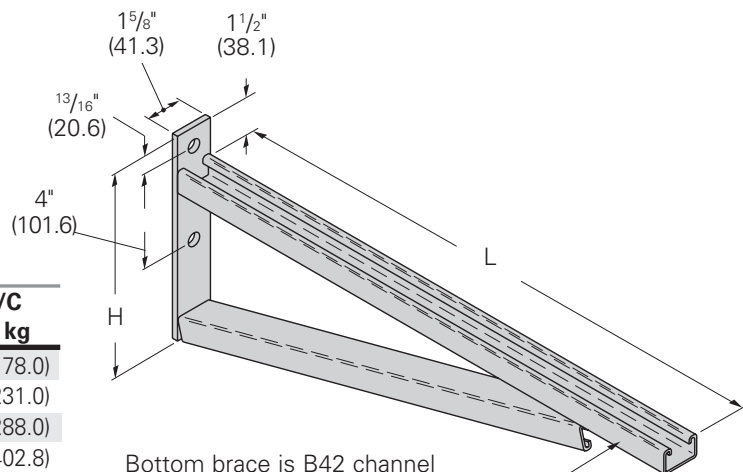


## B494

### Braced Single Bracket

- Safety Factor of 2.5
- Standard finishes: ZN, GRN

| Part No. | L<br>In. mm  | H<br>In. mm     | Uniform Load<br>Lbs. kN | Wt. /C<br>Lbs. kg |
|----------|--------------|-----------------|-------------------------|-------------------|
| B494-12  | 12" (304.8)  | 8 3/4" (222.2)  | 2500 (11.12)            | 392 (178.0)       |
| B494-18  | 18" (475.2)  | 8 3/4" (222.2)  | 1700 (7.56)             | 509 (231.0)       |
| B494-24  | 24" (609.6)  | 8 3/4" (222.2)  | 1300 (5.78)             | 635 (288.0)       |
| B494-30  | 30" (762.0)  | 11 1/4" (285.7) | 1600 (7.11)             | 885 (402.8)       |
| B494-36  | 36" (914.4)  | 11 1/4" (285.7) | 1100 (4.89)             | 1024 (464.5)      |
| B494-42  | 42" (1066.8) | 16" (406.4)     | 980 (4.36)              | 1285 (582.9)      |
| B494-48  | 48" (1219.2) | 16" (406.4)     | 980 (4.36)              | 1409 (639.1)      |



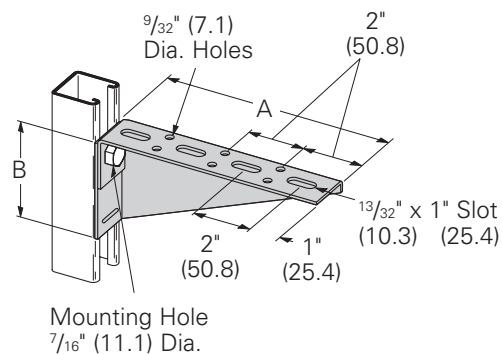
Bottom brace is B42 channel on B494-24 and smaller and B22 channel on B494-30 and larger



## B174SH-B186SH L&R Slotted Bracket

- Safety Factor of 2.5
- Specify L for left or R for right bracing
- Material: ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN, GRN

| Part No. | A<br>In. mm | B<br>In. mm                               | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|-------------|-------------------------------------------|-------------------------|------------------|
| B174SH   | 24" (609.6) | 6 <sup>7</sup> / <sub>16</sub> " (163.5)  | 225 (1.00)              | 370 (167.8)      |
| B175SH   | 26" (660.4) | 6 <sup>15</sup> / <sub>16</sub> " (176.2) | 225 (1.00)              | 425 (192.8)      |
| B176SH   | 28" (711.2) | 7 <sup>7</sup> / <sub>16</sub> " (188.9)  | 225 (1.00)              | 480 (217.7)      |
| B177SH   | 30" (762.0) | 7 <sup>15</sup> / <sub>16</sub> " (201.6) | 225 (1.00)              | 520 (235.9)      |
| B178SH   | 12" (304.8) | 3 <sup>7</sup> / <sub>16</sub> " (87.3)   | 350 (1.55)              | 143 (64.8)       |
| B179SH   | 14" (355.6) | 3 <sup>15</sup> / <sub>16</sub> " (100.0) | 350 (1.55)              | 162 (73.5)       |
| B180SH   | 16" (406.4) | 4 <sup>7</sup> / <sub>16</sub> " (112.7)  | 250 (1.11)              | 204 (92.5)       |
| B181SH   | 18" (457.2) | 4 <sup>15</sup> / <sub>16</sub> " (125.4) | 250 (1.11)              | 232 (105.2)      |
| B182SH   | 20" (508.0) | 5 <sup>7</sup> / <sub>16</sub> " (138.1)  | 250 (1.11)              | 275 (124.7)      |
| B183SH   | 22" (558.8) | 5 <sup>15</sup> / <sub>16</sub> " (150.8) | 250 (1.11)              | 317 (143.8)      |
| B184SH   | 6" (152.4)  | 1 <sup>15</sup> / <sub>16</sub> " (49.2)  | 225 (1.00)              | 58 (26.3)        |
| B185SH   | 8" (203.2)  | 2 <sup>7</sup> / <sub>16</sub> " (61.9)   | 225 (1.00)              | 82 (37.2)        |
| B186SH   | 10" (254.0) | 2 <sup>15</sup> / <sub>16</sub> " (74.6)  | 325 (1.44)              | 103 (46.7)       |

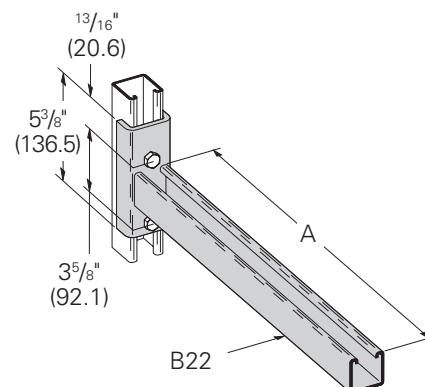


Right bracket shown, left bracket gussett on opposite side.

## B196 Channel Clevis Bracket

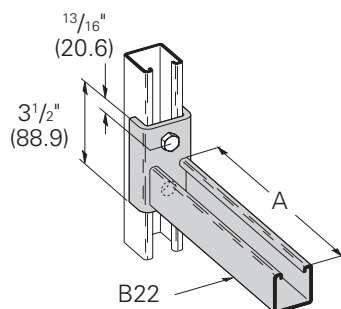
- Safety Factor of 2.5
- Standard finishes: ZN, GRN

| Part No. | A<br>In. mm | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|-------------|-------------------------|------------------|
| B196-18  | 18" (457.2) | 600 (2.67)              | 430 (195.0)      |
| B196-24  | 24" (609.6) | 450 (2.00)              | 510 (231.3)      |



## B198 Channel Clevis Bracket

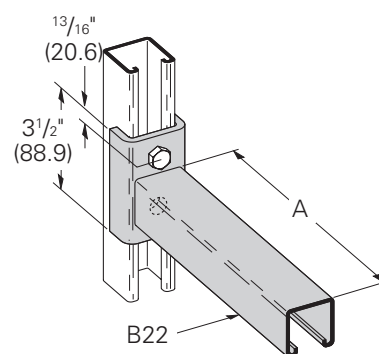
- Safety Factor of 2.5
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|-------------|-------------------------|------------------|
| B198-6   | 6" (152.4)  | 1600 (7.12)             | 185 (83.9)       |
| B198-12  | 12" (304.8) | 800 (3.56)              | 284 (128.8)      |

## B198A Channel Clevis Bracket

- Safety Factor of 2.5
- Standard finishes: ZN, GRN

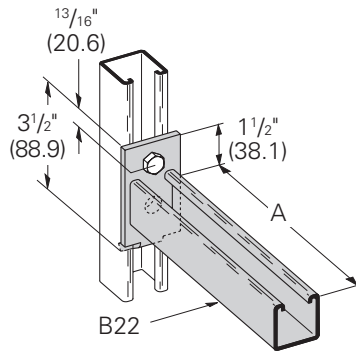


| Part No. | A<br>In. mm | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|-------------|-------------------------|------------------|
| B198A-6  | 6" (152.4)  | 1600 (7.12)             | 185 (83.9)       |
| B198A-12 | 12" (304.8) | 800 (3.56)              | 284 (128.8)      |

Reference page 106 for general fitting and standard finish specifications.

## B293 Channel Bracket

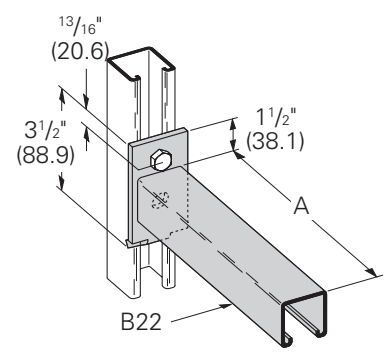
- Safety Factor of 2.5
- Standard finishes: ZN, GRN



| Part No.       | A<br>In. mm | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------------|-------------|-------------------------|------------------|
| <b>B293-6</b>  | 6" (152.4)  | 1200 (5.34)             | 144 (65.3)       |
| <b>B293-12</b> | 12" (304.8) | 600 (2.67)              | 252 (114.3)      |
| <b>B293-18</b> | 18" (457.2) | 400 (1.78)              | 340 (154.2)      |
| <b>B293-24</b> | 24" (609.6) | 300 (1.33)              | 412 (186.9)      |

## B293A Channel Bracket

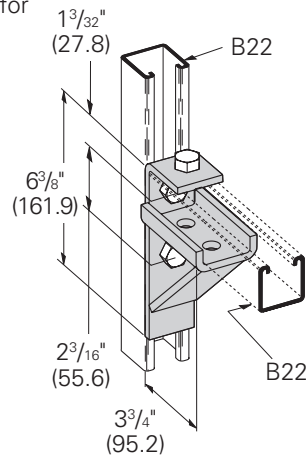
- Safety Factor of 2.5
- Standard finishes: ZN, GRN



| Part No.        | A<br>In. mm | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|-----------------|-------------|-------------------------|------------------|
| <b>B293A-6</b>  | 6" (152.4)  | 1200 (5.34)             | 144 (65.3)       |
| <b>B293A-12</b> | 12" (304.8) | 600 (2.67)              | 252 (114.3)      |
| <b>B293A-18</b> | 18" (457.2) | 400 (1.78)              | 340 (154.2)      |
| <b>B293A-24</b> | 24" (609.6) | 300 (1.33)              | 412 (186.9)      |

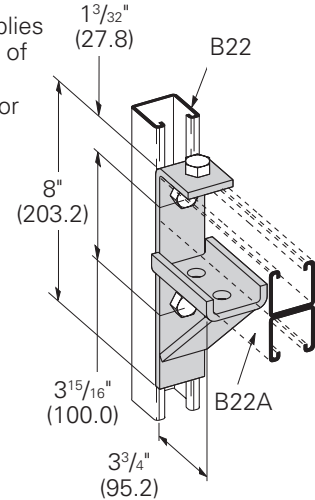
## B194 Bracket for B22 & B24

- Safety Factor of 2.5
- 6300 In.-Lbs (712 N•m) applies to fitting only, not to strength of strut arm
- Refer to pages 56, 57 & 59 for strut loading data
- Standard finishes: ZN, GRN
- Wt./C 210 Lbs. (95.2 kg)



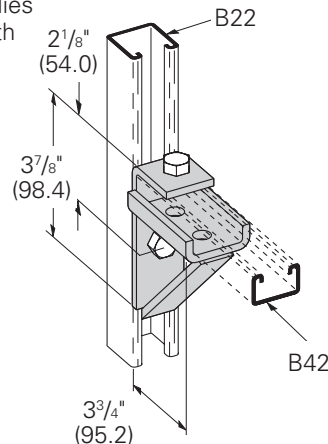
## B370 Bracket for B22A & B11

- Safety Factor of 2.5
- 13000 In.-Lbs (1469 N•m) applies to fitting only, not to strength of strut arm
- Refer to pages 51, 56, & 57 for strut loading data
- Standard finishes: ZN, GRN
- Wt./C 266 Lbs. (120.6 kg)



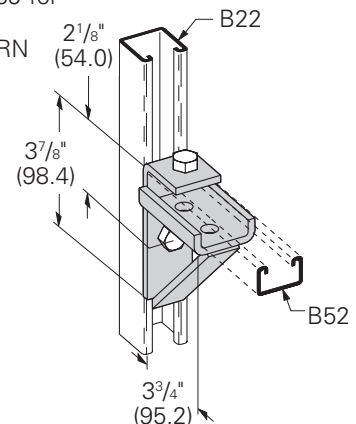
## B195 Bracket for B42

- Safety Factor of 2.5
- 2500 In.-Lbs (282 N•m) applies to fitting only, not to strength of strut arm
- Refer to pages 57 & 65 for strut loading data
- Standard finishes: ZN, GRN
- Wt./C 174 Lbs. (78.9 kg)



## B440 Bracket for B52 & B54

- Safety Factor of 2.5
- 2000 In.-Lbs (226 N•m) applies to fitting only, not to strength of strut arm
- Refer to page 57, 67, & 69 for strut loading data
- Standard finishes: ZN, GRN
- Wt./C 177 Lbs. (80.3 kg)

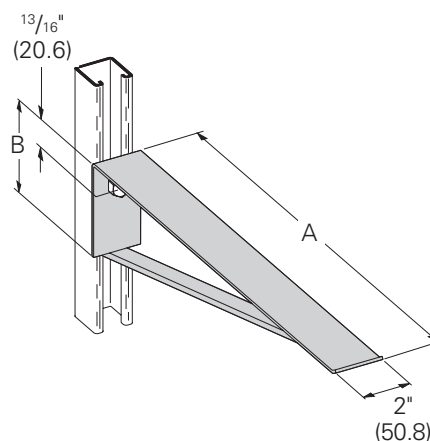


Reference page 106 for general fitting and standard finish specifications.

## B449-4, 8 & 12 Cable Saddle Bracket

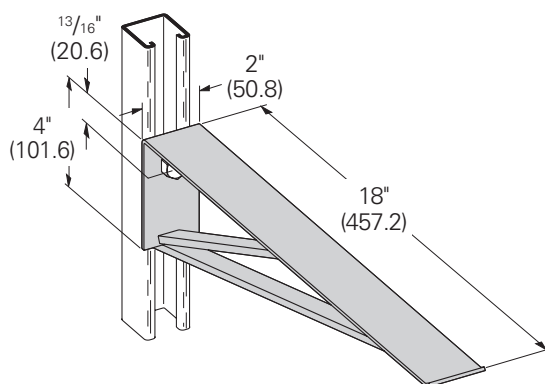
- Safety Factor of 2.5
- Material: 11 Gauge (3.0)  
ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN

| Part No.       | A<br>In. mm     | B<br>In. mm   | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------------|-----------------|---------------|-------------------------|------------------|
| <b>B449-4</b>  | 4 1/2" (114.3)  | 2 3/8" (60.3) | 2400 (10.67)            | 74 (33.5)        |
| <b>B449-8</b>  | 8 1/2" (215.9)  | 2 3/8" (60.3) | 1270 (5.65)             | 124 (56.2)       |
| <b>B449-12</b> | 12 1/2" (317.5) | 4" (101.6)    | 860 (3.82)              | 184 (83.4)       |



## B449-18 18" (457.2) Cable Saddle Bracket

- Safety Factor of 2.5
- Uniform Load 960 Lbs. (4.17 kN)
- Material: 11 Gauge (3.0) ASTM A1011 HSLAS Gr. 50
- Standard finishes: ZN, GRN
- Wt./C 312 Lbs. (141.5 kg)

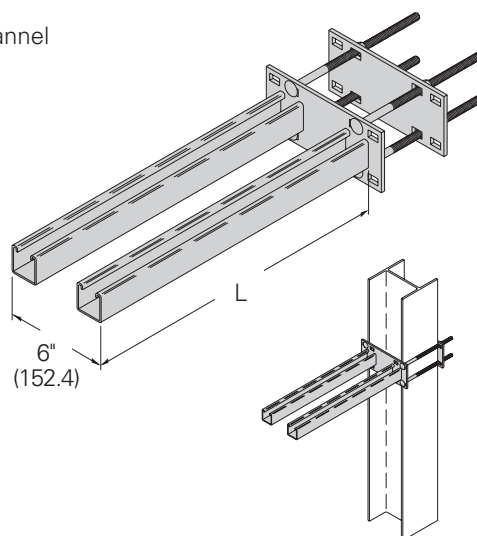


## B409DB Series Solar Bracket

- Safety Factor of 2.5
- Includes: (1) Channel Bracket Plate - 1/4" x 3 1/2" x 7 3/4" with welded channel  
(1) Back Plate - 1/4" x 3 1/2" x 7 3/4"  
(4) 3/8"-16 x 8 1/2" Square Neck Carriage Bolts  
(4) 3/8"-16 Serrated Flange Hex Nuts
- Fits 4" (101mm) to 6 1/2" (165mm) wide supports
- Standard finishes: ZN, HDG

| Part No.         | L<br>In. mm | Uniform Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|------------------|-------------|-------------------------|------------------|
| <b>B409DB-12</b> | 12" (304.8) | 800 (3.56)              | 766 (347.4)      |
| <b>B409DB-18</b> | 18" (457.2) | 800 (3.56)              | 956 (433.6)      |

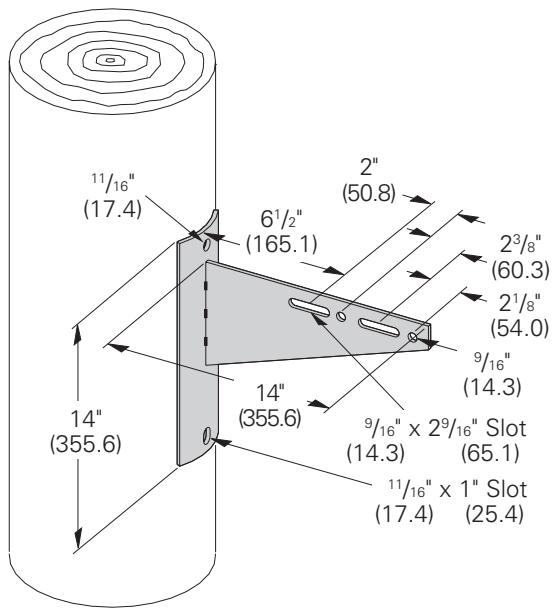
A single channel version and other lengths are available.  
Contact Eaton B-Line Division engineering for more information.



# Brackets

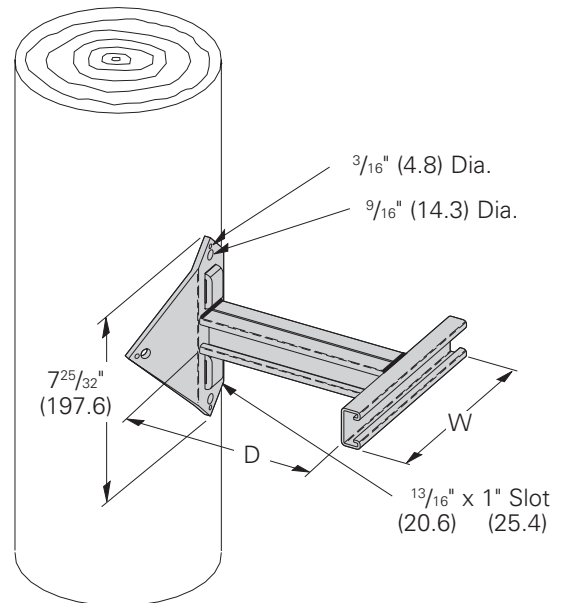
## B816

- Standard finishes: ZN, HDG



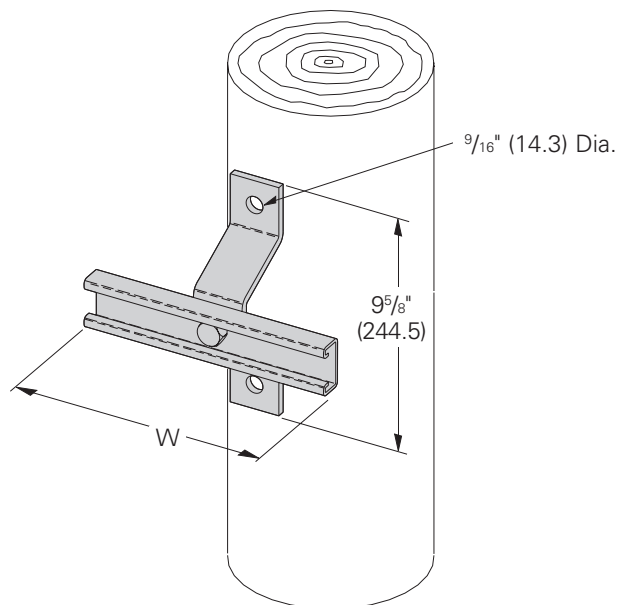
## B852S-\*.\*\*\*

- \*Specify Width: W = 8, 12, 16
- \*\*Specify Depth: D = 6, 8, 10, 12, 16, 18, 24
- $\frac{13}{16}"$  (20.6mm) x 1" (25.4mm) banding slots for steel band
- Standard finishes: ZN, HDG



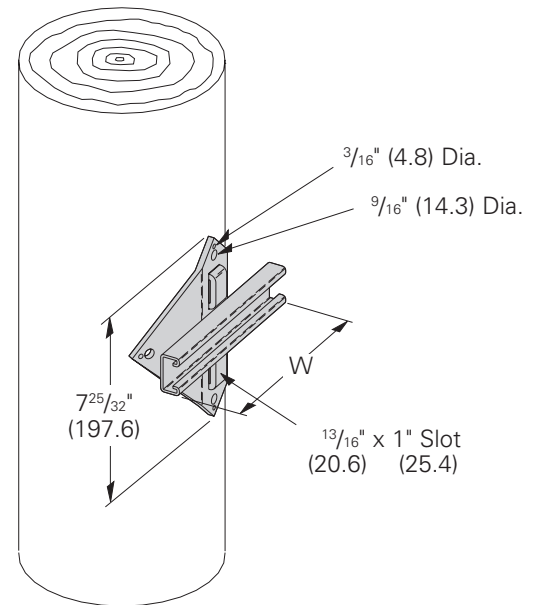
## B802D-\*

- \*Specify Width: W = 8, 12, 16
- Standard finishes: ZN, HDG



## B810-\*

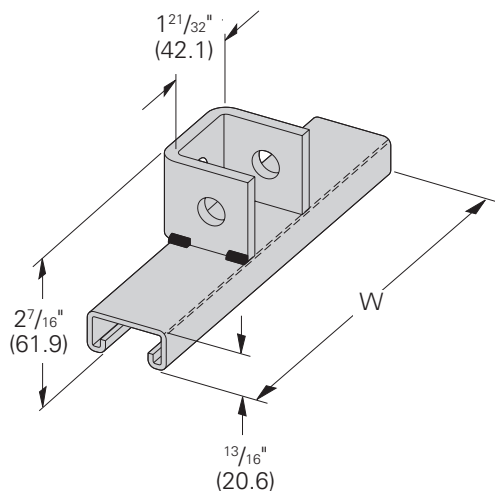
- \*Specify Width: W = 8, 12, 16
- $\frac{13}{16}"$  (20.6mm) x 1" (25.6mm) banding slots for steel band
- Standard finishes: ZN, HDG



Reference page 106 for general fitting and standard finish specifications.

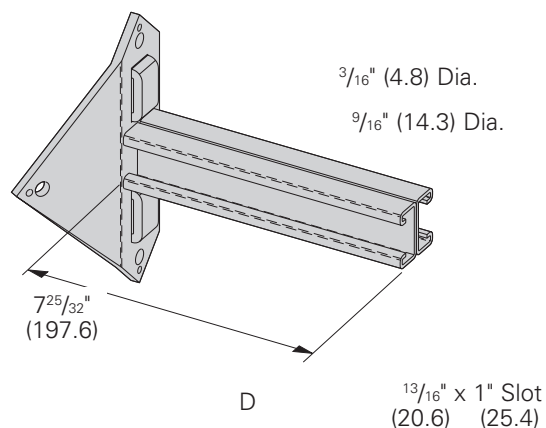
## B811-\*

- \*Specify Width: W = 8, 12, 16
- Can be attached directly to B809 & B812
- Standard finishes: ZN, HDG



## B812-\*

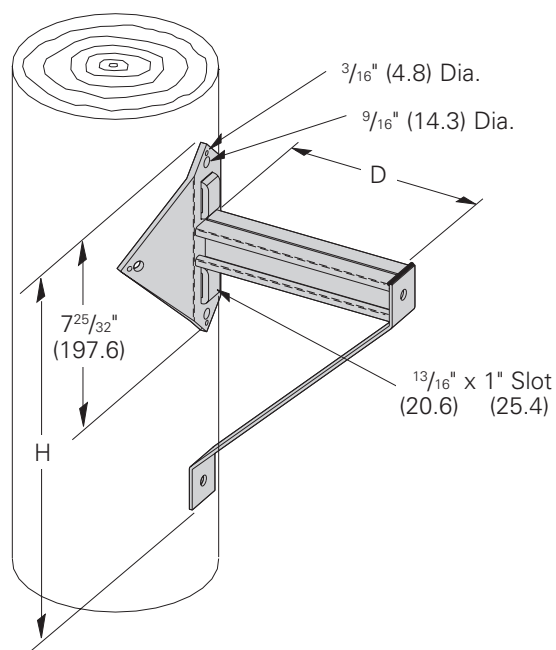
- \*Specify Depth: D = 6, 8, 12, 16, 18, 24
- 13/16" (20.6mm) x 1" (25.4mm) banding slots for steel band
- Standard finishes: ZN, HDG



## B809B-\*

- \*Specify Depth: D = 6, 8, 10, 12, 16, 18, 24
- 13/16" (20.6mm) x 1" (25.4mm) banding slots for steel band
- Standard finishes: ZN, HDG

| Part No.        | D   |         | H       |         |
|-----------------|-----|---------|---------|---------|
|                 | In. | mm      | In.     | mm      |
| <b>B809B-6</b>  | 6"  | (152.4) | 12 3/4" | (323.9) |
| <b>B809B-8</b>  | 8"  | (203.2) | 14 3/4" | (374.7) |
| <b>B809B-10</b> | 10" | (254.0) | 16 3/4" | (425.5) |
| <b>B809B-12</b> | 12" | (304.8) | 18 3/4" | (476.2) |
| <b>B809B-16</b> | 16" | (406.4) | 22 3/4" | (577.8) |
| <b>B809B-18</b> | 18" | (457.2) | 24 3/4" | (628.6) |
| <b>B809B-24</b> | 24" | (609.6) | 27 3/4" | (704.8) |

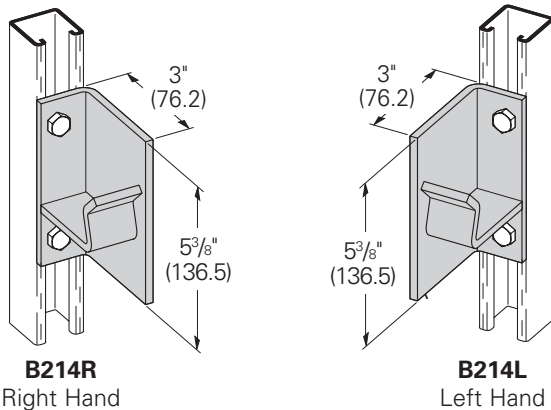


Reference page 106 for general fitting and standard finish specifications.

# Miscellaneous fittings

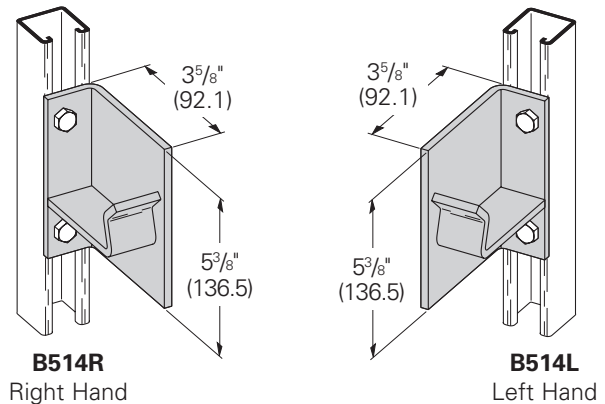
## B214 R&L Reel Rack Support for 1 1/4" (32) Pipe

- Standard finishes: ZN, GRN
- Wt./C 200 Lbs. (90.7 kg)



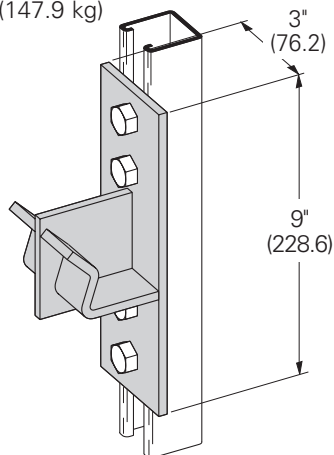
## B514 R&L Reel Rack Support for 2" (50) Pipe

- Standard finishes: ZN, GRN
- Wt./C 246 Lbs. (111.6 kg)



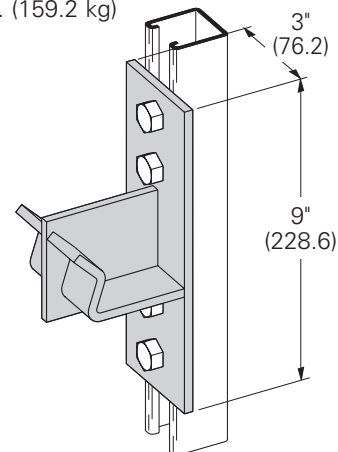
## B475 Double Reel Rack Support on Single Channel for 1 1/4" (32) Pipe

- Standard finishes: ZN, GRN
- Wt./C 326 Lbs. (147.9 kg)



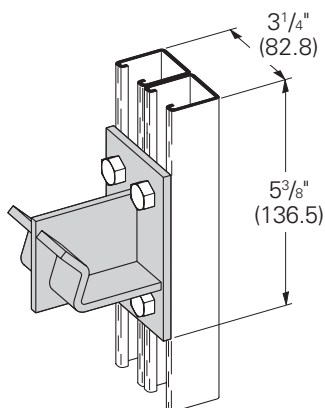
## B473 Double Reel Rack Support on Single Channel for 2" (50) Pipe

- Standard finishes: ZN, GRN
- Wt./C 351 Lbs. (159.2 kg)



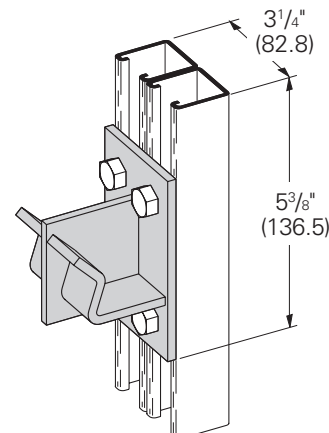
## B474 Double Reel Rack Support on Double Channel for 1 1/4" (32) Pipe

- Standard finishes: ZN, GRN
- Wt./C 257 Lbs. (116.6 kg)



## B472 Double Reel Rack Support on Double Channel for 2" (50) Pipe

- Standard finishes: ZN, GRN
- Wt./C 299 Lbs. (135.6 kg)



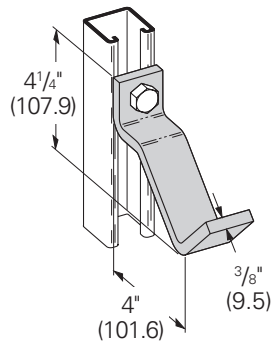
Reference page 106 for general fitting and standard finish specifications.



### B438

#### Pipe Support Bracket

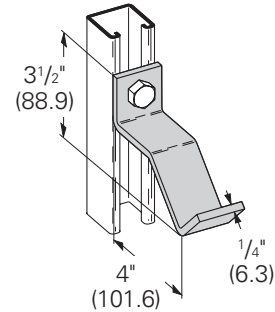
- Standard finishes: ZN, GRN
- Material: ASTM A36
- Wt./C 132 Lbs. (59.9 kg)



### B439

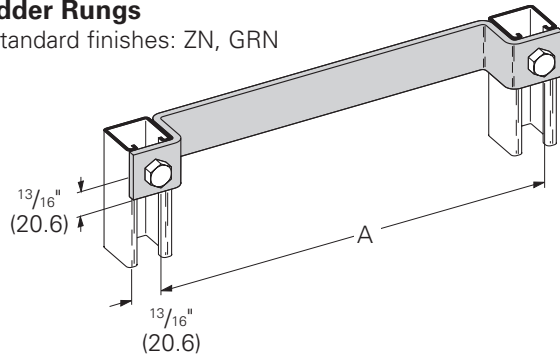
#### Pipe Support Bracket

- Standard finishes: ZN, GRN
- Wt./C 88 Lbs. (39.9 kg)



### B411 Series Ladder Rungs

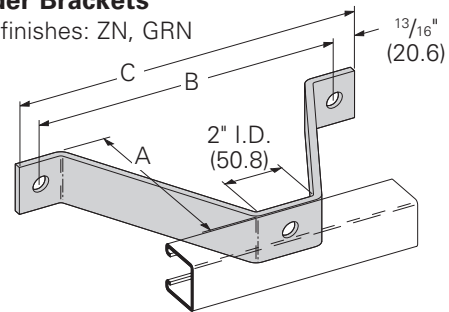
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm | Wt./C<br>Lbs. kg |
|----------|-------------|------------------|
| B411-12  | 12" (304.8) | 176 (79.8)       |
| B411-15  | 15" (381.0) | 202 (91.6)       |
| B411-18  | 18" (457.2) | 234 (106.1)      |

### B381-B385 Wall Ladder Brackets

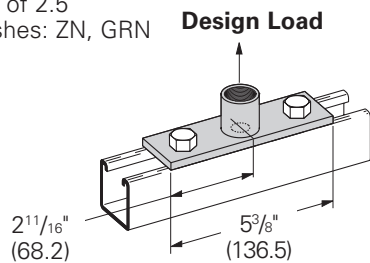
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm     | B<br>In. mm | C<br>In. mm     | Wt./C<br>Lbs. kg |
|----------|-----------------|-------------|-----------------|------------------|
| B381     | 2 3/8" (60.3)   | 6" (152.4)  | 7 5/8" (193.7)  | 110 (49.9)       |
| B382     | 4 3/8" (111.1)  | 8" (203.2)  | 9 5/8" (244.5)  | 164 (74.4)       |
| B383     | 6 3/8" (161.9)  | 10" (254.0) | 11 5/8" (295.3) | 200 (90.7)       |
| B384     | 8 3/8" (212.7)  | 12" (304.8) | 13 5/8" (346.1) | 253 (114.7)      |
| B385     | 10 3/8" (263.5) | 14" (355.6) | 15 5/8" (396.9) | 318 (144.2)      |

### B587-1/2, 3/4 & 1 Pipe Coupling Fitting

- Safety Factor of 2.5
- Standard finishes: ZN, GRN



| Part No. | For<br>Pipe Size<br>In. mm | Wt./C<br>Lbs. kg | Design<br>Load<br>Lbs. kN |
|----------|----------------------------|------------------|---------------------------|
| B587-1/2 | 1/2" (15)                  | 77 (34.9)        | 1000 (4.45)               |
| B587-3/4 | 3/4" (20)                  | 84 (38.1)        | 1400 (6.23)               |
| B587-1   | 1" (25)                    | 105 (47.6)       | 1900 (8.45)               |

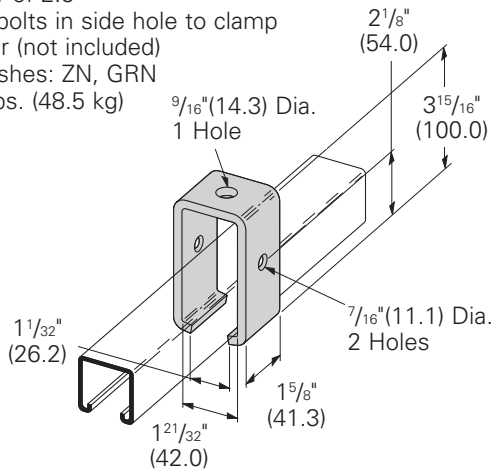
Reference page 106 for general fitting and standard finish specifications.

# Miscellaneous fittings

## B349

### Trolley Beam Support

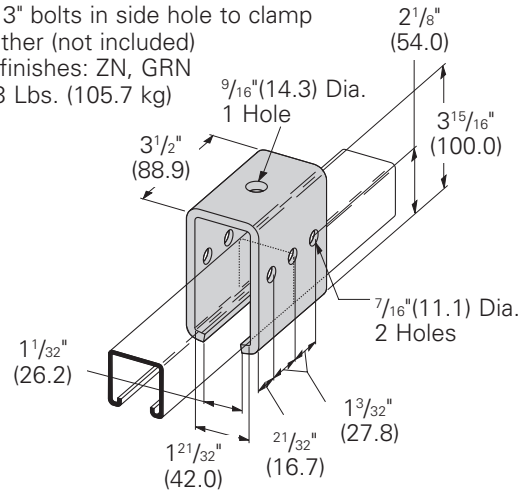
- Design Load 1200 Lbs. (5.34 kN)
- Safety Factor of 2.5
- Use  $\frac{3}{8}$ " x 3" bolts in side hole to clamp strut together (not included)
- Standard finishes: ZN, GRN
- Wt./C 107 Lbs. (48.5 kg)



## B350

### Trolley Beam Joint Support

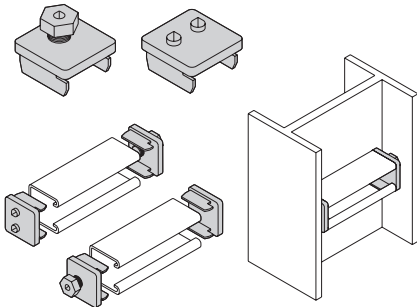
- Design Load 1200 Lbs. (5.34 kN)
- Use  $\frac{3}{8}$ " x 3" bolts in side hole to clamp strut together (not included)
- Standard finishes: ZN, GRN
- Wt./C 233 Lbs. (105.7 kg)



## B614

### Column Support for B22

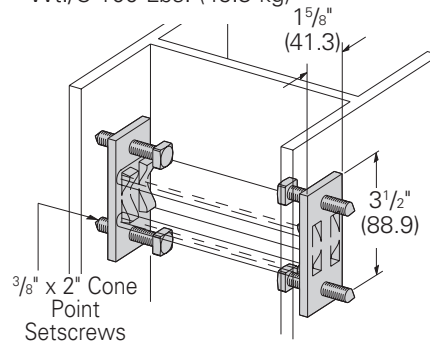
- Quick installation (one bolt to tighten)
- Design Load 800 Lbs. (3.56 kN) Slip with Safety Factor of 3
- Use with B22 and B24 Channel
- Sold in pairs
- Standard finish: ZN
- Wt./C 50 Lbs. (22.6 kg)



## B613

### Column Support for B22

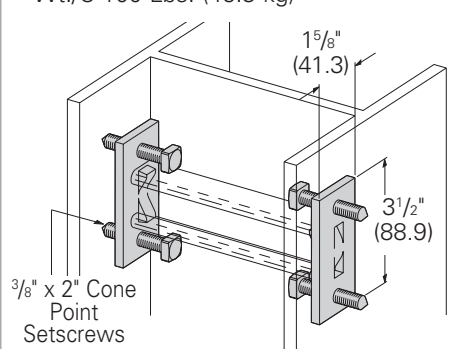
- Design Load 800 Lbs. (3.56 kN) Slip with Safety Factor of 3
- Use with B22 and B24 Channel
- Setscrews to be torqued to 19 ft./Lbs
- Sold in pairs
- Standard finishes: ZN, GRN, HDG
- Wt./C 100 Lbs. (45.3 kg)



## B613A

### Column Support for B52

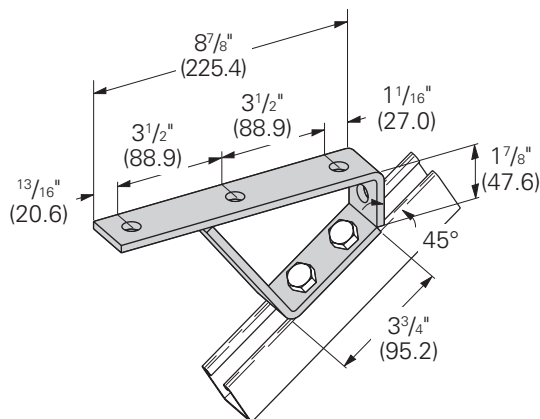
- Design Load 800 Lbs. (3.56 kN) Slip with Safety Factor of 3
- Use with B52 and B54 Channel
- Setscrews to be torqued to 19 ft./Lbs
- Sold in pairs
- Standard finishes: ZN, GRN, HDG
- Wt./C 100 Lbs. (45.3 kg)



## B560

### 45° Stair Support

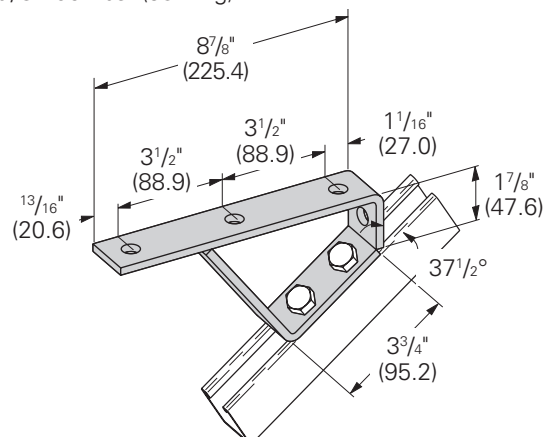
- Standard finishes: ZN, GRN
- Wt./C 220 Lbs. (99.8 kg)



## B562

### 37 1/2° Stair Support

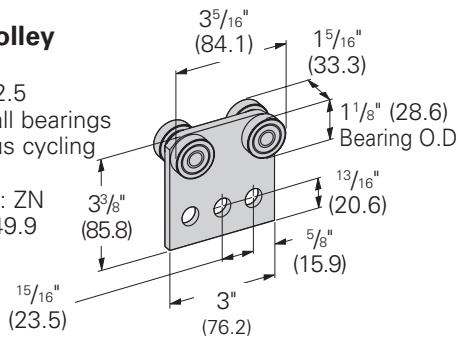
- Standard finishes: ZN, GRN
- Wt./C 206 Lbs. (93.4 kg)



Reference page 106 for general fitting and standard finish specifications.

## B376 Four Bearing Trolley Assembly

- Safety Factor of 2.5
- Stainless steel ball bearings
- Not for continuous cycling applications
- Standard finishes: ZN
- Wt./C 110 Lbs. (49.9 kg)

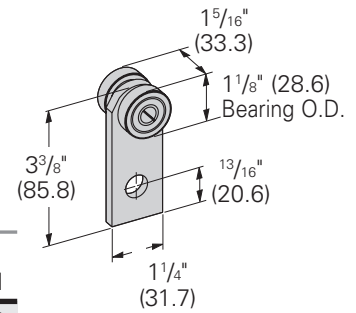


| Design Load in B22 |        |      |
|--------------------|--------|------|
| Lbs.               | kN     | RPM  |
| 300                | (1.33) | @600 |
| 450                | (2.00) | @300 |
| 600                | (2.67) | @100 |

Design Load

## B377 Two Bearing Trolley Assembly

- Safety Factor of 2.5
- Stainless steel ball bearings
- Not for continuous cycling applications
- Standard finishes: ZN
- Wt./C 48 Lbs. (21.8 kg)

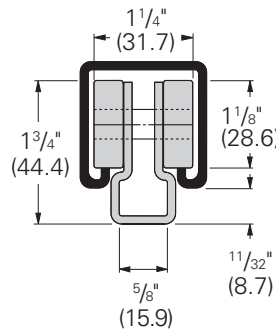


| Design Load in B22 |        |      |
|--------------------|--------|------|
| Lbs.               | kN     | RPM  |
| 150                | (.67)  | @600 |
| 225                | (1.00) | @300 |
| 437                | (1.94) | @100 |

Design Load

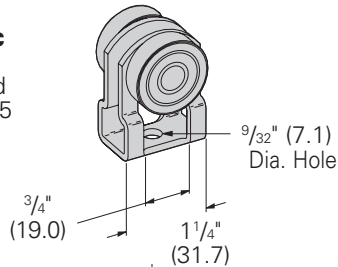
## B477 Two Bearing Light Duty Trolley Assembly

- Design Load 50 Lbs. (.22 kN)
- Safety Factor of 2.5
- Stainless steel ball bearings
- Not for continuous cycling applications
- Material: 12 Gauge (2.6) ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN
- Wt./C 30 Lbs. (13.6 kg)



### B477P With Plastic Bearings

- Design Load 10 Lbs. (.045 kN)



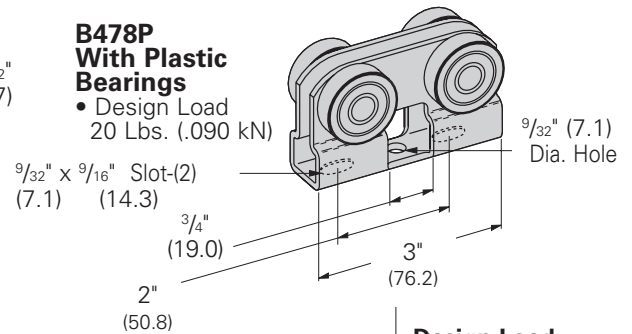
Design Load

## B478 Four Bearing Light Duty Trolley Assembly

- Design Load 100 Lbs. (.44 kN)
- Safety Factor of 2.5
- Stainless steel ball bearings
- Not for continuous cycling applications
- Material: 12 Gauge (2.6) ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN
- Wt./C 68 Lbs. (30.8 kg)

### B478P With Plastic Bearings

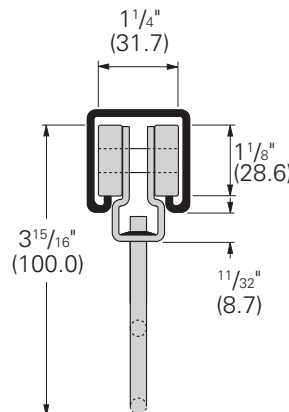
- Design Load 20 Lbs. (.090 kN)



Design Load

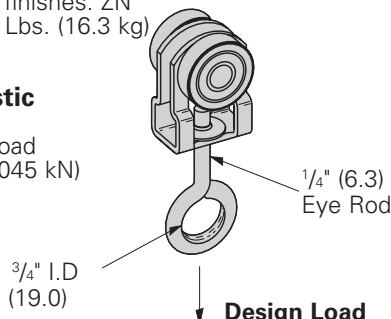
## B477H Two Bearing Light Duty Trolley Assembly with Eye Hook

- Design Load 50 Lbs. (.22 kN)
- Safety Factor of 2.5
- Stainless steel ball bearings
- Not for continuous cycling applications
- Material: 12 Gauge (2.6) ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN
- Wt./C 36 Lbs. (16.3 kg)



### B477HP With Plastic Bearings

- Design Load 10 Lbs. (.045 kN)



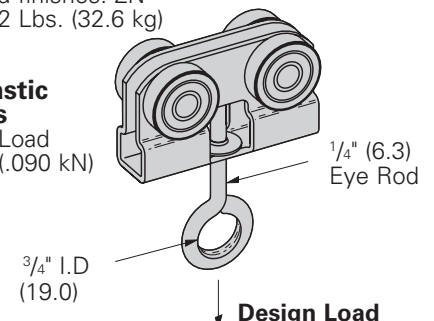
Design Load

## B478H Four Bearing Light Duty Trolley Assembly with Eye Hook

- Design Load 100 Lbs. (.44 kN)
- Safety Factor of 2.5
- Stainless steel ball bearings
- Not for continuous cycling applications
- Material: 12 Gauge (2.6) ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN
- Wt./C 72 Lbs. (32.6 kg)

### B478HP With Plastic Bearings

- Design Load 20 Lbs. (.090 kN)



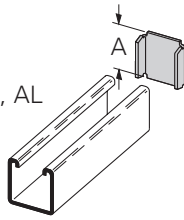
Design Load

Reference page 106 for general fitting and standard finish specifications.

# Miscellaneous fittings

## B203-B206 & B220-B223 Channel End Caps Type X

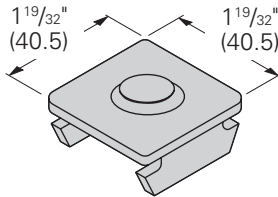
- Material: ASTM A1011 CS Type B
- Standard finishes: ZN, GRN, HDG, SS4, AL



| Part No. | Use With | A<br>In. mm  | Wt./C<br>Lbs. kg |
|----------|----------|--------------|------------------|
| B203     | B42      | 1.015 (25.8) | 6 (2.7)          |
| B204     | B54      | .827 (21.0)  | 5 (2.2)          |
| B205     | B22      | 1.640 (41.6) | 10 (4.5)         |
| B206     | B32      | 1.390 (35.3) | 8 (3.6)          |
| B220     | B52      | .827 (21.0)  | 4 (1.8)          |
| B221     | B12      | 2.452 (62.3) | 15 (6.8)         |
| B222     | B11      | 3.265 (82.9) | 20 (9.1)         |
| B223     | B24      | 1.640 (41.6) | 10 (4.5)         |

## B287 & B288 Channel End Caps

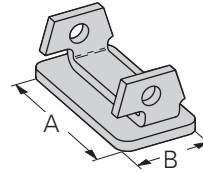
- Material: ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN, GRN



| Part No. | Use With | Wt./C<br>Lbs. kg |
|----------|----------|------------------|
| B287     | B22      | 13 (5.9)         |
| B288     | B24      | 14 (6.3)         |

## B283-B286 Channel End Caps

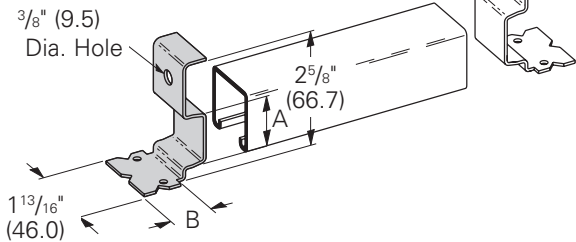
- Material: ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN, GRN



| Part No. | Use With | A<br>In. mm     | B<br>In. mm     | Wt./C<br>Lbs. kg |
|----------|----------|-----------------|-----------------|------------------|
| B283     | B52      | 1 19/32" (40.5) | 25/32" (19.8)   | 6 (2.7)          |
| B284     | B54      | 1 19/32" (40.5) | 25/32" (19.8)   | 6 (2.7)          |
| B285     | B22      | 1 19/32" (40.5) | 1 19/32" (40.5) | 13 (5.9)         |
| B286     | B24      | 1 19/32" (40.5) | 1 19/32" (40.5) | 14 (6.3)         |

## B3322, B3332, B3342, B3352 Anchor End Caps Type Y

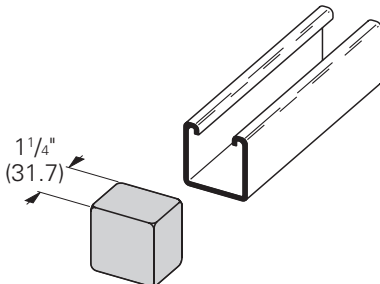
- Material: ASTM A1011 33,000 PSI min. yield
- Standard finishes: ZN



| Part No. | Use With | A<br>In. mm  | B<br>In. mm    | Wt./C<br>Lbs. kg |
|----------|----------|--------------|----------------|------------------|
| B3322    | B22I     | 1.270 (32.2) | 1 3/16" (30.2) | 15 (6.8)         |
| B3332    | B32I     | 1.000 (25.4) | 1 3/16" (30.2) | 15 (6.8)         |
| B3342    | B42I     | .645 (16.4)  | 1 1/4" (31.8)  | 15 (6.8)         |
| B3352    | B52I     | .460 (11.7)  | 1 5/16" (33.3) | 15 (6.8)         |

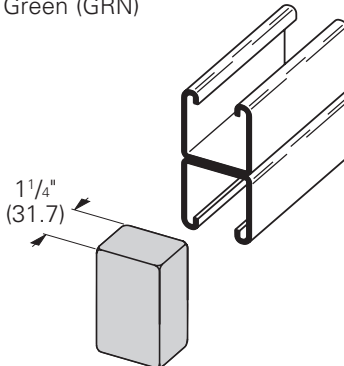
## B822 Plastic End Cap for B22 & B24

- Material: Polyvinyl Chloride (PVC/Vinyl)
- Withstands intermittent temperatures up to 350°F (177°C) and 200°F (93°C) continuous
- Wt./C 3 Lbs. (1.3 kg)
- Available in colors: White (W), Yellow (Y), Black (BLK), Gray (GRY), Green (GRN)



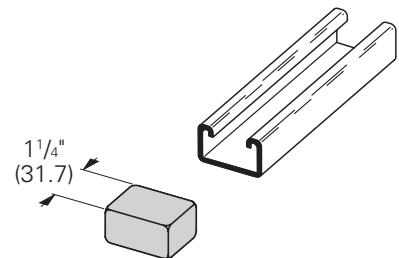
## B822A Plastic End Cap for B22A & B11

- Material: Polyvinyl Chloride (PVC/Vinyl)
- Withstands intermittent temperatures up to 350°F (177°C) and 200°F (93°C) continuous
- Wt./C 5 Lbs. (2.2 kg)
- Available in colors: White (W), Yellow (Y), Black (BLK), Gray (GRY), Green (GRN)



## B852 Plastic End Cap for B52 & B54

- Material: Polyvinyl Chloride (PVC/Vinyl)
- Withstands intermittent temperatures up to 350°F (177°C) and 200°F (93°C) continuous
- Wt./C 2.5 Lbs. (1.1 kg)
- Available in colors: White (W), Yellow (Y), Black (BLK), Gray (GRY), Green (GRN)

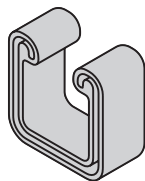


Reference page 106 for general fitting and standard finish specifications.

## B823

### Profile End Caps

- Material: Polyvinyl Chloride (PVC/Vinyl)
- Withstands intermittent temperatures up to 350°F (177°C) and 200°F (93°C) continuous
- Available in colors: White (W), Yellow (Y), Black (BLK), Gray (GRY), Green (GRN)



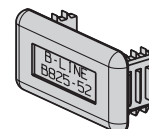
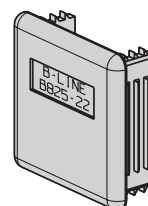
Approx. 3/4" deep  
(19.0)

| Part No.        | Fits<br>Channel Sizes | Wt./C<br>Lbs. kg |
|-----------------|-----------------------|------------------|
| <b>B823-22A</b> | B22A, B24A, B26A      | 6.9 (3.1)        |
| <b>B823-22</b>  | B22, B24, B26         | 4.1 (1.8)        |
| <b>B823-42</b>  | B42                   | 3.8 (1.7)        |
| <b>B823-52</b>  | B52, B54, B56         | 3.5 (1.6)        |

## B825

### Plastic End Caps

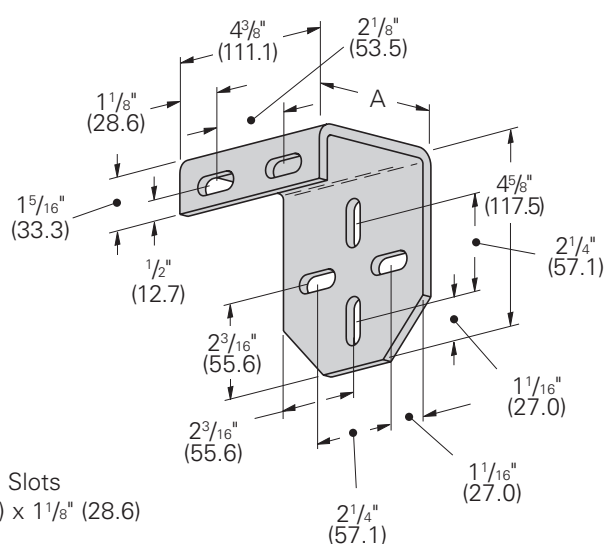
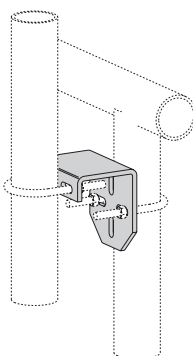
- Material: Polyurethane
- Available in colors: Gray (GRY), Green (GRN)



| Part No.       | Fits<br>Channel Sizes | Wt./C<br>Lbs. kg |
|----------------|-----------------------|------------------|
| <b>B825-22</b> | B22 & B24             | 2.0 (0.9)        |
| <b>B825-52</b> | B52 & B54             | 1.0 (0.4)        |

## B408SLBVNS Series Stand-Off Brackets

- Material: 1/4" (6.3)
- Standard Finishes: HDG, ZN, GRN
- For pipe or rigid conduit sizes of 1 1/2" (40) and 2" (50) use with B501 Series 'U'-Bolts (see page 53)
- For strut channels 1 5/8" (41.3) wide use with B500 Series Square 'U'-Bolts (see page 53)
- Hardware is not included



| Part No.           | A<br>In. (mm) | Wt./C<br>Lbs. kg |
|--------------------|---------------|------------------|
| <b>B408SLBVNS</b>  | 3 1/2" (88.9) | 189 (85.7)       |
| <b>B408SLBVNS1</b> | 3" (76.2)     | 220 (99.8)       |
| <b>B408SLBVNS2</b> | 2" (50.8)     | 236 (107.0)      |

Reference page 106 for general fitting and standard finish specifications.

# Beam clamps



Our beam attachments and pipe supports offered in this section are designed to provide supports without drilling or welding. A complete selection of beam clamps, pipe clamps, rollers, supports and accessories are designed for use with our channels and offer many installation advantages.

## Materials & Finishes (Unless otherwise noted)

Pipe clamps, pipe hangers, beam clamps, brackets, and rollers are made from low carbon steel strips, plates or rod unless noted.

**Note:** A minimum order may apply on special material and finishes.

## Load Data

The load data published includes a safety factor of 5.0 unless noted (safety factor = ratio of ultimate load to the design load).

## Recommended Torque For Setscrews (unless noted)

See chart on page 106 for recommended torquing of bolts (not setscrews).

| Finish Code | Finish                   | Specification                               |
|-------------|--------------------------|---------------------------------------------|
| PLN         | Plain                    | ASTM A1018 Gr. 33<br>ASTM A1011 SS Grade 33 |
| ZN          | Electro-Plated Zinc      | ASTM B633 SC3 Type III<br>or ASTM A653      |
| GRN         | DURA GREEN™              |                                             |
| -           | Malleable Iron           | ASTM A47 Gr. 32510                          |
| HDG         | Hot-Dipped Galvanized    | ASTM A123                                   |
| CZ          | Chromium Zinc            | ASTM F1136 Gr. 3                            |
| SS4         | Stainless Steel Type 304 | ASTM A240                                   |
| SS6         | Stainless Steel Type 316 | ASTM A240                                   |
| AL          | Aluminum                 | ASTM B209                                   |

| Setscrew Size | 1/4"-20 | 3/8"-16 | 1/2"-13 |
|---------------|---------|---------|---------|
| Foot/Lbs.     | 4       | 5       | 11      |
| Nm            | 5       | 7       | 15      |

| Setscrew Size | 5/8"-11 | 3/4"-10 |
|---------------|---------|---------|
| Foot/Lbs.     | 21      | 34      |
| Nm            | 28      | 46      |

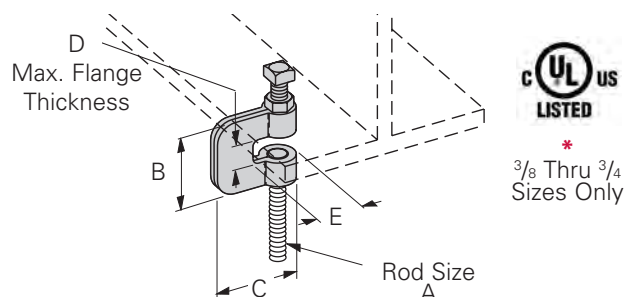
## Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.



## B351L Steel C-Clamp with Locknut

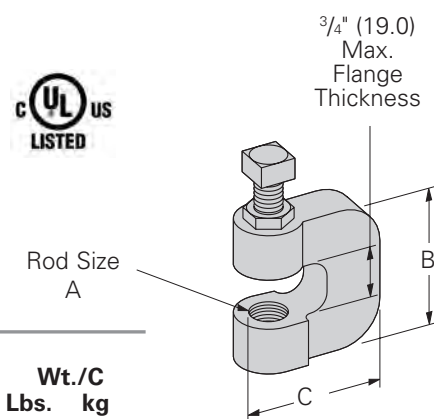
- Safety Factor of 5
- Setscrew and locknut included
- When Retaining Strap is required, order B3362, B3363 or B3365 separately
- Standard finishes: ZN, SS4, PLN



| Part Number With Locknut             | Rod Size A                       | B In. mm                               | C In. mm                               | D In. mm                             | E In. mm                               | Design Load Lbs. kN | Wt./C Lbs. kg |
|--------------------------------------|----------------------------------|----------------------------------------|----------------------------------------|--------------------------------------|----------------------------------------|---------------------|---------------|
| B351L- <sup>3</sup> / <sub>8</sub> * | <sup>3</sup> / <sub>8</sub> "-16 | 2 <sup>3</sup> / <sub>8</sub> " (60.3) | 2 <sup>3</sup> / <sub>8</sub> " (60.3) | <sup>3</sup> / <sub>4</sub> " (19.0) | 1 <sup>3</sup> / <sub>8</sub> " (34.9) | 230 (1.03)          | 41 (18.6)     |
| B351L- <sup>1</sup> / <sub>2</sub> * | <sup>1</sup> / <sub>2</sub> "-13 | 2 <sup>3</sup> / <sub>8</sub> " (60.3) | 2 <sup>3</sup> / <sub>8</sub> " (60.3) | <sup>3</sup> / <sub>4</sub> " (19.0) | 1 <sup>3</sup> / <sub>8</sub> " (34.9) | 380 (1.71)          | 41 (18.6)     |
| B351L- <sup>5</sup> / <sub>8</sub> * | <sup>5</sup> / <sub>8</sub> "-11 | 2 <sup>3</sup> / <sub>8</sub> " (60.3) | 2 <sup>1</sup> / <sub>4</sub> " (57.1) | <sup>3</sup> / <sub>4</sub> " (19.0) | 1 <sup>3</sup> / <sub>8</sub> " (34.9) | 550 (2.47)          | 60 (27.2)     |
| B351L- <sup>3</sup> / <sub>4</sub> * | <sup>3</sup> / <sub>4</sub> "-10 | 2 <sup>3</sup> / <sub>8</sub> " (60.3) | 3 <sup>1</sup> / <sub>4</sub> " (82.5) | <sup>3</sup> / <sub>4</sub> " (19.0) | 1 <sup>3</sup> / <sub>8</sub> " (34.9) | 630 (2.83)          | 71 (32.2)     |
| B351L- <sup>7</sup> / <sub>8</sub>   | <sup>7</sup> / <sub>8</sub> "-9  | 3" (76.2)                              | 3 <sup>1</sup> / <sub>4</sub> " (82.5) | 1" (25.4)                            | 1 <sup>7</sup> / <sub>8</sub> " (47.6) | 1200 (5.34)         | 184 (83.4)    |

## B3036L C-Clamp with Locknut

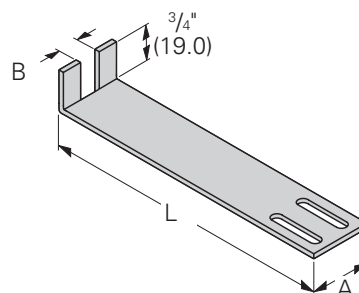
- Safety Factor of 5
- When Retaining Strap is required, order B3363 or B3364 separately
- Setscrew and locknut included
- Material: Malleable iron
- Standard finishes: ZN, PLN



| Part Number With Locknut            | Rod Size A                       | B In. mm                               | C In. mm                               | Design Load Lbs. kN | Wt./C Lbs. kg |
|-------------------------------------|----------------------------------|----------------------------------------|----------------------------------------|---------------------|---------------|
| B3036L- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 | 1 <sup>3</sup> / <sub>4</sub> " (44.4) | 1 <sup>3</sup> / <sub>4</sub> " (44.4) | 300 (0.89)          | 29 (13.1)     |
| B3036L- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 | 1 <sup>3</sup> / <sub>4</sub> " (44.4) | 1 <sup>3</sup> / <sub>4</sub> " (44.4) | 380 (1.69)          | 28 (12.7)     |
| B3036L- <sup>5</sup> / <sub>8</sub> | <sup>5</sup> / <sub>8</sub> "-11 | 2" (50.8)                              | 1 <sup>7</sup> / <sub>8</sub> " (47.6) | 530 (2.36)          | 55 (24.9)     |
| B3036L- <sup>3</sup> / <sub>4</sub> | <sup>3</sup> / <sub>4</sub> "-10 | 2" (50.8)                              | 2" (50.8)                              | 530 (2.36)          | 72 (32.6)     |

## B3362 thru B3365 Retaining Strap

- †When ordering specify L (Length) as a suffix to the part number
- Material: 14 gauge (1.9)
- Standard finishes: GALV, SS4



| Part No. | 6" (152.4) Lbs. kg | 8" (203.2) Lbs. kg | 10" (254.0) Lbs. kg | 12" (304.8) Lbs. kg | A In. mm                               | B In. mm                               | For Use With                                                                                                                     |
|----------|--------------------|--------------------|---------------------|---------------------|----------------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| B3362†   | 17 (7.7)           | 24 (10.9)          | 31 (14.0)           | 38 (17.2)           | 1 <sup>1</sup> / <sub>4</sub> " (31.7) | <sup>7</sup> / <sub>16</sub> " (11.1)  | B351- <sup>3</sup> / <sub>8</sub> & <sup>1</sup> / <sub>2</sub>                                                                  |
| B3363†   | 16 (7.2)           | 23 (10.4)          | 30 (13.6)           | 37 (16.8)           | 1 <sup>1</sup> / <sub>4</sub> " (31.7) | <sup>5</sup> / <sub>8</sub> " (15.9)   | B351- <sup>5</sup> / <sub>8</sub> & <sup>3</sup> / <sub>4</sub> B3036- <sup>3</sup> / <sub>8</sub> & <sup>1</sup> / <sub>2</sub> |
| B3364†   | 16 (7.2)           | 23 (10.4)          | 30 (13.6)           | 37 (16.8)           | 1 <sup>1</sup> / <sub>4</sub> " (31.7) | <sup>11</sup> / <sub>16</sub> " (17.4) | B3036- <sup>5</sup> / <sub>8</sub> & <sup>3</sup> / <sub>4</sub>                                                                 |
| B3365†   | 21 (9.5)           | 29 (13.1)          | 37 (16.8)           | 46 (20.8)           | 1 <sup>1</sup> / <sub>2</sub> " (38.1) | <sup>3</sup> / <sub>4</sub> " (19.0)   | B351- <sup>7</sup> / <sub>8</sub>                                                                                                |

† See note above.

Reference page 154 for general fitting and standard finish specifications.

# Beam clamps

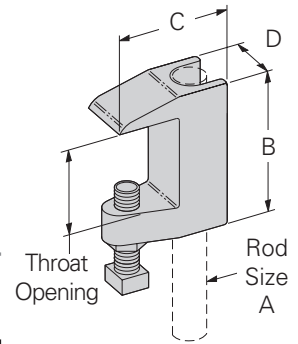
## B3033

### Reversible Wide Jaw Wedge C-Clamp (Malleable Iron)

- Safety Factor of 5
- Setscrew and locknut included
- Material: Malleable iron
- Standard finishes: HDG with ZN hardware, PLN



Throat Openings  
 $1\frac{1}{4}$ " (31.7) For  
 $\frac{3}{8}$  &  $\frac{1}{2}$  Sizes  
 $1\frac{5}{16}$ " (33.3) For  
 $\frac{5}{8}$  &  $\frac{3}{4}$  Sizes



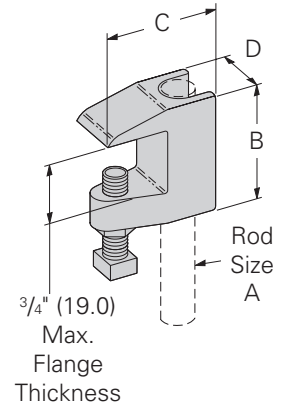
| Part No.             | Rod Size<br>A      | B                   |        | C                  |        | D                  |        | Design Load |        | Wt./C |        | UL Max.<br>Pipe Size<br>In. mm |
|----------------------|--------------------|---------------------|--------|--------------------|--------|--------------------|--------|-------------|--------|-------|--------|--------------------------------|
|                      |                    | In.                 | mm     | In.                | mm     | In.                | mm     | Lbs.        | kN     | Lbs.  | kg     |                                |
| B3033- $\frac{3}{8}$ | $\frac{3}{8}$ "-16 | 2 $\frac{1}{4}$ "   | (57.1) | 2"                 | (50.8) | 1 $\frac{1}{8}$ "  | (28.6) | 500         | (2.22) | 46    | (20.8) | 4" (100)                       |
| B3033- $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | 2 $\frac{5}{16}$ "  | (58.7) | 2 $\frac{3}{16}$ " | (55.5) | 1 $\frac{1}{4}$ "  | (31.7) | 810         | (3.60) | 64    | (29.0) | 8" (200)                       |
| B3033- $\frac{5}{8}$ | $\frac{5}{8}$ "-11 | 2 $\frac{5}{8}$ "   | (66.7) | 2 $\frac{1}{2}$ "  | (63.5) | 1 $\frac{3}{8}$ "  | (34.9) | 1000        | (4.48) | 116   | (52.6) | 8" (200)                       |
| B3033- $\frac{3}{4}$ | $\frac{3}{4}$ "-10 | 2 $\frac{11}{16}$ " | (68.3) | 2 $\frac{1}{2}$ "  | (63.5) | 1 $\frac{7}{16}$ " | (36.5) | 1400        | (6.22) | 140   | (63.5) | 10" (250)                      |

## B3034

### Wedge C-Clamp

- Safety Factor of 5
- $\frac{3}{4}$ " (19.0) Max. flange thickness
- Setscrew and locknut included
- Material: Malleable iron
- Standard finishes: HDG with ZN hardware, PLN

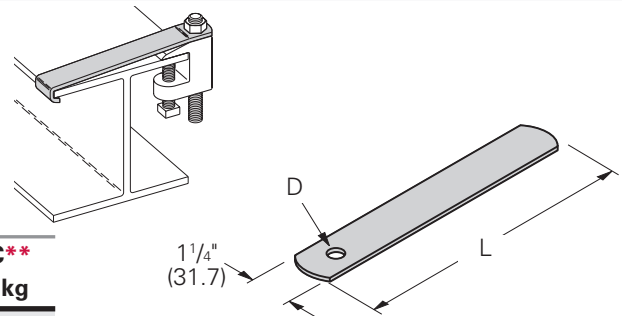
Note:  
 $\frac{3}{8}$  &  $\frac{1}{2}$ " Sizes  
 Are Reversible  
 Style



| Part No.               | Rod Size<br>A      | B                   |        | C                  |        | D                  |        | Design Load |        | Wt./C |        | UL Max.<br>Pipe Size<br>In. mm |
|------------------------|--------------------|---------------------|--------|--------------------|--------|--------------------|--------|-------------|--------|-------|--------|--------------------------------|
|                        |                    | In.                 | mm     | In.                | mm     | In.                | mm     | Lbs.        | kN     | Lbs.  | kg     |                                |
| B3034- $\frac{3}{8}$ * | $\frac{3}{8}$ "-16 | 1 $\frac{5}{8}$ "   | (41.3) | 2"                 | (50.8) | $\frac{7}{8}$ "    | (22.2) | 560         | (2.49) | 54    | (24.5) | 4" (100)                       |
| B3034- $\frac{1}{2}$ * | $\frac{1}{2}$ "-13 | 1 $\frac{13}{16}$ " | (46.0) | 2 $\frac{3}{16}$ " | (55.5) | 1 $\frac{3}{16}$ " | (30.2) | 810         | (3.60) | 51    | (23.1) | 8" (200)                       |
| B3034- $\frac{5}{8}$   | $\frac{5}{8}$ "-11 | 1 $\frac{3}{4}$ "   | (44.5) | 2 $\frac{1}{8}$ "  | (54.0) | 1 $\frac{1}{8}$ "  | (28.6) | 1000        | (4.48) | 70    | (31.7) | —                              |
| B3034- $\frac{3}{4}$   | $\frac{3}{4}$ "-10 | 2"                  | (50.8) | 2 $\frac{1}{4}$ "  | (57.2) | 1 $\frac{1}{8}$ "  | (28.6) | 1500        | (6.67) | 98    | (44.4) | —                              |

**Fig. 69 (Formerly B-Line B3367)**  
**Retaining Strap**

- Specify 'L' lengths required
- Minimum recommended return on strap is 1" (25.4)
- Material: Pre-Galvanized Steel
- Standard finishes: GALV



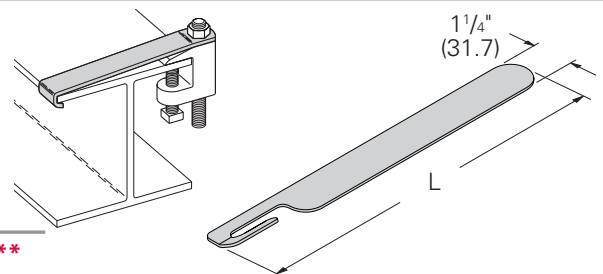
| Part No.             | Hole Dia. D<br>In. mm    | For Use                                                           | Wt./C**<br>Lbs. kg |
|----------------------|--------------------------|-------------------------------------------------------------------|--------------------|
|                      |                          |                                                                   |                    |
| 69- $\frac{3}{8}$ -L | $\frac{7}{16}$ " (30.1)  | B3033- $\frac{3}{8}$ , B3034- $\frac{3}{8}$ & 65XT- $\frac{3}{8}$ | 23.9 (10.8)        |
| 69- $\frac{1}{2}$ -L | $\frac{9}{16}$ " (30.1)  | B3033- $\frac{1}{2}$ & B3034- $\frac{1}{2}$                       | 23.6 (10.7)        |
| 69- $\frac{5}{8}$ -L | $\frac{11}{16}$ " (50.8) | B3033- $\frac{5}{8}$                                              | 23.2 (10.5)        |
| 69- $\frac{3}{4}$ -L | $\frac{13}{16}$ " (63.5) | B3033- $\frac{3}{4}$                                              | 22.7 (10.3)        |

\*\* Wt./C based on 6" (152.4) length.  
 For each additional inch in strap  
 length add 4.2 Lbs (1.9 kg) to Wt./C.

## Fig. 69R

### Retrofit Retaining Strap

- Specify 'L' lengths required
- Minimum recommended return on strap is 1" (25.4)
- Material: Pre-Galvanized Steel
- Standard finishes: GALV



| Part No.              | Slot Width<br>In. mm    | For Use                                                           | Wt./C**<br>Lbs. kg |
|-----------------------|-------------------------|-------------------------------------------------------------------|--------------------|
|                       |                         |                                                                   |                    |
| 69R- $\frac{3}{8}$ -L | $\frac{7}{16}$ " (30.1) | B3033- $\frac{3}{8}$ , B3034- $\frac{3}{8}$ & 65XT- $\frac{3}{8}$ | 22.9 (10.4)        |
| 69R- $\frac{1}{2}$ -L | $\frac{9}{16}$ " (30.1) | B3033- $\frac{1}{2}$ & B3034- $\frac{1}{2}$                       | 22.6 (10.2)        |

\*\* Wt./C based on 6" (152.4) length.  
 For each additional inch in strap  
 length add 4.2 Lbs (1.9 kg) to Wt./C.

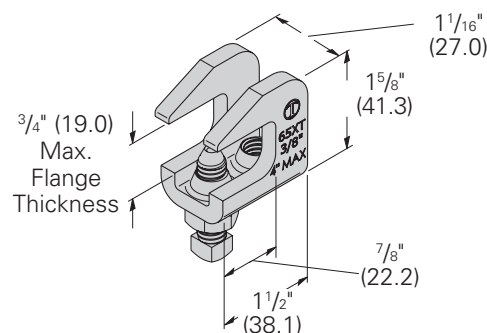
Reference page 154 for general fitting and standard finish specifications.

**Fig. 65XT**  
**Reversible C-Type Beam Clamp**

- Safety Factor of 5
- $\frac{3}{4}$ " (19.0) Max. flange thickness
- Setscrew and locknut included
- Maximum pipe size 4" (100)
- Design Load 610 Lbs. (2.71kN)
- Material: Steel
- Standard finishes: ZN, PLN



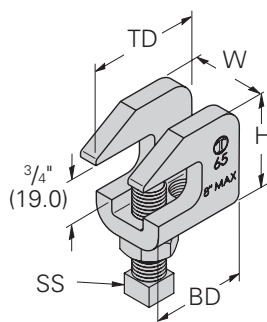
Rod Size  
 $\frac{3}{8}$ "-16



**Fig. 65**  
**Reversible Steel C-Type Beam Clamp -**  
 **$\frac{3}{4}$ " (19.0mm) Throat Opening**

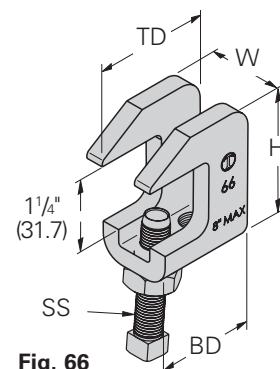
**Fig. 66**  
**Reversible Steel C-Type Beam Clamp -**  
 **$1\frac{1}{4}$ " (31.7mm) Throat Opening**

- Safety Factor of 5
- Maximum pipe size 4" (100) for  $\frac{3}{8}$ "-16 rods
- Maximum pipe size 8" (100) for  $\frac{1}{2}$ "-13 rods
- Material: Steel
- Standard finishes: ZN, PLN



**Fig. 65**

Setscrews and locknuts included



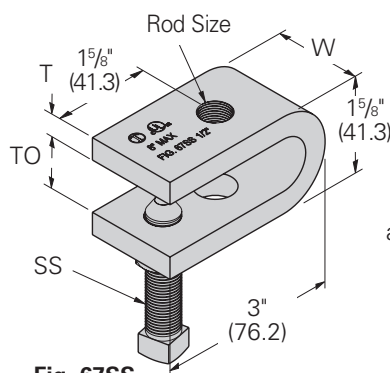
**Fig. 66**

| Part No.          | Rod Size           | Set Screw SS                          | TD in. (mm)               | BD in. (mm)               | H in. (mm)               | W in. (mm)              | Mac. Rec Load* Lbs. (kN) | Approx. Wt./100 Lbs. (kg) |
|-------------------|--------------------|---------------------------------------|---------------------------|---------------------------|--------------------------|-------------------------|--------------------------|---------------------------|
| 65- $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | $\frac{1}{2}$ "-13 x $\frac{13}{4}$ " | $1\frac{15}{16}$ " (49.2) | $1\frac{5}{8}$ " (41.3)   | $1\frac{7}{8}$ " (47.6)  | $1\frac{1}{4}$ " (31.7) | 1130 (31.7)              | 55 (24.9)                 |
| 65- $\frac{5}{8}$ | $\frac{5}{8}$ "-11 | $\frac{1}{2}$ "-13 x $\frac{13}{4}$ " | $1\frac{15}{16}$ " (49.2) | $1\frac{5}{8}$ " (41.3)   | $1\frac{7}{8}$ " (47.6)  | $1\frac{1}{4}$ " (31.7) | 1130 (31.7)              | 55 (24.9)                 |
| 66- $\frac{3}{8}$ | $\frac{3}{8}$ "-16 | $\frac{3}{8}$ "-16 x 2"               | $1\frac{1}{2}$ " (38.1)   | $1\frac{13}{32}$ " (35.7) | $2\frac{3}{16}$ " (55.6) | 1" (25.4)               | 610 (2.71)               | 28 (12.7)                 |
| 66- $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | $\frac{1}{2}$ "-13 x 2"               | 2" (50.8)                 | $1\frac{21}{32}$ " (42.0) | $2\frac{7}{16}$ " (61.9) | $1\frac{1}{4}$ " (31.7) | 1130 (31.7)              | 55 (24.9)                 |
| 66- $\frac{5}{8}$ | $\frac{5}{8}$ "-11 | $\frac{1}{2}$ "-13 x $\frac{13}{4}$ " | 2" (50.8)                 | $1\frac{21}{32}$ " (42.0) | $2\frac{7}{16}$ " (61.9) | $1\frac{1}{4}$ " (31.7) | 1130 (31.7)              | 55 (24.9)                 |

\* Maximum loads for clamp with set screw in up or down position.

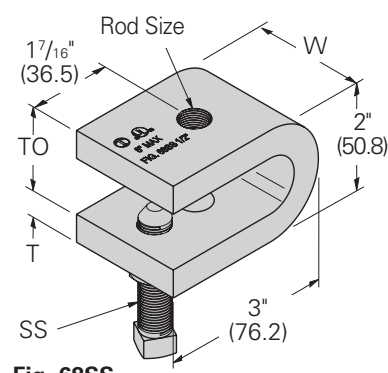
**Fig. 67SS & Fig. 68SS**  
**Reversible Stainless Steel**  
**C-Type Beam Clamp**

- Safety Factor of 5
- Maximum pipe size 4" (100) for  $\frac{3}{8}$ "-16 rods
- Maximum pipe size 8" (100) for  $\frac{1}{2}$ "-13 rods
- Material: Stainless Steel
- Standard finishes: ZN, PLN



**Fig. 67SS**

Setscrews and locknuts included



**Fig. 68SS**

| Part No.            | Rod Size           | Set Screw SS                          | T in. (mm)             | W in. (mm)              | TO in. (mm)             | Mac. Rec Load* Lbs. (kN) | Approx. Wt./100 Lbs. (kg) |
|---------------------|--------------------|---------------------------------------|------------------------|-------------------------|-------------------------|--------------------------|---------------------------|
| 67SS- $\frac{3}{8}$ | $\frac{3}{8}$ "-16 | $\frac{3}{8}$ "-16 x $1\frac{1}{2}$ " | $\frac{3}{8}$ " (9.6)  | 1" (25.4)               | $\frac{7}{8}$ " (22.2)  | 1500 (6.67)              | 68 (30.8)                 |
| 67SS- $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | $\frac{1}{2}$ "-13 x 2"               | $\frac{3}{8}$ " (9.6)  | $1\frac{1}{2}$ " (38.1) | $\frac{7}{8}$ " (22.2)  | 4050 (18.0)              | 107 (48.5)                |
| 68SS- $\frac{3}{8}$ | $\frac{3}{8}$ "-16 | $\frac{3}{8}$ "-16 x $1\frac{1}{2}$ " | $\frac{3}{8}$ " (9.6)  | $1\frac{1}{2}$ " (38.1) | $1\frac{1}{4}$ " (31.7) | 1500 (6.67)              | 84 (38.1)                 |
| 68SS- $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | $\frac{1}{2}$ "-13 x 2"               | $\frac{1}{2}$ " (12.7) | 2" (50.8)               | 1" (25.4)               | 4050 (18.0)              | 170 (77.1)                |

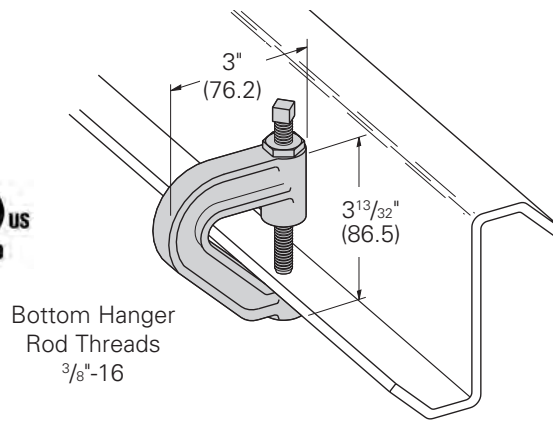
Reference page 154 for general fitting and standard finish specifications.

# Beam clamps

## B3037Z

### Z-Purlin C-Clamp

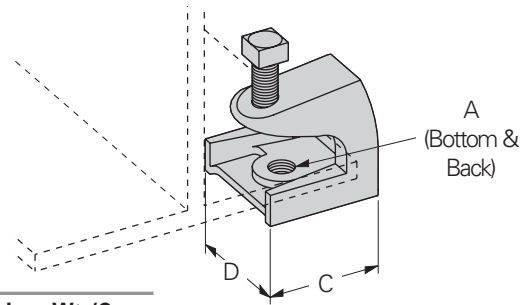
- Design Load 500 Lbs. (2.22 kN)
- Safety Factor of 5
- Designed for attaching a  $\frac{3}{8}$ "-16 hanger rod to the bottom flange of a Z-purlin
- Setscrew and locknut included
- Material: Malleable iron
- Standard finishes: ZN, PLN



## B444

### Series Rod Support

- Safety Factor of 5
- Max. flange thickness  $\frac{3}{4}$ " (19.0) for  $\frac{1}{4}$ " &  $\frac{5}{16}$ " sizes  
1" (25.4) for  $\frac{3}{8}$ " &  $\frac{1}{2}$ " sizes
- Setscrew included
- Material: Malleable iron
- Standard finish: ZN, available in HDG with CZ Hardware

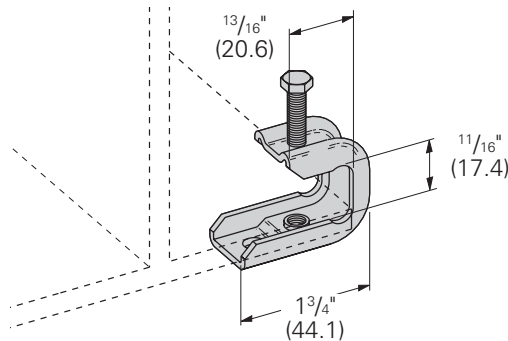


| Part No.             | Thread Size A       | Set Screw          | C In. mm                | D In. mm                 | Design Load Lbs. kN | Wt./C Lbs. kg |
|----------------------|---------------------|--------------------|-------------------------|--------------------------|---------------------|---------------|
| B444- $\frac{1}{4}$  | $\frac{1}{4}$ "-20  | $\frac{1}{4}$ "-20 | $1\frac{3}{8}$ " (34.9) | $1\frac{3}{16}$ " (30.1) | 150 (.66)           | 24 (10.9)     |
| B444- $\frac{5}{16}$ | $\frac{5}{16}$ "-18 | $\frac{1}{4}$ "-20 | $1\frac{3}{8}$ " (34.9) | $1\frac{3}{16}$ " (30.1) | 150 (.66)           | 23 (10.4)     |
| B444- $\frac{3}{8}$  | $\frac{3}{8}$ "-16  | $\frac{1}{2}$ "-13 | $1\frac{7}{8}$ " (47.6) | 2" (50.8)                | 350 (7.12)          | 65 (29.5)     |
| B444- $\frac{1}{2}$  | $\frac{1}{2}$ "-13  | $\frac{5}{8}$ "-11 | $2\frac{3}{8}$ " (60.3) | $2\frac{1}{2}$ " (63.5)  | 1000 (4.45)         | 132 (59.9)    |

## BC442

### Light Duty Beam Clamp

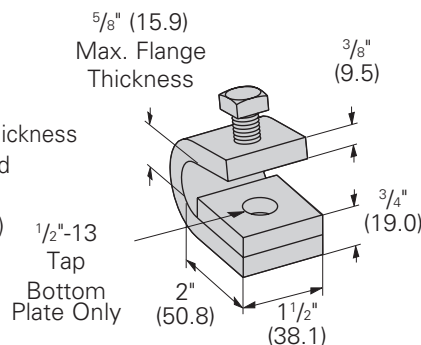
- Design Load 75 Lbs. (.33 kN)
- Safety Factor of 5
- $\frac{11}{16}$ " (17.5) Max. flange thickness
- Setscrew included
- Holes tapped  $\frac{1}{4}$ "-20 (bottom & back)
- Material: 13 gauge (2.3)
- Standard finish: ZN
- Wt./C 13 Lbs. (3.9 kg)



## B210

### Beam Clamp

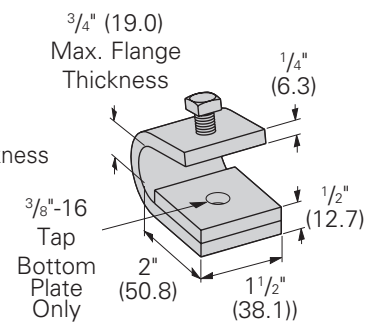
- Design Load 800 Lbs. (3.56 kN)
- Safety Factor of 5
- $\frac{5}{8}$ " (15.9) Max. flange thickness
- $\frac{1}{2}$ "-13 Setscrew included
- Standard finish: ZN
- Wt./C 100 Lbs. (45.3 kg)



## B210A

### Beam Clamp

- Design Load 300 Lbs. (1.33 kN)
- Safety Factor of 5
- $\frac{3}{4}$ " (19.0) Max. flange thickness
- $\frac{3}{8}$ "-16 Setscrew included
- Standard finish: ZN
- Wt./C 60 Lbs. (27.2 kg)

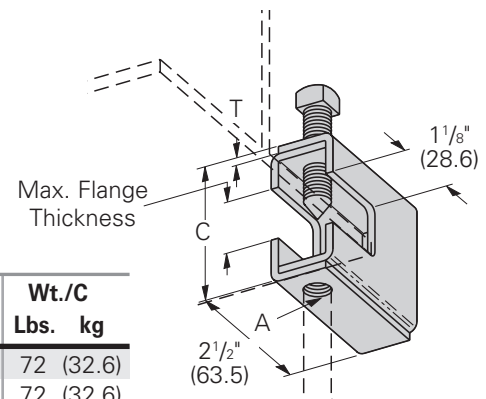


Reference page 154 for general fitting and standard finish specifications.

## B303 thru B309 Beam Clamps

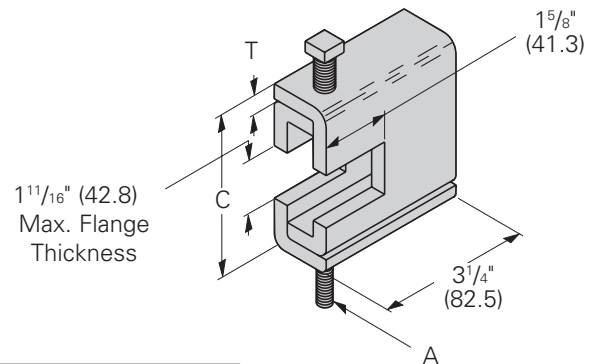
- Safety Factor of 5
- Max. flange thickness  $\frac{1}{16}$ " (1.6) thru  $\frac{7}{8}$ " (22.2)
- Setscrew included
- When retaining strap is required, order B312 separately
- Recommended setscrew torque:  $\frac{3}{8}$ "-16 150 in-lbs. (16.9 N•m)  
 $\frac{1}{2}$ "-13 350 in-lbs. (39.5 N•m)
- Standard finishes: ZN, HDG

| Part No. | Thread Size A       | Set Screw          | C In. mm                 | D In. mm              | Design Load Lbs. kN | Wt./C Lbs. kg |
|----------|---------------------|--------------------|--------------------------|-----------------------|---------------------|---------------|
| B303     | $\frac{1}{4}$ "-20  | $\frac{3}{8}$ "-16 | $2\frac{5}{16}$ " (58.7) | 11 Ga. (3.0)          | 400 (1.78)          | 72 (32.6)     |
| B304     | $\frac{5}{16}$ "-18 | $\frac{3}{8}$ "-16 | $2\frac{5}{16}$ " (58.7) | 11 Ga. (3.0)          | 600 (2.67)          | 72 (32.6)     |
| B305     | $\frac{3}{8}$ "-16  | $\frac{3}{8}$ "-16 | $2\frac{5}{16}$ " (58.7) | 11 Ga. (3.0)          | 600 (2.67)          | 72 (32.6)     |
| B306     | $\frac{3}{8}$ "-16  | $\frac{1}{2}$ "-13 | $2\frac{7}{16}$ " (61.9) | 7 Ga. (4.5)           | 1100 (4.89)         | 97 (44.0)     |
| B307     | $\frac{1}{2}$ "-13  | $\frac{1}{2}$ "-13 | $2\frac{7}{16}$ " (61.9) | 7 Ga. (4.5)           | 1100 (4.89)         | 97 (44.0)     |
| B308     | $\frac{1}{2}$ "-13  | $\frac{1}{2}$ "-13 | $2\frac{9}{16}$ " (65.1) | $\frac{1}{4}$ " (6.3) | 1500 (6.67)         | 133 (60.3)    |
| B309     | $\frac{5}{8}$ "-11  | $\frac{1}{2}$ "-13 | $2\frac{9}{16}$ " (65.1) | $\frac{1}{4}$ " (6.3) | 1500 (6.67)         | 133 (60.3)    |



## B321 Series Beam Clamps

- Safety Factor of 5
- $1\frac{1}{16}$ " (42.8) Max. Flange Thickness
- Setscrew included
- When retaining strap is required, order B312 separately
- Recommended setscrew torque:  $\frac{1}{2}$ "-13 350 in-lbs. (39.5 N•m)  
 $\frac{5}{8}$ "-11 700 in-lbs. (79.0 N•m)
- Minimum flange thickness: B321-1 thru B321-3  $\frac{1}{4}$ " (6.3)  
B321-4 and B321-5  $\frac{3}{8}$ " (9.5)
- Standard finishes: ZN, HDG

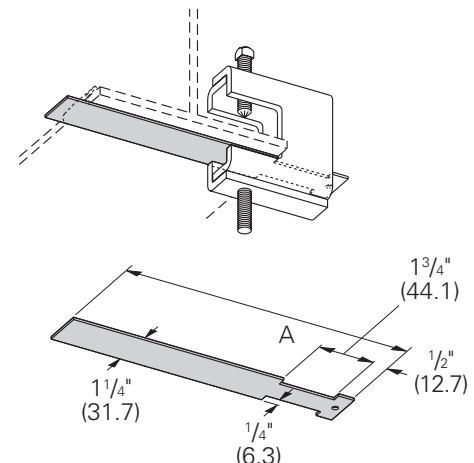


| Part No. | Thread Size A      | Setscrew Size      | C In. mm                  | D In. mm               | Design Load Lbs. kN | Wt./C Lbs. kg |
|----------|--------------------|--------------------|---------------------------|------------------------|---------------------|---------------|
| B321-1   | $\frac{3}{8}$ "-16 | $\frac{1}{2}$ "-13 | $3\frac{9}{16}$ " (92.1)  | $\frac{1}{4}$ " (6.3)  | 1300 (5.78)         | 187 (84.8)    |
| B321-2   | $\frac{1}{2}$ "-13 | $\frac{1}{2}$ "-13 | $3\frac{9}{16}$ " (92.1)  | $\frac{1}{4}$ " (6.3)  | 1400 (6.23)         | 186 (84.3)    |
| B321-3   | $\frac{5}{8}$ "-11 | $\frac{1}{2}$ "-13 | $3\frac{9}{16}$ " (92.1)  | $\frac{1}{4}$ " (6.3)  | 1600 (7.12)         | 185 (83.9)    |
| B321-4   | $\frac{5}{8}$ "-11 | $\frac{5}{8}$ "-11 | $3\frac{23}{32}$ " (94.4) | $\frac{5}{16}$ " (7.9) | 1800 (8.00)         | 239 (108.4)   |
| B321-5   | $\frac{3}{4}$ "-10 | $\frac{5}{8}$ "-11 | $3\frac{23}{32}$ " (94.4) | $\frac{5}{16}$ " (7.9) | 2000 (8.89)         | 238 (107.9)   |

## B312 Series Retaining Strap for use with B303 thru B309 and B321 Series

- $\frac{3}{4}$ " (19.0) Max. flange thickness
- For thicker beams, step up one flange width size
- Material: 14 gauge (1.9)
- Standard finishes: GALV, HDG

| Part No. | For Flange Width In. mm | A In. mm    | Wt./C Lbs. kg |
|----------|-------------------------|-------------|---------------|
| B312-6   | 6" (152.4)              | 9" (228.6)  | 22 (10.0)     |
| B312-9   | 9" (228.6)              | 12" (304.8) | 30 (13.6)     |
| B312-12  | 12" (304.8)             | 15" (381.0) | 40 (18.1)     |
| B312-15  | 15" (381.0)             | 18" (457.2) | 49 (22.2)     |

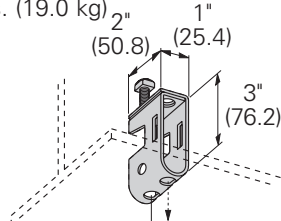


Reference page 154 for general fitting and standard finish specifications.

# Beam clamps

## B751 Beam Clamp

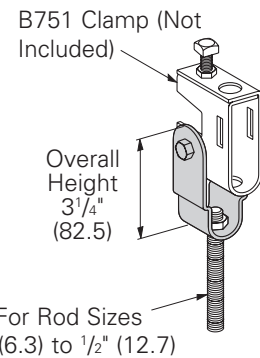
- Safety Factor of 5
- $\frac{3}{4}$ " (19.0) Max. flange thickness
- Setscrew and locknut included
- Maximum ATR size  $\frac{1}{2}$ "
- Use B753 Swivel nut (not included)
- Material: 12 gauge (2.6)
- Standard finish: ZN, HDG
- Wt./C 42 Lbs. (19.0 kg)



Design Load 300 Lbs. (1.33 kN)  
Design Load 300 Lbs. (2.22 kN)

## B752 Beam Clamp Swivel

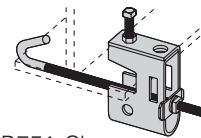
- Design Load 500 Lbs. (2.22 kN)
- Safety Factor of 5
- Material: 12 gauge (2.6)
- Use B753 Swivel nut (not included)
- Includes:
  - 1 pc. B752 Swivel body
  - 1 pc.  $\frac{5}{16}$ "-18 x  $1\frac{3}{4}$ " HHCS
  - 1 pc.  $\frac{5}{16}$ "-18 Hex nut
- Standard finish: ZN
- Wt./C 30 Lbs. (13.6 kg)



## B751-J $\frac{3}{8}$ " Beam Clamp Assembly

- Includes:
  - 1 pc. B751 Beam clamp
  - 1 pc. B701 Type J-Hook only
  - 1 pc. SA203-158 Clip
  - 1 pc.  $\frac{3}{8}$ "-16 Hex Nut
- $\frac{1}{4}$ " (6.3) Diameter J-Hook available upon request  
Part Number changes to B751-J- $\frac{1}{4}$ " and a  $\frac{1}{4}$ "-20 machine square nut (MSQN) is used
- Use B753 Swivel Nut (not included)
- Standard finishes: ZN

B701-J- $\frac{3}{8}$ " J-Hook

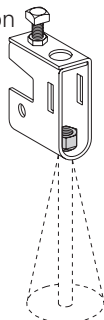


B751 Clamp

| Part No.                | For Flange Width<br>In. mm | Wt./C<br>Lbs. kg |
|-------------------------|----------------------------|------------------|
| B751-J4- $\frac{3}{8}$  | 3"-6" (76.2-152.4)         | 70 (31.7)        |
| B751-J6- $\frac{3}{8}$  | 5"-9" (127.0-228.6)        | 78 (35.4)        |
| B751-J9- $\frac{3}{8}$  | 8"-12" (203.2-304.8)       | 83 (37.6)        |
| B751-J12- $\frac{3}{8}$ | 11"-15" (279.4-381.0)      | 88 (39.9)        |

## B753 Swivel Nut

- Provides a full swivel of 15° in any direction  
Specify rod size
- Standard finish: ZN

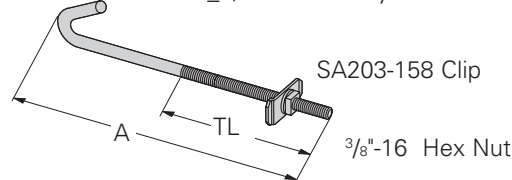


| Part No.            | For Rod Size       | Wt./C<br>Lbs. kg |
|---------------------|--------------------|------------------|
| B753- $\frac{3}{8}$ | $\frac{3}{8}$ "-16 | 4.0 (1.8)        |
| B753- $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | 3.4 (1.5)        |

## B701 Series J-Hook

- $\frac{1}{4}$ " (6.3) Diameter J-Hook available upon request  
Part Number changes to B751-J- $\frac{1}{4}$ " and a  $\frac{1}{4}$ "-20 machine square nut (MSQN) is used
- Standard finish: ZN

B701-J- $\frac{3}{8}$ " J-Hook only



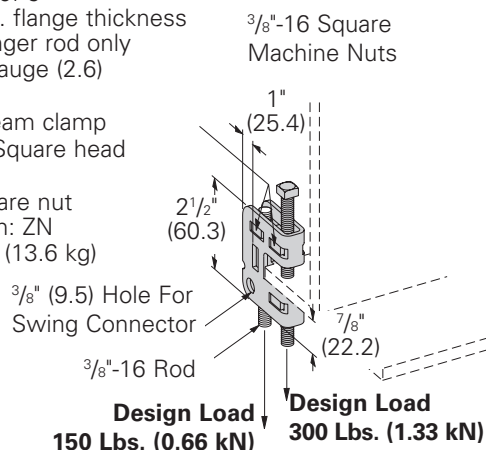
| Part No.                | A<br>In. mm                | Thread Length TL<br>In. mm | Wt./C<br>Lbs. kg |
|-------------------------|----------------------------|----------------------------|------------------|
| B701-J4- $\frac{3}{8}$  | 8 $\frac{3}{4}$ " (222.2)  | 5 $\frac{1}{2}$ " (139.7)  | 26 (11.8)        |
| B701-J6- $\frac{3}{8}$  | 11 $\frac{3}{4}$ " (298.4) | 6 $\frac{1}{2}$ " (165.1)  | 34 (15.4)        |
| B701-J9- $\frac{3}{8}$  | 14 $\frac{3}{4}$ " (374.6) | 6 $\frac{1}{2}$ " (165.1)  | 41 (18.6)        |
| B701-J12- $\frac{3}{8}$ | 17 $\frac{3}{4}$ " (450.8) | 6 $\frac{1}{2}$ " (165.1)  | 48 (21.8)        |

Reference page 154 for general fitting and standard finish specifications.



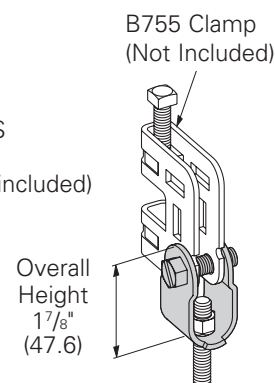
## B755 3/8" Beam Clamp

- Safety Factor of 5
- 5/8" (15.9) Max. flange thickness
- For 3/8"-16 Hanger rod only
- Material: 12 gauge (2.6)
- Includes:
  - 1 pc. B755 Beam clamp
  - 1 pc. 3/8" x 2" Square head setscrew
  - 2 pcs. 3/8" Square nut
- Standard finish: ZN
- Wt./C 30 Lbs. (13.6 kg)



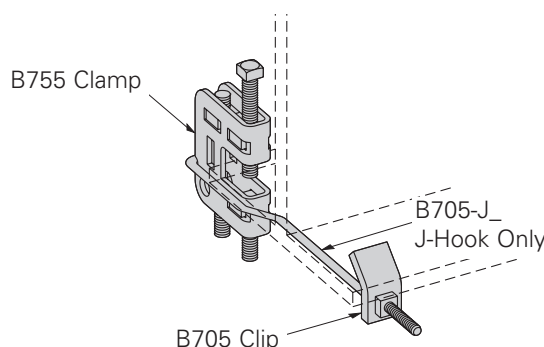
## B756-3/8 Swing Connector

- Design Load 150 Lbs. (0.66 kN)
- Safety Factor of 5
- Material: 12 gauge (2.6)
- Includes:
  - 1 pc. B756-3/8 Swing connector body
  - 1 pc. 5/16"-18 x 1 1/4" SHHMS
  - 1 pc. 5/16"-18 Square nut
- Use B753 Swivel nut (not included)
- Standard finish: ZN
- Wt./C 15 Lbs. (6.8 kg)



## B755-3/8 -J Beam Clamp Assembly

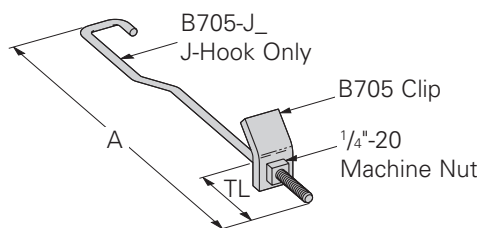
- Includes:
  - 1 pc. B755-3/8 Beam clamp
  - 1 pc. B705 Type J-Hook only
  - 1 pc. B705 Clip
  - 1 pc. 1/4"-20 Square nut
- Standard finish: ZN



| Part No.            | For Flange Width<br>In. mm | Wt./C<br>Lbs. kg |
|---------------------|----------------------------|------------------|
| <b>B755-3/8-J4</b>  | 4"-6" (101.6-152.4)        | 47 (21.3)        |
| <b>B755-3/8-J6</b>  | 6"-10" (152.4-254.0)       | 51 (23.1)        |
| <b>B755-3/8-J10</b> | 10"-12" (254.0-304.8)      | 53 (24.0)        |
| <b>B755-3/8-J12</b> | 12"-14" (304.8-355.6)      | 55 (24.9)        |

## B705 Series J-Hook

- Use with B755-3/8
- Standard finish: ZN



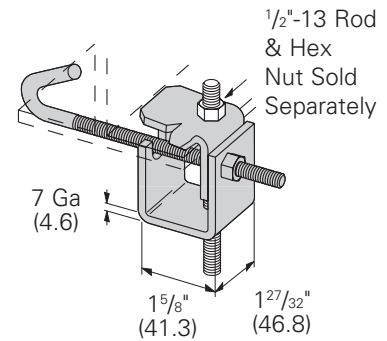
| Part No.        | A<br>In. mm     | Thread Length TL<br>In. mm | Wt./C<br>Lbs. kg |
|-----------------|-----------------|----------------------------|------------------|
| <b>B705-J4</b>  | 7 3/8" (187.3)  | 3" (76.2)                  | 17 (7.7)         |
| <b>B705-J6</b>  | 11 3/8" (288.9) | 4 1/2" (114.3)             | 21 (9.5)         |
| <b>B705-J10</b> | 13 3/8" (339.7) | 4 1/2" (114.3)             | 23 (10.4)        |
| <b>B705-J12</b> | 15 3/8" (390.5) | 4 1/2" (114.3)             | 25 (11.3)        |

Reference page 154 for general fitting and standard finish specifications.

# Beam clamps

## B750 Series Beam Clamp

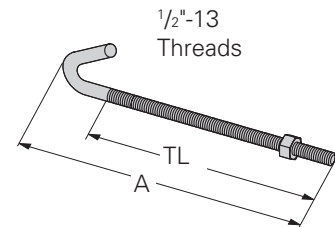
- Safety Factor of 5
- Design Load 500 Lbs. (2.22 kN)
- Recommended Torque: J-Hook nut 125 in-lbs. (14.1 N•m)
- Maximum flange thickness  $\frac{5}{8}$ " (15.9)
- Standard finish: ZN



| Part No.        | For Flange Width |               | Wt./C |        |
|-----------------|------------------|---------------|-------|--------|
|                 | In.              | mm            | Lbs.  | kg     |
| <b>B750-J4</b>  | 3"-6"            | (76.2-152.4)  | 109   | (49.4) |
| <b>B750-J6</b>  | 5"-9"            | (127.0-228.6) | 124   | (56.2) |
| <b>B750-J9</b>  | 8"-12"           | (203.2-304.8) | 135   | (61.2) |
| <b>B750-J12</b> | 11"-15"          | (279.4-381.0) | 147   | (66.7) |

## B700 Series J-Hook

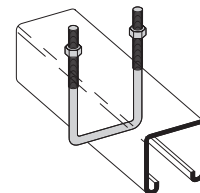
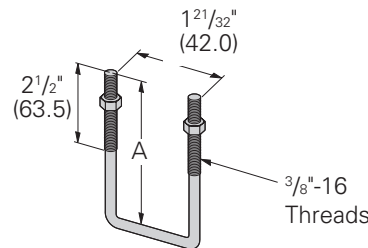
- Includes:
  - 1 pc. J-Bolt
  - 1 pc. Hex Nut
- Maximum flange thickness  $\frac{5}{8}$ " (15.9)
- Standard finish: ZN



| Part No.        | A       |         | Thread Length TL |         | Wt./C |        |
|-----------------|---------|---------|------------------|---------|-------|--------|
|                 | In.     | mm      | In.              | mm      | Lbs.  | kg     |
| <b>B700-J4</b>  | 8 1/2"  | (215.9) | 6 3/4"           | (171.4) | 44    | (19.9) |
| <b>B700-J6</b>  | 11 1/2" | (292.1) | 9 3/4"           | (247.6) | 53    | (24.0) |
| <b>B700-J9</b>  | 14 1/2" | (368.3) | 12 3/4"          | (323.8) | 63    | (28.6) |
| <b>B700-J12</b> | 17 1/2" | (444.5) | 15 3/4"          | (400.0) | 78    | (35.4) |

## B500 Series Square U-Bolt

- Includes:
  - 1 pc. U-Bolt only
  - 2 pcs.  $\frac{3}{8}$ "-16 Hex nuts
- Additional sizes available
- Standard finish: ZN, SS4

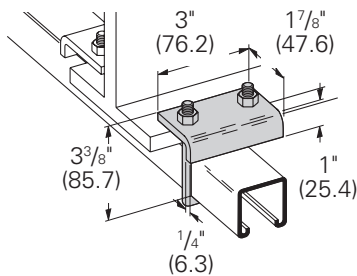


| Part No.          | In.    |         | Channel Size    |               | Wt./C |        |
|-------------------|--------|---------|-----------------|---------------|-------|--------|
|                   | In.    | mm      | In.             | mm            | Lbs.  | kg     |
| <b>B500-3-3/8</b> | 3 3/8" | (85.7)  | 1 5/8" x 1 5/8" | (41.3 x 41.3) | 25    | (11.3) |
| <b>B500-5</b>     | 5"     | (127.0) | 3 1/4" x 1 5/8" | (82.5 x 41.3) | 33    | (14.9) |

Reference page 154 for general fitting and standard finish specifications.

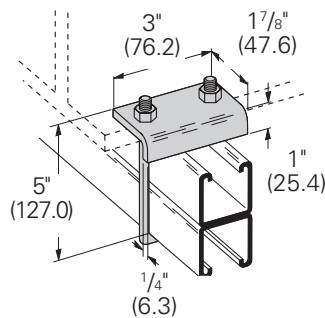
## B441-22 Beam Clamp

- Design Load 1850 Lbs. (8.23 kN) when used in pairs
- Safety Factor of 5
- $\frac{3}{4}$ " (19.0) Max. flange thickness
- For use with  $\frac{13}{16}$ " (20.6) to  $1\frac{5}{8}$ " (41.3) high channel
- Recommended Torque: 150 in-lbs. (16.9 N•m)
- Sold in pieces
- Other flange thickness variations are available, contact us for sizes
- Standard finishes: ZN, HDG, SS4
- Wt./C 87 Lbs. (39.4 kg)



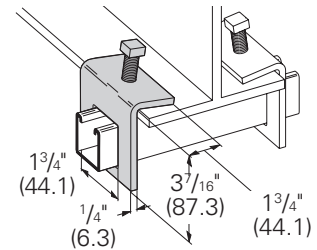
## B441-22A Beam Clamp

- Design Load 1850 Lbs. (8.23 kN) when used in pairs
- Safety Factor of 5
- $\frac{3}{4}$ " (19.0) Max. flange thickness
- For use with  $1\frac{5}{8}$ " (41.3) to  $3\frac{1}{4}$ " (82.5) high channel
- Recommended Torque: 150 in-lbs. (16.9 N•m)
- Sold in pieces
- Other flange thickness variations are available, contact us for sizes
- Standard finishes: ZN, HDG, SS4
- Wt./C 93 Lbs. (42.2 kg)



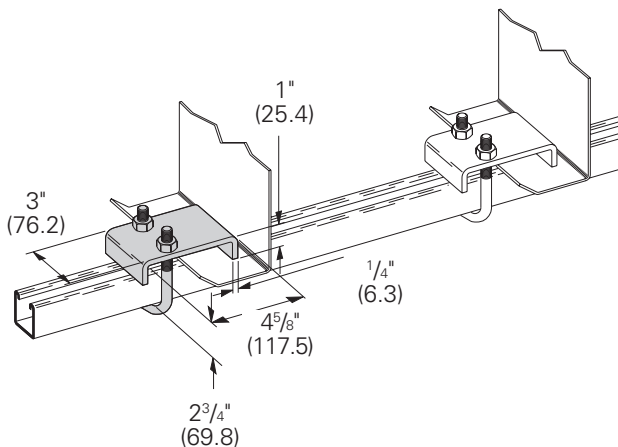
## B314 Beam Clamp

- Design Load 900 Lbs. (4.00 kN) when used in pairs
- Safety Factor of 5
- $\frac{5}{8}$ " (15.9) Max. flange thickness
- For use with channel  $1\frac{5}{8}$ " (41.3) in height
- Setscrew included
- Sold in pieces
- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 105 Lbs. (47.6 kg)



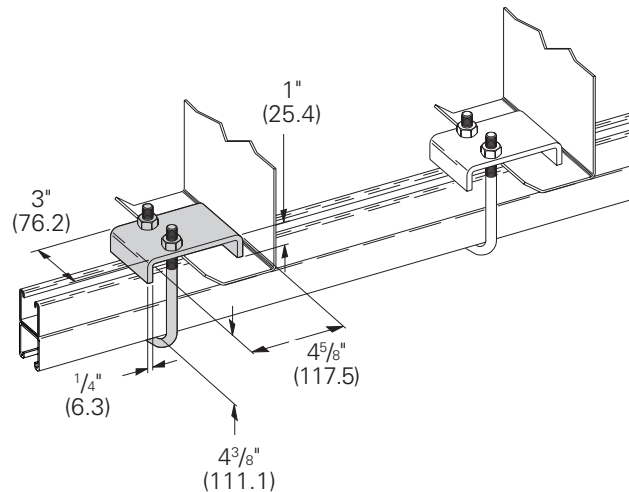
## B441Z-22 Beam Clamp

- Design Load 1200 Lbs. (5.34 kN) when used in series
- Safety Factor of 5
- Sold in pieces
- For use with  $\frac{13}{16}$ " (20.6) to  $1\frac{5}{8}$ " (41.3) high channel
- Recommended Torque: 150 in-lbs. (16.9 N•m)
- Standard finishes: ZN
- Wt./C 95 Lbs. (43.1 kg)



## B441Z-22A Beam Clamp

- Design Load 1200 Lbs. (5.34 kN) when used in series
- Safety Factor of 5
- Sold in pieces
- For use with  $1\frac{5}{8}$ " (41.3) to  $3\frac{1}{4}$ " (82.5) high channel
- Recommended Torque: 150 in-lbs. (16.9 N•m)
- Standard finishes: ZN
- Wt./C 101 Lbs. (45.8 kg)

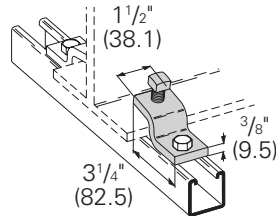


Reference page 154 for general fitting and standard finish specifications.

# Beam clamps

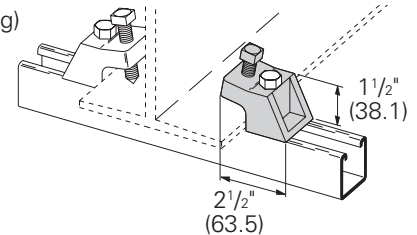
## B211 Zee Beam Clamp

- Design Load 600 Lbs. (2.67 kN) when used in pairs
- Safety Factor of 5
- 1" (25.4) Max. flange thickness
- 1/2"-13 Setscrew included
- Sold in pieces
- Order 1/2"-13 HHCS and channel nut separately
- Standard finishes: ZN, HDG
- Wt./C 66 Lbs. (29.9 kg)



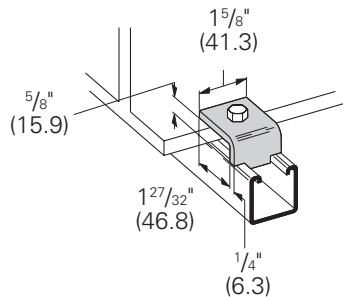
## B213 I-Beam Clamp

- Design Load 900 Lbs. (4.00 kN) when used in pairs
- Safety Factor of 5
- 7/8" (22.2) Max. flange thickness
- 1/2"-13 Setscrew included
- Sold in pieces
- Order 1/2"-13 x 2 1/4" HHCS and channel nut separately
- Material: Malleable iron
- Standard finishes: ZN, GRN
- Wt./C 95 Lbs. (43.1 kg)



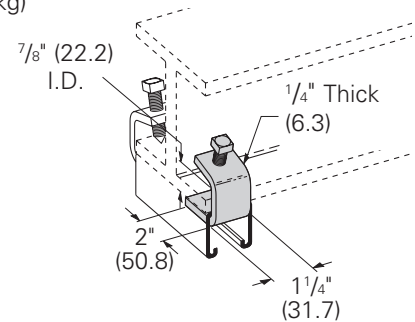
## B355 Beam Clamp

- Design Load 1200 Lbs. (5.34 kN) when used in pairs
- Safety Factor of 5
- 5/8" (15.9) Max. flange thickness
- Sold in pieces
- Order 1/2"-13 x 1 1/2" HHCS and channel nut separately
- Standard finishes: ZN, GRN, HDG, SS4
- Wt./C 30 Lbs. (13.6 kg)



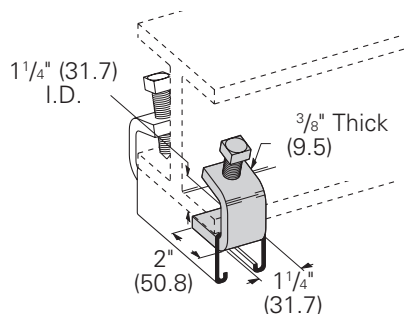
## B212-1/4 I-Beam Clamp

- Design Load 600 Lbs. (2.67 kN) when used in pairs
- Safety Factor of 5
- 7/8" (22.2) Max. flange thickness
- 3/8"-16 Setscrew included
- Sold in pieces
- Standard finish: ZN
- Wt./C 41 Lbs. (18.6 kg)



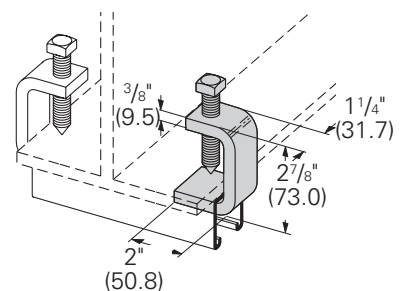
## B212-3/8 I-Beam Clamp

- Design Load 1000 Lbs. (4.45 kN) when used in pairs
- Safety Factor of 5
- 1 1/8" (28.6) Max. flange thickness
- 1/2"-13 Setscrew included
- Sold in pieces
- Standard finishes: ZN, HDG
- Wt./C 62 Lbs. (28.1 kg)



## B435 Beam Clamp

- Design Load 900 Lbs. (4.00 kN) when used in pairs
- Safety Factor of 5
- 2 1/8" (54.0) Max. flange thickness
- 1/2"-13 x 2" Setscrew included
- Sold in pieces
- Standard finish: ZN
- Wt./C 82 Lbs. (37.2 kg)

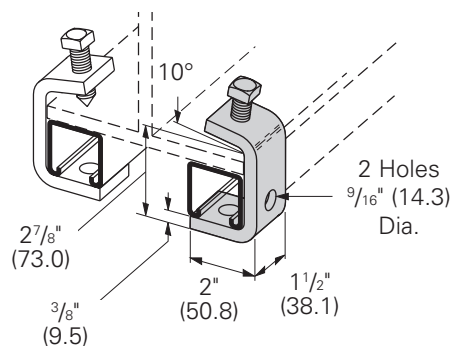


Reference page 154 for general fitting and standard finish specifications.

## B427

### Beam Clamp

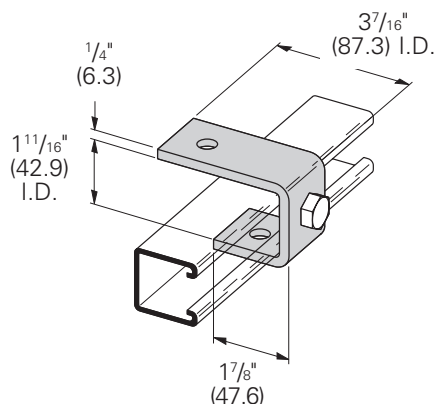
- Design Load 1100 Lbs. (4.89 kN) when used in pairs
- Safety Factor of 5
- 2 1/2" (63.5) Max. flange thickness without channel
- 1/2"-13 x 1 1/2" Setscrew included
- Sold in pieces
- Standard finish: ZN
- Wt./C 92 Lbs. (41.7 kg)



## B405

### Suspension Member

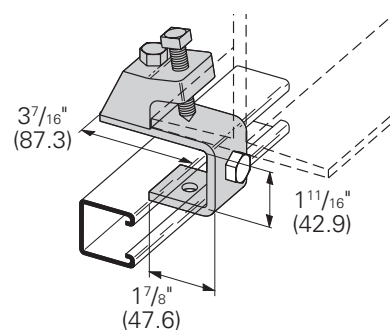
- Standard finishes: ZN, GRN
- Wt./C 75 Lbs. (34.0 kg)



## B405A

### Suspension Member with Beam Clamp

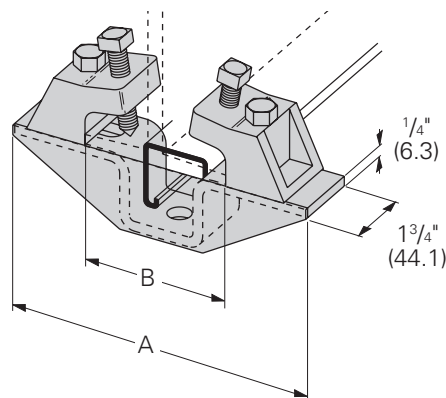
- 7/8" (22.2) Max. flange thickness
- Includes:
  - 1 pc. B405 Suspension member
  - 1 pc. B213 I-Beam clamp
  - 1 pc. 1/2"-13 x 2 1/2" HHCS
  - 1 pc. 1/2"-13 Hex Nut
- Material: Malleable iron
- Standard finishes: ZN, GRN
- Wt./C 183 Lbs. (83.0 kg)



## B602A THRU B602C

### Beam Clamp with Gusset Assembly

- Safety Factor of 5
- 7/8" (22.2) Max. flange thickness
- Includes:
  - 1 pc. B451 Slotted three hole 'U' support with gusset
  - 2 pcs. B213 I-Beam clamp
  - 2 pcs. 1/2"-13 x 2 1/2" HHCS
  - 2 pcs. 1/2"-13 Hex nuts
- Material: Malleable iron
- Standard finishes: ZN, GRN



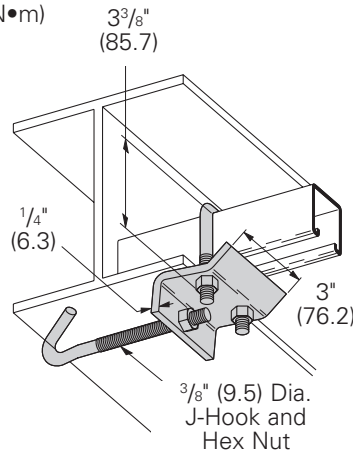
| Part No. | A<br>In. mm     | For Flange Width B<br>In. mm | Design Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|-----------------|------------------------------|------------------------|------------------|
| B602A    | 7 1/4" (184.1)  | 2 3/8"-4 1/2" (60.3-114.3)   | 1200 (5.34)            | 365 (165.1)      |
| B602B    | 8 1/2" (215.9)  | 3 3/4"-5 3/4" (95.2-146.0)   | 1200 (5.34)            | 383 (173.7)      |
| B602C    | 10 3/8" (263.5) | 5 5/8"-7 5/8" (142.9-193.7)  | 1200 (5.34)            | 408 (185.0)      |

Reference page 154 for general fitting and standard finish specifications.

# Beam clamps

## B760-22 Series Beam Clamp

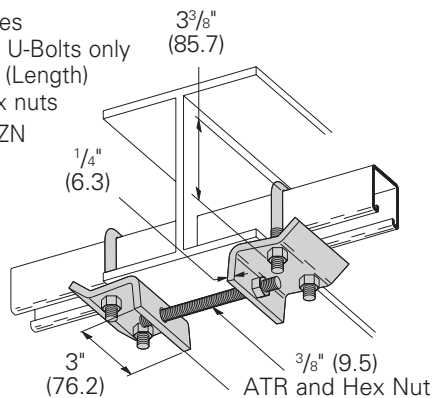
- 1" (25.4) Max. flange thickness
- For use with 1<sup>3</sup>/<sub>16</sub>" (20.6) to 1<sup>5</sup>/<sub>8</sub>" (41.3) high channel
- Recommended Torques:  
U-Bolt nuts 150 in-lbs. (16.9 N•m)  
J-Hook nut 60 in-lbs. (6.8 N•m)
- Includes:  
1 pc. B760 Plate  
1 pc. B701 Type  
J-Hook only  
1 pc. B500-3<sup>3</sup>/<sub>8</sub>"  
U-Bolt only  
3 pcs. <sup>3</sup>/<sub>8</sub>"-16 Hex nuts
- Standard finish: ZN



| Part No.           | For Flange Width                     |               | Wt./c |        |
|--------------------|--------------------------------------|---------------|-------|--------|
|                    | In.                                  | mm            | Lbs.  | kg     |
| <b>B760-22-J4</b>  | 4"-5 <sup>7</sup> / <sub>8</sub> "   | (101.6-149.2) | 122   | (55.3) |
| <b>B760-22-J6</b>  | 6"-8 <sup>7</sup> / <sub>8</sub> "   | (152.4-225.4) | 129   | (58.5) |
| <b>B760-22-J9</b>  | 9"-11 <sup>7</sup> / <sub>8</sub> "  | (228.6-301.6) | 135   | (61.2) |
| <b>B760-22-J12</b> | 12"-14 <sup>7</sup> / <sub>8</sub> " | (304.8-377.8) | 141   | (63.9) |

## B761-22 Series Beam Clamp

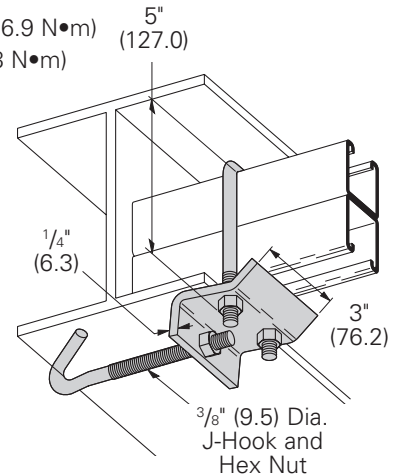
- 1" (25.4) Max. flange thickness
- For use with 1<sup>3</sup>/<sub>16</sub>" (20.6) to 1<sup>5</sup>/<sub>8</sub>" (41.3) high channel
- Recommended Torques:  
U-Bolt nuts 150 in-lbs. (16.9 N•m)  
ATR nuts 60 in-lbs. (6.8 N•m)
- Includes:  
2 pcs. B700 Plates  
2 pcs. B500-3<sup>3</sup>/<sub>8</sub>" U-Bolts only  
1 pc. <sup>3</sup>/<sub>8</sub>"-16 ATR (Length)  
6 pcs. <sup>3</sup>/<sub>8</sub>"-16 Hex nuts
- Standard finish: ZN



| Part No.          | For Flange Width                     |               | ATR Length |         | Wt./C |         |
|-------------------|--------------------------------------|---------------|------------|---------|-------|---------|
|                   | In.                                  | mm            | In.        | mm      | Lbs.  | kg      |
| <b>B761-22-4</b>  | 4"-5 <sup>7</sup> / <sub>8</sub> "   | (101.6-149.2) | 4"         | (101.6) | 202   | (91.6)  |
| <b>B761-22-6</b>  | 6"-8 <sup>7</sup> / <sub>8</sub> "   | (152.4-225.4) | 6"         | (152.4) | 206   | (93.4)  |
| <b>B761-22-9</b>  | 9"-11 <sup>7</sup> / <sub>8</sub> "  | (228.6-301.6) | 9"         | (228.6) | 214   | (97.0)  |
| <b>B761-22-12</b> | 12"-14 <sup>7</sup> / <sub>8</sub> " | (304.8-377.8) | 12"        | (304.8) | 221   | (100.2) |

## B760-22A Series Beam Clamp

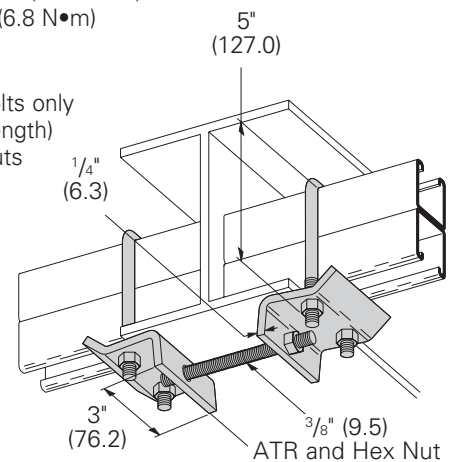
- 1" (25.4) Max. flange thickness
- For use with 1<sup>5</sup>/<sub>8</sub>" (41.3) to 3<sup>1</sup>/<sub>4</sub>" (82.5) high channel
- Recommended Torques:  
U-Bolt nuts 150 in-lbs. (16.9 N•m)  
J-Hook nut 60 in-lbs. (6.8 N•m)
- Includes:  
1 pc. B760 Plate  
1 pc. B701 Type  
J-Hook only  
1 pc. B500-5"  
U-Bolt only  
3 pcs. <sup>3</sup>/<sub>8</sub>"-16 Hex nuts
- Standard finish: ZN



| Part No.            | For Flange Width                     |               | Wt./c |        |
|---------------------|--------------------------------------|---------------|-------|--------|
|                     | In.                                  | mm            | Lbs.  | kg     |
| <b>B760-22A-J4</b>  | 4"-5 <sup>7</sup> / <sub>8</sub> "   | (101.6-149.2) | 129   | (58.5) |
| <b>B760-22A-J6</b>  | 6"-8 <sup>7</sup> / <sub>8</sub> "   | (152.4-225.4) | 136   | (61.7) |
| <b>B760-22A-J9</b>  | 9"-11 <sup>7</sup> / <sub>8</sub> "  | (228.6-301.6) | 142   | (64.4) |
| <b>B760-22A-J12</b> | 12"-14 <sup>7</sup> / <sub>8</sub> " | (304.8-377.8) | 148   | (67.1) |

## B761-22A Series Beam Clamp

- 1" (25.4) Max. flange thickness
- For use with 1<sup>5</sup>/<sub>8</sub>" (41.3) to 3<sup>1</sup>/<sub>4</sub>" (82.5) high channel
- Recommended Torques:  
U-Bolt nuts 150 in-lbs. (16.9 N•m)  
ATR nuts 60 in-lbs. (6.8 N•m)
- Includes:  
2 pcs. B700 Plates  
2 pcs. B500-5" U-Bolts only  
1 pc. <sup>3</sup>/<sub>8</sub>"-16 ATR (Length)  
6 pcs. <sup>3</sup>/<sub>8</sub>"-16 Hex nuts
- Standard finish: ZN



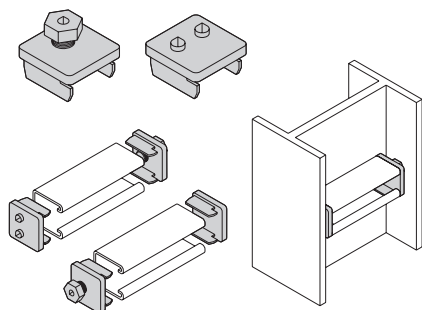
| Part No.           | For Flange Width                     |               | ATR Length |         | Wt./C |         |
|--------------------|--------------------------------------|---------------|------------|---------|-------|---------|
|                    | In.                                  | mm            | In.        | mm      | Lbs.  | kg      |
| <b>B761-22A-4</b>  | 4"-5 <sup>7</sup> / <sub>8</sub> "   | (101.6-149.2) | 4"         | (101.6) | 216   | (98.0)  |
| <b>B761-22A-6</b>  | 6"-8 <sup>7</sup> / <sub>8</sub> "   | (152.4-225.4) | 6"         | (152.4) | 220   | (99.8)  |
| <b>B761-22A-9</b>  | 9"-11 <sup>7</sup> / <sub>8</sub> "  | (228.6-301.6) | 9"         | (228.6) | 228   | (103.4) |
| <b>B761-22A-12</b> | 12"-14 <sup>7</sup> / <sub>8</sub> " | (304.8-377.8) | 12"        | (304.8) | 235   | (106.6) |

Reference page 154 for general fitting and standard finish specifications.



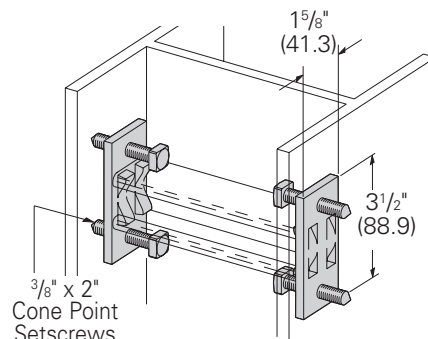
## B614 Column Support for B22

- Quick installation (one bolt to tighten)
- Design Load 800 Lbs. (3.56 kN) slip with Safety Factor of 3
- Use with B22 and B24 channel
- Sold in pairs
- Standard finish: ZN
- Wt./C 50 Lbs. (22.6 kg)



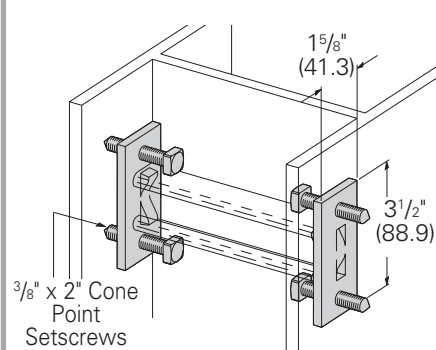
## B613 Column Support for B22

- Design Load 800 Lbs. (3.56 kN) slip with Safety Factor of 3
- Use with B22 and B24 channel
- Setscrews to be torqued to 19 ft./Lbs
- Sold in pairs
- Standard finishes: ZN, GRN, HDG
- Wt./C 100 Lbs. (45.3 kg)



## B613A Column Support for B52

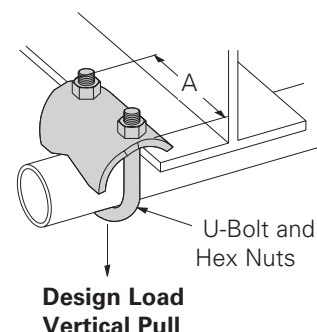
- Design Load 800 Lbs. (3.56 kN) slip with Safety Factor of 3
- Use with B52 and B54 channel
- Setscrews to be torqued to 19 ft./Lbs
- Sold in pairs
- Standard finishes: ZN, GRN, HDG
- Wt./C 100 Lbs. (45.3 kg)



## B422 Series Right Angle Clamp

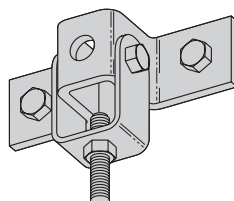
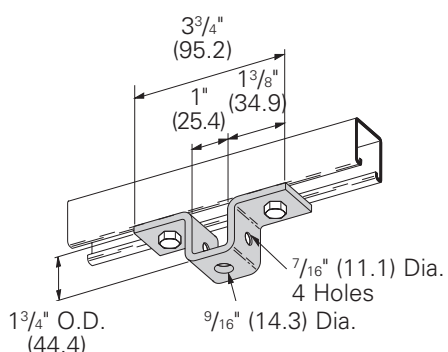
- Safety Factor of 5
- Material: 7 gauge (4.5)
- Standard finishes: ZN, SS4

| Part No.   | Conduit Size<br>In. mm | A<br>In. mm     | Design Load<br>Vertical Pull<br>Lbs. kN | Wt./C<br>Lbs. kg |
|------------|------------------------|-----------------|-----------------------------------------|------------------|
| B422-1/2   | 1/2" (15)              | 2 3/8" (60.3)   | 250 (1.11)                              | 38 (17.2)        |
| B422-3/4   | 3/4" (20)              | 2 3/8" (60.3)   | 300 (1.33)                              | 39 (17.7)        |
| B422-1     | 1" (25)                | 2 7/8" (73.0)   | 400 (1.78)                              | 48 (21.8)        |
| B422-1 1/4 | 1 1/4" (32)            | 2 7/8" (73.0)   | 400 (1.78)                              | 50 (22.7)        |
| B422-1 1/2 | 1 1/2" (40)            | 3 1/4" (82.5)   | 500 (2.22)                              | 59 (26.7)        |
| B422-2     | 2" (50)                | 3 11/16" (93.7) | 600 (2.67)                              | 75 (34.0)        |
| B422-2 1/2 | 2 1/2" (65)            | 4 1/4" (107.9)  | 700 (3.11)                              | 98 (44.4)        |
| B422-3     | 3" (80)                | 4 7/8" (123.8)  | 800 (3.56)                              | 111 (50.3)       |
| B422-3 1/2 | 3 1/2" (90)            | 5 7/16" (138.1) | 900 (4.00)                              | 123 (55.8)       |
| B422-4     | 4" (100)               | 6" (152.4)      | 1000 (4.45)                             | 135 (61.2)       |



## B107S U-Support

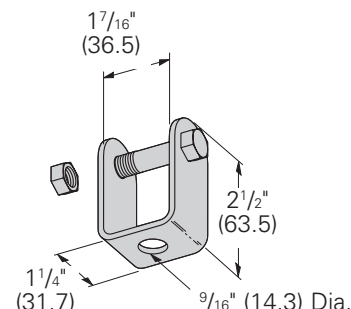
- Material: 7 gauge (4.5)
- Standard finishes: ZN, GRN
- Wt./C 51 Lbs. (23.1 kg)



- Illustration shows B107S and B593 used together
- Design Load 900 Lbs., strength of assembly only
- Verify anchorage

## B593 Clevis Swivel

- Includes:
  - 1 pc. 3/8"-16 x 2" HHCS
  - 1 pc. 3/8"-16 Hex Nut
- Material: 11 gauge (3.0)
- Standard finishes: ZN, GRN
- Wt./C 31 Lbs. (14.0 kg)



Reference page 154 for general fitting and standard finish specifications.

# Pipe/conduit clamps & hangers



Our beam attachments and pipe supports offered in this section are designed to provide supports without drilling or welding. A complete selection of beam clamps, pipe clamps, rollers, supports and accessories are designed for use with our channels and offer many installation advantages.

## Materials & Finishes\*

Pipe clamps, pipe hangers, beam clamps, brackets, and rollers are made from low carbon steel strips, plates or rod unless noted.

\* Unless otherwise noted.

## Load Data

The load data published includes a safety factor of 5.0 unless noted (safety factor = ratio of ultimate load to the design load).

## Recommended Bolt Torque (unless noted)

\* See chart on page 154 for recommended setscrew torquing.

| Finish Code | Finish                   | Specification                          |
|-------------|--------------------------|----------------------------------------|
| PLN         | Plain                    | ASTM A1011<br>33,000 PSI min. yield    |
| ZN          | Electro-Plated Zinc      | ASTM B633 SC3 Type III<br>or ASTM A653 |
| GRN         | DURA GREEN™              |                                        |
| DCU         | DURA-COPPER™             |                                        |
| HDG         | Hot-Dipped Galvanized    | ASTM A123                              |
| YZN         | Yellow Zinc Chromate     | ASTM B633 SC3 Type II                  |
| SS4         | Stainless Steel Type 304 | ASTM A240                              |
| SS6         | Stainless Steel Type 316 | ASTM A240                              |
| AL          | Aluminum                 | ASTM B209                              |

| Bolt Size | 1/4"-20 | 5/16"-18 | 3/8"-16 | 1/2"-13 |
|-----------|---------|----------|---------|---------|
| Foot/Lbs. | 6       | 11       | 19      | 50      |
| Nm        | 8       | 15       | 26      | 68      |

## Metric

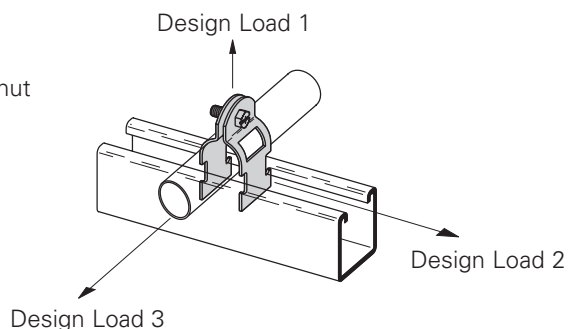
Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

## B2207 thru B2213 Multi-Grip Pipe Clamps for Thinwall (EMT), I.M.C., Rigid Conduit or Pipe

- Safety Factor of 5
- Add PA to suffix for pre-assembled pipe clamps
- Includes combination recess hex head machine screw and square nut
- Material: ASTM A1011 33,000 PSI min. yield
- Standard finish: ZN



For UL installations, follow Table 9 in UL2239.



| Part No. | Nominal Size<br>In. mm | Material Thickness<br>In. mm | O.D. Size Range<br>In. mm | Alternate For Clamp No.'s   | Design Load 1<br>Lbs. kN | Design Load 2<br>Lbs. kN | Design Load 3<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|------------------------|------------------------------|---------------------------|-----------------------------|--------------------------|--------------------------|--------------------------|------------------|
| B2207    | 3/8" (10)              | 16 Ga. (1.5)                 | .557-.706 (14.2-17.9)     | B2000, B2001, B2026         | 400 (1.78)               | 50 (.22)                 | 50 (.22)                 | 9 (4.1)          |
| B2208    | 1/2" (15)              | 16 Ga. (1.5)                 | .701-.875 (17.8-22.2)     | B2001, B2008, B2027, B2028  | 400 (1.78)               | 50 (.22)                 | 50 (.22)                 | 11 (5.0)         |
| B2209    | 3/4" (20)              | 14 Ga. (1.9)                 | .917-1.081 (23.2-27.4)    | B2002, B2009,               | 400 (1.78)               | 50 (.22)                 | 50 (.22)                 | 12 (5.4)         |
| B2210    | 1" (25)                | 14 Ga. (1.9)                 | 1.125-1.375 (28.6-34.9)   | B2003, B2010, B2030, B2031, | 400 (1.78)               | 50 (.22)                 | 50 (.22)                 | 13 (5.9)         |
| B2211    | 1 1/4" (32)            | 14 Ga. (1.9)                 | 1.500-1.691 (38.1-42.9)   | B2004, B2011, B2033, B2034  | 400 (1.78)               | 50 (.22)                 | 50 (.22)                 | 15 (6.8)         |
| B2212    | 1 1/2" (40)            | 12 Ga. (2.6)                 | 1.735-1.931 (44.0-49.0)   | B2005, B2012, B2035         | 600 (2.67)               | 75 (.33)                 | 75 (.33)                 | 23 (10.4)        |
| B2213    | 2" (50)                | 12 Ga. (2.6)                 | 2.192-2.400 (55.7-60.9)   | B2006, B2013 B2039          | 600 (2.67)               | 75 (.33)                 | 75 (.33)                 | 26 (11.8)        |

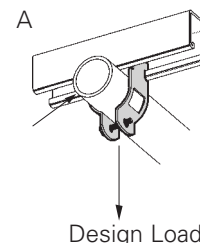
## BPC-8 thru BPC-64 Break-Apart Conduit Clamp

- Design Load 200 Lbs. (.896 kN)
- Includes combination recess hex head machine screw
- Material: ASTM A1011 33,000 PSI min. yield
- Recommended Torque 30 in. - lbs.
- Standard finish: ZN



For UL installations, follow Table 9 in UL2239.

| Part No. | Rigid or EMT Conduit Size<br>In. mm | Wt./C<br>Lbs. kg |
|----------|-------------------------------------|------------------|
| BPC-8    | 1/2" (21.3)                         | 11.2 (5.1)       |
| BPC-12   | 3/4" (26.7)                         | 12.7 (5.8)       |
| BPC-16   | 1" (33.4)                           | 14.5 (6.6)       |
| BPC-20   | 1 1/4" (42.2)                       | 16.5 (7.5)       |
| BPC-24   | 1 1/2" (48.3)                       | 18.5 (8.4)       |
| BPC-32   | 2" (60.3)                           | 21.5 (9.8)       |
| BPC-40   | 2 1/2" (73.0)                       | 21.5 (9.8)       |
| BPC-48   | 3" (88.9)                           | 22.0 (10.0)      |
| BPC-56   | 3 1/2" (101.6)                      | 23.0 (10.4)      |
| BPC-64   | 4" (114.3)                          | 27.5 (12.5)      |



Recommended torque: 35 in-lbs

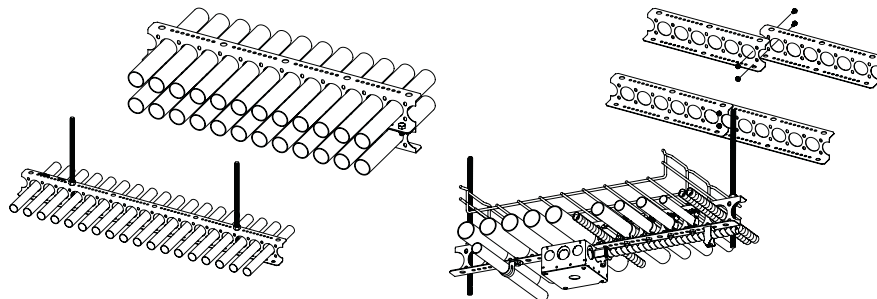
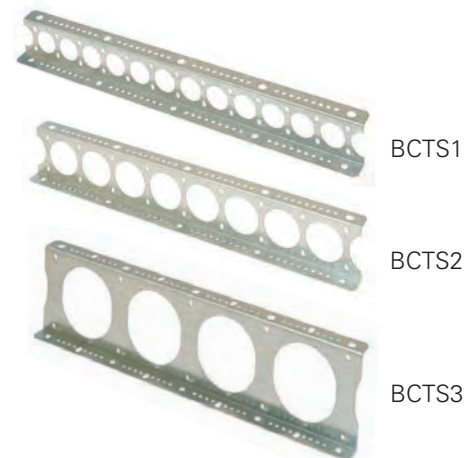
Reference page 168 for general fitting and standard finish specifications.

# Pipe clamps

## BCTS Series Conduit Trapeze Support For Thinwall (EMT), Rigid Conduit or Pipe



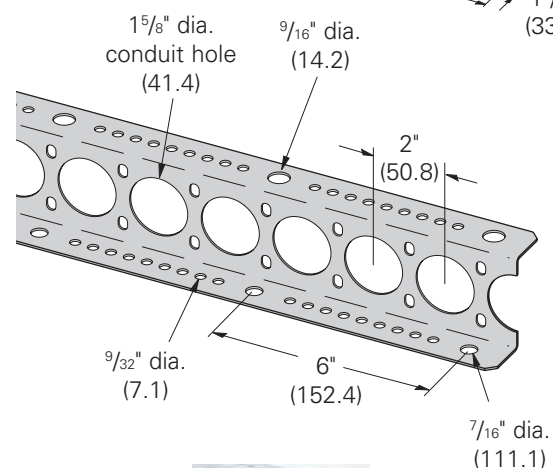
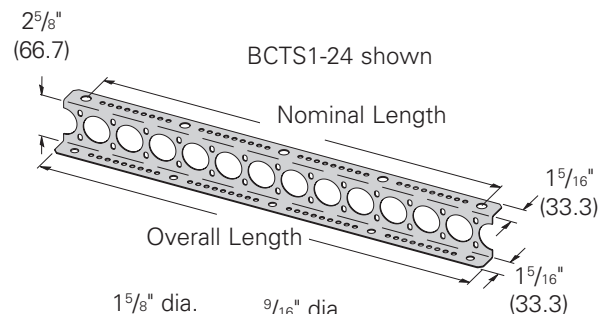
- Used to support multiple runs of conduit/pipe on same elevation
- Available in three sizes:
  - BCTS1** series for up to 1 1/4" EMT or 1" Rigid conduit - 16 ga. (1.5mm)
  - BCTS2** series for up to 2" EMT or 2" Rigid conduit - 16 ga. (1.5mm)
  - BCTS3** series for up to 4" EMT or 4" Rigid conduit - 14 ga. (1.9mm)
- Bushings available for all three sizes
- Multiple lengths available in 6" (152mm) intervals from 12" (305mm) to 120" (3048mm)
- Can be supported with 3/8" or 1/2" threaded rod or bolts by simply flipping the part from top to bottom (threaded rod and hardware is not included)
- Reduces need for conduit/pipe clamps at every support location
- Can be tiered to support multiple conduit/pipe levels
- Can also support Flextray™ and cable tray
- Flange hole patterns provide multiple options for hanger rods, mounting hardware, or accessories
- Repeating 6" (152mm) hole pattern for field cutting
- Hanger rod spacing should not exceed 36" (914mm)
- UL Listed for US and Canada - 500 lb. (22.2kN) load rating at 12" (305mm) hanger spacing for all three sizes - safety factor of 3
- Material: Pre-Galvanized Steel, Stainless Steel Type 316 (add SS6 to part number, i.e. BCTS1-24SS6)



### BCTS1 Series - 1 1/4" EMT/1" Rigid Maximum

Hanger rod spacing loads: Safety Factor of 3 - Evenly distributed maximum loads  
 • 24" (609mm) is 450 lbs. (2.00kN) • 36" (914mm) is 350 lbs. (1.55kN)

| Part No.  | Nominal Length<br>In. mm | Overall Length<br>In. mm | Conduit Holes | Wt./C<br>Lbs. kg |
|-----------|--------------------------|--------------------------|---------------|------------------|
| BCTS1-12  | 12 (305)                 | 14 (355)                 | 6             | 87 (39.4)        |
| BCTS1-18  | 18 (457)                 | 20 (508)                 | 9             | 124 (56.2)       |
| BCTS1-24  | 24 (609)                 | 26 (660)                 | 12            | 162 (73.5)       |
| BCTS1-30  | 30 (762)                 | 32 (813)                 | 15            | 199 (90.2)       |
| BCTS1-36  | 36 (914)                 | 38 (965)                 | 18            | 237 (107.5)      |
| BCTS1-42  | 42 (1067)                | 44 (1117)                | 21            | 274 (124.3)      |
| BCTS1-48  | 48 (1219)                | 50 (1270)                | 24            | 311 (141.0)      |
| BCTS1-54  | 54 (1371)                | 56 (1422)                | 27            | 349 (158.3)      |
| BCTS1-60  | 60 (1524)                | 62 (1575)                | 30            | 386 (175.1)      |
| BCTS1-66  | 66 (1676)                | 68 (1727)                | 33            | 423 (191.9)      |
| BCTS1-72  | 72 (1829)                | 74 (1879)                | 36            | 461 (209.1)      |
| BCTS1-78  | 78 (1981)                | 80 (2032)                | 39            | 498 (225.9)      |
| BCTS1-84  | 84 (2133)                | 86 (2184)                | 42            | 536 (243.1)      |
| BCTS1-90  | 90 (2286)                | 92 (2337)                | 45            | 573 (259.9)      |
| BCTS1-96  | 96 (2438)                | 98 (2489)                | 48            | 610 (276.7)      |
| BCTS1-102 | 102 (2591)               | 104 (2641)               | 51            | 648 (293.9)      |
| BCTS1-108 | 108 (2743)               | 110 (2794)               | 54            | 685 (310.7)      |
| BCTS1-114 | 114 (2895)               | 116 (2946)               | 57            | 722 (327.5)      |
| BCTS1-120 | 120 (3048)               | 122 (3099)               | 60            | 760 (344.7)      |
| BCTB1     | Bushing for 1 5/8" Holes |                          |               | 0.4 (0.18)       |



Reference page 168 for general fitting and standard finish specifications.

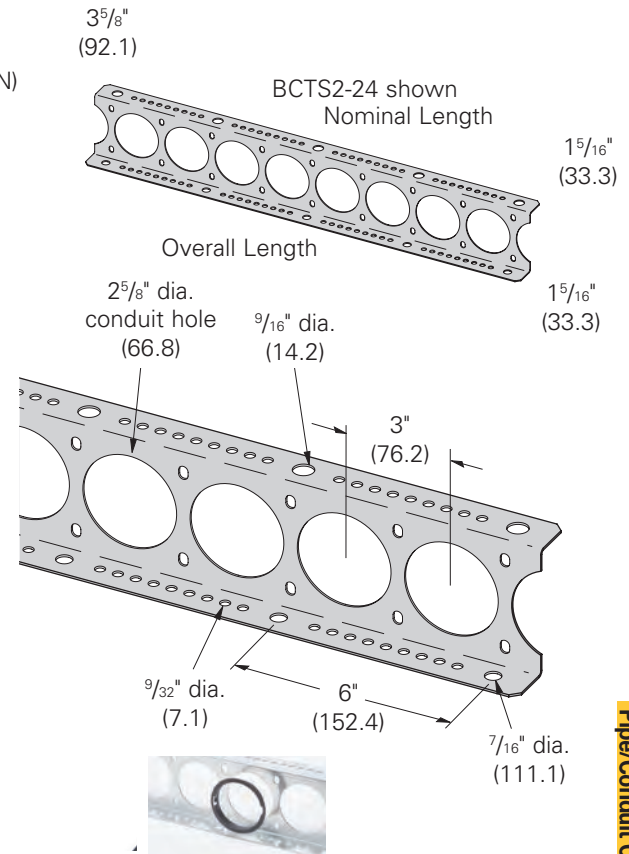


## BCTS Series Conduit Trapeze Support For Thinwall (EMT), Rigid Conduit or Pipe (Continued)

### BCTS2 Series - 2" EMT/2" Rigid Maximum

Hanger rod spacing loads: Safety Factor of 3 - Evenly distributed maximum loads • 24" (609mm) is 400 lbs. (1.78kN) • 36" (914mm) is 300 lbs. (1.33kN)

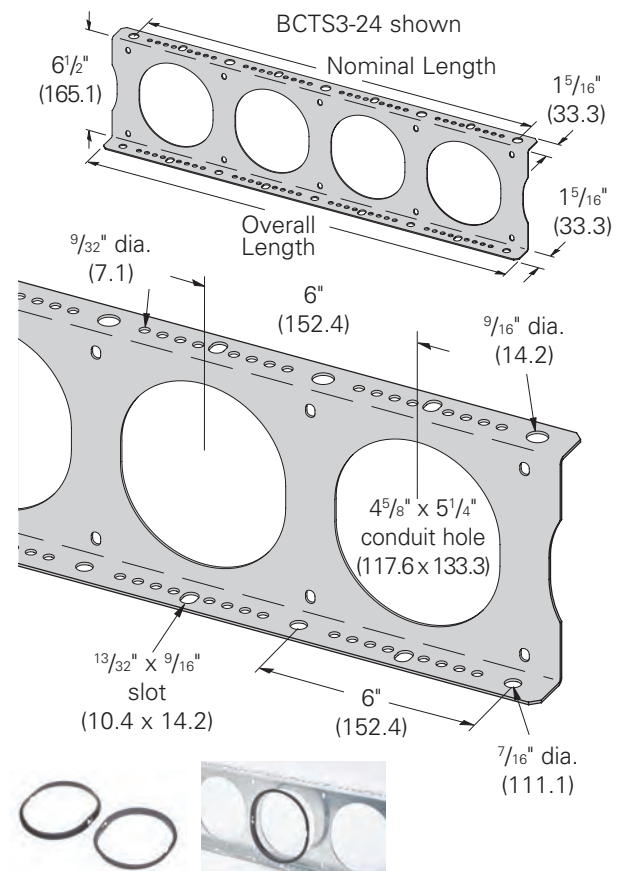
| Part No.  | Nominal Length<br>In. mm                          | Overall Length<br>In. mm | Conduit Holes | Wt./C<br>Lbs. kg |
|-----------|---------------------------------------------------|--------------------------|---------------|------------------|
| BCTS2-12  | 12 (305)                                          | 14 (355)                 | 4             | 95 (43.1)        |
| BCTS2-18  | 18 (457)                                          | 20 (508)                 | 6             | 135 (61.2)       |
| BCTS2-24  | 24 (609)                                          | 26 (660)                 | 8             | 175 (79.3)       |
| BCTS2-30  | 30 (762)                                          | 32 (813)                 | 10            | 215 (97.5)       |
| BCTS2-36  | 36 (914)                                          | 38 (965)                 | 12            | 255 (115.6)      |
| BCTS2-42  | 42 (1067)                                         | 44 (1117)                | 14            | 295 (133.8)      |
| BCTS2-48  | 48 (1219)                                         | 50 (1270)                | 16            | 335 (151.9)      |
| BCTS2-54  | 54 (1371)                                         | 56 (1422)                | 18            | 375 (170.1)      |
| BCTS2-60  | 60 (1524)                                         | 62 (1575)                | 20            | 415 (188.2)      |
| BCTS2-66  | 66 (1676)                                         | 68 (1727)                | 22            | 455 (206.3)      |
| BCTS2-72  | 72 (1829)                                         | 74 (1879)                | 24            | 495 (224.5)      |
| BCTS2-78  | 78 (1981)                                         | 80 (2032)                | 26            | 535 (242.6)      |
| BCTS2-84  | 84 (2133)                                         | 86 (2184)                | 28            | 575 (260.8)      |
| BCTS2-90  | 90 (2286)                                         | 92 (2337)                | 30            | 615 (278.9)      |
| BCTS2-96  | 96 (2438)                                         | 98 (2489)                | 32            | 655 (297.1)      |
| BCTS2-102 | 102 (2591)                                        | 104 (2641)               | 34            | 695 (315.2)      |
| BCTS2-108 | 108 (2743)                                        | 110 (2794)               | 36            | 735 (333.3)      |
| BCTS2-114 | 114 (2895)                                        | 116 (2946)               | 38            | 775 (351.5)      |
| BCTS2-120 | 120 (3048)                                        | 122 (3099)               | 40            | 815 (369.6)      |
| BCTB2     | Bushing for 2 <sup>5</sup> / <sub>8</sub> " Holes |                          |               | 0.70 (0.32)      |



### BCTS3 Series - 4" EMT/4" Rigid Maximum

Hanger rod spacing loads: Safety Factor of 3 - Evenly distributed maximum loads • 24" (609mm) is 800 lbs. (3.56kN) • 36" (914mm) is 750 lbs. (3.33kN)

| Part No.  | Nominal Length<br>In. mm                                                                | Overall Length<br>In. mm | Conduit Holes | Wt./C<br>Lbs. kg |
|-----------|-----------------------------------------------------------------------------------------|--------------------------|---------------|------------------|
| BCTS3-12  | 12 (305)                                                                                | 14 (355)                 | 2             | 168 (76.2)       |
| BCTS3-18  | 18 (457)                                                                                | 20 (508)                 | 3             | 235 (106.6)      |
| BCTS3-24  | 24 (609)                                                                                | 26 (660)                 | 4             | 302 (137.0)      |
| BCTS3-30  | 30 (762)                                                                                | 32 (813)                 | 5             | 369 (167.3)      |
| BCTS3-36  | 36 (914)                                                                                | 38 (965)                 | 6             | 436 (197.7)      |
| BCTS3-42  | 42 (1067)                                                                               | 44 (1117)                | 7             | 504 (228.6)      |
| BCTS3-48  | 48 (1219)                                                                               | 50 (1270)                | 8             | 571 (259.0)      |
| BCTS3-54  | 54 (1371)                                                                               | 56 (1422)                | 9             | 638 (289.3)      |
| BCTS3-60  | 60 (1524)                                                                               | 62 (1575)                | 10            | 705 (319.8)      |
| BCTS3-66  | 66 (1676)                                                                               | 68 (1727)                | 11            | 772 (350.1)      |
| BCTS3-72  | 72 (1829)                                                                               | 74 (1879)                | 12            | 840 (381.0)      |
| BCTS3-78  | 78 (1981)                                                                               | 80 (2032)                | 13            | 907 (411.4)      |
| BCTS3-84  | 84 (2133)                                                                               | 86 (2184)                | 14            | 974 (441.8)      |
| BCTS3-90  | 90 (2286)                                                                               | 92 (2337)                | 15            | 1041 (472.2)     |
| BCTS3-96  | 96 (2438)                                                                               | 98 (2489)                | 16            | 1108 (502.5)     |
| BCTS3-102 | 102 (2591)                                                                              | 104 (2641)               | 17            | 1175 (533.0)     |
| BCTS3-108 | 108 (2743)                                                                              | 110 (2794)               | 18            | 1243 (563.8)     |
| BCTS3-114 | 114 (2895)                                                                              | 116 (2946)               | 19            | 1310 (594.2)     |
| BCTS3-120 | 120 (3048)                                                                              | 122 (3099)               | 20            | 1377 (624.6)     |
| BCTB3     | Bushing for 4 <sup>5</sup> / <sub>8</sub> " x 5 <sup>1</sup> / <sub>4</sub> " Holes 1.3 |                          |               | (0.58)           |



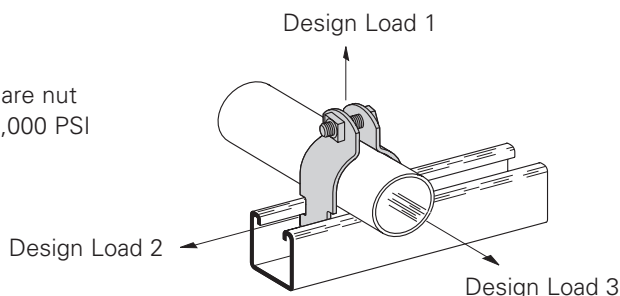
Reference page 168 for general fitting and standard finish specifications.

# Pipe clamps

## B2000 Series Pipe and Conduit Clamps

- Safety Factor of 5
- Add PA to suffix for pre-assembled pipe clamps
- Includes combination recess hex head machine screw and square nut
- Material: 16 Ga. (1.5), 14 Ga. (1.9), 12 Ga. (2.6) ASTM A653 33,000 PSI min. yield and 11 Ga. (3.0) ASTM A1011HSLA Gr. 50
- Standard finishes: ZN, HDG, SS4, SS6, AL

Note: For EMT sizes 2 1/2" and larger use rigid conduit sizes.



## Thinwall Conduit (EMT) Clamps

| Part No.     | Conduit Size |      | Material Thickness |       | Design Load 1 |        | Design Load 2 |       | Design Load 3 |       | Wt./C |        |
|--------------|--------------|------|--------------------|-------|---------------|--------|---------------|-------|---------------|-------|-------|--------|
|              | In.          | mm   | In.                | mm    | Lbs.          | kN     | Lbs.          | kN    | Lbs.          | kN    | Lbs.  | kg     |
| <b>B2000</b> | 3/8"         | (10) | 16 Ga.             | (1.5) | 400 <b>u</b>  | (1.78) | 50            | (.22) | 50            | (.22) | 10    | (4.5)  |
| <b>B2001</b> | 1/2"         | (15) | 16 Ga.             | (1.5) | 400 <b>u</b>  | (1.78) | 50            | (.22) | 50            | (.22) | 10    | (4.5)  |
| <b>B2002</b> | 3/4"         | (20) | 16 Ga.             | (1.9) | 400 <b>u</b>  | (1.78) | 50            | (.22) | 50            | (.22) | 11    | (5.0)  |
| <b>B2003</b> | 1"           | (25) | 14 Ga.             | (1.9) | 600 <b>u</b>  | (2.67) | 75            | (.33) | 75            | (.33) | 16    | (7.2)  |
| <b>B2004</b> | 1 1/4"       | (32) | 14 Ga.             | (1.9) | 600 <b>u</b>  | (2.67) | 75            | (.33) | 75            | (.33) | 19    | (8.6)  |
| <b>B2005</b> | 1 1/2"       | (40) | 12 Ga.             | (2.6) | 800 <b>u</b>  | (3.56) | 125           | (.56) | 125           | (.56) | 28    | (12.7) |
| <b>B2006</b> | 2"           | (50) | 12 Ga.             | (2.6) | 800 <b>u</b>  | (3.56) | 125           | (.56) | 125           | (.56) | 33    | (14.9) |

## Rigid or Conduit or Pipe Clamps

| Part No.     | Conduit Size |       | Material Thickness |       | Design Load 1 |        | Design Load 2 |        | Design Load 3 |       | Wt./C |        |
|--------------|--------------|-------|--------------------|-------|---------------|--------|---------------|--------|---------------|-------|-------|--------|
|              | In.          | mm    | In.                | mm    | Lbs.          | kN     | Lbs.          | kN     | Lbs.          | kN    | Lbs.  | kg     |
| <b>B2001</b> | 3/8"         | (10)  | 16 Ga.             | (1.5) | 400 <b>u</b>  | (1.78) | 50            | (.22)  | 50            | (.22) | 10    | (4.5)  |
| <b>B2008</b> | 1/2"         | (15)  | 16 Ga.             | (1.5) | 400 <b>u</b>  | (1.78) | 50            | (.22)  | 50            | (.22) | 11    | (5.0)  |
| <b>B2009</b> | 3/4"         | (20)  | 14 Ga.             | (1.9) | 600 <b>u</b>  | (2.67) | 75            | (.33)  | 75            | (.33) | 15    | (6.8)  |
| <b>B2010</b> | 1"           | (25)  | 14 Ga.             | (1.9) | 600 <b>u</b>  | (2.67) | 75            | (.33)  | 75            | (.33) | 16    | (7.2)  |
| <b>B2011</b> | 1 1/4"       | (32)  | 14 Ga.             | (1.9) | 600 <b>u</b>  | (2.67) | 75            | (.33)  | 75            | (.33) | 20    | (9.1)  |
| <b>B2012</b> | 1 1/2"       | (40)  | 12 Ga.             | (2.6) | 800 <b>u</b>  | (3.56) | 125           | (.56)  | 125           | (.56) | 30    | (13.6) |
| <b>B2013</b> | 2"           | (50)  | 12 Ga.             | (2.6) | 800 <b>u</b>  | (3.56) | 125           | (.56)  | 125           | (.56) | 34    | (15.4) |
| <b>B2014</b> | 2 1/2"       | (65)  | 12 Ga.             | (2.6) | 800 <b>u</b>  | (3.56) | 125           | (.56)  | 125           | (.56) | 38    | (17.2) |
| <b>B2015</b> | 3"           | (80)  | 12 Ga.             | (2.6) | 800 <b>u</b>  | (3.56) | 125           | (.56)  | 125           | (.56) | 44    | (19.9) |
| <b>B2016</b> | 3 1/2"       | (90)  | 12 Ga.             | (2.6) | 800 <b>u</b>  | (3.56) | 125           | (.56)  | 125           | (.56) | 49    | (22.2) |
| <b>B2017</b> | 4"           | (100) | 12 Ga.             | (2.6) | 800 <b>u</b>  | (3.56) | 125           | (.56)  | 125           | (.56) | 54    | (24.5) |
| <b>B2018</b> | 4 1/2"       | (115) | 11 Ga.             | (3.0) | 1000 <b>u</b> | (4.45) | 200           | (.89)  | 150           | (.67) | 70    | (31.7) |
| <b>B2019</b> | 5"           | (125) | 11 Ga.             | (3.0) | 1000 <b>u</b> | (4.45) | 200           | (.89)  | 150           | (.67) | 77    | (34.9) |
| <b>B2020</b> | 6"           | (150) | 11 Ga.             | (3.0) | 1000 <b>u</b> | (4.45) | 200           | (.89)  | 150           | (.67) | 100   | (45.3) |
| <b>B2021</b> | 7"           | (175) | 11 Ga.             | (3.0) | 1000 <b>u</b> | (4.45) | 250           | (1.11) | 200           | (.89) | 115   | (52.1) |
| <b>B2022</b> | 8"           | (200) | 11 Ga.             | (3.0) | 1000 <b>u</b> | (4.45) | 250           | (1.11) | 200           | (.89) | 128   | (58.0) |
| <b>B2130</b> | 10"          | (254) | 11 Ga.             | (3.0) | 1000 <b>u</b> | (4.45) | 250           | (1.11) | 200           | (.89) | 160   | (72.6) |
| <b>B2132</b> | 12"          | (305) | 11 Ga.             | (3.0) | 1000 <b>u</b> | (4.45) | 250           | (1.11) | 200           | (.89) | 185   | (83.9) |



As shown with **u** For UL installations, follow Table 9 in UL2239.

Reference page 168 for general fitting and standard finish specifications.



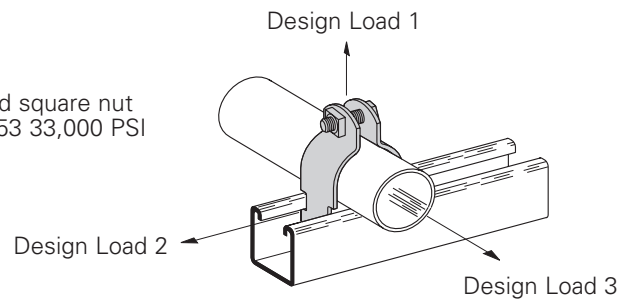
## B2000 Series PVC Clamps

- Safety Factor of 5
- Add PA to suffix for pre-assembled pipe clamps
- Includes combination recess hex head machine screw and square nut
- Material: 16 Ga. (1.5), 14 Ga. (1.9), 12 Ga. (2.6) ASTM A653 33,000 PSI min. yield and 11 Ga. (3.0) ASTM A1011HSLA Gr. 50
- Standard finishes: PVC

### Clamp Sizing Chart for PVC Coated Rigid Conduit and Clamps

| Nominal Conduit Size<br>In. mm | Conduit Coating |               |               |               |
|--------------------------------|-----------------|---------------|---------------|---------------|
|                                | .020 (.51mm)    |               | .040 (1.01mm) |               |
|                                | Clamp Coating   |               | Clamp Coating |               |
|                                | 0               | .020" (.51mm) | 0             | .020" (.51mm) |
| 1/2" (15)                      | B2008           | B2002         | B2002         | B2009         |
| 3/4" (20)                      | B2030           | B2030         | B2030         | B2003         |
| 1" (25)                        | B2032           | B2010         | B2010         | B2004         |
| 1 1/4" (32)                    | B2005           | B2005         | B2005         | B2005         |
| 1 1/2" (40)                    | B2012           | B2037         | B2037         | B2037         |
| 2" (50)                        | B2013           | B2041         | B2041         | B2041         |
| 2 1/2" (65)                    | B2014           | B2045         | B2045         | B2045         |
| 3" (80)                        | B2015           | B2050         | B2050         | B2050         |
| 3 1/2" (90)                    | B2016           | B2054         | B2054         | B2054         |
| 4" (100)                       | B2017           | B2058         | B2058         | B2058         |
| 5" (125)                       | B2019           | B2066         | B2066         | B2066         |
| 6" (150)                       | B2020           | B2115         | B2115         | B2115         |

\*See B2000 O.D. pipe and conduit clamp chart on pgs. 131-132 for corresponding clamp load data.



### Clamp Sizing Chart for PVC Coated Thinwall (EMT) Conduit and Clamps

| Nominal Conduit Size<br>In. mm | Conduit Coating |               |               |               |
|--------------------------------|-----------------|---------------|---------------|---------------|
|                                | .020 (.51mm)    |               | .040 (1.01mm) |               |
|                                | Clamp Coating   |               | Clamp Coating |               |
|                                | 0               | .020" (.51mm) | 0             | .020" (.51mm) |
| 3/8" (10)                      | B2026           | B2026         | B2026         | B2001         |
| 1/2" (15)                      | B2027           | B2027         | B2027         | B2008         |
| 3/4" (20)                      | B2009           | B2009         | B2009         | B2009         |
| 1" (25)                        | B2003           | B2031         | B2031         | B2031         |
| 1 1/4" (32)                    | B2004           | B2011         | B2011         | B2011         |
| 1 1/2" (40)                    | B2005           | B2005         | B2005         | B2012         |
| 2" (50)                        | B2039           | B2039         | B2039         | B2013         |

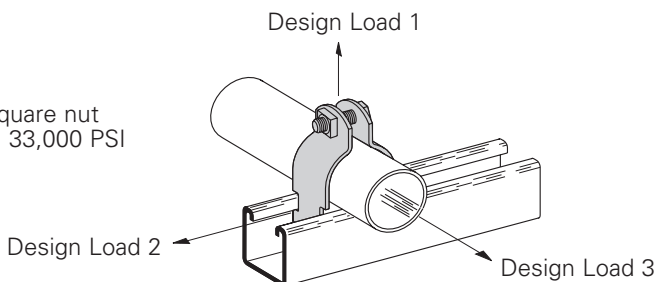
\*See B2000 O.D. pipe and conduit clamp chart on pgs. 131-132 for corresponding clamp load data.

## B2000 Series Copper Tubing Clamps

- Safety Factor of 5
- Add PA to suffix for pre-assembled pipe clamps
- Includes combination recess hex head machine screw and square nut
- Material: 16 Ga. (1.5), 14 Ga. (1.9), 12 Ga. (2.6) ASTM A1011 33,000 PSI min. yield and 11 Ga. (3.0) ASTM A1011HSLA Gr. 50
- Standard finish: Exclusive DURA-COPPER™ Finish (DCU)

### Copper Tubing Clamps

| Part No. | Tubing Size<br>In. (mm) | O.D. Size |         | Material Thickness<br>In. (mm) | Design Load 1 |        | Design Load 2 |        | Design Load 3 |       | Wt./C<br>Lbs. kg |
|----------|-------------------------|-----------|---------|--------------------------------|---------------|--------|---------------|--------|---------------|-------|------------------|
|          |                         | In.       | (mm)    |                                | Lbs.          | kN     | Lbs.          | kN     | Lbs.          | kN    |                  |
| B2024DCU | 1/4" (6.3)              | .375      | (9.5)   | 16 Ga. (1.5)                   | 400           | (1.78) | 50            | (.22)  | 50            | (.22) | 8 (3.6)          |
| B2025DCU | 3/8" (9.5)              | .500      | (12.7)  | 16 Ga. (1.5)                   | 400           | (1.78) | 50            | (.22)  | 50            | (.22) | 9 (4.1)          |
| B2026DCU | 1/2" (12.7)             | .625      | (15.9)  | 16 Ga. (1.5)                   | 400           | (1.78) | 50            | (.22)  | 50            | (.22) | 10 (4.5)         |
| B2027DCU | 5/8" (15.9)             | .750      | (19.0)  | 16 Ga. (1.5)                   | 400           | (1.78) | 50            | (.22)  | 50            | (.22) | 10 (4.5)         |
| B2008DCU | 3/4" (19.0)             | .875      | (22.2)  | 16 Ga. (1.5)                   | 400           | (1.78) | 50            | (.22)  | 50            | (.22) | 11 (5.0)         |
| B2030DCU | 1" (25.4)               | 1.125     | (28.6)  | 14 Ga. (1.9)                   | 600           | (2.67) | 75            | (.33)  | 75            | (.33) | 15 (6.8)         |
| B2010DCU | 1 1/4" (31.7)           | 1.375     | (34.9)  | 14 Ga. (1.9)                   | 600           | (2.67) | 75            | (.33)  | 75            | (.33) | 17 (7.7)         |
| B2011DCU | 1 1/2" (38.1)           | 1.625     | (41.3)  | 14 Ga. (1.9)                   | 600           | (2.67) | 75            | (.33)  | 75            | (.33) | 19 (8.6)         |
| B2038DCU | 2" (50.8)               | 2.125     | (54.0)  | 12 Ga. (2.6)                   | 800           | (3.56) | 125           | (.56)  | 125           | (.56) | 32 (14.5)        |
| B2042DCU | 2 1/2" (63.5)           | 2.625     | (66.7)  | 12 Ga. (2.6)                   | 800           | (3.56) | 125           | (.56)  | 125           | (.56) | 35 (15.9)        |
| B2046DCU | 3" (76.2)               | 3.125     | (79.4)  | 12 Ga. (2.6)                   | 800           | (3.56) | 125           | (.56)  | 125           | (.56) | 39 (17.7)        |
| B2050DCU | 3 1/2" (88.9)           | 3.625     | (92.1)  | 11 Ga. (3.0)                   | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 54 (24.5)        |
| B2054DCU | 4" (101.6)              | 4.125     | (104.8) | 11 Ga. (3.0)                   | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 61 (27.6)        |
| B2062DCU | 5" (127.0)              | 5.125     | (130.2) | 11 Ga. (3.0)                   | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 70 (31.7)        |
| B2110DCU | 6" (152.5)              | 6.125     | (155.6) | 11 Ga. (3.0)                   | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 94 (42.6)        |
| B2126DCU | 8" (203.2)              | 8.125     | (206.4) | 11 Ga. (3.0)                   | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 123 (55.8)       |

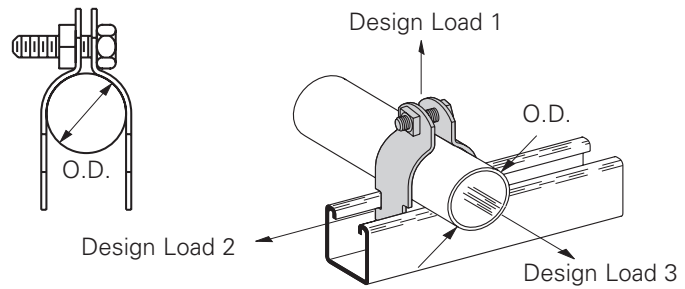


Reference page 168 for general fitting and standard finish specifications.

# Pipe clamps

## B2000 Series O.D. Pipe and Conduit Clamps

- Safety Factor of 5
- Add PA to suffix for pre-assembled pipe clamps
- Other sizes available upon request
- Includes combination recess hex head machine screw and square nut.
- Material: 16 Ga. (1.5), 14 Ga. (1.9), 12 Ga. (2.6)  
ASTM A653 33,000 PSI min. yield and 11 Ga. (3.0)  
ASTM A1011HSLA Gr. 50
- Standard finishes: ZN, HDG, SS4



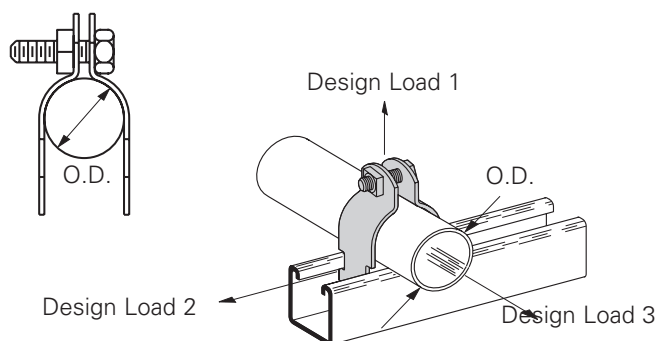
## O.D. Clamps

| Part No. | O.D. Size (in.)<br>In. mm | Hardware Size | Material Gauge Thickness<br>In. mm | Design Load 1 |        | Design Load 2 |       | Design Load 3 |       | Wt./C |        |
|----------|---------------------------|---------------|------------------------------------|---------------|--------|---------------|-------|---------------|-------|-------|--------|
|          |                           |               |                                    | Lbs.          | kN     | Lbs.          | kN    | Lbs.          | kN    | Lbs.  | kg     |
| B2023    | 1/4" (6.3)                | 1/4"-20       | 16 (1.5)                           | 120           | (.54)  | 30            | (.13) | 30            | (.13) | 8     | (3.6)  |
| B2024    | 3/8" (9.5)                | 1/4"-20       | 16 (1.5)                           | 300           | (1.33) | 40            | (.18) | 40            | (.18) | 8     | (3.6)  |
| B2025    | 1/2" (12.7)               | 1/4"-20       | 16 (1.5)                           | 400           | (1.78) | 50            | (.22) | 50            | (.22) | 9     | (4.1)  |
| B2026    | 5/8" (15.9)               | 1/4"-20       | 16 (1.5)                           | 400           | (1.78) | 50            | (.22) | 50            | (.22) | 10    | (4.5)  |
| B2027    | 3/4" (19.0)               | 1/4"-20       | 16 (1.5)                           | 400           | (1.78) | 50            | (.22) | 50            | (.22) | 10    | (4.5)  |
| B2008    | 7/8" (22.2)               | 1/4"-20       | 16 (1.5)                           | 400           | (1.78) | 50            | (.22) | 50            | (.22) | 11    | (5.0)  |
| B2009    | 1" (25.4)                 | 1/4"-20       | 14 (1.9)                           | 500           | (2.22) | 75            | (.33) | 75            | (.33) | 15    | (6.8)  |
| B2030    | 1 1/8" (28.6)             | 1/4"-20       | 14 (1.9)                           | 600           | (2.67) | 75            | (.33) | 75            | (.33) | 15    | (6.8)  |
| B2031    | 1 1/4" (31.7)             | 1/4"-20       | 14 (1.9)                           | 600           | (2.67) | 75            | (.33) | 75            | (.33) | 16    | (7.3)  |
| B2010    | 1 3/8" (34.9)             | 1/4"-20       | 14 (1.9)                           | 600           | (2.67) | 75            | (.33) | 75            | (.33) | 17    | (7.7)  |
| B2004    | 1 1/2" (38.1)             | 1/4"-20       | 14 (1.9)                           | 600           | (2.67) | 75            | (.33) | 75            | (.33) | 18    | (8.2)  |
| B2011    | 1 5/8" (41.3)             | 1/4"-20       | 14 (1.9)                           | 600           | (2.67) | 75            | (.33) | 75            | (.33) | 19    | (8.6)  |
| B2005    | 1 3/4" (44.4)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 29    | (13.1) |
| B2012    | 1 7/8" (47.6)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 30    | (13.6) |
| B2037    | 2" (50.8)                 | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 30    | (13.6) |
| B2038    | 2 1/8" (54.0)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 32    | (14.5) |
| B2039    | 2 1/4" (57.1)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 32    | (14.5) |
| B2013    | 2 3/8" (60.3)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 34    | (15.4) |
| B2041    | 2 1/2" (63.5)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 35    | (15.9) |
| B2042    | 2 5/8" (66.7)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 35    | (15.9) |
| B2043    | 2 3/4" (69.8)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 38    | (17.2) |
| B2014    | 2 7/8" (73.0)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 38    | (17.2) |
| B2045    | 3" (76.2)                 | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 38    | (17.2) |
| B2046    | 3 1/8" (79.4)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 39    | (17.7) |
| B2047    | 3 1/4" (82.5)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 41    | (18.6) |
| B2048    | 3 3/8" (85.7)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 43    | (19.5) |
| B2015    | 3 1/2" (88.9)             | 5/16"-18      | 12 (2.6)                           | 800           | (3.56) | 125           | (.56) | 125           | (.56) | 44    | (20.0) |
| B2050    | 3 5/8" (92.1)             | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 54    | (24.5) |
| B2051    | 3 3/4" (95.2)             | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 57    | (25.8) |
| B2052    | 3 7/8" (91.3)             | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 55    | (25.0) |
| B2016    | 4" (101.6)                | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 57    | (25.8) |
| B2054    | 4 1/8" (104.8)            | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 61    | (27.7) |
| B2055    | 4 1/4" (107.9)            | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 62    | (28.1) |
| B2056    | 4 3/8" (111.1)            | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 64    | (29.0) |
| B2017    | 4 1/2" (114.3)            | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 66    | (29.9) |
| B2058    | 4 5/8" (117.5)            | 5/16"-18      | 11 (3.0)                           | 1000          | (4.45) | 200           | (.89) | 150           | (.67) | 66    | (29.9) |

Reference page 168 for general fitting and standard finish specifications.

## B2000 Series O.D. Pipe and Conduit Clamps

- Safety Factor of 5
- Add PA to suffix for pre-assembled pipe clamps
- Other sizes available upon request
- Includes combination recess hex head machine screw and square nut.
- Material: 16 Ga. (1.5), 14 Ga. (1.9), 12 Ga. (2.6) ASTM A653 33,000 PSI min. yield and 11 Ga. (3.0) ASTM A1011HSLA Gr. 50
- Standard finishes: ZN, HDG, SS4



## O.D. Clamps

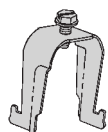
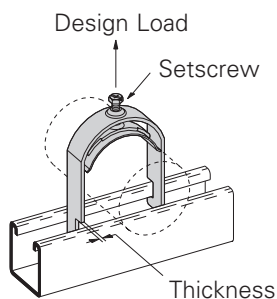
| Part No. | O.D. Size (in.)                  |         | Hardware Size | Material Gauge Thickness |       | Design Load 1 |        | Design Load 2 |        | Design Load 3 |       | Wt./C |        |
|----------|----------------------------------|---------|---------------|--------------------------|-------|---------------|--------|---------------|--------|---------------|-------|-------|--------|
|          | In.                              | mm      |               | In.                      | mm    | Lbs.          | kN     | Lbs.          | kN     | Lbs.          | kN    | Lbs.  | kg     |
| B2059    | 4 <sup>3</sup> / <sub>4</sub> "  | (120.6) | 5/16"-18      | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 68    | (30.8) |
| B2060    | 4 <sup>7</sup> / <sub>8</sub> "  | (123.8) | 5/16"-18      | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 69    | (31.3) |
| B2018    | 5                                | (127.0) | 5/16"-18      | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 70    | (31.8) |
| B2062    | 5 <sup>1</sup> / <sub>8</sub> "  | (130.2) | 5/16"-18      | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 70    | (31.8) |
| B2063    | 5 <sup>1</sup> / <sub>4</sub> "  | (133.3) | 5/16"-18      | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 70    | (31.8) |
| B2064    | 5 <sup>3</sup> / <sub>8</sub> "  | (136.5) | 5/16"-18      | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 77    | (34.9) |
| B2019    | 5 <sup>1</sup> / <sub>2</sub> "  | (139.7) | 5/16"-18      | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 78    | (35.4) |
| B2066    | 5 <sup>5</sup> / <sub>8</sub> "  | (142.9) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 83    | (37.6) |
| B2067    | 5 <sup>3</sup> / <sub>4</sub> "  | (146.0) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 84    | (38.1) |
| B2068    | 5 <sup>7</sup> / <sub>8</sub> "  | (149.2) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 85    | (38.6) |
| B2069    | 6"                               | (152.4) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 200           | (.89)  | 150           | (.67) | 87    | (39.5) |
| B2110    | 6 <sup>1</sup> / <sub>8</sub> "  | (155.6) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 94    | (42.6) |
| B2111    | 6 <sup>1</sup> / <sub>4</sub> "  | (158.7) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 96    | (43.5) |
| B2112    | 6 <sup>3</sup> / <sub>8</sub> "  | (161.9) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 98    | (44.4) |
| B2113    | 6 <sup>1</sup> / <sub>2</sub> "  | (165.1) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 99    | (44.9) |
| B2020    | 6 <sup>5</sup> / <sub>8</sub> "  | (168.3) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 100   | (45.4) |
| B2115    | 6 <sup>3</sup> / <sub>4</sub> "  | (171.4) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 102   | (46.3) |
| B2116    | 6 <sup>7</sup> / <sub>8</sub> "  | (174.6) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 104   | (47.2) |
| B2117    | 7"                               | (177.8) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 106   | (48.1) |
| B2118    | 7 <sup>1</sup> / <sub>8</sub> "  | (181.0) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 108   | (49.0) |
| B2119    | 7 <sup>1</sup> / <sub>4</sub> "  | (184.1) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 110   | (49.9) |
| B2120    | 7 <sup>3</sup> / <sub>8</sub> "  | (187.3) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 112   | (50.8) |
| B2121    | 7 <sup>1</sup> / <sub>2</sub> "  | (190.5) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 114   | (51.7) |
| B2021    | 7 <sup>5</sup> / <sub>8</sub> "  | (193.7) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 115   | (52.2) |
| B2123    | 7 <sup>3</sup> / <sub>4</sub> "  | (196.8) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 117   | (53.1) |
| B2124    | 7 <sup>7</sup> / <sub>8</sub> "  | (200.0) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 119   | (54.0) |
| B2125    | 8"                               | (203.2) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 121   | (54.9) |
| B2126    | 8 <sup>1</sup> / <sub>8</sub> "  | (206.4) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 123   | (55.8) |
| B2127    | 8 <sup>1</sup> / <sub>4</sub> "  | (209.5) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 125   | (56.7) |
| B2128    | 8 <sup>3</sup> / <sub>8</sub> "  | (212.7) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 126   | (57.2) |
| B2129    | 8 <sup>1</sup> / <sub>2</sub> "  | (215.9) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 128   | (58.1) |
| B2022    | 8 <sup>5</sup> / <sub>8</sub> "  | (219.1) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 128   | (58.1) |
| B2130    | 10 <sup>3</sup> / <sub>4</sub> " | (273.0) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 160   | (72.6) |
| B2132    | 12 <sup>3</sup> / <sub>4</sub> " | (323.8) | 3/8"-16       | 11                       | (3.0) | 1000          | (4.45) | 250           | (1.11) | 200           | (.89) | 185   | (83.9) |

Reference page 168 for general fitting and standard finish specifications.

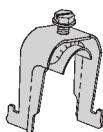
# Pipe clamps

## B1508 thru B1564S Conduit/Strut Clamps

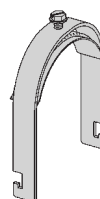
- Safety Factor of 3
- Clamps without saddles are not recommended for flexible conduit or cable
- All Sizes Include:  
1/4"-20 slotted hex head machine screw
- Standard finish: ZN



B1508 thru B1520



B1508S thru B1524S



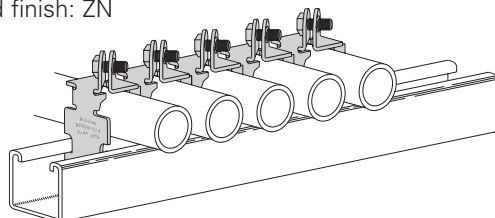
B1532S thru B1564S

| Part No.      | Use With |       |               |       |           |       |             |        |       |        |
|---------------|----------|-------|---------------|-------|-----------|-------|-------------|--------|-------|--------|
|               | EMT      |       | Rigid Conduit |       | Thickness |       | Design Load |        | Wt./C |        |
|               | In.      | mm    | In.           | mm    | In.       | mm    | Lbs.        | kN     | Lbs.  | kg     |
| <b>B1508</b>  | 1/2"     | (15)  | —             | —     | 16 Ga.    | (1.5) | 200         | (.89)  | 7.4   | (3.4)  |
| <b>B1512</b>  | 3/4"     | (20)  | 1/2"          | (15)  | 16 Ga.    | (1.5) | 200         | (.89)  | 8.0   | (3.6)  |
| <b>B1516</b>  | 1"       | (25)  | 3/4"          | (20)  | 14 Ga.    | (1.9) | 300         | (1.33) | 11.0  | (5.0)  |
| <b>B1520</b>  | 1 1/4"   | (32)  | 1"            | (25)  | 14 Ga.    | (1.9) | 300         | (1.33) | 12.5  | (5.7)  |
| <b>B1508S</b> | 1/2"     | (15)  | —             | —     | 16 Ga.    | (1.5) | 200         | (.89)  | 8.6   | (3.9)  |
| <b>B1512S</b> | 3/4"     | (20)  | 1/2"          | (15)  | 16 Ga.    | (1.5) | 200         | (.89)  | 9.2   | (4.2)  |
| <b>B1516S</b> | 1"       | (25)  | 3/4"          | (20)  | 14 Ga.    | (1.9) | 300         | (1.33) | 12.7  | (5.8)  |
| <b>B1520S</b> | 1 1/4"   | (32)  | 1"            | (25)  | 14 Ga.    | (1.9) | 300         | (1.33) | 14.6  | (6.6)  |
| <b>B1524S</b> | 1 1/2"   | (40)  | 1 1/4"        | (32)  | 12 Ga.    | (2.6) | 400         | (1.78) | 20.5  | (9.3)  |
| <b>B1532S</b> | 2"       | (50)  | 1 1/2"        | (40)  | 12 Ga.    | (2.6) | 400         | (1.78) | 21.5  | (9.8)  |
| <b>B1534S</b> | —        | —     | 2"            | (50)  | 12 Ga.    | (2.6) | 400         | (1.78) | 22.7  | (10.3) |
| <b>B1540S</b> | 2 1/2"   | (65)  | 2 1/2"        | (65)  | 12 Ga.    | (2.6) | 400         | (1.78) | 26.0  | (11.9) |
| <b>B1548S</b> | 3"       | (80)  | 3"            | (80)  | 12 Ga.    | (2.6) | 400         | (1.78) | 30.2  | (13.7) |
| <b>B1556S</b> | 3 1/2"   | (90)  | 3 1/2"        | (90)  | 12 Ga.    | (2.6) | 400         | (1.78) | 33.3  | (15.1) |
| <b>B1564S</b> | 4"       | (100) | 4"            | (100) | 12 Ga.    | (2.6) | 400         | (1.78) | 36.6  | (16.6) |

Reference page 168 for general fitting and standard finish specifications.

## B2601 thru B2610 TWIST EAR™ Pipe Clamp

- One piece break apart, screw retainer, thread impressions
- Tighter alignment, no need to leave additional space between clamps in order to access nut and bolt
- Easier access bolt can be tightened directly from front
- Available in 1/2", 3/4", 1" rigid and EMT conduit
- Recommended Torque 30 in. - lbs.
- Safety Factor of 3
- Standard finish: ZN

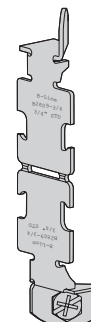


Allows for multiple clamps to be used in succession, with easier access than other pipe clamps.

Design Load



Break-apart - break in the middle, bolt the ends together.

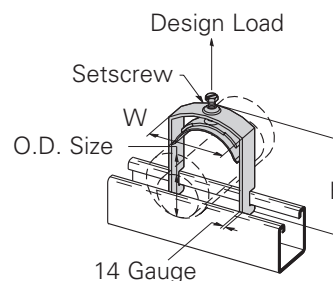


No loose pieces. One piece break apart with screw retainer and thread impressions.

| Part No. | Use With      |                         | Thickness<br>In. mm | Design Load |            | Wt./C |  |
|----------|---------------|-------------------------|---------------------|-------------|------------|-------|--|
|          | EMT<br>In. mm | Rigid Conduit<br>In. mm |                     | Lbs. kN     | Lbs. kg    |       |  |
| B2601    | 1/2" (17.9)   | — —                     | 16 Ga. (1.5)        | 300 (1.34)  | 8.2 (3.7)  |       |  |
| B2602    | 3/4" (23.4)   | — —                     | 14 Ga. (1.9)        | 500 (2.24)  | 13.5 (6.1) |       |  |
| B2603    | 1" (29.5)     | — —                     | 14 Ga. (1.9)        | 500 (2.24)  | 15.6 (7.1) |       |  |
| B2608    | — —           | 1/2" (21.3)             | 16 Ga. (1.5)        | 300 (1.34)  | 8.2 (3.7)  |       |  |
| B2609    | — —           | 3/4" (26.7)             | 14 Ga. (1.9)        | 500 (2.24)  | 13.5 (6.1) |       |  |
| B2610    | — —           | 1" (33.4)               | 14 Ga. (1.9)        | 500 (2.24)  | 15.6 (7.1) |       |  |

## BP081SS thru BP475SS P Clamps

- Minimizes induction heating
- Material: Stainless Steel Type 304



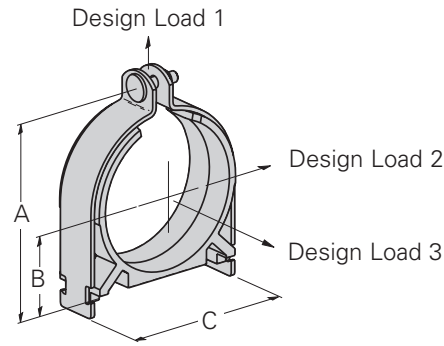
| Part No.       | O.D. Size   |               | Height H |         | Width W |         | Design Load |        | Wt./C. |        |
|----------------|-------------|---------------|----------|---------|---------|---------|-------------|--------|--------|--------|
|                | In.         | mm            | In.      | mm      | In.     | mm      |             |        |        |        |
|                |             |               |          |         |         |         | Lbs.        | kN     | Lbs.   | kg     |
| <b>BP081SS</b> | .250-.840   | (6.4-21.3)    | 1.86     | (47.2)  | 0.87    | (22.1)  | 300         | (1.33) | 9.0    | (4.1)  |
| <b>BP110SS</b> | .810-1.100  | (20.6-28.0)   | 2.18     | (55.4)  | 1.19    | (30.2)  | 300         | (1.33) | 12.0   | (5.4)  |
| <b>BP135SS</b> | .850-1.350  | (21.6-34.8)   | 2.25     | (57.2)  | 1.38    | (35.1)  | 300         | (1.33) | 14.0   | (6.3)  |
| <b>BP175SS</b> | 1.250-1.750 | (31.8-44.4)   | 2.78     | (70.6)  | 1.78    | (45.2)  | 300         | (1.33) | 21.0   | (9.5)  |
| <b>BP205SS</b> | 1.550-2.050 | (39.4-52.1)   | 3.00     | (76.2)  | 2.28    | (57.9)  | 300         | (1.33) | 30.0   | (13.6) |
| <b>BP250SS</b> | 2.00-2.50   | (50.8-63.5)   | 3.43     | (87.1)  | 2.83    | (71.9)  | 300         | (1.33) | 35.0   | (15.9) |
| <b>BP300SS</b> | 2.55-3.00   | (64.7-76.2)   | 3.87     | (97.8)  | 3.15    | (80.0)  | 300         | (1.33) | 39.0   | (17.7) |
| <b>BP325SS</b> | 2.75-3.25   | (69.9-82.8)   | 4.06     | (103.1) | 3.28    | (83.3)  | 300         | (1.33) | 41.0   | (18.6) |
| <b>BP375SS</b> | 3.25-3.75   | (82.6-95.3)   | 4.60     | (116.8) | 3.83    | (97.3)  | 300         | (1.33) | 47.0   | (21.3) |
| <b>BP425SS</b> | 3.75-4.25   | (95.3-108.0)  | 5.13     | (130.3) | 4.50    | (114.3) | 300         | (1.33) | 54.0   | (24.4) |
| <b>BP475SS</b> | 4.25-4.75   | (108.0-120.7) | 5.70     | (144.7) | 4.85    | (123.2) | 300         | (1.33) | 58.0   | (26.3) |

Reference page 168 for general fitting and standard finish specifications.

# Vibra-Clamp Pipe clamps

## BVT Series VIBRA-CLAMP™ - Copper & O.D.

- Safety Factor of 3
- Accesses tubing sizes 1/8" (3) to 6" (150)
- Allows easy one tool installation
- Endures both high (+300°F) and low (-40°F) temperatures
- Dampens vibration and noise
- Eliminates galvanic metal to metal contact
- Resists most industrial oils and solvents
- Reduces thermal loss and gain
- Helps secure tubing firmly to channel (strut)
- Dielectric strength of 400 volts/mil
- Includes cushion, clamp, screw and nut
- Standard finishes: YZN, SS4



| Catalog Number | Tubing O.D. Size<br>In. mm | Copper Tubing Size<br>In. mm | In. A<br>mm  | In. B<br>mm | In. C<br>mm  | Wt./C<br>Lbs. kg |
|----------------|----------------------------|------------------------------|--------------|-------------|--------------|------------------|
| BVT025         | 1/4" (6.3)                 | 1/8" (3)                     | 1.22 (30.9)  | 0.19 (4.8)  | 0.49 (12.4)  | 11 (5.0)         |
| BVT037         | 3/8" (9.5)                 | 1/4" (6)                     | 1.36 (34.5)  | 0.25 (6.3)  | 0.61 (15.5)  | 12 (5.4)         |
| BVT050         | 1/2" (12.7)                | 3/8" (10)                    | 1.49 (37.8)  | 0.31 (7.8)  | 0.74 (18.8)  | 14 (6.3)         |
| BVT062         | 5/8" (15.9)                | 1/2" (15)                    | 1.62 (41.1)  | 0.38 (9.6)  | 0.86 (21.8)  | 15 (6.8)         |
| BVT075         | 3/4" (19.0)                | 5/8" (17)                    | 1.87 (47.4)  | 0.50 (12.7) | 1.15 (29.2)  | 19 (8.6)         |
| BVT087         | 7/8" (22.2)                | 3/4" (20)                    | 2.00 (50.8)  | 0.56 (14.2) | 1.27 (32.2)  | 21 (9.5)         |
| BVT100         | 1" (25.4)                  | —                            | 2.25 (57.1)  | 0.69 (17.5) | 1.52 (38.6)  | 22 (10.0)        |
| BVT112         | 1 1/8" (28.6)              | 1" (25)                      | 2.25 (57.1)  | 0.69 (17.5) | 1.52 (38.6)  | 26 (11.8)        |
| BVT125         | 1 1/4" (31.7)              | —                            | 2.51 (63.7)  | 0.81 (20.6) | 1.78 (45.2)  | 36 (16.3)        |
| BVT137         | 1 3/8" (34.9)              | 1 1/4" (32)                  | 2.51 (63.7)  | 0.81 (20.6) | 1.78 (45.2)  | 38 (17.2)        |
| BVT150         | 1 1/2" (38.1)              | —                            | 2.74 (69.6)  | 0.88 (22.4) | 1.96 (49.8)  | 35 (15.9)        |
| BVT162         | 1 5/8" (41.3)              | 1 1/2" (40)                  | 3.00 (76.2)  | 1.00 (25.4) | 2.20 (55.9)  | 40 (18.1)        |
| BVT175         | 1 3/4" (44.4)              | —                            | 3.13 (79.5)  | 1.06 (26.9) | 2.33 (59.1)  | 44 (19.9)        |
| BVT187         | 1 7/8" (47.6)              | —                            | 3.28 (83.3)  | 1.13 (28.7) | 2.46 (62.5)  | 40 (18.1)        |
| BVT200         | 2" (50.8)                  | —                            | 3.52 (89.4)  | 1.25 (31.7) | 2.70 (68.6)  | 55 (25.0)        |
| BVT212         | 2 1/8" (54.0)              | 2" (50)                      | 3.52 (89.4)  | 1.25 (31.7) | 2.70 (68.6)  | 55 (25.0)        |
| BVT225         | 2 1/4" (57.1)              | —                            | 3.64 (92.4)  | 1.31 (33.2) | 2.83 (71.8)  | 54 (24.5)        |
| BVT250         | 2 1/2" (63.5)              | —                            | 3.91 (99.3)  | 1.43 (36.3) | 3.11 (79.0)  | 56 (25.4)        |
| BVT262         | 2 5/8" (66.6)              | 2 1/2" (65)                  | 4.02 (102.1) | 1.50 (38.1) | 3.20 (81.3)  | 55 (25.0)        |
| BVT300         | 3" (76.2)                  | —                            | 4.42 (112.2) | 1.68 (42.6) | 3.61 (91.6)  | 67 (30.4)        |
| BVT312         | 3 1/8" (79.4)              | 3" (80)                      | 4.53 (115.0) | 1.75 (44.4) | 3.70 (93.9)  | 64 (29.0)        |
| BVT362         | 3 5/8" (92.1)              | 3 1/2" (90)                  | 5.05 (128.2) | 2.00 (50.8) | 4.23 (107.4) | 76 (34.5)        |
| BVT412         | 4 1/8" (104.8)             | 4" (100)                     | 5.55 (140.9) | 2.25 (57.1) | 4.73 (120.1) | 93 (42.2)        |
| BVT612         | 6 1/8" (155.5)             | 6" (150)                     | 7.62 (193.5) | 3.25 (82.5) | 6.74 (171.1) | 136 (61.6)       |

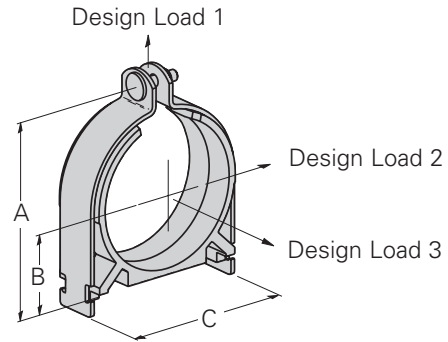
| Catalog Number | Design Load<br>Lbs. <sup>1</sup> kN | Design Load<br>Lbs. <sup>2</sup> kN | Design Load<br>Lbs. <sup>3</sup> kN |
|----------------|-------------------------------------|-------------------------------------|-------------------------------------|
| BVT025         | 400 (1.78)                          | 50 (0.22)                           | 50 (0.22)                           |
| BVT037         | 400 (1.78)                          | 50 (0.22)                           | 50 (0.22)                           |
| BVT050         | 400 (1.78)                          | 50 (0.22)                           | 50 (0.22)                           |
| BVT062         | 400 (1.78)                          | 50 (0.22)                           | 50 (0.22)                           |
| BVT075         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVT087         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVT100         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVT112         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVT125         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVT137         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVT150         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVT162         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT175         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT187         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT200         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT212         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT225         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT250         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT262         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT300         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT312         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVT362         | 1000 (4.45)                         | 200 (0.89)                          | 150 (0.67)                          |
| BVT412         | 1000 (4.45)                         | 200 (0.89)                          | 150 (0.67)                          |
| BVT612         | 1000 (4.45)                         | 200 (0.89)                          | 150 (0.67)                          |

Reference page 168 for general fitting and standard finish specifications.



## BVP Series VIBRA-CLAMP™ - Iron Pipe & Rigid Conduit

- Safety Factor of 3
- Accesses pipe sizes 1/4" (6) to 6" (150)
- Allows easy one tool installation
- Endures both high (+300°F) and low (-40°F) temperatures
- Dampens vibration and noise
- Eliminates galvanic metal to metal contact
- Resists most industrial oils and solvents
- Reduces thermal loss and gain
- Helps secure pipe firmly to channel (strut)
- Dielectric strength of 400 volts/mil
- Includes cushion, clamp, screw and nut
- Standard finishes: YZN, SS4



| Catalog Number | Nominal Pipe Size<br>In. mm | Steel O.D. Size<br>In. mm | In. A<br>mm  | In. B<br>mm | In. C<br>mm  | Wt./C<br>Lbs. kg |
|----------------|-----------------------------|---------------------------|--------------|-------------|--------------|------------------|
| BVP025         | 1/4" (6.3)                  | 0.540 (13.7)              | 1.61 (39.9)  | 0.37 (9.4)  | 0.87 (22.1)  | 15 (6.8)         |
| BVP037         | 3/8" (9.5)                  | 0.675 (17.1)              | 1.86 (47.2)  | 0.50 (12.7) | 1.15 (29.2)  | 18 (8.2)         |
| BVP050         | 1/2" (12.7)                 | 0.875 (22.2)              | 1.99 (50.5)  | 0.56 (14.2) | 1.27 (32.3)  | 20 (9.1)         |
| BVP075         | 3/4" (19.0)                 | 1.050 (26.7)              | 2.25 (57.1)  | 0.69 (17.5) | 1.52 (38.6)  | 21 (9.5)         |
| BVP100         | 1" (25.4)                   | 1.312 (33.3)              | 2.51 (63.8)  | 0.81 (20.6) | 1.77 (45.0)  | 20 (9.1)         |
| BVP125         | 1 1/4" (31.7)               | 1.660 (42.2)              | 3.00 (76.2)  | 1.00 (25.4) | 2.21 (56.1)  | 36 (16.3)        |
| BVP150         | 1 1/2" (38.1)               | 1.900 (48.3)              | 3.21 (83.1)  | 1.12 (28.4) | 2.41 (62.3)  | 40 (18.1)        |
| BVP200         | 2" (50.8)                   | 2.375 (60.3)              | 3.77 (95.8)  | 1.37 (34.8) | 2.96 (75.2)  | 45 (20.4)        |
| BVP250         | 2 1/2" (63.5)               | 2.875 (73.0)              | 4.28 (108.7) | 1.62 (41.1) | 3.46 (87.9)  | 54 (24.5)        |
| BVP300         | 3" (76.2)                   | 3.500 (88.9)              | 5.05 (128.3) | 2.00 (50.8) | 4.24 (107.7) | 81 (36.7)        |
| BVP350         | 3 1/2" (88.9)               | 4.000 (101.6)             | 5.55 (140.9) | 2.25 (57.1) | 4.74 (120.3) | 87 (39.4)        |
| BVP400         | 4" (101.6)                  | 4.500 (114.3)             | 6.05 (153.7) | 2.50 (63.5) | 5.24 (133.1) | 109 (49.4)       |
| BVP500         | 5" (127.0)                  | 5.563 (141.3)             | 6.84 (173.7) | 3.00 (76.2) | 6.24 (158.4) | 136 (61.6)       |
| BVP600         | 6" (152.4)                  | 6.625 (168.3)             | 8.24 (209.3) | 3.56 (90.4) | 7.36 (186.9) | 163 (73.8)       |

| Catalog Number | Design Load<br>Lbs. <sup>1</sup> kN | Design Load<br>Lbs. <sup>2</sup> kN | Design Load<br>Lbs. <sup>3</sup> kN |
|----------------|-------------------------------------|-------------------------------------|-------------------------------------|
| BVP025         | 400 (1.78)                          | 50 (0.22)                           | 50 (0.22)                           |
| BVP037         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVP050         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVP075         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVP100         | 600 (2.67)                          | 75 (0.33)                           | 75 (0.33)                           |
| BVP125         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVP150         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVP200         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVP250         | 800 (3.56)                          | 125 (0.56)                          | 125 (0.56)                          |
| BVP300         | 1000 (4.45)                         | 200 (0.89)                          | 150 (0.67)                          |
| BVP350         | 1000 (4.45)                         | 200 (0.89)                          | 150 (0.67)                          |
| BVP400         | 1000 (4.45)                         | 200 (0.89)                          | 150 (0.67)                          |
| BVP500         | 1000 (4.45)                         | 200 (0.89)                          | 150 (0.67)                          |
| BVP600         | 1000 (4.45)                         | 200 (0.89)                          | 150 (0.67)                          |

Reference page 168 for general fitting and standard finish specifications.

# Armafix™ Clamps & Accessories

## IPH Series

### Inserted - Inserts with Clamps

- Engineered load-bearing inserts prevents insulation compression
- Innovative insulated pipe support
- Desirable "Foam-to-Foam" bond
- Service temperature range  
-58°F (-50°C) to +220°F (+105°C)



Insert Only



Assembly  
Insert & Clamp

### 3/4" Wall Insulation Thickness

| Assembly Part No. | Insert Only Part No. | Pipe/Copper/OD Size      | Hanger Size* |
|-------------------|----------------------|--------------------------|--------------|
| IPH03834          | IPH03834WO           | 3/8" O.D.                | 2"           |
| IPH01234          | IPH01234WO           | 1/2" O.D.                | 2"           |
| IPH05834          | IPH05834WO           | 5/8" O.D.                | 2"           |
| IPH07834          | IPH07834WO           | 3/4" O.D. & 7/8" O.D.    | 2 1/2"       |
| IPH11834          | IPH11834WO           | 3/4" IPS & 1 1/8" O.D.   | 2 1/2"       |
| IPH13834          | IPH13834WO           | 1 3/8" O.D.              | 3"           |
| IPH15834          | IPH15834WO           | 1 5/8" O.D.              | 3 1/2"       |
| IPH11034          | IPH11034WO           | 1 1/2" IPS & 1 7/8" O.D. | 3 1/2"       |
| IPH21834          | IPH21834WO           | 2 1/8" O.D.              | 4"           |
| IPH25834          | IPH25834WO           | 2 5/8" O.D.              | 5"           |
| IPH31834          | IPH31834WO           | 3 1/8" O.D.              | 5"           |
| IPH35834          | IPH35834WO           | 3 5/8" O.D.              | 6"           |
| IPH41834          | IPH41834WO           | 4 1/8" O.D.              | 6"           |
| IPH40034          | IPH40034WO           | 4" IPS                   | 6"           |
| IPH50034          | IPH50034WO           | 5" IPS                   | 8"           |
| IPH60034          | IPH60034WO           | 6" IPS                   | 10"          |
| IPH80034          | IPH80034WO           | 8" IPS                   | 12"          |

\* Recommended pipe hanger size for insulation thickness shown. (Order hanger separately)

## IPH18230

### ARMAFLEX®† Insulation Tape

- 30 ft. (9.14 M) roll



†Armaflex® is a registered trademark of Armacell.

### 1/2" Wall Insulation Thickness

| Assembly Part No. | Insert Only Part No. | Pipe/Copper/OD Size      | Hanger Size* |
|-------------------|----------------------|--------------------------|--------------|
| IPH03812          | IPH03812WO           | 3/8" O.D.                | 1 1/4"       |
| IPH01212          | IPH01212WO           | 1/2" O.D.                | 1 1/4"       |
| IPH05812          | IPH05812WO           | 5/8" O.D.                | 1 1/2"       |
| IPH07812          | IPH07812WO           | 3/4" O.D. & 7/8" O.D.    | 2"           |
| IPH11812          | IPH11812WO           | 3/4" IPS & 1 1/8" O.D.   | 2"           |
| IPH13812          | IPH13812WO           | 1 3/8" O.D.              | 2 1/2"       |
| IPH15812          | IPH15812WO           | 1 5/8" O.D.              | 2 1/2"       |
| IPH11012          | IPH11012WO           | 1 1/2" IPS & 1 7/8" O.D. | 3"           |
| IPH21812          | IPH21812WO           | 2 1/8" O.D.              | 3"           |
| IPH25812          | IPH25812WO           | 2 5/8" O.D.              | 3 1/2"       |
| IPH31812          | IPH31812WO           | 3 1/8" O.D.              | 4"           |
| IPH35812          | IPH35812WO           | 3 5/8" O.D.              | 5"           |
| IPH41812          | IPH41812WO           | 4 1/8" O.D.              | 6"           |
| IPH40012          | IPH40012WO           | 4" IPS                   | 6"           |
| IPH50012          | IPH50012WO           | 5" IPS                   | 8"           |
| IPH60012          | IPH60012WO           | 6" IPS                   | 8"           |

\* Recommended pipe hanger size for insulation thickness shown. (Order hanger separately)

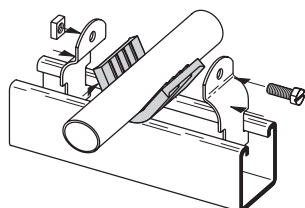
### 1" Wall Insulation Thickness

| Assembly Part No. | Insert Only Part No. | Pipe/Copper/OD Size      | Hanger Size* |
|-------------------|----------------------|--------------------------|--------------|
| IPH05810          | IPH05810WO           | 5/8" O.D.                | 2 1/2"       |
| IPH07810          | IPH07810WO           | 3/4" O.D. & 7/8" O.D.    | 3"           |
| IPH11810          | IPH11810WO           | 3/4" IPS & 1 1/8" O.D.   | 3"           |
| IPH13810          | IPH13810WO           | 1 3/8" O.D.              | 3 1/2"       |
| IPH15810          | IPH15810WO           | 1 5/8" O.D.              | 3 1/2"       |
| IPH11010          | IPH11010WO           | 1 1/2" IPS & 1 7/8" O.D. | 4"           |
| IPH21810          | IPH21810WO           | 2 1/8" O.D.              | 4"           |
| IPH25810          | IPH25810WO           | 2 5/8" O.D.              | 5"           |
| IPH31810          | IPH31810WO           | 3 1/8" O.D.              | 5"           |
| IPH35810          | IPH35810WO           | 3 5/8" O.D.              | 6"           |
| IPH41810          | IPH41810WO           | 4 1/8" O.D.              | 6"           |
| IPH40010          | IPH40010WO           | 4" IPS                   | 8"           |
| IPH50010          | IPH50010WO           | 5" IPS                   | 8"           |
| IPH60010          | IPH60010WO           | 6" IPS                   | 10"          |
| IPH80010          | IPH80010WO           | 8" IPS                   | 12"          |

\* Recommended pipe hanger size for insulation thickness shown. (Order hanger separately)

## B1999 VIBRA-CUSHION

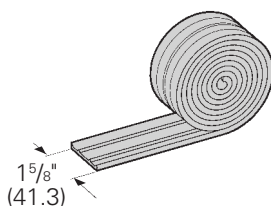
- Packaged 20 Ft. (6.09 m) per carton
- Ideal isolation material
- Inhibits galvanic corrosion
- Dampens sound and vibrations
- Service Temperature Range  
-75°F (-60°C) to +375°F (+199°C)
- Wt./Carton 3.8 Lbs. (1.7 kg)



### Features

Vibra-Cushion™ is designed for use with refrigeration lines, HVAC, copper tubing, glass pipe and hydraulic lines. It provides an energy-absorption barrier between the lines and the mounting material and remains flexible thru its entire service range of -75°F (-60°C) to +375°F (+199°C).

This elastomer allows for expansion and contraction within the mounting system and prevents galvanic reaction between dissimilar metals.



### For Rigid Conduit or Iron Pipe

| Nominal Size<br>In. mm | Length*<br>In. mm | Use<br>Clamp No. |
|------------------------|-------------------|------------------|
| 3/8" (10)              | 2 1/8" (54.0)     | <b>B2002</b>     |
| 1/2" (15)              | 2 5/8" (66.7)     | <b>B2009</b>     |
| 3/4" (20)              | 3 1/4" (82.5)     | <b>B2031</b>     |
| 1" (25)                | 4 1/8" (104.8)    | <b>B2004</b>     |
| 1 1/4" (32)            | 5 3/16" (131.8)   | <b>B2012</b>     |
| 1 1/2" (40)            | 5 15/16" (150.8)  | <b>B2038</b>     |
| 2" (50)                | 7 1/2" (190.5)    | <b>B2042</b>     |
| 2 1/2" (65)            | 9" (228.6)        | <b>B2046</b>     |
| 3" (80)                | 11" (279.4)       | <b>B2051</b>     |
| 3 1/2" (90)            | 12 1/2" (317.5)   | <b>B2055</b>     |
| 4" (100)               | 14 1/2" (368.3)   | <b>B2059</b>     |
| 5" (125)               | 17 7/16" (442.9)  | <b>B2067</b>     |
| 6" (150)               | 20 3/4" (527.0)   | <b>B2116</b>     |

\* Length of Vibra-Cushion

### For Thinwall (EMT) Conduit

| Nominal Size<br>In. mm | Length*<br>In. mm | Use<br>Clamp No. |
|------------------------|-------------------|------------------|
| 3/8" (10)              | 1 13/16" (46.0)   | <b>B2027</b>     |
| 1/2" (15)              | 2 13/16" (58.7)   | <b>B2002</b>     |
| 3/4" (20)              | 2 7/8" (73.0)     | <b>B2003</b>     |
| 1" (25)                | 3 5/8" (92.1)     | <b>B2032</b>     |
| 1 1/4" (32)            | 4 3/8" (120.6)    | <b>B2036</b>     |
| 1 1/2" (40)            | 5 7/16" (138.1)   | <b>B2012</b>     |
| 2" (50)                | 6 7/8" (174.6)    | <b>B2013</b>     |

\* Length of Vibra-Cushion

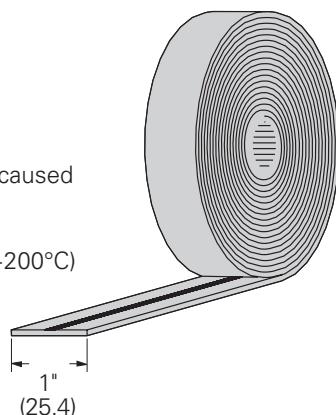
### For Copper Tubing Type L & K

| Nominal Size<br>In. mm | Length*<br>In. mm | Use<br>Clamp No. |
|------------------------|-------------------|------------------|
| 1/4" (6)               | 1 3/16" (30.2)    | <b>B2026</b>     |
| 3/8" (10)              | 1 9/16" (39.7)    | <b>B2027</b>     |
| 1/2" (15)              | 1 7/8" (47.6)     | <b>B2008</b>     |
| 5/8" (17)              | 2 5/16" (58.7)    | <b>B2009</b>     |
| 3/4" (20)              | 2 3/4" (69.8)     | <b>B2030</b>     |
| 1" (25)                | 3 1/2" (88.9)     | <b>B2010</b>     |
| 1 1/4" (32)            | 4 5/16" (109.5)   | <b>B2011</b>     |
| 1 1/2" (40)            | 5 1/8" (130.2)    | <b>B2012</b>     |
| 2" (50)                | 6 11/16" (169.9)  | <b>B2013</b>     |
| 2 1/2" (65)            | 8 1/4" (209.5)    | <b>B2014</b>     |
| 3" (80)                | 9 13/16" (249.2)  | <b>B2048</b>     |
| 3 1/2" (90)            | 11 3/8" (288.9)   | <b>B2052</b>     |
| 4" (100)               | 12 5/16" (328.6)  | <b>B2056</b>     |
| 5" (125)               | 16 1/8" (409.6)   | <b>B2064</b>     |
| 6" (150)               | 19 1/4" (488.9)   | <b>B2112</b>     |
| 8" (200)               | 25 1/2" (647.7)   | <b>B2128</b>     |

\* Length of Vibra-Cushion

## ISO Pipe Isolator

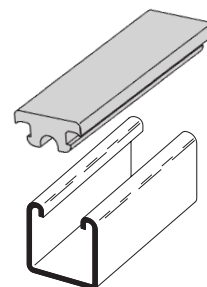
- Non-adhesive rubber tape
- Fuses to itself
- Water resistant
- Ideal Isolation material
- Prevents galvanic reaction caused by dissimilar metal contact
- Temperature Range  
-140°F (-60°C) to +395°F (+200°C)



| Part No.   | Thickness<br>In. mm | Ft./Roll<br>Ft. m |
|------------|---------------------|-------------------|
| <b>ISO</b> | .020 (0.5)          | 36 (11)           |

## BVS Type - Vibra Strip™ for 1 5/8" (41.3) wide B-Line channel

- Fits securely in 1 5/8" wide channel
- Temperature range: -20°F to 212°F
- Ideal isolation & vibration dampening qualities
- 45 durometer hardness
- Material: Neoprene



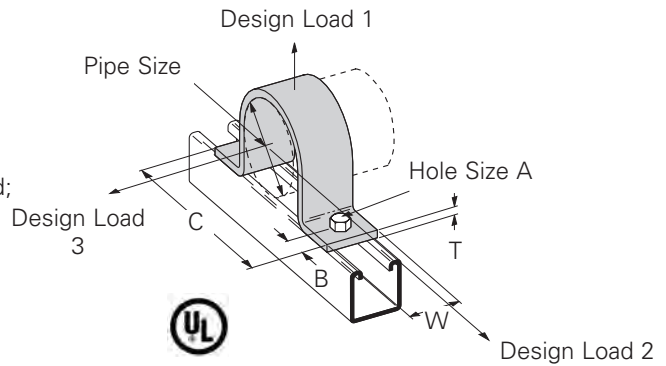
| Part No.       | Max. Load<br>Lbs. per<br>Lineal In.<br>Lbs. kg/25.4 mm | Length<br>In. mm | Std.<br>Pkg. | Wt.<br>Each<br>Lbs. kg |
|----------------|--------------------------------------------------------|------------------|--------------|------------------------|
| <b>BVS-12</b>  | 40 (18.1)                                              | 12" (304.8)      | 25           | .46 (.21)              |
| <b>BVS-120</b> | 40 (18.1)                                              | 120" (3048.0)    | 25           | 4.60 (2.08)            |

Reference page 168 for general fitting and standard finish specifications.

# Pipe clamps

## B2400 Series Standard Pipe Clamp

- Safety Factor of 5
- B2400-3/4 thru B2400-8 are UL listed
- Order hardware separately
- Other sizes available upon request
- Material: Sizes - 1/2" - 1 1/2", ASTM A1011 33,000 PSI min. yield;  
2" - 12", ASTM A1018 33,000 PSI min. yield;  
14"-Larger, ASTM A36
- Standard finish: ZN
- Ductile iron sizes available
- Meets requirements of MSS SP-58 & SP-69 Type 26



| Part No.    | Pipe Size<br>In. mm | A<br>In. mm    | B<br>In. mm    | C<br>In. mm       | T<br>In. mm  | W<br>In. mm   |
|-------------|---------------------|----------------|----------------|-------------------|--------------|---------------|
| B2400-1/2   | 1/2" (15)           | 5/16" (7.9)    | 7/16" (11.1)   | 2 13/16" (71.4)   | 10 Ga. (3.4) | 1 5/8" (41.3) |
| B2400-3/4   | 3/4" (20)           | 5/16" (7.9)    | 7/16" (11.1)   | 3" (76.2)         | 10 Ga. (3.4) | 1 5/8" (41.3) |
| B2400-1     | 1" (25)             | 5/16" (7.9)    | 7/16" (11.1)   | 3 17/32" (89.7)   | 10 Ga. (3.4) | 1 5/8" (41.3) |
| B2400-1 1/4 | 1 1/4" (32)         | 5/16" (7.9)    | 7/16" (11.1)   | 3 3/4" (95.2)     | 10 Ga. (3.4) | 1 5/8" (41.3) |
| B2400-1 1/2 | 1 1/2" (40)         | 5/16" (7.9)    | 7/16" (11.1)   | 4 1/16" (103.2)   | 10 Ga. (3.4) | 1 5/8" (41.3) |
| B2400-2     | 2" (50)             | 7/16" (11.1)   | 1 1/16" (17.4) | 5 21/32" (143.6)  | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-2 1/2 | 2 1/2" (65)         | 7/16" (11.1)   | 1 1/16" (17.4) | 6 5/32" (156.3)   | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-3     | 3" (80)             | 7/16" (11.1)   | 1 1/16" (17.4) | 6 25/32" (172.2)  | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-3 1/2 | 3 1/2" (90)         | 7/16" (11.1)   | 1 1/16" (17.4) | 7 9/32" (184.9)   | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-4     | 4" (100)            | 9/16" (14.3)   | 1 1/16" (17.4) | 7 25/32" (197.6)  | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-5     | 5" (125)            | 9/16" (14.3)   | 1 1/16" (17.4) | 8 7/8" (225.4)    | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-6     | 6" (150)            | 9/16" (14.3)   | 1 1/16" (17.4) | 9 15/16" (252.4)  | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-8     | 8" (200)            | 9/16" (14.3)   | 1 1/16" (17.4) | 11 31/32" (304.0) | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-10    | 10" (250)           | 9/16" (14.3)   | 1 1/16" (17.4) | 14" (355.6)       | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-12    | 12" (300)           | 9/16" (14.3)   | 1 1/16" (17.4) | 16" (406.4)       | 1/4" (6.3)   | 1 5/8" (41.3) |
| B2400-14    | 14" (350)           | 1 5/16" (23.8) | 1 1/2" (38.1)  | 20 3/4" (527.0)   | 3/8" (9.5)   | 1 3/4" (44.4) |
| B2400-16    | 16" (400)           | 1 5/16" (23.8) | 1 1/2" (38.1)  | 22 3/4" (577.8)   | 3/8" (9.5)   | 1 3/4" (44.4) |
| B2400-18    | 18" (460)           | 1 5/16" (23.8) | 1 3/4" (44.4)  | 27" (685.8)       | 1/2" (12.7)  | 1 3/4" (44.4) |
| B2400-20    | 20" (510)           | 1 5/16" (23.8) | 1 3/4" (44.4)  | 29" (736.6)       | 1/2" (12.7)  | 1 3/4" (44.4) |
| B2400-24    | 24" (610)           | 1 5/16" (23.8) | 1 3/4" (44.4)  | 33" (838.2)       | 1/2" (12.7)  | 1 3/4" (44.4) |

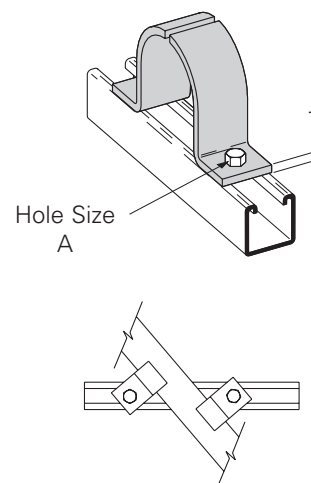
| Part No.    | Design Load<br>1<br>Lbs. kN | Design Load<br>2<br>Lbs. kN | Design Load<br>3<br>Lbs. kN | Wt./C<br>Lbs. kg |
|-------------|-----------------------------|-----------------------------|-----------------------------|------------------|
| B2400-1/2   | 600 (2.67)                  | 150 (.67)                   | 105 (.47)                   | 23 (10.4)        |
| B2400-3/4   | 600 (2.67)                  | 150 (.67)                   | 105 (.47)                   | 26 (11.8)        |
| B2400-1     | 600 (2.67)                  | 150 (.67)                   | 120 (.53)                   | 31 (14.0)        |
| B2400-1 1/4 | 600 (2.67)                  | 150 (.67)                   | 120 (.53)                   | 36 (16.3)        |
| B2400-1 1/2 | 600 (2.67)                  | 150 (.67)                   | 120 (.53)                   | 39 (17.7)        |
| B2400-2     | 1200 (5.34)                 | 480 (2.14)                  | 180 (.80)                   | 93 (42.2)        |
| B2400-2 1/2 | 1200 (5.34)                 | 480 (2.14)                  | 180 (.80)                   | 106 (48.1)       |
| B2400-3     | 1200 (5.34)                 | 480 (2.14)                  | 300 (1.33)                  | 132 (59.9)       |
| B2400-3 1/2 | 1200 (5.34)                 | 480 (2.14)                  | 300 (1.33)                  | 151 (68.5)       |
| B2400-4     | 1500 (6.67)                 | 600 (2.67)                  | 450 (2.00)                  | 160 (72.6)       |
| B2400-5     | 1500 (6.67)                 | 600 (2.67)                  | 450 (2.00)                  | 192 (87.1)       |
| B2400-6     | 1500 (6.67)                 | 600 (2.67)                  | 450 (2.00)                  | 219 (99.3)       |
| B2400-8     | 2000 (8.90)                 | 800 (3.56)                  | 600 (2.67)                  | 297 (134.7)      |
| B2400-10    | 2000 (8.90)                 | 800 (3.56)                  | 600 (2.67)                  | 465 (210.9)      |
| B2400-12    | 2000 (8.90)                 | 800 (3.56)                  | 600 (2.67)                  | 560 (254.0)      |
| B2400-14    | 2000 (8.90)                 | 800 (3.56)                  | 600 (2.67)                  | 761 (345.2)      |
| B2400-16    | 2000 (8.90)                 | 800 (3.56)                  | 600 (2.67)                  | 861 (390.5)      |
| B2400-18    | 2000 (8.90)                 | 800 (3.56)                  | 600 (2.67)                  | 1297 (588.3)     |
| B2400-20    | 2000 (8.90)                 | 800 (3.56)                  | 600 (2.67)                  | 1426 (646.8)     |
| B2400-24    | 2000 (8.90)                 | 800 (3.56)                  | 600 (2.67)                  | 1682 (762.9)     |

Reference page 168 for general fitting and standard finish specifications.

## B437 Series Two Piece Pipe Clamp

- Clamp halves can turn allowing pipe to be fastened to channel at any direction
- Order hardware separately
- Standard finish: ZN

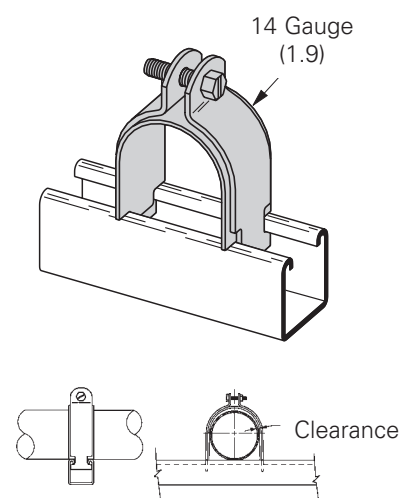
| Part No.   | Pipe Size<br>In. mm | A<br>In. mm  | T<br>In. mm  | Wt./C<br>Lbs. kg |
|------------|---------------------|--------------|--------------|------------------|
| B437-1/2   | 1/2" (15)           | 5/16" (7.9)  | 10 Ga. (3.4) | 22 (10.0)        |
| B437-3/4   | 3/4" (20)           | 5/16" (7.9)  | 10 Ga. (3.4) | 26 (11.8)        |
| B437-1     | 1" (25)             | 5/16" (7.9)  | 10 Ga. (3.4) | 30 (13.6)        |
| B437-1 1/4 | 1 1/4" (32)         | 5/16" (7.9)  | 10 Ga. (3.4) | 35 (15.9)        |
| B437-1 1/2 | 1 1/2" (40)         | 5/16" (7.9)  | 10 Ga. (3.4) | 38 (17.2)        |
| B437-2     | 2" (50)             | 7/16" (11.1) | 1/4" (6.3)   | 91 (41.3)        |
| B437-2 1/2 | 2 1/2" (65)         | 7/16" (11.1) | 1/4" (6.3)   | 104 (47.2)       |
| B437-3     | 3" (80)             | 7/16" (11.1) | 1/4" (6.3)   | 130 (58.9)       |
| B437-3 1/2 | 3 1/2" (90)         | 7/16" (11.1) | 1/4" (6.3)   | 149 (67.6)       |
| B437-4     | 4" (100)            | 9/16" (11.1) | 1/4" (6.3)   | 158 (71.6)       |
| B437-5     | 5" (125)            | 9/16" (11.1) | 1/4" (6.3)   | 190 (86.2)       |
| B437-6     | 6" (150)            | 9/16" (11.1) | 1/4" (6.3)   | 217 (98.4)       |
| B437-8     | 8" (200)            | 9/16" (11.1) | 1/4" (6.3)   | 295 (133.8)      |



## B2417 Strut Mounted Pipe Guide

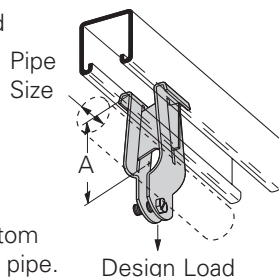
- Copper tubing sizes available - B2417CT Series
- Standard finish: ZN

| Part No.    | Pipe Size<br>In. mm | Minimum<br>Radial Clearance<br>In. mm | Includes<br>Clamp No. | Wt./C<br>Lbs. kg |
|-------------|---------------------|---------------------------------------|-----------------------|------------------|
| B2417-1/2   | 1/2" (15)           | 1/16" (1.6)                           | B2009                 | 22 (10.0)        |
| B2417-3/4   | 3/4" (20)           | 1/16" (1.6)                           | B2010                 | 25 (11.3)        |
| B2417-1     | 1" (25)             | 3/32" (2.3)                           | B2034                 | 30 (13.6)        |
| B2417-1 1/4 | 1 1/4" (32)         | 3/32" (2.3)                           | B2037                 | 47 (21.8)        |
| B2417-1 1/2 | 1 1/2" (40)         | 3/32" (2.3)                           | B2039                 | 51 (23.1)        |
| B2417-2     | 2" (50)             | 1/8" (3.2)                            | B2043                 | 62 (28.1)        |
| B2417-2 1/2 | 2 1/2" (65)         | 1/8" (3.2)                            | B2047                 | 69 (31.3)        |
| B2417-3     | 3" (80)             | 5/32" (3.9)                           | B2016                 | 108 (49.0)       |
| B2417-3 1/2 | 3 1/2" (90)         | 5/32" (3.9)                           | B2017                 | 118 (53.5)       |
| B2417-4     | 4" (100)            | 5/32" (3.9)                           | B2018                 | 128 (58.0)       |



## B2070 thru B2080 Parallel Pipe Clamp

- Safety Factor of 2
- Designed to support pipe or rigid conduit
- Includes:
  - 1 pr. pipe clamps
  - 1 pc. stand off plate
  - 1 pc. flotted hex head machine screws
  - 1 pc. Square Nut
- Standard finish: ZN



A dimension, from bottom of channel to center of pipe.

| Part No. | Pipe Size<br>In. mm | A<br>In. mm     | Material<br>Thickness<br>In. mm | Design<br>Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|---------------------|-----------------|---------------------------------|---------------------------|------------------|
| B2070    | 3/8" (10)           | 1 11/16" (42.9) | 16 Ga. (1.5)                    | 300 (1.33)                | 24 (10.9)        |
| B2071    | 1/2" (15)           | 1 3/4" (44.4)   | 16 Ga. (1.5)                    | 300 (1.33)                | 26 (11.8)        |
| B2072    | 3/4" (20)           | 1 7/8" (47.6)   | 14 Ga. (1.9)                    | 300 (1.33)                | 30 (13.6)        |
| B2073    | 1" (25)             | 2" (50.8)       | 14 Ga. (1.9)                    | 400 (1.78)                | 33 (14.9)        |
| B2074    | 1 1/4" (32)         | 2 3/16" (55.6)  | 14 Ga. (1.9)                    | 400 (1.78)                | 36 (16.3)        |
| B2075    | 1 1/2" (40)         | 2 5/16" (58.7)  | 12 Ga. (2.6)                    | 500 (2.22)                | 50 (22.7)        |
| B2076    | 2" (50)             | 2 9/16" (65.1)  | 12 Ga. (2.6)                    | 500 (2.22)                | 55 (24.9)        |
| B2077    | 2 1/2" (65)         | 2 7/8" (73.0)   | 12 Ga. (2.6)                    | 500 (2.22)                | 60 (27.2)        |
| B2078    | 3" (80)             | 3 3/16" (80.9)  | 12 Ga. (2.6)                    | 500 (2.22)                | 66 (29.9)        |
| B2079    | 3 1/2" (90)         | 3 7/16" (87.3)  | 11 Ga. (3.0)                    | 500 (2.22)                | 85 (38.5)        |
| B2080    | 4" (100)            | 3 5/8" (92.1)   | 11 Ga. (3.0)                    | 500 (2.22)                | 95 (43.1)        |

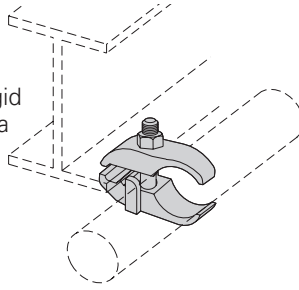
Reference page 168 for general fitting and standard finish specifications.



# Pipe clamps

## B670 Series Parallel Pipe Clamp

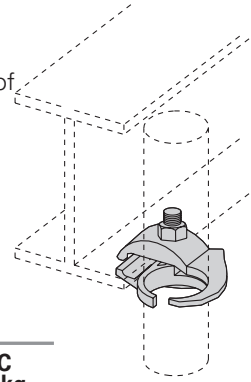
- Designed to support pipe or rigid conduit parallel to the edge of a beam or angle iron
- Hardware included
- Material: Malleable iron
- Standard finish: HDG



| Part Number | Pipe/Conduit Size<br>In. mm | Wt./C<br>Lbs. kg |
|-------------|-----------------------------|------------------|
| B670-3/8    | 3/8" (10)                   | 32 (14.5)        |
| B670-1/2    | 1/2" (15)                   | 58 (26.3)        |
| B670-3/4    | 3/4" (20)                   | 64 (29.0)        |
| B670-1      | 1" (25)                     | 70 (31.7)        |
| B670-1 1/4  | 1 1/4" (32)                 | 77 (34.9)        |
| B670-1 1/2  | 1 1/2" (40)                 | 93 (42.2)        |
| B670-2      | 2" (50)                     | 105 (47.6)       |
| B670-2 1/2  | 2 1/2" (65)                 | 143 (64.8)       |
| B670-3      | 3" (80)                     | 164 (74.4)       |
| B670-3 1/2  | 3 1/2" (90)                 | 190 (86.2)       |
| B670-4      | 4" (100)                    | 205 (93.0)       |

## B671 Series Edge Pipe Clamp

- Designed to support pipe or rigid conduit perpendicular to the edge of a beam or angle iron
- Hardware included
- Material: Malleable iron
- Standard finish: HDG

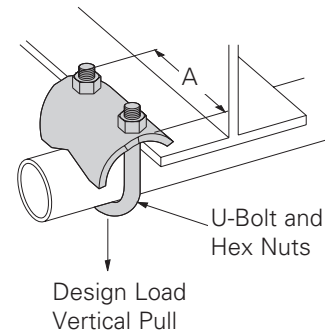


| Part Number | Pipe/Conduit Size<br>In. mm | Wt./C<br>Lbs. kg |
|-------------|-----------------------------|------------------|
| B671-1/2    | 1/2" (15)                   | 67 (30.4)        |
| B671-3/4    | 3/4" (20)                   | 71 (32.2)        |
| B671-1      | 1" (25)                     | 85 (38.5)        |
| B671-1 1/4  | 1 1/4" (32)                 | 91 (41.3)        |
| B671-1 1/2  | 1 1/2" (40)                 | 115 (52.1)       |
| B671-2      | 2" (50)                     | 135 (61.2)       |
| B671-2 1/2  | 2 1/2" (65)                 | 183 (83.0)       |
| B671-3      | 3" (80)                     | 230 (104.3)      |

## B422 Series Right Angle Clamp

- Safety Factor of 5
- Material: 7 gauge (4.5)
- Standard finishes: ZN, SS4

| Part No.   | Conduit Size<br>In. mm | A<br>In. mm     | Design Load<br>Vertical Pull<br>Lbs. kN | Wt./C<br>Lbs. kg |
|------------|------------------------|-----------------|-----------------------------------------|------------------|
| B422-1/2   | 1/2" (15)              | 2 3/8" (60.3)   | 250 (1.11)                              | 38 (17.2)        |
| B422-3/4   | 3/4" (20)              | 2 3/8" (60.3)   | 300 (1.33)                              | 39 (17.7)        |
| B422-1     | 1" (25)                | 2 7/8" (73.0)   | 400 (1.78)                              | 48 (21.8)        |
| B422-1 1/4 | 1 1/4" (32)            | 2 7/8" (73.0)   | 400 (1.78)                              | 50 (22.7)        |
| B422-1 1/2 | 1 1/2" (40)            | 3 1/4" (82.5)   | 500 (2.22)                              | 59 (26.7)        |
| B422-2     | 2" (50)                | 3 11/16" (93.7) | 600 (2.67)                              | 75 (34.0)        |
| B422-2 1/2 | 2 1/2" (65)            | 4 1/4" (107.9)  | 700 (3.11)                              | 98 (44.4)        |
| B422-3     | 3" (80)                | 4 7/8" (123.8)  | 800 (3.56)                              | 111 (50.3)       |
| B422-3 1/2 | 3 1/2" (90)            | 5 7/16" (138.1) | 900 (4.00)                              | 123 (55.8)       |
| B422-4     | 4" (100)               | 6" (152.4)      | 1000 (4.45)                             | 135 (61.2)       |



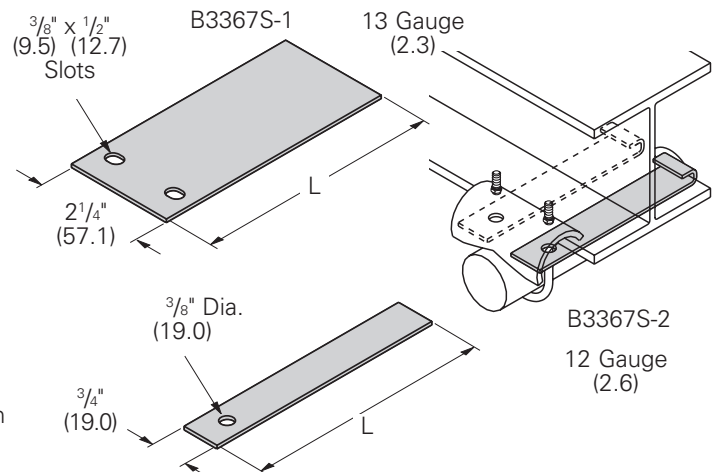
## B3367S Retaining Strap

- Available in 'L' lengths of 6" (152.4), 8" (203.2), 9" (228.6), 10" (254.0), 12" (304.8), 14" (355.6), 16" (406.4), 18" (457.2)
- Material: Steel
- Standard finishes: ZN, PLN

| Part No.   | For Use With          | Wt./C**<br>Lbs. kg |
|------------|-----------------------|--------------------|
| B3367S-1-L | B422-1/2 & 3/4        | 33.4 (5.8)         |
| B3367S-2-L | B422-1, 1 1/4 & 1 1/2 | 12.8 (15.1)        |

\*\* Wt./C based on 6" (152.4) length. For each additional inch in strap length add the following to the Wt./C.  
For B3367S-1 add 5.7 Lbs (2.6 kg)  
For B3367S-2 add 2.2 Lbs (1.0 kg)

Note: Use Fig. 69 (Old B3367-3/8 retaining strap, page 116) for B422-2 thru 4

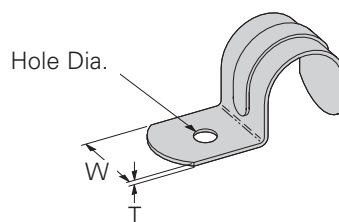


Reference page 168 for general fitting and standard finish specifications.



## B2301 Series One Hole EMT Strap

- Standard finish: ZN

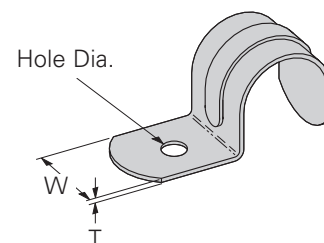


| Part No.    | Conduit Size<br>In. mm | T<br>In. mm | W<br>In. mm   | Hole Dia.<br>In. mm | Wt./C<br>Lbs. kg |
|-------------|------------------------|-------------|---------------|---------------------|------------------|
| B2301-1/2   | 1/2" (15)              | .050 (1.3)  | 3/4" (19.0)   | 9/32" (7.1)         | 2.4 (1.1)        |
| B2301-3/4   | 3/4" (20)              | .050 (1.3)  | 7/8" (22.2)   | 9/32" (7.1)         | 4.2 (1.9)        |
| B2301-1     | 1" (25)                | .050 (1.3)  | 1" (25.4)     | 9/32" (7.1)         | 8.3 (3.7)        |
| B2301-1 1/4 | 1 1/4" (32)            | .065 (1.6)  | 1 1/4" (31.7) | 9/32" (7.1)         | 11.0 (5.0)       |
| B2301-1 1/2 | 1 1/2" (40)            | .090 (2.3)  | 1" (25.4)     | 11/32" (8.7)        | 14.8 (6.7)       |
| B2301-2     | 2" (50)                | .090 (2.3)  | 1 1/4" (31.7) | 13/32" (10.3)       | 21.6 (9.8)       |

## B2302 Series One Hole Rigid Conduit/Pipe Strap

- Standard finish: ZN

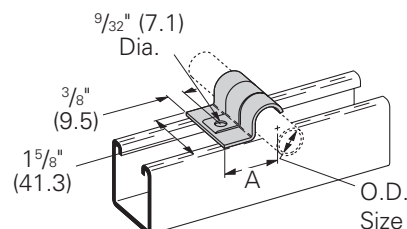
| Part No.    | Conduit/Pipe<br>Size In. mm | T<br>In. mm | W<br>In. mm   | Hole Dia.<br>In. mm | Wt./C<br>Lbs. kg |
|-------------|-----------------------------|-------------|---------------|---------------------|------------------|
| B2302-1/4   | 1/4" (6)                    | .045 (1.1)  | 5/8" (15.9)   | 13/64" (5.1)        | 1.4 (.6)         |
| B2302-3/8   | 3/8" (10)                   | .050 (1.3)  | 3/4" (19.0)   | 9/32" (7.1)         | 2.4 (1.1)        |
| B2302-1/2   | 1/2" (15)                   | .050 (1.3)  | 7/8" (22.2)   | 9/32" (7.1)         | 3.3 (1.5)        |
| B2302-3/4   | 3/4" (20)                   | .050 (1.3)  | 7/8" (22.2)   | 9/32" (7.1)         | 3.8 (1.7)        |
| B2302-1     | 1" (25)                     | .065 (1.6)  | 1" (25.4)     | 9/32" (7.1)         | 7.2 (3.2)        |
| B2302-1 1/4 | 1 1/4" (32)                 | .065 (1.6)  | 1 1/4" (31.7) | 21/64" (8.3)        | 11.0 (5.0)       |
| B2302-1 1/2 | 1 1/2" (40)                 | 11 Ga.(3.0) | 1" (25.4)     | .380 (9.6)          | 19.2 (8.7)       |
| B2302-2     | 2" (50)                     | 11 Ga.(3.0) | 1 1/4" (31.7) | .389 (9.9)          | 28.8 (13.0)      |
| B2302-2 1/2 | 2 1/2" (65)                 | 7 Ga.(4.5)  | 1 1/4" (31.7) | .665 (16.9)         | 55.2 (25.0)      |
| B2302-3     | 3" (80)                     | 7 Ga.(4.5)  | 1 1/4" (31.7) | .650 (16.5)         | 68.0 (30.8)      |
| B2302-3 1/2 | 3 1/2" (90)                 | 1/4" (6.3)  | 1 1/4" (31.7) | .622 (15.8)         | 96.0 (43.5)      |
| B2302-4     | 4" (100)                    | 1/4" (6.3)  | 1 1/4" (31.7) | .630 (16.0)         | 108.0 (49.0)     |



## B2084 thru B2091 One Hole O.D. Tubing Clamp

- Material: 14 Gauge (1.9) ASTM A1011 33,000 PSI min. yield
- Standard finish: ZN

| Part No. | O.D. Size<br>In. mm | A<br>In. mm    | Wt./C<br>Lbs. kg |
|----------|---------------------|----------------|------------------|
| B2084    | 1/4" (6.3)          | 7/8" (22.2)    | 4.0 (1.8)        |
| B2085    | 5/16" (7.9)         | 29/32" (23.0)  | 4.2 (1.9)        |
| B2086    | 3/8" (9.5)          | 31/32" (24.6)  | 5.2 (2.3)        |
| B2087    | 1/2" (12.7)         | 1 1/16" (25.9) | 5.8 (2.6)        |
| B2088    | 5/8" (15.9)         | 13/32" (27.8)  | 7.1 (3.2)        |
| B2089    | 3/4" (19.0)         | 1 5/32" (29.1) | 7.7 (3.5)        |
| B2090    | 7/8" (22.2)         | 1 7/32" (30.7) | 8.7 (3.9)        |
| B2091    | 1" (25.4)           | 1 9/32" (32.2) | 10.0 (4.5)       |

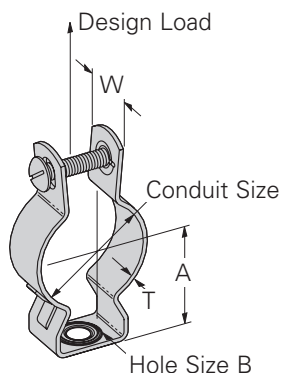


Reference page 168 for general fitting and standard finish specifications.

# Pipe clamps

## BL1400 Series Conduit Hanger

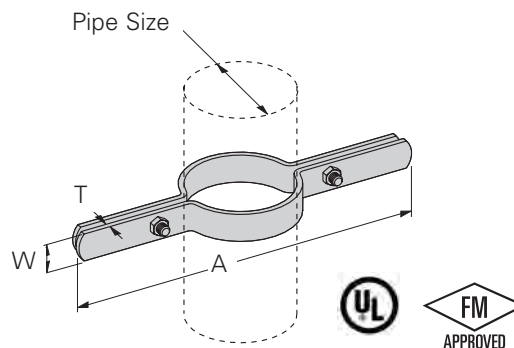
- Safety Factor of 3
- Unless noted all sizes fit both rigid (R) and thinwall (EMT) conduit
- Hardware included
- Now available in Dura-Copper™ finish - add DCU to part number.
- Standard finishes: ZN, SS4



| Part No | Conduit Size             | A<br>In. mm   | B<br>In. mm  | T<br>In. mm  | W<br>In. mm   | Design Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|---------|--------------------------|---------------|--------------|--------------|---------------|------------------------|------------------|
| BL1400  | 1/2" EMT & Rigid         | 29/32" (23.0) | 9/32" (7.1)  | 16 Ga. (1.5) | 3/4" (19.0)   | 50 (.222)              | 6 (2.7)          |
| BL1410  | 3/4" EMT & Rigid         | 31/32" (24.6) | 9/32" (7.1)  | 16 Ga. (1.5) | 3/4" (19.0)   | 50 (.222)              | 7 (3.2)          |
| BL1420  | 1" EMT & Rigid           | 1 1/4" (31.7) | 9/32" (7.1)  | 16 Ga. (1.5) | 3/4" (19.0)   | 60 (.267)              | 8 (3.6)          |
| BL1425  | 1 1/4" EMT               | 1.2" (30.5)   | 1/4" (6.35)  | 18 Ga. (1.2) | 7/8" (22.2)   | 75 (.334)              | 10 (4.5)         |
| BL1430  | 1 1/4" Rigid, 1 1/2" EMT | 1.375" (34.9) | 1/4" (6.35)  | 18 Ga. (1.2) | 7/8" (22.2)   | 80 (.356)              | 11 (5.0)         |
| BL1440  | 1 1/2" Rigid             | 1.65" (41.9)  | 5/16" (7.94) | 18 Ga. (1.2) | 1" (25.4)     | 80 (.356)              | 16 (7.3)         |
| BL1450  | 2" EMT & Rigid           | 1.94" (49.3)  | 5/16" (7.94) | 18 Ga. (1.2) | 1" (25.4)     | 100 (.445)             | 23 (10.4)        |
| BL1460  | 2 1/2" EMT & Rigid       | 2.1" (53.3)   | 5/16" (7.94) | 16 Ga. (1.5) | 1 1/4" (31.7) | 125 (.556)             | 29 (13.2)        |
| BL1470  | 3" EMT & Rigid           | 2.45" (62.2)  | 5/16" (7.94) | 16 Ga. (1.5) | 1 1/4" (31.7) | 165 (.734)             | 31 (14.1)        |
| BL1480  | 3 1/2" EMT & Rigid       | 2.76" (70.1)  | 5/16" (7.94) | 16 Ga. (1.5) | 1 1/4" (31.7) | 200 (.890)             | 38 (17.2)        |
| BL1490  | 4" EMT & Rigid           | 3" (76.2)     | 5/16" (7.94) | 16 Ga. (1.5) | 1 1/4" (31.7) | 230 (1.023)            | 38 (17.2)        |

## B3373 Series Riser Clamp

- Safety Factor of 3.5
- B3373-3/4 thru B3373-8 are UL Listed
- B3373-3/4 thru B3373-6 are FM Approved
- Includes hex head cap screws and hex nuts
- Standard finishes: ZN, PLN

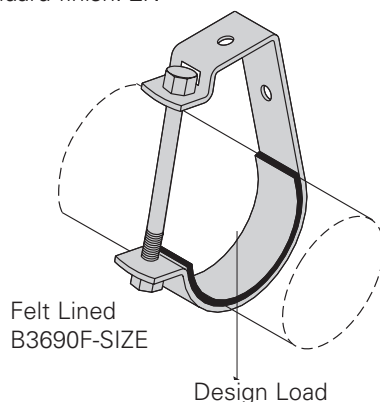


| Part No.    | Pipe Size<br>In. mm | A<br>In. mm       | Design Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|-------------|---------------------|-------------------|------------------------|------------------|
| B3373-1/2   | 1/2" (15)           | 9" (228.6)        | 255 (1.13)             | 101 (45.9)       |
| B3373-3/4   | 3/4" (20)           | 9 1/4" (234.9)    | 255 (1.13)             | 105 (47.7)       |
| B3373-1     | 1" (25)             | 9 9/16" (242.9)   | 255 (1.13)             | 109 (49.4)       |
| B3373-1 1/4 | 1 1/4" (32)         | 10" (254.0)       | 255 (1.13)             | 112 (50.9)       |
| B3373-1 1/2 | 1 1/2" (32)         | 10 1/4" (260.3)   | 255 (1.13)             | 113 (51.1)       |
| B3373-2     | 2" (40)             | 10 3/4" (273.0)   | 255 (1.13)             | 165 (75.0)       |
| B3373-2 1/2 | 2 1/2" (50)         | 11 1/4" (285.7)   | 390 (1.73)             | 180 (81.6)       |
| B3373-3     | 3" (65)             | 11 15/16" (303.2) | 530 (2.36)             | 195 (88.4)       |
| B3373-3 1/2 | 3 1/2" (80)         | 12 3/8" (314.3)   | 670 (2.98)             | 217 (98.5)       |
| B3373-4     | 4" (90)             | 12 7/8" (327.0)   | 810 (3.60)             | 228 (103.5)      |
| B3373-5     | 5" (100)            | 14" (355.6)       | 1160 (5.16)            | 480 (217.7)      |
| B3373-6     | 6" (100)            | 15 3/16" (385.8)  | 1570 (6.98)            | 526 (238.6)      |
| B3373-8     | 8" (100)            | 17 3/4" (450.8)   | 2500 (11.12)           | 957 (434.1)      |

Reference page 168 for general fitting and standard finish specifications.

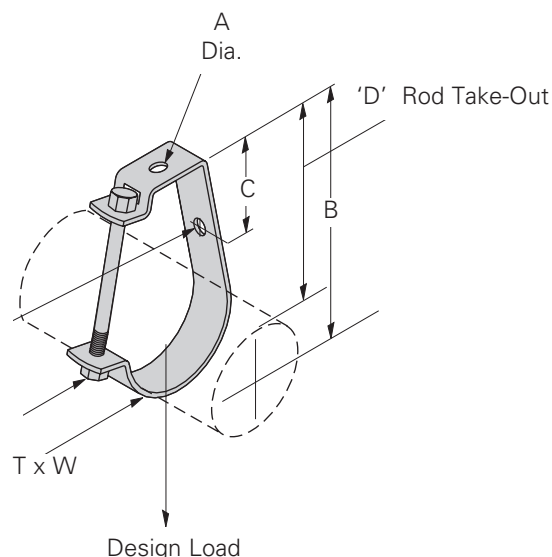
## B3690 Series Adjustable J Hanger

- Safety Factor of 5
- Material:
  - 12 Ga. (2.6) ASTM A1011 33,000 PSI min. yield
  - 11 Ga. (3.0) ASTM A1011 HSLA Gr. 50 Class 1
  - 7 Ga. (4.5) ASTM A1011 33,000 PSI min. yield and
  - 1/4" (6.3) ASTM A1018 33,000 PSI min. yield
- Standard finish: ZN



'E' Diameter. Is  
For Wall Mounting

Bolt Size 'F' and  
Hex Nut Included



| Part No.    | Pipe or Conduit Size |       | A       |        | B        |         | C       |        | D        |         | E      |        |
|-------------|----------------------|-------|---------|--------|----------|---------|---------|--------|----------|---------|--------|--------|
|             | In.                  | mm    | In.     | mm     | In.      | mm      | In.     | mm     | In.      | mm      | In.    | mm     |
| B3690-1/2   | 1/2"                 | (15)  | 13/32"  | (10.3) | 23/32"   | (53.2)  | 1"      | (25.4) | 1 11/16" | (42.5)  | 13/32" | (10.3) |
| B3690-3/4   | 3/4"                 | (20)  | 13/32"  | (10.3) | 2 11/32" | (59.5)  | 1"      | (25.4) | 1 13/16" | (46.2)  | 13/32" | (10.3) |
| B3690-1     | 1"                   | (25)  | 13/32"  | (10.3) | 2 19/32" | (65.9)  | 1"      | (25.4) | 1 15/16" | (49.2)  | 13/32" | (10.3) |
| B3690-1 1/4 | 1 1/4"               | (32)  | 13/32"  | (10.3) | 2 13/16" | (71.4)  | 1"      | (25.4) | 2"       | (50.4)  | 13/32" | (10.3) |
| B3690-1 1/2 | 1 1/2"               | (40)  | 13/32"  | (10.3) | 3 1/16"  | (77.8)  | 1"      | (25.4) | 2 1/8"   | (53.7)  | 13/32" | (10.3) |
| B3690-2     | 2"                   | (50)  | 13/32"  | (10.3) | 3 1/2"   | (88.9)  | 1"      | (25.4) | 2 5/16"  | (58.7)  | 13/32" | (10.3) |
| B3690-2 1/2 | 2 1/2"               | (65)  | 9/16"   | (14.3) | 4 7/16"  | (112.7) | 1"      | (25.4) | 3"       | (76.2)  | 9/16"  | (14.3) |
| B3690-3     | 3"                   | (80)  | 9/16"   | (14.3) | 4 7/8"   | (123.8) | 1"      | (25.4) | 3 1/8"   | (79.4)  | 9/16"  | (14.3) |
| B3690-3 1/2 | 3 1/2"               | (90)  | 9/16"   | (14.3) | 5 3/16"  | (131.8) | 1"      | (25.4) | 3 3/16"  | (81.0)  | 9/16"  | (14.3) |
| B3690-4     | 4"                   | (100) | 1 1/16" | (17.5) | 6 1/8"   | (155.6) | 1 1/4"  | (31.8) | 3 7/8"   | (98.4)  | 9/16"  | (14.3) |
| B3690-5     | 5"                   | (125) | 1 1/16" | (17.5) | 6 3/4"   | (171.4) | 1 1/2"  | (38.1) | 4"       | (100.8) | 9/16"  | (14.3) |
| B3690-6     | 6"                   | (150) | 1 3/16" | (20.6) | 7 3/4"   | (196.8) | 1 3/16" | (30.2) | 4 7/16"  | (112.7) | 9/16"  | (14.3) |
| B3690-8     | 8"                   | (200) | 1 3/16" | (20.6) | 9 1/4"   | (235.0) | 1"      | (25.4) | 4 15/16" | (125.4) | 9/16"  | (14.3) |

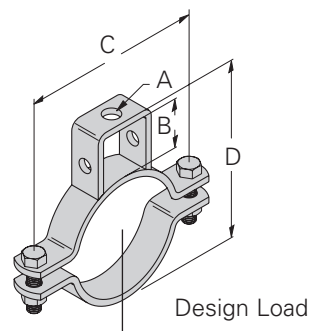
| Part No.    | F<br>Bolt Size    |    | T      |       | W      |        | Design Load |        | Wt./C |         |
|-------------|-------------------|----|--------|-------|--------|--------|-------------|--------|-------|---------|
|             | In.               | mm | In.    | mm    | In.    | mm     | Lbs.        | kN     | Lbs.  | kg      |
| B3690-1/2   | 1/4"-20 x 2 1/4"  |    | 12 Ga. | (2.6) | 3/4"   | (19.0) | 400         | (1.78) | 20    | (9.1)   |
| B3690-3/4   | 1/4"-20 x 2 1/2"  |    | 12 Ga. | (2.6) | 3/4"   | (19.0) | 400         | (1.78) | 23    | (10.4)  |
| B3690-1     | 1/4"-20 x 2 3/4"  |    | 12 Ga. | (2.6) | 3/4"   | (19.0) | 400         | (1.78) | 24    | (10.9)  |
| B3690-1 1/4 | 1/4"-20 x 3"      |    | 12 Ga. | (2.6) | 3/4"   | (19.0) | 400         | (1.78) | 27    | (12.2)  |
| B3690-1 1/2 | 1/4"-20 x 3 1/4"  |    | 12 Ga. | (2.6) | 3/4"   | (19.0) | 400         | (1.78) | 29    | (13.1)  |
| B3690-2     | 1/4"-20 x 3 1/2"  |    | 12 Ga. | (2.6) | 3/4"   | (19.0) | 400         | (1.78) | 32    | (14.5)  |
| B3690-2 1/2 | 3/8"-16 x 4 1/2"  |    | 11 Ga. | (3.0) | 1 1/4" | (31.7) | 800         | (3.56) | 71    | (32.2)  |
| B3690-3     | 3/8"-16 x 5"      |    | 11 Ga. | (3.0) | 1 1/4" | (31.7) | 800         | (3.56) | 77    | (34.9)  |
| B3690-3 1/2 | 3/8"-16 x 5 1/2"  |    | 11 Ga. | (3.0) | 1 1/4" | (31.7) | 800         | (3.56) | 84    | (38.1)  |
| B3690-4     | 3/8"-16 x 6 1/2"  |    | 7 Ga.  | (4.5) | 1 1/4" | (31.7) | 800         | (3.56) | 139   | (63.0)  |
| B3690-5     | 3/8"-16 x 7 1/2"  |    | 7 Ga.  | (4.5) | 1 1/4" | (31.7) | 800         | (3.56) | 166   | (75.3)  |
| B3690-6     | 3/8"-16 x 8 1/2"  |    | 1/4"   | (6.3) | 1 1/4" | (31.7) | 1000        | (4.45) | 226   | (102.5) |
| B3690-8     | 3/8"-16 x 10 1/2" |    | 1/4"   | (6.3) | 1 1/2" | (38.1) | 1200        | (5.34) | 332   | (150.6) |

Reference page 168 for general fitting and standard finish specifications.

# Pipe hangers

**Fig. 4B Series (Formerly B386 Series)  
Suspension Rod Pipe Strap**

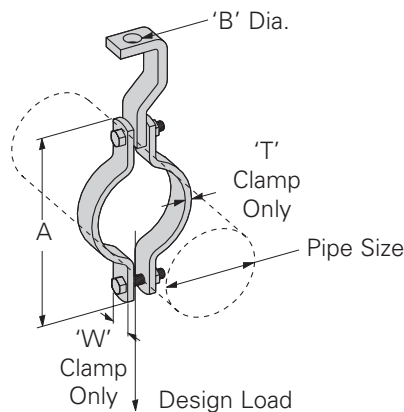
- Safety Factor of 3
- Includes hex head cap screws and hex nuts
- Standard finishes: ZN, GRN



| Part No. | Pipe Size<br>in. mm | Rod Size<br>A | B<br>in. mm   | C<br>in. mm      | D<br>in. mm     | Bolt<br>Size | Design Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|---------------------|---------------|---------------|------------------|-----------------|--------------|------------------------|------------------|
| 4B-3/4   | 3/4" (20)           | 3/8"-16       | 1" (25.4)     | 2 7/8" (73.0)    | 2 5/8" (66.7)   | 5/16"-18     | 330 (1.47)             | 56 (3.6)         |
| 4B-1     | 1" (25)             | 3/8"-16       | 1" (25.4)     | 3 1/4" (82.5)    | 2 5/16" (74.6)  | 5/16"-18     | 330 (1.47)             | 60 (3.6)         |
| 4B-1 1/4 | 1 1/4" (32)         | 3/8"-16       | 1" (25.4)     | 3 9/16" (90.6)   | 3 1/4" (82.5)   | 5/16"-18     | 330 (1.47)             | 74 (4.5)         |
| 4B-1 1/2 | 1 1/2" (40)         | 3/8"-16       | 1" (25.4)     | 3 13/16" (96.8)  | 3 7/16" (87.3)  | 5/16"-18     | 330 (1.47)             | 79 (5.0)         |
| 4B-2     | 2" (50)             | 3/8"-16       | 1 1/2" (38.1) | 5 1/8" (130.2)   | 4 5/8" (117.5)  | 5/16"-18     | 440 (1.78)             | 156 (5.0)        |
| 4B-2 1/2 | 2 1/2" (65)         | 1/2"-13       | 1 3/4" (44.4) | 5 5/8" (142.9)   | 5 3/8" (136.5)  | 3/8"-16      | 440 (1.78)             | 176 (5.4)        |
| 4B-3     | 3" (80)             | 1/2"-13       | 1 7/8" (47.6) | 6 3/4" (171.4)   | 6 1/8" (155.5)  | 3/8"-16      | 660 (2.93)             | 198 (6.3)        |
| 4B-3 1/2 | 3 1/2" (90)         | 1/2"-13       | 2" (50.8)     | 7 1/4" (184.1)   | 6 3/4" (171.4)  | 3/8"-16      | 660 (2.93)             | 219 (7.2)        |
| 4B-4     | 4" (100)            | 5/8"-11       | 2" (50.8)     | 8 5/8" (219.1)   | 7 1/4" (184.1)  | 2/2"-13      | 800 (3.56)             | 288 (8.1)        |
| 4B-5     | 5" (125)            | 5/8"-11       | 2" (50.8)     | 9 7/8" (250.8)   | 8 5/16" (211.1) | 5/8"-11      | 980 (4.36)             | 390 (8.1)        |
| 4B-6     | 6" (150)            | 3/4"-10       | 2 1/8" (54.0) | 10 5/16" (277.8) | 9 1/2" (241.3)  | 5/8"-11      | 980 (4.36)             | 448 (8.1)        |
| 4B-8     | 8" (200)            | 7/8"-9        | 2 1/8" (54.0) | 13 7/16" (341.2) | 11 1/2" (292.1) | 3/4"-10      | 1200 (5.34)            | 691 (8.1)        |

**B394 Series  
Pipe Strap**

- Safety Factor of 3
- Includes:
  - 1 Pair pipe clamps with hex head cap screws and hex nuts
  - 1 Hanger strap
- Standard finishes: ZN

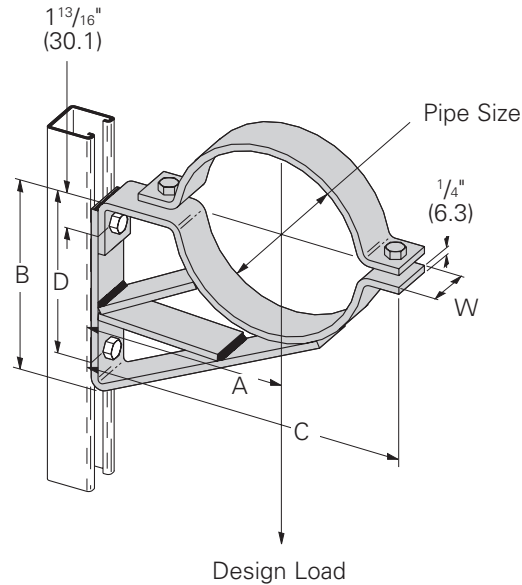


| Part No.   | Pipe Size<br>In. mm | A<br>In. mm     | B<br>In. mm     | T<br>In. mm | W<br>In. mm   | Design Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|------------|---------------------|-----------------|-----------------|-------------|---------------|------------------------|------------------|
| B394-3/4   | 3/4" (20)           | 3 5/16" (84.1)  | 7 1/16" (11.1)  | 1/8" (3.2)  | 1" (25.4)     | 500 (2.22)             | 71 (32.2)        |
| B394-1     | 1" (25)             | 3 3/4" (95.2)   | 7 1/16" (11.1)  | 1/8" (3.2)  | 1" (25.4)     | 500 (2.22)             | 76 (34.5)        |
| B394-1 1/4 | 1 1/4" (32)         | 4" (101.6)      | 7 1/16" (11.1)  | 1/8" (3.2)  | 1" (25.4)     | 500 (2.22)             | 77 (34.9)        |
| B394-1 1/2 | 1 1/2" (40)         | 4 5/16" (109.5) | 7 1/16" (11.1)  | 1/8" (3.2)  | 1" (25.4)     | 800 (3.56)             | 79 (35.8)        |
| B394-2     | 2" (50)             | 5 1/2" (139.7)  | 7 1/16" (11.1)  | 1/4" (6.3)  | 1" (25.4)     | 1040 (4.62)            | 166 (75.3)       |
| B394-2 1/2 | 2 1/2" (65)         | 6 3/8" (161.9)  | 9 1/16" (14.3)  | 1/4" (6.3)  | 1" (25.4)     | 1040 (4.62)            | 179 (81.2)       |
| B394-3     | 3" (80)             | 7" (177.8)      | 9 1/16" (14.3)  | 1/4" (6.3)  | 1" (25.4)     | 1040 (4.62)            | 190 (86.2)       |
| B394-3 1/2 | 3 1/2" (90)         | 7 9/16" (192.1) | 9 1/16" (14.3)  | 1/4" (6.3)  | 1" (25.4)     | 1040 (4.62)            | 203 (92.1)       |
| B394-4     | 4" (100)            | 8 5/8" (219.1)  | 11 1/16" (17.4) | 1/4" (6.3)  | 1 1/4" (31.7) | 1040 (4.62)            | 320 (145.1)      |
| B394-5     | 5" (125)            | 9 3/4" (247.6)  | 11 1/16" (17.4) | 1/4" (6.3)  | 1 1/4" (31.7) | 1040 (4.62)            | 353 (160.1)      |
| B394-6     | 6" (150)            | 11 5/8" (295.3) | 13 1/16" (20.6) | 3/8" (9.5)  | 1 1/2" (38.1) | 1615 (7.18)            | 637 (288.9)      |
| B394-8     | 8" (200)            | 13 7/8" (352.4) | 13 1/16" (20.6) | 3/8" (9.5)  | 1 1/2" (38.1) | 1615 (7.18)            | 837 (379.6)      |

Reference page 168 for general fitting and standard finish specifications.

## B591 Series Pipe Bracket Saddle and Clamp

- Safety Factor of 3
- Inside brace not required on B591-2 and B591-2½
- Includes:
  - 1 pc. Saddle bottom
  - 1 pc. Saddle top (clamp)
  - 2 pcs. Hex head cap screws
  - 2 pcs. Hex nuts
- Standard finish: ZN



| Part No.       | Pipe Size |       | A   |         | B    |         | C    |         | D   |         | W   |        | Design Load |        | Wt./C |         |
|----------------|-----------|-------|-----|---------|------|---------|------|---------|-----|---------|-----|--------|-------------|--------|-------|---------|
|                | In.       | mm    | In. | mm      | In.  | mm      | In.  | mm      | In. | mm      | In. | mm     | Lbs.        | kN     | Lbs.  | kg      |
| <b>B591-2</b>  | 2"        | (50)  | 4½" | (114.3) | 4½"  | (114.3) | 7¾"  | (182.6) | 3⅛" | (77.8)  | 1⅝" | (41.3) | 1235        | (5.53) | 290   | (131.5) |
| <b>B591-2½</b> | 2½"       | (65)  | 5"  | (127.0) | 5"   | (127.0) | 7⅝"  | (201.6) | 3⅞" | (90.5)  | 1⅝" | (41.3) | 1180        | (5.29) | 330   | (149.7) |
| <b>B591-3</b>  | 3"        | (80)  | 5½" | (139.7) | 5¾"  | (146.0) | 8¾"  | (222.2) | 3⅜" | (96.8)  | 1⅝" | (41.3) | 1125        | (5.04) | 439   | (199.1) |
| <b>B591-3½</b> | 3½"       | (90)  | 6"  | (152.4) | 6¾"  | (171.4) | 9½"  | (241.3) | 4⅞" | (115.9) | 1⅝" | (41.3) | 1070        | (4.79) | 490   | (222.2) |
| <b>B591-4</b>  | 4"        | (100) | 6½" | (165.1) | 6¾"  | (171.4) | 10¼" | (260.3) | 6⅛" | (128.6) | 1⅝" | (41.3) | 1015        | (4.55) | 545   | (247.2) |
| <b>B591-5</b>  | 5"        | (125) | 7½" | (190.5) | 8"   | (203.2) | 12⅛" | (308.0) | 6⅛" | (154.0) | 1⅝" | (41.3) | 960         | (4.30) | 666   | (302.1) |
| <b>B591-6</b>  | 6"        | (150) | 8"  | (203.2) | 8¾"  | (222.2) | 13¾" | (335.0) | 6⅜" | (173.0) | 1⅝" | (41.3) | 905         | (4.05) | 724   | (328.4) |
| <b>B591-8</b>  | 8"        | (200) | 9"  | (228.6) | 10½" | (266.7) | 15⅞" | (395.3) | 8⅞" | (217.5) | 2"  | (50.8) | 850         | (3.81) | 1087  | (493.0) |

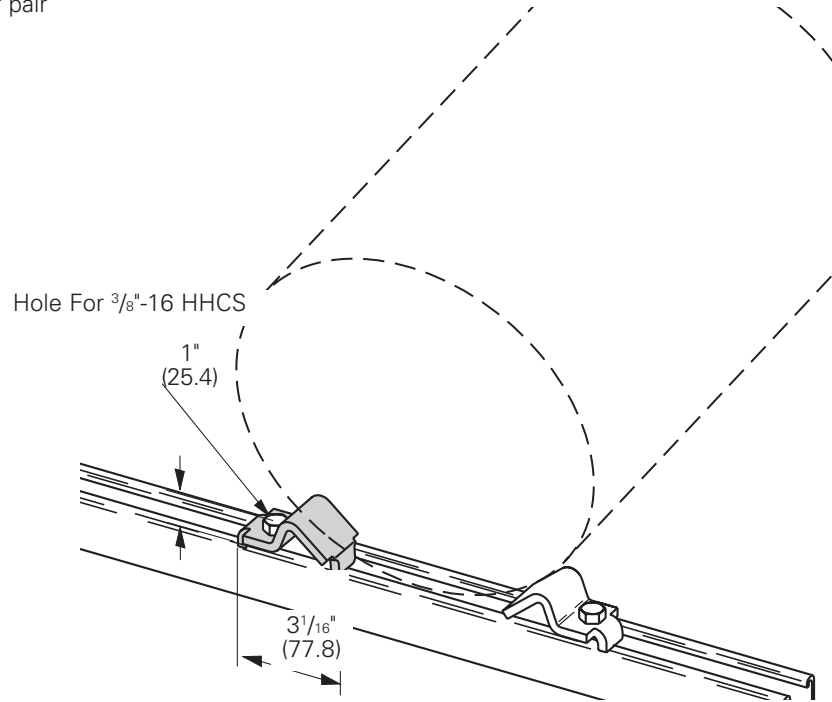
Reference page 168 for general fitting and standard finish specifications.

# Pipe block

## B356

### Pipe Block - 2" (50) to 8" (200) Pipe

- Required hardware not included:
  - 1 pc.  $\frac{3}{8}$ "-16 x 1" Hex head cap screw
  - 1 pc.  $\frac{3}{8}$ "-16 Channel nut
- Material:  $\frac{1}{4}$ " (6.3) thick  $1\frac{5}{8}$ " (41.3) wide  
ASTM A1018 33,000 PSI min. yield
- Standard finish: ZN
- Wt./C 42 Lbs. (19.0 kg) Per pair

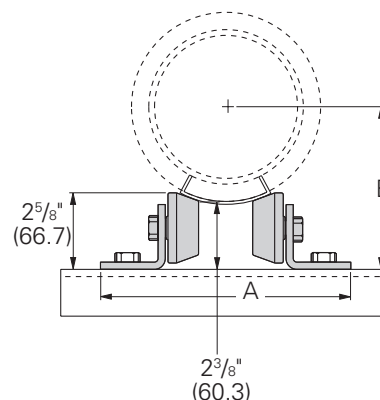
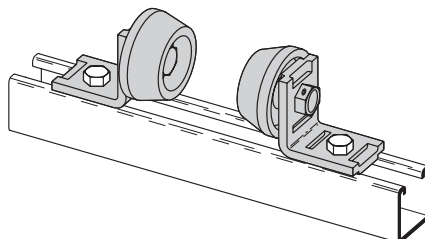




## B218

### Pipe Rollers - 1/2" (15) to 8" (200) Pipe

- Design Load 500 Lbs. (2.22 kN)
- Safety Factor of 5
- When used with B3160 thru B3165 Saddles (see Pipe Hanger Catalog)
- Malleable iron rollers
- Sold in pairs
- Required hardware not included:  
2 pcs. 1/2"-13 x 1 1/4" Hex head cap screws  
2 pcs. 1/2"-13 Channel nuts
- Standard finish: ZN
- Wt./C 256 Lbs. (116.1 kg) Per pair



Reference Chart - A Dimension

| Pipe Size   | Insulation Thickness in. (mm) |                |                |                |               |             |             |
|-------------|-------------------------------|----------------|----------------|----------------|---------------|-------------|-------------|
|             | 0" (0.0)                      | 1" (25.4)      | 1 1/2" (38.1)  | 2" (50.8)      | 2 1/2" (63.5) | 3" (76.2)   | 4" (101.6)  |
| 1/2" (15)   | 7 1/4" (184.1)                | —              | —              | —              | —             | —           | —           |
| 3/4" (20)   | 7 1/4" (184.1)                | 7 1/4" (184.1) | 7 5/8" (193.7) | 8" (203.2)     | —             | —           | —           |
| 1" (25)     | 7 1/4" (184.1)                | 7 1/4" (184.1) | 7 5/8" (193.7) | 8 1/4" (209.5) | —             | —           | —           |
| 1 1/4" (32) | 7 1/4" (184.1)                | 7 1/4" (184.1) | 8" (203.2)     | 8 1/4" (209.5) | —             | —           | —           |
| 1 1/2" (40) | 7 1/4" (184.1)                | 7 5/8" (193.7) | 8" (203.2)     | 8 1/2" (215.9) | 9" (228.6)    | —           | —           |
| 2" (50)     | 7 1/4" (184.1)                | 7 5/8" (193.7) | 8 1/2" (215.9) | 8 1/2" (215.9) | 9" (228.6)    | —           | —           |
| 2 1/2" (65) | 7 1/4" (184.1)                | 8" (203.2)     | 8 1/2" (215.9) | 9" (228.6)     | 10" (254.0)   | —           | —           |
| 3" (80)     | 7 1/4" (184.1)                | 8 1/2" (215.9) | 9" (228.6)     | 9" (228.6)     | 10" (254.0)   | 10" (254.0) | —           |
| 3 1/2" (90) | 7 1/4" (184.1)                | 8 1/2" (215.9) | 9" (228.6)     | 10" (254.0)    | 10" (254.0)   | 10" (254.0) | —           |
| 4" (100)    | 7 5/8" (193.7)                | 9" (228.6)     | 9" (228.6)     | 10" (254.0)    | 10" (254.0)   | 11" (279.4) | —           |
| 5" (125)    | 8 1/2" (215.9)                | 9" (228.6)     | 10" (254.0)    | 10" (254.0)    | 11" (279.4)   | 11" (279.4) | 12" (304.8) |
| 6" (150)    | 9" (228.6)                    | 10" (254.0)    | 10" (254.0)    | 11" (279.4)    | 11" (279.4)   | 11" (279.4) | 12" (304.8) |
| 8" (200)    | 10" (254.0)                   | 11" (279.4)    | 11" (279.4)    | 11" (279.4)    | 12" (304.8)   | —           | —           |

Reference Chart - B Dimension

| Pipe Size   | Insulation Thickness in. (mm) |                  |                  |                 |                  |                |                  |
|-------------|-------------------------------|------------------|------------------|-----------------|------------------|----------------|------------------|
|             | 0" (0.0)                      | 1" (25.4)        | 1 1/2" (38.1)    | 2" (50.8)       | 2 1/2" (63.5)    | 3" (76.2)      | 4" (101.6)       |
| 1/2" (15)   | 2 1/16" (68.3)                | —                | —                | —               | —                | —              | —                |
| 3/4" (20)   | 2 13/16" (71.4)               | 3 7/8" (98.4)    | 4 3/8" (111.1)   | 4 7/8" (123.8)  | —                | —              | —                |
| 1" (25)     | 2 15/16" (74.6)               | 4 3/16" (106.4)  | 4 11/16" (119.1) | 5 1/16" (128.6) | —                | —              | —                |
| 1 1/4" (32) | 3 1/8" (79.4)                 | 4 3/16" (106.4)  | 4 5/8" (117.5)   | 5 1/8" (130.2)  | —                | —              | —                |
| 1 1/2" (40) | 3 1/4" (82.5)                 | 4 3/8" (111.1)   | 4 7/8" (123.8)   | 5 5/16" (134.9) | 5 3/4" (146.0)   | —              | —                |
| 2" (50)     | 3 9/16" (90.5)                | 4 11/16" (119.1) | 5 1/16" (128.6)  | 5 5/8" (142.9)  | 6 1/16" (154.0)  | —              | —                |
| 2 1/2" (65) | 3 13/16" (96.8)               | 4 7/8" (123.8)   | 5 5/16" (134.9)  | 6" (152.4)      | 6 3/8" (161.9)   | —              | —                |
| 3" (80)     | 4 1/8" (104.8)                | 5 1/16" (128.6)  | 5 9/16" (141.3)  | 6 1/8" (155.6)  | 6 7/16" (163.5)  | 7" (177.8)     | —                |
| 3 1/2" (90) | 4 3/8" (111.1)                | 5 5/16" (134.9)  | 5 13/16" (147.6) | 6 1/4" (158.7)  | 6 11/16" (169.9) | 7 1/4" (184.1) | —                |
| 4" (100)    | 4 5/8" (117.5)                | 5 9/16" (141.3)  | 6 1/16" (154.0)  | 6 7/16" (163.5) | 6 15/16" (176.2) | 7 3/8" (187.3) | —                |
| 5" (125)    | 5" (127.0)                    | 6 1/16" (154.0)  | 6 7/16" (163.5)  | 7" (177.8)      | 7 3/8" (187.3)   | 7 7/8" (200.0) | 8 13/16" (223.8) |
| 6" (150)    | 5 1/2" (139.7)                | 6 7/16" (163.5)  | 6 15/16" (176.2) | 7 3/8" (187.3)  | 7 15/16" (201.6) | 8 1/2" (215.9) | 9 1/2" (241.3)   |
| 8" (200)    | 6 15/16" (160.3)              | 7 3/8" (187.3)   | 7 15/16" (201.6) | 8 7/16" (214.3) | 8 15/16" (227.0) | —              | —                |

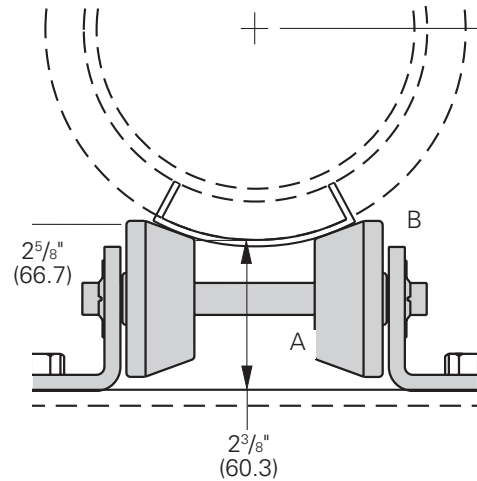
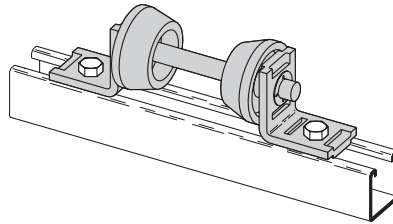
Reference page 168 for general fitting and standard finish specifications.

# Pipe rollers

## B219

### Pipe Roller Series - 3/4" (20) to 12" (300) Pipe

- Design Load 750 Lbs. (3.33 kN)
- Safety Factor of 5
- Requires field assembly
- When used with B3160 thru B3165 Saddles (see Pipe Hanger Catalog)
- Malleable iron rollers
- Sold in pairs
- Required hardware not included:  
2 pcs. 1/2"-13 x 1 1/4" Hex head cap screws  
2 pcs. 1/2"-13 Channel nuts
- Reference sizing chart on page 193
- Standard finish: ZN



Reference Chart - A Dimension

| Part No.      | A       |         | Wt./C PR |         |
|---------------|---------|---------|----------|---------|
|               | In.     | mm      | Lbs.     | kg      |
| <b>B219</b>   | 7 1/4"  | (184.1) | 253      | (114.7) |
| <b>B219-1</b> | 8"      | (203.2) | 258      | (117.0) |
| <b>B219-2</b> | 9"      | (228.6) | 263      | (119.3) |
| <b>B219-3</b> | 10"     | (254.0) | 269      | (122.0) |
| <b>B219-4</b> | 10 7/8" | (276.2) | 274      | (124.8) |
| <b>B219-5</b> | 11 5/8" | (295.3) | 279      | (126.5) |

Reference Chart - B Dimension

| Pipe Size | Insulation Thickness in. (mm) |             |             |             |             |             |             |
|-----------|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
|           | 0" (0.0)                      | 1" (25.4)   | 1½" (38.1)  | 2" (50.8)   | 2½" (63.5)  | 3" (76.2)   | 4" (101.6)  |
| ½" (15)   | 2⅞" (68.3)                    | —           | —           | —           | —           | —           | —           |
| ¾" (20)   | 2⅞" (71.4)                    | 3⅞" (98.4)  | 4½" (114.3) | 4⅞" (123.8) | —           | —           | —           |
| 1" (25)   | 2⅞" (74.6)                    | 4⅞" (106.4) | 4⅞" (117.5) | 5⅞" (128.6) | —           | —           | —           |
| 1¼" (32)  | 3⅞" (79.4)                    | 4⅞" (106.4) | 4⅞" (117.5) | 5⅞" (130.2) | —           | —           | —           |
| 1½" (40)  | 3⅞" (82.5)                    | 4⅞" (112.7) | 4⅞" (123.8) | 5⅞" (133.3) | 5⅞" (146.0) | —           | —           |
| 2" (50)   | 3⅞" (90.5)                    | 4⅞" (117.5) | 5⅞" (131.8) | 5⅞" (139.7) | 6⅞" (154.0) | —           | —           |
| 2½" (65)  | 3⅞" (95.2)                    | 4⅞" (123.8) | 5⅞" (133.3) | 6" (152.4)  | 6⅞" (161.9) | —           | —           |
| 3" (80)   | 4⅞" (104.8)                   | 5⅞" (130.2) | 5⅞" (141.3) | 6⅞" (154.0) | 6⅞" (163.5) | 6⅞" (176.2) | —           |
| 3½" (90)  | 4⅞" (107.9)                   | 5⅞" (133.3) | 5⅞" (147.6) | 6⅞" (158.7) | 6⅞" (169.9) | 7⅞" (179.4) | —           |
| 4" (100)  | 4⅞" (115.9)                   | 5⅞" (139.7) | 6⅞" (154.0) | 6⅞" (163.5) | 6⅞" (176.2) | 7⅞" (187.3) | —           |
| 5" (125)  | 5⅞" (128.6)                   | 6⅞" (154.0) | 6⅞" (163.5) | 7" (177.8)  | 7⅞" (187.3) | 7⅞" (200.0) | 8⅞" (227.0) |
| 6" (150)  | 5⅞" (138.1)                   | 6⅞" (163.5) | 6⅞" (176.2) | 7⅞" (187.3) | 7⅞" (200.0) | 8⅞" (211.1) | 9⅞" (242.9) |
| 8" (200)  | 6⅞" (161.9)                   | 7⅞" (188.9) | 7⅞" (201.6) | 8⅞" (212.7) | 9" (228.6)  | —           | —           |
| 10" (250) | 7⅞" (185.7)                   | 8⅞" (208.0) | —           | —           | —           | —           | —           |
| 12" (300) | 8⅞" (209.5)                   | —           | —           | —           | —           | —           | —           |

Reference B219 sizing chart on page 193

**B219 Sizing Chart**

| Pipe Size | Insulation Thickness in. (mm) |           |            |           |            |           |            |
|-----------|-------------------------------|-----------|------------|-----------|------------|-----------|------------|
|           | 0" (0.0)                      | 1" (25.4) | 1½" (38.1) | 2" (50.8) | 2½" (63.5) | 3" (76.2) | 4" (101.6) |
| ½" (15)   | B219                          | –         | –          | –         | –          | –         | –          |
| ¾" (20)   | B219                          | B219      | B219       | B219-1    | –          | –         | –          |
| 1" (25)   | B219                          | B219      | B219-1     | B219-1    | –          | –         | –          |
| 1¼" (32)  | B219                          | B219      | B219-1     | B219-1    | –          | –         | –          |
| 1½" (40)  | B219                          | B219      | B219-1     | B219-2    | B219-2     | –         | –          |
| 2" (50)   | B219                          | B219-1    | B219-1     | B219-2    | B219-2     | –         | –          |
| 2½" (65)  | B219                          | B219-1    | B219-2     | B219-2    | B219-3     | –         | –          |
| 3" (80)   | B219                          | B219-1    | B219-2     | B219-2    | B219-3     | B219-3    | –          |
| 3½" (90)  | B219-1                        | B219-2    | B219-2     | B219-3    | B219-3     | B219-4    | –          |
| 4" (100)  | B219-1                        | B219-2    | B219-2     | B219-3    | B219-3     | B219-4    | –          |
| 5" (125)  | B219-1                        | B219-2    | B219-3     | B219-3    | B219-4     | B219-4    | B219-5     |
| 6" (150)  | B219-2                        | B219-3    | B219-3     | B219-4    | B219-4     | B219-5    | B219-5     |
| 8" (200)  | B219-3                        | B219-4    | B219-4     | B219-5    | B219-5     | –         | –          |
| 10" (250) | B219-4                        | B219-5    | –          | –         | –          | –         | –          |
| 12" (300) | B219-5                        | –         | –          | –         | –          | –         | –          |

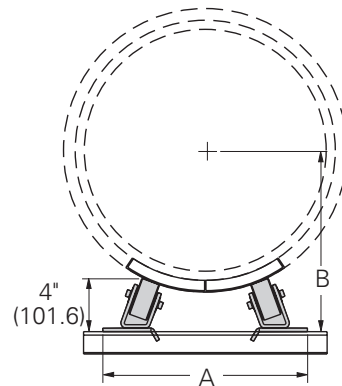
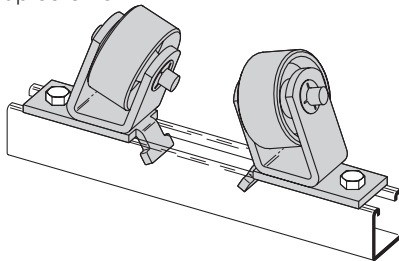
Reference page 168 for general fitting and standard finish specifications.

# Pipe rollers

## B379

### Pipe Rollers - 6" (150) to 18" (450) Pipe

- Design Load 1500 Lbs. (6.67 kN)
- Safety Factor of 5
- Requires field assembly
- When used with B3160 thru B3165 Saddles (see Pipe Hanger Catalog)
- Malleable iron rollers
- Sold in pairs
- Required hardware not included:  
2 pcs. 1/2"-13 x 1 1/4" Hex head cap screws  
2 pcs. 1/2"-13 Channel nuts
- Standard finish: ZN
- Wt./C 889 Lbs. (403.2 kg)



Reference Chart - A Dimension

| Pipe Size | Insulation Thickness in. (mm) |                  |                  |                   |                   |                 |                  |
|-----------|-------------------------------|------------------|------------------|-------------------|-------------------|-----------------|------------------|
|           | 0" (0.0)                      | 1" (25.4)        | 1 1/2" (38.1)    | 2" (50.8)         | 2 1/2" (63.5)     | 3" (76.2)       | 4" (101.6)       |
| 6" (150)  | 9 9/16" (242.9)               | 10 3/16" (258.8) | 10 5/8" (269.9)  | 11" (279.4)       | 11 3/8" (288.9)   | 11 3/4" (298.4) | 12 1/2" (317.5)  |
| 8" (200)  | 10 1/4" (260.3)               | 11 1/16" (281.0) | 11 3/8" (288.9)  | 11 3/4" (298.4)   | 12 3/16" (309.6)  | 12 1/2" (317.5) | 13 1/4" (336.5)  |
| 10" (250) | 11" (279.4)                   | 11 3/4" (298.4)  | 12 1/8" (308.0)  | 12 1/2" (317.5)   | 12 13/16" (325.4) | 13 1/8" (333.4) | 13 7/8" (352.4)  |
| 12" (300) | 11 11/16" (296.9)             | 12 9/16" (319.1) | 12 7/8" (327.0)  | 13 1/4" (336.5)   | 13 9/16" (344.5)  | 13 7/8" (352.4) | 14 5/8" (371.5)  |
| 14" (350) | 12 1/16" (306.4)              | 12 7/8" (327.0)  | 13 3/16" (335.0) | 13 9/16" (344.5)  | 13 7/8" (352.4)   | 14 1/4" (361.9) | 14 7/8" (377.8)  |
| 16" (400) | 12 3/4" (323.8)               | 13 1/2" (342.9)  | 13 7/8" (352.4)  | 14 13/16" (360.4) | 14 1/2" (368.3)   | 14 7/8" (377.8) | 15 1/2" (393.7)  |
| 18" (450) | 13 1/2" (342.9)               | 14 1/4" (361.9)  | 14 5/8" (371.5)  | 15" (381.0)       | 15 5/16" (388.9)  | 15 5/8" (396.9) | 16 5/16" (414.3) |

Reference Chart - B Dimension

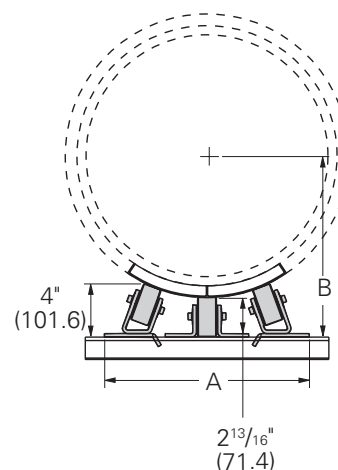
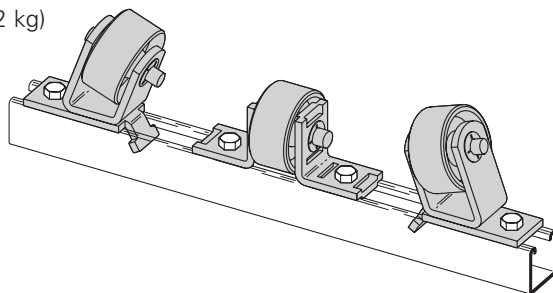
| Pipe Size | Insulation Thickness in. (mm) |                   |                   |                   |                   |                   |                   |
|-----------|-------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|           | 0" (0.0)                      | 1" (25.4)         | 1 1/2" (38.1)     | 2" (50.8)         | 2 1/2" (63.5)     | 3" (76.2)         | 4" (101.6)        |
| 6" (150)  | 6 7/8" (174.6)                | 7 7/8" (200.0)    | 8 3/8" (212.7)    | 8 7/8" (225.4)    | 9 3/8" (238.1)    | 9 7/8" (250.8)    | 10 15/16" (277.8) |
| 8" (200)  | 7 13/16" (198.4)              | 8 7/8" (225.4)    | 9 3/8" (238.1)    | 9 7/8" (250.8)    | 10 7/16" (265.1)  | 10 15/16" (277.8) | 11 7/8" (301.6)   |
| 10" (250) | 8 13/16" (223.8)              | 9 7/8" (250.8)    | 10 7/16" (265.1)  | 10 15/16" (277.8) | 11 3/8" (288.9)   | 11 7/8" (301.6)   | 12 13/16" (325.4) |
| 12" (300) | 9 3/4" (247.6)                | 10 15/16" (277.8) | 11 3/8" (288.9)   | 11 7/8" (301.6)   | 12 5/16" (312.7)  | 12 13/16" (325.4) | 13 3/4" (349.2)   |
| 14" (350) | 10 5/16" (261.9)              | 11 3/8" (288.9)   | 11 7/8" (301.6)   | 12 5/16" (312.7)  | 12 13/16" (325.4) | 13 1/4" (336.5)   | 14 1/4" (361.9)   |
| 16" (400) | 11 5/16" (287.3)              | 12 5/16" (312.7)  | 12 13/16" (325.4) | 13 1/4" (336.5)   | 13 3/4" (349.2)   | 14 1/4" (361.9)   | 15 1/8" (384.2)   |
| 18" (450) | 12 1/4" (311.1)               | 13 1/4" (336.5)   | 13 3/4" (349.2)   | 14 3/16" (360.4)  | 14 11/16" (373.1) | 15 1/8" (384.2)   | 16 1/16" (408.0)  |

Reference page 168 for general fitting and standard finish specifications.

## B479

### Pipe Rollers - 16" (400) to 30" (750) Pipe

- Design Load 2000 Lbs. (8.89 kN)
- Safety Factor of 5
- Requires field assembly
- When used with B3160 thru B3165 Saddles (see Pipe Hanger Catalog)
- Malleable iron rollers
- Sold in pieces
- Required hardware not included:  
4 pcs. 1/2"-13 x 1 1/4" Hex head cap screws  
4 pcs. 1/2"-13 Channel nuts
- Standard finish: ZN
- Wt./C 889 Lbs. (403.2 kg)



Reference Chart - A Dimension

| Pipe Size | Insulation Thickness in. (mm) |                  |                  |                  |                   |                  |                  |
|-----------|-------------------------------|------------------|------------------|------------------|-------------------|------------------|------------------|
|           | 0" (0.0)                      | 1" (25.4)        | 1 1/2" (38.1)    | 2" (50.8)        | 2 1/2" (63.5)     | 3" (76.2)        | 4" (101.6)       |
| 16" (400) | 15 3/16" (385.8)              | 15 5/8" (396.9)  | 15 7/8" (403.2)  | 16" (406.4)      | 16 1/4" (412.7)   | 16 1/2" (419.1)  | 17" (431.8)      |
| 18" (450) | 15 1/2" (393.7)               | 16" (406.4)      | 16 3/16" (411.2) | 16 3/8" (415.9)  | 16 9/16" (420.7)  | 16 3/4" (425.4)  | 17 3/16" (436.6) |
| 20" (500) | 16" (406.4)                   | 16 3/8" (415.9)  | 16 9/16" (420.7) | 16 7/8" (428.6)  | 16 15/16" (430.2) | 17 3/16" (436.6) | 17 1/2" (444.5)  |
| 24" (600) | 16 13/16" (427.0)             | 17 5/16" (439.7) | 17 1/2" (444.5)  | 17 1/2" (444.5)  | 17 11/16" (449.3) | 17 7/8" (454.0)  | 18 1/8" (460.4)  |
| 30" (750) | 17 13/16" (452.4)             | 18 1/4" (463.5)  | 18 3/8" (466.7)  | 18 9/16" (471.5) | 18 7/8" (476.2)   | 18 7/8" (479.4)  | 19 1/4" (488.9)  |

Reference Chart - B Dimension

| Pipe Size | Insulation Thickness in. (mm) |                   |                  |                   |                  |                  |                   |
|-----------|-------------------------------|-------------------|------------------|-------------------|------------------|------------------|-------------------|
|           | 0" (0.0)                      | 1" (25.4)         | 1 1/2" (38.1)    | 2" (50.8)         | 2 1/2" (63.5)    | 3" (76.2)        | 4" (101.6)        |
| 16" (400) | 10 13/16" (274.6)             | 11 15/16" (303.2) | 12 3/8" (314.3)  | 12 15/16" (328.6) | 13 3/8" (339.7)  | 13 5/16" (354.0) | 14 15/16" (379.4) |
| 18" (450) | 11 7/8" (301.6)               | 12 15/16" (328.6) | 13 7/16" (341.3) | 13 15/16" (354.0) | 14 7/16" (366.7) | 14 5/16" (379.4) | 15 5/16" (404.8)  |
| 20" (500) | 12 3/16" (325.4)              | 13 15/16" (354.0) | 14 7/16" (366.7) | 14 7/8" (377.8)   | 15 7/16" (392.1) | 15 7/8" (403.2)  | 16 15/16" (430.2) |
| 24" (600) | 14 13/16" (376.2)             | 15 7/8" (403.2)   | 16 3/8" (415.9)  | 16 7/8" (428.6)   | 17 3/8" (441.3)  | 17 7/8" (454.0)  | 18 7/8" (479.4)   |
| 30" (750) | 17 13/16" (452.4)             | 18 7/8" (479.4)   | 19 3/8" (492.1)  | 19 7/8" (504.8)   | 20 3/8" (517.5)  | 20 5/16" (531.8) | 21 15/16" (557.2) |

Reference page 168 for general fitting and standard finish specifications.

# DURA-BLOK rooftop supports



Our DURA-BLOK™ products gives you a versatile and long-term solution for all your roof top support needs. Designed with flexibility in mind, DURA-BLOK is ideal for roof top support applications such as pipe, HVAC, duct, conduit, cable tray, and roof walkways.

Manufactured to provide years of service in harsh, roof top environments, DURA-BLOK is made from 100% recycled rubber, requires no supplemental rubber pads, and will not float or blow away. The 1" (25.4) gap between blocks allow water to flow freely around longer assemblies. For added strength, the DURA-BLOK support channel is through bolted on all sizes. For added visibility, a reflective strip is incorporated on both sides of each DURA-BLOK support.

Beyond product durability, DURA-BLOK helps to dampen vibration, are not sharp or abrasive and requires no roof penetration to maximize existing roof life - and roof structural and environmental integrity. DURA-BLOK is also resistant to freezing and thawing.

## Recommended Torque (In channels)

| Bolt Size | 1/4"-20 | 5/16"-18 | 3/8"-16 | 1/2"-13 |
|-----------|---------|----------|---------|---------|
| Foot/Lbs. | 6       | 11       | 19      | 50      |
| Nm        | 8       | 15       | 26      | 68      |

| Bolt Size | M6x1 | M8 x1.25 | M10 x 1.5 | M12x1.75 |
|-----------|------|----------|-----------|----------|
| Foot/Lbs. | 9    | 13       | 27        | 46       |
| Nm        | 12   | 17       | 36        | 62       |

## Materials & Finishes

See appropriate fitting pages.  
Alternative finishes available upon request.

## Metric

Metric dimensions are shown in parentheses.  
Unless noted, all metric dimensions are in millimeters.



# DURA-BLOK rooftop supports

## Support Bases Only

- Base only - see chart for height, width and length.
- 100% recycled rubber, UV resistant.
- Load Rating - Ultimate Uniform Load (See Chart Below)\*
- DURA-BLOK channel support is designed as an economical support for piping systems, cable tray, HVAC equipment and many other applications. The DURA-BLOK is UV resistant and suitable for any type of roofing material or other flat surfaces. Material effectively accepts screw fasteners for securing accessories.



DBM



DBP

| Part No. | Height x Width x Length<br>In. mm      | Wt./Each<br>Lbs. kg | Load Rating<br>Lbs. kN |
|----------|----------------------------------------|---------------------|------------------------|
| DBM      | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9) | 2.35 (1.07)         | 200 (0.89)             |
| DBP      | 4" x 6" x 9.6" (101.6 x 152.4 x 243.8) | 4.48 (2.03)         | 500 (2.22)             |

## DB Series - Support Bases with Channel

- Base with 1" (25.4mm) tall galvanized channel - see chart for overall height, width and length.
- 100% recycled rubber, UV resistant.
- Load Rating - Ultimate Uniform Load (See Chart Below)\*
- DURA-BLOK DB-Series channel support is designed for superior support of piping systems, cable tray, HVAC equipment, walkway systems and many other applications. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. (For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 202)
- For sloped roofs use B634 adjustable hinge fittings (see page 118).



DB10



DB20



DB30

| Part No. | Height x Width x Length<br>In. mm        | Wt./Each<br>Lbs. kg | Load Rating<br>Lbs. kN |
|----------|------------------------------------------|---------------------|------------------------|
| DB5      | 5" x 6" x 4.8" (127.0 x 152.4 x 121.9)   | 2.75 (1.25)         | 200 (0.89)             |
| DB10     | 5" x 6" x 9.6" (127.0 x 152.4 x 243.8)   | 5.28 (2.39)         | 500 (2.22)             |
| DB20     | 5" x 6" x 20.2" (127.0 x 152.4 x 513.1)  | 10.63 (4.82)        | 1000 (4.45)            |
| DB30     | 5" x 6" x 30.8" (127.0 x 152.4 x 782.3)  | 15.99 (7.25)        | 1500 (6.67)            |
| DB40     | 5" x 6" x 41.4" (127.0 x 152.4 x 1051.5) | 21.34 (9.68)        | 2000 (8.89)            |
| DB48     | 5" x 6" x 52.0" (127.0 x 152.4 x 1320.8) | 26.70 (12.40)       | 2500 (11.12)           |

## DB6 Series - Support Base with B12 Channel

- Base with 12 ga. (2.6mm) galvanized channel 27/16" (61.9mm) tall - see chart for overall height, width and length.
- 100% recycled rubber, UV resistant.
- Load Rating - Ultimate Uniform Load (See Chart Below)\*
- DURA-BLOK DB-Series channel support is designed for superior support of piping systems, cable tray, HVAC equipment, walkway systems and many other applications. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. (For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 202)
- For sloped roofs use B634 adjustable hinge fittings (see page 118).



DB610



DB620



DB630

| Part No. | Height x Width x Length<br>In. mm            | Wt./Each<br>Lbs. kg | Load Rating<br>Lbs. kN |
|----------|----------------------------------------------|---------------------|------------------------|
| DB610    | 67/16" x 6" x 9.6" (163.5 x 152.4 x 243.8)   | 6.36 (2.88)         | 500 (2.22)             |
| DB620    | 67/16" x 6" x 20.2" (163.5 x 152.4 x 513.1)  | 12.90 (5.85)        | 1000 (4.45)            |
| DB630    | 67/16" x 6" x 30.8" (163.5 x 152.4 x 782.3)  | 19.45 (8.82)        | 1500 (6.67)            |
| DB640    | 67/16" x 6" x 41.4" (163.5 x 152.4 x 1051.5) | 26.00 (11.79)       | 2000 (8.89)            |
| DB648    | 67/16" x 6" x 52.0" (163.5 x 152.4 x 1320.8) | 32.55 (14.76)       | 2500 (11.12)           |

\* **General Note:** Consult roofing manufacturer or engineer for roof load capacity. The weakest point may be the insulation board beneath the rubber membrane.

DURA-BLOK Supports

Reference page 196 for general fitting and standard finish specifications.

# DURA-BLOK rooftop supports

## DB10 SERIES

### Support Bases with B22 Channel

- Two (2) bases bridged with 12 ga. (2.6mm) galvanized channel 1<sup>5</sup>/<sub>8</sub>" (41.3mm) tall - see chart for overall height, width and length.
- 100% recycled rubber, UV resistant.
- Load Rating: 1000 lbs. (4.45kN) (Uniform Load)\*
- DURA-BLOK DB10-Series channel support is designed for superior support of piping systems, cable tray, HVAC equipment, walkway systems and many other applications. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. (For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 202)

| Part No. | Height x Width x Length<br>In. mm                                   | Wt./Each<br>Lbs. kg |
|----------|---------------------------------------------------------------------|---------------------|
| DB10-28  | 5 <sup>5</sup> / <sub>8</sub> " x 6" x 28" (142.9 x 152.4 x 711.2)  | 13.16 (5.97)        |
| DB10-36  | 5 <sup>5</sup> / <sub>8</sub> " x 6" x 36" (142.9 x 152.4 x 914.4)  | 14.36 (6.51)        |
| DB10-42  | 5 <sup>5</sup> / <sub>8</sub> " x 6" x 42" (142.9 x 152.4 x 1066.8) | 15.52 (7.04)        |
| DB10-50  | 5 <sup>5</sup> / <sub>8</sub> " x 6" x 50" (142.9 x 152.4 x 1270.0) | 16.45 (7.46)        |
| DB10-60  | 5 <sup>5</sup> / <sub>8</sub> " x 6" x 60" (142.9 x 152.4 x 1524.0) | 17.94 (8.14)        |



DB10-36



DB10-50

## DBM SERIES

### Support Base with Riser Rod & Clamp

- Base with 3/8"-16 threaded rod and B3198H clamp - see chart for height, width and length
- 100% recycled rubber, UV resistant.
- Load Rating 50 lbs. (0.22kN) (Ultimate Load)\*
- DURA-BLOK DBM-Series pipe/tubing support is designed for support of single piping systems where elevation adjustment is needed. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces.



DBM-2CT



DBM-1

| Part No.    | Clamp<br>Part No.† | Block -Height x Width x Length<br>In. mm | Height** Min.-Max.<br>In. mm | Wt./Each<br>Lbs. kg |
|-------------|--------------------|------------------------------------------|------------------------------|---------------------|
| DBM-1/2CT   | B3198HCT-1/2       | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 9.69"-11.19" (246.1-284.2)   | 2.75 (1.25)         |
| DBM-3/4CT   | B3198HCT-3/4       | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 9.84"-11.34" (249.9-288.0)   | 2.76 (1.25)         |
| DBM-1CT     | B3198HCT-1         | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 9.95"-11.45" (252.7-290.8)   | 2.84 (1.29)         |
| DBM-1 1/4CT | B3198HCT-1 1/4     | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 10.13"-11.63" (257.3-295.4)  | 2.95 (1.34)         |
| DBM-1 1/2CT | B3198HCT-1 1/2     | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 10.28"-11.78" (261.1-299.2)  | 2.96 (1.34)         |
| DBM-2CT     | B3198HCT-2         | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 10.53"-12.03" (267.4-305.5)  | 3.03 (1.37)         |
| DBM-1/2     | B3198H-1/2         | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 9.86"-11.36" (250.4-288.5)   | 2.78 (1.26)         |
| DBM-3/4     | B3198H-3/4         | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 10.06"-11.56" (255.5-293.6)  | 2.84 (1.29)         |
| DBM-1       | B3198H-1           | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 10.14"-11.64" (257.5-295.6)  | 2.86 (1.30)         |
| DBM-1 1/4   | B3198H-1 1/4       | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 10.25"-11.75" (260.3-298.4)  | 2.93 (1.33)         |
| DBM-1 1/2   | B3198H-1 1/2       | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 10.42"-11.92" (264.6-302.7)  | 2.99 (1.36)         |
| DBM-2       | B3198H-2           | 4" x 6" x 4.8" (101.6 x 152.4 x 121.9)   | 10.66"-12.16" (270.7-308.8)  | 3.10 (1.41)         |

† See Pipe Hanger Catalog for dimensions and specifications. \*\* From bottom of rubber block to center of pipe/tubing.

\* **General Note:** Consult roofing manufacturer or engineer for roof load capacity.  
The weakest point may be the insulation board beneath the rubber membrane.

Reference page 196 for general fitting and standard finish specifications.

# DURA-BLOK rooftop supports

## DBE Series

### Support Base with Rod Risers & Channel



- Base with (2) 1/2" electro zinc all threaded rod risers - Top channel is 1" (25.4mm) tall. See chart for adjustable height x wide x length.
- 100% recycled rubber, UV resistant.
- Load Rating\* 200 lbs. (0.89kN) (To increase load capacity use load distribution plate CLDP10)
- DURA-BLOK DBE-Series channel support is designed as a superior support of piping systems, cable tray, HVAC equipment and many other applications where elevation adjustment is critical. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. (For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 202)

| Part No. | Adjustable Height x Width x Length<br>In. mm        | Wt./Each<br>Lbs. kg |
|----------|-----------------------------------------------------|---------------------|
| DBE10-8  | 5 1/2-8" x 6" x 9.6" (139.7-152.4 x 152.4 x 243.8)  | 5.68 (2.58)         |
| DBE10-12 | 5 1/2-12" x 6" x 9.6" (139.7-304.8 x 152.4 x 243.8) | 5.72 (2.59)         |
| DBE10-16 | 5 1/2-16" x 6" x 9.6" (139.7-406.4 x 152.4 x 243.8) | 5.76 (2.61)         |



## DBR Series

### Support Base with Rod Risers & Pipe Roll



- Base with (2) 1/2" electro zinc all threaded rod risers and a B3114-3 1/2" pipe roll with sockets - base is 4" (101.6mm) high x 6" (152.4mm) wide x 9.6" (243.8mm) long. Overall height is 12" (304.8mm) from bottom of base to contact point on roller.
- Pipe roll & sockets for up to 3 1/2" (90) pipe sizes.
- 100% recycled rubber, UV resistant.
- Load Rating\* 200 lbs. (0.89kN) (To increase load capacity use load distribution plate CLDP10)
- DURA-BLOK DBR-Series support is designed to support pipe up to 3 1/2" (90) nominal size where difference in elevation is required and longitudinal movement is expected. The DURA-BLOK is UV resistant and approved for installation on any type of roofing material or other flat surfaces.

| Part No. | Adjustable Height x Width x Length<br>In. mm        | Wt./Each<br>Lbs. kg |
|----------|-----------------------------------------------------|---------------------|
| DBR10-12 | up to 12" x 6" x 9.6" (up to 304.8 x 152.4 x 243.8) | 8.20 (3.72)         |



## CLDP10

### Load Distribution Plate

- 11 ga. (3.0mm) steel plate with slots.
- Dimensions: 1 5/8" (41.3mm) wide x 9 1/2" (241.3mm) long.
- DURA-BLOK CLDP10 load bearing stabilizer plate increases load ratings for DBE Series and DBR Series by allowing the load from the threaded rods to be distributed over the length of the base instead of the point load where the rods attach to the base.

| Part No. | Thickness x Width x Length<br>In. mm          | Wt./Each<br>Lbs. kg |
|----------|-----------------------------------------------|---------------------|
| CLDP10   | 11 Ga. x 1 5/8" x 9 1/2" (3.0 x 41.3 x 241.3) | 0.53 (0.24)         |



Loosen hex nuts and slide plate under the flat washers

Retighten the hex nuts with plate in place



DURA-BLOK Supports

\* **General Note:** Consult roofing manufacturer or engineer for roof load capacity. The weakest point may be the insulation board beneath the rubber membrane.

Reference page 196 for general fitting and standard finish specifications.

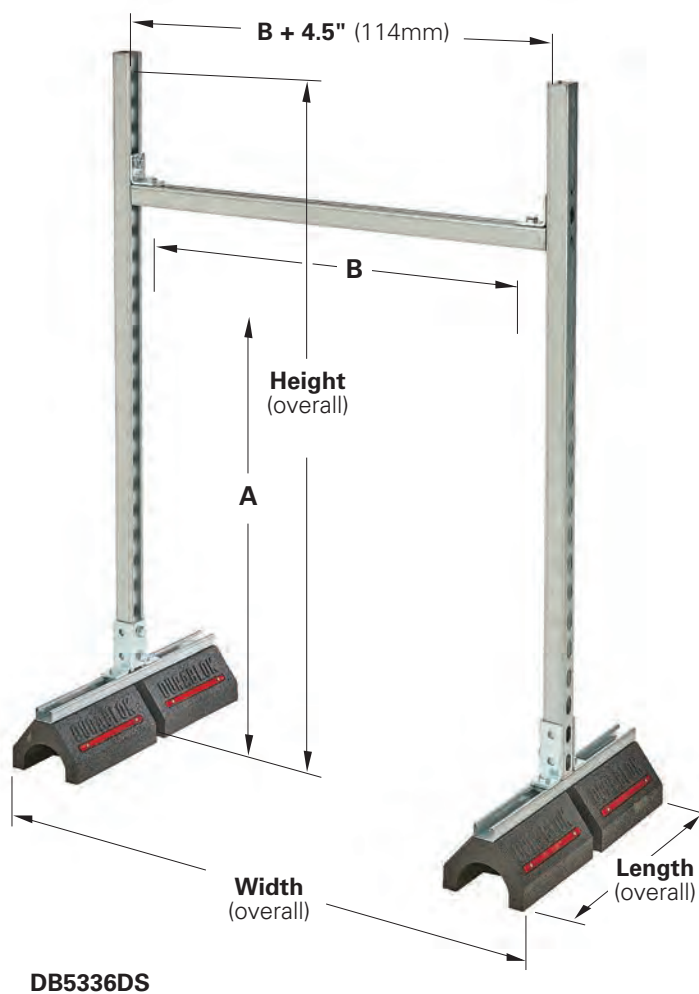
# DURA-BLOK rooftop supports

## DB\_DS Series

### Support Bases with B22SH

#### Vertical & Horizontal Channel Members

- Product is shipped unassembled.
- Two (2) DB20 bases with 1" (25.4mm) tall galvanized channel - Bases are 5" (127.0mm) high x 6" (152.4mm) wide x 20.2" (513.1mm) long. Vertical & Horizontal Riser Channels (SH Style) - 1<sup>5</sup>/<sub>8</sub>" (41.3mm) x 1<sup>5</sup>/<sub>8</sub>" (41.3mm) x 12 ga. (2.6mm) Fittings & Hardware - Electro-Plated Steel
- 100% recycled rubber, UV resistant.
- Ultimate Load Rating: 1000 lbs. (4.45kN) (Uniform Load)\*
- DURA-BLOK DB\_DS-Series channel support with risers is designed for superior support of piping systems, cable tray, HVAC equipment, walkway systems and many other applications. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. (For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 202)



\* **General Note:** Consult roofing manufacturer or engineer for roof load capacity.  
The weakest point may be the insulation board beneath the rubber membrane.

Reference page 196 for general fitting and standard finish specifications.



# DURA-BLOK rooftop supports

DB\_DS Series cont.

| Part No.        | A Min. to Max.<br>In. mm       | B<br>In. mm    |
|-----------------|--------------------------------|----------------|
| <b>DB2318DS</b> | 10.56" to 20.75" (268 to 527)  | 13 1/2" (343)  |
| <b>DB2918DS</b> | 10.56" to 26.75" (268 to 679)  | 13 1/2" (343)  |
| <b>DB4118DS</b> | 10.56" to 38.75" (268 to 984)  | 13 1/2" (343)  |
| <b>DB5318DS</b> | 10.56" to 50.75" (268 to 1289) | 13 1/2" (343)  |
| <b>DB2324DS</b> | 10.56" to 20.75" (268 to 527)  | 19 1/2" (495)  |
| <b>DB2924DS</b> | 10.56" to 26.75" (268 to 679)  | 19 1/2" (495)  |
| <b>DB4124DS</b> | 10.56" to 38.75" (268 to 984)  | 19 1/2" (495)  |
| <b>DB5324DS</b> | 10.56" to 50.75" (268 to 1289) | 19 1/2" (495)  |
| <b>DB2336DS</b> | 10.56" to 20.75" (268 to 527)  | 31 1/2" (800)  |
| <b>DB2936DS</b> | 10.56" to 26.75" (268 to 679)  | 31 1/2" (800)  |
| <b>DB4136DS</b> | 10.56" to 38.75" (268 to 984)  | 31 1/2" (800)  |
| <b>DB5336DS</b> | 10.56" to 50.75" (268 to 1289) | 31 1/2" (800)  |
| <b>DB2348DS</b> | 10.56" to 20.75" (268 to 527)  | 43 1/2" (1105) |
| <b>DB2948DS</b> | 10.56" to 26.75" (268 to 679)  | 43 1/2" (1105) |
| <b>DB4148DS</b> | 10.56" to 38.75" (268 to 984)  | 43 1/2" (1105) |
| <b>DB5348DS</b> | 10.56" to 50.75" (268 to 1289) | 43 1/2" (1105) |

| Part No.        | Height (overall)<br>In. mm | Width (overall)<br>In. mm | Length (overall)<br>In. mm | Wt./Each<br>lbs. kg |
|-----------------|----------------------------|---------------------------|----------------------------|---------------------|
| <b>DB2318DS</b> | 23" (584)                  | 25 5/8" (651)             | 20.2" (513)                | 33.31 (15.11)       |
| <b>DB2918DS</b> | 29" (736)                  | 25 5/8" (651)             | 20.2" (513)                | 35.00 (15.88)       |
| <b>DB4118DS</b> | 41" (1041)                 | 25 5/8" (651)             | 20.2" (513)                | 38.40 (17.42)       |
| <b>DB5318DS</b> | 53" (1346)                 | 25 5/8" (651)             | 20.2" (513)                | 41.80 (18.96)       |
| <b>DB2324DS</b> | 23" (584)                  | 31 5/8" (803)             | 20.2" (513)                | 34.15 (15.49)       |
| <b>DB2924DS</b> | 29" (736)                  | 31 5/8" (803)             | 20.2" (513)                | 35.84 (16.26)       |
| <b>DB4124DS</b> | 41" (1041)                 | 31 5/8" (803)             | 20.2" (513)                | 39.25 (17.80)       |
| <b>DB5324DS</b> | 53" (1346)                 | 31 5/8" (803)             | 20.2" (513)                | 42.65 (19.34)       |
| <b>DB2336DS</b> | 23" (584)                  | 43 5/8" (1108)            | 20.2" (513)                | 35.84 (16.26)       |
| <b>DB2936DS</b> | 29" (736)                  | 43 5/8" (1108)            | 20.2" (513)                | 37.56 (17.03)       |
| <b>DB4136DS</b> | 41" (1041)                 | 43 5/8" (1108)            | 20.2" (513)                | 40.95 (18.57)       |
| <b>DB5336DS</b> | 53" (1346)                 | 43 5/8" (1108)            | 20.2" (513)                | 44.34 (20.11)       |
| <b>DB2348DS</b> | 23" (584)                  | 55 5/8" (1415)            | 20.2" (513)                | 37.55 (17.03)       |
| <b>DB2948DS</b> | 29" (736)                  | 55 5/8" (1415)            | 20.2" (513)                | 39.25 (17.80)       |
| <b>DB4148DS</b> | 41" (1041)                 | 55 5/8" (1415)            | 20.2" (513)                | 42.65 (19.34)       |
| <b>DB5348DS</b> | 53" (1346)                 | 55 5/8" (1415)            | 20.2" (513)                | 46.03 (20.88)       |

A = Adjustable height from bottom of DURA-BLOK to top of horizontal channel.  
 B = Space between fittings that support horizontal channel.  
 Height (overall) = Distance from bottom of DURA-BLOK to top of upright channel.  
 Width (overall) = Distance from outside-to-outside of DURA-BLOK supports.  
 Length (overall) = Distance from end-to-end of DURA-BLOK supports.

Reference page 196 for general fitting and standard finish specifications.

# DURA-BLOK rooftop supports

## DBR Series

### Support Bases with Channel & Pipe Roller

- Base with 1" (25.4mm) tall galvanized channel - see chart for overall height, width and length.
- 100% recycled rubber, UV resistant.
- Load Rating: (See Chart Below)\*
- DURA-BLOK DBR-Series support is designed to support pipe where longitudinal movement is expected. The DURA-BLOK is UV resistant and approved for installation on any type of roofing material or other flat surfaces.



DBR4-6

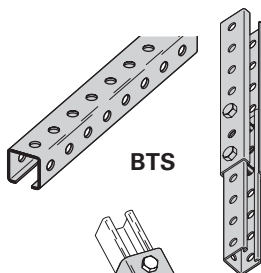


DBR16-20

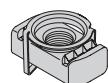
| Part No.   | Roller Part No.† | Block & Channel -Height x Width x Length<br>In. mm | Height**<br>In. mm | Wt./Each<br>Lbs. kg | Load Rating<br>Lbs. kN |
|------------|------------------|----------------------------------------------------|--------------------|---------------------|------------------------|
| DBR2-3 1/2 | B3126-2 to 3 1/2 | 5" x 6" x 9.6" (127.0 x 152.4 x 243.8)             | 7.09" (180)        | 5.28 (2.39)         | 500 (2.22)             |
| DBR4-6     | B3126-4 to 6     | 5" x 6" x 9.6" (127.0 x 152.4 x 243.8)             | 7.09" (180)        | 10.63 (4.82)        | 500 (2.22)             |
| DBR8-10    | B3126-8-10       | 5" x 6" x 20.2" (127.0 x 152.4 x 513.1)            | 8.34" (212)        | 15.99 (7.25)        | 1000 (4.45)            |
| DBR12-14   | B3126-12-14      | 5" x 6" x 20.2" (127.0 x 152.4 x 513.1)            | 9.38" (238)        | 21.34 (9.68)        | 1000 (4.45)            |
| DBR16-20   | B3126-16-20      | 5" x 6" x 20.2" (127.0 x 152.4 x 513.1)            | 9.78" (248)        | 26.70 (12.11)       | 1000 (4.45)            |

† See Pipe Hanger Catalog for dimensions and specifications. \*\* From bottom of rubber block to bottom of pipe/tubing.

### Compatible Components Available to make DURA-BLOK bases more versatile



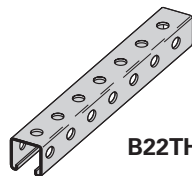
BTS



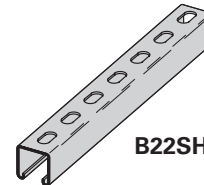
TN Nuts



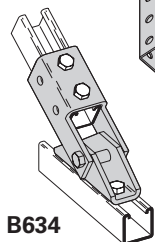
HHCS



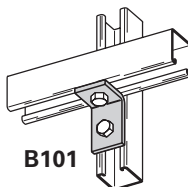
B22TH



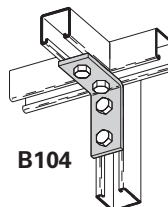
B22SH



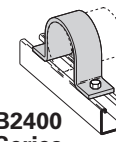
B634



B101



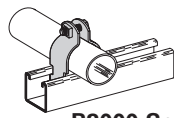
B104



B2400 Series



BVT Series



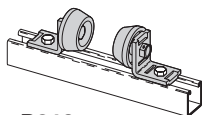
B2000 Series



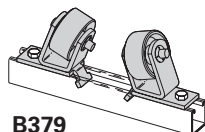
B3124 Series



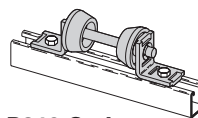
B3126 Series



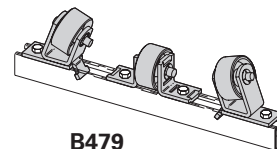
B218



B379



B219 Series



B479

Above rollers can be mounted on DB Series, DB6 Series, and DB10 Series units.

Reference page 196 for general fitting and standard finish specifications.



# DURA-BLOK rooftop supports

## Rooftop Applications



DURA-BLOK Supports



# DURA-BLOK rooftop supports

## GRATEWALK Rooftop Walkway with Integrated DURA-BLOK Supports

B-Line series GRATEWALK™ Rooftop Walkways with DURA-BLOK™ supports provide the optimal solution to extend the life of your roof, while providing a safe pathway to roof mounted support equipment.



### Features & Benefits of the GRATEWALK Rooftop Walkway

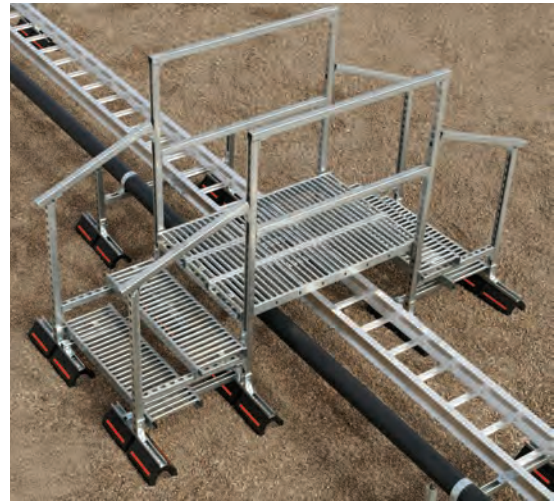
- Available with slip resistant GRATE-LOCK, helping provide a safe walkway for foot traffic on the roof.
- Easy to install, elevated design, creates an identifiable path for foot traffic helping prevent wear and tear to the roof surface.
- The cross-over design offers safe passage over existing cabling, piping, cable tray or any other interference on the rooftop.
- The self cleaning pattern allows water and dirt to easily flow through, helping make the grating an ideal walkway in all weather conditions.
- Handrail options are available
- Integrated with 100% post-consumer recycled rubber supporting LEED credit qualification.
- Provide solid support for the walkway that stays in place and replaces the need for separate rubber roof mounting pads which tend to float away.

## Rooftop Walkway with Integrated DURA-BLOK Supports

The GRATEWALK Rooftop Walkway with Integrated DURA-BLOK Supports\* is available in a variety of configurations.

- Straight sections for long straight stretches of pathway
- Cross-over options to install over the existing cable trays, piping, and more
- Stairways over the top of existing equipment or leading up to existing equipment
- Handrail options available for additional wallway safety and support
- Platforms to provide access to rooftop mounted equipment
- Accessories available to support unique requirements

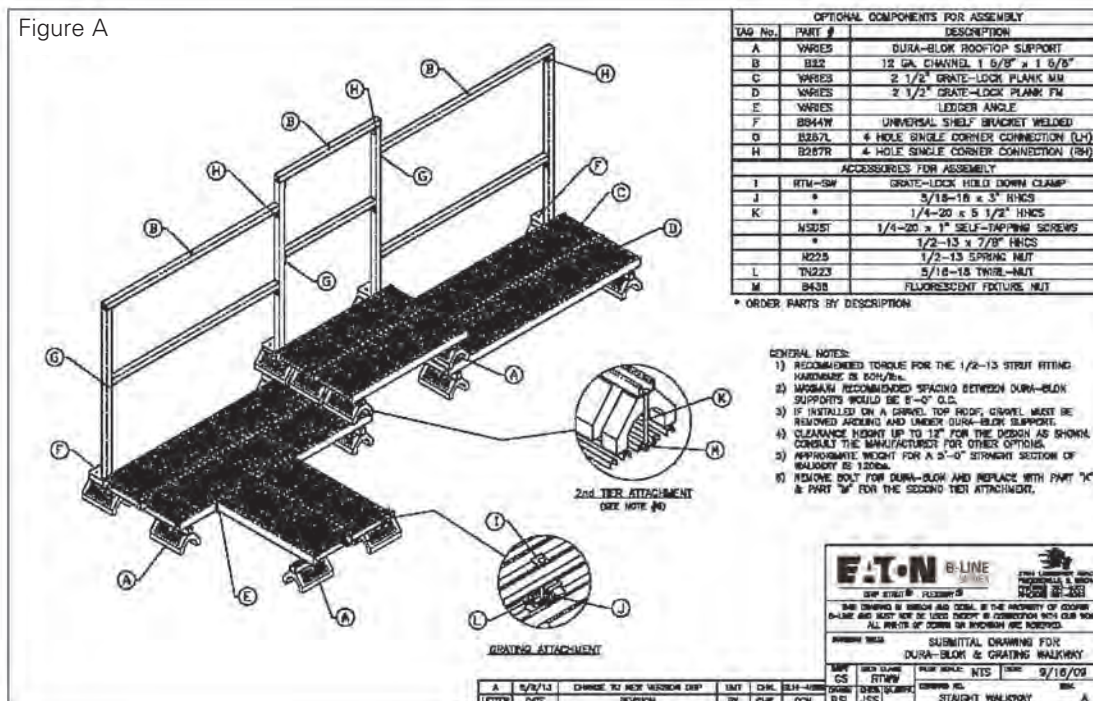
\* All Items are shipped individually for field assembly.



## Engineering Design Service

- Take-off and estimating
- Specification review and development
- Alternative layout designs
- Technical consultation
- Submittal drawing packages (see Figure A) including assembly instructions

Figure A





# Electrical accessories



A complete system of top quality, time saving products, designed for surface metal raceways, lighting and cable supports. Innovative designs offer many installation advantages. The surface raceways are U.L. listed and meet the requirements of the National Electrical Code, Article 384.

## Surface Raceways

Our channel provides structural support in addition to a raceway system.

For U.L. wire fill see chart on page 278-279.

## Cable Supports

A full range of clamps and saddles are offered in porcelain and thermoplastic elastomer. Our Insulclamp™ cable clamps and porcelain saddles are furnished complete with steel clamps (electro-plated) and Everdur hardware where required.

## Materials & Finishes\*

Steel products are made from low carbon steel strips or plates. Porcelain saddles and clamps are made by dry process and white glazed (porcelain dielectric strength is 50 volts per mil).

\*Unless otherwise noted.

| Finish Code | Finish               | Specification                       |
|-------------|----------------------|-------------------------------------|
| PLN         | Plain                | ASTM A1011<br>33,000 PSI min. yield |
| ZN          | Electro-Plated Zinc  | ASTM B633 SC3 Type III              |
| GRN         | DURA GREEN           |                                     |
| GALV        | Pre-Galvanized       | ASTM A653                           |
| YZN         | Yellow Zinc Chromate | ASTM B633 SC3 Type II               |

## Design Load

Design load data published includes a Safety Factor of 3.0 (Safety Factor = Ratio of ultimate load to the design load).

U.L. listed raceway channels:

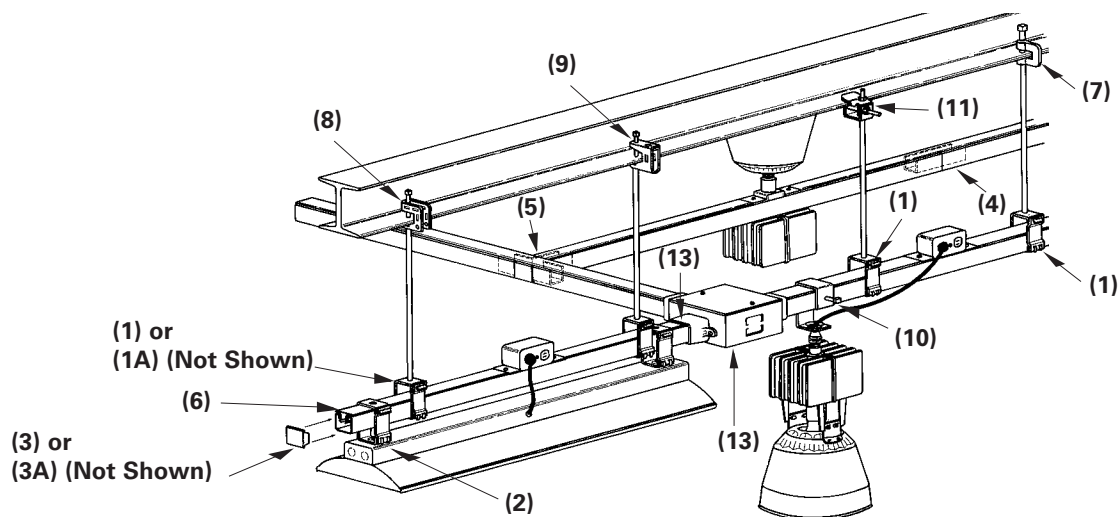
|             |             |
|-------------|-------------|
| B11, B11KO6 | B32, B32KO6 |
| B12, B12KO6 | B42, B42KO6 |
| B22, B22KO6 | B52, B52KO6 |
| B24, B24KO6 | B54, B54KO6 |
| B26, B26KO6 | B56, B56KO6 |

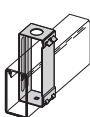
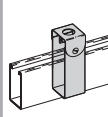
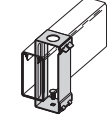
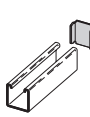
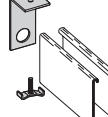
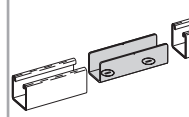
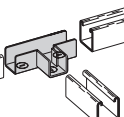
U.L. File No. E29637

In all cases, the snap-in closure strip is required to complete raceway enclosure.

## Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

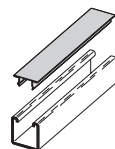
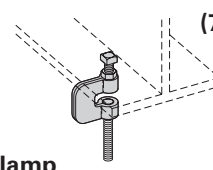
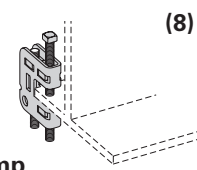
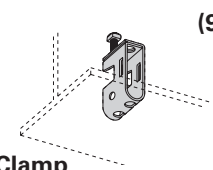
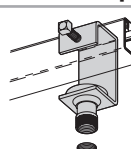
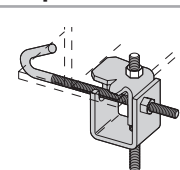
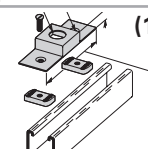
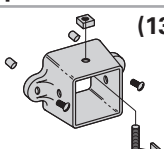


| Selection Chart          |                |  |  |  |  |  |  |  |
|--------------------------|----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Channel Number           | Depth in. mm   | Channel Hanger                                                                    | Channel Hanger                                                                    | Fixture Hanger                                                                    | End Cap                                                                           | Connection End Cap                                                                  | Internal Straight Splice                                                            | Internal Tee Splice                                                                 |
| <b>B22A</b>              | 3 1/4" (82.5)  | B616-22A*                                                                         | B241S*                                                                            | B616S-22A*                                                                        | B205 or B285                                                                      | B392-22**                                                                           | B766-22 (2)<br>B285                                                                 | B768-22 (2)                                                                         |
| <b>B11</b>               | 3 1/4" (82.5)  | B616-22A*                                                                         | B241S*                                                                            | B616S-22A*                                                                        | B222                                                                              | B392-11**                                                                           | B766-11                                                                             | B768-11                                                                             |
| <b>B12</b>               | 2 7/16" (61.9) | B616-22A*                                                                         | B241S*                                                                            | B616S-22A*                                                                        | B221                                                                              | B392-12**                                                                           | B766-12                                                                             | B768-12                                                                             |
| <b>B22</b><br><b>B24</b> | 1 5/8" (41.3)  | B616*                                                                             | B216S*                                                                            | B616S*<br>B616TG*                                                                 | B205 or B285<br>B223 or B286                                                      | B392-22**                                                                           | B766-22                                                                             | B768-22                                                                             |
| <b>B32</b>               | 1 3/8" (34.9)  | B616*                                                                             | B216S*                                                                            | B616S*<br>B616TG*                                                                 | B206                                                                              | B392-32**                                                                           | B766-32                                                                             | B768-32                                                                             |
| <b>B42</b>               | 1" (25.4)      | B616*                                                                             | B215S*                                                                            | B616S*<br>B616TG*                                                                 | B203                                                                              | —                                                                                   | B766-42                                                                             | B768-42                                                                             |
| <b>B52</b><br><b>B54</b> | 1 3/16" (20.6) | B616*                                                                             | B215S*                                                                            | B616S*<br>B616TG*                                                                 | B220 or B283<br>B204 or B284                                                      | —                                                                                   | B766-52                                                                             | B768-52                                                                             |

\*Specify Hanger Rod or Conduit Size.

\*\*Specify Conduit Size

## Other Items Shown on Illustration

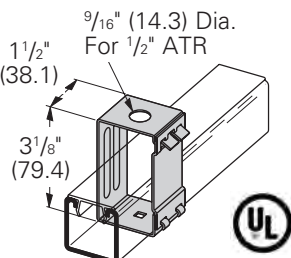
|                                                                                                                                |             |                                                                                                                   |             |                                                                                                                                                 |             |                                                                                                                                  |             |
|--------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>B217-20</b><br><br>Snap-in Closure Strip | <b>(6)</b>  | <b>B351L</b><br><br>Beam Clamp | <b>(7)</b>  | <b>B755</b><br><br>Beam Clamp                               | <b>(8)</b>  | <b>B751</b><br><br>Beam Clamp               | <b>(9)</b>  |
| <b>B465</b><br><br>H.I.D. Fixture Hanger    | <b>(10)</b> | <b>B750</b><br><br>Beam Clamp  | <b>(11)</b> | <b>B447</b><br><b>B447A</b><br><br>Conduit Connection Plate | <b>(12)</b> | <b>B719</b><br><br>B718 Series Junction Box | <b>(13)</b> |

Reference page 206 for general fitting and standard finish specifications. U.L. Wire Fill Chart on pages 272 - 273.

# Fluorescent fixture hangers

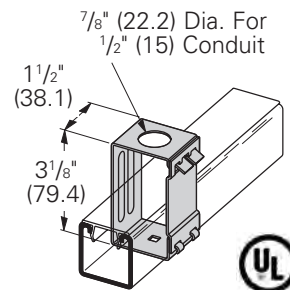
## B616-9/16 Channel Hanger

- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Includes:  
2 pcs.  $\frac{3}{8}$ " Flat washers for use with  $\frac{3}{8}$ " ATR
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 25 Lbs. (11.3 kg)



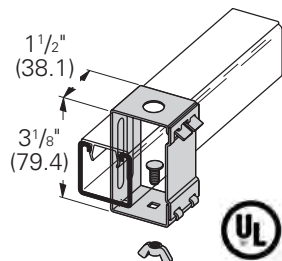
## B616-7/8 Channel Hanger

- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 25 Lbs. (11.3 kg)



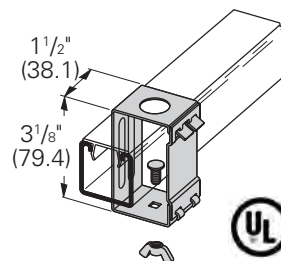
## B616S-9/16 Fluorescent Fixture Hanger with Stud

- Design Load 150 Lbs. (.67 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Allows more than  $\frac{1}{2}$ " (12.7) space between channel and fixture
- Includes:  
2 pcs.  $\frac{3}{8}$ " Flat washers for use with  $\frac{3}{8}$ " ATR
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 30 Lbs. (13.6 kg)



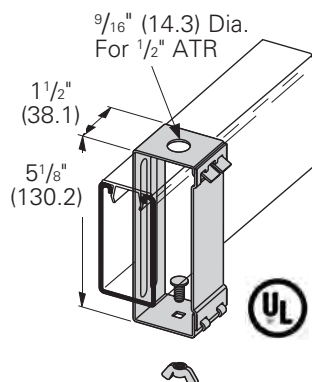
## B616S-7/8 Fluorescent Fixture Hanger with Stud

- Design Load 150 Lbs. (.67 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Allows more than  $\frac{1}{2}$ " (12.7) space between channel and fixture
- Standard finish: ZN
- Material: 16 gauge (1.5)
- Wt./C 30 Lbs. (13.6 kg)



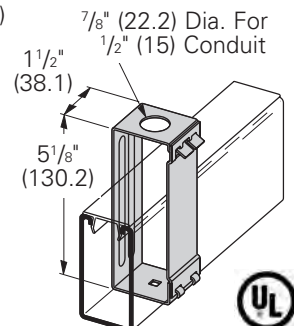
## B616-22A-9/16 Channel Hanger

- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Includes:  
2 pcs.  $\frac{3}{8}$ " Flat washers for use with  $\frac{3}{8}$ " ATR
- Material: 14 gauge (1.9)
- Standard finish: ZN
- Wt./C 44 Lbs. (19.9 kg)



## B616-22A-7/8 Channel Hanger

- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Material: 14 gauge (1.9)
- Standard finish: ZN
- Wt./C 44 Lbs. (19.9 kg)



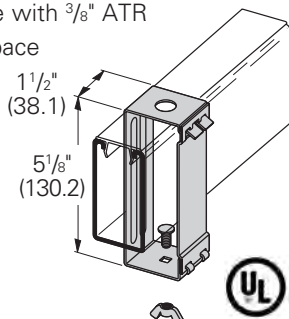


# Fluorescent fixture hangers

## B616S-22A-9/16

### Fluorescent Fixture Hanger with Stud

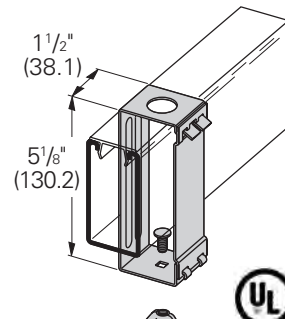
- Design Load 150 Lbs. (.67 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Includes:  
2 pcs.  $\frac{3}{8}$ " Flat washers for use with  $\frac{3}{8}$ " ATR
- Allows more than  $\frac{1}{2}$ " (12.7) space between channel and fixture
- Material: 14 gauge (1.9)
- Standard finish: ZN
- Wt./C 49 Lbs. (22.2 kg)



## B616S-22A-7/8

### Fluorescent Fixture Hanger with Stud

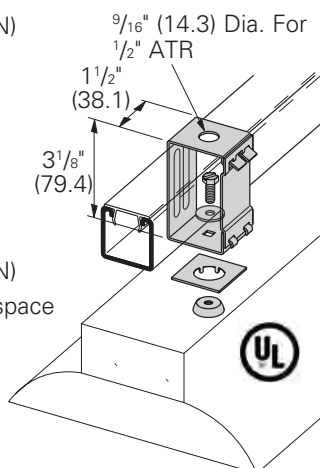
- Design Load 150 Lbs. (.67 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Allows more than  $\frac{1}{2}$ " (12.7) space between channel and fixture
- Material: 14 gauge (1.9)
- Standard finish: ZN
- Wt./C 49 Lbs. (22.2 kg)



## B616TG-9/16

### Fluorescent Fixture Hanger for $\frac{1}{2}$ " (15) Knockout

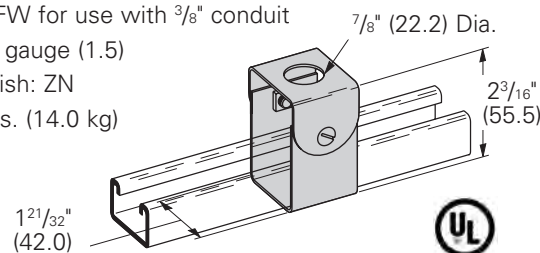
- Design Load 150 Lbs. (.67 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Includes:  
2 pcs.  $\frac{3}{8}$ " Flat washers for use with  $\frac{3}{8}$ " ATR
- Design Load 150 Lbs. (.67 kN)
- Allows more than  $\frac{1}{2}$ " (12.7) space between channel and fixture
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 32 Lbs. (14.5 kg)



## B215S

### Channel Hanger

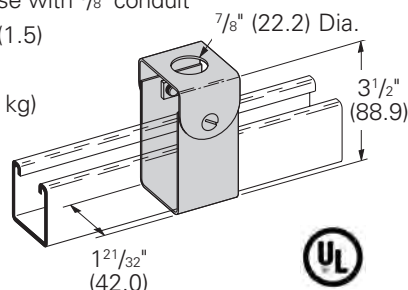
- Can be used with  $\frac{3}{8}$ " &  $\frac{1}{2}$ " threaded rod or  $\frac{3}{8}$ " &  $\frac{1}{2}$ " conduit
- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- For use with B42, B52, & B54 channels
- Hardware included:  
One (1)  $\frac{3}{8}$ " x  $1\frac{1}{2}$ " FFW for use with  $\frac{3}{8}$ "-16 ATR  
One (1)  $\frac{1}{2}$ " FW for use with  $\frac{1}{2}$ "-13 ATR  
One (1)  $\frac{5}{8}$ " FW for use with  $\frac{3}{8}$ " conduit
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 31 Lbs. (14.0 kg)



## B216S

### Channel Hanger

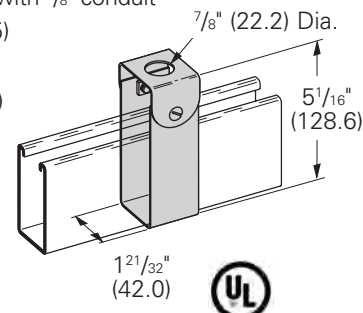
- Can be used with  $\frac{3}{8}$ " &  $\frac{1}{2}$ " threaded rod or  $\frac{3}{8}$ " &  $\frac{1}{2}$ " conduit
- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- For use with B22, B24, & B32 channels
- Hardware included:  
One (1)  $\frac{3}{8}$ " x  $1\frac{1}{2}$ " FFW for use with  $\frac{3}{8}$ "-16 ATR  
One (1)  $\frac{1}{2}$ " FW for use with  $\frac{1}{2}$ "-13 ATR  
One (1)  $\frac{5}{8}$ " FW for use with  $\frac{3}{8}$ " conduit
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 38 Lbs. (17.2 kg)



## B241S

### Channel Hanger

- Can be used with  $\frac{3}{8}$ " &  $\frac{1}{2}$ " threaded rod or  $\frac{3}{8}$ " &  $\frac{1}{2}$ " conduit
- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- For use with B11 & B12 channels
- Hardware included:  
One (1)  $\frac{3}{8}$ " x  $1\frac{1}{2}$ " FFW for use with  $\frac{3}{8}$ "-16 ATR  
One (1)  $\frac{1}{2}$ " FW for use with  $\frac{1}{2}$ "-13 ATR  
One (1)  $\frac{5}{8}$ " FW for use with  $\frac{3}{8}$ " conduit
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 47 Lbs. (21.3 kg)



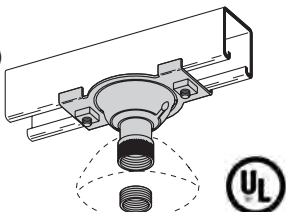
Reference page 206 for general fitting and standard finish specifications. U.L. Wire Fill Chart on pages 272 - 273.

# Fluorescent fixture hangers

## B390S

### 360° Swivel Channel Connector

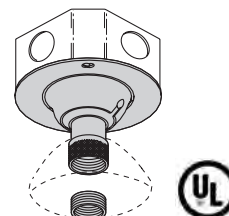
- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- Maximum design load 50 Lbs. (.22 kN) when used as a fixture support
- Swings 15° in 360° plane
- Includes:  
2 pcs. SN224-3/4" WO Stud nut 2 pcs. 1/4"-20 Square nut 1 pc. 3/4" (20) to 1/2" (15) Conduit Reducer
- Standard finish: ZN
- Wt./C 71 Lbs. (32.2 kg)



## B390BX

### 360° Swivel Box Connector

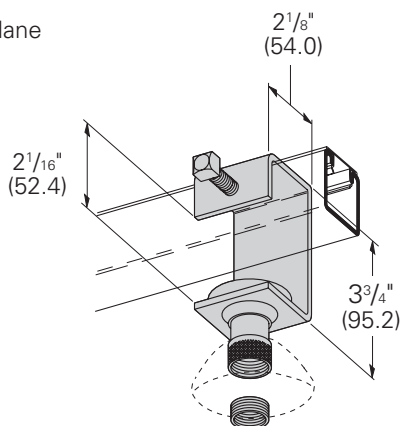
- Design Load 250 Lbs. (1.11 kN) for connector fitting only
- Safety Factor of 3
- Design Load 50 Lbs. (.22 kN) when used as illustrated or for use as a fixture support
- Swings 15° in 360° plane
- Includes:  
1 pc. 3/4" (20) to 1/2" (15) Conduit reducer
- Fits on 4" box
- Standard finish: ZN
- Wt./C 55 Lbs. (24.9 kg)



## B465

### H.I.D. Fixture Hanger

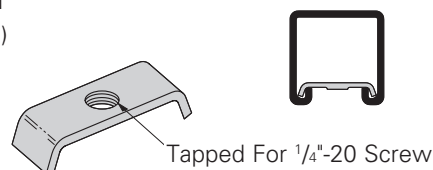
- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3
- Swings 15° in 360° plane
- Includes:  
1 pc. 3/4" (20) to 1/2" (15) Conduit reducer
- Standard finish: ZN
- Wt./C 95 Lbs. (43.1 kg)



## B436

### Fluorescent Fixture Nut

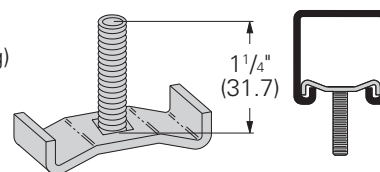
- Standard finish: ZN
- Wt./C 2 Lbs. (.9 kg)



## B436S

### Fluorescent Fixture Stud Nut

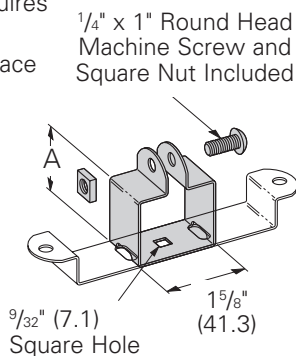
- Bolt size: 1/4" x 1 1/4"
- Standard finish: ZN
- Wt./C 4 Lbs. (1.8 kg)
- Design Load 250 Lbs. (1.11 kN)
- Safety Factor of 3



## B460

### Fluorescent Fixture Hanger

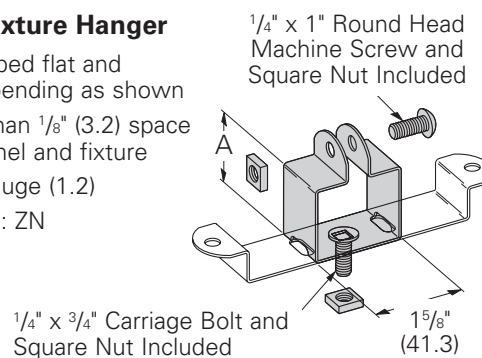
- Hanger is shipped flat and requires field bending as shown
- Allows more than 1/2" (12.7) space between channel and fixture
- Material: 18 gauge (1.2)
- Standard finish: ZN



## B464

### Fluorescent Fixture Hanger

- Hanger is shipped flat and requires field bending as shown
- Allows more than 1/8" (3.2) space between channel and fixture
- Material: 18 gauge (1.2)
- Standard finish: ZN

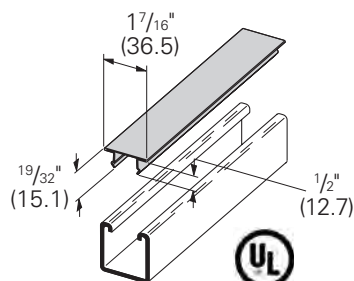


| Part No.       | For Channel Size | A        |         | Wt./C |        |
|----------------|------------------|----------|---------|-------|--------|
|                |                  | In.      | mm      | Lbs.  | kg     |
| <b>B460-22</b> | B22, B24, B32    | 2 1/8"   | (57.5)  | 17    | (7.7)  |
| <b>B460-12</b> | B12              | 2 15/16" | (79.5)  | 20    | (9.1)  |
| <b>B460-11</b> | B11              | 3 3/4"   | (101.6) | 23    | (10.4) |

| Part No.       | For Channel Size | A       |        | Wt./C |        |
|----------------|------------------|---------|--------|-------|--------|
|                |                  | In.     | mm     | Lbs.  | kg     |
| <b>B464-32</b> | B32              | 1 1/2"  | (40.6) | 17    | (7.7)  |
| <b>B464-22</b> | B22, B24         | 1 3/4"  | (47.4) | 18    | (8.1)  |
| <b>B464-12</b> | B12              | 2 9/16" | (66.0) | 21    | (9.5)  |
| <b>B464-11</b> | B11              | 3 3/8"  | (91.4) | 24    | (10.9) |

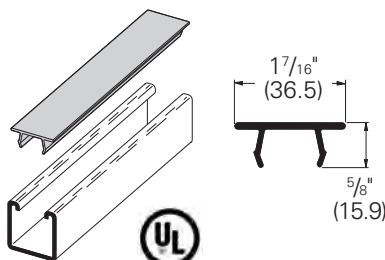
## B217-20 Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- Material: 20 gauge (.9)
- Standard finishes: GRN, GALV, YZN
- Standard length: 120" (3.05m)
- Wt./CFT 36 Lbs. (16.3 kg)



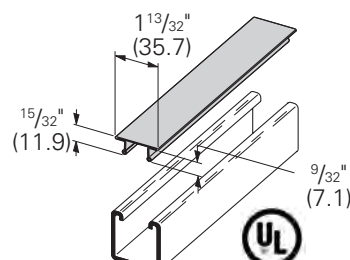
## B217P Plastic Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- Standard finishes: Green (GRN) or Gray (GRY) Plastic
- Standard length: 120" (3.05m)
- Wt./CFT 9.2 Lbs. (4.2 kg)



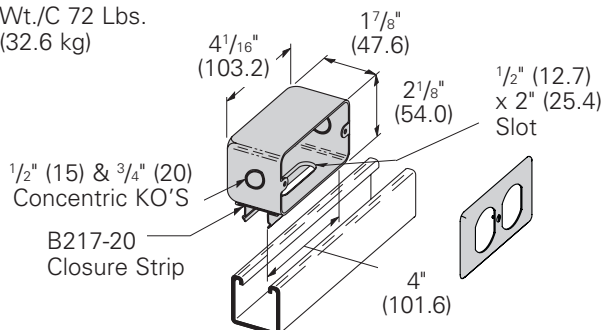
## B217-24 Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- For use with 7 or fewer conductors no larger than #12 AWG
- Material: 24 gauge (.6)
- Standard finishes: GRN, GALV, YZN
- Standard length: 120" (3.05m)
- Wt./CFT 28 Lbs. (12.7 kg)



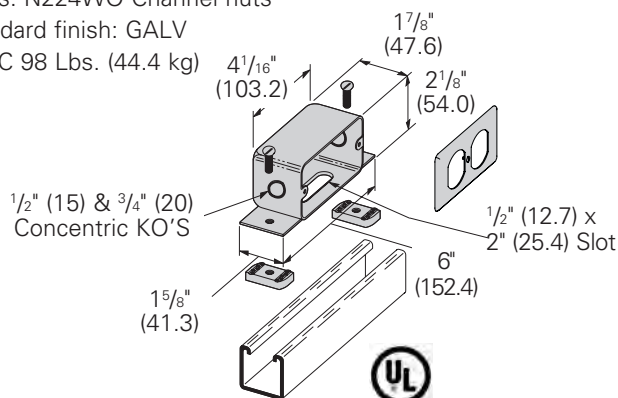
## B516 Snap-In Outlet Box

- Provided with #10-32 tapped hole for grounding strap
- Duplex cover plate included
- Receptacle not furnished
- Requires ground wire installation for use with UL listed channel raceway system
- Standard finish: GALV
- Wt./C 72 Lbs. (32.6 kg)



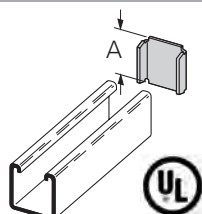
## B516S Outlet Box

- Duplex cover plate included
- Receptacle not furnished
- Includes: 2 pcs. 1/4"-20 Flat head machine screws  
2 pcs. N224WO Channel nuts
- Standard finish: GALV
- Wt./C 98 Lbs. (44.4 kg)



## B203 thru B206 B220 thru B223 X Type End Caps

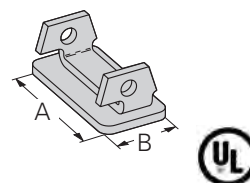
- Material: 12 gauge (2.6)
- Standard finishes: ZN, GRN, HDG, SS4



| Part No. | Use With | A      |        | Wt./C |       |
|----------|----------|--------|--------|-------|-------|
|          |          | In.    | mm     | Lbs.  | kg    |
| B203     | B42      | 1.015" | (25.8) | 6     | (2.7) |
| B204     | B54      | .827"  | (21.0) | 5     | (2.2) |
| B205     | B22      | 1.640" | (41.6) | 10    | (4.5) |
| B206     | B32      | 1.390" | (35.3) | 8     | (3.6) |
| B220     | B52      | .827"  | (21.0) | 4     | (1.8) |
| B221     | B12      | 2.452" | (62.3) | 15    | (6.8) |
| B222     | B11      | 3.265" | (82.9) | 20    | (9.1) |
| B223     | B24      | 1.640" | (41.6) | 10    | (4.5) |

## B283 thru B286 End Caps

- Material: 12 gauge (2.6)
- Standard finishes: ZN, GRN



| Part No. | Use With | A                                 |        | B                                 |        | Wt./C<br>Lbs. kg |
|----------|----------|-----------------------------------|--------|-----------------------------------|--------|------------------|
|          |          | In.                               | mm     | In.                               | mm     |                  |
| B283     | B52      | 1 <sup>19</sup> / <sub>32</sub> " | (40.5) | <sup>25</sup> / <sub>32</sub> "   | (19.8) | 6 (2.7)          |
| B284     | B54      | 1 <sup>19</sup> / <sub>32</sub> " | (40.5) | <sup>25</sup> / <sub>32</sub> "   | (19.8) | 6 (2.7)          |
| B285     | B22      | 1 <sup>19</sup> / <sub>32</sub> " | (40.5) | 1 <sup>19</sup> / <sub>32</sub> " | (40.5) | 13 (5.9)         |
| B286     | B24      | 1 <sup>19</sup> / <sub>32</sub> " | (40.5) | 1 <sup>19</sup> / <sub>32</sub> " | (40.5) | 14 (6.3)         |

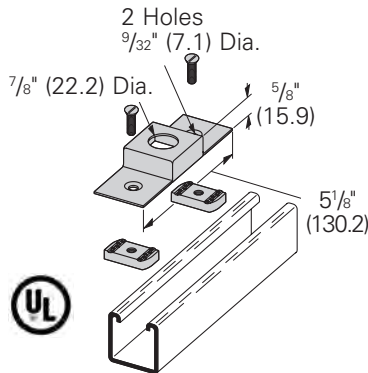
Reference page 206 for general fitting and standard finish specifications. U.L. Wire Fill Chart on pages 272 - 273.

# Electrical accessories

## B447

### Conduit Connection Plate for 1/2" (15) Conduit

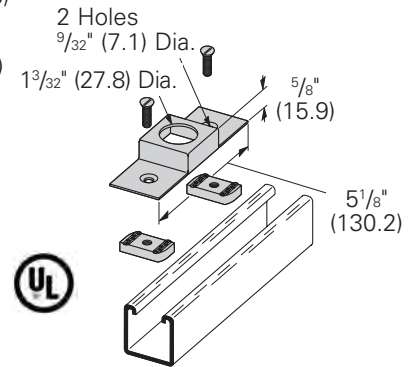
- Includes:
  - 2 pcs. 1/4"-20 Flat head machine screws
  - 2 pcs. N224WO Channel nuts
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 35 Lbs. (15.9 kg)



## B447A

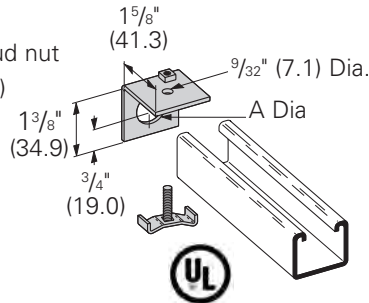
### Conduit Connection Plate for 3/4" (20) Conduit

- Includes:
  - 2 pcs. 1/4"-20 Flat head machine screws
  - 2 pcs. N224WO Channel nuts
- Material: 16 gauge (1.5)
- Standard finish: ZN
- Wt./C 35 Lbs. (15.9 kg)



## B392-32 Series Connection End Cap

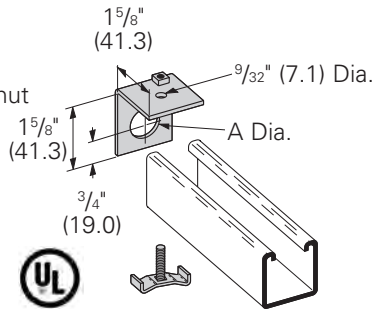
- Includes:
  - 1 pc. 1/4"-20 Square nut
  - 1 pc. B436S Fixture stud nut
- Material: 11 gauge (3.0)
- Standard finish: ZN



| Part No.    | A       |        | Conduit Size |      | Wt./C<br>Lbs. kg |
|-------------|---------|--------|--------------|------|------------------|
|             | In.     | mm     | In.          | mm   |                  |
| B392-32-1/2 | 7/8"    | (22.2) | 1/2"         | (15) | 20 (9.1)         |
| B392-32-3/4 | 1 1/16" | (27.0) | 3/4"         | (20) | 19 (8.6)         |

## B392-22 Series Connection End Cap

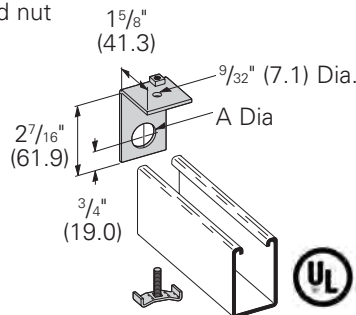
- Includes:
  - 1 pc. 1/4"-20 Square nut
  - 1 pc. B436S Fixture stud nut
- Material: 11 gauge (3.0)
- Standard finish: ZN



| Part No.    | A              |        | Conduit Size |      | Wt./C<br>Lbs. kg |
|-------------|----------------|--------|--------------|------|------------------|
|             | In.            | mm     | In.          | mm   |                  |
| B392-22-1/2 | 7/8"           | (22.2) | 1/2"         | (15) | 21 (9.5)         |
| B392-22-3/4 | 1 1/16"        | (27.0) | 3/4"         | (20) | 20 (9.1)         |
| B392-22-1   | 1" Pipe Thread |        | 1"           | (25) | 17 (7.7)         |

## B392-12 Series Connection End Cap

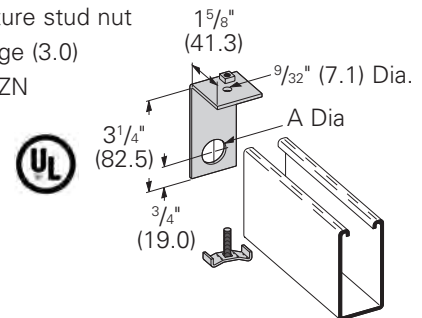
- Includes:
  - 1 pc. 1/4"-20 Square nut
  - 1 pc. B436S Fixture stud nut
- Material: 11 gauge (3.0)
- Standard finish: ZN



| Part No.    | A              |        | Conduit Size |      | Wt./C<br>Lbs. kg |
|-------------|----------------|--------|--------------|------|------------------|
|             | In.            | mm     | In.          | mm   |                  |
| B392-12-1/2 | 7/8"           | (22.2) | 1/2"         | (15) | 27 (12.2)        |
| B392-12-3/4 | 1 1/16"        | (27.0) | 3/4"         | (20) | 26 (11.8)        |
| B392-12-1   | 1" Pipe Thread |        | 1"           | (25) | 23 (10.4)        |

## B392-11 Series Connection End Cap

- Includes:
  - 1 pc. 1/4"-20 Square nut
  - 1 pc. B436S Fixture stud nut
- Material: 11 gauge (3.0)
- Standard finish: ZN

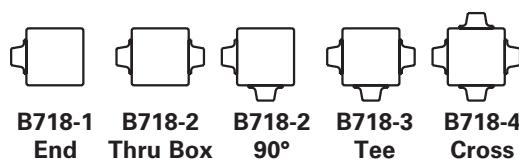


| Part No.    | A              |        | Conduit Size |      | Wt./C<br>Lbs. kg |
|-------------|----------------|--------|--------------|------|------------------|
|             | In.            | mm     | In.          | mm   |                  |
| B392-11-1/2 | 7/8"           | (22.2) | 1/2"         | (15) | 36 (16.3)        |
| B392-11-3/4 | 1 1/16"        | (27.0) | 3/4"         | (20) | 33 (14.9)        |
| B392-11-1   | 1" Pipe Thread |        | 1"           | (25) | 32 (14.5)        |

## B718 Universal Junction Bob

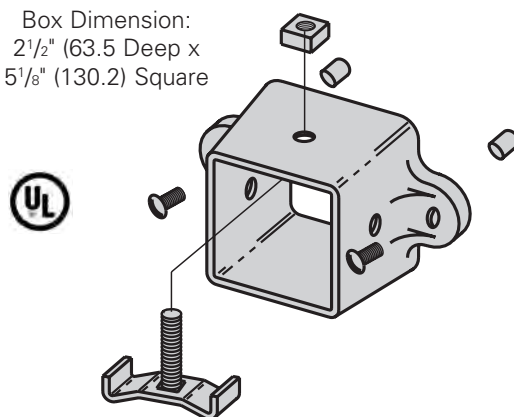
- Assemble B719 Hubs into B718 square knockouts
- Designed for use with B22 & B24 channel
- B718 Includes:
  - 1 pc. Junction box only
  - 1 pc. Cover only
  - 2 pcs. #10-20 Round head machine screws
- Standard finish: ZN
- Wt./C 180 Lbs. (81.6 kg)

| Part No.      | Includes        | Wt./C |         |
|---------------|-----------------|-------|---------|
|               |                 | Lbs.  | kg      |
| <b>B718-1</b> | 1 B718 & 1 B719 | 205   | (93.0)  |
| <b>B718-2</b> | 1 B718 & 2 B719 | 230   | (104.3) |
| <b>B718-3</b> | 1 B718 & 3 B719 | 255   | (115.6) |
| <b>B718-4</b> | 1 B718 & 4 B719 | 280   | (127.0) |



### Selection Guide

Box Dimension:  
2 1/2" (63.5 Deep x  
5 1/8" (130.2) Square



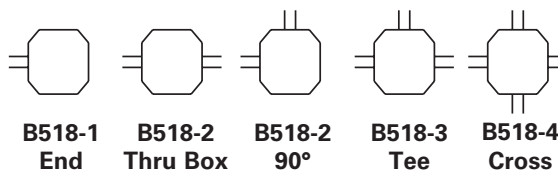
## B719AL Universal Junction Box Hub

- B719AL Includes:
  - 1 pc. B719AL Hub only
  - 1 pc. B436S Fixture stud nut
  - 1 pc. 1/4"-20 Square nut
  - 2 pcs. #10-24 Self tapping screws
  - 2 pcs. Rubber caps
- Material: Aluminum
- Wt./C 25 Lbs. (11.3 kg)

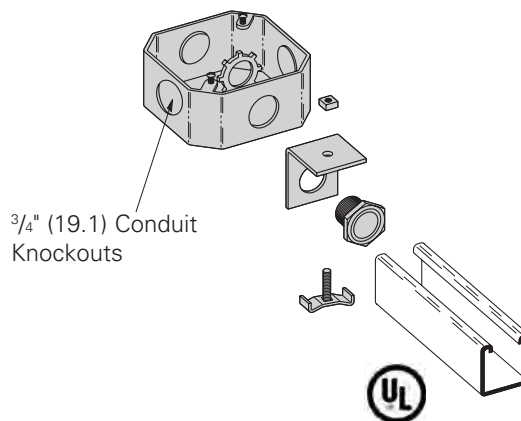
## B518-1 thru B518-4 Universal Junction Box & Hubs

- Channel connection kits as shown in the chart above
- Includes:
  - 1 pc. Junction box with screws
  - 1 pc. Box cover
- Standard finish: ZN

| Part No.      | Channel Connection Kits Included | Wt./C |        |
|---------------|----------------------------------|-------|--------|
|               |                                  | Lbs.  | kg     |
| <b>B518-1</b> | 1                                | 106   | (48.1) |
| <b>B518-2</b> | 2                                | 137   | (62.1) |
| <b>B518-3</b> | 3                                | 162   | (78.5) |
| <b>B518-4</b> | 4                                | 192   | (87.1) |



### Selection Guide



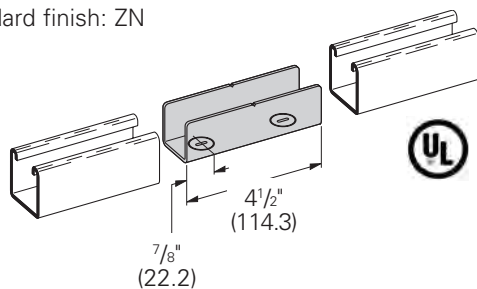
## Channel Connection Kit

- For use with B22 & B24 channels.
- Box Dimension: Standard 4" octagon box
- Includes:
  - 1 pc. B392-22-3/4 End connection (See page 212)
  - 1 pc. 3/4" (20) Insulated chase nipple
  - 1 pc. 3/4" (20) Lock nut
- Standard finish: ZN

# Strut joiners

## B766 Series Straight Strut Joiner

- Includes: 2 Cam screws
- Material: 12 gauge (2.6)
- Standard finish: ZN



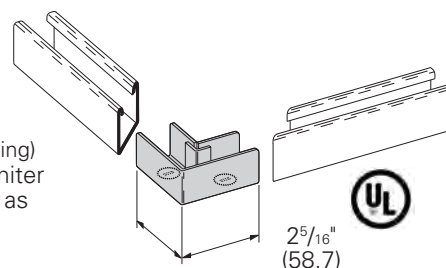
| Part No.         | For Channel Size | Wt./C |        |
|------------------|------------------|-------|--------|
|                  |                  | Lbs.  | kg     |
| <b>B766-11</b>   | B11              | 94    | (42.6) |
| <b>B766-12</b>   | B12              | 72    | (32.6) |
| <b>B766-22 *</b> | B22 & B24        | 50    | (22.7) |
| <b>B766-32</b>   | B32              | 44    | (19.9) |
| <b>B766-42</b>   | B42              | 34    | (15.4) |
| <b>B766-52</b>   | B52 & B54        | 28    | (12.7) |

\* Cast aluminum parts

## B767 Series 90° Elbow Strut Joiner

- Includes: 2 Cam screws
- Material: 12 gauge (2.6)
- Standard finish: ZN

**Note:** B767-22  
(Cast Aluminum Fitting)  
does not require miter  
cutting of channel as  
shown in drawing.

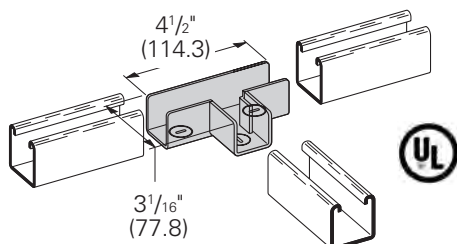


| Part No.         | For Channel Size | Wt./C |        |
|------------------|------------------|-------|--------|
|                  |                  | Lbs.  | kg     |
| <b>B767-11</b>   | B11              | 74    | (33.5) |
| <b>B767-12</b>   | B12              | 56    | (25.4) |
| <b>B767-22 *</b> | B22 & B24        | 39    | (17.7) |
| <b>B767-32</b>   | B32              | 34    | (15.4) |
| <b>B767-42</b>   | B42              | 27    | (12.2) |
| <b>B767-52</b>   | B52 & B54        | 23    | (10.4) |

\* Cast aluminum parts

## B768 Series Tee Strut Joiner

- Includes: 3 Cam screws
- Patented
- Material: 12 gauge (2.6)
- Standard finish: ZN

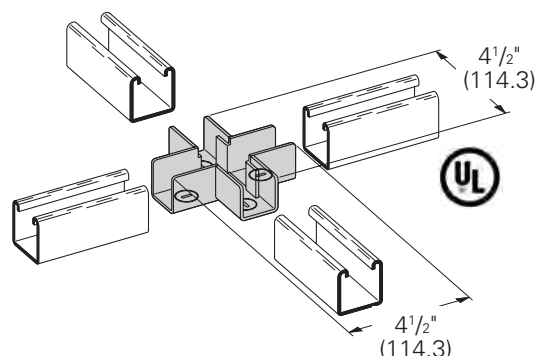


| Part No.         | For Channel Size | Wt./C |        |
|------------------|------------------|-------|--------|
|                  |                  | Lbs.  | kg     |
| <b>B768-11</b>   | B11              | 142   | (64.4) |
| <b>B768-12</b>   | B12              | 112   | (50.8) |
| <b>B768-22 *</b> | B22 & B24        | 79    | (35.8) |
| <b>B768-32</b>   | B32              | 72    | (32.6) |
| <b>B768-42</b>   | B42              | 62    | (28.1) |
| <b>B768-52</b>   | B52 & B54        | 57    | (25.8) |

\* Cast aluminum parts

## B769 Series Cross Strut Joiner

- Includes: 4 Cam screws
- Patented
- Material: 12 gauge (2.6)
- Standard finish: ZN



| Part No.         | For Channel Size | Wt./C |        |
|------------------|------------------|-------|--------|
|                  |                  | Lbs.  | kg     |
| <b>B769-11</b>   | B11              | 148   | (67.1) |
| <b>B769-12</b>   | B12              | 120   | (54.4) |
| <b>B769-22 *</b> | B22 & B24        | 87    | (39.4) |
| <b>B769-32</b>   | B32              | 78    | (35.4) |
| <b>B769-42</b>   | B42              | 65    | (29.5) |
| <b>B769-52</b>   | B52 & B54        | 58    | (26.3) |

\* Cast aluminum parts

**Note:** Strut joiners are not for structural support. A channel support is recommended within 24" (609 mm) of each joint.

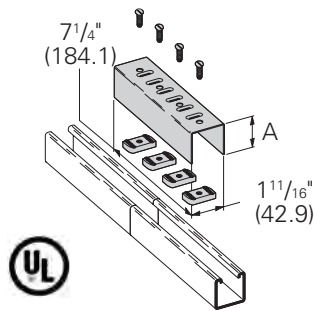
Reference page 206 for general fitting and standard finish specifications. U.L. Wire Fill Chart on pages 272 - 273.



# Strut joiners and electrical hardware

## B166 Four Hole Splice Clevis

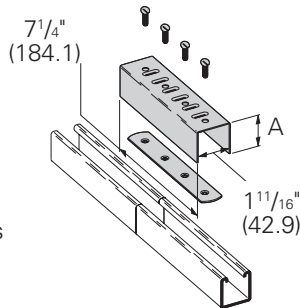
- Includes:
  - 1 Splice clevis
  - 4 pcs. 1/4"-20 Flat head machine screws
  - 4 pcs. N224WO channel nuts
- Material: 16 gauge (1.5)
- Standard finishes: ZN, GRN



| Part No.       | In.     | A mm   | For Channel Size | Wt./C Lbs. | kg     |
|----------------|---------|--------|------------------|------------|--------|
| <b>B166-11</b> | 3 1/4"  | (82.5) | B11              | 128        | (58.0) |
| <b>B166-12</b> | 2 7/16" | (61.9) | B12              | 108        | (49.0) |
| <b>B166-22</b> | 1 5/8"  | (41.3) | B22, B24         | 91         | (40.3) |
| <b>B166-32</b> | 1 3/8"  | (34.9) | B32              | 83         | (37.6) |
| <b>B166-42</b> | 1"      | (25.4) | B42              | 75         | (34.0) |
| <b>B166-52</b> | 13/16"  | (20.6) | B52, B54         | 71         | (32.2) |

## B166-46 Four Hole Splice Clevis Assembly

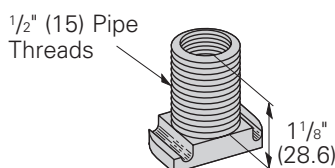
- Requires ground wire for use with UL listed channel raceway system
- Includes:
  - 1 Splice clevis
  - 1 pc. B466W tapped plate
  - 4 pcs. 1/4"-20 Flat Head Machine Screws
- Material: 16 gauge (1.5)
- Standard finishes: ZN, GRN



| Part No.          | In.     | A mm   | For Channel Size | Wt./C Lbs. | kg     |
|-------------------|---------|--------|------------------|------------|--------|
| <b>B166-46-11</b> | 3 1/4"  | (82.5) | B11              | 118        | (53.5) |
| <b>B166-46-12</b> | 2 7/16" | (61.9) | B12              | 98         | (44.4) |
| <b>B166-46-22</b> | 1 5/8"  | (41.3) | B22, B24         | 79         | (35.8) |
| <b>B166-46-32</b> | 1 3/8"  | (34.9) | B32              | 73         | (33.1) |
| <b>B166-46-42</b> | 1"      | (25.4) | B42              | 65         | (29.5) |
| <b>B166-46-52</b> | 13/16"  | (20.6) | B52, B54         | 61         | (27.6) |

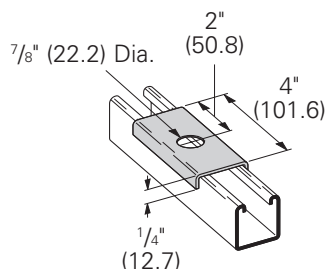
## B393-1 Wiring Stud

- Requires ground wire for use with UL listed channel raceway system
- 1/2" (15) pipe threads
- Material: Cast aluminum
- Wt./C 6 Lbs. (2.7 kg)



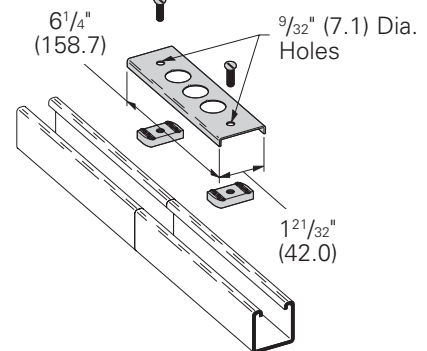
## B589 Spacer Clevis

- Can be used with B393-1 wiring stud
- Material: 12 gauge (2.6)
- Standard finish: ZN
- Wt./C 29 Lbs. (13.1 kg)



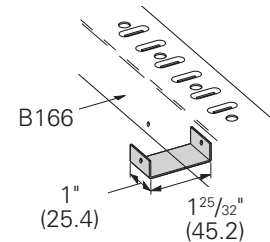
## B619 Knock-Out Plate

- Requires ground wire for use with UL listed channel raceway system
- Includes: 2 pcs. 1/4"-20 Flat head machine screws  
2 pcs. N224WO Channel nuts
- Material: 16 gauge (1.5) - 1/2" (15) conduit knockouts
- Standard finish: ZN
- Wt./C 40 Lbs. (18.1 kg)



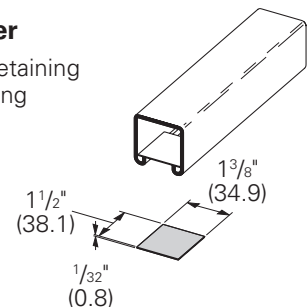
## B166CL Splice Clevis Clip

- Use to cover gap between strut
- Material: 18 gauge (1.2)
- Standard finish: ZN
- Wt./C 4 Lbs. (1.8 kg)



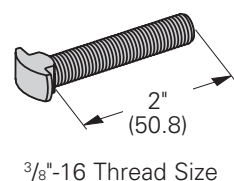
## B590 Fiber Wire Retainer

- Installation aid for retaining wires before installing snap closure strip
- Wt./C 1 Lb. (.4 kg)



## B617 Shoulder Bolt

- Standard finish: ZN
- Wt./C 6 Lbs. (2.7 kg)

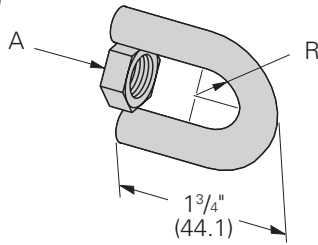


Reference page 206 for general fitting and standard finish specifications. U.L. Wire Fill Chart on pages 272 - 273.

# Electrical hardware & porcelain saddles

## B446A Swivel Hanger (Female Only)

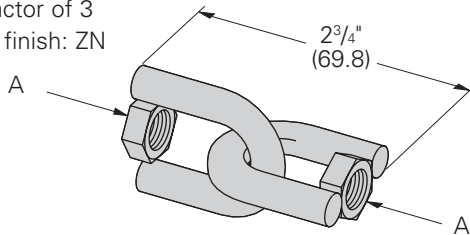
- Design Load:  
(<sup>3</sup>/<sub>8</sub>)-610 Lbs. (2.71 kN)  
(<sup>1</sup>/<sub>2</sub>)-1130 Lbs. (5.02 kN)
- Safety Factor of 3
- Standard finish: ZN



| Part No.                           | A                                   | R                                    | Wt./C |       |
|------------------------------------|-------------------------------------|--------------------------------------|-------|-------|
|                                    |                                     | In. mm                               | Lbs.  | kg    |
| B446A- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 HN | <sup>9</sup> / <sub>32</sub> " (7.1) | 13    | (5.9) |
| B446A- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 HN | <sup>3</sup> / <sub>8</sub> " (9.5)  | 15    | (6.8) |

## B446C Swivel Hanger (Female-Female)

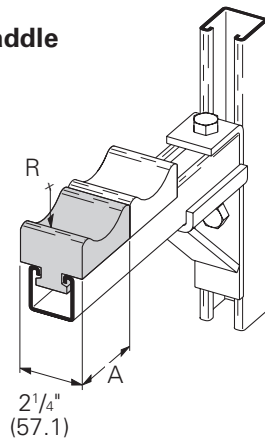
- Design Load:  
(<sup>3</sup>/<sub>8</sub>)-610 Lbs. (2.71 kN)  
(<sup>1</sup>/<sub>2</sub>)-1130 Lbs. (5.02 kN)
- Safety Factor of 3
- Standard finish: ZN



| Part No.                           | A                                   | Wt./C |        |
|------------------------------------|-------------------------------------|-------|--------|
|                                    |                                     | Lbs.  | kg     |
| B446C- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 HN | 26    | (11.8) |
| B446C- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 HN | 31    | (14.0) |

## B4050 & B4051 Porcelain Cable Channel Saddle

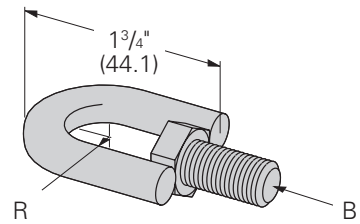
- Electrical porcelain has an dielectric strength of 50 volts/mil



| Part No. | A          | R             | Wt./C |        |
|----------|------------|---------------|-------|--------|
|          | In. mm     | In. mm        | Lbs.  | kg     |
| B4050    | 3" (76.2)  | 1 3/8" (34.9) | 72    | (32.6) |
| B4051    | 4" (101.6) | 2 1/8" (54.0) | 100   | (45.3) |

## B446B Swivel Hanger (Male Only)

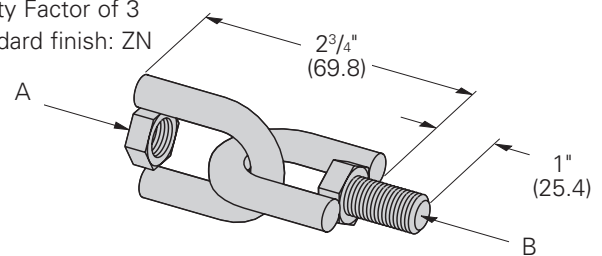
- Design Load:  
(<sup>3</sup>/<sub>8</sub>)-610 Lbs. (2.71 kN)  
(<sup>1</sup>/<sub>2</sub>)-1130 Lbs. (5.02 kN)
- Safety Factor of 3
- Standard finish: ZN



| Part No.                           | A                                     | R                                    | Wt./C |       |
|------------------------------------|---------------------------------------|--------------------------------------|-------|-------|
|                                    |                                       | In. mm                               | Lbs.  | kg    |
| B446B- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 HHCS | <sup>9</sup> / <sub>32</sub> " (7.1) | 16    | (7.2) |
| B446B- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 HHCS | <sup>3</sup> / <sub>8</sub> " (9.5)  | 20    | (9.1) |

## B446 Swivel Hanger (Female-Male)

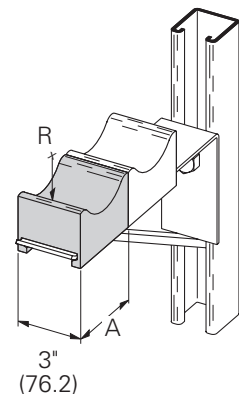
- Design Load:  
(<sup>3</sup>/<sub>8</sub>)-610 Lbs. (2.71 kN)  
(<sup>1</sup>/<sub>2</sub>)-1130 Lbs. (5.02 kN)
- Safety Factor of 3
- Standard finish: ZN



| Part No.                          | A                                   | B                                     | Wt./C |        |
|-----------------------------------|-------------------------------------|---------------------------------------|-------|--------|
|                                   |                                     |                                       | Lbs.  | kg     |
| B446- <sup>3</sup> / <sub>8</sub> | <sup>3</sup> / <sub>8</sub> "-16 HN | <sup>3</sup> / <sub>8</sub> "-16 HHCS | 28    | (12.7) |
| B446- <sup>1</sup> / <sub>2</sub> | <sup>1</sup> / <sub>2</sub> "-13 HN | <sup>1</sup> / <sub>2</sub> "-13 HHCS | 36    | (16.3) |

## B4094 & B4095 Porcelain Cable Rack Saddle

- Electrical porcelain has an dielectric strength of 50 volts/mil
- Designed for use with B449 brackets

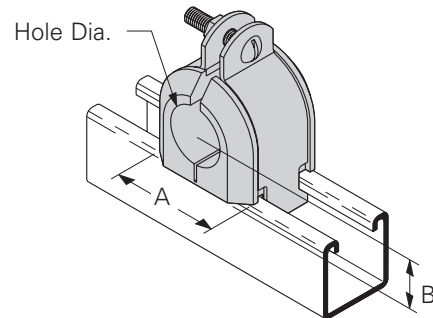


| Part No. | A             | R             | Wt./C |        |
|----------|---------------|---------------|-------|--------|
|          | In. mm        | In. mm        | Lbs.  | kg     |
| B4094    | 2 7/8" (73.0) | 1 3/8" (34.9) | 67    | (30.4) |
| B4095    | 3 7/8" (98.4) | 2 1/8" (54.0) | 106   | (48.1) |

## B4060 THRU B4093

### Insulclamp Cable Clamps (Replaces porcelain clamps)

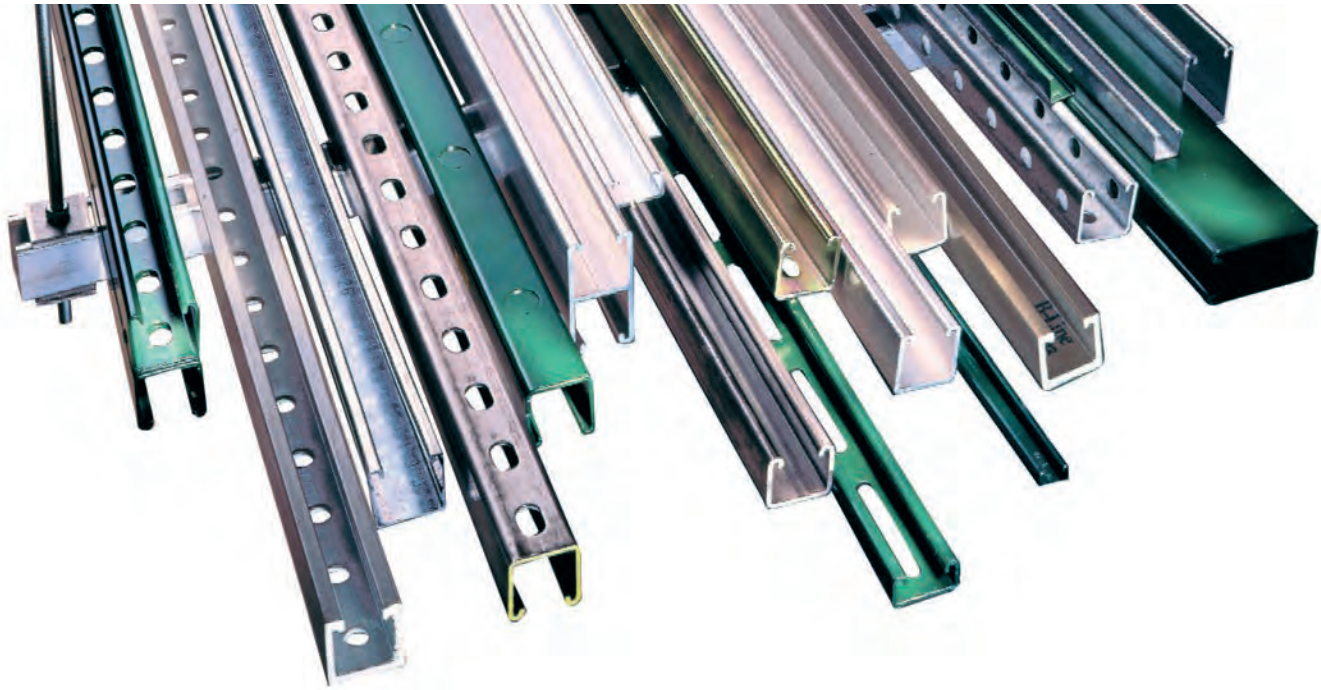
- Assembly includes:  
1 Insulclamp™ & 1 pr. zinc plated pipe straps with Everdur (Silicon Bronze) hardware
- The thermoplastic elastomer Insulclamp has a dielectric strength of 640 volts/mil
- The flame retardant one piece design allows for trouble free assembly
- Everdur hardware is non-ferrous and prevents magnetic induction



| Part No. | Hole Dia.<br>In. mm | Wt./C<br>Lbs. kg | A<br>In. mm   | B<br>In. mm  | Includes<br>Clamp No. |
|----------|---------------------|------------------|---------------|--------------|-----------------------|
| B4060    | 3/8" (9.5)          | 25 (11.3)        | 1.36" (34.5)  | .56" (14.2)  | B2030                 |
| B4061    | 1/2" (12.7)         | 25 (11.3)        |               |              |                       |
| B4062    | 5/8" (15.9)         | 25 (11.3)        |               |              |                       |
| B4063    | 3/4" (19.0)         | 37 (16.8)        | 1.86" (47.2)  | .81" (20.8)  | B2011                 |
| B4064    | 7/8" (22.2)         | 37 (16.8)        |               |              |                       |
| B4065    | 1" (25.4)           | 37 (16.8)        |               |              |                       |
| B4066    | 1 1/8" (28.6)       | 37 (16.8)        |               |              |                       |
| B4067    | 1 1/4" (31.7)       | 58 (26.3)        | 2.36" (59.9)  | 1.06" (26.9) | B2038                 |
| B4068    | 1 3/8" (34.9)       | 58 (26.3)        |               |              |                       |
| B4069    | 1 1/2" (38.1)       | 58 (26.3)        |               |              |                       |
| B4070    | 1 5/8" (41.3)       | 58 (26.3)        |               |              |                       |
| B4071    | 1 3/4" (44.4)       | 76 (34.5)        | 2.86" (72.6)  | 1.31" (33.3) | B2042                 |
| B4072    | 1 7/8" (47.6)       | 76 (34.5)        |               |              |                       |
| B4073    | 2" (50.8)           | 76 (34.5)        |               |              |                       |
| B4074    | 2 1/8" (54.0)       | 76 (34.5)        |               |              |                       |
| B4075    | 2 1/4" (57.1)       | 90 (40.8)        | 3.36" (85.3)  | 1.56" (39.6) | B2046                 |
| B4076    | 2 3/8" (60.3)       | 90 (40.8)        |               |              |                       |
| B4077    | 2 1/2" (63.5)       | 90 (40.8)        |               |              |                       |
| B4078    | 2 5/8" (66.7)       | 90 (40.8)        |               |              |                       |
| B4079    | 2 3/4" (69.8)       | 109 (49.4)       | 3.86" (98.0)  | 1.81" (46.0) | B2050                 |
| B4080    | 2 7/8" (73.0)       | 109 (49.4)       |               |              |                       |
| B4081    | 3" (76.2)           | 109 (49.4)       |               |              |                       |
| B4082    | 3 1/8" (79.4)       | 109 (49.4)       |               |              |                       |
| B4083    | 3 1/4" (82.5)       | 130 (58.9)       | 4.36" (110.7) | 2.06" (52.3) | B2054                 |
| B4084    | 3 3/8" (85.7)       | 130 (58.9)       |               |              |                       |
| B4085    | 3 1/2" (88.9)       | 130 (58.9)       |               |              |                       |
| B4086    | 3 5/8" (92.1)       | 130 (58.9)       |               |              |                       |
| B4087    | 3 3/4" (95.2)       | 160 (72.6)       | 4.86" (123.4) | 2.31" (58.7) | B2058                 |
| B4088    | 3 7/8" (98.4)       | 160 (72.6)       |               |              |                       |
| B4089    | 4" (101.6)          | 160 (72.6)       |               |              |                       |
| B4090    | 4 1/8" (104.8)      | 160 (72.6)       |               |              |                       |
| B4091    | 4 1/4" (107.9)      | 160 (72.6)       | 5.24" (133.1) | 2.50" (63.5) | B2018                 |
| B4092    | 4 3/8" (111.1)      | 160 (72.6)       |               |              |                       |
| B4093    | 4 1/2" (114.3)      | 160 (72.6)       |               |              |                       |

Reference page 206 for general fitting and standard finish specifications. U.L. Wire Fill Chart on pages 272 - 273.

# Aluminum and stainless steel



## Aluminum

Aluminum channels, fittings and accessories offer excellent corrosion resistance and are suitable for many indoor and outdoor applications. Aluminum's high strength to weight ratio helps greatly reduce overall cost of installation through ease of handling and cutting. Channels are extruded from aluminum alloy 6063-T6. Closure strips are extruded from aluminum alloy 6063-T5. Fittings and accessories are made from aluminum alloy 5052-H32.

## Stainless Steel

Where corrosion problems persist and other material and fittings are ineffective, we recommend use of corrosion resistant stainless steel channels and accessories. Channels and fittings are available in two types of stainless steel:

SS4-AISI Type 304

SS6-AISI Type 316

## Fittings

Most fittings, as shown in this catalog, can be supplied in aluminum or stainless steel. Consult factory for possible minimum production quantities and set-up charges.

## Load Data

### Aluminum

Channel's approximate load data can be determined by multiplying load data in the steel channel section of this catalog by a factor of 0.38.

### Stainless Steel

Channel load data is the same as the data in the steel channel section of this catalog.

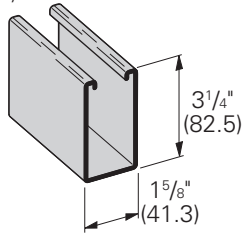
## Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

# Aluminum channel and closure strips

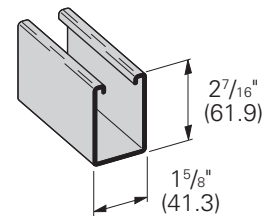
## B11AL

- Thickness: .105 (2.6 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: Aluminum
- Weight: 1.06 Lbs./Ft. (1.58 kg/m)



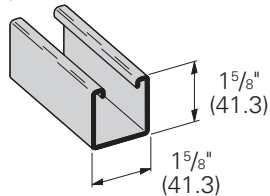
## B12AL

- Thickness: .105 (2.6 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: Aluminum
- Weight: .86 Lbs./Ft. (1.28 kg/m)



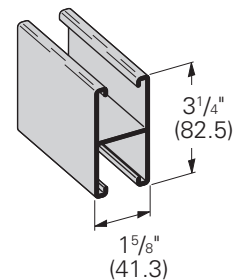
## B22AL

- Thickness: .105 (2.6 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: Aluminum
- Weight: .66 Lbs./Ft. (0.98 kg/m)



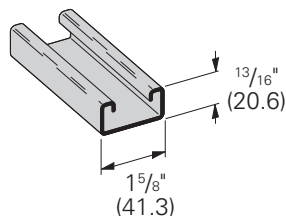
## B22AAL

- Thickness: .105 (2.6 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: Aluminum
- Weight: 1.18 Lbs./Ft. (1.75 kg/m)



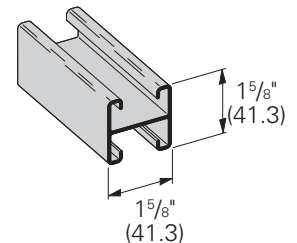
## B54AL

- Thickness: .080 (2.0 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: Aluminum
- Weight: .37 Lbs./Ft. (0.55 kg/m)



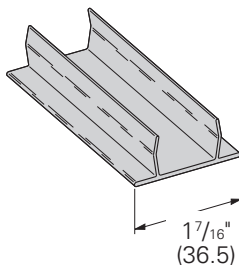
## B54AAL

- Thickness: .080 (2.0 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: Aluminum
- Weight: .57 Lbs./Ft. (0.84 kg/m)



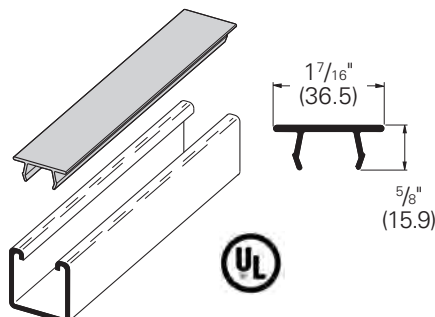
## B217AL Closure Strip

- Standard Length: 10' (304.8 cm)
- Material: Aluminum
- Weight: .15 Lbs./Ft. (0.23 kg/m)



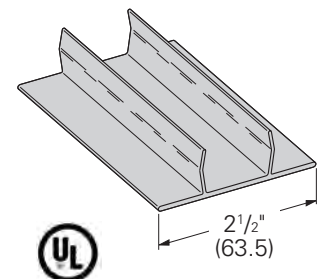
## B217P Plastic Closure Strip

- Standard Length: 10' (304.8 cm)
- Material: PVC
- Weight: .09 Lbs./Ft. (0.14 kg/m)



## B217FFAL Closure Strip

- Standard Length: 10' (304.8 cm)
- Material: Aluminum
- Weight: .16 Lbs./Ft. (0.24 kg/m)

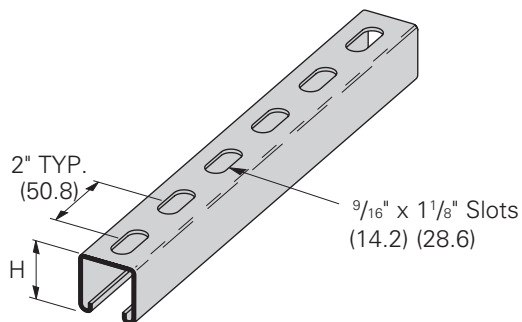


Reference page 218 for general fitting specifications. Other channel combinations available-see steel section for styles.

# Aluminum

## SH Type Channel

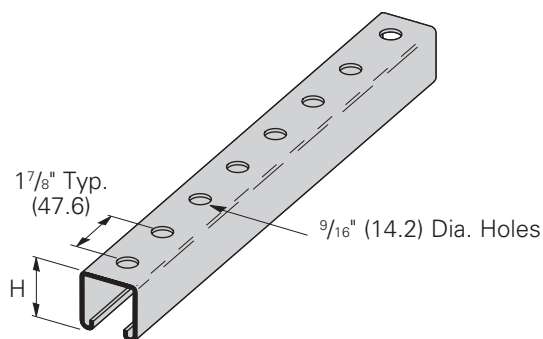
- Material: Aluminum



| Part No. | Thickness<br>in. mm | H<br>in. mm              | Wt./C<br>Lbs./Ft.kg/m |
|----------|---------------------|--------------------------|-----------------------|
| B12SH AL | .105 (2.6)          | $2\frac{7}{16}$ " (61.9) | .83 (1.23)            |
| B22SH AL | .105 (2.6)          | $1\frac{5}{8}$ " (41.3)  | .63 (.93)             |
| B54SH AL | .080 (2.0)          | $1\frac{3}{16}$ " (20.6) | .34 (.50)             |

## H-17/8 Type Channel

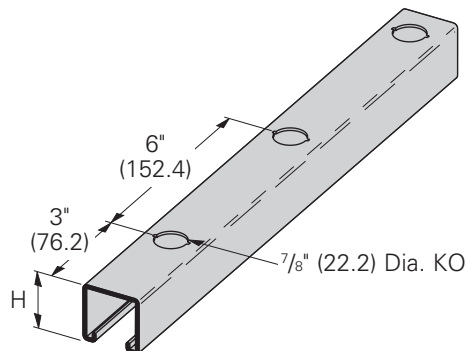
- Material: Aluminum



| Part No.    | Thickness<br>in. mm | H<br>in. mm              | Wt./C<br>Lbs./Ft.kg/m |
|-------------|---------------------|--------------------------|-----------------------|
| B12H17/8 AL | .105 (2.6)          | $2\frac{7}{16}$ " (61.9) | .86 (1.28)            |
| B22H17/8 AL | .105 (2.6)          | $1\frac{5}{8}$ " (41.3)  | .66 (.98)             |
| B54H17/8 AL | .080 (2.0)          | $1\frac{3}{16}$ " (20.6) | .37 (.55)             |

## KO6 Type Knockout Channel

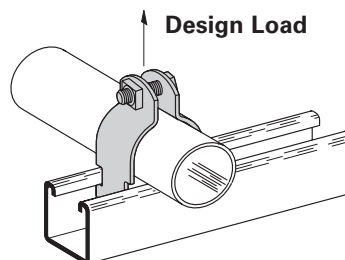
- Material: Aluminum



| Part No.  | Thickness<br>in. mm | H<br>in. mm              | Wt./C<br>Lbs./Ft.kg/m |
|-----------|---------------------|--------------------------|-----------------------|
| B12KO6 AL | .105 (2.6)          | $2\frac{7}{16}$ " (61.9) | .86 (1.28)            |
| B22KO6 AL | .105 (2.6)          | $1\frac{5}{8}$ " (41.3)  | .66 (.98)             |
| B54KO6 AL | .080 (2.0)          | $1\frac{3}{16}$ " (20.6) | .37 (.56)             |

## B2000 Series Rigid Conduit Clamps

- Safety Factor of 5
- Machine Screw and Square Nut included
- Pipe clamp material 5052-H32



| Part No. | Conduit or<br>Pipe Size<br>in. mm | Material<br>Thickness<br>in. mm | Design<br>Load<br>Lbs. kN | Wt./C<br>Lbs. kg |
|----------|-----------------------------------|---------------------------------|---------------------------|------------------|
| B2001 AL | $\frac{3}{8}$ " (10)              | .063 (1.6)                      | 180 (.80)                 | 4 (1.8)          |
| B2008 AL | $\frac{1}{2}$ " (15)              | .063 (1.6)                      | 180 (.80)                 | 4 (1.8)          |
| B2009 AL | $\frac{3}{4}$ " (20)              | .080 (2.0)                      | 270 (1.20)                | 6 (2.7)          |
| B2010 AL | 1" (25)                           | .080 (2.0)                      | 270 (1.20)                | 7 (3.2)          |
| B2011 AL | $1\frac{1}{4}$ " (32)             | .080 (2.0)                      | 270 (1.20)                | 8 (3.6)          |
| B2012 AL | $1\frac{1}{2}$ " (40)             | .100 (2.5)                      | 360 (1.60)                | 11 (5.0)         |
| B2013 AL | 2" (50)                           | .100 (2.5)                      | 360 (1.60)                | 12 (5.4)         |
| B2014 AL | $2\frac{1}{2}$ " (65)             | .100 (2.5)                      | 360 (1.60)                | 13 (5.9)         |
| B2015 AL | 3" (80)                           | .100 (2.5)                      | 360 (1.60)                | 16 (7.2)         |
| B2016 AL | $3\frac{1}{2}$ " (90)             | .125 (3.2)                      | 450 (2.00)                | 22 (10.0)        |
| B2017 AL | 4" (100)                          | .125 (3.2)                      | 450 (2.00)                | 24 (10.9)        |
| B2018 AL | $4\frac{1}{2}$ " (115)            | .125 (3.2)                      | 450 (2.00)                | 26 (11.8)        |
| B2019 AL | 5" (125)                          | .125 (3.2)                      | 450 (2.00)                | 27 (12.2)        |
| B2020 AL | 6" (150)                          | .125 (3.2)                      | 450 (2.00)                | 33 (14.9)        |

Reference page 218 for general fitting specifications. Other channel combinations available-see steel section for styles.



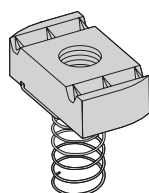
## Aluminum Fittings

Most fittings, as shown in this catalog, can be supplied in aluminum. See "Fittings" section (page 106) of this catalog. Consult factory for possible minimum production quantities and set-up charges.

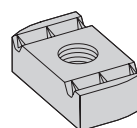
### Channel Nuts

We recommend the use of Stainless Steel channel nuts with Aluminum channel. For channel nut pull-out strength and slip resistance, use the channel nut information provided on pg. 84 & 85.

A (.70) multiplier is to be applied to obtain the appropriate derated values for aluminum channel.



Spring Nut



Nut Without Spring

### Nuts for B12 Channel

| Part Number |                | Thread Size | Thickness |       | Wt./C |       |
|-------------|----------------|-------------|-----------|-------|-------|-------|
| With Spring | Without Spring |             | in.       | mm    | Lbs.  | kg    |
| N724SS6     | N224WOSS6      | 1/4"-20     | 1/4"      | (6.3) | 6.6   | (3.0) |
| N728SS6     | N228WOSS6      | 3/8"-16     | 3/8"      | (9.5) | 10.6  | (4.8) |
| N725SS6     | N225WOSS6      | 1/2"-13     | 3/8"      | (9.5) | 9.7   | (4.4) |

### Nuts for B22, B24 Channels

| Part Number |                | Thread Size | Thickness |       | Wt./C |       |
|-------------|----------------|-------------|-----------|-------|-------|-------|
| With Spring | Without Spring |             | in.       | mm    | Lbs.  | kg    |
| N224SS6     | N224WOSS6      | 1/4"-20     | 1/4"      | (6.3) | 6.6   | (3.0) |
| N228SS6     | N228WOSS6      | 3/8"-16     | 3/8"      | (9.5) | 10.6  | (4.8) |
| N225SS6     | N225WOSS6      | 1/2"-13     | 3/8"      | (9.5) | 9.7   | (4.4) |

### Nuts for B54 Channel

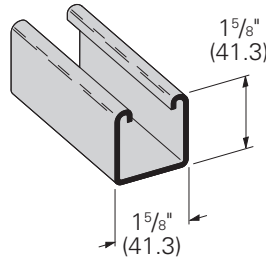
| Part Number |                | Thread Size | Thickness |       | Wt./C |       |
|-------------|----------------|-------------|-----------|-------|-------|-------|
| With Spring | Without Spring |             | in.       | mm    | Lbs.  | kg    |
| N524SS6     | N224WOSS6      | 1/4"-20     | 1/4"      | (6.3) | 6.6   | (3.0) |
| N528SS6     | N228WOSS6      | 3/8"-16     | 3/8"      | (9.5) | 10.6  | (4.8) |
| N525SS6     | N525WOSS6      | 1/2"-13     | 3/8"      | (9.5) | 9.7   | (4.4) |

Reference page 218 for general fitting specifications. Other channel combinations available-see steel section for styles.

# Stainless steel

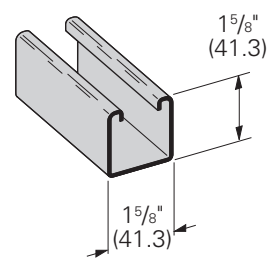
## B22SS

- Substitute 4 for Stainless Steel Type 304 or 6 for Stainless Steel Type 316
- Thickness: 12 Ga. (2.6 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: SS4, SS6
- Weight: 1.90 Lbs./Ft. (2.83 kg/m)



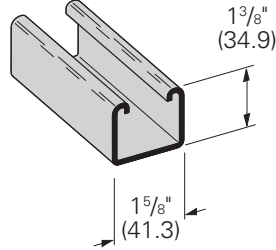
## B24SS

- Substitute 4 for Stainless Steel Type 304 or 6 for Stainless Steel Type 316
- Thickness: 14 Ga. (1.9 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: SS4, SS6
- Weight: 1.40 Lbs./Ft. (2.08 kg/m)



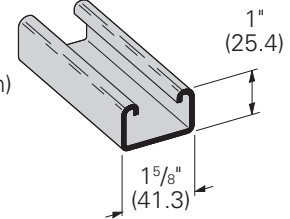
## B32SS4

- Thickness: 12 Ga. (2.6 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: SS4
- Weight: 1.70 Lbs./Ft. (2.53 kg/m)



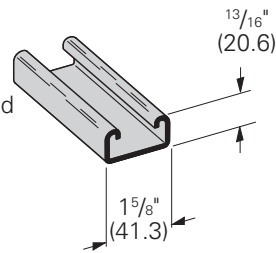
## B42SS4

- Thickness: 12 Ga. (2.6 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: SS4
- Weight: 1.44 Lbs./Ft. (2.14 kg/m)



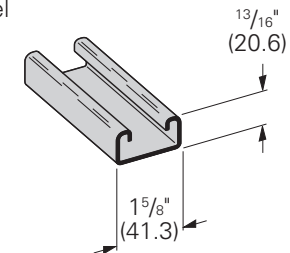
## B52SS

- Substitute 4 for Stainless Steel Type 304 or 6 for Stainless Steel Type 316
- Thickness: 12 Ga. (2.6 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: SS4, SS6
- Weight: 1.27 Lbs./Ft. (1.89 kg/m)

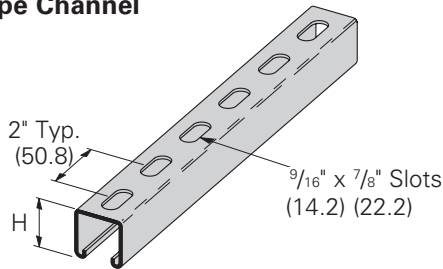


## B54SS

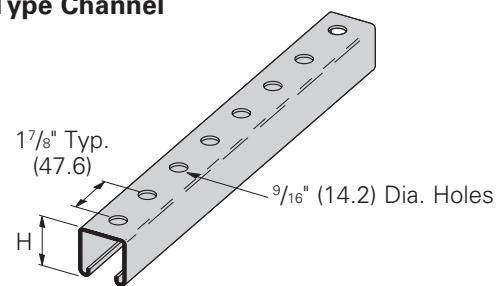
- Substitute 4 for Stainless Steel Type 304 or 6 for Stainless Steel Type 316
- Thickness: 14 Ga. (1.9 mm)
- Standard Length: 10' (3.05 m) and 20' (6.09 m)
- Material: SS4, SS6
- Weight: .97 Lbs./Ft. (1.44 kg/m)



## SH Type Channel



## H-1 7/8 Type Channel



| Part No.  | Thickness<br>in. mm | H<br>in. mm    | Wt./C<br>Lbs./Ft.kg/m |
|-----------|---------------------|----------------|-----------------------|
| B22SH SS4 | 12 Ga. (2.6)        | 1 5/8" (41.3)  | 1.82 (2.70)           |
| B22SH SS6 | 12 Ga. (2.6)        | 1 5/8" (41.3)  | 1.82 (2.70)           |
| B24SH SS4 | 14 Ga. (1.9)        | 1 5/8" (41.3)  | 1.34 (1.99)           |
| B24SH SS6 | 14 Ga. (1.9)        | 1 5/8" (41.3)  | 1.34 (1.99)           |
| B32SH SS4 | 12 Ga. (2.6)        | 1 3/8" (34.9)  | 1.62 (2.41)           |
| B42SH SS4 | 12 Ga. (2.6)        | 1" (25.4)      | 1.36 (2.02)           |
| B52SH SS4 | 12 Ga. (2.6)        | 1 3/16" (20.6) | 1.23 (1.83)           |
| B52SH SS6 | 12 Ga. (2.6)        | 1 3/16" (20.6) | 1.23 (1.83)           |
| B54SH SS4 | 14 Ga. (1.9)        | 1 3/16" (20.6) | .91 (1.35)            |
| B54SH SS6 | 14 Ga. (1.9)        | 1 3/16" (20.6) | .91 (1.35)            |

| Part No.      | Thickness<br>in. mm | H<br>in. mm    | Wt./C<br>Lbs./Ft.kg/m |
|---------------|---------------------|----------------|-----------------------|
| B22H1 7/8 SS4 | 12 Ga. (2.6)        | 1 5/8" (41.3)  | 1.85 (2.75)           |
| B22H1 7/8 SS6 | 12 Ga. (2.6)        | 1 5/8" (41.3)  | 1.85 (2.75)           |
| B24H1 7/8 SS4 | 14 Ga. (1.9)        | 1 5/8" (41.3)  | 1.36 (2.02)           |
| B24H1 7/8 SS6 | 14 Ga. (1.9)        | 1 5/8" (41.3)  | 1.36 (2.02)           |
| B32H1 7/8 SS4 | 12 Ga. (2.6)        | 1 3/8" (34.9)  | 1.65 (2.45)           |
| B42H1 7/8 SS4 | 12 Ga. (2.6)        | 1" (25.4)      | 1.39 (2.07)           |
| B52H1 7/8 SS4 | 12 Ga. (2.6)        | 1 3/16" (20.6) | 1.20 (1.83)           |
| B52H1 7/8 SS6 | 12 Ga. (2.6)        | 1 3/16" (20.6) | 1.20 (1.83)           |
| B54H1 7/8 SS4 | 14 Ga. (1.9)        | 1 3/16" (20.6) | .93 (1.38)            |
| B54H1 7/8 SS6 | 14 Ga. (1.9)        | 1 3/16" (20.6) | .93 (1.38)            |

Reference page 218 for general fitting specifications. Other channel combinations available-see steel section for styles.

## Stainless Steel Fittings

Most fittings, as shown in this catalog, can be supplied in Type 304 or Type 316 stainless steel. See "Fittings" section (page 106) of this catalog.

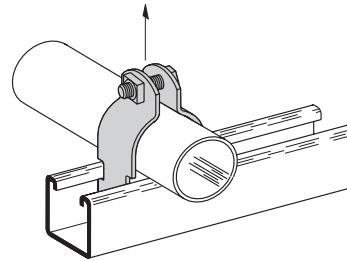
Consult factory for possible minimum production quantities and set-up charges.

### B2000 Series Pipe & Tubing Clamps

- Safety Factor of 5
- Combination recess hex head machine screw and square nut included
- Material: Stainless Steel Type 304 & 316

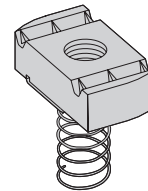
| Part No.         | Conduit or<br>Pipe Size<br>in. mm | Material<br>Thickness<br>in. mm | Design<br>Load |        | Wt./C |        |
|------------------|-----------------------------------|---------------------------------|----------------|--------|-------|--------|
|                  |                                   |                                 | Lbs.           | kN     | Lbs.  | kg     |
| <b>B2001 SS4</b> | 3/8" (10)                         | 16 Ga. (1.5)                    | 400            | (1.78) | 10    | (4.5)  |
| <b>B2008 SS4</b> | 1/2" (15)                         | 16 Ga. (1.5)                    | 400            | (1.78) | 11    | (5.0)  |
| <b>B2009 SS4</b> | 3/4" (20)                         | 14 Ga. (1.9)                    | 600            | (2.67) | 15    | (6.8)  |
| <b>B2010 SS4</b> | 1" (25)                           | 14 Ga. (1.9)                    | 600            | (2.67) | 16    | (7.2)  |
| <b>B2011 SS4</b> | 1 1/4" (32)                       | 14 Ga. (1.9)                    | 600            | (2.67) | 20    | (9.1)  |
| <b>B2012 SS4</b> | 1 1/2" (40)                       | 12 Ga. (2.6)                    | 800            | (3.56) | 30    | (13.6) |
| <b>B2013 SS4</b> | 2" (50)                           | 12 Ga. (2.6)                    | 800            | (3.56) | 34    | (15.4) |
| <b>B2014 SS4</b> | 2 1/2" (65)                       | 12 Ga. (2.6)                    | 800            | (3.56) | 38    | (17.2) |
| <b>B2015 SS4</b> | 3" (80)                           | 12 Ga. (2.6)                    | 800            | (3.56) | 44    | (19.9) |
| <b>B2016 SS4</b> | 3 1/2" (90)                       | 12 Ga. (2.6)                    | 1000           | (4.45) | 51    | (23.1) |
| <b>B2017 SS4</b> | 4" (100)                          | 12 Ga. (2.6)                    | 1000           | (4.45) | 55    | (24.9) |
| <b>B2018 SS4</b> | 4 1/2" (115)                      | 12 Ga. (2.6)                    | 1000           | (4.45) | 59    | (26.7) |
| <b>B2019 SS4</b> | 5" (125)                          | 12 Ga. (2.6)                    | 1000           | (4.45) | 64    | (29.0) |
| <b>B2020 SS4</b> | 6" (150)                          | 12 Ga. (2.6)                    | 1000           | (4.45) | 80    | (36.3) |

Design Load

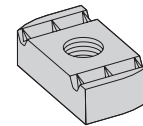


### Channel Nuts

- For Channel Nuts pull-out strength and slip resistance, use the data shown on pages 84 & 85.
- Helps reduce slip load by up to 50% due to hardness of material.



Spring Nut



Nut Without Spring

### Nuts for B22, B24, B32 Channels

| Part Number    |                   | Thread<br>Size | Thickness |       | Wt./C |       |
|----------------|-------------------|----------------|-----------|-------|-------|-------|
| With<br>Spring | Without<br>Spring |                | in.       | mm    | Lbs.  | kg    |
| <b>N224SS6</b> | <b>N224WOSS6</b>  | 1/4"-20        | 1/4"      | (6.3) | 6.6   | (3.0) |
| <b>N228SS6</b> | <b>N228WOSS6</b>  | 3/8"-16        | 3/8"      | (9.5) | 10.6  | (4.8) |
| <b>N225SS6</b> | <b>N225WOSS6</b>  | 1/2"-13        | 3/8"      | (9.5) | 9.7   | (4.4) |

### Nuts for B42, B52, B54 Channels

| Part Number    |                   | Thread<br>Size | Thickness |       | Wt./C |       |
|----------------|-------------------|----------------|-----------|-------|-------|-------|
| With<br>Spring | Without<br>Spring |                | in.       | mm    | Lbs.  | kg    |
| <b>N524SS6</b> | <b>N224WOSS6</b>  | 1/4"-20        | 1/4"      | (6.3) | 6.6   | (3.0) |
| <b>N528SS6</b> | <b>N228WOSS6</b>  | 3/8"-16        | 3/8"      | (9.5) | 10.6  | (4.8) |
| <b>N525SS6</b> | <b>N525WOSS6</b>  | 1/2"-13        | 3/8"      | (9.5) | 9.7   | (4.4) |

Reference page 218 for general fitting specifications. Other channel combinations available-see steel section for styles.

# Fiberglass



We offer two fire retardant (FR) resins for strut systems: polyester and vinyl ester. Both resins are ideal for corrosive environments.

While polyester is sufficient for most uses, vinyl ester is suitable for a broader range of environments.

Please refer to the "Corrosion Resistance Guide" for specific applications, page 225.

## Materials & Finishes

Our Fiberglass Strut systems are manufactured from glass fiber-reinforced plastic shapes that meet ASTM E-84, Class 1 Flame Rating and self-extinguishing requirements of ASTM D-635. A surface veil is applied during pultrusion to ensure a resin-rich surface and ultraviolet resistance.

## Fittings

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

Hole Size –  $\frac{13}{32}$ " (10.3 mm) Dia.

Hole Spacing –  $\frac{13}{16}$ " (20.6 mm) from end and  $1\frac{7}{8}$ " (47.6 mm) on center.

Width –  $1\frac{5}{8}$ " (41.3 mm)

Thickness –  $\frac{1}{4}$ " (6.3 mm)

## Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

## Channel Resin Information

We offer two fire retardant (FR) resins for strut systems, polyester and vinyl ester. Both resins are ideal for corrosive environments. While polyester is sufficient for most uses, vinyl ester is suitable for a broader range of environments. Please refer to the "Corrosion Resistance Guide" below for specific applications.

| Corrosion Resistance Guide    |             |              |                         |             |              |
|-------------------------------|-------------|--------------|-------------------------|-------------|--------------|
| Chemicals                     | 70°F (21°C) | 160°F (71°C) | Chemicals               | 70°F (21°C) | 160°F (71°C) |
| Acetic acid 5%                | BFP/BFV     | BFP/BFV      | Methyl alcohol 10%      | BFP/BFV     | BFV-150° **  |
| Acetic acid 52%               | BFP/BFV     | BFV-210° **  | Naphtha                 | BFP/BFV     | BFP/BFV      |
| Aluminum potassium sulfate 5% | BFP/BFV     | BFP/BFV      | Nitric acid 5%          | BFP/BFV     | BFP/BFV      |
| Ammonium hydroxide 10%        | BFP/BFV     | BFV-150° **  | Nitric acid 20%         | BFV         | BFV-120° **  |
| Ammonium nitrate              | BFP/BFV     | BFP/BFV      | Phosphoric acid 10%     | BFP/BFV     | BFP/BFV      |
| Benzene sulfonic acid 5%      | BFP/BFV     | BFP/BFV      | Phosphoric acid 30%     | BFP/BFV     | BFP/BFV      |
| Calcium chloride              | BFP/BFV     | BFP/BFV      | Phosphoric acid 85%     | BFP/BFV     | BFP/BFV      |
| Carbon tetrachloride          | BFV         | BFV-100° **  | Sodium bicarbonate 10%  | BFP/BFV     | BFP/BFV      |
| Chlorine dioxide 15%          | BFP/BFV     | BFV-150° **  | Sodium bisulfate        | BFP/BFV     | BFP/BFV      |
| Chromic acid 5%               | BFV         | BFV-150° **  | Sodium carbonate        | BFP/BFV     | BFV          |
| Copper sulfate                | BFP/BFV     | BFP/BFV      | Sodium chloride         | BFP/BFV     | BFP/BFV      |
| Diesel fuel                   | BFP/BFV     | BFV          | Sodium hydroxide 1-50%  | BFV         | BFV-120° **  |
| Ethylene glycol               | BFP/BFV     | BFP/BFV      | Sodium hypochlorite 5%  | BFP/BFV     | BFV-120° **  |
| Fatty acids 100%              | BFP/BFV     | BFP/BFV      | Sodium nitrate          | BFP/BFV     | BFP/BFV      |
| Ferrous sulfate               | BFP/BFV     | BFP/BFV      | Sodium silicate         | BFP/BFV     | BFV-210° **  |
| Fluosilicic acid 0-20%        | BFV         | BFV          | Sodium sulfate          | BFP/BFV     | BFP/BFV      |
| Gasoline                      | BFP/BFV     | BFV          | Sulfuric acid 0-30%     | BFP/BFV     | BFP/BFV      |
| Hydrochloric acid 1%          | BFP/BFV     | BFP/BFV      | Sulfuric acid 30-50%    | BFV         | BFV          |
| Hydrochloric acid 15%         | BFP/BFV     | BFV-180° **  | Sulfuric acid 50-70%    | BFV         | BFV-180° **  |
| Hydrochloric acid 37%         | BFP/BFV     | BFV-150° **  | Trisodium phosphate 25% | BFP/BFV     | BFV-210° **  |
| Kerosene                      | BFP/BFV     | BFP/BFV      | Trisodium phosphate-All | BFV         | BFV-210° **  |
| Magnesium chloride            | BFP/BFV     | BFP/BFV      | Water, Distilled        | BFP/BFV     | BFP/BFV      |

BFP - BFP parts recommended    BFV - BFV parts recommended    \*\* - Not recommended to exceed this temperature

Information contained in this chart is based on data from raw material suppliers.

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 suitability.

The recommendations or suggestions contained in this chart are made without guarantee or representation as to results. We suggest that you evaluate the recommendations and suggestions in your own laboratory or actual field trial prior to use.

### Recommended Guideline:

| Temperature  | Design Load Multiplier |
|--------------|------------------------|
| 75°F (24°C)  | 100%                   |
| 100°F (38°C) | 90%                    |
| 125°F (52°C) | 78%                    |
| 150°F (66°C) | 68%                    |
| 175°F (79°C) | 60%                    |
| 200°F (93°C) | 52%                    |

| Flame Retardant Properties                                        | BFP            | BFV            |
|-------------------------------------------------------------------|----------------|----------------|
| Flame Resistance (FTMS 406-2023)<br>ign/burn, seconds             | 75/75          | 75/75          |
| Intermittent Flame Test (HLT-15), rating                          | 100            | 100            |
| Flammability Test (ASTM D635)<br>Ignition<br>Burning Time         | none<br>0 sec. | none<br>0 sec. |
| Surface Burning Characteristics (ASTM E84),<br>Flame spread index | 25             | 25             |
| UL 94 Flame Class                                                 | V-0            | V-0            |

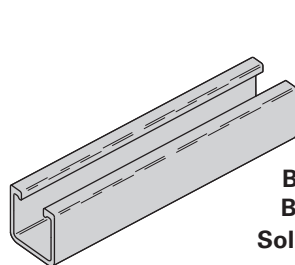
Reference page 224 for general fitting specifications.



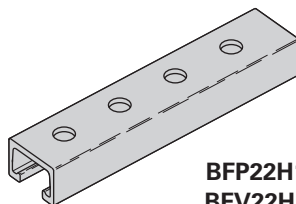
# Fiberglass

## BFP22 THRU BFV22SH

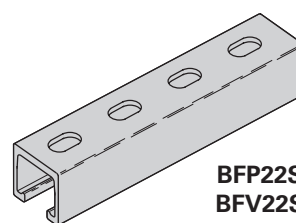
- Channel lengths: 10 Ft. (3.05 m) and 20 Ft. (6.09 m)
- Fiberglass strut meets specification of ASTM D-4385 Levels III and IV.



**BFP22  
BFV22  
Solid Back**



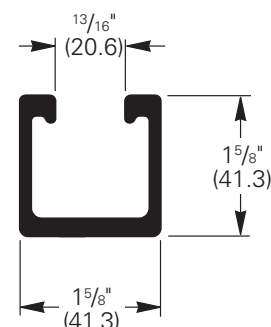
**BFP22H1<sup>7/8</sup>  
BFV22H1<sup>7/8</sup>  
9/16" (14.3) holes  
1 7/8" (47.6) on centers**



**BFP22SH  
BFV22SH  
9/16" (14.3) x 7/8" (22.2) slots  
2" (50.8) on centers**

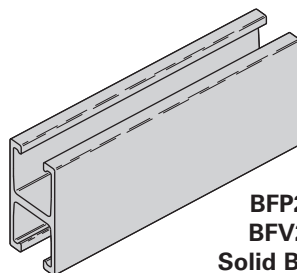
| Part No.                      | Material          | Description   | Color | Weight<br>Lbs./ft. kg/m |       |
|-------------------------------|-------------------|---------------|-------|-------------------------|-------|
| <b>BFP22*</b>                 | Polyester Resin   | Solid Back    | Gray  | .63                     | (.94) |
| <b>BFV22*</b>                 | Vinyl Ester Resin | Solid Back    | Beige | .63                     | (.94) |
| <b>BFP22H1<sup>7/8</sup>*</b> | Polyester Resin   | Holes in Back | Gray  | .60                     | (.89) |
| <b>BFV22H1<sup>7/8</sup>*</b> | Vinyl Ester Resin | Holes in Back | Beige | .60                     | (.89) |
| <b>BFP22SH*</b>               | Polyester Resin   | Slots in Back | Gray  | .61                     | (.91) |
| <b>BFV22SH*</b>               | Vinyl Ester Resin | Slots in Back | Beige | .61                     | (.91) |

\* Insert -10 for 10'-0" (3.05 m) length or -20 for 20'-0" (6.09 m) length



## BFP22A BFV22A

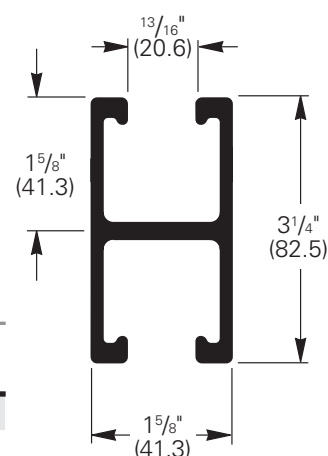
- Channel Lengths: 10 Ft. (3.05 m) and 20 Ft. (6.09 m)
- Fiberglass strut meets specification of ASTM D-4385 Levels III and IV.



**BFP22A  
BFV22A  
Solid Back to  
Back**

| Part No.       | Material          | Description  | Color | Weight<br>Lbs./ft. kg/m |        |
|----------------|-------------------|--------------|-------|-------------------------|--------|
| <b>BFP22A*</b> | Polyester Resin   | Back To Back | Gray  | 1.15                    | (1.71) |
| <b>BFV22A*</b> | Vinyl Ester Resin | Back To Back | Beige | 1.15                    | (1.71) |

\* Insert -10 for 10'-0" (3.05 m) length or -20 for 20'-0" (6.09 m) length



## Field Cutting Sealant Kits

### RSK010

- Pint Sealing Kit (473 cm<sup>3</sup>) includes sealant and brush applicator
- Seals exposed fibers after field cutting
- UV resistant



Published design loads on page 227 are based on usage at 70°F (21°C) and must be reduced for continuous exposure to higher temperatures. Refer to the chart below for high temperature applications.

| Temperature  | Design Load Multiplier |
|--------------|------------------------|
| 75°F (24°C)  | 100%                   |
| 100°F (38°C) | 90%                    |
| 125°F (52°C) | 78%                    |
| 150°F (66°C) | 68%                    |
| 175°F (79°C) | 60%                    |
| 200°F (93°C) | 52%                    |

APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATORY PROTECTION DEVICE SHOULD BE WORN WHEN FIELD CUTTING OR GRINDING FIBERGLASS.

Reference page 224 for general fitting specifications.



## Beam Loading Data for Glass Reinforced Polyester Resin

| Beam Span |        | Part No. | Maximum Allowable Beam Load |         | Deflection @ Maximum Allowable Beam Load |          | Allowable Load @ Deflection = |         |            |        |
|-----------|--------|----------|-----------------------------|---------|------------------------------------------|----------|-------------------------------|---------|------------|--------|
| in.       | mm     |          | Lbs.                        | kN      | in.                                      | mm       | 1/240 Span                    |         | 1/360 Span |        |
|           |        |          |                             |         |                                          |          | Lbs.                          | kN      | Lbs.       | kN     |
| 12"       | (305)  | BFP22    | 1781                        | (7.92)  | 0.064                                    | (1.62)   | 1392                          | (6.19)  | 928        | (4.13) |
|           |        | BFP22A   | 2259                        | (10.05) | 0.037                                    | (.94)    | 2259                          | (10.05) | 2051       | (9.12) |
| 24"       | (609)  | BFP22    | 890                         | (3.96)  | 0.256                                    | (6.50)   | 347                           | (1.54)  | 231        | (1.03) |
|           |        | BFP22A   | 1127                        | (5.01)  | 0.147                                    | (3.73)   | 767                           | (3.41)  | 511        | (2.27) |
| 36"       | (914)  | BFP22    | 592                         | (2.63)  | 0.576                                    | (14.63)  | 153                           | (0.68)  | 101        | (0.45) |
|           |        | BFP22A   | 750                         | (3.33)  | 0.330                                    | (8.38)   | 338                           | (1.50)  | 224        | (0.99) |
| 48"       | (1219) | BFP22    | 443                         | (1.97)  | 1.024                                    | (26.01)  | 85                            | (0.38)  | 55         | (0.24) |
|           |        | BFP22A   | 560                         | (2.49)  | 0.587                                    | (14.91)  | 188                           | (0.83)  | 123        | (0.55) |
| 60"       | (1524) | BFP22    | 353                         | (1.57)  | 1.600                                    | (40.64)  | 53                            | (0.23)  | 34         | (0.15) |
|           |        | BFP22A   | 446                         | (1.98)  | 0.918                                    | (23.32)  | 117                           | (0.52)  | 76         | (0.34) |
| 72"       | (1829) | BFP22    | 293                         | (1.30)  | 2.303                                    | (58.49)  | 35                            | (0.15)  | 22         | (0.10) |
|           |        | BFP22A   | 370                         | (1.64)  | 1.322                                    | (33.58)  | 78                            | (0.34)  | 50         | (0.22) |
| 96"       | (2438) | BFP22    | 218                         | (0.97)  | 4.095                                    | (104.01) | 17                            | (0.07)  | 9          | (0.04) |
|           |        | BFP22A   | 273                         | (1.21)  | 2.350                                    | (59.69)  | 39                            | (0.17)  | 23         | (0.10) |
| 120"      | (3048) | BFP22    | 172                         | (0.76)  | 6.398                                    | (162.51) | 8                             | (0.03)  | 3          | (0.01) |
|           |        | BFP22A   | 214                         | (0.95)  | 3.671                                    | (93.24)  | 19                            | (0.08)  | 9          | (0.04) |

## Beam Loading Data for Glass Reinforced Vinyl Ester Resin

| Beam Span |        | Part No.      | Maximum Allowable Beam Load |         | Deflection @ Maximum Allowable Beam Load |          | Allowable Load @ Deflection = |         |            |         |
|-----------|--------|---------------|-----------------------------|---------|------------------------------------------|----------|-------------------------------|---------|------------|---------|
| in.       | mm     |               | Lbs.                        | kN      | in.                                      | mm       | 1/240 Span                    |         | 1/360 Span |         |
|           |        |               |                             |         |                                          |          | Lbs.                          | kN      | Lbs.       | kN      |
| 12"       | (305)  | <b>BFV22</b>  | 2220                        | (9.87)  | 0.071                                    | (1.80)   | 1568                          | (6.97)  | 1045       | (4.65)  |
|           |        | <b>BFV22A</b> | 6442                        | (28.65) | 0.039                                    | (0.99)   | 6442                          | (29.65) | 5549       | (24.68) |
| 24"       | (609)  | <b>BFV22</b>  | 1109                        | (4.93)  | 0.283                                    | (7.19)   | 391                           | (1.74)  | 260        | (1.15)  |
|           |        | <b>BFV22A</b> | 3219                        | (14.32) | 0.155                                    | (3.94)   | 2079                          | (9.25)  | 1385       | (6.16)  |
| 36"       | (914)  | <b>BFV22</b>  | 738                         | (3.28)  | 0.637                                    | (16.18)  | 172                           | (0.76)  | 114        | (0.51)  |
|           |        | <b>BFV22A</b> | 2144                        | (9.53)  | 0.348                                    | (8.84)   | 922                           | (4.10)  | 613        | (2.72)  |
| 48"       | (1219) | <b>BFV22</b>  | 553                         | (2.46)  | 1.133                                    | (28.78)  | 96                            | (0.43)  | 63         | (0.28)  |
|           |        | <b>BFV22A</b> | 1606                        | (7.14)  | 0.619                                    | (15.72)  | 516                           | (2.29)  | 342        | (1.52)  |
| 60"       | (1524) | <b>BFV22</b>  | 441                         | (1.96)  | 1.770                                    | (44.96)  | 60                            | (0.26)  | 39         | (0.17)  |
|           |        | <b>BFV22A</b> | 1283                        | (5.70)  | 0.967                                    | (24.56)  | 327                           | (1.45)  | 216        | (0.96)  |
| 72"       | (1829) | <b>BFV22</b>  | 366                         | (1.63)  | 2.549                                    | (64.74)  | 40                            | (0.18)  | 25         | (0.11)  |
|           |        | <b>BFV22A</b> | 1067                        | (4.74)  | 1.393                                    | (35.38)  | 224                           | (0.99)  | 147        | (0.65)  |
| 96"       | (2438) | <b>BFV22</b>  | 273                         | (1.21)  | 4.531                                    | (115.09) | 19                            | (0.08)  | 11         | (0.05)  |
|           |        | <b>BFV22A</b> | 796                         | (3.54)  | 2.477                                    | (62.91)  | 121                           | (0.54)  | 78         | (0.34)  |
| 120"      | (3048) | <b>BFV22</b>  | 216                         | (0.96)  | 7.079                                    | (179.80) | 9                             | (0.04)  | 7          | (0.02)  |
|           |        | <b>BFV22A</b> | 633                         | (2.81)  | 3.870                                    | (98.30)  | 72                            | (0.32)  | 44         | (0.19)  |

## Loading Information

### Beam Loads:

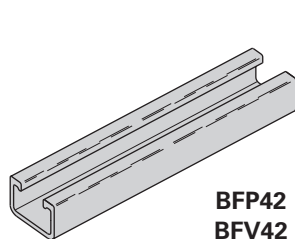
The above charts list the total allowable uniform load for various simple spans based on a minimum safety factor of 2. If the load is concentrated at center span, multiply the load from the above charts by 0.5 and the corresponding deflection by 0.8. All beams should be supported in a manner to prevent rotation at supports. Long, deep beams should be tied between supports to prevent twist. For channels with holes or slots use 90% of recommended load shown in channel loading chart.

Reference page 224 for general fitting specifications.

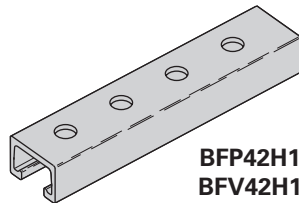
# Fiberglass

## BFP42 thru BFV42SH

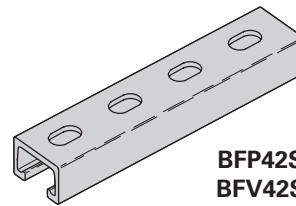
- Channel lengths: 10 Ft. (3.05 m) and 20 Ft. (6.09 m)
- Fiberglass strut meets specification of ASTM D-4385 Levels III and IV.



**BFP42  
BFV42  
Solid Back**

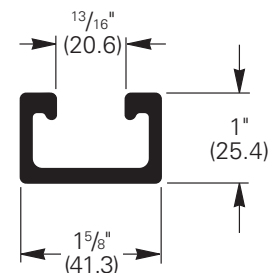


**BFP42H1<sup>7/8</sup>  
BFV42H1<sup>7/8</sup>  
9/16" (14.3) holes  
1 7/8" (47.6) on centers**



**BFP42SH  
BFV42SH  
9/16" (14.3) x 7/8" (22.2) slots  
2" (50.8) on centers**

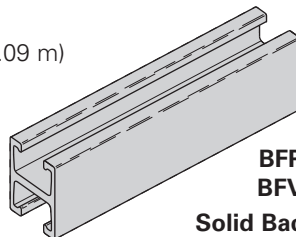
| Part No.                      | Material          | Description   | Color | Weight<br>Lbs./ft. kg/m |
|-------------------------------|-------------------|---------------|-------|-------------------------|
| <b>BFP42*</b>                 | Polyester Resin   | Solid Back    | Gray  | .48 (.71)               |
| <b>BFV42*</b>                 | Vinyl Ester Resin | Solid Back    | Beige | .48 (.71)               |
| <b>BFP42H1<sup>7/8</sup>*</b> | Polyester Resin   | Holes in Back | Gray  | .46 (.68)               |
| <b>BFV42H1<sup>7/8</sup>*</b> | Vinyl Ester Resin | Holes in Back | Beige | .46 (.68)               |
| <b>BFP42SH*</b>               | Polyester Resin   | Slots in Back | Gray  | .47 (.70)               |
| <b>BFV42SH*</b>               | Vinyl Ester Resin | Slots in Back | Beige | .47 (.70)               |



\* Insert -10 for 10'-0" (3.05 m) length or -20 for 20'-0" (6.09 m) length

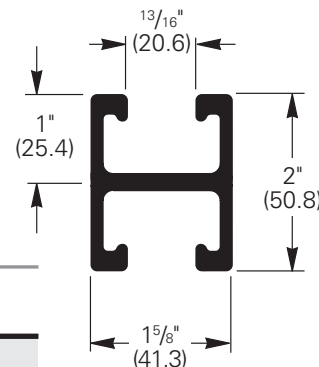
## BFP42A BFV42A

- Channel lengths: 10 Ft. (3.05 m) and 20 Ft. (6.09 m)
- Fiberglass strut meets specification of ASTM D-4385 Levels III and IV.



**BFP42A  
BFV42A  
Solid Back to Back**

| Part No.       | Material          | Description  | Color | Weight<br>Lbs./ft. kg/m |
|----------------|-------------------|--------------|-------|-------------------------|
| <b>BFP42A*</b> | Polyester Resin   | Back To Back | Gray  | .85 (1.26)              |
| <b>BFV42A*</b> | Vinyl Ester Resin | Back To Back | Beige | .85 (1.26)              |



\* Insert -10 for 10'-0" (3.05 m) length or -20 for 20'-0" (6.09 m) length

Published design loads on page 229 are based on usage at 70°F (21°C) and must be reduced for continuous exposure to higher temperatures. Refer to the chart below for high temperature applications.

## Field Cutting Sealant Kits

### RSK010

- Pint Sealing Kit (473 cm<sup>3</sup>) includes sealant and brush applicator
- Seals exposed fibers after field cutting
- UV resistant



| Temperature  | Design Load Multiplier |
|--------------|------------------------|
| 75°F (24°C)  | 100%                   |
| 100°F (38°C) | 90%                    |
| 125°F (52°C) | 78%                    |
| 150°F (66°C) | 68%                    |
| 175°F (79°C) | 60%                    |
| 200°F (93°C) | 52%                    |

APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATORY PROTECTION DEVICE SHOULD BE WORN WHEN FIELD CUTTING OR GRINDING FIBERGLASS.

Reference page 224 for general fitting specifications.

## Beam Loading Data for Glass Reinforced Polyester Resin

| Beam Span |        | Part No. | Maximum Allowable Beam Load |         | Deflection @ Maximum Allowable Beam Load |          | Allowable Load @ Deflection = |        |            |        |
|-----------|--------|----------|-----------------------------|---------|------------------------------------------|----------|-------------------------------|--------|------------|--------|
|           |        |          | Lbs.                        | kN      | in.                                      | mm       | 1/240 Span                    |        | 1/360 Span |        |
| in.       | mm     |          |                             |         |                                          |          | Lbs.                          | kN     | Lbs.       | kN     |
| 12"       | (305)  | BFP42    | 841                         | (3.74)  | 0.104                                    | (2.64)   | 403                           | (1.79) | 269        | (1.19) |
|           |        | BFP42A   | 2325                        | (10.34) | 0.060                                    | (1.52)   | 1948                          | (8.66) | 1299       | (5.78) |
| 24"       | (609)  | BFP42    | 420                         | (1.87)  | 0.417                                    | (10.59)  | 100                           | (0.44) | 66         | (0.29) |
|           |        | BFP42A   | 1161                        | (5.16)  | 0.239                                    | (6.07)   | 486                           | (2.16) | 323        | (1.43) |
| 36"       | (914)  | BFP42    | 279                         | (1.24)  | 0.938                                    | (23.82)  | 43                            | (0.19) | 29         | (0.13) |
|           |        | BFP42A   | 773                         | (3.44)  | 0.537                                    | (13.64)  | 214                           | (0.95) | 142        | (0.63) |
| 48"       | (1219) | BFP42    | 208                         | (0.92)  | 1.667                                    | (42.34)  | 23                            | (0.10) | 15         | (0.06) |
|           |        | BFP42A   | 578                         | (2.57)  | 0.955                                    | (24.26)  | 119                           | (0.53) | 78         | (0.34) |
| 60"       | (1524) | BFP42    | 166                         | (0.74)  | 2.604                                    | (66.14)  | 14                            | (0.06) | 8          | (0.03) |
|           |        | BFP42A   | 461                         | (2.05)  | 1.491                                    | (37.87)  | 74                            | (0.33) | 48         | (0.21) |
| 72"       | (1829) | BFP42    | 137                         | (0.61)  | 3.750                                    | (95.25)  | 8                             | (0.03) | 5          | (0.02) |
|           |        | BFP42A   | 383                         | (1.70)  | 2.148                                    | (54.56)  | 49                            | (0.22) | 31         | (0.14) |
| 96"       | (2438) | BFP42    | 101                         | (0.45)  | 6.667                                    | (169.34) | 3                             | (0.01) | —          | —      |
|           |        | BFP42A   | 284                         | (1.26)  | 3.818                                    | (96.98)  | 24                            | (0.10) | 14         | (0.04) |
| 120"      | (3048) | BFP42    | 79                          | (0.35)  | 10.417                                   | (264.59) | —                             | —      | —          | —      |
|           |        | BFP42A   | 224                         | (0.99)  | 5.966                                    | (151.53) | 11                            | (0.05) | 5          | (0.02) |

## Beam Loading Data for Glass Reinforced Vinyl Ester Resin

| Beam Span |        | Part No. | Maximum Allowable Beam Load |         | Deflection @ Maximum Allowable Beam Load |          | Allowable Load @ Deflection = |         |            |         |
|-----------|--------|----------|-----------------------------|---------|------------------------------------------|----------|-------------------------------|---------|------------|---------|
| in.       | mm     |          | Lbs.                        | kN      | in.                                      | mm       | 1/240 Span                    |         | 1/360 Span |         |
|           |        |          |                             |         |                                          |          | Lbs.                          | kN      | Lbs.       | kN      |
| 12"       | (305)  | BFV42    | 988                         | (4.39)  | 0.112                                    | (2.84)   | 440                           | (1.96)  | 293        | (1.30)  |
|           |        | BFV42A   | 2865                        | (12.74) | 0.063                                    | (1.60)   | 2278                          | (10.13) | 1518       | (6.75)  |
| 24"       | (609)  | BFV42    | 493                         | (2.19)  | 0.448                                    | (11.38)  | 109                           | (0.48)  | 73         | (0.32)  |
|           |        | BFV42A   | 1431                        | (6.36)  | 0.252                                    | (6.40)   | 568                           | (2.52)  | 378        | (1.68)  |
| 36"       | (914)  | BFV42    | 328                         | (1.46)  | 1.009                                    | (25.63)  | 48                            | (0.21)  | 31         | (0.14)  |
|           |        | BFV42A   | 953                         | (4.24)  | 0.566                                    | (14.37)  | 251                           | (1.11)  | 166        | (0.74)  |
| 48"       | (1219) | BFV42    | 245                         | (1.09)  | 1.793                                    | (45.54)  | 26                            | (0.11)  | 16         | (0.07)  |
|           |        | BFV42A   | 713                         | (3.17)  | 1.006                                    | (25.55)  | 139                           | (0.62)  | 92         | (0.41)  |
| 60"       | (1524) | BFV42    | 195                         | (0.87)  | 2.802                                    | (71.17)  | 15                            | (0.06)  | 9          | (0.04)  |
|           |        | BFV42A   | 569                         | (2.53)  | 1.572                                    | (39.93)  | 87                            | (0.38)  | 57         | (0.25)  |
| 72"       | (1829) | BFV42    | 162                         | (0.72)  | 4.035                                    | (102.49) | 9                             | (0.04)  | 5          | (0.02)  |
|           |        | BFV42A   | 473                         | (2.10)  | 2.264                                    | (57.50)  | 58                            | (0.26)  | 37         | (0.16)  |
| 96"       | (2438) | BFV42    | 120                         | (0.53)  | 7.173                                    | (182.19) | 3                             | (0.01)  | 1          | (0.004) |
|           |        | BFV42A   | 351                         | (1.56)  | 4.025                                    | (102.23) | 29                            | (0.13)  | 17         | (0.07)  |
| 120"      | (3048) | BFV42    | 94                          | (0.42)  | 11.207                                   | (284.66) | —                             | —       | —          | —       |
|           |        | BFV42A   | 278                         | (1.23)  | 6.288                                    | (159.71) | 14                            | (0.06)  | 7          | (0.03)  |

## Loading Information

### Beam Loads:

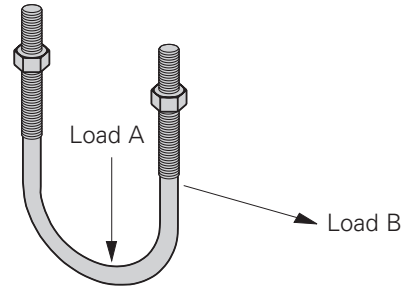
The above charts list the total allowable uniform load for various simple spans based on a minimum safety factor of 2. If the load is concentrated at center span, multiply the load from the above charts by 0.5 and the corresponding deflection by 0.8. All beams should be supported in a manner to prevent rotation at supports. Long, deep beams should be tied between supports to prevent twist. For channels with holes or slots use 90% of recommended load shown in channel loading chart.

Reference page 224 for general fitting specifications.

# Fiberglass

## BFV501 Series U-Bolts with Hex Nuts

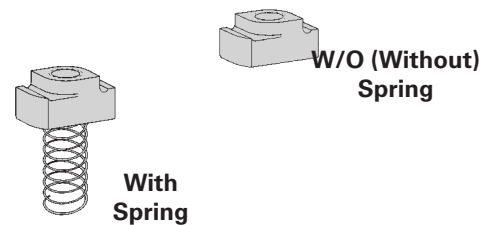
- Design Load Safety Factor of 3
- Load A: Straight down loading
- Load B: Side loading
- Inner surface of U-Bolt is flat to provide additional contact surface area
- Material: Glass reinforced polyurethane



| Part No.     | Nominal<br>Pipe Size<br>in. mm | Thread<br>Size | Design Load<br>A<br>Lbs. kN | Design Load<br>B<br>Lbs. kN | Maximum<br>Torque<br>in.-Lbs. N•m | Wt./C<br>Lbs. kg |
|--------------|--------------------------------|----------------|-----------------------------|-----------------------------|-----------------------------------|------------------|
| BFV501-1/2   | 1/2 (15)                       | 3/8"-16        | 300 (1.33)                  | 150 (.67)                   | 30 (3.4)                          | 3.5 (1.59)       |
| BFV501-3/4   | 3/4 (20)                       | 3/8"-16        | 300 (1.33)                  | 150 (.67)                   | 30 (3.4)                          | 3.9 (1.77)       |
| BFV501-1     | 1 (25)                         | 3/8"-16        | 300 (1.33)                  | 150 (.67)                   | 30 (3.4)                          | 4.4 (1.99)       |
| BFV501-1 1/4 | 1 1/4 (32)                     | 3/8"-16        | 300 (1.33)                  | 150 (.67)                   | 30 (3.4)                          | 4.8 (2.18)       |
| BFV501-1 1/2 | 1 1/2 (40)                     | 3/8"-16        | 300 (1.33)                  | 150 (.67)                   | 30 (3.4)                          | 5.2 (2.36)       |
| BFV501-2     | 2 (50)                         | 1/2"-13        | 600 (2.67)                  | 200 (.89)                   | 60 (6.8)                          | 7.7 (3.49)       |
| BFV501-2 1/2 | 2 1/2 (65)                     | 1/2"-13        | 600 (2.67)                  | 200 (.89)                   | 60 (6.8)                          | 10.2 (4.63)      |
| BFV501-3     | 3 (80)                         | 1/2"-13        | 600 (2.67)                  | 200 (.89)                   | 60 (6.8)                          | 12.6 (5.71)      |
| BFV501-3 1/2 | 3 1/2 (90)                     | 1/2"-13        | 600 (2.67)                  | 200 (.89)                   | 60 (6.8)                          | 15.1 (6.85)      |
| BFV501-4     | 4 (100)                        | 1/2"-13        | 600 (2.67)                  | 200 (.89)                   | 60 (6.8)                          | 17.6 (7.98)      |

## Channel Nuts

- Design Load Safety Factor of 3
- Overall Nut Height 5/8" (15.9)
- Maximum torque and slip resistance loads shown are when using stainless steel bolts. When using fiberglass hardware use Max. Torque for fiberglass bolts, and multiply slip resistance loads by .14 for 3/8"-16 and .60 for 1/2"-13 thread size.
- Material: Glass reinforced polyurethane
- Spring Material: Zinc plated steel



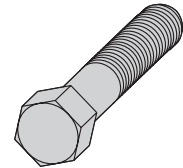
| Part No.<br>With Spring | Part No.<br>W/O Spring | Thread<br>Size | Pull-Out<br>Lbs. kN | Slip Resistance<br>Lbs. N | Max. Torque<br>in.-Lbs. N•m | Wt./C<br>Lbs. kg |
|-------------------------|------------------------|----------------|---------------------|---------------------------|-----------------------------|------------------|
| BFV-224                 | BFV-224WO              | 1/4"-20        | 300 (1.33)          | 150 (.67)                 | 200 (22.6)                  | 2.4 (1.09)       |
| BFV-223                 | BFV-223WO              | 5/16"-18       | 300 (1.33)          | 150 (.67)                 | 200 (22.6)                  | 2.5 (1.13)       |
| BFV-228                 | BFV-228WO              | 3/8"-16        | 300 (1.33)          | 150 (.67)                 | 200 (22.6)                  | 2.3 (1.04)       |
| BFV-225                 | BFV-225WO              | 1/2"-13        | 300 (1.33)          | 150 (.67)                 | 200 (22.6)                  | 2.1 (0.95)       |

Reference page 224 for general fitting specifications.

## BFVHHCS Hex Head Cap Screws

- Design Load Safety Factor of 3
- Material: Glass reinforced polyurethane

| Part No.                                 | Thread Size         | Design Load (in tension) |        | Max. Torque |        | Wt./C |        |
|------------------------------------------|---------------------|--------------------------|--------|-------------|--------|-------|--------|
|                                          |                     | Lbs.                     | kN     | in.-Lbs.    | N•m    | Lbs.  | kg     |
| BFVHHCS $\frac{5}{16}$ x 1               | $\frac{5}{16}$ "-18 | 190                      | (.84)  | 30          | (3.4)  | .4    | (.18)  |
| BFVHHCS $\frac{5}{16}$ x 1 $\frac{1}{4}$ | $\frac{5}{16}$ "-18 | 190                      | (.84)  | 30          | (3.4)  | .5    | (.23)  |
| BFVHHCS $\frac{5}{16}$ x 1 $\frac{1}{2}$ | $\frac{5}{16}$ "-18 | 190                      | (.84)  | 30          | (3.4)  | .6    | (.27)  |
| BFVHHCS $\frac{5}{16}$ x 2               | $\frac{5}{16}$ "-18 | 190                      | (.84)  | 30          | (3.4)  | .8    | (.36)  |
| BFVHHCS $\frac{3}{8}$ x 1                | $\frac{3}{8}$ "-16  | 300                      | (1.33) | 45          | (5.1)  | .9    | (.41)  |
| BFVHHCS $\frac{3}{8}$ x 1 $\frac{1}{4}$  | $\frac{3}{8}$ "-16  | 300                      | (1.33) | 45          | (5.1)  | 1.1   | (.50)  |
| BFVHHCS $\frac{3}{8}$ x 1 $\frac{1}{2}$  | $\frac{3}{8}$ "-16  | 300                      | (1.33) | 45          | (5.1)  | 1.3   | (.59)  |
| BFVHHCS $\frac{3}{8}$ x 2                | $\frac{3}{8}$ "-16  | 300                      | (1.33) | 45          | (5.1)  | 1.3   | (.59)  |
| BFVHHCS $\frac{3}{8}$ x 2 $\frac{1}{2}$  | $\frac{3}{8}$ "-16  | 300                      | (1.33) | 45          | (5.1)  | 1.5   | (.68)  |
| BFVHHCS $\frac{1}{2}$ x 1                | $\frac{1}{2}$ "-13  | 490                      | (2.18) | 110         | (12.4) | 1.4   | (.63)  |
| BFVHHCS $\frac{1}{2}$ x 1 $\frac{1}{4}$  | $\frac{1}{2}$ "-13  | 490                      | (2.18) | 110         | (12.4) | 1.8   | (.81)  |
| BFVHHCS $\frac{1}{2}$ x 1 $\frac{1}{2}$  | $\frac{1}{2}$ "-13  | 490                      | (2.18) | 110         | (12.4) | 2.2   | (1.00) |
| BFVHHCS $\frac{1}{2}$ x 2                | $\frac{1}{2}$ "-13  | 490                      | (2.18) | 110         | (12.4) | 3.0   | (1.36) |
| BFVHHCS $\frac{1}{2}$ x 2 $\frac{1}{2}$  | $\frac{1}{2}$ "-13  | 490                      | (2.18) | 110         | (12.4) | 3.7   | (1.68) |
| BFVHHCS $\frac{1}{2}$ x 3                | $\frac{1}{2}$ "-13  | 490                      | (2.18) | 110         | (12.4) | 4.5   | (2.04) |

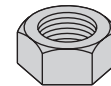


Fiberglass Materials

## BFVHN Hex Nuts

- $\frac{3}{4}$ " & 1" sizes are available. Contact inside sales for details
- Material: Glass reinforced polyurethane

| Part No.             | Thread Size         | Nut Thickness   |        | Wt./C |       |
|----------------------|---------------------|-----------------|--------|-------|-------|
|                      |                     | in.             | mm     | Lbs.  | kg    |
| BFVHN $\frac{5}{16}$ | $\frac{5}{16}$ "-18 | $\frac{17}{64}$ | (6.7)  | .2    | (.09) |
| BFVHN $\frac{3}{8}$  | $\frac{3}{8}$ "-16  | $\frac{21}{64}$ | (8.3)  | .3    | (.13) |
| BFVHN $\frac{1}{2}$  | $\frac{1}{2}$ "-13  | $\frac{7}{16}$  | (11.1) | .7    | (.32) |
| BFVHN $\frac{5}{8}$  | $\frac{5}{8}$ "-11  | $\frac{35}{64}$ | (13.9) | 1.4   | (.63) |



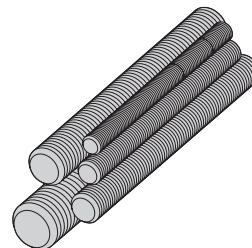
Reference page 224 for general fitting specifications.

# Fiberglass

## BFVATR All Threaded Rod

- Design Load Safety Factor of 3
- Design Load can be increased by 40% if a second ATR nut is used.
- Use ATR nuts in place of hex nuts with  $\frac{3}{8}$ "-16 and  $\frac{1}{2}$ "-13 threaded rod in order to obtain minimum required thread engagement of  $\frac{17}{32}$ " (13.5) to obtain design load shown below.
- Material: Glass reinforced vinyl ester

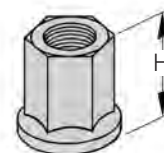
| Part No.                   | Thread Size        | Design Load<br>(in tension) |        | Max. Torque |        | Wt./Ft. |       |
|----------------------------|--------------------|-----------------------------|--------|-------------|--------|---------|-------|
|                            |                    | Lbs.                        | kN     | in.-Lbs.    | N•m    | Lbs.    | kg    |
| BFVATR $\frac{3}{8}$ x 48" | $\frac{3}{8}$ "-16 | 350                         | (1.55) | 48          | (5.4)  | .08     | (.04) |
| BFVATR $\frac{1}{2}$ x 48" | $\frac{1}{2}$ "-13 | 650                         | (2.89) | 96          | (10.8) | .13     | (.06) |
| BFVATR $\frac{5}{8}$ x 48" | $\frac{5}{8}$ "-11 | 1000                        | (4.45) | 192         | (21.7) | .21     | (.09) |



## BFVATRHN Threaded Rod Nuts

- ATR Nut is required with  $\frac{3}{8}$ "-16 and  $\frac{1}{2}$ "-13 ATR to provide additional thread engagement which is critical to ATR load carrying capacity.
- Material: Glass reinforced polyurethane

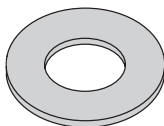
| Part No.               | Thread Size        | H             |      | Wt./C |       |
|------------------------|--------------------|---------------|------|-------|-------|
|                        |                    | in.           | mm   | Lbs.  | kg    |
| BFVATRHN $\frac{3}{8}$ | $\frac{3}{8}$ "-16 | $\frac{3}{4}$ | (19) | .8    | (.36) |
| BFVATRHN $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | $\frac{7}{8}$ | (22) | 1.7   | (.77) |



## BFVFW Flat Washers

- Material: PVC

| Part No.            | Hole Size in. | Wt./C |       |
|---------------------|---------------|-------|-------|
|                     |               | Lbs.  | kg    |
| BFVFW $\frac{3}{8}$ | $\frac{3}{8}$ | .5    | (.22) |
| BFVFW $\frac{1}{2}$ | $\frac{1}{2}$ | .5    | (.22) |
| BFVFW $\frac{5}{8}$ | $\frac{5}{8}$ | .5    | (.22) |
| BFVFW $\frac{3}{4}$ | $\frac{3}{4}$ | .5    | (.22) |
| BFVFW 1             | 1             | .5    | (.22) |



## BFV655 Series Rod Couplings

- Material: Glass reinforced polyurethane

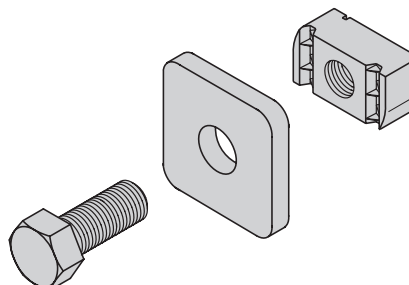
| Part No.              | Thread Size        | Wt./C |        |
|-----------------------|--------------------|-------|--------|
|                       |                    | Lbs.  | kg     |
| BFV655- $\frac{3}{8}$ | $\frac{3}{8}$ "-16 | 7.4   | (3.35) |
| BFV655- $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | 11.3  | (5.12) |
| BFV655- $\frac{5}{8}$ | $\frac{5}{8}$ "-11 | 16.7  | (7.57) |



## BFVSL Series Stop-Lock Kits

- Material: Glass Reinforced Polyurethane

| Part No.             | Thread Size        | Wt./C |        |
|----------------------|--------------------|-------|--------|
|                      |                    | Lbs.  | kg     |
| BFVSL- $\frac{3}{8}$ | $\frac{3}{8}$ "-16 | 7.4   | (3.35) |
| BFVSL- $\frac{1}{2}$ | $\frac{1}{2}$ "-13 | 11.3  | (5.12) |

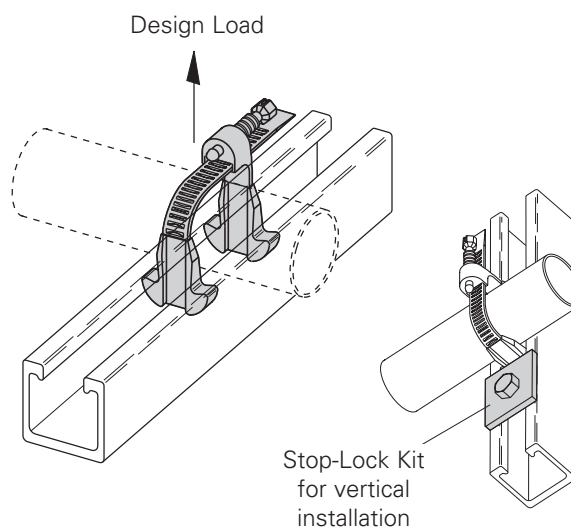


Reference page 224 for general fitting specifications.



## BFV100 thru BFV300 Adjustable Pipe Clamps

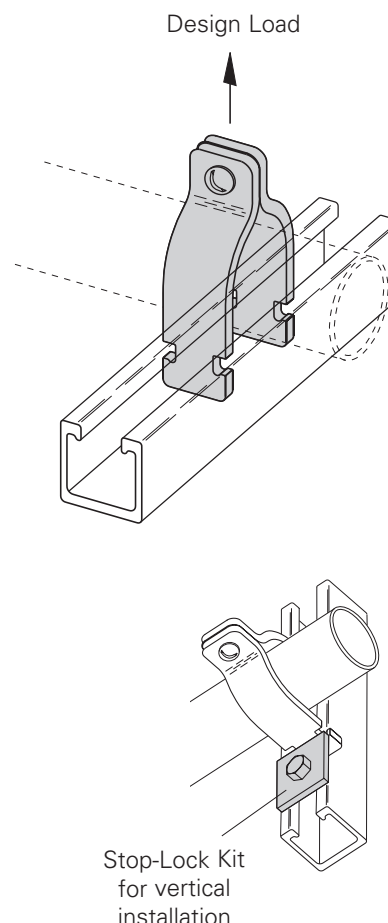
- Completely Non-Metallic
- Adjustable to U.S. & Metric pipe diameters
- Fits OD Sizes  $\frac{3}{4}$ " (19.0) to  $3\frac{1}{2}$ " (88.9)
- Easy To Install
- No special tools required
- Design Load Safety Factor of 3
- Material: Glass reinforced polyurethane
- Not recommended for vertical installation without additional Stop-Lock Kit. Kit includes one square washer, channel nut and hex head cap screw. Order (Stop-Lock Kit on page 232) BFVSL- $\frac{3}{8}$  for  $\frac{3}{8}$ "-16 hardware or BFVSL- $\frac{1}{2}$  for  $\frac{1}{2}$ "-13 hardware. Mount kit below clamp when used in vertical strut to prevent clamp slipping.



| Part No.      | Nominal Pipe Sizes             |           | Pipe O.D. Range |               | Design Load |       | Max. Torque |        |
|---------------|--------------------------------|-----------|-----------------|---------------|-------------|-------|-------------|--------|
|               | in.                            | mm        | in.             | mm            | Lbs.        | kN    | in.-Lbs.    | N•m    |
| <b>BFV100</b> | $\frac{1}{2}$ - $1\frac{1}{2}$ | (15 - 40) | .75 - 1.90      | (21.3 - 48.3) | 135         | (.60) | 10          | (1.13) |
| <b>BFV200</b> | $1\frac{1}{2}$ - 2             | (40 - 51) | 1.90 - 2.37     | (48.3 - 60.3) | 135         | (.60) | 36          | (4.07) |
| <b>BFV300</b> | $2\frac{1}{2}$ - 3             | (63 - 76) | 2.87 - 3.50     | (73.0 - 88.9) | 145         | (.64) | 36          | (4.07) |

## BFV2000 Series Non-Metallic Pipe Clamps

- For rigid and PVC conduit.
- Standard hardware includes slotted round head machine screw and square nut in 316 stainless steel
- Design Load Safety Factor of 3
- Material: Glass reinforced PPO
- Not recommended for vertical installation without additional Stop-Lock Kit. Kit includes one square washer, channel nut and hex head cap screw. Order (Stop-Lock Kit on page 232) BFVSL- $\frac{3}{8}$  for  $\frac{3}{8}$ "-16 hardware or BFVSL- $\frac{1}{2}$  for  $\frac{1}{2}$ "-13 hardware. Mount kit below clamp when used in vertical strut to prevent clamp slipping.
- If non-metallic hardware is required, add N to the part number.  
**Example: BFV2008N**



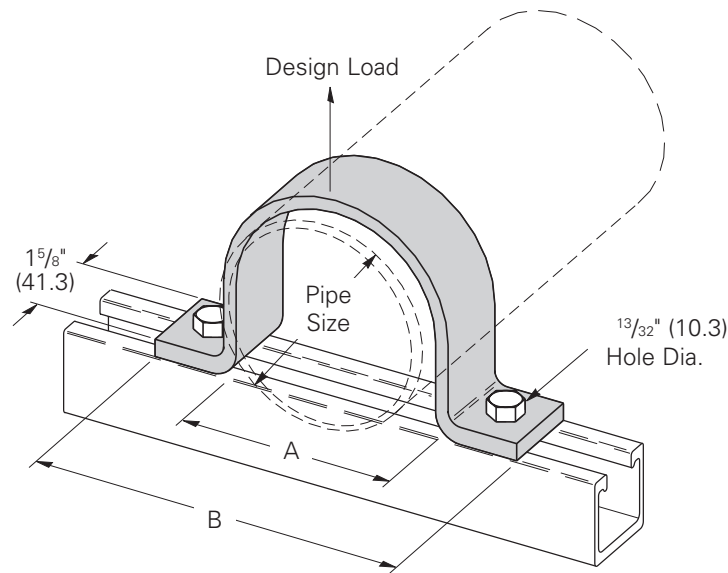
| Part No.       | Nominal Pipe Size |       | Design Load |        | Maximum Torque |
|----------------|-------------------|-------|-------------|--------|----------------|
|                | in.               | mm    | Lbs.        | kN     | in.-Lbs. N•m   |
| <b>BFV2008</b> | $\frac{1}{2}$     | (15)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2009</b> | $\frac{3}{4}$     | (20)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2010</b> | 1                 | (25)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2011</b> | $1\frac{1}{4}$    | (32)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2012</b> | $1\frac{1}{2}$    | (40)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2013</b> | 2                 | (50)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2014</b> | $2\frac{1}{2}$    | (65)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2015</b> | 3                 | (80)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2016</b> | $3\frac{1}{2}$    | (90)  | 300         | (1.33) | 10 (1.13)      |
| <b>BFV2017</b> | 4                 | (100) | 300         | (1.33) | 10 (1.13)      |

Reference page 224 for general fitting specifications.

# Fiberglass

## BFP2400 Series 2-Hole Pipe Clamps

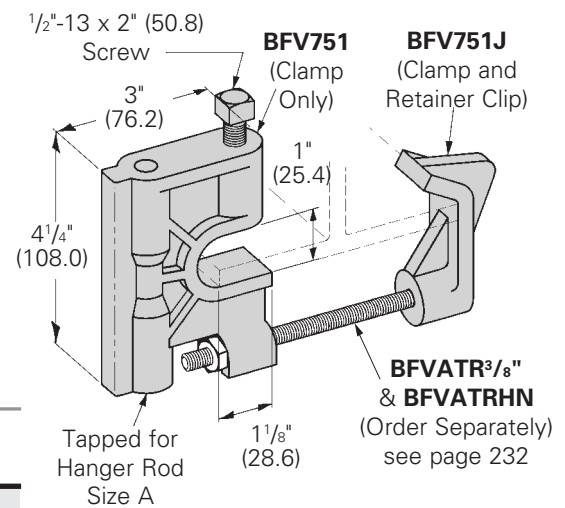
- Design Load Safety Factor of 3
- Material: Glass reinforced polyester



| Part No.         | Nominal Pipe Size |       | A                             |       | B                             |       | Design Load |        |
|------------------|-------------------|-------|-------------------------------|-------|-------------------------------|-------|-------------|--------|
|                  | in.               | mm    | in.                           | mm    | in.                           | mm    | Lbs.        | kN     |
| <b>BFP2400-2</b> | 2                 | (50)  | 2 <sup>3</sup> / <sub>8</sub> | (60)  | 5 <sup>1</sup> / <sub>2</sub> | (140) | 115         | (0.51) |
| <b>BFP2400-3</b> | 3                 | (80)  | 3 <sup>1</sup> / <sub>2</sub> | (89)  | 6 <sup>3</sup> / <sub>4</sub> | (171) | 130         | (0.58) |
| <b>BFP2400-4</b> | 4                 | (100) | 4 <sup>1</sup> / <sub>2</sub> | (114) | 7 <sup>3</sup> / <sub>4</sub> | (197) | 150         | (0.66) |
| <b>BFP2400-6</b> | 6                 | (150) | 6 <sup>5</sup> / <sub>8</sub> | (168) | 10                            | (254) | 150         | (0.66) |

## BFV751 & BFV751J Beam Clamp

- Design Load Safety Factor of 3
- BFV751J (clip included) must be used when installed on tapered flange beams.
- Material: Glass reinforced polyurethane
- Setscrew material: Stainless Steel 316 ASTM F593 Group 2, S4

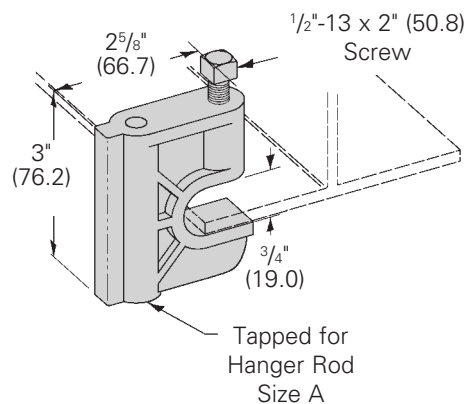


| Part No.           | For Hanger Rod Size A | Design Load Lbs. kN | Torque ft.-Lbs. N•m |
|--------------------|-----------------------|---------------------|---------------------|
| <b>BFV751-3/8</b>  | 3/8"-16               | 500 (2.22)          | 10 (13)             |
| <b>BFV751J-3/8</b> | 3/8"-16               | 500 (2.22)          | 10 (13)             |
| <b>BFV751-1/2</b>  | 1/2"-13               | 500 (2.22)          | 10 (13)             |
| <b>BFV751J-1/2</b> | 1/2"-13               | 500 (2.22)          | 10 (13)             |
| <b>BFV751-5/8</b>  | 5/8"-11               | 500 (2.22)          | 10 (13)             |
| <b>BFV751J-5/8</b> | 5/8"-11               | 500 (2.22)          | 10 (13)             |

Reference page 224 for general fitting specifications.

## BFV755 Beam Clamp

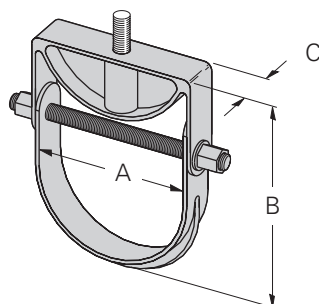
- Design Load Safety Factor of 3
- Material: Glass reinforced polyurethane
- Setscrew material: Stainless Steel 316 ASTM F593 Group 2, S4



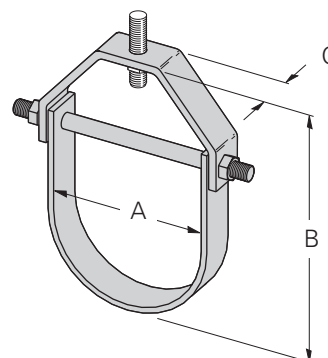
| Part No.   | For Hanger Rod Size A | Design Load<br>Lbs. kN | Torque<br>ft.-Lbs. N•m |
|------------|-----------------------|------------------------|------------------------|
| BFV755-3/8 | 3/8"-16               | 400 (1.78)             | 10 (13)                |
| BFV755-1/2 | 1/2"-13               | 400 (1.78)             | 10 (13)                |

## BFV3104 Series Clevis Hangers

- Design Load Safety Factor of 3 at 120°F (49°C).
- Insulation may be required at higher temperatures.
- Order hanger rod and nuts separately.
- Material: Glass reinforced polyurethane for BFV3104-1 thru BFV3104-6
- Material: Glass reinforced polyester & vinyl ester for BFV3104-8 thru BFV3104-12



BFV3104-1 thru BFV3104-6



BFV3104-8 thru BFV3104-12

| Part No.            | Nominal Pipe Size |          | A     |       | B       |       | C     |      | Hanger Rod Size | Design Load |        |
|---------------------|-------------------|----------|-------|-------|---------|-------|-------|------|-----------------|-------------|--------|
|                     | in.               | mm       | in.   | mm    | in.     | mm    | in.   | mm   |                 | Lbs.        | kN     |
| BFV3104-1           | 1                 | (50)     | 1 1/2 | (38)  | 4 1/4   | (108) | 1 1/4 | (32) | 1/2"-13         | 670         | (2.98) |
| BFV3104-1 1/2       | 1 1/2             | (65)     | 2     | (51)  | 5 1/8   | (130) | 1 1/4 | (32) | 1/2"-13         | 670         | (2.98) |
| BFV3104-2           | 2                 | (50)     | 2 1/2 | (63)  | 6 1/2   | (165) | 1 1/4 | (32) | 1/2"-13         | 730         | (3.25) |
| BFV3104-2 1/2, 3, 4 | 2 1/2-4           | (65-100) | 5 1/8 | (130) | 10      | (254) | 1 1/2 | (38) | 1/2"-13         | 1150        | (5.11) |
| BFV3104-6           | 6                 | (150)    | 6 3/4 | (171) | 12 5/16 | (313) | 2     | (51) | 1/2"-13         | 1170        | (5.20) |

| Part No.   | Nominal Pipe Size |       | A      |       | B      |       | C   |       | Hanger Rod Size | Design Load |        |
|------------|-------------------|-------|--------|-------|--------|-------|-----|-------|-----------------|-------------|--------|
|            | in.               | mm    | in.    | mm    | in.    | mm    | in. | mm    |                 | Lbs.        | kN     |
| BF*3104-8  | 8                 | (200) | 9 1/4  | (235) | 16 5/8 | (422) | 3   | (76)  | 5/8"-11         | 350         | (1.55) |
| BF*3104-10 | 10                | (250) | 11 3/8 | (289) | 19 7/8 | (505) | 4   | (101) | 5/8"-11         | 450         | (2.01) |
| BF*3104-12 | 12                | (300) | 13 1/2 | (343) | 22 3/8 | (568) | 5   | (127) | 5/8"-11         | 600         | (2.69) |

\*Specify P for polyester or V for Vinyl ester.

Reference page 224 for general fitting specifications.

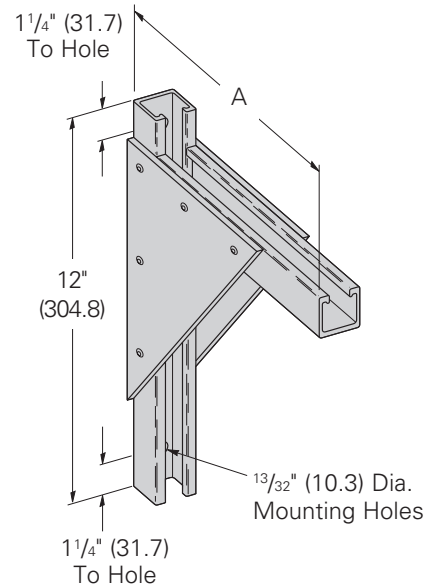
# Fiberglass

## BF\*409 Series Brackets 6" (152mm) to 24" (609mm) Long

- Design Load Safety Factor of 3 based on uniform loading
- MH1 - From top of bracket to center of mounting hole
- MH2 - From bottom of bracket to center of mounting hole

| Part No.  | A   |       | Design Load |        |
|-----------|-----|-------|-------------|--------|
|           | in. | mm    | Lbs.        | kN     |
| BF*409-6  | 10  | (250) | 1400        | (6.22) |
| BF*409-9  | 13  | (330) | 1000        | (4.45) |
| BF*409-12 | 16  | (406) | 800         | (3.56) |
| BF*409-18 | 22  | (559) | 675         | (3.00) |
| BF*409-24 | 28  | (711) | 450         | (2.00) |

\* Insert P for Glass Reinforced Polyester Resin or V for Glass Reinforced Vinyl Ester Resin

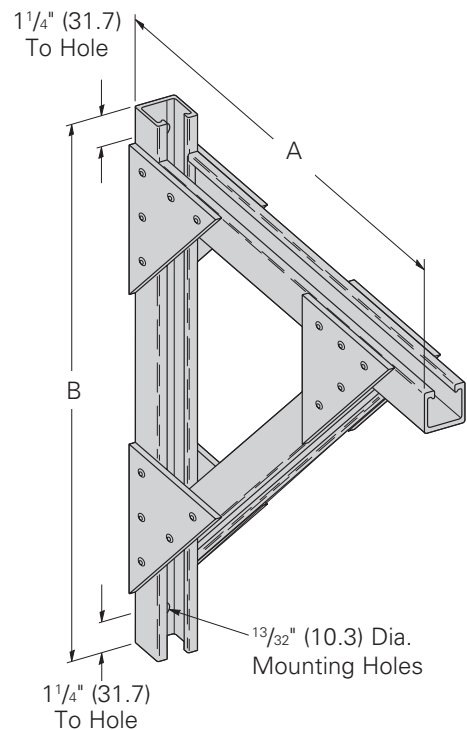


## BF\*494 Series Brackets 24" (609mm) to 36" (914mm) Long

- Design Load Safety Factor of 3 based on uniform loading
- MH1 - From top of bracket to center of mounting hole
- MH2 - From bottom of bracket to center of mounting hole
- Material: Glass reinforced vinyl ester or polyester

| Part No.  | A   |        | B   |       | Design Load |        |
|-----------|-----|--------|-----|-------|-------------|--------|
|           | in. | mm     | in. | mm    | Lbs.        | kN     |
| BF*494-24 | 28  | (711)  | 23  | (584) | 750         | (3.33) |
| BF*494-30 | 34  | (863)  | 26  | (660) | 750         | (3.33) |
| BF*494-36 | 40  | (1016) | 29  | (736) | 750         | (3.33) |

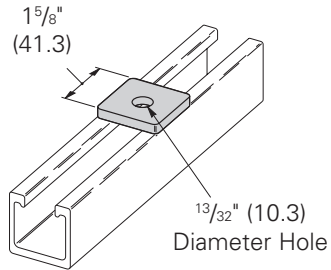
\* Insert P for glass reinforced polyester resin or V for glass reinforced vinyl ester resin



Reference page 224 for general fitting specifications.

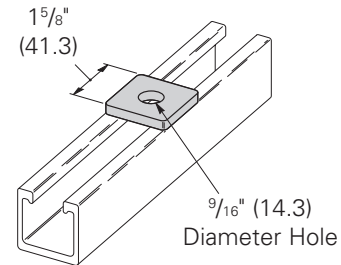
## BFV201 Square Washer for $\frac{3}{8}$ " bolt

- Material: Injection molded glass reinforced polyurethane



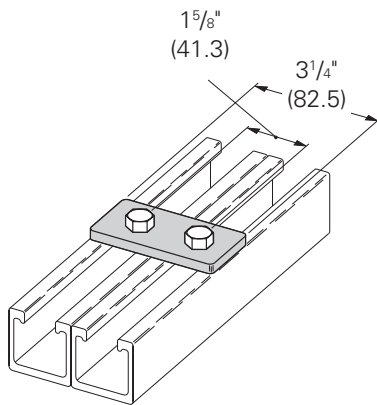
## BFV202 Square Washer for $\frac{1}{2}$ " bolt

- Material: Injection molded glass reinforced polyurethane



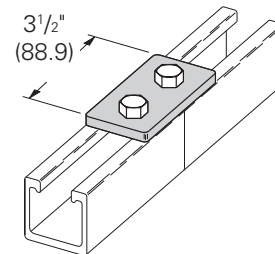
## BFV340 Two Hole Flat Plate

- Material: Injection molded glass reinforced polyurethane



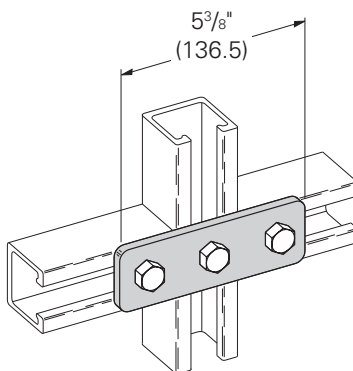
## BFV129 Two Hole Splice Plate

- Material: Injection molded glass reinforced polyurethane



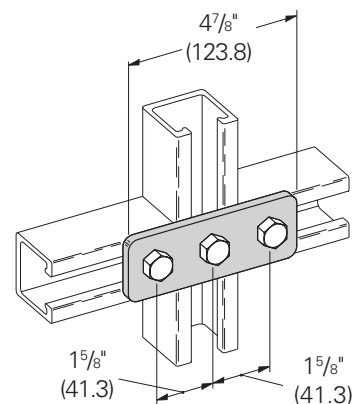
## BFV141 Three Hole Flat Plate

- Material: Injection molded glass reinforced polyurethane



## BFV557 Three Hole Flat Plate

- Material: Injection molded glass reinforced polyurethane

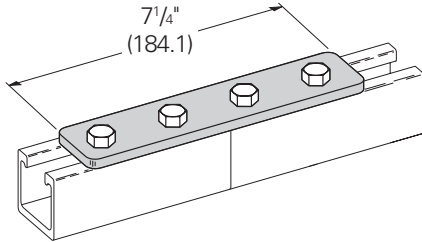


Reference page 224 for general fitting specifications.

# Fiberglass

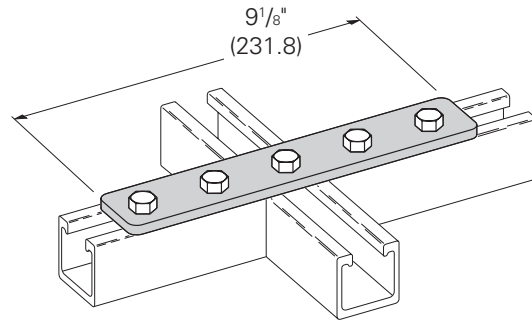
## BFV341 Four Hole Splice Plate

- Material: Injection molded glass reinforced polyurethane



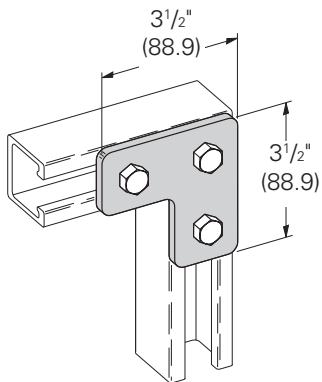
## BFV342 Five Hole Flat Plate

- Material: Injection molded glass reinforced polyurethane



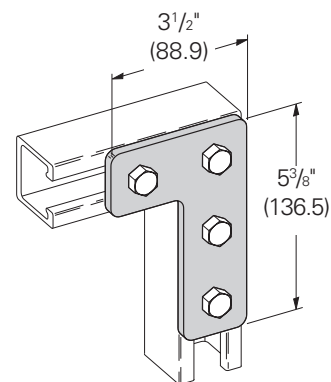
## BFV140 Three Hole Flat Corner Plate

- Material: Injection molded glass reinforced polyurethane



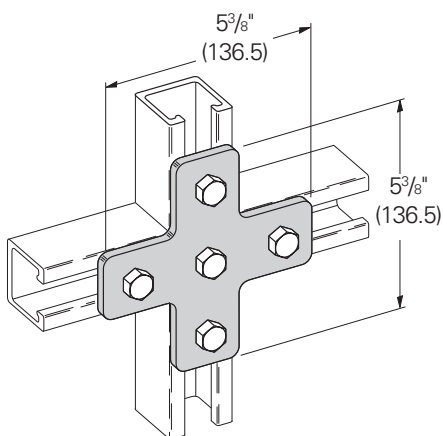
## BFV143 Four Hole Flat Corner Plate

- Material: Injection molded glass reinforced polyurethane



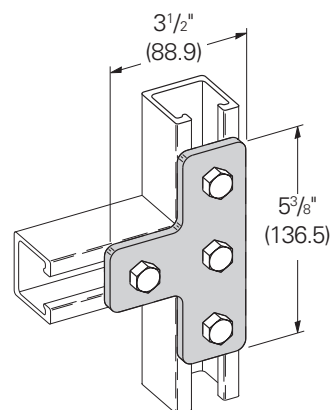
## BFV132 Five Hole Flat Cross Plate

- Material: Injection molded glass reinforced polyurethane



## BFV133 Four Hole Flat Tee Plate

- Material: Injection molded glass reinforced polyurethane

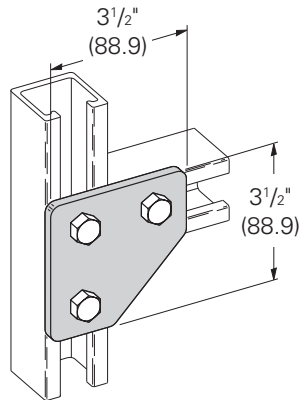


Reference page 224 for general fitting specifications.



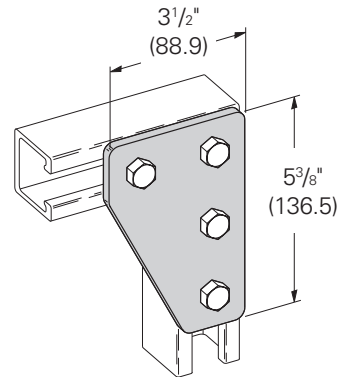
## BFV135 Three Hole Flat Gusset Corner Plate

- Material: Injection molded glass reinforced polyurethane



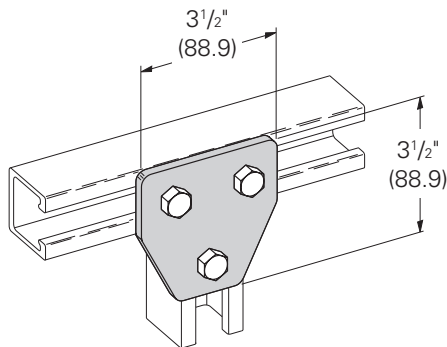
## BFV142 Four Hole Flat Gusset Corner Plate

- Material: Injection molded glass reinforced polyurethane



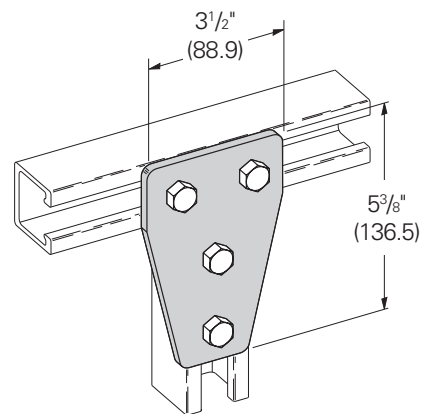
## BFV337 Three Hole Flat Gusset Tee Plate

- Material: Injection molded glass reinforced polyurethane



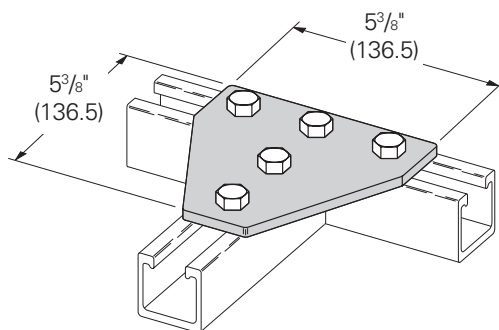
## BFV136 Four Hole Flat Gusset Tee Plate

- Material: Injection molded glass reinforced polyurethane



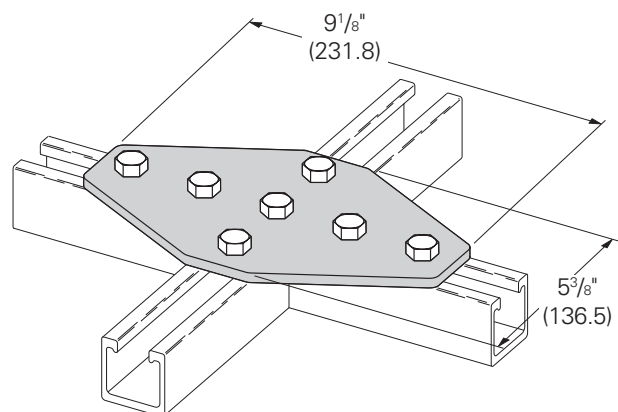
## BFV532 Five Hole Flat Gusset Tee Plate

- Material: Injection molded glass reinforced polyurethane



## BFV334 Seven Hole Flat Gusset Cross Plate

- Material: Injection molded glass reinforced polyurethane

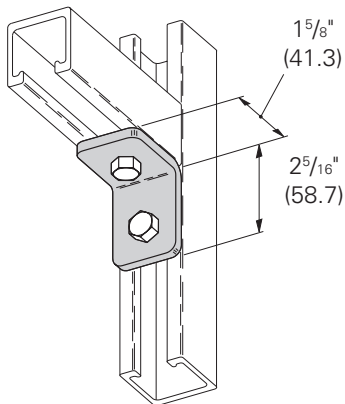


Reference page 224 for general fitting specifications.

# Fiberglass

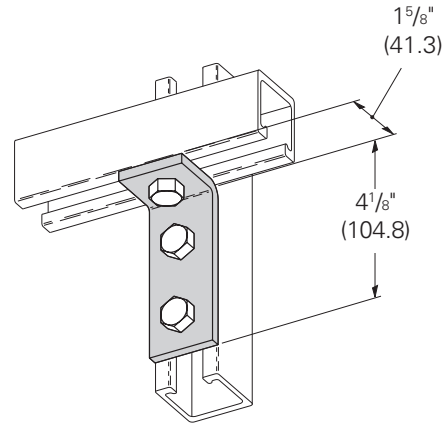
## BFV101 Two Hole 90° Corner Angle

- Material: Injection molded glass reinforced polyurethane



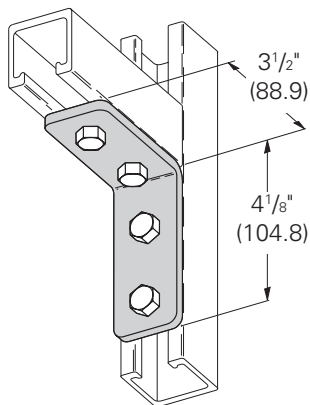
## BFV103 Three Hole 90° Corner Angle

- Material: Injection molded glass reinforced polyurethane



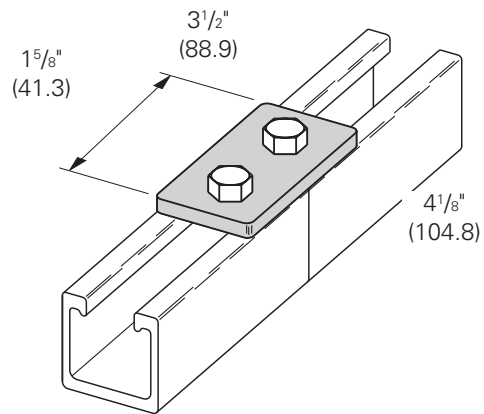
## BFV104 Four Hole 90° Corner Angle

- Material: Injection molded glass reinforced polyurethane



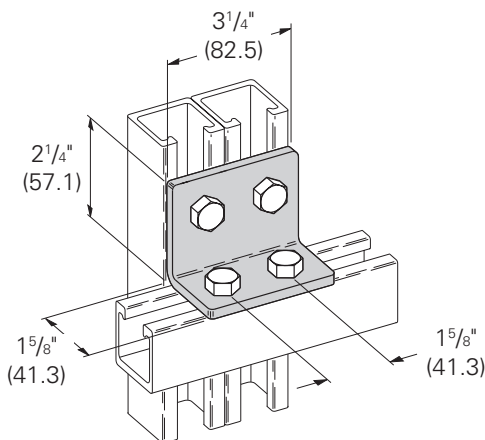
## BFV118 Four Hole 90° Gussetted Shelf Angle

- Material: Injection molded glass reinforced polyurethane



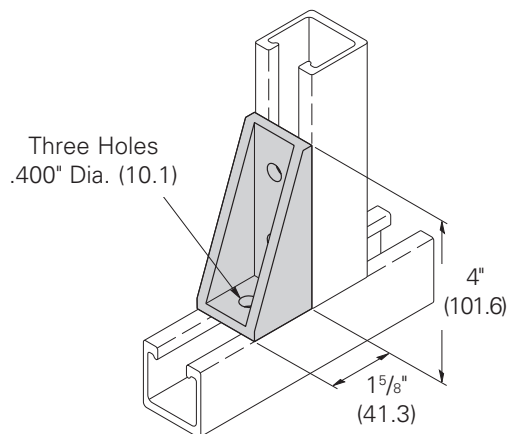
## BFV558 Four Hole 90° Corner Angle

- Material: Injection molded glass reinforced polyurethane



## BFV371-2G Three Hole 90° Gussetted Corner Angle

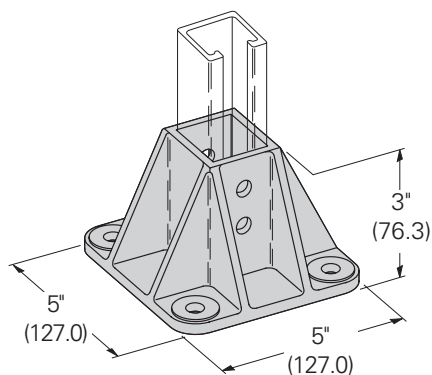
- Material: Injection molded glass reinforced polyurethane



Reference page 224 for general fitting specifications.

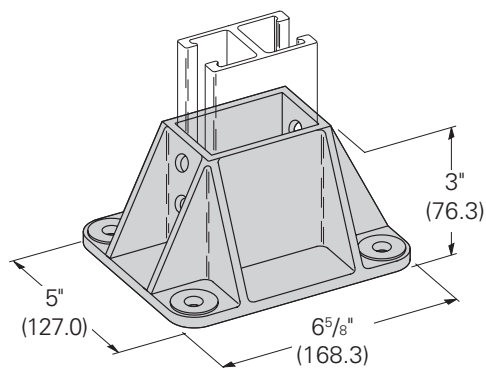
## BFV280SQ Post Base for BF\*22

- Material: Glass reinforced polyurethane



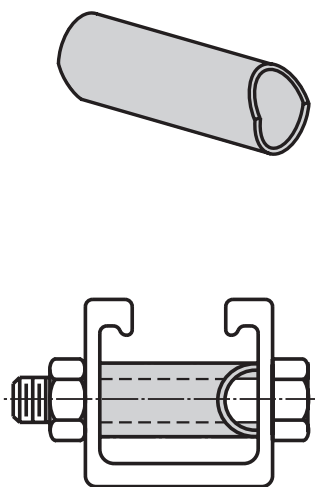
## BFV281SQ Post Base for BF\*22A

- Material: Glass reinforced polyurethane



## BFV650 Channel Spacer

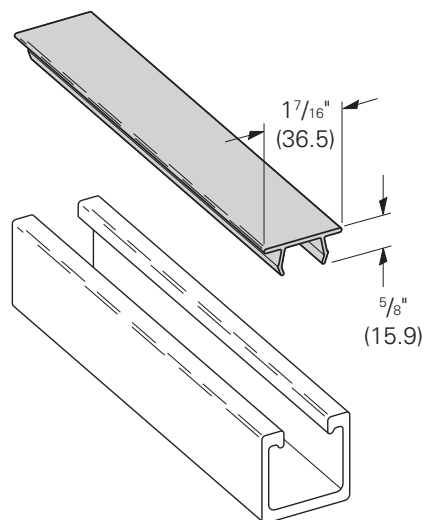
- Spacer I.D. accommodates 3/8" rod or bolts.
- Material: Polyurethane



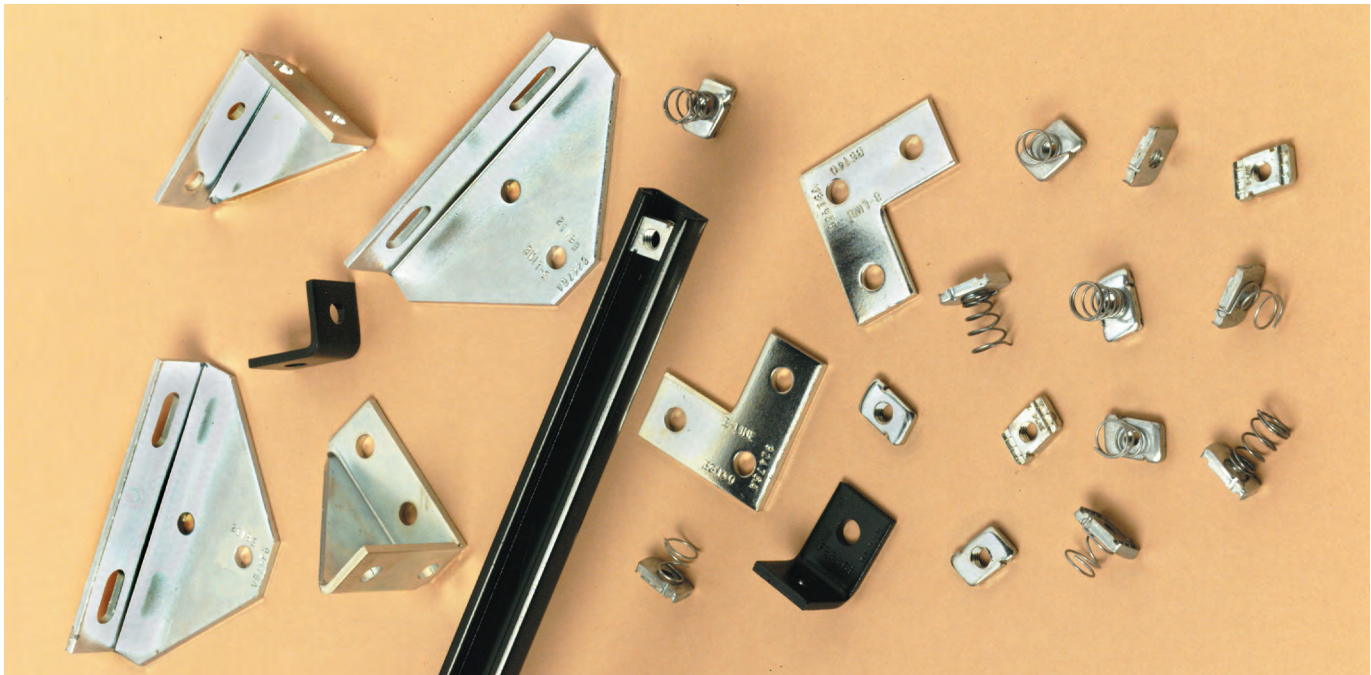
Used when attaching fittings to side walls of channel. This channel spacer prevents wall compression in heavy load conditions.

## B217P Plastic Closure Strip

- Available in 10 Ft. (3.05 m) lengths.
- Material: PVC



Reference page 224 for general fitting specifications.



Our mini channels and fittings provide for an economical method of supporting light load requirements on a strut system.

**Channel**

Channels are cold formed on our modern rolling mills from 18 Ga. (1.2 mm) low carbon steel strips plain steel (ASTM A1008 33,000 PSI min. yield) and pre-galvanized steel strips, (ASTM A653 33,000 PSI min. yield). A continuous slot with inturned lips provides the ability to make attachments at any point. Channel combinations are made with new state of the art, high-tech welding equipment.

**Lengths**

Standard lengths are 10' (3.05 m) and 20' (6.09 m) for B62 series, and 10' (3.05 m) for B72 series. Custom lengths are available.

**Fittings**

Mini fittings are formed from hot rolled pickled and oiled strip or sheet steel (ASTM A1011, HSLAS, Grade 50, Class1). The following dimensions apply to all fittings except as noted on the drawings:

**Hole Size** –  $\frac{9}{32}$ " (7.14 mm) Dia.

**Hole Spacing** –  $\frac{13}{32}$ " (10.3 mm) from end and  $1\frac{1}{16}$ " (27.0 mm) on center.

**Width** –  $\frac{13}{16}$ " (20.6 mm)

**Thickness** –  $\frac{1}{8}$ " (3.2 mm)

**Materials & Finishes\***

\* Unless otherwise noted.

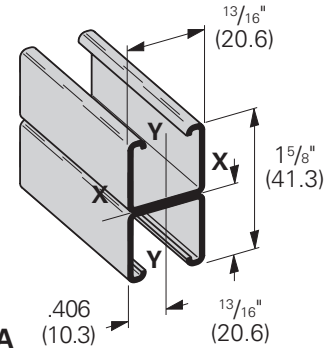
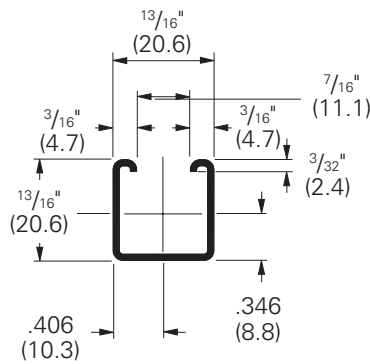
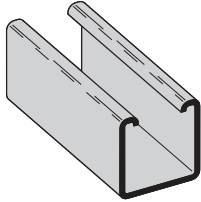
| Finish Code | Finish                | Specification                        |
|-------------|-----------------------|--------------------------------------|
| PLN         | Plain                 | ASTM A1011, HSLAS, Grade 50, Class 1 |
| ZN          | Electro-Plated Zinc   | ASTM B633 SC3 Type II                |
| GRN         | DURA-GREEN™           |                                      |
| GLV         | Pre-Galvanized        | ASTM A653 33,000 PSI min. yield      |
| HDG         | Hot-Dipped Galvanized | ASTM A123                            |

**Metric**

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

# B62 Channel

- Thickness: 18 Ga. (1.2 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized
- Weight: .42 Lbs./Ft. (.62 kg/m)



**B62A**  
Wt. .84 Lbs./Ft. (1.25 kg/m)

## Section Properties

| Section Properties |                      |                                          | X - X Axis                       |                                  |                        | Y - Y Axis                       |                                  |                        |
|--------------------|----------------------|------------------------------------------|----------------------------------|----------------------------------|------------------------|----------------------------------|----------------------------------|------------------------|
|                    |                      |                                          | Moment of Inertia (I)            | Section Modulus (S)              | Radius of Gyration (r) | Moment of Inertia (I)            | Section Modulus (S)              | Radius of Gyration (r) |
| Channel            | Weight lbs./ft. kg/m | Areas of Section sq. in. cm <sup>2</sup> | in. <sup>4</sup> cm <sup>4</sup> | in. <sup>3</sup> cm <sup>3</sup> | in. cm                 | in. <sup>4</sup> cm <sup>4</sup> | in. <sup>3</sup> cm <sup>3</sup> | in. cm                 |
| <b>B62</b>         | .420 (.62)           | .123 (.80)                               | .0103 (.43)                      | .0221 (.36)                      | .289 (.73)             | .0134 (.56)                      | .0330 (.54)                      | .330 (.84)             |
| <b>B62A</b>        | .839 (1.25)          | .247 (1.59)                              | .0500 (2.08)                     | .0616 (1.01)                     | .450 (1.14)            | .0269 (1.12)                     | .0663 (1.09)                     | .330 (.84)             |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.

## Beam Loading

| Beam Span<br>In. mm | Channel Style | Uniform Load and Deflection |              | Uniform Load @ Deflection = 1/240 Span |             | Uniform Load @ Deflection = 1/360 Span |             |
|---------------------|---------------|-----------------------------|--------------|----------------------------------------|-------------|----------------------------------------|-------------|
|                     |               | Lbs. kN                     | In. mm       | Lbs. kN                                | Lbs. kN     | Lbs. kN                                | Lbs. kN     |
| 12 (305)            | <b>B62</b>    | 364 (1.62)                  | .027 (.68)   | 364 (1.62)                             | 364 (1.62)  | 364 (1.62)                             | 364 (1.62)  |
|                     | <b>B62A</b>   | 420* (1.87)                 | .006 (.15)   | 420* (1.87)                            | 420* (1.87) | 420* (1.87)                            | 420* (1.87) |
| 24 (609)            | <b>B62</b>    | 182 (0.81)                  | .109 (2.77)  | 167 (0.74)                             | 111 (0.49)  | 111 (0.49)                             | 111 (0.49)  |
|                     | <b>B62A</b>   | 420* (1.87)                 | .051 (1.29)  | 420* (1.87)                            | 420* (1.87) | 420* (1.87)                            | 420* (1.87) |
| 36 (914)            | <b>B62</b>    | 121 (0.54)                  | .245 (6.22)  | 74 (0.33)                              | 50 (0.22)   | 50 (0.22)                              | 50 (0.22)   |
|                     | <b>B62A</b>   | 341 (1.51)                  | .141 (3.58)  | 341 (1.51)                             | 242 (1.07)  | 242 (1.07)                             | 242 (1.07)  |
| 48 (1219)           | <b>B62</b>    | 91 (0.40)                   | .436 (11.07) | 42 (0.18)                              | 28 (0.12)   | 28 (0.12)                              | 28 (0.12)   |
|                     | <b>B62A</b>   | 256 (1.14)                  | .250 (6.35)  | 204 (0.91)                             | 136 (0.60)  | 136 (0.60)                             | 136 (0.60)  |
| 60 (1524)           | <b>B62</b>    | 73 (0.32)                   | .681 (17.30) | 27 (0.12)                              | 18 (0.08)   | 18 (0.08)                              | 18 (0.08)   |
|                     | <b>B62A</b>   | 205 (0.91)                  | .391 (9.93)  | 131 (0.58)                             | 87 (0.39)   | 87 (0.39)                              | 87 (0.39)   |
| 72 (1829)           | <b>B62</b>    | 61 (0.27)                   | .981 (24.92) | 19 (0.08)                              | 12 (0.05)   | 12 (0.05)                              | 12 (0.05)   |
|                     | <b>B62A</b>   | 170 (0.75)                  | .563 (14.30) | 91 (0.40)                              | 61 (0.27)   | 61 (0.27)                              | 61 (0.27)   |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

## Column Loading

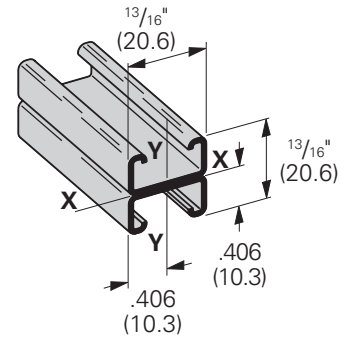
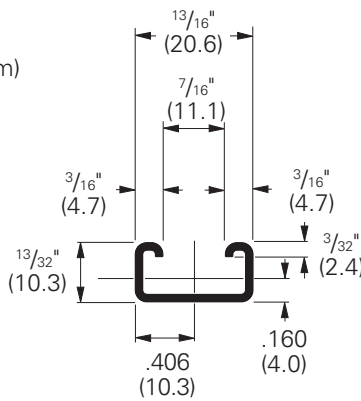
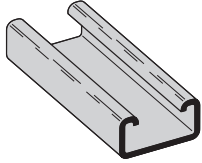
| Unbraced Height<br>In. mm | Channel Style | Max. Column Loading K = .80 |                    | Max. Column Loading (Loaded @ C.G.) |              |              |              |              |              |
|---------------------------|---------------|-----------------------------|--------------------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
|                           |               | Loaded @ C.G.               | Loaded @ Slot Face | K = .65                             |              | K = 1.0      |              | K = 1.2      |              |
|                           |               | Lbs. kN                     | Lbs. kN            | Lbs.                                | kN           | Lbs.         | kN           | Lbs.         | kN           |
| 12 (305)                  | <b>B62</b>    | 2052 (9.13)                 | 820 (3.65)         | 2161 (9.61)                         | 1890 (8.41)  | 1715 (7.63)  | 1715 (7.63)  | 1715 (7.63)  | 1715 (7.63)  |
|                           | <b>B62A</b>   | 4666 (20.75)                | 1449 (6.44)        | 4710 (20.95)                        | 4593 (20.43) | 4503 (20.03) | 4503 (20.03) | 4503 (20.03) | 4503 (20.03) |
| 24 (609)                  | <b>B62</b>    | 1350 (6.00)                 | 645 (2.87)         | 1624 (7.22)                         | 1020 (4.54)  | 818 (3.64)   | 818 (3.64)   | 818 (3.64)   | 818 (3.64)   |
|                           | <b>B62A</b>   | 4275 (19.01)                | 1367 (6.08)        | 4453 (19.81)                        | 3982 (17.71) | 3624 (16.12) | 3624 (16.12) | 3624 (16.12) | 3624 (16.12) |
| 36 (914)                  | <b>B62</b>    | 818 (3.64)                  | 471 (2.09)         | 1053 (4.68)                         | 633 (2.81)   | 515 (2.29)   | 515 (2.29)   | 515 (2.29)   | 515 (2.29)   |
|                           | <b>B62A</b>   | 3624 (16.12)                | 847 (3.77)         | 4023 (17.89)                        | 2965 (13.19) | 2179 (9.69)  | 2179 (9.69)  | 2179 (9.69)  | 2179 (9.69)  |
| 48 (1219)                 | <b>B62</b>    | 589 (2.62)                  | 369 (1.64)         | 745 (3.31)                          | 456 (2.03)   | 365** (1.62) | 365** (1.62) | 365** (1.62) | 365** (1.62) |
|                           | <b>B62A</b>   | 2713 (12.06)                | 504 (2.24)         | 3421 (15.21)                        | 1765 (7.85)  | 1225 (5.45)  | 1225 (5.45)  | 1225 (5.45)  | 1225 (5.45)  |
| 60 (1524)                 | <b>B62</b>    | 456 (2.03)                  | 300 (1.33)         | 579 (2.57)                          | 347** (1.54) | 271** (1.20) | 271** (1.20) | 271** (1.20) | 271** (1.20) |
|                           | <b>B62A</b>   | 1765 (7.85)                 | 323 (1.44)         | 2647 (11.77)                        | 1129 (5.02)  | 784** (3.49) | 784** (3.49) | 784** (3.49) | 784** (3.49) |
| 72 (1829)                 | <b>B62</b>    | 365** (1.62)                | 248 (1.10)         | 470 (2.09)                          | 271** (1.20) | —            | —            | —            | —            |
|                           | <b>B62A</b>   | 1225 (5.45)                 | 224 (0.99)         | 1856 (8.25)                         | 784** (3.49) | 545** (2.42) | 545** (2.42) | 545** (2.42) | 545** (2.42) |

\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 242 for general fitting specifications.

# B72 Channel

- Thickness: 18 Ga. (1.2 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized
- Weight: .29 Lbs./Ft. (.43 kg/m)



**B72A**  
Wt. .58 Lbs./Ft. (.87 kg/m)

## Section Properties

| Channel     | Weight<br>lbs./ft. kg/m | Areas of<br>Section<br>sq. in. cm <sup>2</sup> | X - X Axis                                                   |                                                            |                                     | Y - Y Axis                                                   |                                                            |                                     |
|-------------|-------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------|------------------------------------------------------------|-------------------------------------|
|             |                         |                                                | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm | Moment of<br>Inertia (I)<br>in. <sup>4</sup> cm <sup>4</sup> | Section<br>Modulus (S)<br>in. <sup>3</sup> cm <sup>3</sup> | Radius of<br>Gyration (r)<br>in. cm |
| <b>B72</b>  | .287 (.43)              | .084 (.54)                                     | .0018 (.07)                                                  | .0073 (.12)                                                | .146 (.37)                          | .0077 (.32)                                                  | .0190 (.31)                                                | .302 (.77)                          |
| <b>B72A</b> | .574 (.85)              | .169 (1.09)                                    | .0078 (.32)                                                  | .0192 (.31)                                                | .215 (.55)                          | .0155 (.65)                                                  | .0382 (.63)                                                | .303 (.77)                          |

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.

## Beam Loading

| Beam Span<br>In. mm | Channel<br>Style | Uniform Load and Deflection |        |       |         | Uniform Load @ Deflection = |        |                    |        |
|---------------------|------------------|-----------------------------|--------|-------|---------|-----------------------------|--------|--------------------|--------|
|                     |                  | Lbs.                        | kN     | In.   | mm      | 1/240 Span<br>Lbs.          | kN     | 1/360 Span<br>Lbs. | kN     |
| 12 (305)            | <b>B72</b>       | 116                         | (0.51) | .051  | (1.29)  | 113                         | (0.50) | 75                 | (0.32) |
|                     | <b>B72A</b>      | 210*                        | (0.93) | .020  | (.51)   | 210*                        | (0.93) | 210*               | (0.93) |
| 24 (609)            | <b>B72</b>       | 58                          | (0.26) | .206  | (5.23)  | 28                          | (0.12) | 19                 | (0.08) |
|                     | <b>B72A</b>      | 159                         | (0.71) | .125  | (3.17)  | 127                         | (0.56) | 85                 | (0.38) |
| 36 (914)            | <b>B72</b>       | 39                          | (0.17) | .465  | (11.81) | 13                          | (0.06) | 8                  | (0.03) |
|                     | <b>B72A</b>      | 106                         | (0.45) | .281  | (7.14)  | 57                          | (0.25) | 38                 | (0.17) |
| 36 (1219)           | <b>B72</b>       | 29                          | (0.13) | .827  | (21.00) | 7                           | (0.03) | 5                  | (0.02) |
|                     | <b>B72A</b>      | 80                          | (0.35) | .500  | (12.70) | 32                          | (0.14) | 21                 | (0.09) |
| 60 (1524)           | <b>B72</b>       | 23                          | (0.10) | 1.292 | (32.81) | 5                           | (0.02) | 3                  | (0.01) |
|                     | <b>B72A</b>      | 64                          | (0.28) | .782  | (19.86) | 20                          | (0.09) | 14                 | (0.06) |

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

## Column Loading

| Unbraced<br>Height<br>In. mm | Channel<br>Style | Max. Column Loading K = .80<br>Loaded @ C.G. |         | Max. Column Loading (Loaded @ C.G.) |        |                 |         |                 |         |
|------------------------------|------------------|----------------------------------------------|---------|-------------------------------------|--------|-----------------|---------|-----------------|---------|
|                              |                  | Lbs.                                         | kN      | Loaded @<br>Slot Face<br>Lbs.       | kN     | K = .65<br>Lbs. | kN      | K = 1.0<br>Lbs. | kN      |
| 12 (305)                     | <b>B72</b>       | 1598                                         | (7.11)  | 539                                 | (2.40) | 1712            | (7.61)  | 1410            | (6.27)  |
|                              | <b>B72A</b>      | 3600                                         | (16.01) | 986                                 | (4.38) | 3700            | (16.46) | 3433            | (15.27) |
| 24 (609)                     | <b>B72</b>       | 701                                          | (3.12)  | 320                                 | (1.42) | 1050            | (4.67)  | 450             | (2.00)  |
|                              | <b>B72A</b>      | 2710                                         | (12.05) | 802                                 | (3.57) | 3113            | (13.85) | 2043            | (9.09)  |
| 36 (914)                     | <b>B72</b>       | 313**                                        | (1.39)  | 188                                 | (0.83) | 473             | (2.10)  | 201**           | (0.89)  |
|                              | <b>B72A</b>      | 1421                                         | (6.32)  | 569                                 | (2.53) | 2135            | (9.50)  | 909             | (4.04)  |
| 36 (1219)                    | <b>B72</b>       | 177**                                        | (0.79)  | 122                                 | (0.54) | 267**           | (1.19)  | —               | —       |
|                              | <b>B72A</b>      | 799                                          | (3.55)  | 404                                 | (1.80) | 1211            | (5.39)  | 512**           | (2.28)  |
| 60 (1524)                    | <b>B72</b>       | 113**                                        | (0.50)  | 85                                  | (0.38) | 171**           | (0.76)  | —               | —       |
|                              | <b>B72A</b>      | 512**                                        | (2.28)  | 298                                 | (1.32) | 775             | (3.45)  | 327**           | (1.45)  |

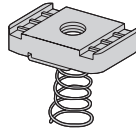
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 242 for general fitting specifications.

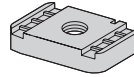


# Mini channel nuts and fittings

## Nuts for B62, B72 Channel



Spring Nut



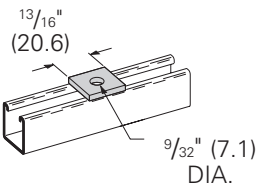
Nut Without Spring

| Part Number        |                       |                    |                       | Thread Size | Thickness<br>In. mm |        | Wt./C<br>Lbs. kg |       |
|--------------------|-----------------------|--------------------|-----------------------|-------------|---------------------|--------|------------------|-------|
| B62<br>With Spring | B62<br>Without Spring | B72<br>With Spring | B72<br>Without Spring |             |                     |        |                  |       |
| N621               | N621WO                | N7221              | N621WO                | #8-32       | .150                | (3.81) | 1.0              | (.45) |
| N622               | N622WO                | N7222              | N622WO                | #10-24      | .150                | (3.81) | 1.0              | (.45) |
| N627               | N627WO                | N7227              | N627WO                | #10-32      | .150                | (3.81) | 1.0              | (.45) |
| N624               | N624WO                | N7224              | N624WO                | 1/4-20      | .150                | (3.81) | 1.0              | (.45) |
| BMM-3L             | BMM-3                 | BMM-3S             | BMM-3                 | M3.5 x 0.6  | .150                | (3.81) | 1.0              | (.45) |
| BMM-4L             | BMM-4                 | BMM-4S             | BMM-4                 | M4 x 0.7    | .150                | (3.81) | 1.0              | (.45) |
| BMM-5L             | BMM-5                 | BMM-5S             | BMM-5                 | M5 x 0.8    | .150                | (3.81) | 1.0              | (.45) |
| BMM-6L             | BMM-6                 | BMM-6S             | BMM-6                 | M6 x 1      | .150                | (3.81) | 1.0              | (.45) |

## Mini fittings

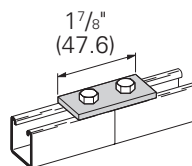
### B6202 Square Washer

- Standard finishes: ZN, GRN
- Wt./C 2 Lbs. (.9 kg)



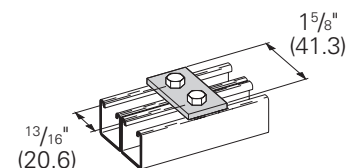
### B6129 Two Hole Splice Plate

- Standard finishes: ZN, GRN
- Wt./C 5 Lbs. (2.2 kg)



### B6340 Two Hole Splice Plate

- Standard finishes: ZN, GRN
- Wt./C 5 Lbs. (2.2 kg)



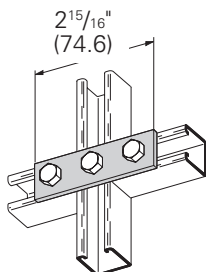
Reference page 242 for general fitting specifications.

# Mini fittings

## B6141

### Three Hole Splice Plate

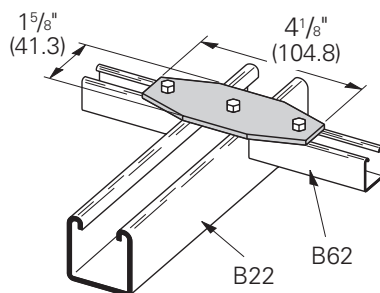
- Standard finishes: ZN, GRN
- Wt./C 7 Lbs. (3.2 kg)



## B600-62

### Three Hole Flat Adapter Plate

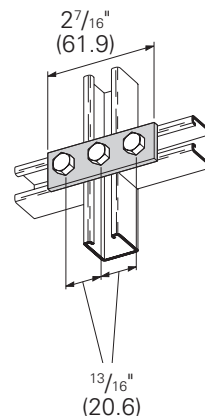
- Standard finishes: ZN, GRN
- Wt./C 19 Lbs. (8.6 kg)



## B6557

### Three Hole Splice Plate

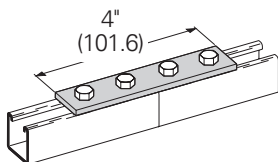
- Standard finishes: ZN, GRN
- Wt./C 7 Lbs. (3.2 kg)



## B6341

### Four Hole Splice Plate

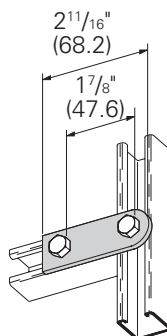
- Standard finishes: ZN, GRN
- Wt./C 11 Lbs. (5.0 kg)



## B6138

### Two Hole Swivel Plate

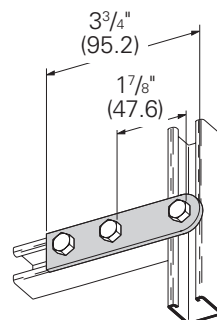
- Standard finishes: ZN, GRN
- Wt./C 7 Lbs. (3.2 kg)



## B6139

### Three Hole Swivel Plate

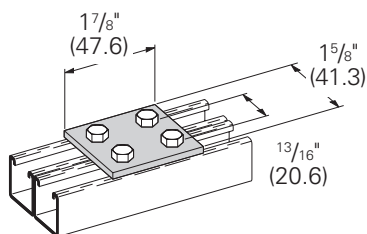
- Standard finishes: ZN, GRN
- Wt./C 10 Lbs. (4.5 kg)



## B6504

### Four Hole Splice Plate

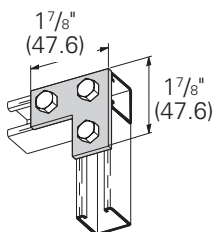
- Standard finishes: ZN, GRN
- Wt./C 10 Lbs. (4.5 kg)



## B6140

### Three Hole Corner Plate

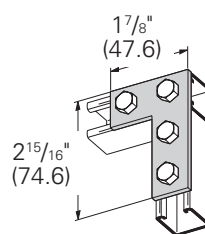
- Standard finishes: ZN, GRN
- Wt./C 8 Lbs. (3.6 kg)



## B6143

### Four Hole Corner Plate

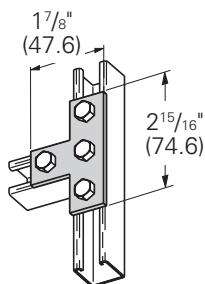
- Standard finishes: ZN, GRN
- Wt./C 11 Lbs. (5.0 kg)



Reference page 242 for general fitting specifications.

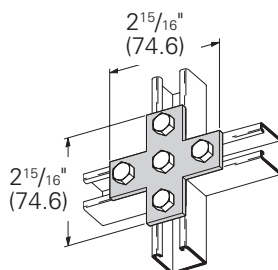
## B6133 Four Hole Tee Plate

- Standard finishes: ZN, GRN
- Wt./C 11 Lbs. (5.0 kg)



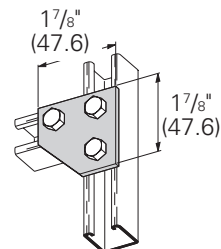
## B6132 Five Hole Cross Plate

- Standard finishes: ZN, GRN
- Wt./C 13 Lbs. (5.9 kg)



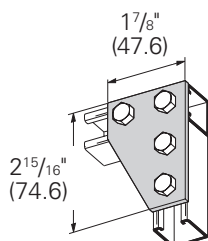
## B6135 Three Hole Corner Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 9 Lbs. (4.1 kg)



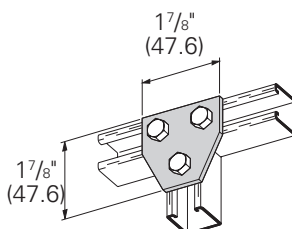
## B6142 Four Hole Corner Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 15 Lbs. (6.8 kg)



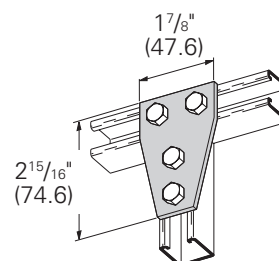
## B6337 Three Hole Tee Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 10 Lbs. (4.5 kg)



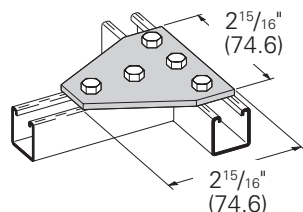
## B6136 Four Hole Tee Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 15 Lbs. (6.8 kg)



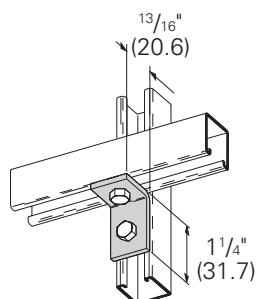
## B6532 Five Hole Tee Gusset Plate

- Standard finishes: ZN, GRN
- Wt./C 22 Lbs. (10.0 kg)



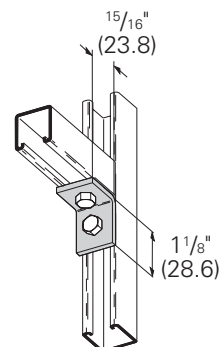
## B6101 Two Hole Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 5 Lbs. (2.2 kg)



## B6230 Two Hole Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 5 Lbs. (2.2 kg)



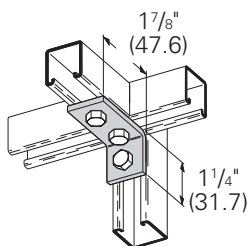
Reference page 242 for general fitting specifications.

# Mini fittings

## B6102

### Three Hole Corner Angle

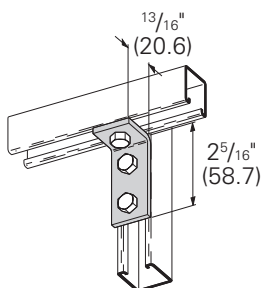
- Standard finishes: ZN, GRN
- Wt./C 8 Lbs. (3.6 kg)



## B6103

### Three Hole Corner Angle

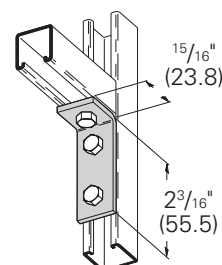
- Standard finishes: ZN, GRN
- Wt./C 8 Lbs. (3.6 kg)



## B6232

### Three Hole Corner Angle

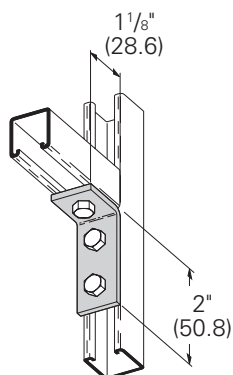
- Standard finishes: ZN, GRN
- Wt./C 7 Lbs. (3.2 kg)



## B6374

### Three Hole Corner Angle

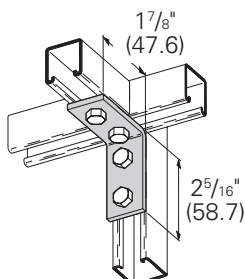
- Standard finishes: ZN, GRN
- Wt./C 7 Lbs. (3.2 kg)



## B6104

### Four Hole Corner Angle

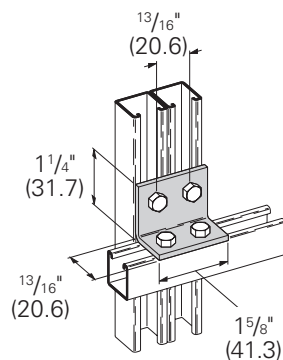
- Standard finishes: ZN, GRN
- Wt./C 10 Lbs. (4.5 kg)



## B6558

### Four Hole Corner Angle

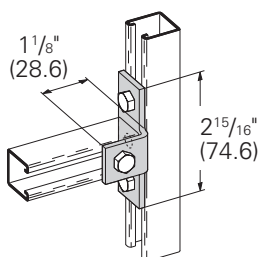
- Standard finishes: ZN, GRN
- Wt./C 10 Lbs. (4.5 kg)



## B6357

### Four Hole Offset Bent Tee

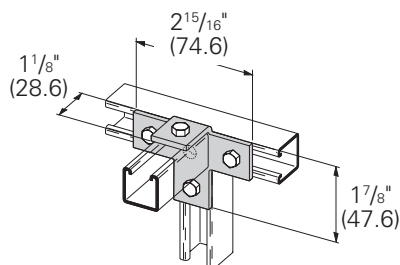
- Standard finishes: ZN, GRN
- Wt./C 11 Lbs. (5.0 kg)



## B6239

### Five Hole Offset Bent Tee

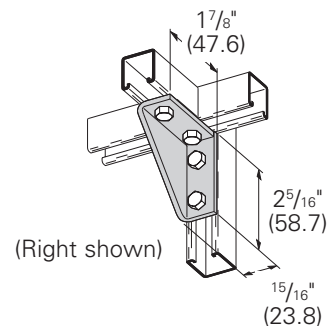
- Standard finishes: ZN, GRN
- Wt./C 14 Lbs. (6.3 kg)



## B6144R & L

### Four Hole Shelf Bracket

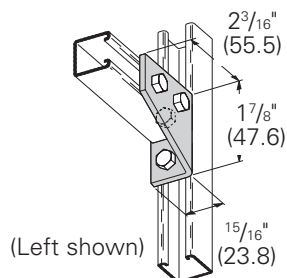
- Standard finishes: ZN, GRN
- Wt./C 19 Lbs. (8.6 kg)



Reference page 242 for general fitting specifications.

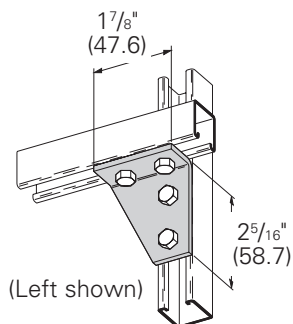
## B6134R & L Four Hole Corner Gusset

- Standard finishes: ZN, GRN
- Wt./C 15 Lbs. (6.8 kg)



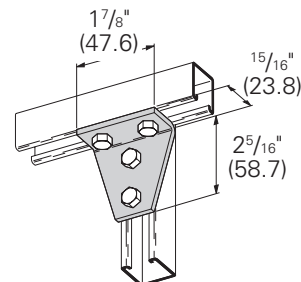
## B6234R & L Four Hole Corner Gusset

- Standard finishes: ZN, GRN
- Wt./C 15 Lbs. (6.8 kg)



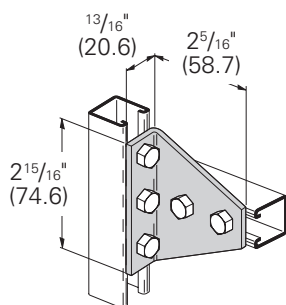
## B6118 Four Hole Gussetted Shelf Angle

- Standard finishes: ZN, GRN
- Wt./C 15 Lbs. (6.8 kg)



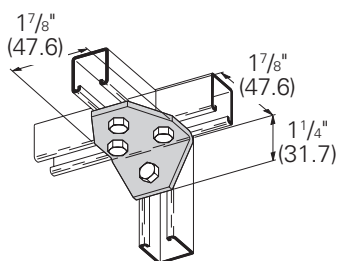
## B6533 Five Hole Gussetted Shelf Angle

- Standard finishes: ZN, GRN
- Wt./C 22 Lbs. (10.0 kg)



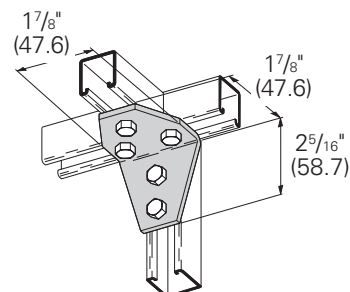
## B6126 Four Hole Gussetted Three Way Shelf Angle

- Standard finishes: ZN, GRN
- Wt./C 15 Lbs. (6.8 kg)



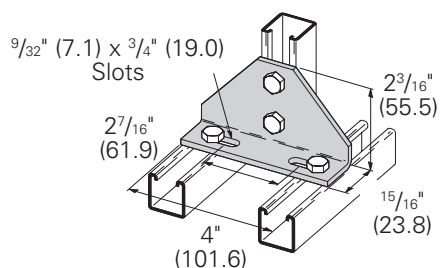
## B6127 Five Hole Gussetted Three Way Shelf Angle

- Standard finishes: ZN, GRN
- Wt./C 18 Lbs. (8.1 kg)



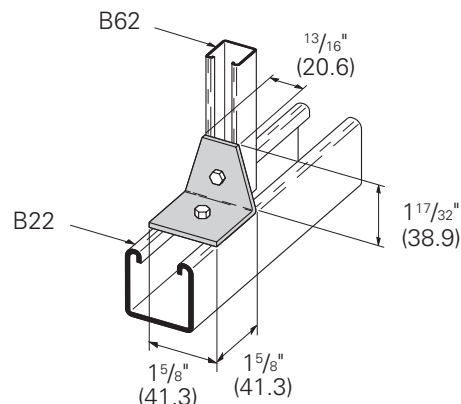
## B6112 Four Hole Adjustable Corner Angle

- Standard finishes: ZN, GRN
- Wt./C 32Lbs. (14.5 kg)



## B589-62 Two Hole 90° Adapter Angle

- Standard finishes: ZN, GRN
- Wt./C 11 Lbs. (5.0 kg)

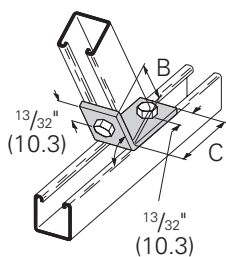


Reference page 242 for general fitting specifications.

# Mini fittings

## B6147-B6152 Two Hole Open Angle

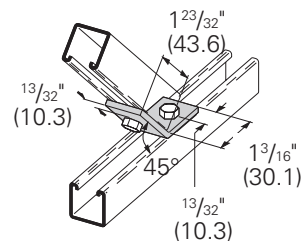
- Standard finishes: ZN, GRN



| Part No. | A       | B<br>In. mm     | C<br>In. mm    | Wt./C<br>Lbs. kg |
|----------|---------|-----------------|----------------|------------------|
| B6147    | 82 1/2° | 2 1/32" (51.6)  | 27/32" (21.4)  | 8.0 (3.6)        |
| B6148    | 75°     | 2 1/32" (51.6)  | 27/32" (21.4)  |                  |
| B6149    | 67 1/2° | 2" (50.8)       | 7/8" (22.2)    |                  |
| B6150    | 60°     | 1 31/32" (50.0) | 1 5/16" (23.8) |                  |
| B6151    | 52 1/2° | 1 7/8" (47.6)   | 1 1/16" (27.0) |                  |
| B6152    | 37 1/2° | 2" (50.8)       | 23/32" (23.0)  |                  |

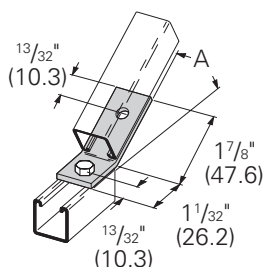
## B6154 Two Hole Open Angle

- Standard finishes: ZN, GRN
- Wt./C 8 Lbs. (3.6 kg)



## B6162-B6165 Two Hole Open Angle

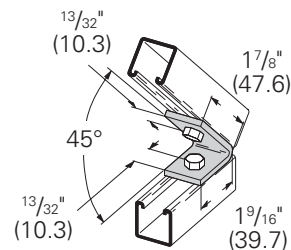
- Standard finishes: ZN, GRN



| Part No. | A       | Wt./C<br>Lbs. kg |
|----------|---------|------------------|
| B6162    | 30°     | 8.0 (3.6)        |
| B6163    | 22 1/2° |                  |
| B6164    | 15°     |                  |
| B6165    | 7 1/2°  |                  |

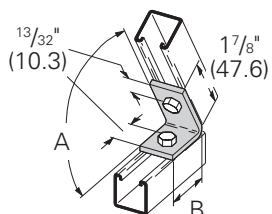
## B6155 Two Hole Closed Angle

- Standard finishes: ZN, GRN
- Wt./C 8 Lbs. (3.6 kg)



## B6156-B6161 Two Hole Closed Angle

- Standard finishes: ZN, GRN



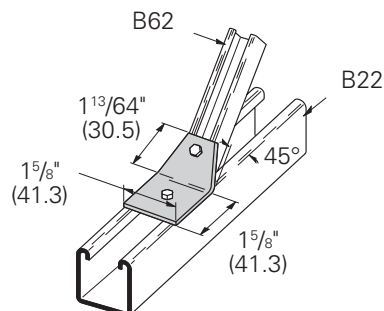
| Part No. | A       | B<br>In. mm     | Wt./C<br>Lbs. kg |
|----------|---------|-----------------|------------------|
| B6156    | 82 1/2° | 19/32" (32.5)   | 8.0 (3.6)        |
| B6157    | 75°     | 15/16" (33.3)   |                  |
| B6158    | 67 1/2° | 1 3/8" (34.9)   |                  |
| B6159    | 60°     | 1 13/32" (35.7) |                  |
| B6160    | 52 1/2° | 1 15/32" (37.3) |                  |
| B6161    | 37 1/2° | 1 21/32" (42.0) |                  |

Reference page 242 for general fitting specifications.



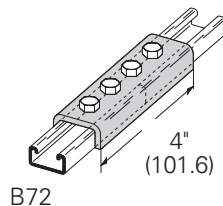
## B601-62 Two Hole 45° Adapter Angle

- Standard finishes: ZN, GRN
- Wt./C 14 Lbs. (6.3 kg)



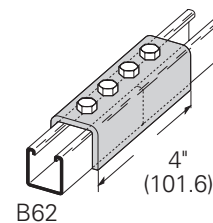
## B6167 Four Hole Splice Clevis for B72

- Standard finishes: ZN, GRN
- Wt./C 24 Lbs. (10.9 kg)



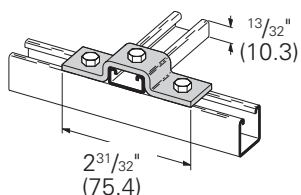
## B6172 Four Hole Splice Clevis for B62

- Standard finishes: ZN, GRN
- Wt./C 36 Lbs. (16.3 kg)



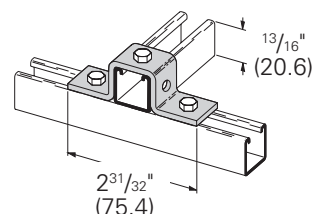
## B7116 Three Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 10 Lbs. (4.5 kg)



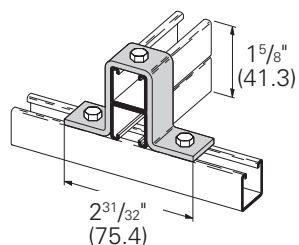
## B6107 Three Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 12 Lbs. (5.4 kg)



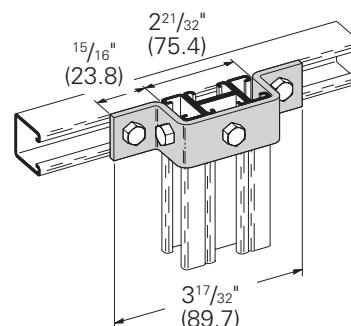
## B6107-62A Three Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 16 Lbs. (7.2 kg)



## B6594 Five Hole U-Support

- Standard finishes: ZN, GRN
- Wt./C 13 Lbs. (5.9 kg)

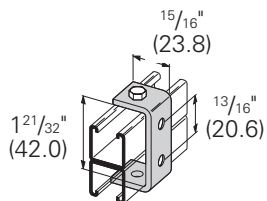


Reference page 242 for general fitting specifications.

# Mini fittings

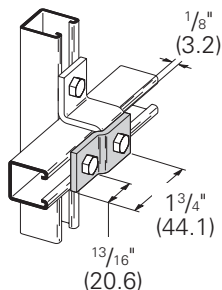
## B6173 Four Hole Clevis

- Standard finishes: ZN, GRN
- Wt./C 9 Lbs. (4.1 kg)



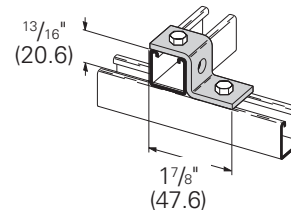
## B6526 Two Hole Offset Z-Support

- Standard finishes: ZN, GRN
- Wt./C 5 Lbs. (2.2 kg)



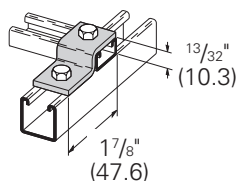
## B6105 Two Hole Offset Z-Support for B62

- Standard finishes: ZN, GRN
- Wt./C 7 Lbs. (3.2 kg)



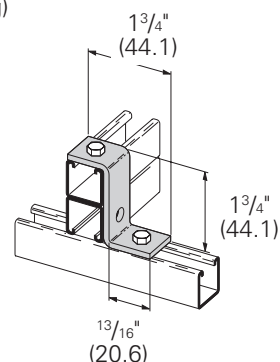
## B7105 Two Hole Offset Z-Support for B72

- Standard finishes: ZN, GRN
- Wt./C 7 Lbs. (3.2 kg)



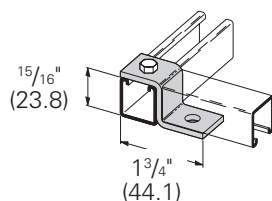
## B6110 Two Hole Offset Z-Support for B62A

- Standard finishes: ZN, GRN
- Wt./C 9 Lbs. (4.1 kg)



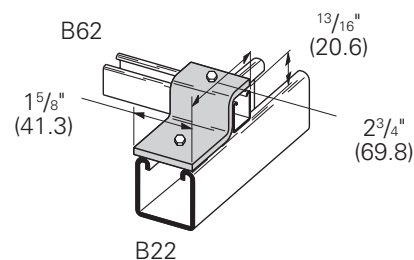
## B6108 Two Hole Offset Z-Support

- Standard finishes: ZN, GRN
- Wt./C 7 Lbs. (3.2 kg)



## B598-62 Two Hole Z-Adapter Plate

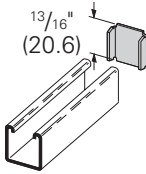
- Standard finishes: ZN, GRN
- Wt./C 28 Lbs. (12.7 kg)



Reference page 242 for general fitting specifications.

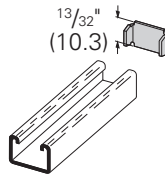
## B6205 End Cap for B62

- Material: ASTM A1008 SS Gr. 33 Type 1
- Standard finishes: ZN, GRN
- Wt./C 3 Lbs. (1.3 kg)



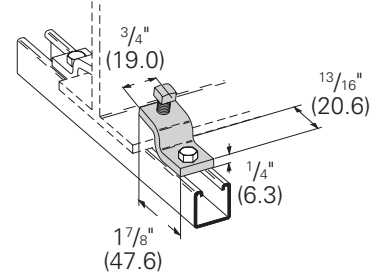
## B7205 End Cap for B72

- Material: ASTM A1008 SS Gr. 33 Type 1
- Standard finishes: ZN, GRN
- Wt./C 1 Lb. (.4 kg)



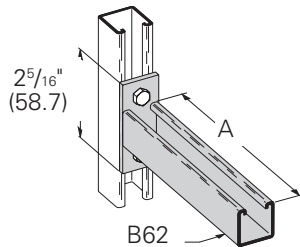
## B6211 Z-Beam Clamp

- 5/16"-18 Setscrew included
- 13/16" (20.6) Max. Flange Thickness
- Material: ASTM A36
- Standard finishes: ZN, GRN
- Wt./C 13 Lbs. (5.9 kg)



## B6409-6, 9 Bracket

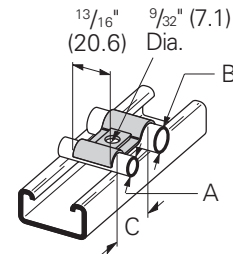
- Safety Factor of 2
- Uniform Design Load 40 Lbs. (.18 kN)
- Standard finishes: ZN, GRN



| Part No. | A<br>In. mm | Wt./C<br>Lbs. kg |
|----------|-------------|------------------|
| B6409-6  | 6" (152.4)  | 28.0 (12.7)      |
| B6409-9  | 9" (228.6)  | 35.0 (15.8)      |

## B2350-B2355 One Hole Double Tubing Strap

- Material: ASTM A1008 SS Gr. 33 Type 1
- Standard finishes: ZN, GRN

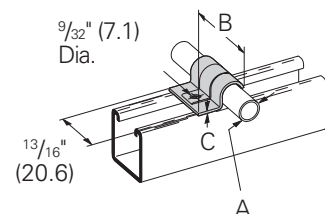


| Part No. | O.D. Size<br>A<br>In. mm | O.D. Size<br>B<br>In. mm | C<br>In. mm   | Wt./C<br>Lbs. kg |
|----------|--------------------------|--------------------------|---------------|------------------|
| B2350    | 1/4" (6.3)               | 1/4" (6.3)               | 3/4" (19.0)   | 1.2 (.5)         |
| B2351    | 3/8" (9.5)               | 3/8" (9.5)               | 1" (25.4)     | 2.0 (.9)         |
| B2352    | 1/2" (12.7)              | 1/2" (12.7)              | 1 1/4" (31.7) | 2.9 (1.3)        |
| B2353    | 1/4" (6.3)               | 3/8" (9.5)               | 7/8" (22.2)   | 1.6 (.7)         |
| B2354    | 1/4" (6.3)               | 1/2" (12.7)              | 1" (25.4)     | 2.1 (.9)         |
| B2355    | 3/8" (9.5)               | 1/2" (12.7)              | 1 1/8" (28.6) | 2.5 (1.1)        |

## B2308-B2315 One Hole Tubing Strap

- Material: Sizes 1/4" - 1/2", ASTM A611 Gr. C 5/8" - 1", ASTM A1008 SS Gr. 33 Type 1
- Standard finishes: ZN, GRN

| Part No. | O.D. Size<br>A<br>In. mm | B<br>In. mm     | C<br>In. mm | Wt./C<br>Lbs. kg |
|----------|--------------------------|-----------------|-------------|------------------|
| B2308    | 1/4" (6.3)               | 1 1/32" (26.2)  | .048 (1.2)  | 1.2 (.5)         |
| B2309    | 5/16" (7.9)              | 1 3/32" (27.8)  | .048 (1.2)  | 1.4 (.6)         |
| B2310    | 3/8" (9.5)               | 1 3/16" (30.1)  | .048 (1.2)  | 1.6 (.7)         |
| B2311    | 1/2" (12.7)              | 1 21/64" (33.7) | .048 (1.2)  | 1.9 (.8)         |
| B2312    | 5/8" (15.9)              | 1 25/64" (35.3) | .062 (1.6)  | 2.7 (1.2)        |
| B2313    | 3/4" (19.0)              | 1 39/64" (40.9) | .075 (1.9)  | 4.3 (1.9)        |
| B2314    | 7/8" (22.2)              | 1 51/64" (45.6) | .075 (1.9)  | 4.9 (2.2)        |
| B2315    | 1" (25.4)                | 2 1/32" (51.6)  | .075 (1.9)  | 5.2 (2.3)        |



Reference page 242 for general fitting specifications.

# Continuous concrete inserts



Continuous slot concrete inserts are designed to provide a pre-set support system cast in concrete ceilings, walls, and floors to allow flexibility of attachment at any point along the channel. This provides an excellent support system for pipe, conduit, and cable trays.

Continuous concrete inserts, manufactured from our standard channels, have formed anchors spaced on 4 inch (101.6 mm) centers. The  $\frac{3}{16}$ " (4.8 mm) nail-holes are provided for securing the inserts to the forms.

Available in lengths from 3 inches (7.62 cm) to 240 inches (609.6 cm), concrete inserts are shipped complete with end caps and styrofoam filler strips which prevent seepage of concrete into the insert. Styrofoam is easily removed by pulling the convenient pull-tab.

## Materials & Finishes\*

\*Unless otherwise noted.

| Finish Code | Finish                   | Specification                       |
|-------------|--------------------------|-------------------------------------|
| PLN         | Plain                    | ASTM A1011<br>33,000 PSI min. yield |
| GRN         | DURA GREEN™              |                                     |
| ZN          | Electro-Plated Zinc      | ASTM B633 SC1 Type III              |
| GALV        | Pre-Galvanized           | ASTM A653<br>33,000 PSI min. yield  |
| HDG         | Hot-Dipped Galvanized    | ASTM A123                           |
| SS4         | Stainless Steel Type 304 | ASTM A240                           |
| SS6         | Stainless Steel Type 316 | ASTM A240                           |

## Spot Inserts

Spot inserts provide for economical single attachment points with full flexibility of fastener sizing, but with limited adjustment. These products are made from steel strips in accordance with ASTM A1011, 33,000 PSI min. yield. Standard finish is electro-plated zinc (ASTM B633).

## Special Concrete Inserts

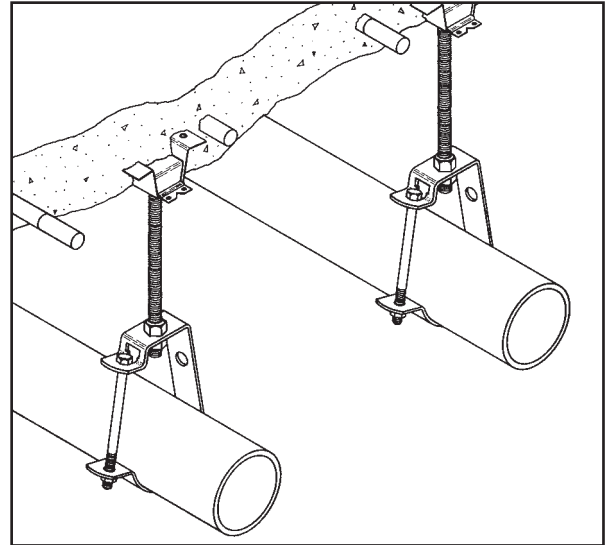
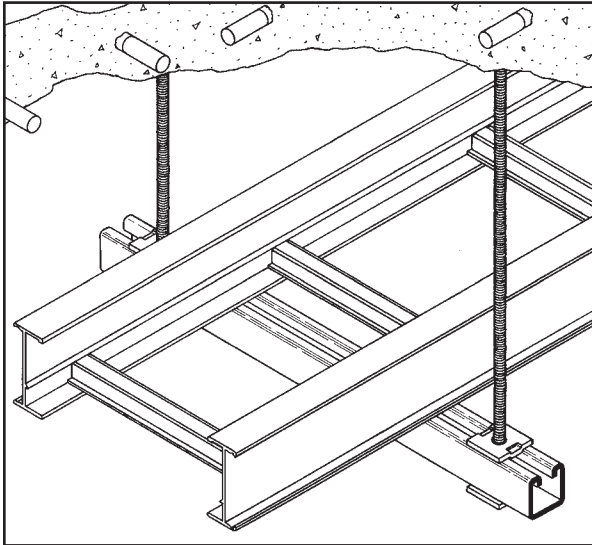
Pre-stressed inserts, inserts with studs welded to the back of the channel, and other types of special inserts are available.

## Test Data

Independent Testing Laboratory test data available upon request.

## Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

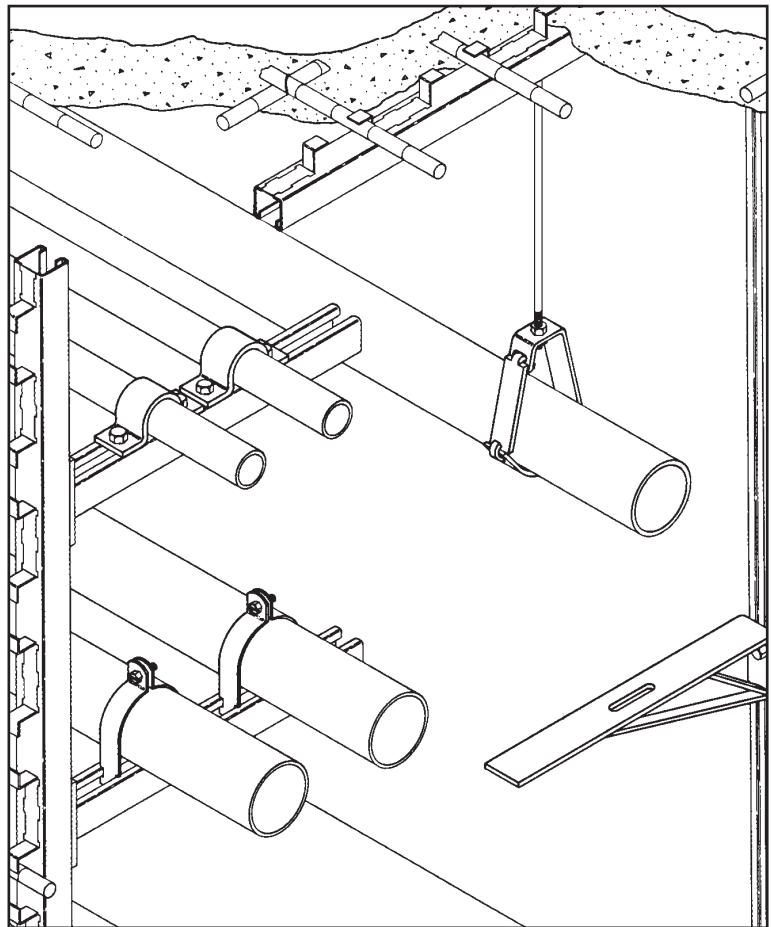


Continuous concrete inserts, installed in the ceiling, can be used to support trapeze hangers, suspended pipe racks, cable trays and single or multiple pipe hangers.

When installed in walls, continuous concrete inserts can be used as a support for tunnel stanchions, equipment braces, brackets and pipe racks.

Use spot inserts for single pipe-support or trapeze type hangers. Spot Inserts offer full flexibility of rod and fastener sizings.

Our channel can be attached to continuous concrete inserts in walls or ceilings. Channel can also be attached to concrete walls and floors with expansion anchors.



Reference page 254 for general fitting and standard finish specifications.

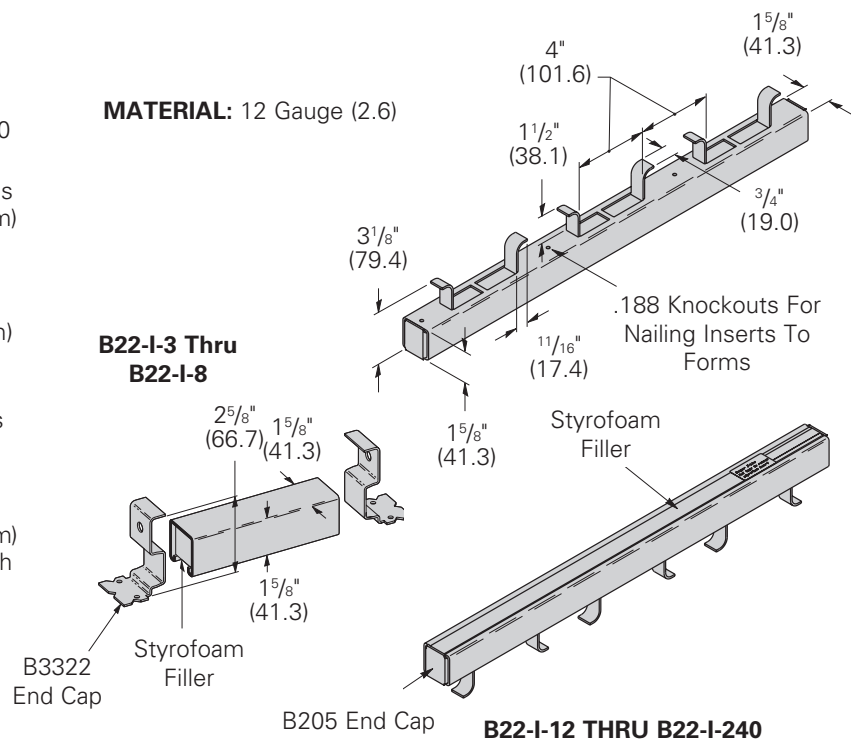
# Continuous concrete inserts

## B22I

### Continuous Concrete Insert

- Design Load for B22-I-12 thru B22-I-240 is 2,000 lbs. (8.89 kN) per foot of concrete insert length with safety factor of 3 in 3000 psi concrete.
- Loads concentrated within the last 2 inches (50.8 mm) of concrete inserts 8" (203.2 mm) and longer should not exceed 1,000 lbs. (4.45kN).
- Concrete insert should be secured to the forms on 16" (406.4 mm) to 24" (609.6 mm) intervals.
- B22-I continuous concrete inserts are made from B22 channel. Use channel nuts designed for use in B22 channel.
- B22-I concrete inserts are supplied with styrofoam fillers. B3322 end caps are furnished with inserts through 8" (203.2 mm) long, and B205 end caps are furnished with inserts 12" (304.8 mm) and longer.
- Material: Plain Steel ASTM A1011 33,000 PSI min. yield or Pre-Galvanized Steel ASTM A653SS 33,000 PSI min. yield.
- Finish: Plain, DURA GREEN™, Pre-Galv, HDG

**MATERIAL:** 12 Gauge (2.6)



| Part No.       | Length |       | Wt./C |        | Design Load |        |
|----------------|--------|-------|-------|--------|-------------|--------|
|                | in.    | mm    | Lbs.  | kg     | Lbs.        | kN     |
| <b>B22-I-3</b> | 3"     | (76)  | 72    | (32.6) | 500         | (2.22) |
| <b>B22-I-4</b> | 4"     | (101) | 88    | (39.9) | 800         | (3.56) |
| <b>B22-I-6</b> | 6"     | (152) | 120   | (54.4) | 1000        | (4.45) |
| <b>B22-I-8</b> | 8"     | (203) | 152   | (68.9) | 1200        | (5.34) |

| Part No.         | Length |        | Wt./C |          |
|------------------|--------|--------|-------|----------|
|                  | in.    | mm     | Lbs.  | kg       |
| <b>B22-I-12</b>  | 12"    | (305)  | 224   | (101.6)  |
| <b>B22-I-16</b>  | 16"    | (406)  | 289   | (131.1)  |
| <b>B22-I-20</b>  | 20"    | (508)  | 353   | (160.1)  |
| <b>B22-I-24</b>  | 24"    | (609)  | 420   | (190.5)  |
| <b>B22-I-32</b>  | 32"    | (813)  | 553   | (250.8)  |
| <b>B22-I-36</b>  | 36"    | (914)  | 620   | (281.2)  |
| <b>B22-I-40</b>  | 40"    | (1016) | 686   | (311.1)  |
| <b>B22-I-48</b>  | 48"    | (1219) | 820   | (371.9)  |
| <b>B22-I-60</b>  | 60"    | (1524) | 1018  | (461.7)  |
| <b>B22-I-72</b>  | 72"    | (1829) | 1218  | (552.5)  |
| <b>B22-I-84</b>  | 84"    | (2133) | 1417  | (642.7)  |
| <b>B22-I-96</b>  | 96"    | (2438) | 1616  | (733.0)  |
| <b>B22-I-108</b> | 108"   | (2743) | 1816  | (823.7)  |
| <b>B22-I-120</b> | 120"   | (3048) | 2016  | (914.4)  |
| <b>B22-I-144</b> | 144"   | (3657) | 2416  | (1095.9) |
| <b>B22-I-168</b> | 168"   | (4267) | 2816  | (1277.3) |
| <b>B22-I-192</b> | 192"   | (4877) | 3216  | (1458.7) |
| <b>B22-I-216</b> | 216"   | (5486) | 3616  | (1640.2) |
| <b>B22-I-240</b> | 240"   | (6096) | 4016  | (1821.6) |

Reference page 254 for general fitting and standard finish specifications



# Continuous concrete inserts

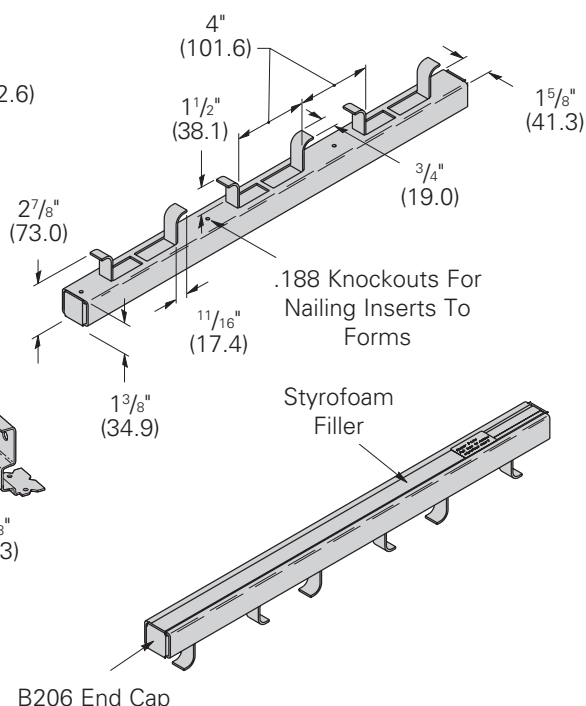
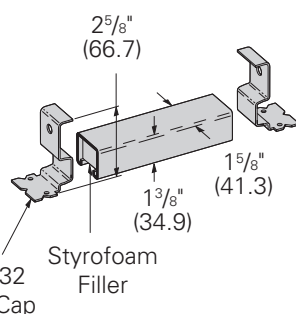
## B32I

### Continuous Concrete Insert

- Design Load for B32-I-12 thru B32-I-240 is 2,000 lbs. (8.89 kN) per foot of concrete insert length with safety factor of 3 in 3000 psi concrete.
- Loads concentrated within the last 2 inches (50.8 mm) of concrete inserts 8" (203.2 mm) and longer should not exceed 1,000 lbs. (4.45kN).
- Concrete insert should be secured to the forms on 16" (406.4 mm) to 24" (609.6 mm) intervals.
- B32-I continuous concrete inserts are made from B32 channel. Use channel nuts designed for use in B32 channel.
- B32-I concrete inserts are supplied with styrofoam fillers. B3332 end caps are furnished with inserts through 8" (203.2 mm) long, and B206 end caps are furnished with inserts 12" (304.8 mm) and longer.
- Material: Plain Steel ASTM A1011 33,000 PSI min. yield or Pre-Galvanized Steel ASTM A653SS 33,000 PSI min. yield.
- Finish: Plain, DURA GREEN™, Pre-Galv, HDG

**MATERIAL:** 12 Gauge (2.6)

**B32-I-3 Thru B32-I-8**



**B22-I-12 THRU B22-I-240**

| Part No.       | Length |       | Wt./C |        | Design Load |        |
|----------------|--------|-------|-------|--------|-------------|--------|
|                | in.    | mm    | Lbs.  | kg     | Lbs.        | kN     |
| <b>B32-I-3</b> | 3"     | (76)  | 65    | (29.5) | 500         | (2.22) |
| <b>B32-I-4</b> | 4"     | (101) | 80    | (36.3) | 800         | (3.56) |
| <b>B32-I-6</b> | 6"     | (152) | 108   | (49.0) | 1000        | (4.45) |
| <b>B32-I-8</b> | 8"     | (203) | 137   | (62.1) | 1200        | (5.34) |

| Part No.         | Length |        | Wt./C |          |
|------------------|--------|--------|-------|----------|
|                  | in.    | mm     | Lbs.  | kg       |
| <b>B32-I-12</b>  | 12"    | (305)  | 202   | (91.6)   |
| <b>B32-I-16</b>  | 16"    | (406)  | 262   | (118.8)  |
| <b>B32-I-20</b>  | 20"    | (508)  | 316   | (143.3)  |
| <b>B32-I-24</b>  | 24"    | (609)  | 376   | (170.5)  |
| <b>B32-I-32</b>  | 32"    | (813)  | 496   | (225.0)  |
| <b>B32-I-36</b>  | 36"    | (914)  | 556   | (252.2)  |
| <b>B32-I-40</b>  | 40"    | (1016) | 616   | (279.4)  |
| <b>B32-I-48</b>  | 48"    | (1219) | 736   | (333.8)  |
| <b>B32-I-60</b>  | 60"    | (1524) | 915   | (415.0)  |
| <b>B32-I-72</b>  | 72"    | (1829) | 1095  | (496.7)  |
| <b>B32-I-84</b>  | 84"    | (2133) | 1274  | (577.9)  |
| <b>B32-I-96</b>  | 96"    | (2438) | 1453  | (659.0)  |
| <b>B32-I-108</b> | 108"   | (2743) | 1633  | (740.7)  |
| <b>B32-I-120</b> | 120"   | (3048) | 1813  | (822.3)  |
| <b>B32-I-144</b> | 144"   | (3657) | 2173  | (985.6)  |
| <b>B32-I-168</b> | 168"   | (4267) | 2533  | (1148.9) |
| <b>B32-I-192</b> | 192"   | (4877) | 2893  | (1312.2) |
| <b>B32-I-216</b> | 216"   | (5486) | 3253  | (1475.5) |
| <b>B32-I-240</b> | 240"   | (6096) | 3613  | (1638.8) |

Reference page 254 for general fitting and standard finish specifications.

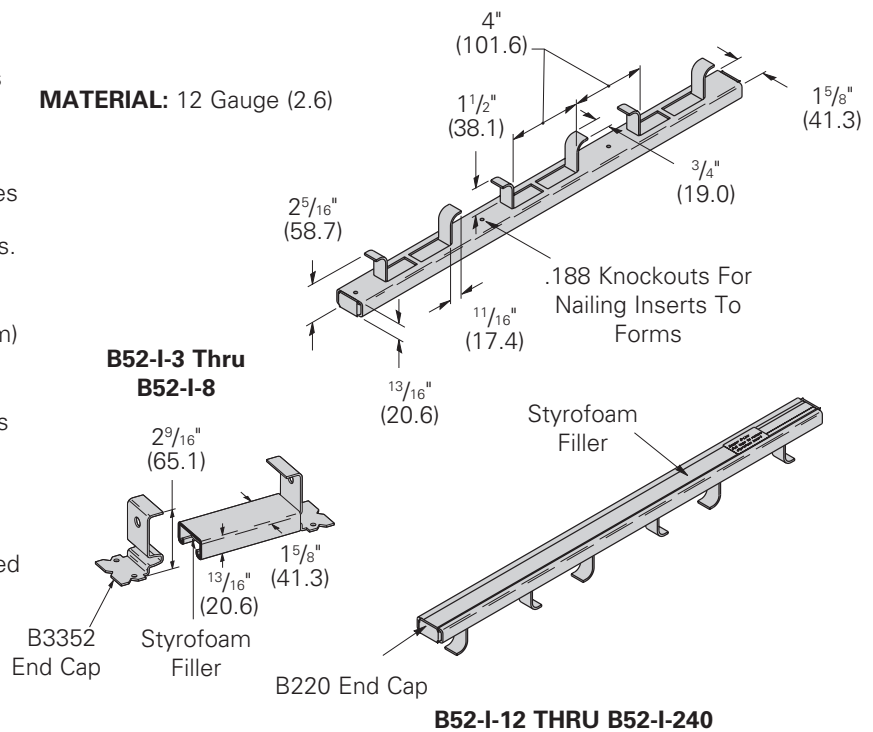
# Continuous concrete inserts

## B52I

### Continuous Concrete Insert

- Design Load for B52-I-12 thru B52-I-240 is 1,500 lbs. (6.67 kN) per foot of concrete insert length with safety factor of 3 in 3000 psi concrete.
- Loads concentrated within the last 2 inches (50.8 mm) of concrete inserts 8" (203.2 mm) and longer should not exceed 750 lbs. (3.33kN).
- Concrete insert should be secured to the forms on 16" (406.4 mm) to 24" (609.6 mm) intervals.
- B52-I continuous concrete inserts are made from B52 channel. Use channel nuts designed for use in B52 channel.
- B52-I concrete inserts are supplied with styrofoam fillers. B3352 end caps are furnished with inserts through 8" (203.2 mm) long, and B220 end caps are furnished with inserts 12" (304.8 mm) and longer.
- Material: Plain Steel ASTM A1011 33,000 PSI min. yield or Pre-Galvanized Steel ASTM A653SS 33,000 PSI min. yield.
- Finish: Plain, DURA GREEN™, Pre-Galv, HDG

**MATERIAL:** 12 Gauge (2.6)



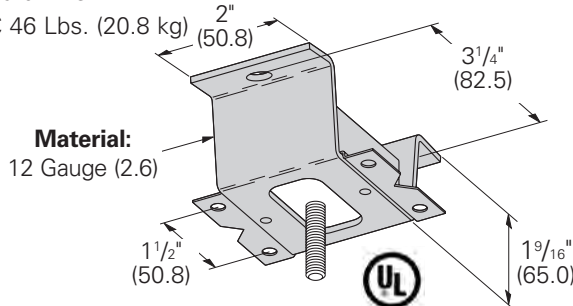
| Part No. | Length |       | Wt./C |        | Design Load |        |
|----------|--------|-------|-------|--------|-------------|--------|
|          | in.    | mm    | Lbs.  | kg     | Lbs.        | kN     |
| B52-I-3  | 3"     | (76)  | 53    | (24.0) | 400         | (1.78) |
| B52-I-4  | 4"     | (101) | 63    | (28.6) | 500         | (2.22) |
| B52-I-6  | 6"     | (152) | 85    | (38.5) | 750         | (3.33) |
| B52-I-8  | 8"     | (203) | 106   | (48.1) | 1000        | (4.45) |

| Part No.  | Length |        | Wt./C |          |
|-----------|--------|--------|-------|----------|
|           | in.    | mm     | Lbs.  | kg       |
| B52-I-12  | 12"    | (305)  | 157   | (71.2)   |
| B52-I-16  | 16"    | (406)  | 202   | (91.6)   |
| B52-I-20  | 20"    | (508)  | 237   | (107.5)  |
| B52-I-24  | 24"    | (609)  | 282   | (127.9)  |
| B52-I-32  | 32"    | (813)  | 373   | (169.2)  |
| B52-I-36  | 36"    | (914)  | 419   | (190.0)  |
| B52-I-40  | 40"    | (1016) | 464   | (210.4)  |
| B52-I-48  | 48"    | (1219) | 556   | (252.2)  |
| B52-I-60  | 60"    | (1524) | 692   | (313.9)  |
| B52-I-72  | 72"    | (1829) | 829   | (376.0)  |
| B52-I-84  | 84"    | (2133) | 965   | (437.7)  |
| B52-I-96  | 96"    | (2438) | 1107  | (502.1)  |
| B52-I-108 | 108"   | (2743) | 1237  | (561.1)  |
| B52-I-120 | 120"   | (3048) | 1374  | (623.2)  |
| B52-I-144 | 144"   | (3657) | 1648  | (747.5)  |
| B52-I-168 | 168"   | (4267) | 1922  | (871.8)  |
| B52-I-192 | 192"   | (4877) | 2196  | (996.1)  |
| B52-I-216 | 216"   | (5486) | 2470  | (1120.4) |
| B52-I-240 | 240"   | (6096) | 2744  | (1244.6) |

Reference page 254 for general fitting and standard finish specifications

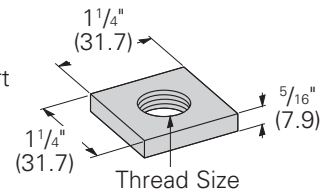
## B2500 Spot Insert

- Design Load 600 Lbs. (2.67 kN)
- Safety Factor of 5
- Order N2500 Nuts Separately
- Material: Steel ASTM A1011 33,000 PSI min. yield
- Standard finish: ZN
- Wt./C 46 Lbs. (20.8 kg)



## N2500 Insert Square Nut

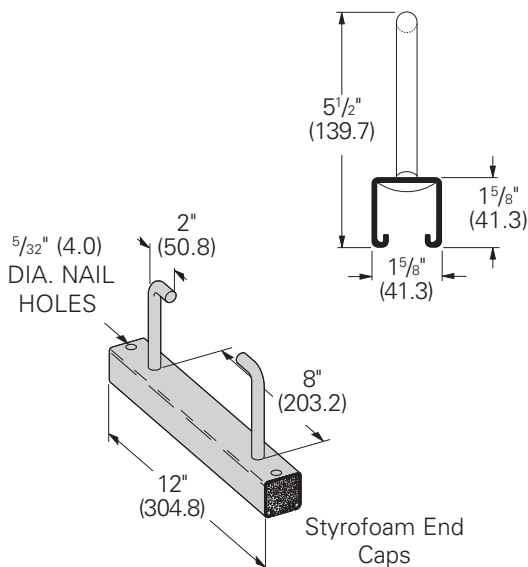
- For use in B2500 Spot Insert
- Material: Steel ASTM A36
- Standard finish: ZN



| Part No.   | Thread Size | Wt./C<br>Lbs. kg |
|------------|-------------|------------------|
| N2500-1/4  | 1/4"-20     | 13 (5.9)         |
| N2500-5/16 | 5/16"-18    | 13 (5.9)         |
| N2500-3/8  | 3/8"-16     | 12 (5.4)         |
| N2500-1/2  | 1/2"-13     | 12 (5.4)         |
| N2500-5/8  | 5/8"-11     | 11 (5.0)         |
| N2500-3/4  | 3/4"-10     | 10 (4.5)         |
| N2500-7/8  | 7/8"-9      | 9 (4.1)          |

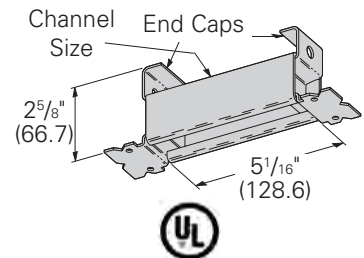
## B2503 Heavy Duty Spot Insert

- Designed for use where heavy loads are required in curtain wall applications
- Design Load is 5000 Lbs. (22.2 kN) with a Safety Factor of 3
- Loading based on two N225 channel nuts spaced 3" (76.2 mm) on center and a minimum of 2" (50.8 mm) from the end of the insert
- Styrofoam end caps prevent concrete seepage into the channel
- 12" (304.8 mm) long insert is anchored into the concrete at a depth of 5 1/2" (139.7 mm)
- Material: 12 Gauge (2.6 mm) thick steel
- Standard finish: ZN
- Wt./C 42 Lbs. (19.0 kg)



## B2505 Thru B2508 Spot Insert

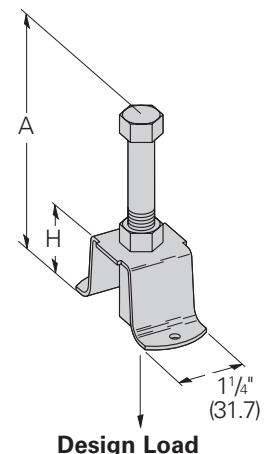
- Safety Factor of 5
- To support 10" (250) pipe use B2505 insert with 5/8"-11 Channel Nuts.
- To support up to and including 8" (200) pipes use B2506, B2507 and B2508 inserts with the desired Channel Nuts.
- Standard finish: ZN



| Part No. | Channel Style | End Cap Part No. | Design Load<br>Lbs. kN | Maximum<br>Pipe Size | Wt./C<br>Lbs. kg |
|----------|---------------|------------------|------------------------|----------------------|------------------|
| B2505    | B22           | B3322            | 1200 (5.34)            | 10" (250)            | 96 (43.5)        |
| B2506    | B32           | B3332            | 1000 (4.45)            | 8" (200)             | 88 (39.9)        |
| B2507    | B42           | B3342            | 1000 (4.45)            | 8" (200)             | 77 (34.9)        |
| B2508    | B52           | B3352            | 1000 (4.45)            | 8" (200)             | 69 (31.3)        |

## B2501 Light Duty Spot Insert

- Safety Factor of 2
- The concrete attachment problem solver for light duty applications.
- Fast and easy applications.
- No concrete leakage problems.
- One piece unitized construction.
- Color coded cap on thread for rod size identification and to prevent concrete seepage. (1/4"-Yellow, 3/8"-Red, 1/2"-Blue)



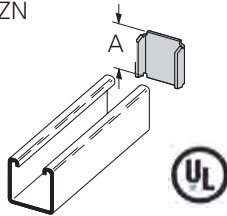
| Part No. & Size | Height A<br>In. mm | Height H<br>In. mm | Design Load<br>Lbs. kN | Wt./C<br>Lbs. kN |
|-----------------|--------------------|--------------------|------------------------|------------------|
| B2501-1/4       | 2 7/16" (61.9)     | 7/8" (22.2)        | 250 (1.11)             | 16 (7.2)         |
| B2501-3/8       | 3 1/16" (77.8)     | 1 7/8" (47.6)      | 610 (2.71)             | 22 (9.9)         |
| B2501-1/2       | 4 1/8" (104.8)     | 1 7/8" (47.6)      | 880 (3.91)             | 26 (11.7)        |

Reference page 254 for general fitting and standard finish specifications.

# Insert accessories

## B205, B206, B220 X Type End Caps

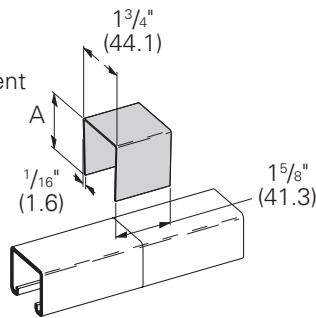
- UL listed for raceway use only
- Material: 12 Gauge (2.6)
- Standard finish: ZN



| Part No. | Use With | A<br>In. mm                              | Wt./C<br>Lbs. kg |
|----------|----------|------------------------------------------|------------------|
| B205     | B22      | 1 <sup>21</sup> / <sub>32</sub> " (42.0) | 10 (4.5)         |
| B206     | B32      | 1 <sup>13</sup> / <sub>32</sub> " (35.7) | 8 (3.6)          |
| B220     | B52      | 2 <sup>7</sup> / <sub>32</sub> " (21.4)  | 4 (1.8)          |

## B380 Joint Splice Plate

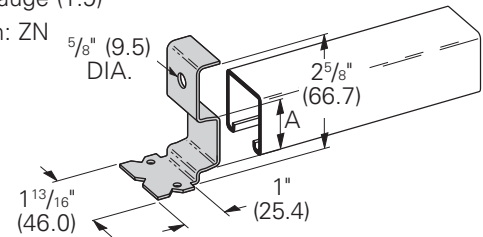
- Used at splice points to prevent concrete seepage in long continuous runs of concrete inserts.
- Material: 18 Gauge (1.2)
- Standard finish: GALV



| Part No. | Use With | A<br>In. mm                             | Wt./C<br>Lbs. kg |
|----------|----------|-----------------------------------------|------------------|
| B380-22  | B22      | 1 <sup>5</sup> / <sub>8</sub> " (41.3)  | 11 (5.0)         |
| B380-32  | B32      | 1 <sup>3</sup> / <sub>8</sub> " (34.9)  | 10 (4.5)         |
| B380-42  | B42      | 1" (25.4)                               | 9 (4.1)          |
| B380-52  | B52      | 1 <sup>3</sup> / <sub>16</sub> " (20.6) | 7 (3.2)          |

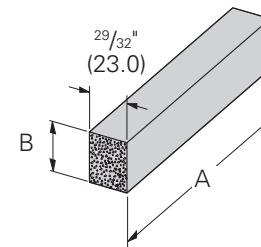
## B3322, B3332, B3342, B3352 Y Type End Caps

- UL listed for raceway use only
- Material: 14 Gauge (1.9)
- Standard finish: ZN



| Part No. | Use With | A<br>In. mm  | Wt./C<br>Lbs. kg |
|----------|----------|--------------|------------------|
| B3322    | B22      | 1.270 (32.2) | 15 (6.8)         |
| B3332    | B32      | 1.000 (25.4) | 15 (6.8)         |
| B3342    | B42      | .645 (16.4)  | 15 (6.8)         |
| B3352    | B52      | .460 (11.7)  | 15 (6.8)         |

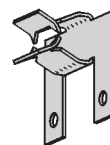
## B22IFS-B52IFS Styrofoam Filler Strip



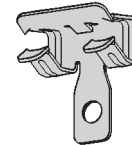
| Part No. | A<br>Ft. mm | B<br>In. mm                            | Wt./C<br>Lbs. kg |
|----------|-------------|----------------------------------------|------------------|
| B22-IFS  | 4' (1219)   | 1 <sup>7</sup> / <sub>32</sub> " (309) | 10 (4.5)         |
| B32-IFS  | 4' (1219)   | 1" (254)                               | 9 (4.1)          |
| B52-IFS  | 4' (1219)   | 2 <sup>1</sup> / <sub>32</sub> " (167) | 7 (3.2)          |

## Pipe Sleeve Fasteners

- Allows for rigid attachment of pipe sleeves to wall and floor forms for concrete pouring.
- Accommodates Schedule 40, Schedule 80, or 5/16" (8) and smaller wall thickness.
- Simply installed with a hammer.

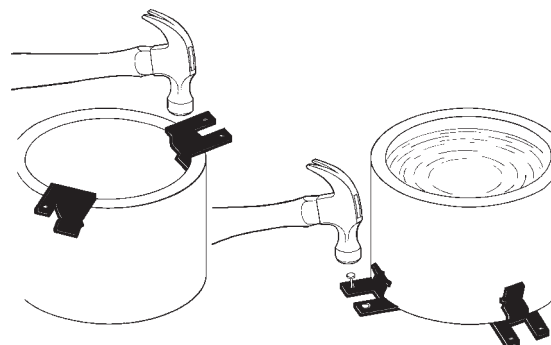


BD40



BE-5-8 & BE-9-12

| Part No. | Sleeve Diameter | Wall Thickness   |
|----------|-----------------|------------------|
| BD40     | All Dia.        | 5/16" & under    |
| BE-5-8   | 6"              | Schedule 80 pipe |
| BE-9-12  | 9" - 14"        | Schedule 80 pipe |



Reference page 254 for general fitting and standard finish specifications

## Wedge Anchors †

- Heavy and medium duty all purpose anchor.
- For use in solid concrete and grout filled block.
- Anchors can be installed through the fixture, no need for hole spotting.
- **UL** (Underwriters Laboratories) Listed
- **FM** (Factory Mutual) Approved
- Available in Zinc Plated Carbon Steel or Type 304 Stainless Steel.

† Not ICC-ES Certified



| Wedge Anchor - Data             | 1/4"    | 3/8"    | 1/2"    | 5/8"    |
|---------------------------------|---------|---------|---------|---------|
| ANSI Drill Bit Size (in.)       | 1/4     | 3/8     | 1/2     | 5/8     |
| Fixture Clearance Hole (in.)    | 5/16    | 7/16    | 9/16    | 11/16   |
| Thread Size (UNC)               | 1/4"-20 | 3/4"-16 | 1/2"-13 | 5/8"-11 |
| Washer O.D. (in.)               | 5/8     | 13/16   | 1 1/16  | 1 3/4   |
| Wrench Size                     | 7/16    | 9/16    | 3/4     | 15/16   |
| Max. Tightening Torque (ft-lbs) | 8       | 28      | 60      | 90      |
| Min. Embedment Depth (in.)      | 1 1/8   | 1 5/8   | 2 1/4   | 2 3/4   |
| Load Capacity Tension (lbs) *   | 415     | 775     | 1200    | 1570    |
| Load Capacity Shear (lbs) *     | 325     | 635     | 1050    | 1705    |

\* Based on concrete compression strength of 4,000 psi using applied safety factor of 4.

| Catalog Number                  | Size          | Thread Length |
|---------------------------------|---------------|---------------|
| <b>Zinc Plated Carbon Steel</b> |               |               |
| <b>AWA-25-175</b>               | 1/4" x 1 3/4" | 3/4"          |
| <b>AWA-25-225</b>               | 1/4" x 2 1/4" | 1 1/4"        |
| <b>AWA-25-325</b>               | 1/4" x 3 1/4" | 2 1/4"        |
| <b>AWA-37-225</b>               | 3/8" x 2 1/4" | 1 1/4"        |
| <b>AWA-37-275</b>               | 3/8" x 2 3/4" | 1 5/8"        |
| <b>AWA-37-300</b>               | 3/8" x 3"     | 1 7/8"        |
| <b>AWA-37-350</b>               | 3/8" x 3 1/2" | 2 3/8"        |
| <b>AWA-37-375</b>               | 3/8" x 3 3/4" | 2 5/8"        |
| <b>AWA-37-500</b>               | 3/8" x 5"     | 3 7/8"        |
| <b>AWA-50-275</b>               | 1/2" x 2 3/4" | 1 3/8"        |
| <b>AWA-50-375</b>               | 1/2" x 3 3/4" | 2 3/8"        |
| <b>AWA-50-450</b>               | 1/2" x 4 1/2" | 3 1/8"        |
| <b>AWA-50-550</b>               | 1/2" x 5 1/2" | 4 1/8"        |
| <b>AWA-50-700</b>               | 1/2" x 7"     | 5 5/8"        |
| <b>AWA-62-275</b>               | 5/8" x 3 1/2" | 2"            |
| <b>AWA-62-375</b>               | 5/8" x 4 1/2" | 3"            |
| <b>AWA-62-450</b>               | 5/8" x 5"     | 3 1/2"        |
| <b>AWA-62-550</b>               | 5/8" x 6"     | 4 1/2"        |
| <b>AWA-62-700</b>               | 5/8" x 7"     | 5 1/2"        |
| <b>Stainless Steel</b>          |               |               |
| <b>AWA-25-175SS4</b>            | 1/4" x 1 3/4" | 3/4"          |
| <b>AWA-25-225SS4</b>            | 1/4" x 2 1/4" | 1 1/4"        |
| <b>AWA-25-325SS4</b>            | 1/4" x 3 1/4" | 2 1/4"        |
| <b>AWA-37-225SS4</b>            | 3/8" x 2 1/4" | 1 1/4"        |
| <b>AWA-37-275SS4</b>            | 3/8" x 2 3/4" | 1 5/8"        |
| <b>AWA-37-300SS4</b>            | 3/8" x 3"     | 1 7/8"        |
| <b>AWA-37-350SS4</b>            | 3/8" x 3 1/2" | 2 3/8"        |
| <b>AWA-37-375SS4</b>            | 3/8" x 3 3/4" | 2 5/8"        |
| <b>AWA-37-500SS4</b>            | 3/8" x 5"     | 3 7/8"        |
| <b>AWA-50-275SS4</b>            | 1/2" x 2 3/4" | 1 3/8"        |
| <b>AWA-50-375SS4</b>            | 1/2" x 3 3/4" | 2 3/8"        |
| <b>AWA-50-450SS4</b>            | 1/2" x 4 1/2" | 3 1/8"        |
| <b>AWA-50-550SS4</b>            | 1/2" x 5 1/2" | 4 1/8"        |
| <b>AWA-50-700SS4</b>            | 1/2" x 7"     | 5 5/8"        |
| <b>AWA-62-275SS4</b>            | 5/8" x 3 1/2" | 2"            |
| <b>AWA-62-375SS4</b>            | 5/8" x 4 1/2" | 3"            |
| <b>AWA-62-450SS4</b>            | 5/8" x 5"     | 3 1/2"        |
| <b>AWA-62-550SS4</b>            | 5/8" x 6"     | 4 1/2"        |
| <b>AWA-62-700SS4</b>            | 5/8" x 7"     | 5 1/2"        |

## Seismic Wedge Anchors

- Fully threaded, torque-controlled wedge anchor which is designed for consistent performance in cracked and uncracked concrete.
- For use in concrete, structural sand lightweight concrete, and concrete over metal deck.
- Nominal drill but size is the same as the anchor diameter.
- **ICC-ES Listed**, ESR-2502, Category 1.
- **UL** (Underwriters Laboratories) Listed
- **FM** (Factory Mutual) Approved
- Zinc Plated Carbon Steel with stainless steel expansion clip for premium performance.

Consult factory for sizes and other information.



Reference page 254 for general fitting and standard finish specifications.

# Anchors

## Concrete Screw Bolts

- For use in racking, shelving, material handling, structural anchorage, masonry and food & beverage facilities.
- One piece heavy-duty anchor with a finished hex-head.
- Fast installation and immediate loading reduces downtime.
- For proper performance, screw anchors must be installed with the corresponding bits. The bits have a matched tolerance range designed to provide optimum performance.
- **ICC-ES Listed, ESR 2526**, qualified for static, seismic and wind loading in concrete.
- **ICC-ES Listed, ESR 4042**, qualified for static, wind and seismic loading in grouted masonry.

| Catalog Number                   | Anchor Length | Thread Length |
|----------------------------------|---------------|---------------|
| <b>Screw Type Anchor - Steel</b> |               |               |
| ACB-25-175                       | 1/4" x 1 3/4" | 1 5/8"        |
| ACB-25-225                       | 1/4" x 2 1/4" | 2"            |
| ACB-25-300                       | 1/4" x 3"     | 2 3/4"        |
| ACB-37-175                       | 3/8" x 1 3/4" | 1 1/2"        |
| ACB-37-250                       | 3/8" x 2 1/2" | 2 1/4"        |
| ACB-37-300                       | 3/8" x 3"     | 2 3/4"        |
| ACB-37-400                       | 3/8" x 4"     | 3 3/4"        |



| Catalog Number                          | Drill Size | Usable Length | Overall Length |
|-----------------------------------------|------------|---------------|----------------|
| <b>Drill Bits - Straight Shank Type</b> |            |               |                |
| 1372                                    | 1/4"       | 4"            | 6"             |
| 1380                                    | 3/8"       | 4"            | 6"             |
| <b>Drill Bits - SDS Type</b>            |            |               |                |
| 1314                                    | 1/4"       | 4"            | 6"             |
| 1316                                    | 3/8"       | 4"            | 6"             |



Straight Shank Drill Bit



SDS Hex Drill Bit

**Note:** Matched tolerance bits must be used for installation.

| Concrete Screw Bolts - Data   | 1/4" | 3/8"  |
|-------------------------------|------|-------|
| ACB Drill Bit Size (in.)      | 1/4  | 3/8   |
| Min. Embedment Depth (in.)    | 1    | 1 1/2 |
| Load Capacity Tension (lbs) * | 385  | 835   |
| Load Capacity Shear (lbs) *   | 480  | 1125  |

\* Based on concrete compression strength of 4000 psi in uncracked concrete using applied safety factor of 4.0. For additional loading information contact factory. For ultimate strength design data in cracked and uncracked concrete, see ICC-ES ESR-3889.

Reference page 254 for general fitting and standard finish specifications



## Concrete Screws

- Light to medium duty anchor for use in concrete, masonry block and brick base materials.
- Concrete screws are engineered with matched tolerance bits and installation tools to optimize performance.
- High low thread design for greater stability and grip.
- No hole spotting required.
- One drill bit is packaged in each box of concrete screws.
- Blue fluorocarbon coating for corrosion resistance.

| Catalog Number | Size |
|----------------|------|
|----------------|------|

### Hex Head Concrete Screws

|                      |                |
|----------------------|----------------|
| <b>ACS-18-125H</b> † | 3/16" x 1 1/4" |
| <b>ACS-18-175H</b> † | 3/16" x 1 3/4" |
| <b>ACS-18-225H</b>   | 3/16" x 2 1/4" |
| <b>ACS-18-275H</b>   | 3/16" x 2 3/4" |
| <b>ACS-18-325H</b>   | 3/16" x 3 1/4" |
| <b>ACS-18-375H</b>   | 3/16" x 3 3/4" |
| <b>ACS-18-400H</b>   | 3/16" x 4"     |
| <b>ACS-25-125H</b> † | 1/4" x 1 1/4"  |
| <b>ACS-25-175H</b> † | 1/4" x 1 3/4"  |
| <b>ACS-25-225H</b>   | 1/4" x 2 1/4"  |
| <b>ACS-25-275H</b>   | 1/4" x 2 3/4"  |
| <b>ACS-25-325H</b>   | 1/4" x 3 1/4"  |
| <b>ACS-25-375H</b>   | 1/4" x 3 3/4"  |
| <b>ACS-25-400H</b>   | 1/4" x 4"      |

### Flat Head Concrete Screws

|                      |                |
|----------------------|----------------|
| <b>ACS-18-125F</b> † | 3/16" x 1 1/4" |
| <b>ACS-18-175F</b> † | 3/16" x 1 3/4" |
| <b>ACS-18-225F</b>   | 3/16" x 2 1/4" |
| <b>ACS-18-275F</b>   | 3/16" x 2 3/4" |
| <b>ACS-25-125F</b> † | 1/4" x 1 1/4"  |
| <b>ACS-25-175F</b> † | 1/4" x 1 3/4"  |
| <b>ACS-25-225F</b>   | 1/4" x 2 1/4"  |
| <b>ACS-25-275F</b>   | 1/4" x 2 3/4"  |

† Not ICC-ES listed

Hex Head



| Hex Head - Data              | 3/16" | 1/4"  |
|------------------------------|-------|-------|
| ANSI Drill Bit Size (in.)    | 5/32  | 3/16  |
| Fixture Clearance Hole (in.) | 1/4   | 5/16  |
| Head Height (in.)            | 7/64  | 9/64  |
| Head Width (in.)             | 1/4   | 5/16  |
| Washer O.D. (in.)            | 11/32 | 13/32 |
| Washer Thickness (in.)       | 1/32  | 1/32  |
| Hex Driver (in.)             | 1/4   | 5/16  |

Flat Head



| Flat Head - Data             | 3/16" | 1/4" |
|------------------------------|-------|------|
| ANSI Drill Bit Size (in.)    | 5/32  | 3/16 |
| Fixture Clearance Hole (in.) | 1/4   | 5/16 |
| Phillips Head O.D. (in.)     | 3/8   | 1/2  |
| Phillips Head Height (in.)   | 9/64  | 3/16 |
| Phillips Bit Size            | 2     | 3    |



Straight Shank Drill Bit



SDS Hex Drill Bit

| Catalog Number | Bit Size | Usable Length |
|----------------|----------|---------------|
|----------------|----------|---------------|

### Straight Shank Drill Bits

|               |                |    |
|---------------|----------------|----|
| <b>2782SD</b> | 5/32" x 4 1/2" | 3" |
| <b>2786SD</b> | 3/16" x 4 1/2" | 3" |

### SDS Hex Drill Bits

|             |            |    |
|-------------|------------|----|
| <b>2793</b> | 5/32" x 5" | 3" |
| <b>2796</b> | 3/16" x 5" | 3" |



| Catalog Number | Description |
|----------------|-------------|
|----------------|-------------|

### Setting Tool

|             |                         |
|-------------|-------------------------|
| <b>2791</b> | Concrete Screw Tool Kit |
|-------------|-------------------------|

| Embedment Depth | Nominal Anchor Dia. / Loading* |             |              |            |
|-----------------|--------------------------------|-------------|--------------|------------|
|                 | 3/16" Tension                  | 3/16" Shear | 1/4" Tension | 1/4" Shear |
| 1 3/4"          | 360                            | 240         | 555          | 375        |

\* Based on concrete compression strength of 4000 psi using applied safety factor of 4.0. For additional loading information contact factory.

**ICC-ES Listed, ESR 3068**, qualified for static, wind and loading in concrete.

**ICC-ES Listed, ESR 1678**, qualified for static, wind and seismic loading in grouted concrete.

**ICC-ES Listed, ESR 3213**, qualified for use in chemically treated wood.

**ICC-ES Listed, ESR 3042**, qualified for use in wood.

Reference page 254 for general fitting and standard finish specifications.

# Anchors

## Wood-Knocker<sup>†</sup> II Anchors

- Wood-Knocker<sup>™</sup> concrete inserts are installed on wooden forms used to support newly poured concrete floors, roof slabs, or walls.
- When the forms are stripped, the color-coded flange is visibly embedded in the concrete surface.
- The unique, six sided impact plate offers resistance to rotation within the concrete as threaded rod is being installed.
- Suitable for overhead installations such as suspending cable tray, pipe hangers, strut, and conduit.
- Color coded by size for all trades.
- Lowest in-place cost.
- **ICC-ES** Certified. See ICC-ESR-3657
- **UL** (Underwriters Laboratories) Listed
- **FM** (Factory Mutual) Approved



## Wood-Knocker<sup>™</sup> II Anchors

| Catalog Number | Rod Diameter | Color  |
|----------------|--------------|--------|
| ACPW-25-2      | 1/4"         | Brown  |
| ACPW-37-2      | 3/8"         | Green  |
| ACPW-3750-2    | 3/8"-1/2"    | Gray   |
| ACPW-50-2      | 1/2"         | Yellow |
| ACPW-62-2      | 5/8"         | Red    |
| ACPW-75-2      | 3/4"         | Purple |

| Wood Knocker - Data           | 1/4"    | 3/8"    | 1/2"    | 5/8"    | 3/4"    |
|-------------------------------|---------|---------|---------|---------|---------|
| Insert Thread Length (in.)    | 3/8     | 5/8     | 11/16   | 15/16   | 1 1/8   |
| Plastic Flange Diameter (in.) | 1 3/8   | 1 3/8   | 1 3/8   | 1 5/8   | 1 5/8   |
| Thread Size (UNC)             | 1/4"-20 | 3/8"-16 | 1/2"-13 | 5/8"-11 | 3/4"-10 |
| Overall Length (in.)          | 1 7/8   | 1 7/8   | 1 7/8   | 1 7/8   | 1 7/8   |
| Min. Insert Spacing (in.)     | 9       | 9       | 9       | 12      | 12      |
| Min. End Distance (in.)       | 6       | 6       | 6       | 9       | 9       |
| Load Capacity Tension (lbs) * | 1240    | 1605    | 1605    | 1550    | 1550    |
| Load Capacity Shear (lbs) *   | 495     | 1775    | 2465    | 3785    | 3785    |

\* Based on normal weight concrete with minimum compression strength of 3000 psi.  
Allowable load capacities are calculated using applied safety factor of 4.0. For additional loading information contact factory.  
Minimum embedment depth is 2".

<sup>†</sup> Wood-Knocker<sup>™</sup> is a registered trademark used by DeWalt

Reference page 254 for general fitting and standard finish specifications

## Bang-It<sup>†</sup> Anchors

- Bang-It<sup>™</sup> concrete inserts are designed for installation in and through metal composite deck used to support newly poured concrete floors or roof slabs.
- After installation, the protective sleeve of the insert protrudes below the surface of the deck, allowing overhead attachment of threaded rod.
- The unique, six sided impact plate offers resistance to rotation within the concrete as threaded rod is being installed.
- Suitable for overhead installations such as suspending cable tray, pipe hangers, strut, and conduit.
- Color coded by size for all trades.
- **ICC-ES** Certified. See ICC-ESR-3657
- **UL** (Underwriters Laboratories) Listed
- **FM** (Factory Mutual) Approved
- Lowest in-place cost.

## Bang-It+ Anchors

| Catalog Number | Rod Diameter | Color  |
|----------------|--------------|--------|
| ACPD-25        | 1/4"         | Brown  |
| ACPD-37        | 3/8"         | Green  |
| ACPD-3750-2    | 3/8"-1/2"    | Gray   |
| ACPD-50        | 1/2"         | Yellow |
| ACPD-62        | 5/8"         | Red    |
| ACPD-75        | 3/4"         | Purple |



## Carbide Hole Saw for Bang-It+ Anchors

| Number        | Catalog Description                          |
|---------------|----------------------------------------------|
| ACPD-HS813-2  | 13/16" diameter for 1/4", 3/8", & 1/2" sizes |
| ACPD-HS1188-2 | 13/16" diameter for 5/8" & 3/4" sizes        |

| Bang-It - Data                  | 1/4"    | 3/8"    | 1/2"    | 5/8"    | 3/4"    |
|---------------------------------|---------|---------|---------|---------|---------|
| Metal Hole Saw Diameter (in.)   | 13/16   | 13/16   | 13/16   | 13/16   | 13/16   |
| Drilling Speed (rpm)            | 700-900 | 700-900 | 700-900 | 500-700 | 500-700 |
| Insert Thread Length (in.)      | 3/8     | 5/8     | 11/16   | 15/16   | 1 1/8   |
| Length of Sleeve (in.)          | 3 3/8   | 3 3/8   | 3 3/8   | 3 3/8   | 3 3/8   |
| Thread Size (UNC)               | 1/4"-20 | 3/8"-16 | 1/2"-13 | 5/8"-11 | 3/4"-10 |
| Embedment Depth (in.)           | 2       | 2       | 2       | 2       | 2       |
| Upper Deck Tension Load (lbs) * | 1115    | 1915    | 2370    | 2935    | 2935    |
| Lower Deck Tension Load (lbs) * | 830     | 830     | 830     | 930     | 990     |
| Upper Deck Shear Load (lbs) *   | 835     | 1115    | 1115    | 1115    | 1115    |
| Lower Deck Shear Load (lbs) *   | 625     | 840     | 840     | 840     | 840     |

\* Based on sand lightweight and normal weight concrete with minimum compression strength of 3000 psi over steel deck.

Allowable load capacities are calculated using applied safety factor of 4.0.

For additional loading information contact factory.

Minimum insert spacing of 6", minimum end spacing 6".

† Bang-It<sup>™</sup> is a registered trademark used by DeWalt

Reference page 254 for general fitting and standard finish specifications.

# Anchors

## Rapid Rod Hangers for Steel †

- One-piece, all steel threaded fastener system for suspending steel threaded rod.
- Suitable for overhead installations such as suspending cable tray, pipe hangers, strut and conduit.
- Side Mount (SW) available for side mounting applications.
- Lower in-place cost, when compared to beam clamps, lag bolts and drop-ins.
- Steel rapid rods can be installed with a screw gun or hammer drill.
- **UL** (Underwriters Laboratories) Listed
- **FM** (Factory Mutual) Approved
- Made of Zinc Plated carbon steel.



Steel Hanger Rod



Steel Hanger Rod - Side Mount

### Steel Rod Hanger - Point Style #3 For Purlins

|                          |      |                      |
|--------------------------|------|----------------------|
| <b>ARS-25-100-2</b>      | 1/4" | 1/4" x 1"            |
| <b>ARS-37-100HN-2 **</b> | 3/8" | 1/4" x 1" w/nuts     |
| <b>ARS-37-150-2</b>      | 3/8" | 1/4" x 1 1/2"        |
| <b>ARS-37-150HN-2 **</b> | 3/8" | 1/4" x 1 1/2" w/nuts |
| <b>ARS-37-200-2</b>      | 3/8" | 1/4" x 2"            |

### Steel Rod Hanger - Side Mount - Point Style #3 For Purlins

|                       |      |                  |
|-----------------------|------|------------------|
| <b>ARS-25-100SW-2</b> | 1/4" | 1/4" x 1" w/nuts |
| <b>ARS-37-100SW-2</b> | 3/8" | 1/4" x 1" w/nuts |

### Steel Rod Hanger - Point Style #5 For Purlins

|                            |      |                        |
|----------------------------|------|------------------------|
| <b>ARS-37-150HDHN-2 **</b> | 3/8" | #12-24 x 1 1/2" w/nuts |
|----------------------------|------|------------------------|

\*\* For UL & FM listings, steel rapid rod should be installed with a retaining nut.

† Not ICC-ES Certified

| Catalog Number | Tool Description |
|----------------|------------------|
| <b>7187-2</b>  | Steel Socket     |



## Steel Rapid Rod™ - Data

| Description      | Rod Size | Min. Thickness | Max. Thickness | Load (Material Thickness) | Load Direction | Pipe Size | Pipe Thickness | Pipe Size | Pipe Thickness |
|------------------|----------|----------------|----------------|---------------------------|----------------|-----------|----------------|-----------|----------------|
| ARS-25-100-2     | 1/4"     | 0.060          | 0.250          | 593 (0.125")              | —              | —         | —              | —         | —              |
| ARS-37-100HN-2   | 3/8"     | 0.060          | 0.250          | 1172 (0.125")             | V              | 4"        | 0.125"         | 4"        | 12 ga.         |
| ARS-37-150-2     | 3/8"     | 0.188          | 0.250          | 593 (0.125")              | V              | 4"        | 0.060"         | —         | —              |
| ARS-37-150HN-2   | 3/8"     | 0.060          | 0.250          | 1172 (0.125")             | V              | 4"        | 0.060"         | —         | —              |
| ARS-37-200-2     | 3/8"     | 0.060          | 0.250          | 593 (0.125")              | V              | 4"        | 0.125"         | —         | —              |
| ARS-25-100SW-2   | 3/8"     | 0.060          | 0.250          | 642 (0.111")              | H              | 4"        | —              | —         | —              |
| ARS-37-100SW-2   | 3/8"     | 0.060          | 0.250          | 702 (0.111")              | H              | 4"        | 0.060"         | 4"        | 16 ga.         |
| ARS-37-150HDHN-2 | 3/8"     | 0.060          | 0.250          | 1452 (0.111")             | V              | 4"        | 0.125"         | 4"        | 12 ga.         |

Loads shown for ASTM A36 steel beams and ASTM A572 steel purlins include a safety factor of 4.

For UL & FM listings, steel rapid rod must be installed with a retaining nut. UL & FM load rating for 3/8" rapid rod is 365 lbs. and can support up to a maximum 4" pipe.

### Steel Rapid Rod - Data

| Point Style               | #3         | #5         |
|---------------------------|------------|------------|
| Self-Drilling Range (in.) | 1/16 - 1/4 | 1/16 - 1/2 |
| Screw Size (UNC) *        | 1/4"-20    | 1/4"-20    |

\* Dimensions for self-drilling (embedded) portion of anchor.

Reference page 254 for general fitting and standard finish specifications

## Rapid Rod Hangers for Concrete<sup>†</sup>

### Rapid Rod Hangers for Wood<sup>†</sup>

- One-piece, all steel threaded fastener system for suspending steel threaded rod.
- Suitable for overhead installations such as suspending cable tray, pipe hangers, strut and conduit.
- Side Mount (SW) available for side mounting applications.
- Lower in-place cost, when compared to beam clamps, lag bolts and drop-ins.
- Wood rapid rods can be installed with a screw gun or hammer drill.
- Concrete Rapid Rod™ hangers can be installed with an adjustable torque, battery powered screw gun or hammer drill.
- **UL** (Underwriters Laboratories) Listed
- **FM** (Factory Mutual) Approved
- Made of Zinc Plated carbon steel.



ARC Series

ARW Series

ARW-SW Series

| Catalog Number                                                     | Rod Size | Shank Size & Length |
|--------------------------------------------------------------------|----------|---------------------|
| <b>Concrete Rod Hanger - ANSI Wedge-Bolt OT Thread Shank Style</b> |          |                     |
| ARC-25-125                                                         | 1/4"     | 1/4" x 1 5/8"       |
| ARC-37-150                                                         | 3/8"     | 1/4" x 1 5/8"       |
| ARC-37-275                                                         | 3/8"     | 3/8" x 2 3/4"       |

For side mount concrete applications use ARW-25-100SW or ARW-37-200SW with 3/16" drill bit.

### Wood Rod Hanger - Point Style Type 17

|            |      |                |
|------------|------|----------------|
| ARW-25-200 | 1/4" | 1/4" x 2"      |
| ARW-37-100 | 3/8" | 1/4" x 1"      |
| ARW-37-200 | 3/8" | 1/4" x 2"      |
| ARW-37-250 | 3/8" | 5/16" x 2 1/2" |
| ARW-50-250 | 1/2" | 5/16" x 2 1/2" |

### Wood Rod Hanger - Side Mount - Point Style Type 17

|              |      |           |
|--------------|------|-----------|
| ARW-25-100SW | 1/4" | 1/4" x 1" |
| ARW-37-200SW | 3/8" | 1/4" x 2" |

### Catalog Tool Number Description

#### Tools

|        |                                   |
|--------|-----------------------------------|
| 7187-2 | Wood Socket                       |
| 7195-2 | 1/4" Concrete Socket              |
| 7197-2 | 3/8" Concrete Socket              |
| 5874   | Concrete Tapper Sleeve Assy.      |
| 5866   | 1/4" X 6" Hex Shank SDS Drill Bit |



7187



7195



7197

Reference page 254 for general fitting and standard finish specifications.

## Rapid Rod Hangers - Concrete

| Concrete Rapid Rod - Data      | 1/4"  | 3/8"  | 3/8"  |
|--------------------------------|-------|-------|-------|
| ANSI Drill Bit (in.)           | 1/4   | 1/4   | 1/4   |
| Thread Length (in.)            | 1 5/8 | 1 5/8 | 2 1/2 |
| Min. Embedment Depth (in.)     | 1 5/8 | 1 5/8 | 2 1/2 |
| Load Capacity Tension (lbs.) * | 815   | 815   | 1050  |
| Load Capacity Shear (lbs.) *   | 380   | 525   | 525   |

\* Based on concrete compression strength of 4000 psi using applied safety factor of 4.0. For additional loading information contact factory.

FM approved load capacity for 3/8" anchor is 365 lbs., maximum 4" pipe size.

## Rapid Rod Hangers - Wood

| Wood Rapid Rod - Data    | 1/4" Thread Forming | 3/8" Thread Forming |
|--------------------------|---------------------|---------------------|
| Pre-Drill Diameter (in.) | 1/8                 | 1/8                 |
| Point Style              | Type 17             | Type 17             |

### Wood Rapid Rod - Embedment & Load Data (lbs.)

| Rod/Anchor Size | Embedment Depth | Fir | Pine | Spruce |
|-----------------|-----------------|-----|------|--------|
| 1/4"            | 1"              | 170 | 160  | 160    |
| 3/8"            | 2"              | 375 | 375  | 375    |
| 1/2"            | 2 1/2"          | 665 | 775  | 775    |

Minimum load ratings are based on a safety factor of 4.

UL approved load capacity for 3/8" rod sizes and 1/4" screw size is 260 lbs., maximum 3" pipe. UL approved load capacity for 3/8" rod sizes and 3/8" screw size is 375 lbs., maximum 4" pipe.

FM approval only applies to 3/8" x 2 1/2" screw size. Approved for 365 lbs., up to 4" pipe.

<sup>†</sup> Not ICC-ES Certified



# Anchors

## Self-Tapping Screw Anchors

- For use in normal-weight concrete, structural sand lightweight concrete and concrete over metal deck.
- Anchor design allows for shallow embedment and mechanically interlocks with base material.
- Internally threaded anchor for easy adjustment and removability of threaded rod or bolt.
- Fast anchor installation with a powered impact wrench.
- Suitable for overhead applications such as suspending cable tray, strut, pipe hangers and conduit.
- **FM** Approved.
- **ICC-ES** certified. See ICC-ES ESR-2272.
- Made of Zinc Plated carbon steel.
- Setting tool included.



ATM-37 Anchor

| Catalog Number                   | Size | Thread Depth |
|----------------------------------|------|--------------|
| <b>Self-Tapping Screw Anchor</b> |      |              |
| <b>ATM-37</b>                    | 3/8" | 1 1/16"      |
| <b>Tool</b>                      |      |              |
| <b>6407 SD</b>                   | 3/8" | —            |

ICC-ES certified. See ICC-ES ESR-2272.



6407 SD Tool

| Self-Tapping Machine Screw - Data | 3/8"  |
|-----------------------------------|-------|
| ANSI Drill Bit Size (in.)         | 1/2   |
| Min. Concrete Thickness (in.)     | 4     |
| Max. Tightening Torque (ft-lbs)   | 8     |
| Min. Embedment Depth (in.)        | 1 5/8 |
| Load Capacity Tension (lbs) *     | 590   |
| Load Capacity Shear (lbs) *       | 260   |

\* Based on concrete compression strength of 3000 psi in uncracked concrete using applied safety factor of 4.0.

For additional loading information contact factory. The shear capacity is controlled by steel strength and is ASTM A36 (or equivalent).

For ultimate strength design data in cracked and uncracked concrete, see ICC-ES ESR-2272.

## Sleeve Type Expansion Anchors

- For use in concrete and masonry substrates.
- Suitable for solid and hollow core materials.
- Fits standard fixture holes - no need to undersize anchors for proper fit.
- Sleeve has 360° contact area and reduces concrete stress.
- **UL** Listed and **FM** Approved
- Zinc Plated Steel and (Type 304 Stainless Steel \*\* add SS4 to part number)



Hex Nut (HN) Style



Acorn Nut (AN) Style



Slotted Round Head (RS) Style

| Sleeve Type Expansion - Data  | 1/4"   | 3/8"     | 1/2"    | 5/8"    | 3/4"    |
|-------------------------------|--------|----------|---------|---------|---------|
| ANSI Drill Bit Size (in.)     | 1/4    | 3/8      | 1/2     | 5/8     | 3/4     |
| Fixture Clearance Hole (in.)  | 5/16   | 7/16     | 9/16    | 11/16   | 15/16   |
| Plow Bolt Size (UNC)          | #10-24 | 5/16"-18 | 3/8"-16 | 1/2"-13 | 5/8"-11 |
| Min. Embedment Depth (in.)    | 1/2    | 1 1/4    | 1 1/2   | 2       | 2 1/4   |
| Load Capacity Tension (lbs) * | 65     | 540      | 645     | 1405    | 1455    |
| Load Capacity Shear (lbs) *   | 250    | 1030     | 1215    | 1215    | 2760    |



For loading information, see ICC-ES ESR-2502.

Rod Hanger (RH) Style

| Sleeve Type Expansion - Data  | Hanger Rod |          |         |
|-------------------------------|------------|----------|---------|
|                               | 1/4"       | 3/8"     | 1/2"    |
| ANSI Drill Bit Size (in.)     | 1/4        | 3/8      | 1/2     |
| Fixture Clearance Hole (in.)  | NA         | NA       | NA      |
| Plow Bolt Size (UNC)          | #10-24     | 5/16"-18 | 3/8"-16 |
| Coupling Height (in.)         | 7/8        | 1        | 1 1/4   |
| Min. Embedment Depth (in.)    | 1/2        | 1 1/4    | 1 1/2   |
| Load Capacity Tension (lbs) * | 65         | 540      | 645     |
| Load Capacity Shear (lbs) *   | 250        | 1030     | 1215    |

\* Based on concrete compression strength of 4000 psi using applied safety factor of 4.0. For additional loading contact factory.

| Catalog Number       | Size             | Thread Length |
|----------------------|------------------|---------------|
| <b>Hex Nut Style</b> |                  |               |
| <b>ASA-37-187HN</b>  | 3/8" x 1 7/8" ** | 1 5/8"        |
| <b>ASA-37-300HN</b>  | 3/8" x 3" **     | 1 5/8"        |
| <b>ASA-37-400HN</b>  | 3/8" x 4"        | 1 5/8"        |
| <b>ASA-50-225HN</b>  | 1/2" x 2 1/2" ** | 2 1/8"        |
| <b>ASA-50-300HN</b>  | 1/2" x 3" **     | 2 1/4"        |
| <b>ASA-50-400HN</b>  | 1/2" x 3 3/4" ** | 2 1/4"        |
| <b>ASA-50-525HN</b>  | 1/2" x 5 1/4"    | 2 1/4"        |
| <b>ASA-50-600HN</b>  | 1/2" x 6"        | 2 1/4"        |
| <b>ASA-62-225HN</b>  | 5/8" x 2 1/2"    | 2 1/8"        |
| <b>ASA-62-300HN</b>  | 5/8" x 3"        | 2 3/4"        |
| <b>ASA-62-425HN</b>  | 5/8" x 4 1/4" ** | 2 3/4"        |
| <b>ASA-62-600HN</b>  | 5/8" x 5 3/4"    | 2 3/4"        |
| <b>ASA-75-250HN</b>  | 3/4" x 2 3/4"    | 2 1/8"        |
| <b>ASA-75-425HN</b>  | 3/4" x 4 1/4"    | 3/8"          |
| <b>ASA-75-625HN</b>  | 3/4" x 6 1/4"    | 3/8"          |

### Acorn Nut Style

|                     |               |        |
|---------------------|---------------|--------|
| <b>ASA-25-62AN</b>  | 1/4" x 5/8"   | 1/2"   |
| <b>ASA-25-137AN</b> | 1/4" x 1 3/8" | 1 1/8" |
| <b>ASA-25-225AN</b> | 1/4" x 2 1/4" | 1 1/8" |

### Slotted Round Head Style

|                     |               |        |
|---------------------|---------------|--------|
| <b>ASA-25-112RS</b> | 1/4" x 1 3/8" | 1"     |
| <b>ASA-25-200RS</b> | 1/2" x 2 1/4" | 1 1/8" |

| Catalog Number      | Size          | Drill Diameter |
|---------------------|---------------|----------------|
| <b>Rod Hanger</b>   |               |                |
| <b>ASA-25-150RH</b> | 1/4" x 1 1/2" | 5/16"          |
| <b>ASA-37-187RH</b> | 3/8" x 1 7/8" | 3/8"           |
| <b>ASA-50-225RH</b> | 1/2" x 2 1/4" | 1/2"           |



## Hollow Base Drop-in Anchors ‡

- For use in hollow base materials such as hollow concrete block, brick with weep holes, and precast hollow core plank.
- Can also be used in solid base materials.
- Smooth wall drop-in can be installed flush mounted or below the base material surface.
- Available in Zinc Plated finish.

| Catalog Number             | Rod Size | Overall Length | Sleeve Length |
|----------------------------|----------|----------------|---------------|
| <b>Hollow Base Drop-In</b> |          |                |               |
| <b>ADH-25</b>              | 1/4"     | 7/8"           | 5/8"          |
| <b>ADH-37</b>              | 3/8"     | 1 5/16"        | 1 5/16"       |
| <b>ADH-50</b>              | 1/2"     | 1 3/4"         | 1 1/4"        |
| <b>Setting Tools</b>       |          |                |               |
| <b>9323</b>                | 1/4"     | —              | —             |
| <b>9343</b>                | 3/8"     | —              | —             |
| <b>9353</b>                | 1/2"     | —              | —             |

‡ Not ICC-ES certified



Anchor

Setting Tool

| Hollow Base Drop-In - Data      | 1/4"    | 3/8"    | 1/2"    |
|---------------------------------|---------|---------|---------|
| ANSI Drill Bit Size (in.)       | 3/8     | 5/8     | 3/4     |
| Max. Tightening Torque (ft-lbs) | 5       | 10      | 20      |
| Thread Size (UNC)               | 1/4"-20 | 3/8"-16 | 1/2"-13 |
| Thread Length In Cone (in.)     | 3/8     | 5/8     | 3/4     |
| Min. Embedment Depth (in.)      | 3/4     | 1       | 1 1/2   |
| Load Capacity Tension (lbs) *   | 230     | 415     | 805     |
| Load Capacity Shear (lbs) *     | 240     | 510     | 805     |

\* Based on concrete compression strength of 4000 psi using applied safety factor of 4.0. For additional loading information contact factory.

## Wall Screws

- One-piece, all steel anchor with high-profile threads for easy fastening into wallboard and other masonry base materials.
- Deep cutting, corkscrew-like threads provide for smooth entry and a strong hold.
- No pre-drilling is required when fastening into wallboard or wood.
- Fastening into concrete, hollow or grout filled block, brick and plaster requires a pre-drilled 3/16" ANSI hole.
- Installed with a No. 8 drill bit or No. 2 Phillips driver.
- Made of case hardened carbon steel with chrome finish.

| Catalog Number    | Size           | Head Type |
|-------------------|----------------|-----------|
| <b>Wall Screw</b> |                |           |
| <b>AWS-CH</b>     | 3/16" x 1 1/4" | Combo     |
| <b>AWS-OH</b>     | 3/16" x 1 1/4" | Oval      |
| <b>AWS-PH</b>     | 3/16" x 1 1/4" | Pan       |

‡ Not ICC-ES certified



AWS-CH

AWS-OH

AWS-PH

| Wall Screw - Data             | Minimum Embedment Depth | Load Cap. Tension (lbs.) * | Load Cap. Shear (lbs.) * |
|-------------------------------|-------------------------|----------------------------|--------------------------|
| Concrete *                    | 3/4"                    | 90                         | 260                      |
| 1/2" Wallboard                | NA                      | 20                         | 60                       |
| 5/8" Wallboard                | NA                      | 35                         | 90                       |
| 3/4" Plywood                  | NA                      | 65                         | 150                      |
| Grout-Filled Concrete Masonry | 1"                      | 55                         | 165                      |
| Hollow Concrete Masonry       | 1"                      | 60                         | 165                      |
| Brick Masonry                 | 3/4"                    | 70                         | 120                      |

\* Based on concrete compression strength of 4000 psi. Allowable load capacities are calculated using an applied safety factor of 4.0. For additional loading contact factory.

## Plastic Screw Anchors

- Designed for use with lightweight fixtures.
- Recommended for use in concrete, block and brick.
- Recommended for light duty static applications where holding power is not critical.
- Not recommended for overhead use.
- Kit includes 100 anchors, 100 screws and one drill bit.
- Made of engineered plastic.



| Catalog Number | Screw Size |
|----------------|------------|
| <b>APC-8K</b>  | #8 x 1"    |
| <b>APC-10K</b> | #10 x 1"   |
| <b>APC-12K</b> | #12 x 1"   |

| Plastic Conical Anchor - Data | #8 Tension Shear (lbs.) (lbs.) |      | #10 - #12 Tension Shear (lbs.) (lbs.) |    |
|-------------------------------|--------------------------------|------|---------------------------------------|----|
| Nominal Weight Concrete *     | 85                             | 70   | 140                                   | 90 |
| Hollow Concrete Masonry **    | 60                             | 45   | 70                                    | 55 |
| Clay Brick Masonry ***        | 30                             | 50   | 55                                    | 65 |
| Minimum Embedment Depth       | 7/8"                           | 7/8" | 1"                                    | 1" |

\* Based on concrete compression strength of 4000 psi.

\*\* Based on hollow concrete masonry with minimum compression strength of 1500 psi.

\*\*\* Based on clay brick masonry with minimum compression strength of 1500 psi.

Loads contain an applied safety factor of 4.0.

For additional loading information contact factory.

Reference page 254 for general fitting and standard finish specifications.

# Slotted angle



Our slotted angle is an all-purpose framing system, roll formed from high strength steel strips. It is designed to be used as economical shelving, racks or electrical and mechanical supports. The unique pattern of horizontal and vertical slots permits full flexibility. Three basic sizes are available for light, medium, and heavy duty applications.

**Materials & Finishes\***

| Finish Code | Finish              | Specification                       |
|-------------|---------------------|-------------------------------------|
| PLN         | Plain               | ASTM A1011<br>33,000 PSI min. yield |
| ZN          | Electro-Plated Zinc | ASTM B633 SC3                       |
| GRN         | DURA GREEN™         |                                     |
| GALV        | Pre-Galvanized      | ASTM A653<br>33,000 PSI min. yield  |

\*Unless otherwise noted.

**Lengths**

Standard lengths are 10' (3.05 m) and 12' (3.66 m). Slotted angle is shipped in ten piece bundles complete with 60 pieces of 3/8"-16 x 3/4" (19mm) hex head cap screws and 3/8" hex nuts.

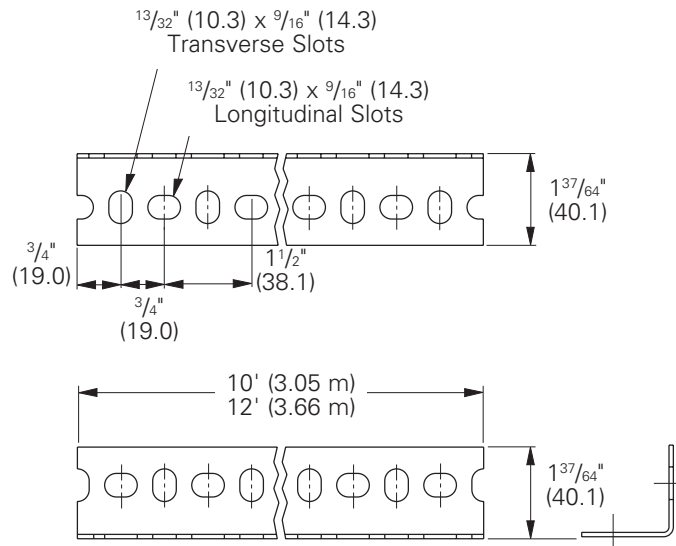
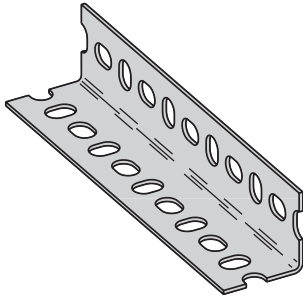
**Metric**

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

# Slotted angle sizes

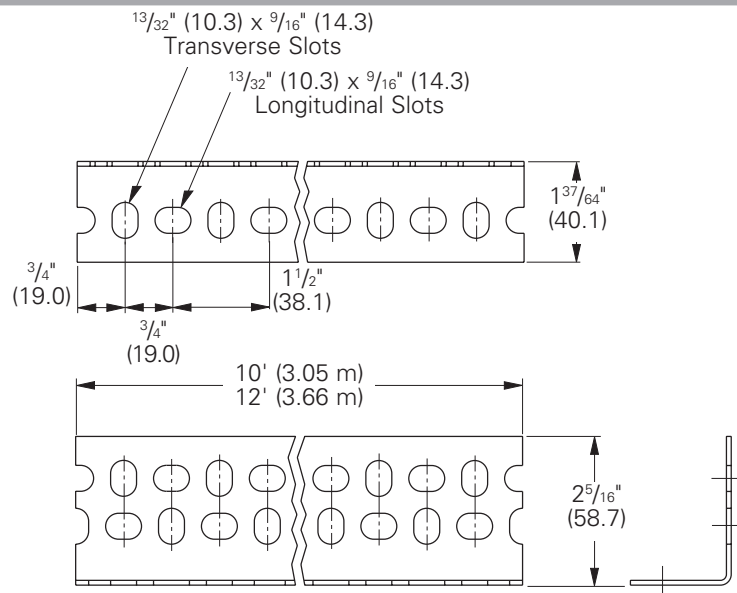
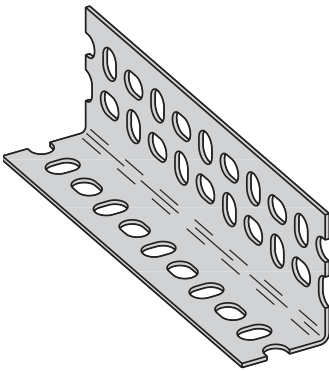
## SA158

- 14 Gauge (1.9)
- $1\frac{5}{8}" \times 1\frac{5}{8}"$
- Standard finishes: ZN, GRN
- Wt./Ft. .66 Lbs. (.98 kg/m)



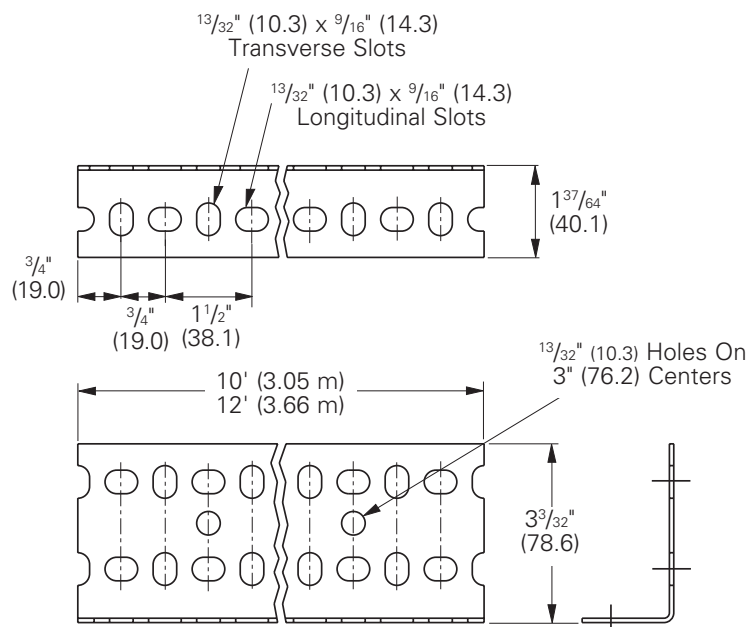
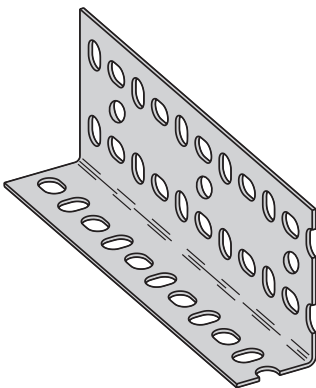
## SA276

- 14 Gauge (1.9)
- $1\frac{5}{8}" \times 2\frac{3}{8}"$
- Standard finishes: ZN, GRN
- Wt./Ft. .78 Lbs. (1.17 kg/m)



## SA318

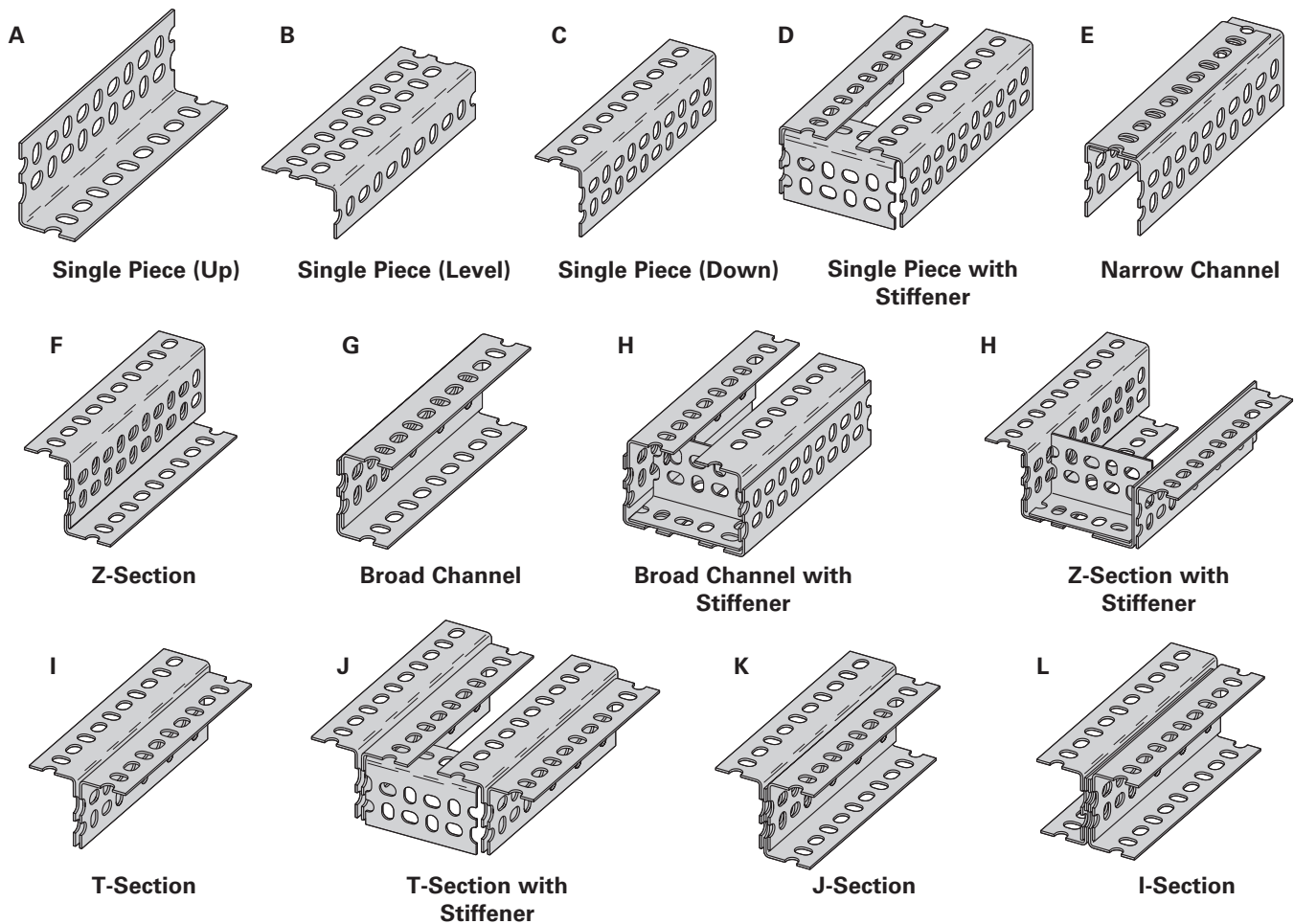
- 12 Gauge (2.6)
- $1\frac{5}{8}" \times 3\frac{1}{8}"$
- Standard finishes: ZN, GRN
- Wt./Ft. 1.32 Lbs. (1.96 kg/m)



Reference page 264 for general fitting and standard finish specifications.

# Slotted angle beam loading and combinations

## Beam Sections



For greater strength required in some applications, Slotted angle may be fastened together to create combination shapes. A number of these combinations are illustrated above. Refer to the following table for load capacities of these combinations.

Beam Sections illustrated are single sections, except J, N, and P.

## Beam Loading

SA158-1<sup>5</sup>/<sub>8</sub>" (41.3) x 1<sup>5</sup>/<sub>8</sub>" (41.3) x 14 Gauge (1.9)

|          | Beam Span    |         |              |        |               |        |               |        |               |        |               |        |               |        |      |    |
|----------|--------------|---------|--------------|--------|---------------|--------|---------------|--------|---------------|--------|---------------|--------|---------------|--------|------|----|
|          | 24" (609 mm) |         | 36" (914 mm) |        | 48" (1219 mm) |        | 60" (1524 mm) |        | 72" (1829 mm) |        | 84" (2133 mm) |        | 96" (2438 mm) |        |      |    |
|          | Lbs.         | kN      | Lbs.         | kN     | Lbs.          | kN     | Lbs.          | kN     | Lbs.          | kN     | Lbs.          | kN     | Lbs.          | kN     | Lbs. | kN |
| <b>A</b> | 825          | (3.67)  | 525          | (2.33) | 340           | (1.51) | 230           | (1.02) | 180           | (0.80) | —             | —      | —             | —      | —    | —  |
| <b>B</b> | 1100         | (4.89)  | 800          | (3.56) | 540           | (2.40) | 370           | (1.64) | 250           | (1.11) | —             | —      | —             | —      | —    | —  |
| <b>C</b> | 1100         | (4.89)  | 800          | (3.56) | 540           | (2.40) | 370           | (1.64) | 250           | (1.11) | —             | —      | —             | —      | —    | —  |
| <b>D</b> | 1300         | (5.78)  | 900          | (4.00) | 625           | (2.78) | 450           | (2.00) | 330           | (1.47) | 275           | (1.22) | 200           | (0.89) | —    | —  |
| <b>G</b> | 1900         | (8.45)  | 1360         | (6.05) | 1050          | (4.67) | 825           | (3.67) | 660           | (2.93) | 530           | (2.36) | 400           | (1.78) | —    | —  |
| <b>H</b> | 2300         | (10.23) | 1850         | (8.23) | 1450          | (6.45) | 1100          | (4.89) | 950           | (4.22) | 800           | (3.56) | 700           | (3.11) | —    | —  |
| <b>I</b> | 2200         | (9.78)  | 1650         | (7.34) | 1225          | (5.45) | 930           | (4.14) | 700           | (3.11) | 550           | (2.44) | 450           | (2.00) | —    | —  |

Based on simple beam condition with uniform loads on parallel beams. To determine concentrated load capacity at mid-span, multiply uniform load by 0.5.

Reference page 264 for general fitting and standard finish specifications.

# Slotted angle beam loading

## Beam Loading

SA276-1<sup>5</sup>/<sub>8</sub>" (41.3) x 2<sup>3</sup>/<sub>8</sub>" (60.3) x 14 Gauge (1.9)

| Beam Span |              |         |              |         |               |         |               |         |               |         |               |         |               |        |                |        |                |        |
|-----------|--------------|---------|--------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|--------|----------------|--------|----------------|--------|
|           | 24" (609 mm) |         | 36" (914 mm) |         | 48" (1219 mm) |         | 60" (1524 mm) |         | 72" (1829 mm) |         | 84" (2133 mm) |         | 96" (2438 mm) |        | 108" (2743 mm) |        | 120" (3048 mm) |        |
|           | Lbs.         | kN      | Lbs.         | kN      | Lbs.          | kN      | Lbs.          | kN      | Lbs.          | kN      | Lbs.          | kN      | Lbs.          | kN     | Lbs.           | kN     | Lbs.           | kN     |
| A         | –            | –       | 680          | (3.02)  | 450           | (2.00)  | 340           | (1.51)  | –             | –       | –             | –       | –             | –      | –              | –      | –              | –      |
| B         | –            | –       | 830          | (3.69)  | 550           | (2.44)  | 360           | (1.60)  | 210           | (0.93)  | 150           | (0.67)  | –             | –      | –              | –      | –              | –      |
| C         | –            | –       | 1540         | (6.85)  | 1060          | (4.71)  | 800           | (3.56)  | 610           | (2.71)  | 480           | (2.13)  | 340           | (1.51) | 250            | (1.11) | –              | –      |
| D         | –            | –       | 1880         | (8.36)  | 1280          | (5.69)  | 970           | (4.31)  | 820           | (3.65)  | 650           | (2.89)  | 550           | (2.44) | 420            | (1.87) | 340            | (1.51) |
| E         | –            | –       | 2110         | (9.38)  | 1730          | (7.69)  | 1460          | (5.77)  | 1250          | (5.56)  | 1090          | (4.85)  | 920           | (4.09) | 820            | (3.65) | 680            | (3.02) |
| F         | 4290         | (19.08) | 2510         | (11.16) | 1790          | (7.96)  | 1330          | (5.91)  | 980           | (4.36)  | 710           | (3.16)  | 550           | (2.44) | 420            | (1.87) | 320            | (1.42) |
| G         | 4320         | (19.21) | 3000         | (13.34) | 2140          | (9.52)  | 1600          | (7.12)  | 1290          | (5.74)  | 1040          | (4.62)  | 820           | (3.65) | 640            | (2.85) | 490            | (2.18) |
| H         | –            | –       | 3480         | (15.48) | 2430          | (10.81) | 1890          | (8.41)  | 1620          | (7.20)  | 1430          | (6.36)  | 1270          | (5.65) | 1160           | (5.16) | 1030           | (4.58) |
| I         | 5780         | (25.71) | 3640         | (16.19) | 2820          | (12.54) | 2200          | (9.78)  | 1700          | (7.56)  | 1350          | (6.00)  | 1060          | (4.71) | 850            | (3.78) | 680            | (3.02) |
| J         | –            | –       | 3660         | (16.28) | 2840          | (12.63) | 2230          | (9.92)  | 1720          | (7.65)  | 1360          | (6.05)  | 1090          | (4.85) | 874            | (3.89) | 700            | (3.11) |
| K         | –            | –       | 4910         | (21.84) | 3830          | (17.03) | 3000          | (13.34) | 2550          | (11.34) | 2190          | (9.74)  | 1880          | (8.36) | 1640           | (7.29) | 1430           | (6.36) |
| L         | –            | –       | 6360         | (28.29) | 4590          | (20.42) | 3470          | (15.43) | 2910          | (12.94) | 2550          | (11.34) | 2240          | (9.96) | 2010           | (8.94) | 1840           | (8.18) |

Based on simple beam condition with uniform loads on parallel beams. To determine concentrated load capacity at mid-span, multiply uniform load by 0.5.

## Beam Loading

SA318-1<sup>5</sup>/<sub>8</sub>" (41.3) x 3<sup>1</sup>/<sub>8</sub>" (79.4) x 12 Gauge (2.6)

| Beam Span |              |         |              |         |               |         |               |         |               |         |               |         |               |         |                |         |                |         |
|-----------|--------------|---------|--------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|---------|----------------|---------|----------------|---------|
|           | 24" (609 mm) |         | 36" (914 mm) |         | 48" (1219 mm) |         | 60" (1524 mm) |         | 72" (1829 mm) |         | 84" (2133 mm) |         | 96" (2438 mm) |         | 108" (2743 mm) |         | 120" (3048 mm) |         |
|           | Lbs.         | kN      | Lbs.         | kN      | Lbs.          | kN      | Lbs.          | kN      | Lbs.          | kN      | Lbs.          | kN      | Lbs.          | kN      | Lbs.           | kN      | Lbs.           | kN      |
| A         | –            | –       | 1140         | (5.07)  | 850           | (3.78)  | 690           | (3.07)  | –             | –       | –             | –       | –             | –       | –              | –       | –              | –       |
| B         | –            | –       | 1250         | (5.56)  | 850           | (3.78)  | 600           | (2.67)  | 400           | (1.78)  | –             | –       | –             | –       | –              | –       | –              | –       |
| C         | 4800         | (21.35) | 2750         | (12.23) | 1800          | (8.01)  | 1280          | (5.69)  | 1000          | (4.45)  | 790           | (3.51)  | 610           | (2.71)  | –              | –       | –              | –       |
| D         | –            | –       | 3900         | (17.35) | 2690          | (11.96) | 2050          | (9.12)  | 1700          | (7.56)  | 1480          | (6.58)  | 1280          | (5.69)  | 1100           | (4.89)  | 960            | (4.27)  |
| E         | –            | –       | 4160         | (18.50) | 3560          | (15.83) | 3130          | (13.92) | 2750          | (12.23) | 2400          | (10.67) | 2170          | (9.65)  | 1950           | (8.67)  | 1780           | (7.92)  |
| F         | 8180         | (36.38) | 5000         | (22.24) | 3650          | (16.23) | 2750          | (12.23) | 2200          | (9.78)  | 1750          | (7.78)  | 1350          | (6.00)  | 1020           | (4.54)  | 700            | (3.11)  |
| G         | 10600        | (47.15) | 6050         | (26.91) | 4440          | (19.75) | 3330          | (14.81) | 2670          | (11.88) | 2120          | (9.43)  | 1660          | (7.38)  | 1210           | (5.38)  | 1000           | (4.45)  |
| H         | –            | –       | 6100         | (27.13) | 4620          | (20.55) | 3670          | (16.32) | 3110          | (13.83) | 2680          | (11.92) | 2380          | (10.59) | 2100           | (9.34)  | 1950           | (8.67)  |
| I         | 13700        | (60.94) | 7800         | (34.69) | 5900          | (26.24) | 4600          | (20.46) | 3800          | (16.90) | 3190          | (14.19) | 2630          | (11.70) | 2170           | (9.65)  | 1810           | (8.05)  |
| J         | –            | –       | 7900         | (35.14) | 6300          | (28.02) | 5050          | (22.46) | 4070          | (18.10) | 3240          | (14.41) | 2630          | (11.70) | 2170           | (9.65)  | 1810           | (8.05)  |
| K         | –            | –       | 10050        | (44.70) | 8000          | (35.58) | 6320          | (28.11) | 5350          | (23.80) | 4650          | (20.68) | 4040          | (17.97) | 3520           | (15.66) | 3120           | (13.88) |
| L         | –            | –       | 12700        | (56.49) | 9550          | (42.48) | 7540          | (33.54) | 6540          | (29.09) | 5730          | (25.49) | 5030          | (22.37) | 4520           | (20.10) | 4000           | (17.79) |

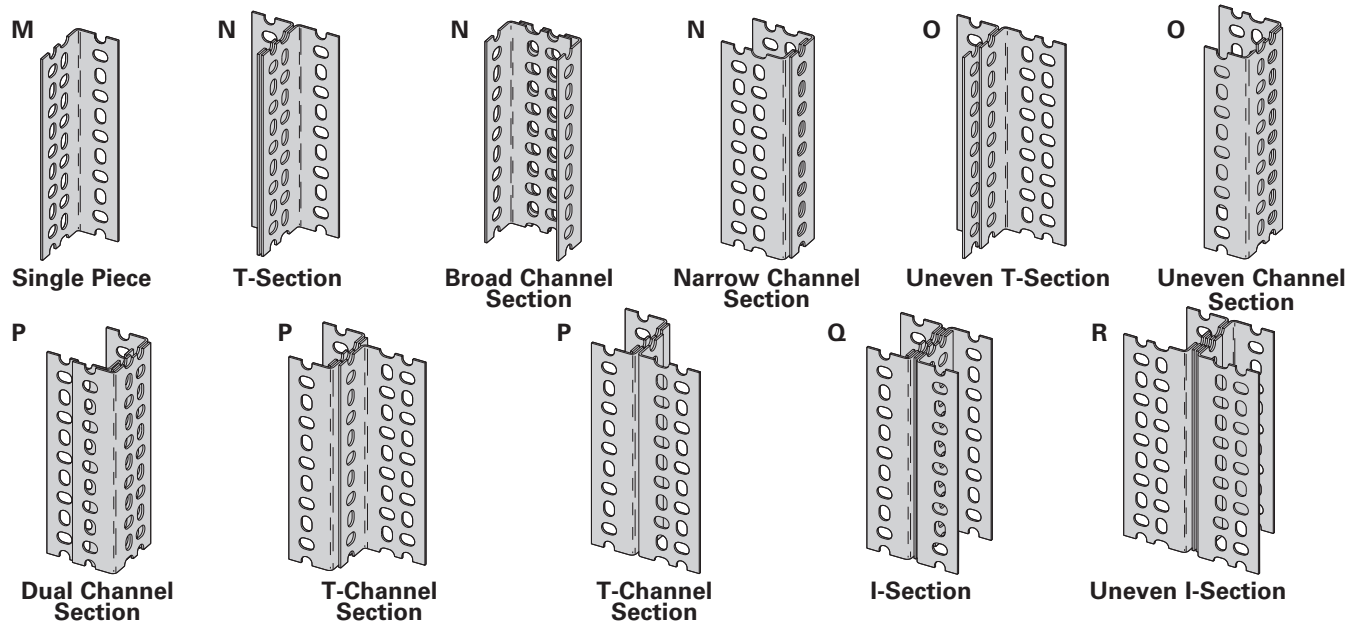
Based on simple beam condition with uniform loads on parallel beams. To determine concentrated load capacity at mid-span, multiply uniform load by 0.5.

Reference page 264 for general fitting and standard finish specifications.



# Slotted angle beam loading and combinations

## Column Sections



For greater strength required in some applications, Slotted Angle may be fastened together to create combination shapes. A number of these combinations are illustrated above. Refer to the following table for load capacities of these combinations.

### Column Loading - SA158-1<sup>5</sup>/<sub>8</sub>" (41.3) x 1<sup>5</sup>/<sub>8</sub>" (41.3) x 14 Gauge (1.9)

#### Column Height

|          | 36" (914 mm)<br>Lbs. kN | 48" (1219 mm)<br>Lbs. kN | 60" (1524 mm)<br>Lbs. kN | 72" (1829 mm)<br>Lbs. kN |
|----------|-------------------------|--------------------------|--------------------------|--------------------------|
| <b>M</b> | 1450 (6.45)             | 1150 (5.11)              | 950 (4.22)               | 750 (3.33)               |
| <b>N</b> | 3850 (17.12)            | 3500 (15.57)             | 3000 (13.34)             | 2500 (11.12)             |

### Column Loading - SA276-1<sup>5</sup>/<sub>8</sub>" (41.3) x 2<sup>3</sup>/<sub>8</sub>" (60.3) x 14 Gauge (1.9)

#### Column Height

|          | 36" (914 mm)<br>Lbs. kN | 48" (1219 mm)<br>Lbs. kN | 60" (1524 mm)<br>Lbs. kN | 72" (1829 mm)<br>Lbs. kN | 84" (2133 mm)<br>Lbs. kN | 96" (2438 mm)<br>Lbs. kN | 108" (2743 mm)<br>Lbs. kN | 120" (3048 mm)<br>Lbs. kN |
|----------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| <b>M</b> | 2280 (10.14)            | 1970 (8.76)              | 1520 (6.76)              | 1070 (4.760)             | 660 (2.93)               | — —                      | — —                       | — —                       |
| <b>N</b> | 4760 (21.17)            | 4490 (19.97)             | 3995 (17.77)             | 3140 (13.97)             | 2340 (10.41)             | 1750 (7.78)              | — —                       | — —                       |
| <b>O</b> | 4940 (21.97)            | 4680 (20.82)             | 4310 (19.17)             | 3870 (17.21)             | 3665 (16.30)             | 2700 (12.01)             | 2060 (9.16)               | 1610 (7.16)               |
| <b>P</b> | 7270 (32.34)            | 6920 (30.78)             | 6370 (28.33)             | 5840 (25.98)             | 4930 (21.93)             | 3850 (17.12)             | 2870 (12.76)              | 2060 (9.16)               |
| <b>Q</b> | 9520 (42.35)            | 8970 (39.90)             | 7990 (35.54)             | 6280 (27.93)             | 4660 (20.73)             | 3500 (15.57)             | — —                       | — —                       |
| <b>R</b> | 9865 (43.88)            | 9330 (41.50)             | 8620 (38.34)             | 7715 (34.32)             | 6740 (29.98)             | 5365 (23.86)             | 4115 (18.30)              | 3210 (14.28)              |

Column Loads assume no lateral support.

### Column Loading - SA318-1<sup>5</sup>/<sub>8</sub>" (41.3) x 3<sup>1</sup>/<sub>8</sub>" (79.4) x 12 Gauge (2.6)

#### Column Height

|          | 36" (914 mm)<br>Lbs. kN | 48" (1219 mm)<br>Lbs. kN | 60" (1524 mm)<br>Lbs. kN | 72" (1829 mm)<br>Lbs. kN | 84" (2133 mm)<br>Lbs. kN | 96" (2438 mm)<br>Lbs. kN | 108" (2743 mm)<br>Lbs. kN | 120" (3048 mm)<br>Lbs. kN |
|----------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| <b>M</b> | 3470 (15.43)            | 2870 (12.76)             | 1970 (8.76)              | 1280 (5.69)              | — —                      | — —                      | — —                       | — —                       |
| <b>N</b> | 7970 (35.45)            | 7360 (32.74)             | 6570 (29.22)             | 5270 (23.44)             | 3670 (16.32)             | 2580 (11.47)             | — —                       | — —                       |
| <b>O</b> | 8770 (39.01)            | 8580 (38.16)             | 8180 (36.38)             | 7690 (34.21)             | 6970 (31.00)             | 6260 (27.84)             | 5460 (24.29)              | 4460 (19.84)              |
| <b>P</b> | 12560 (55.87)           | 11970 (53.24)            | 11360 (50.53)            | 10480 (46.62)            | 9470 (42.12)             | 8370 (37.23)             | 6880 (30.60)              | 5370 (23.89)              |
| <b>Q</b> | 15940 (70.90)           | 14750 (65.61)            | 13160 (58.54)            | 10560 (46.97)            | 7370 (32.78)             | 5170 (23.00)             | — —                       | — —                       |
| <b>R</b> | 17550 (78.06)           | 17150 (76.29)            | 16360 (72.77)            | 15360 (68.32)            | 13970 (62.14)            | 12570 (55.91)            | 10970 (48.80)             | 8960 (39.85)              |

Column Loads assume no lateral support.

Reference page 264 for general fitting and standard finish specifications.



# Slotted angle kits and fittings

## AHHK-1/4 & AHHK-3/8

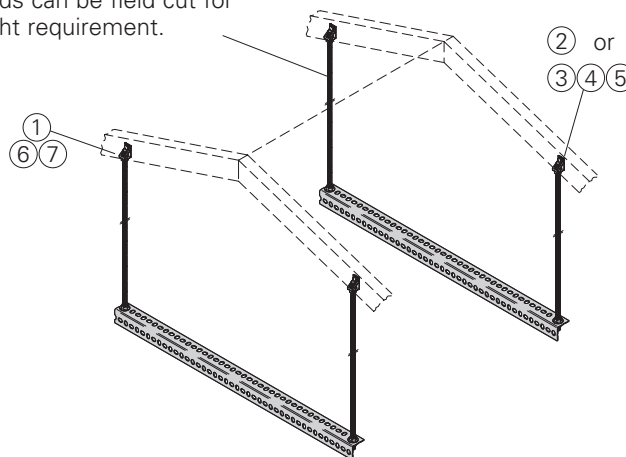
### Air Handler Hanging Kit

- Standard finishes: ZN
- Load Capacity Per Kit: 400 Lbs. (181.4 kg)

- ⑧ Hanging rods come in 72" lengths. Rods can be field cut for proper height requirement.

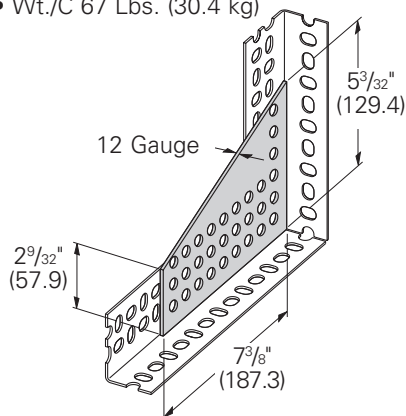
| Item # | Description                 | Quantity |          |
|--------|-----------------------------|----------|----------|
|        |                             | AHHK 1/4 | AHHK 3/8 |
| ①      | Rod Hanger Fitting          | 4        | 4        |
| ②      | Lag Screw                   | 4        | 4        |
| ③      | Hex Head Cap Screw          | 4        | 4        |
| ④      | Flat Washer (For HHCS)      | 4        | 4        |
| ⑤      | Hex Nuts (For HHCS)         | 4        | 4        |
| ⑥      | Hex Nuts (For Hanging Rods) | 16       | 16       |
| ⑦      | Flat Washer (See Note 1)    | 16       | -        |
| ⑧      | Hanging Rods (72" Long)     | 4        | 4        |
| ⑨      | SA158 (36" Long)            | 2        | 2        |

Note 1: Flat washers are required for 1/4"-20 hanging rods only.



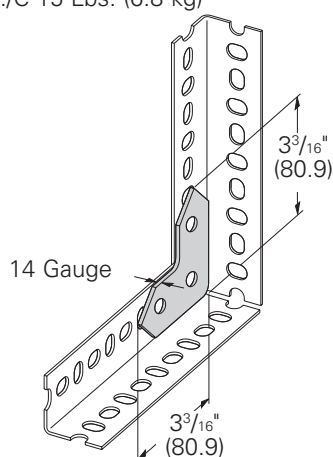
### SA101 Connection Plate

- Standard finishes: ZN, GRN
- Wt./C 67 Lbs. (30.4 kg)



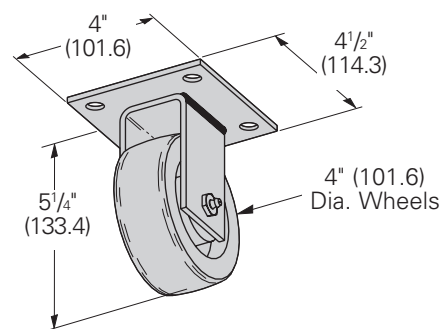
### SA102 Angle Brace

- Standard finishes: ZN, GRN
- Wt./C 15 Lbs. (6.8 kg)



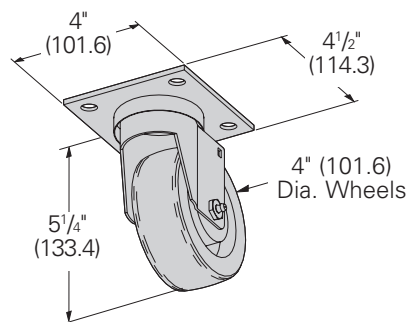
### SA154 Rigid Caster

- Safety Factor of 1.5
- 300 Lbs. (136.1 kg) maximum load capacity
- Caster material: Phenolic
- Standard finishes: ZN, GRN
- Wt./Ea. 2.0 Lbs. (.91 kg)



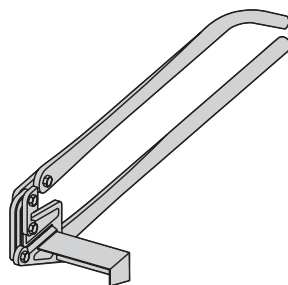
### SA155 Swivel Caster

- Safety Factor of 1.5
- 300 Lbs. (136.1 kg) maximum load capacity
- Caster material: Phenolic
- Standard finishes: ZN, GRN
- Wt./Ea. 2.2 Lbs. (1.0 kg)



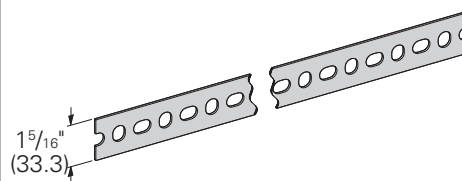
### SA110 Slotted Angle Cutter

- Standard finishes:
- Wt./Ea. 16 Lbs. (7.26 kg)



### SA131 Slotted Strap

- Hole pattern is identical to the hole pattern in slotted angles
- Standard length: 10' (3.05 m)
- Standard finishes: Pre-Galv. (GALV)
- Material thickness: 14 gauge (1.9)



CLEATS: To reinforce load-bearing joints, cleats can be field made by cutting 2 1/4" (57.1) long segments from the widest slotted angle available.

Use SA276 for light duty cleats and SA318 for heavy duty cleats.

SPLICE PLATES: To assemble two pieces of slotted angle using a butt joint requires a 6" (152.4) splice plate for reinforcement.

Reference page 264 for general fitting and standard finish specifications.

# Reference data

## Metric Conversion Chart

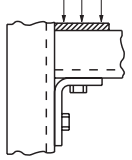
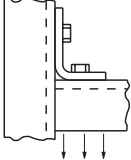
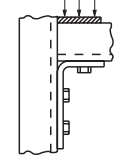
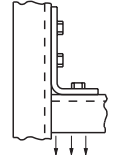
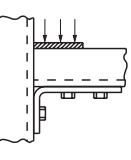
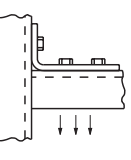
| To Convert From    | To                | Multiply By                              | To Convert From                        | To                            | Multiply By    |
|--------------------|-------------------|------------------------------------------|----------------------------------------|-------------------------------|----------------|
| <b>Angle</b>       |                   |                                          | <b>Length</b>                          |                               |                |
| degree             | radian (rad)      | 0.01745329                               | foot (ft)                              | meter (m)                     | 0.3048         |
| radian (rad)       | degree            | 57.29578                                 | inch (in)                              | meter (m)                     | 0.0254         |
| <b>Area</b>        |                   |                                          | mil                                    | meter (m)                     | 0.0000254      |
|                    |                   |                                          | inch (in)                              | millimeter (mm)               | 25.40000       |
|                    |                   |                                          | inch (in)                              | micrometer (μm)               | 25400.00       |
|                    |                   |                                          | millimeter (mm)                        | inch (in)                     | 0.0393701      |
|                    |                   |                                          | meter (m)                              | foot (ft)                     | 3.280840       |
|                    |                   |                                          | meter (m)                              | inch (in)                     | 39.37008       |
|                    |                   |                                          | meter (m)                              | mil                           | 39370.08       |
|                    |                   |                                          | micrometer (μm)                        | inch (in)                     | 0.00003937008  |
| <b>Temperature</b> |                   |                                          | <b>Volume</b>                          |                               |                |
|                    |                   |                                          | foot <sub>3</sub>                      | cubic meter (m <sub>3</sub> ) | 0.02831685     |
|                    |                   |                                          | inch <sub>3</sub>                      | cubic meter (m <sub>3</sub> ) | 0.00001638706  |
|                    |                   |                                          | cubic centimeter (cm <sub>3</sub> )    | cubic inch (in <sub>3</sub> ) | 0.06102374     |
|                    |                   |                                          | cubic meter (m <sub>3</sub> )          | foot <sub>3</sub>             | 35.31466       |
| degree Fahrenheit  | degree Celsius    | $t^{\circ C} = (t^{\circ F} - 32) / 1.8$ | cubic meter (m <sub>3</sub> )          | inch <sub>3</sub>             | 61023.76       |
| degree Celsius     | degree Fahrenheit | $t^{\circ F} = 1.8t^{\circ C} + 32$      | gallon (U.S. liquid)                   | cubic meter (m <sub>3</sub> ) | 0.003785412    |
| <b>Force</b>       |                   |                                          | <b>Section Properties</b>              |                               |                |
|                    |                   |                                          | section modulus S (in <sub>3</sub> )   | S (m <sub>3</sub> )           | 0.00001638706  |
|                    |                   |                                          | moment of inertia I (in <sub>4</sub> ) | I (m <sub>4</sub> )           | 0.000004162314 |
|                    |                   |                                          | modulus of elasticity E (psi)          | E (Pa)                        | 6894.757       |
|                    |                   |                                          | section modulus S (m <sub>3</sub> )    | S (in <sub>3</sub> )          | 61023.74       |
|                    |                   |                                          | moment of inertia I (m <sub>4</sub> )  | I (in <sub>4</sub> )          | 2402510.0      |
| pounds-force (lbf) | newtons (N)       | 4.448222                                 | modulus of elasticity E (Pa)           | E (psi)                       | 0.0001450377   |

| To Convert From                 | To                                             | Multiply By    |
|---------------------------------|------------------------------------------------|----------------|
| <b>Bending Moment or Torque</b> |                                                |                |
| lbf • ft                        | newton meter (N•m)                             | 1.355818       |
| lbf • in                        | newton meter (N•m)                             | 0.1129848      |
| N•m                             | lbf • ft                                       | 0.7375621      |
| N•m                             | lbf • in                                       | 8.850748       |
| <b>Mass</b>                     |                                                |                |
| ounce (avoirdupois)             | kilogram (kg)                                  | 0.02834952     |
| pound (avoirdupois)             | kilogram (kg)                                  | 0.4535924      |
| ton (short, 2000 lb)            | kilogram (kg)                                  | 907.1847       |
| ton (long, 2240 lb)             | kilogram (kg)                                  | 1016.047       |
| kilogram (kg)                   | ounce (avoirdupois)                            | 35.27396       |
| kilogram (kg)                   | pound (avoirdupois)                            | 2.204622       |
| kilogram (kg)                   | ton (short, 2000 lb)                           | 0.001102311    |
| kilogram (kg)                   | ton (long, 2240 lb)                            | 0.0009842064   |
| <b>Mass Per Unit Length</b>     |                                                |                |
| lb/ft                           | kilogram per meter (kg/m)                      | 1.488164       |
| lb/in                           | kilogram per meter (kg/m)                      | 17.85797       |
| kg/m                            | lb/ft                                          | 0.6719689      |
| kg/m                            | lb/in                                          | 0.5599741      |
| <b>Mass Per Unit Volume</b>     |                                                |                |
| lb/ft <sup>3</sup>              | kilogram per cubic meter (kg/m <sup>3</sup> )  | 16.01846       |
| lb/in <sup>3</sup>              | kilogram per cubic meter (kg/m <sup>3</sup> )  | 27679.9        |
| kg/m <sup>3</sup>               | lb/ft <sup>3</sup>                             | 0.06242797     |
| kg/m <sup>3</sup>               | lb/in <sup>3</sup>                             | 0.0000361273   |
| lbs/ft <sup>3</sup>             | lbs/in <sup>3</sup>                            | 1728.0         |
| <b>Mass Per Unit Area</b>       |                                                |                |
| lb/ft <sup>2</sup>              | kilogram per square meter (kg/m <sup>2</sup> ) | 4.882428       |
| kg/m <sup>2</sup>               | pound per square foot (lb/ft <sup>2</sup> )    | 0.2048161      |
| <b>Pressure or Stress</b>       |                                                |                |
| lbf/in <sup>2</sup> (psi)       | pascal (Pa)                                    | 6894.757       |
| kip/in <sup>2</sup> (ksi)       | pascal (Pa)                                    | 6894757.0      |
| lbf/in <sup>2</sup> (psi)       | megapascals (MPa)                              | 0.006894757    |
| pascal (Pa)                     | pound-force per square inch (psi)              | 0.0001450377   |
| pascal (Pa)                     | kip per square inch (ksi)                      | 0.000001450377 |
| megapascals (MPa)               | lbf/in <sup>2</sup> (psi)                      | 145.0377       |

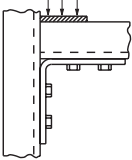
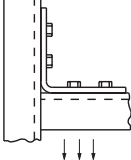
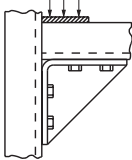
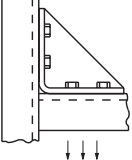
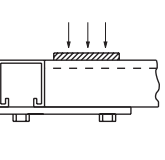
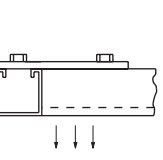
| Abbreviations                            |
|------------------------------------------|
| Defl. = Deflection                       |
| S.F. = Safety Factor                     |
| Ft. = Feet                               |
| Pre-galv. = Pre-galvanized Steel         |
| K Factor = Deflection ÷ load in Lbs./Ft. |
| o.c. = On Center                         |
| PVC = Poly Vinyl Chloride                |
| In. = Inch                               |
| psi = Pounds per Square Inch             |
| wt./c = Weight per 100 pieces            |

| Metric Symbols   |
|------------------|
| m = meter        |
| cm = centimeter  |
| mm = millimeter  |
| μm = micrometer  |
| kg = kilogram    |
| N = newton       |
| kN = kilonewton  |
| Pa = pascal      |
| MPa = megapascal |

## Design Load Data (For typical channel-fitting connections when USED IN PAIRS).

| Channel Thickness | 90° Fittings                                                                      |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                   |  |  |  |  |  |  |
|                   | Lbs. kN                                                                           | Lbs. kN                                                                           | Lbs. kN                                                                           | Lbs. kN                                                                            | Lbs. kN                                                                             | Lbs. kN                                                                             |
| 12 ga. (2.6)      | 1500 (6.67)                                                                       | 1000 (4.45)                                                                       | 2000 (8.90)                                                                       | 1500 (6.67)                                                                        | 1500 (6.67)                                                                         | 1000 (4.45)                                                                         |
| 14 ga. (1.9)      | 1000 (4.45)                                                                       | 650 (2.89)                                                                        | 1500 (6.67)                                                                       | 1150 (5.12)                                                                        | 1000 (4.45)                                                                         | 650 (2.89)                                                                          |
| 16 ga. (1.5)      | 750 (3.34)                                                                        | 500 (2.22)                                                                        | 900 (4.00)                                                                        | 650 (2.89)                                                                         | 1000 (4.45)                                                                         | 500 (2.22)                                                                          |

Design load data includes a safety factor of 2.5 (safety factor = ratio of ultimate load to design load).

| Channel Thickness | 90° Fittings                                                                      |                                                                                   |                                                                                   |                                                                                    | Flat Fittings                                                                       |                                                                                     |
|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                   |  |  |  |  |  |  |
|                   | Lbs. kN                                                                           | Lbs. kN                                                                           | Lbs. kN                                                                           | Lbs. kN                                                                            | Lbs. kN                                                                             | Lbs. kN                                                                             |
| 12 ga. (2.6)      | 2500 (11.12)                                                                      | 2000 (8.90)                                                                       | 3000 (13.34)                                                                      | 2500 (11.12)                                                                       | 1000 (4.45)                                                                         | 1000 (4.45)                                                                         |
| 14 ga. (1.9)      | 2000 (8.90)                                                                       | 1650 (7.34)                                                                       | 2000 (8.90)                                                                       | 1650 (7.34)                                                                        | 800 (3.56)                                                                          | 800 (3.56)                                                                          |
| 16 ga. (1.5)      | 1500 (6.67)                                                                       | 1250 (5.56)                                                                       | 1500 (6.67)                                                                       | 1250 (5.56)                                                                        | 600 (2.67)                                                                          | 600 (2.67)                                                                          |

# Reference data

## General Notes for Strut-Type Channel Raceway

UL Catagory RIUU - Cooper B-Line, Inc. (DBA Eaton), Highland, IL 62249 December 11, 1998 (C)  File No. E29637FLUORESCENT AND INCANDESCENT LIGHTING

Suitable for not more than the number of wires of the sizes and types indicated in the following tables. Intended to enclose circuits operating at potentials not exceeding 600 volts between conductors. In all cases, the B217-20 or B217P snap-in cover is required to complete raceway closure. When using B217-24 snap-in cover, the number of wires is limited to 7 or fewer conductors no larger than #12 AWG.

Eaton's B-Line series strut-type channel raceways and fittings are manufactured and tested to comply with the UL Standard for Safety for Strut-Type Channel Raceways and Fittings (UL 5B) in accordance with Article 384 of the 2002 National Electrical Code, NFPA 70.

1. Support spans for strut-type channel raceway shall not exceed 10 foot intervals.
2. No conductor larger than that for which the raceway is listed shall be installed in strut-type channel raceways. No wires under 14AWG or over 6AWG are allowed in any strut-type channel raceway. See tables 1, 2, and 3 (on pages 231 & 232) for a listing of the approved conductors for strut-type channel raceways.
3. The number of conductors permitted in strut-type channel raceway shall not exceed the percentage fill using Table 384-22 and the applicable outside diameter of specific types and sizes of wire given in the tables in chapter 9 of the National Electrical Code. Table 384-22 lists two different percent fill areas depending on the use of internal or external joiners. Use 40% area fill with external joiners and 25% area fill for internal joiners.
4. Items in the electrical section of Eaton's B-Line Business' Strut Systems Catalog identified by the UL symbol provide for electrical continuity. Other items require the use of a separate grounding wire.
5. If strut-type channel raceway is connected to another wiring system, the raceway must be field-tapped adjacent to the wire entry point to accept a #10-32 or larger grounding screw. A plated or stainless steel screw may be used. A sheet metal screw is not acceptable. Drill and tap the grounding wire hole before installing wires in raceway or move installed wires out of the way to avoid damage. After drilling and tapping, remove metal chips and burrs before installing screw.

**TABLE 1: MAXIMUM NUMBER OF WIRES (Adjusted per NEC Table 384.22 for 40% fill)**

Use this table to determine the type and number of conductors for use with B-Line series strut-type channel raceway using external joiners. This table applies for all installations except for the support and supply of electric discharge type lighting fixtures. See table 2 and 3 for further information.

Table 1 applies to steel and aluminum cover strips; contact B-Line or reference website for plastic closure strip information.

| Insulation Type | Wire Size AWG. | B11<br>B11K06 | B12<br>B12K06 | B22<br>B22K06 | B24<br>B24K06 | B32<br>B32K06 |
|-----------------|----------------|---------------|---------------|---------------|---------------|---------------|
| FEP,<br>FEPB    | 14             | 172           | 127           | 81            | 81            | 67            |
|                 | 12             | 126           | 92            | 59            | 59            | 49            |
|                 | 10             | 90            | 66            | 42            | 42            | 35            |
|                 | 8              | 51            | 38            | 24            | 24            | 20            |
|                 | 6              | 24            | 17            | 11            | 12            | 9             |
| RH, RHH,<br>RHW | 14             | 52            | 38            | 24            | 26            | 20            |
|                 | 12             | 45            | 33            | 21            | 22            | 17            |
|                 | 10             | 37            | 27            | 17            | 18            | 14            |
|                 | 8              | 20            | 14            | 9             | 10            | 7             |
|                 | 6              | 14            | 10            | 6             | 7             | 5             |
| T, TW           | 14             | 124           | 91            | 58            | 58            | 48            |
|                 | 12             | 95            | 70            | 45            | 45            | 37            |
|                 | 10             | 69            | 51            | 33            | 33            | 27            |
|                 | 8              | 36            | 26            | 17            | 18            | 14            |
|                 | 6              | 21            | 15            | 9             | 10            | 8             |
| THHN,<br>THWN   | 14             | 178           | 131           | 84            | 84            | 69            |
|                 | 12             | 130           | 95            | 61            | 61            | 50            |
|                 | 10             | 82            | 60            | 38            | 38            | 32            |
|                 | 8              | 46            | 34            | 21            | 22            | 17            |
|                 | 6              | 33            | 24            | 15            | 16            | 12            |
| THW             | 14             | 82            | 61            | 39            | 39            | 32            |
|                 | 12             | 66            | 49            | 31            | 31            | 26            |
|                 | 10             | 52            | 38            | 24            | 24            | 20            |
|                 | 8              | 29            | 21            | 13            | 14            | 11            |
|                 | 6              | 21            | 15            | 10            | 10            | 8             |
| XHHW            | 14             | 124           | 91            | 58            | 58            | 48            |
|                 | 12             | 95            | 70            | 45            | 45            | 37            |
|                 | 10             | 71            | 52            | 33            | 33            | 28            |
|                 | 8              | 37            | 27            | 17            | 19            | 14            |
|                 | 6              | 27            | 20            | 13            | 14            | 10            |

**Table 2: Maximum Number of Wires**

Also suitable for the number of wires in table below when installed to support and supply *electric discharge type lighting fixtures* when raceway wiring is suitable for at least **70°C and clearance between fixture and raceway is at least 1/8"**. In all cases, a snap-in cover is required to complete the raceway enclosure.

| Wire Size                                                            | Raceway Catalog Wires |               |               |               |               |
|----------------------------------------------------------------------|-----------------------|---------------|---------------|---------------|---------------|
|                                                                      | B11<br>B11K06         | B12<br>B12K06 | B22<br>B22K06 | B24<br>B24K06 | B32<br>B32K06 |
| Type Insulation: FEP, FEPB, RH, RHH, RHW, RUH, THHN, THWN, THW, XHHW |                       |               |               |               |               |
| 14                                                                   | 13                    | 10            | 10            | 10            | 10            |
| 12                                                                   | 13                    | 10            | 10            | 10            | 10            |
| 10                                                                   | 13                    | 10            | 8             | 8             | 6             |
| 8                                                                    | 10                    | 8             | 6             | 6             | 4             |
| 6                                                                    | 8                     | 6             | 4             | 4             | 3             |

When using B217-24 snap-in cover, the number of wires is limited to 7 or fewer conductors no larger than #12 AWG.

**Table 3: Maximum Number of Wires**

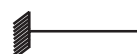
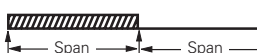
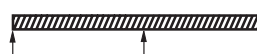
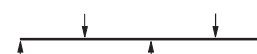
Also suitable for the number of wires in table below when installed to support and supply *electric discharge type lighting fixtures* when raceway wiring is suitable for 75°C, or wiring suitable for 60°C **if a minimum clearance between fixture and raceway is at least 1/2"**. In all cases, a snap-in cover is required to complete the raceway enclosure.

| Wire Size                                                            | Raceway Catalog Wires |               |               |               |               |
|----------------------------------------------------------------------|-----------------------|---------------|---------------|---------------|---------------|
|                                                                      | B11<br>B11K06         | B12<br>B12K06 | B22<br>B22K06 | B24<br>B24K06 | B32<br>B32K06 |
| Type Insulation: FEP, FEPB, RH, RHH, RHW, RUH, THHN, THWN, THW, XHHW |                       |               |               |               |               |
| 14                                                                   | 10                    | 10            | 10            | 10            | 10            |
| 12                                                                   | 10                    | 10            | 10            | 10            | 10            |
| 10                                                                   | 8                     | 5             | 5             | 5             | 5             |
| 8                                                                    | 6                     | 4             | 4             | 4             | 4             |
| 6                                                                    | 4                     | 4             | 4             | 4             | 4             |

When using B217-24 snap-in cover, the number of wires is limited to 7 or fewer conductors no larger than #12 AWG.

# Reference data

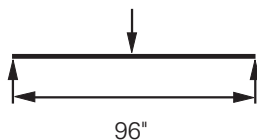
The data shown in the beam load charts for appropriate channels on page(s) 50 thru 73 is for simply supported, single span beams with a uniformly distributed load. For other loading and/or support conditions, use the appropriate factor from the chart below.

| Load and Support Condition                                                    |                                                                                     | Load Factor | Deflection Factor |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|-------------------|
| Simple Beam - Uniform Load                                                    |    | 1.00        | 1.00              |
| Simple Beam - Concentrated Load at Center                                     |    | .50         | .80               |
| Simple Beam - Two Equal Concentrated Loads at 1/4 Points                      |    | 1.00        | 1.10              |
| Beam Fixed at Both Ends - Uniform Load                                        |    | 1.50        | .30               |
| Beam Fixed at Both Ends - Concentrated Load at Center                         |    | 1.00        | .40               |
| Cantilever Beam - Uniform Load                                                |    | .25         | 2.40              |
| Cantilever Beam - Concentrated Load at End                                    |    | .12         | 3.20              |
| Continuous Beam - Two Equal Spans - Uniform Load on One Span                  |   | 1.30        | .92               |
| Continuous Beam - Two Equal Spans - Concentrated Load on Both Spans           |  | 1.00        | .42               |
| Continuous Beam - Two Equal Spans - Concentrated Load at Center of One Span   |  | .62         | .71               |
| Continuous Beam - Two Equal Spans - Concentrated Load at Center of Both Spans |  | .67         | .48               |

## EXAMPLES:

### PROBLEM:

Calculate the maximum allowable load and corresponding deflection of a simply supported B22 beam with a concentrated load at midspan as shown.



### SOLUTION:

From beam load chart for B22 (page 56), maximum allowable load is  $\bar{A}$  and the corresponding deflection is  $\bar{B}$ .  
Multiplying by the appropriate factors shown in the chart above.

$$\text{LOAD} = \bar{A} \times \text{load factor} = \underline{\hspace{2cm}}$$

$$\text{DEFLECTION} = \bar{B} \times \text{deflection factor} = \underline{\hspace{2cm}}$$

### PROBLEM:

Calculate the maximum allowable load and corresponding deflection of a cantilever B52 beam with a uniformly distributed load.



### SOLUTION:

From beam load chart for B52 (page 67), maximum allowable load is  $\bar{A}$  and the corresponding deflection is  $\bar{B}$ .  
Multiplying by the appropriate factors shown in chart above.

$$\text{LOAD} = \bar{A} \times \text{load factor} = \underline{\hspace{2cm}}$$

$$\text{DEFLECTION} = \bar{B} \times \text{deflection factor} = \underline{\hspace{2cm}}$$



**Rigid Steel Conduit (Heavy Wall Conduit)**

| Nominal Conduit Size |       | Outside Diameter |         | Nominal Inside Diameter |         | Minimum Weight Per 100 Ft. (30.5m) with Couplings Attached |         | Weight of Conduit and Conductors Per 100 Ft. (30.5m)* |          |
|----------------------|-------|------------------|---------|-------------------------|---------|------------------------------------------------------------|---------|-------------------------------------------------------|----------|
| In.                  | mm    | In.              | mm      | In.                     | mm      | Lbs.                                                       | kg      | Lbs.                                                  | kg       |
| 3/8"                 | (10)  | 0.675            | (17.1)  | 0.493                   | (12.5)  | 51.5                                                       | (23.4)  | 65.1                                                  | (29.5)   |
| 1/2"                 | (15)  | 0.840            | (21.3)  | 0.632                   | (16.0)  | 79.0                                                       | (35.8)  | 101.1                                                 | (45.9)   |
| 3/4"                 | (20)  | 1.050            | (26.7)  | 0.836                   | (21.3)  | 105.0                                                      | (47.6)  | 145.8                                                 | (66.1)   |
| 1"                   | (25)  | 1.315            | (33.4)  | 1.063                   | (27.0)  | 153.0                                                      | (69.4)  | 219.3                                                 | (99.5)   |
| 1 1/4"               | (32)  | 1.660            | (42.2)  | 1.394                   | (35.4)  | 201.0                                                      | (91.2)  | 318.3                                                 | (144.4)  |
| 1 1/2"               | (40)  | 1.900            | (48.3)  | 1.624                   | (41.3)  | 249.0                                                      | (113.0) | 408.8                                                 | (185.4)  |
| 2"                   | (50)  | 2.375            | (60.3)  | 2.083                   | (52.9)  | 332.0                                                      | (150.6) | 593.8                                                 | (269.3)  |
| 2 1/2"               | (65)  | 2.875            | (73.0)  | 2.489                   | (63.2)  | 527.0                                                      | (239.1) | 901.0                                                 | (408.7)  |
| 3"                   | (80)  | 3.500            | (88.9)  | 3.090                   | (78.5)  | 682.6                                                      | (309.6) | 1259.0                                                | (571.1)  |
| 3 1/2"               | (90)  | 4.000            | (101.6) | 3.570                   | (90.7)  | 831.0                                                      | (376.9) | 1604.0                                                | (727.6)  |
| 4"                   | (100) | 4.500            | (114.3) | 4.050                   | (102.9) | 972.3                                                      | (441.0) | 1967.0                                                | (892.2)  |
| 5"                   | (125) | 5.563            | (141.3) | 5.073                   | (128.9) | 1313.6                                                     | (595.9) | 2876.0                                                | (1304.5) |
| 6"                   | (150) | 6.625            | (168.3) | 6.093                   | (154.8) | 1745.3                                                     | (791.7) | 4003.0                                                | (1815.7) |

Dimensions taken from ANSI C80.1-1977.

\*Conduit plus weight of heaviest conductor combination as specified by the National Electrical Code.

**Intermediate Metal Conduit (IMC)**

| Nominal Conduit Size |       | Outside Diameter |         | Nominal Inside Diameter |         | Minimum Weight Per 100 Ft. (30.5m) with Couplings Attached |         | Weight of Conduit and Conductors Per 100 Ft. (30.5m)* |         |
|----------------------|-------|------------------|---------|-------------------------|---------|------------------------------------------------------------|---------|-------------------------------------------------------|---------|
| In.                  | mm    | In.              | mm      | In.                     | mm      | Lbs.                                                       | kg      | Lbs.                                                  | kg      |
| 1/2"                 | (15)  | 0.815            | (20.7)  | .675                    | (17.1)  | 60.0                                                       | (27.2)  | 82.1                                                  | (37.2)  |
| 3/4"                 | (20)  | 1.029            | (26.1)  | .879                    | (22.3)  | 82.0                                                       | (37.2)  | 122.8                                                 | (55.7)  |
| 1"                   | (25)  | 1.290            | (32.7)  | 1.120                   | (28.4)  | 116.0                                                      | (52.6)  | 182.3                                                 | (82.7)  |
| 1 1/4"               | (32)  | 1.638            | (41.6)  | 1.468                   | (37.3)  | 150.0                                                      | (68.0)  | 267.3                                                 | (121.2) |
| 1 1/2"               | (40)  | 1.883            | (47.7)  | 1.703                   | (43.3)  | 182.0                                                      | (82.5)  | 341.8                                                 | (155.0) |
| 2"                   | (50)  | 2.360            | (59.9)  | 2.170                   | (55.1)  | 242.0                                                      | (109.7) | 503.8                                                 | (228.5) |
| 2 1/2"               | (65)  | 2.857            | (72.5)  | 2.597                   | (66.0)  | 428.0                                                      | (194.1) | 775.0                                                 | (351.5) |
| 3"                   | (80)  | 3.476            | (88.3)  | 3.216                   | (81.7)  | 526.0                                                      | (238.6) | 1069.0                                                | (485.0) |
| 3 1/2"               | (90)  | 3.971            | (100.8) | 3.711                   | (94.3)  | 612.0                                                      | (277.6) | 1346.0                                                | (610.8) |
| 4"                   | (100) | 4.466            | (113.4) | 4.206                   | (106.8) | 682.0                                                      | (309.4) | 1632.0                                                | (740.5) |

\*Conduit plus weight of heaviest conductor combination as specified by the National Electrical Code.

Rigid and Intermediate Metal Conduit shall be supported at least every 10 feet (3.05 m) and within 3 feet (914 mm) of each outlet box, junction box, cabinet, or fitting, except for straight runs of conduit connected with couplings which may be supported in accordance with NEC Article 345 and 346, provided such supports prevent transmission of stresses to termination where conduit is deflected between supports.

**NEC Table 346-12**

| Conduit Size  |            | Maximum Support Span |        |
|---------------|------------|----------------------|--------|
| In.           | mm         | Feet                 | Meters |
| 1/2 - 3/4     | (15 - 20)  | 10                   | (3.05) |
| 1             | (25)       | 12                   | (3.66) |
| 1 1/4 - 1 1/2 | (32 - 40)  | 14                   | (4.27) |
| 2 - 2 1/2     | (50 - 65)  | 16                   | (4.88) |
| 3 - 6         | (80 - 150) | 20                   | (6.10) |

# Reference data

## Electrical Metallic Tubing (EMT) — Thinwall Conduit

| Nominal<br>Conduit Size<br>In.    mm |       | Outside<br>Diameter<br>In.    mm |         | Inside<br>Diameter<br>In.    mm |         | Weight<br>Per 100 Ft. (30.5m) with |         | Weight of Conduit<br>and Conductors<br>Per 100 Ft. (30.5m)* |         |
|--------------------------------------|-------|----------------------------------|---------|---------------------------------|---------|------------------------------------|---------|-------------------------------------------------------------|---------|
|                                      |       |                                  |         |                                 |         | Lbs.                               | kg      | Lbs.                                                        | kg      |
| 3/8"                                 | (10)  | 0.577                            | (14.7)  | 0.493                           | (12.5)  | 23.0                               | (10.4)  | 36.6                                                        | (16.6)  |
| 1/2"                                 | (15)  | 0.706                            | (17.9)  | 0.622                           | (15.8)  | 28.5                               | (12.9)  | 50.6                                                        | (23.0)  |
| 3/4"                                 | (20)  | 0.922                            | (23.4)  | 0.824                           | (20.9)  | 43.5                               | (19.7)  | 84.3                                                        | (38.2)  |
| 1"                                   | (25)  | 1.163                            | (29.5)  | 1.049                           | (26.6)  | 64.0                               | (29.0)  | 130.3                                                       | (59.1)  |
| 1 1/4"                               | (32)  | 1.510                            | (38.3)  | 1.380                           | (35.1)  | 95.0                               | (43.1)  | 212.3                                                       | (96.3)  |
| 1 1/2"                               | (40)  | 1.740                            | (44.2)  | 1.610                           | (40.9)  | 110.0                              | (49.9)  | 269.8                                                       | (122.4) |
| 2"                                   | (50)  | 2.197                            | (55.8)  | 2.067                           | (52.5)  | 140.0                              | (63.5)  | 401.8                                                       | (182.3) |
| 2 1/2"                               | (65)  | 2.875                            | (73.0)  | 2.731                           | (69.4)  | 205.0                              | (93.0)  | 579.0                                                       | (262.6) |
| 3"                                   | (80)  | 3.500                            | (88.9)  | 3.356                           | (85.2)  | 250.0                              | (113.4) | 826.3                                                       | (374.8) |
| 3 1/2"                               | (90)  | 4.000                            | (101.6) | 3.834                           | (97.4)  | 325.0                              | (147.4) | 1098.0                                                      | (498.0) |
| 4"                                   | (100) | 4.500                            | (114.3) | 4.334                           | (110.1) | 370.0                              | (167.8) | 1364.0                                                      | (618.7) |

Dimensions taken from ANSI C80.3-1977.

\*Conduit plus weight of heaviest conductor combination as specified by the National Electrical Code.

Electrical Metallic tubing shall be supported at least every 10 feet (3.05 m) and within 3 feet (914 mm) of each outlet box, junction box, cabinet, or fitting. See NEC Article 348.

## Rigid Aluminum Conduit

| Nominal<br>Conduit Size |       | Outside<br>Diameter |         | Nominal<br>Inside<br>Diameter |         | Minimum Weight                                 |         | Weight of Conduit<br>and Conductors |          |
|-------------------------|-------|---------------------|---------|-------------------------------|---------|------------------------------------------------|---------|-------------------------------------|----------|
|                         |       |                     |         |                               |         | Per 100 Ft. (30.5m) with<br>Couplings Attached |         | Per 100 Ft. (30.5m)*                |          |
| In.                     | mm    | In.                 | mm      | In.                           | mm      | Lbs.                                           | kg      | Lbs.                                | kg       |
| 1/2"                    | (15)  | 0.840               | (21.3)  | 0.632                         | (16.1)  | 27.4                                           | (12.4)  | 49.5                                | (22.5)   |
| 3/4"                    | (20)  | 1.050               | (26.7)  | 0.836                         | (21.2)  | 36.4                                           | (16.5)  | 77.2                                | (35.0)   |
| 1"                      | (25)  | 1.315               | (33.4)  | 1.063                         | (27.0)  | 53.0                                           | (24.0)  | 119.3                               | (54.1)   |
| 1 1/4"                  | (32)  | 1.660               | (42.2)  | 1.394                         | (35.4)  | 69.6                                           | (31.6)  | 186.9                               | (84.8)   |
| 1 1/2"                  | (40)  | 1.900               | (48.3)  | 1.624                         | (41.2)  | 82.2                                           | (37.3)  | 242.0                               | (109.8)  |
| 2"                      | (50)  | 2.375               | (60.3)  | 2.083                         | (52.9)  | 115.7                                          | (52.5)  | 377.5                               | (171.2)  |
| 2 1/2"                  | (65)  | 2.875               | (73.0)  | 2.489                         | (63.2)  | 182.5                                          | (82.8)  | 556.5                               | (252.4)  |
| 3"                      | (80)  | 3.500               | (88.9)  | 3.090                         | (78.5)  | 238.9                                          | (108.4) | 815.2                               | (369.8)  |
| 3 1/2"                  | (90)  | 4.000               | (101.6) | 3.570                         | (90.7)  | 287.7                                          | (130.5) | 1061.0                              | (481.3)  |
| 4"                      | (100) | 4.500               | (114.3) | 4.050                         | (102.9) | 340.0                                          | (154.2) | 1334.0                              | (605.1)  |
| 5"                      | (125) | 5.563               | (141.3) | 5.073                         | (128.9) | 465.4                                          | (211.1) | 2028.0                              | (919.9)  |
| 6"                      | (150) | 6.625               | (168.3) | 6.093                         | (154.8) | 612.5                                          | (277.8) | 2870.0                              | (1301.8) |

Dimensions taken from ANSI C80.5-1977.

\*Conduit plus weight of heaviest conductor combination as specified by the National Electrical Code.

Aluminum Rigid Conduit shall be supported at least every 10 feet (3.05 m) and within 3 feet (914 mm) of each outlet box, junction box, cabinet, or fitting, except for straight runs of conduit connected with couplings which may be supported in accordance with NEC Table 344.30 (B)(2), provided such supports prevent transmission of stresses to termination where conduit is deflected between supports.

**NEC TABLE 344.30 (B)(2)**

| Conduit Size  |            | Maximum Support Span |        |
|---------------|------------|----------------------|--------|
| In.           | mm         | Feet                 | Meters |
| 1/2 - 3/4     | (15 - 20)  | 10                   | (3.05) |
| 1             | (25)       | 12                   | (3.66) |
| 1 1/4 - 1 1/2 | (32 - 40)  | 14                   | (4.27) |
| 2 - 2 1/2     | (50 - 65)  | 16                   | (4.88) |
| 3 - 6         | (80 - 150) | 20                   | (6.10) |

## SCHEDULE 40 PVC PLASTIC PIPE

| Nominal<br>Conduit Size<br>In. mm | Outside<br>Diameter<br>In. mm | Inside<br>Diameter<br>In. mm | Weight of Pipe<br>Per 100 Ft. (30.5m) |         | Weight of Pipe<br>Filled With Water<br>Per 100 Ft. (30.5m) |          |
|-----------------------------------|-------------------------------|------------------------------|---------------------------------------|---------|------------------------------------------------------------|----------|
|                                   |                               |                              | Lbs.                                  | kg      | Lbs.                                                       | kg       |
| 1/8" (3)                          | .405 (10.3)                   | .269 (6.8)                   | 4.7                                   | (2.1)   | 7.2                                                        | (3.2)    |
| 1/4" (6)                          | .540 (13.7)                   | .364 (9.2)                   | 8.2                                   | (3.7)   | 12.7                                                       | (5.8)    |
| 3/8" (10)                         | .675 (17.1)                   | .493 (12.5)                  | 10.9                                  | (4.9)   | 19.2                                                       | (8.7)    |
| 1/2" (15)                         | .840 (21.3)                   | .622 (15.8)                  | 16.4                                  | (7.4)   | 29.6                                                       | (13.4)   |
| 3/4" (20)                         | 1.050 (26.7)                  | .824 (20.9)                  | 21.8                                  | (9.9)   | 44.9                                                       | (20.4)   |
| 1" (25)                           | 1.315 (33.4)                  | 1.049 (26.6)                 | 32.1                                  | (14.6)  | 69.6                                                       | (31.6)   |
| 1 1/4" (32)                       | 1.660 (42.2)                  | 1.380 (35.1)                 | 43.4                                  | (19.7)  | 108.2                                                      | (49.1)   |
| 1 1/2" (40)                       | 1.900 (48.3)                  | 1.610 (40.9)                 | 51.8                                  | (23.5)  | 140.0                                                      | (63.5)   |
| 2" (50)                           | 2.375 (60.3)                  | 2.067 (52.5)                 | 69.5                                  | (31.5)  | 214.9                                                      | (97.5)   |
| 2 1/2" (65)                       | 2.875 (73.0)                  | 2.469 (62.7)                 | 109.6                                 | (49.7)  | 317.1                                                      | (143.8)  |
| 3" (80)                           | 3.500 (88.9)                  | 3.068 (77.9)                 | 143.5                                 | (65.1)  | 463.9                                                      | (210.4)  |
| 3 1/2" (90)                       | 4.000 (101.6)                 | 3.548 (90.1)                 | 175.6                                 | (79.7)  | 604.1                                                      | (274.0)  |
| 4" (100)                          | 4.500 (114.3)                 | 4.026 (102.3)                | 204.3                                 | (92.7)  | 756.0                                                      | (342.9)  |
| 5" (125)                          | 5.563 (141.3)                 | 5.047 (128.2)                | 281.7                                 | (127.8) | 1148.8                                                     | (521.1)  |
| 6" (150)                          | 6.625 (168.3)                 | 6.065 (154.1)                | 360.9                                 | (163.7) | 1613.0                                                     | (731.7)  |
| 8" (200)                          | 8.625 (219.1)                 | 7.981 (202.7)                | 545.3                                 | (247.3) | 2713.5                                                     | (1230.8) |
| 10" (250)                         | 10.750 (273.1)                | 10.020 (254.5)               | 791.3                                 | (358.9) | 4208.9                                                     | (1909.1) |
| 12" (300)                         | 12.750 (323.9)                | 11.938 (303.2)               | 1035.2                                | (469.6) | 5886.4                                                     | (2670.0) |

1 cubic ft. of water weighs 62.41 Lbs.  
 1 cubic meter of water weighs 999.972 kg.  
 1 gallon (U.S.) weighs 8.335 Lbs.  
 1 liter weighs .999 kg.

## All Threaded Rod (ATR)

| Nominal<br>Size (In)<br>and Thread | Root Area<br>In. <sup>2</sup> cm <sup>2</sup> | Design Load (SF=5) |         |
|------------------------------------|-----------------------------------------------|--------------------|---------|
|                                    |                                               | Lbs.               | kN      |
| 1/4-20"                            | 0.027 (0.174)                                 | 240                | (1.07)  |
| 5/16-18"                           | 0.045 (0.290)                                 | 400                | (1.78)  |
| 3/8-16"                            | 0.068 (0.438)                                 | 730                | (3.24)  |
| 1/2-13"                            | 0.126 (0.812)                                 | 1350               | (6.00)  |
| 5/8-11"                            | 0.202 (1.303)                                 | 2160               | (9.60)  |
| 3/4-10"                            | 0.302 (1.948)                                 | 3230               | (14.37) |
| 7/8-9"                             | 0.419 (2.703)                                 | 4480               | (19.93) |
| 1-8"                               | 0.551 (3.561)                                 | 5900               | (26.24) |
| 1 1/8-7"                           | 0.693 (4.471)                                 | 7450               | (33.14) |
| 1 1/4-7"                           | 0.889 (5.735)                                 | 9500               | (42.25) |
| 1 1/2-6"                           | 1.293 (8.342)                                 | 13800              | (61.38) |

Dimensions taken from ANSI B1.1-1982 Unified Inch Screw Threads. All threads are UNCR series.

Tabulated loads are based on an allowable tensile stress of 12000 psi (82.7 MPa) reduced by 25% resulting in 9000 psi (62 MPa). From ANSI/MSS SP-58, Table 3.

## Clamp Sizing Chart For PVC Coated Rigid Conduit and Clamps

| Nominal<br>Conduit<br>Size | Conduit Coating               |              |                                |              |
|----------------------------|-------------------------------|--------------|--------------------------------|--------------|
|                            | .020 (.51mm)<br>Clamp Coating |              | .040 (1.01mm)<br>Clamp Coating |              |
|                            | 0                             | .020 (.51mm) | 0                              | .020 (.51mm) |
| 1/2" (15)                  | B2028                         | B2002        | B2002                          | B2029        |
| 3/4" (20)                  | B2030                         | B2030        | B2030                          | B2003        |
| 1" (25)                    | B2032                         | B2032        | B2032                          | B2033        |
| 1 1/4" (32)                | B2005                         | B2005        | B2005                          | B2005        |
| 1 1/2" (40)                | B2012                         | B2037        | B2037                          | B2037        |
| 2" (50)                    | B2013                         | B2041        | B2041                          | B2041        |
| 2 1/2" (65)                | B2014                         | B2045        | B2045                          | B2045        |
| 3" (80)                    | B2015                         | B2050        | B2050                          | B2050        |
| 3 1/2" (90)                | B2016                         | B2054        | B2054                          | B2054        |
| 4" (100)                   | B2017                         | B2058        | B2058                          | B2058        |
| 5" (125)                   | B2019                         | B2066        | B2066                          | B2066        |
| 6" (150)                   | B2020                         | B2115        | B2115                          | B2115        |

## Clamp Sizing Chart For PVC Coated Thinwall (EMT) Conduit and Clamps

| Nominal<br>Conduit<br>Size | Conduit Coating               |              |                                |              |
|----------------------------|-------------------------------|--------------|--------------------------------|--------------|
|                            | .020 (.51mm)<br>Clamp Coating |              | .040 (1.01mm)<br>Clamp Coating |              |
|                            | 0                             | .020 (.51mm) | 0                              | .020 (.51mm) |
| 3/8" (10)                  | B2026                         | B2026        | B2026                          | B2007        |
| 1/2" (15)                  | B2027                         | B2027        | B2027                          | B2008        |
| 3/4" (20)                  | B2029                         | B2029        | B2029                          | B2009        |
| 1" (25)                    | B2003                         | B2031        | B2031                          | B2031        |
| 1 1/4" (32)                | B2004                         | B2034        | B2034                          | B2034        |
| 1 1/2" (40)                | B2035                         | B2035        | B2035                          | B2036        |
| 2" (50)                    | B2039                         | B2039        | B2039                          | B2013        |

# Reference data

## Copper Tubing, Type L

| Nominal Tubing Size |       | Outside Diameter |         | Inside Diameter |         | Weight of Tubing Per 100 Ft. (30.5m) |          | Weight of Tubing Filled With Water Per 100 Ft. (30.5m) |          |
|---------------------|-------|------------------|---------|-----------------|---------|--------------------------------------|----------|--------------------------------------------------------|----------|
| In.                 | mm    | In.              | mm      | In.             | mm      | Lbs.                                 | kg       | Lbs.                                                   | kg       |
| 1/4"                | (6)   | .375             | (9.5)   | .315            | (8.0)   | 12.6                                 | (5.7)    | 16.0                                                   | (7.2)    |
| 3/8"                | (10)  | .500             | (12.7)  | .430            | (10.9)  | 19.8                                 | (9.0)    | 26.1                                                   | (11.8)   |
| 1/2"                | (15)  | .625             | (15.9)  | .545            | (13.8)  | 28.5                                 | (12.9)   | 38.6                                                   | (17.5)   |
| 5/8"                | (17)  | .750             | (19.1)  | .666            | (16.9)  | 36.2                                 | (16.4)   | 51.3                                                   | (23.3)   |
| 3/4"                | (20)  | .875             | (22.2)  | .785            | (19.9)  | 45.5                                 | (20.6)   | 66.5                                                   | (30.2)   |
| 1"                  | (25)  | 1.125            | (28.6)  | 1.025           | (26.0)  | 65.5                                 | (29.7)   | 101.3                                                  | (45.9)   |
| 1 1/4"              | (32)  | 1.375            | (34.9)  | 1.265           | (32.1)  | 88.4                                 | (40.1)   | 142.9                                                  | (64.8)   |
| 1 1/2"              | (40)  | 1.625            | (41.3)  | 1.505           | (38.2)  | 114.0                                | (51.7)   | 191.1                                                  | (86.7)   |
| 2"                  | (50)  | 2.125            | (54.0)  | 1.985           | (50.4)  | 175.0                                | (79.4)   | 309.1                                                  | (140.2)  |
| 2 1/2"              | (65)  | 2.625            | (66.7)  | 2.465           | (62.6)  | 248.0                                | (112.5)  | 454.8                                                  | (206.3)  |
| 3"                  | (80)  | 3.125            | (79.4)  | 2.945           | (74.8)  | 333.0                                | (151.0)  | 628.2                                                  | (285.0)  |
| 3 1/2"              | (90)  | 3.625            | (92.1)  | 3.425           | (87.0)  | 429.0                                | (194.6)  | 828.3                                                  | (375.7)  |
| 4"                  | (100) | 4.125            | (104.8) | 3.905           | (99.2)  | 538.0                                | (244.0)  | 1057.1                                                 | (479.5)  |
| 5"                  | (125) | 5.125            | (130.2) | 4.875           | (123.8) | 761.0                                | (345.2)  | 1570.0                                                 | (712.1)  |
| 6"                  | (150) | 6.125            | (155.6) | 5.845           | (148.5) | 1020.0                               | (462.7)  | 2182.9                                                 | (990.2)  |
| 8"                  | (200) | 8.125            | (206.4) | 7.725           | (196.2) | 1930.0                               | (875.4)  | 3961.3                                                 | (1796.8) |
| 10"                 | (250) | 10.125           | (257.2) | 9.625           | (244.5) | 3010.0                               | (1365.3) | 6163.4                                                 | (2795.7) |
| 12"                 | (300) | 12.125           | (308.0) | 11.565          | (293.8) | 4040.0                               | (1832.5) | 8592.8                                                 | (3897.6) |

## Copper Tubing, Type K

| Nominal Tubing Size |       | Outside Diameter |         | Inside Diameter |         | Weight of Tubing Per 100 Ft. (30.5m) |          | Weight of Tubing Filled With Water Per 100 Ft. (30.5m) |          |
|---------------------|-------|------------------|---------|-----------------|---------|--------------------------------------|----------|--------------------------------------------------------|----------|
| In.                 | mm    | In.              | mm      | In.             | mm      | Lbs.                                 | kg       | Lbs.                                                   | kg       |
| 1/4"                | (6)   | .375             | (9.5)   | .305            | (7.7)   | 14.5                                 | (6.6)    | 17.7                                                   | (8.0)    |
| 3/8"                | (10)  | .500             | (12.7)  | .402            | (10.2)  | 26.9                                 | (12.2)   | 32.4                                                   | (14.7)   |
| 1/2"                | (15)  | .625             | (15.9)  | .527            | (13.4)  | 34.4                                 | (15.6)   | 43.9                                                   | (19.9)   |
| 5/8"                | (17)  | .750             | (19.1)  | .652            | (16.6)  | 41.8                                 | (19.0)   | 56.3                                                   | (25.5)   |
| 3/4"                | (20)  | .875             | (22.2)  | .745            | (18.9)  | 64.1                                 | (29.1)   | 83.0                                                   | (37.6)   |
| 1"                  | (25)  | 1.125            | (28.6)  | .995            | (25.3)  | 83.9                                 | (38.1)   | 117.6                                                  | (53.3)   |
| 1 1/4"              | (32)  | 1.375            | (34.9)  | 1.245           | (31.6)  | 104.0                                | (47.2)   | 156.8                                                  | (71.1)   |
| 1 1/2"              | (40)  | 1.625            | (41.3)  | 1.481           | (37.6)  | 136.0                                | (61.7)   | 210.7                                                  | (95.6)   |
| 2"                  | (50)  | 2.125            | (54.0)  | 1.959           | (49.8)  | 206.0                                | (93.4)   | 336.6                                                  | (152.7)  |
| 2 1/2"              | (65)  | 2.625            | (66.7)  | 2.435           | (61.8)  | 293.0                                | (132.9)  | 494.8                                                  | (224.5)  |
| 3"                  | (80)  | 3.125            | (79.4)  | 2.907           | (73.8)  | 400.0                                | (181.4)  | 687.7                                                  | (311.9)  |
| 3 1/2"              | (90)  | 3.625            | (92.1)  | 3.385           | (86.0)  | 512.0                                | (232.2)  | 902.0                                                  | (409.2)  |
| 4"                  | (100) | 4.125            | (104.8) | 3.857           | (98.0)  | 651.0                                | (295.3)  | 1157.4                                                 | (525.0)  |
| 5"                  | (125) | 5.125            | (130.2) | 4.805           | (122.0) | 967.0                                | (438.6)  | 1752.9                                                 | (795.1)  |
| 6"                  | (150) | 6.125            | (155.6) | 5.741           | (145.8) | 1390.0                               | (630.5)  | 2511.9                                                 | (1139.4) |
| 8"                  | (200) | 8.125            | (206.4) | 7.583           | (192.6) | 2590.0                               | (1174.8) | 4547.3                                                 | (2062.6) |
| 10"                 | (250) | 10.125           | (257.2) | 9.449           | (240.0) | 4030.0                               | (1828.0) | 7069.2                                                 | (3206.5) |
| 12"                 | (300) | 12.125           | (308.0) | 11.315          | (287.4) | 5780.0                               | (2621.8) | 10138.0                                                | (4598.5) |

Dimensions taken from ASTM B 88-83.

1 cubic ft. of water weighs 62.41 Lbs.  
 1 cubic meter of water weighs 999.972 kg.  
 1 gallon (U.S.) weighs 8.335 Lbs.  
 1 liter weighs .999 kg.

## STANDARD WEIGHT SCHEDULE 40 STEEL PIPE

| Nominal Tubing Size |       | Outside Diameter |         | Inside Diameter |         | Nominal Weight Per 100 Ft. (30.5m) Plain End |          | Weight of Pipe Filled With Water Per 100 Ft. (30.5m) |           |
|---------------------|-------|------------------|---------|-----------------|---------|----------------------------------------------|----------|------------------------------------------------------|-----------|
| In.                 | mm    | In.              | mm      | In.             | mm      | Lbs.                                         | kg       | Lbs.                                                 | kg        |
| 3/8"                | (10)  | .675             | (17.1)  | .493            | (12.5)  | 57.0                                         | (25.9)   | 65.3                                                 | (29.6)    |
| 1/2"                | (15)  | .840             | (21.3)  | .622            | (15.8)  | 85.0                                         | (38.6)   | 98.2                                                 | (44.5)    |
| 3/4"                | (20)  | 1.050            | (26.7)  | .824            | (20.9)  | 113.0                                        | (51.3)   | 136.1                                                | (61.7)    |
| 1"                  | (25)  | 1.315            | (33.4)  | 1.049           | (26.6)  | 168.0                                        | (76.2)   | 205.5                                                | (93.2)    |
| 1 1/4"              | (32)  | 1.660            | (42.2)  | 1.380           | (35.1)  | 227.0                                        | (103.0)  | 291.8                                                | (132.4)   |
| 1 1/2"              | (40)  | 1.900            | (48.3)  | 1.610           | (40.9)  | 272.0                                        | (123.4)  | 360.2                                                | (163.4)   |
| 2"                  | (50)  | 2.375            | (60.3)  | 2.067           | (52.5)  | 365.0                                        | (165.6)  | 510.4                                                | (231.5)   |
| 2 1/2"              | (65)  | 2.875            | (73.0)  | 2.469           | (62.7)  | 579.0                                        | (262.6)  | 786.5                                                | (356.8)   |
| 3"                  | (80)  | 3.500            | (88.9)  | 3.068           | (77.9)  | 758.0                                        | (343.8)  | 1078.4                                               | (489.2)   |
| 3 1/2"              | (90)  | 4.000            | (101.9) | 3.548           | (90.1)  | 911.0                                        | (413.2)  | 1339.5                                               | (607.6)   |
| 4"                  | (100) | 4.500            | (114.3) | 4.026           | (102.3) | 1079.0                                       | (489.4)  | 1630.7                                               | (739.7)   |
| 5"                  | (125) | 5.563            | (141.3) | 5.047           | (128.2) | 1462.0                                       | (663.2)  | 2329.1                                               | (1056.4)  |
| 6"                  | (150) | 6.625            | (168.3) | 6.065           | (154.1) | 1897.0                                       | (860.5)  | 3149.1                                               | (1428.4)  |
| 8"                  | (200) | 8.625            | (219.1) | 7.981           | (202.7) | 2855.0                                       | (1295.0) | 5023.2                                               | (2278.5)  |
| 10"                 | (250) | 10.750           | (273.1) | 10.020          | (254.5) | 4048.0                                       | (1836.1) | 7465.6                                               | (3386.3)  |
| 12"                 | (300) | 12.750           | (323.9) | 12.000          | (304.8) | 4956.0                                       | (2248.0) | 9857.7                                               | (4471.4)  |
| 14"                 | (350) | 14.000           | (355.6) | 13.250          | (336.6) | 5457.0                                       | (2475.3) | 11433.1                                              | (5185.9)  |
| 16"                 | (400) | 16.000           | (406.4) | 15.250          | (387.4) | 6258.0                                       | (2838.6) | 14174.3                                              | (6429.4)  |
| 18"                 | (450) | 18.000           | (457.2) | 17.250          | (438.2) | 7059.0                                       | (3201.9) | 17187.9                                              | (7796.3)  |
| 20"                 | (500) | 20.000           | (508.0) | 19.250          | (489.0) | 7860.0                                       | (3565.2) | 20473.7                                              | (9286.7)  |
| 24"                 | (600) | 24.000           | (609.6) | 23.250          | (590.6) | 9462.0                                       | (4291.9) | 27862.5                                              | (12638.2) |

Dimensions taken from ASTM A 53-82.

1 cubic ft. of water weighs 62.41 Lbs.

1 gallon (U.S.) weighs 8.335 Lbs.

1 cubic meter of water weighs 999.972 kg.

1 liter weighs .999 kg.

## TRAPEZE HANGERS USING B-LINE STRUT OR ANGLE IRON

| Length of Trapeze Bar | Nominal Pipe Sizes            |                               |                                |                                |                                |                                |                                |                                |
|-----------------------|-------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                       | 2 1/2" (65mm) or less         | 3" (80mm)                     | 3 1/2" (90mm)                  | 4" (100mm)                     | 5" (125mm)                     | 6" (150mm)                     | 8" (200mm)                     | 10" (250mm)                    |
| 1'-6" (0.46m)         | 1 1/2" x 1 1/2" x 3/16" B24SH | 1 1/2" x 1 1/2" x 3/16" B24SH | 1 1/2" x 1 1/2" x 3/16" B24SH  | 2" x 1 1/2" x 3/16" B22SH      | 2" x 1 1/2" x 3/16" B22SH      | 2 1/2" x 1 1/2" x 3/16" B12SH  | 3" x 2" x 3/16" B11SH          | 3" x 2" x 1/4" B11SH           |
| 2'-0" (0.61m)         | 1 1/2" x 1 1/2" x 3/16" B24SH | 2" x 1 1/2" x 3/16" B22SH     | 2" x 1 1/2" x 3/16" B22SH      | 2" x 1 1/2" x 3/16" B22SH      | 2 1/2" x 1 1/2" x 3/16" B12SH  | 2 1/2" x 1 1/2" x 3/16" B12SH  | 3" x 2" x 3/16" B11SH          | 3" x 2" x 1/4" B11SH           |
| 2'-6" (0.76m)         | 2" x 1 1/2" x 3/16" B22SH     | 2" x 1 1/2" x 3/16" B22SH     | 2" x 1 1/2" x 3/16" B22SH      | 2 1/2" x 1 1/2" x 3/16" B12SH  | 2 1/2" x 1 1/2" x 3/16" B12SH  | 3" x 2" x 3/16" B11SH          | 3" x 2" x 1/4" B11SH           | 3" x 2" x 1/4" B11SH           |
| 3'-0" (0.91m)         | 2" x 1 1/2" x 3/16" B22SH     | 2" x 1 1/2" x 3/16" B22SH     | 2 1/2" x 1 1/2" x 3/16" B12SH  | 2 1/2" x 1 1/2" x 3/16" B12SH  | 3" x 2" x 3/16" B11SH          | 3" x 2" x 3/16" B11SH          | 3 1/2" x 2 1/2" x 1/4" B12SHA  | 3 1/2" x 2 1/2" x 5/16" B12SHA |
| 4'-0" (1.22m)         | 2 1/2" x 1 1/2" x 3/16" B12SH | 2 1/2" x 1 1/2" x 3/16" B12SH | 2 1/2" x 1 1/2" x 3/16" B12SH  | 3" x 2" x 3/16" B11SH          | 3" x 2" x 3/16" B11SH          | 3" x 2" x 1/4" B11SH           | 3 1/2" x 2 1/2" x 5/16" B12SHA | 4" x 3" x 5/16" B12SHA         |
| 5'-0" (1.52m)         | 2 1/2" x 1 1/2" x 3/16" B12SH | 2 1/2" x 1 1/2" x 3/16" B12SH | 3" x 2" x 3/16" B11SH          | 3" x 2" x 3/16" B11SH          | 3" x 2" x 1/4" B11SH           | 3 1/2" x 2 1/2" x 5/16" B12SHA | 4" x 3" x 5/16" B12SHA         | 5" x 3 1/2" x 5/16" B11SHA     |
| 6'-0" (1.83m)         | 2 1/2" x 1 1/2" x 3/16" B12SH | 3" x 2" x 3/16" B11SH         | 3" x 2" x 3/16" B11SH          | 3" x 2" x 1/4" B11SH           | 3 1/2" x 2 1/2" x 5/16" B12SHA | 4" x 3" x 5/16" B12SHA         | 4" x 3" x 5/16" B12SHA         | 5" x 3 1/2" x 5/16" B11SHA     |
| 7'-0" (2.13m)         | 3" x 2" x 3/16" B11SH         | 3" x 2" x 3/16" B11SH         | 3" x 2" x 1/4" B11SH           | 3" x 2" x 1/4" B11SH           | 3 1/2" x 2 1/2" x 5/16" B12SHA | 4" x 3" x 5/16" B12SHA         | 5" x 3 1/2" x 5/16" B11SHA     | 6" x 4" x 1/4" 2-B12SHA        |
| 8'-0" (2.44m)         | 3" x 2" x 3/16" B11SH         | 3" x 2" x 1/4" B11SH          | 3" x 2" x 1/4" B11SH           | 3 1/2" x 2 1/2" x 5/16" B12SHA | 3 1/2" x 2 1/2" x 5/16" B12SHA | 4" x 3" x 5/16" B12SHA         | 5" x 3 1/2" x 5/16" B11SHA     | 6" x 4" x 1/4" 2-B12SHA        |
| 9'-0" (2.74m)         | 3" x 2" x 3/16" B11SH         | 3" x 2" x 1/4" B11SH          | 3 1/2" x 2 1/2" x 5/16" B12SHA | 3 1/2" x 2 1/2" x 5/16" B12SHA | 3 1/2" x 2 1/2" x 5/16" B12SHA | 4" x 3" x 5/16" B12SHA         | 5" x 3 1/2" x 5/16" B11SHA     | 6" x 4" x 3/8" 2-B11SHA        |
| 10'-0" (3.05m)        | 3" x 2" x 1/4" B11SH          | 3" x 2" x 1/4" B11SH          | 3 1/2" x 2 1/2" x 5/16" B12SHA | 3 1/2" x 2 1/2" x 5/16" B12SHA | 4" x 3" x 5/16" B12SHA         | 5" x 3 1/2" x 5/16" B11SHA     | 6" x 4" x 1/4" 2-B12SHA        | 6" x 4" x 3/8" 2-B11SHA        |

Reference: Table 3-14.1.6 standard for the installation of Sprinkler Systems, NFPA No. 13-1985, published by National Fire Protection Association.

# Tolco to B-Line cross reference

| Tolco Fig#       | B-Line Pt. #       | Tolco Fig#   | B-Line Pt. #    | Tolco Fig#       | B-Line Pt. # |
|------------------|--------------------|--------------|-----------------|------------------|--------------|
| 2 STR 1/2"       | B2400-1/2          | BC-13-1/2    | B307            | BR-17-24         | B297-24      |
| 2 STR 3/4"       | B2400-3/4          | BC-13-5/8    | B309            | BR-17-30         | B297-30      |
| 2 STR 1"         | B2400-1            | BC-13-3/4    | B321-5          | BR-17-36         | B297-36      |
| 2 STR 1 1/4"     | B2400-1 1/4        | BC-14-1/4    | B303            | BR-18-6          | B293-6       |
| 2 STR 1 1/2"     | B2400-1 1/2        | BC-14-5/16   | B304            | BR-18-12         | B293-12      |
| 2 STR 2"         | B2400-2            | BC-14-3/8    | B321-1          | BR-19-18         | B293A-18     |
| 2 STR 2 1/2"     | B2400-2 1/2        | BC-14-1/2    | B321-2          | BR-18-24         | B293-24      |
| 2 STR 3"         | B2400-3            | BC-14-5/8    | B321-4          | BR-19-6          | B293A-6      |
| 2 STR 3 1/2"     | B2400-3 1/2        | BC-14-3/4    | B321-5          | BR-18-12         | B293-12      |
| 2 STR 4"         | B2400-4            | BC-16        | B314            | BR-19-18         | B293A-18     |
| 2 STR 5"         | B2400-5            | BC-17        | B441-22         | BR-19-24         | B293A-24     |
| 2 STR 6"         | B2400-6            | BC-18-3/8    | B212-3/8        | BR-20            | B439         |
| 2 STR 8"         | B2400-8            | BC-18-1/2    | B212-1/2        | BR-21            | B356         |
| 65XT             | N/C                | BC-19        | B427            | BR-22-6          | B409-6       |
| 69               | Discontinued B3367 | BC-20        | B355            | BR-22-12         | B409-12      |
| 69R              | N/C                | BC-21        | B211            | BR-22-18         | B409-18      |
| 75               | N/C                | BC-23        | B614            | BR-22-24         | B409-25      |
| 98               | SC228              | BC-70        | B760-22 Series  | C SAFETY END CAP | B852         |
| 98B              | N/C                | BC-71        | B760-22A Series | C-14             | B54          |
| 310              | B2501              | BC-72        | B761-22 Series  | C-14 END CAP     | B204         |
| 310N 1/4         | N2501-1/4          | BC-73        | B761-22A Series | CL-10            | B217-20      |
| 310N 3/8         | N2501-3/8          | BR-10-8L     | B185SHL         | CR ISOLATOR      | ISO          |
| 310N 1/2         | N2501-1/2          | BR-10-8R     | B185SHR         | CUSH CLP 1/4     | BVT025       |
| 310N 5/8         | N2501-5/8          | BR-10-10L    | B186SHL         | CUSH CLP 3/8     | BVT037       |
| 310N 3/4         | N2501-3/4          | BR-10-10R    | B186SHR         | CUSH CLP 1/2     | BVT050       |
| 310N 7/8         | N2501-7/8          | BR-10-12L    | B178SHL         | CUSH CLP 5/8     | BVT062       |
| 902              | B335V              | BR-10-12R    | B178SHR         | CUSH CLP 3/4     | BVT075       |
| 912              | B335-1             | BR-10-18L    | B181SHL         | CUSH CLP 1       | BVT100       |
| 913              | B335-2             | BR-10-18R    | B181SHR         | CUSH CLP 1 1/8   | BVT112       |
| 914              | B335               | BR-10-20L    | B182SHL         | CUSH CLP 1 1/4   | BVT125       |
| 915              | B634               | BR-10-20R    | B182SHR         | CUSH CLP 1 3/8   | BVT137       |
| 915D             | B635               | BR-11-8 1/2  | B187            | CUSH CLP 1 1/2   | BVT150       |
| A SAFETY END CAP | B822               | BR-11-10 1/2 | B541            | CUSH CLP 1 5/8   | BVT162       |
| A-12             | B22                | BR-11-12 1/2 | B289-12         | CUSH CLP 1 3/4   | BVT175       |
| A-12 End Cap     | B205               | BR-11-14 1/2 | B289-14         | CUSH CLP 2       | BVT200       |
| A-12 End Spot    | B3322              | BR-11-22     | B292            | CUSH CLP 2 1/8   | BVT212       |
| A-14             | B24                | BR-12        | B290            | CUSH CLP 2 1/2   | BVT250       |
| A-14 End Cap     | B223               | BR-13        | B194            | CUSH CLP 2 5/8   | BVT262       |
| BC-09            | B312 Series        | BR-14        | B370            | CUSH CLP 3       | BVT300       |
| BC-10            | B751               | BR-15-18     | B196-18         | CUSH CLP 3 1/8   | BVT312       |
| BC-11            | B751-J Series      | BR-15-24     | B196-24         | CUSH CLP 3 5/8   | BVT362       |
| BC-12            | B751-J Series      | BR-16-6      | B198A-6         | CUSH CLP 4       | BVT400       |
| BC-13-1/4        | B303               | BR-16-12     | B198A-12        | CUSH CLP 4 5/8   | N/A          |
| BC-13-5/16       | B304               | BR-17-12     | B297-12         | CUSH CLP 5 1/8   | N/A          |
| BC-13-3/8        | B305               | BR-17-18     | B297-18         | CUSH CLP 6 1/8   | BVT612       |



# Tolco to B-Line cross reference

| Tolco Fig#         | B-Line Pt. # | Tolco Fig#     | B-Line Pt. # | Tolco Fig# | B-Line Pt. # |
|--------------------|--------------|----------------|--------------|------------|--------------|
| CUSH CLP IPS 1/4   | BVP025       | F-26           | B138         | L-36 L     | B234L        |
| CUSH CLP IPS 3/8   | BVP037       | F-27           | B139         | L-36 R     | B234R        |
| CUSH CLP IPS 1/2   | BVP050       | F-28           | B132         | L-37       | B112         |
| CUSH CLP IPS 3/4   | BVP075       | F-29           | B339         | L-38       | B113         |
| CUSH CLP IPS 1     | BVP100       | F-30           | B337         | L-39       | B461         |
| CUSH CLP IPS 1 1/4 | BVP125       | F-31           | B136         | L-40       | B533         |
| CUSH CLP IPS 1 1/2 | BVP150       | F-32           | B532         | L-41       | B485         |
| CUSH CLP IPS 2     | BVP200       | F-33           | B142         | L-42 L     | B134L        |
| CUSH CLP IPS 2 1/2 | BVP250       | F-34           | B556         | L-42 R     | B134R        |
| CUSH CLP IPS 3     | BVP300       | F-35           | B135         | L-43       | B125         |
| CUSH CLP IPS 3 1/2 | BVP350       | F-36           | B140         | L-44-12    | B261-12      |
| CUSH CLP IPS 4     | BVP400       | F-37           | B143         | L-44-16    | B261-16      |
| CUSH CLP IPS 5     | BVP500       | F-38           | B334         | L-44-18    | B261-18      |
| CUSH CLP IPS 6     | BVP600       | HEX HEAD BOLTS | HHCS         | L-45-30    | B162         |
| CUSH STRIP         | B1999        | L-08           | B231         | L-45-45    | B154         |
| D-12               | B12          | L-10           | B101         | L-45-60    | B150         |
| D-12 END CAP       | B221         | L-11           | B230         | L-46-30    | B246         |
| E SAFETY END CAP   | B822-A       | L-12-3         | B359         | L-46-45    | B248         |
| E-12               | B11          | L-12-3 1/2     | B360         | L-46-60    | B250         |
| E-12 END CAP       | B222         | L-12-4         | B361         | L-47-30    | N/C          |
| EMTC-1/2           | B2001        | L-15           | B372         | L-47-45    | B155         |
| EMTC-3/4           | B2002        | L-16           | B496-1       | L-47-60    | B159         |
| EMTC-1             | B2003        | L-17           | B496         | L-48-30    | N/C          |
| EMTC-1 1/4         | B2004        | L-18           | B102         | L-48-45    | B368         |
| EMTC-1 1/2         | B2005        | L-19           | B232         | L-48-60    | B366         |
| EMTC-2             | B2006        | L-20           | B103         | NUT 1/4    | N224WO       |
| F-09               | B129         | L-21           | B371-2       | NUT 3/8    | N228WO       |
| F-10               | B200D        | L-22           | B104         | NUT 1/2    | N225WO       |
| F-11               | B201D        | L-23 U         | B844         | NUT 5/8    | N255WO       |
| F-12-1/2           | B202-D       | L-24 L         | B503L        | NUT 3/4    | N275WO       |
| F-12-5/8           | B202-1D      | L-24 R         | B503R        | NUT 7/8    | N278WO       |
| F-12-3/4           | B202-2D      | L-25 L         | B503L        | OD 1/4     | B2023        |
| F-13               | B200         | L-25           | B503R        | OD 3/8     | B2024        |
| F-14               | B201         | L-26 L         | B236L        | OD 1/2     | B2025        |
| F-15               | B202         | L-26 R         | B236R        | OD 5/8     | B2026        |
| F-15               | B202         | L-27           | B357         | OD 3/4     | B2027        |
| F-16               | B202-1       | L-28           | B237         | OD 7/8     | B2008        |
| F-17               | B202-2       | L-29           | B240-378     | OD 1       | B2029        |
| F-18               | N/C          | L-30           | B558         | OD 1 1/8   | B2030        |
| F-20               | B141         | L-31 L         | B235L        | OD 1 1/4   | B2031        |
| F-21               | B342         | L-31 R         | B235R        | OD 1 3/8   | B2032        |
| F-22               | B340         | L-32           | B126         | OD 1 1/2   | B2004        |
| F-23               | B341         | L-33           | B127         | OD 1 5/8   | B2011        |
| F-24               | B504         | L-34           | B118         | OD 1 3/4   | B2005        |
| F-25               | B133         | L-35           | B239         | OD 1 7/8   | B2036        |

# Tolco to B-Line cross reference

| Tolco Fig#                       | B-Line Pt. # | Tolco Fig#                          | B-Line Pt. # | Tolco Fig#                          | B-Line Pt. #                        |
|----------------------------------|--------------|-------------------------------------|--------------|-------------------------------------|-------------------------------------|
| OD 2                             | B2037        | OD 8 <sup>5</sup> / <sub>8</sub>    | B2022        | RIGID 3 <sup>3</sup> / <sub>4</sub> | B2009                               |
| OD 2 <sup>1</sup> / <sub>8</sub> | B2038        | OD 8 <sup>3</sup> / <sub>4</sub>    | B2133        | RIGID 1                             | B2010                               |
| OD 2 <sup>1</sup> / <sub>4</sub> | B2039        | OD 8 <sup>7</sup> / <sub>8</sub>    | B2134        | RIGID 1 <sup>1</sup> / <sub>4</sub> | B2011                               |
| OD 2 <sup>3</sup> / <sub>8</sub> | B2013        | OD 9                                | B2135        | RIGID 1 <sup>1</sup> / <sub>2</sub> | B2012                               |
| OD 2 <sup>1</sup> / <sub>2</sub> | B2041        | OD 9 <sup>1</sup> / <sub>2</sub>    | B2139        | RIGID 2                             | B2013                               |
| OD 2 <sup>5</sup> / <sub>8</sub> | B2042        | OD 9 <sup>5</sup> / <sub>8</sub>    | B2140        | RIGID 2 <sup>1</sup> / <sub>2</sub> | B2014                               |
| OD 2 <sup>3</sup> / <sub>4</sub> | B2043        | OD 10                               | B2143        | RIGID 3                             | B2015                               |
| OD 2 <sup>7</sup> / <sub>8</sub> | B2014        | OD 10 <sup>3</sup> / <sub>4</sub>   | B2130        | RIGID 3 <sup>1</sup> / <sub>2</sub> | B2016                               |
| OD 3                             | B2045        | OD 11                               | B2151        | RIGID 4                             | B2017                               |
| OD 3 <sup>1</sup> / <sub>8</sub> | B2046        | OD 11 <sup>5</sup> / <sub>8</sub>   | B2156        | RIGID 5                             | B2019                               |
| OD 3 <sup>1</sup> / <sub>4</sub> | B2047        | OD 12                               | B2159        | RIGID 6                             | B2120                               |
| OD 3 <sup>3</sup> / <sub>8</sub> | B2048        | OD 12 <sup>3</sup> / <sub>4</sub>   | B2132        | RIGID 8                             | B2122                               |
| OD 3 <sup>1</sup> / <sub>2</sub> | B2015        | OD CP 3 <sup>3</sup> / <sub>8</sub> | B2024DCU     | ROL-10                              | B377                                |
| OD 3 <sup>5</sup> / <sub>8</sub> | B2050        | OD CP 1 <sup>1</sup> / <sub>2</sub> | B2025DCU     | ROL-11                              | B376                                |
| OD 3 <sup>3</sup> / <sub>4</sub> | B2051        | OD CP 5 <sup>5</sup> / <sub>8</sub> | B2026DCU     | ROL-12 *                            | B218                                |
| OD 3 <sup>7</sup> / <sub>8</sub> | B2052        | OD CP 3 <sup>3</sup> / <sub>4</sub> | B2027DCU     | ROL-13                              | B219 Series                         |
| OD 4                             | B2016        | OD CP 7 <sup>7</sup> / <sub>8</sub> | B2008DCU     | ROL-14                              | B379                                |
| OD 5 <sup>1</sup> / <sub>8</sub> | B2062        | OD CP 1 <sup>1</sup> / <sub>8</sub> | B2030DCU     | ROL-15                              | B479                                |
| OD 5 <sup>1</sup> / <sub>4</sub> | B2063        | OD CP 1 <sup>3</sup> / <sub>8</sub> | B2032DCU     | ROL-16                              | B3126 Series                        |
| OD 5 <sup>3</sup> / <sub>8</sub> | B2064        | OD CP 1 <sup>5</sup> / <sub>8</sub> | B2011DCU     | SPRA 1 <sup>1</sup> / <sub>4</sub>  | N224                                |
| OD 5 <sup>1</sup> / <sub>2</sub> | B2019        | OD CP 2 <sup>1</sup> / <sub>8</sub> | B2038DCU     | SPRA 3 <sup>3</sup> / <sub>8</sub>  | N228                                |
| OD 5 <sup>5</sup> / <sub>8</sub> | B2066        | OD CP 2 <sup>5</sup> / <sub>8</sub> | B2042DCU     | SPRA 1 <sup>1</sup> / <sub>2</sub>  | N225                                |
| OD 5 <sup>3</sup> / <sub>4</sub> | B2067        | OD CP 3 <sup>1</sup> / <sub>8</sub> | B2046DCU     | SPRA 5 <sup>5</sup> / <sub>8</sub>  | N255                                |
| OD 5 <sup>7</sup> / <sub>8</sub> | B2068        | OD CP 3 <sup>5</sup> / <sub>8</sub> | B2050DCU     | SPRA 3 <sup>3</sup> / <sub>4</sub>  | N275                                |
| OD 6                             | B2069        | OD CP 4 <sup>1</sup> / <sub>8</sub> | B2054DCU     | SPRA 7 <sup>7</sup> / <sub>8</sub>  | N278                                |
| OD 6 <sup>1</sup> / <sub>8</sub> | B2110        | OD CP 5 <sup>1</sup> / <sub>8</sub> | B2062DCU     | SPRC 1 <sup>1</sup> / <sub>4</sub>  | N524                                |
| OD 6 <sup>1</sup> / <sub>4</sub> | B2111        | OD CP 6 <sup>1</sup> / <sub>8</sub> | B2110DCU     | SPRC 3 <sup>3</sup> / <sub>8</sub>  | N528                                |
| OD 6 <sup>3</sup> / <sub>8</sub> | B2112        | P-09                                | B280FL       | SPRC 1 <sup>1</sup> / <sub>2</sub>  | N525                                |
| OD 6 <sup>1</sup> / <sub>2</sub> | B2113        | P-10                                | B279         | SPRC 5 <sup>5</sup> / <sub>8</sub>  | N555                                |
| OD 6 <sup>5</sup> / <sub>8</sub> | B2020        | P-10 F                              | B279FL       | SPRC 3 <sup>3</sup> / <sub>4</sub>  | N575                                |
| OD 6 <sup>3</sup> / <sub>4</sub> | B2115        | P-10 SQ                             | B279SQ       | SPRD 1 <sup>1</sup> / <sub>4</sub>  | N724                                |
| OD 6 <sup>7</sup> / <sub>8</sub> | B2116        | P-11                                | B280         | SPRD 3 <sup>3</sup> / <sub>8</sub>  | N728                                |
| OD 7                             | B2117        | P-11 F                              | B280FL       | SPRD 1 <sup>1</sup> / <sub>2</sub>  | N725                                |
| OD 7 <sup>1</sup> / <sub>8</sub> | B2118        | P-11 SQ                             | B280SQ       | SPRD 5 <sup>5</sup> / <sub>8</sub>  | N755                                |
| OD 7 <sup>1</sup> / <sub>4</sub> | B2119        | P-12                                | B281A        | SPRD 3 <sup>3</sup> / <sub>4</sub>  | N775                                |
| OD 7 <sup>3</sup> / <sub>8</sub> | B2120        | P-12 F                              | B281AFL      | SPRM 1 <sup>1</sup> / <sub>4</sub>  | SN224                               |
| OD 7 <sup>1</sup> / <sub>2</sub> | B2121        | P-12 SQ                             | B281ASQ      | SPRM 3 <sup>3</sup> / <sub>8</sub>  | SN228                               |
| OD 7 <sup>5</sup> / <sub>8</sub> | B2021        | P-13                                | B281         | SPRM 1 <sup>1</sup> / <sub>2</sub>  | SN225                               |
| OD 7 <sup>3</sup> / <sub>4</sub> | B2123        | P-13 F                              | B281FL       | SPRM 5 <sup>5</sup> / <sub>8</sub>  | SN255                               |
| OD 7 <sup>7</sup> / <sub>8</sub> | B2124        | P-13 SQ                             | B281SQ       | SWF 3 <sup>3</sup> / <sub>8</sub>   | B446A-3 <sup>3</sup> / <sub>8</sub> |
| OD 8                             | B2125        | P-14                                | B585         | SWF 1 <sup>1</sup> / <sub>2</sub>   | B446A-1 <sup>1</sup> / <sub>2</sub> |
| OD 8 <sup>1</sup> / <sub>8</sub> | B2126        | P-15                                | B278         | SWF 5 <sup>5</sup> / <sub>8</sub>   | B446A-5 <sup>5</sup> / <sub>8</sub> |
| OD 8 <sup>1</sup> / <sub>4</sub> | B2127        | PIPE PIER                           | DURA-BLOKS   | SWF 3 <sup>3</sup> / <sub>4</sub>   | B446A-3 <sup>3</sup> / <sub>4</sub> |
| OD 8 <sup>3</sup> / <sub>8</sub> | B2128        | RIGID 3 <sup>3</sup> / <sub>8</sub> | B2001        | SWFF 3 <sup>3</sup> / <sub>8</sub>  | B446C-3 <sup>3</sup> / <sub>8</sub> |
| OD 8 <sup>1</sup> / <sub>2</sub> | B2129        | RIGID 1 <sup>1</sup> / <sub>2</sub> | B2008        | SWFF 1 <sup>1</sup> / <sub>2</sub>  | B446C-1 <sup>1</sup> / <sub>2</sub> |

# Tolco to B-Line cross reference

| Tolco<br>Fig#                             | B-Line<br>Pt. #                    | Tolco<br>Fig#                            | B-Line<br>Pt. # | Tolco<br>Fig# | B-Line<br>Pt. # |
|-------------------------------------------|------------------------------------|------------------------------------------|-----------------|---------------|-----------------|
| SWFF <sup>5</sup> / <sub>8</sub> .....    | B446C- <sup>5</sup> / <sub>8</sub> | U-18 .....                               | B398-1          | W-12 .....    | B119            |
| SWFF <sup>3</sup> / <sub>4</sub> .....    | B446C- <sup>3</sup> / <sub>4</sub> | U-22 .....                               | B169, B170      | W-13 .....    | B120            |
| SWM <sup>3</sup> / <sub>8</sub> .....     | B446B- <sup>3</sup> / <sub>8</sub> | U-24 .....                               | B167, B172      | W-14 .....    | B121            |
| SWM <sup>1</sup> / <sub>2</sub> .....     | B446B- <sup>1</sup> / <sub>2</sub> | U-26 .....                               | B173            | W-16 .....    | B271            |
| SWM <sup>5</sup> / <sub>8</sub> .....     | B446B- <sup>5</sup> / <sub>8</sub> | U-29 .....                               | B400-1          | W-17 .....    | B272            |
| SWM <sup>3</sup> / <sub>4</sub> .....     | B446B- <sup>3</sup> / <sub>4</sub> | U-30 .....                               | B400-3          | W-18 .....    | B273            |
| SWMF <sup>3</sup> / <sub>8</sub> .....    | B446- <sup>3</sup> / <sub>8</sub>  | U-31 .....                               | B425            | W-19 .....    | B122            |
| SWMF <sup>1</sup> / <sub>2</sub> .....    | B446- <sup>1</sup> / <sub>2</sub>  | U-32 .....                               | B519            | W-20 .....    | B124            |
| SWMF <sup>5</sup> / <sub>8</sub> .....    | B446- <sup>5</sup> / <sub>8</sub>  | U-33 .....                               | B581            | W-21 .....    | B123            |
| SWMF <sup>3</sup> / <sub>4</sub> .....    | B446- <sup>3</sup> / <sub>4</sub>  | U-34 .....                               | N/C             | W-22 L .....  | B274L           |
| TSN <sup>1</sup> / <sub>4</sub> .....     | TN224                              | UNIV- <sup>1</sup> / <sub>2</sub> .....  | B2208           | W-22 R .....  | B274R           |
| TSN <sup>3</sup> / <sub>8</sub> .....     | TN228                              | UNIV- <sup>3</sup> / <sub>4</sub> .....  | B2209           | W-23 .....    | B276            |
| TSN <sup>1</sup> / <sub>2</sub> .....     | TN225                              | UNIV-1 .....                             | B2210           | W-24 .....    | B495            |
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| U-13-8 <sup>1</sup> / <sub>2</sub> .....  | B333-2                             | W-10 R .....                             | B267R           | Z-25 .....    | B515            |
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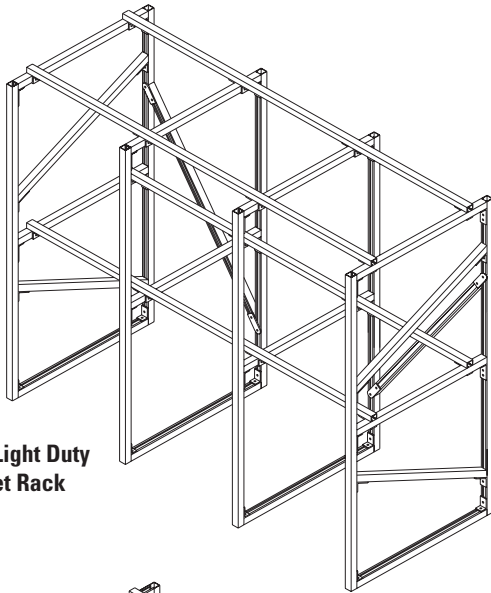
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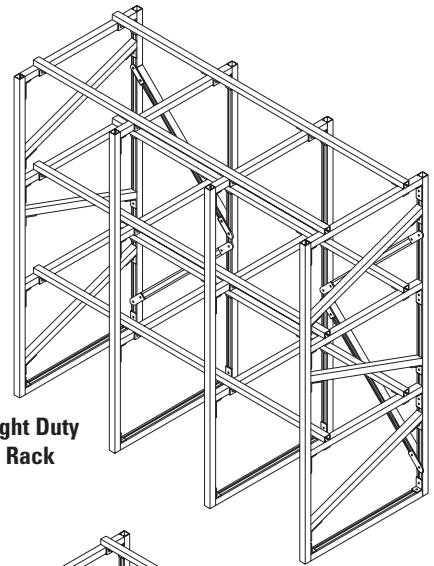
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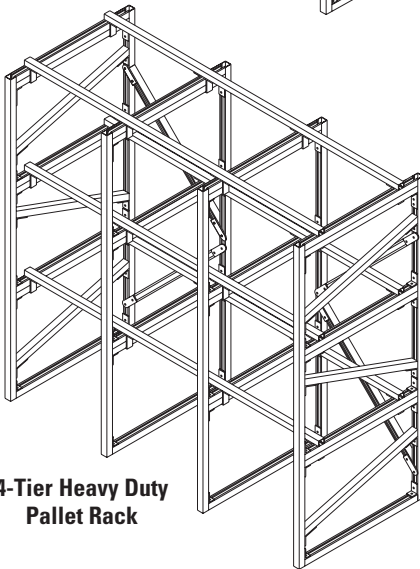
**3-Tier Light Duty  
Pallet Rack**



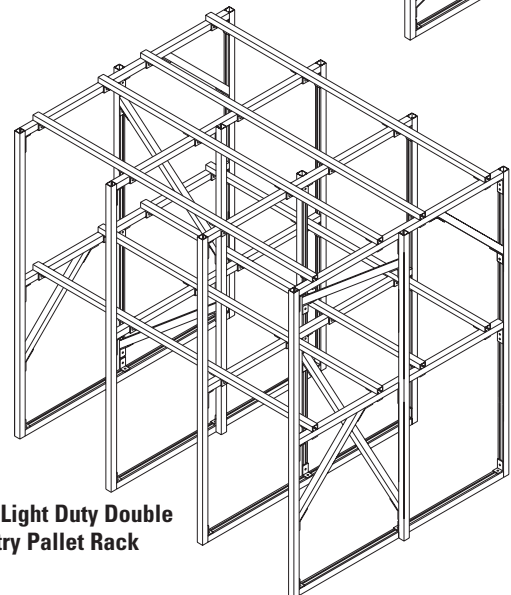
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Pallet Rack**



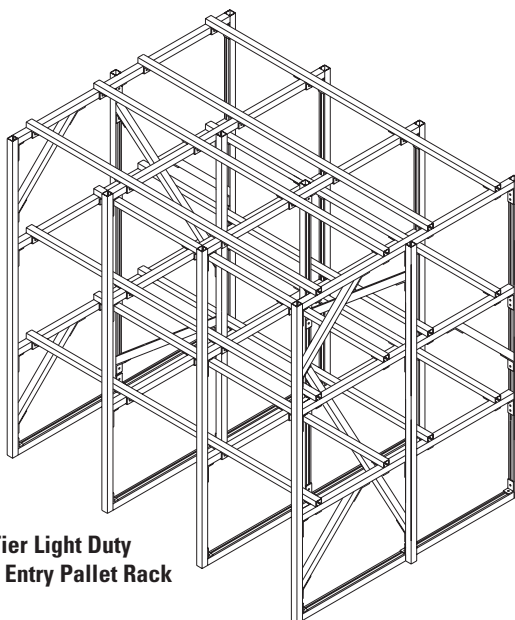
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Pallet Rack**



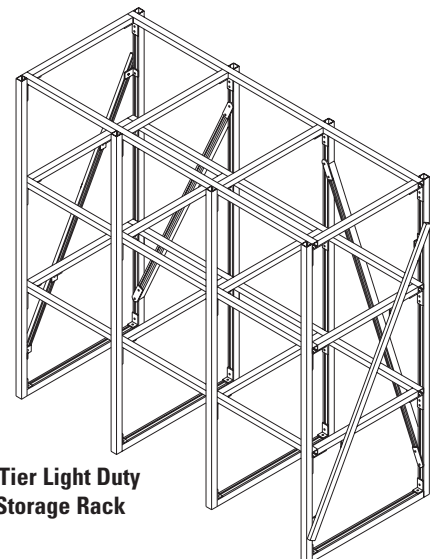
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Entry Pallet Rack**



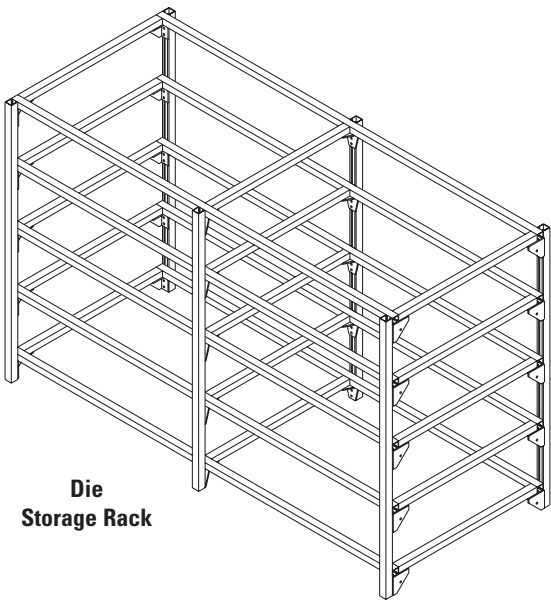
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Double Entry Pallet Rack**



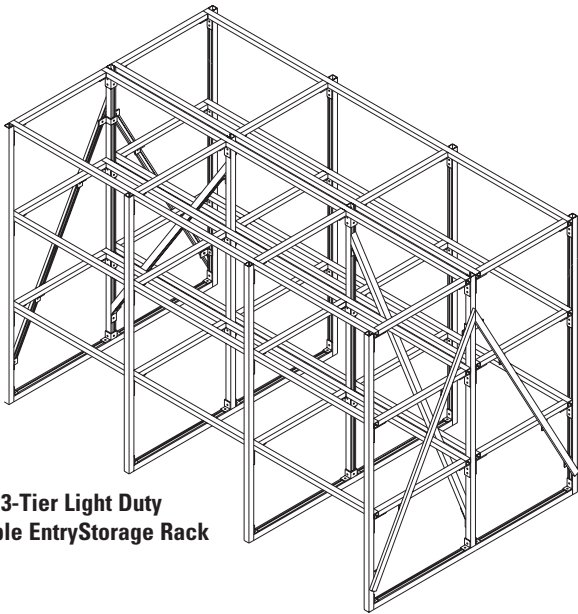
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Storage Rack**



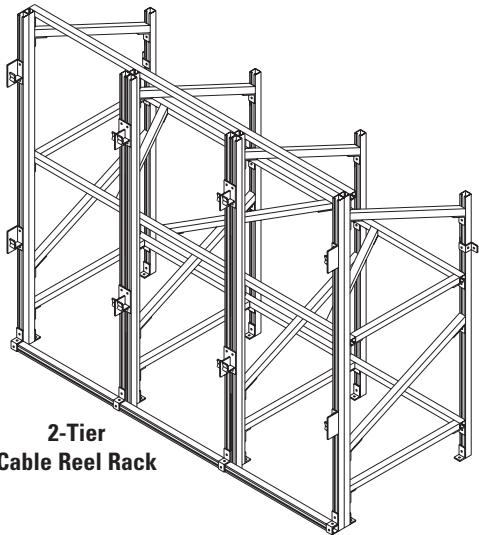
# Typical strut applications



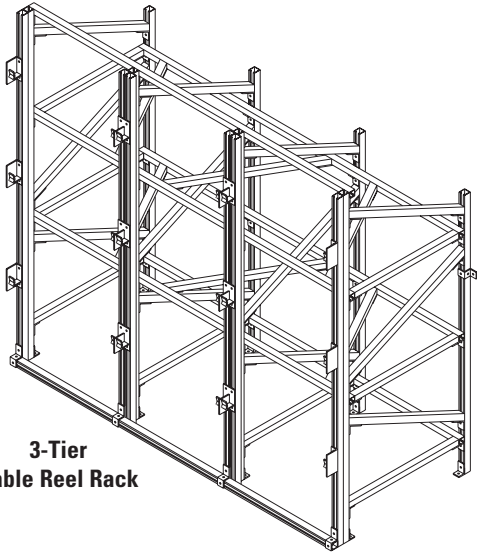
**Die  
Storage Rack**



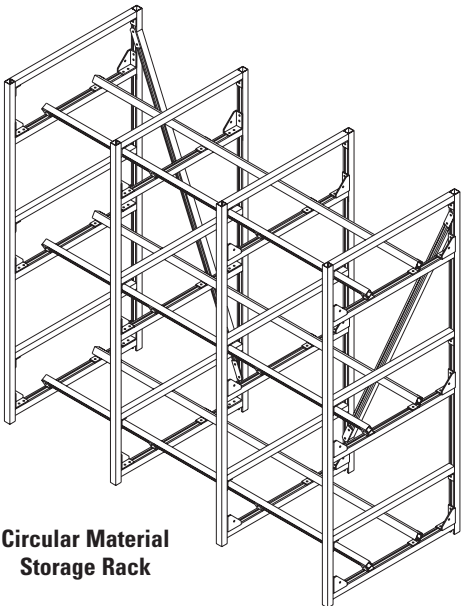
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Double Entry Storage Rack**



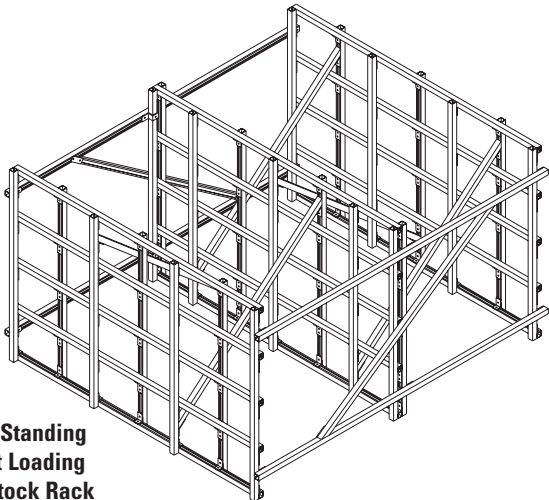
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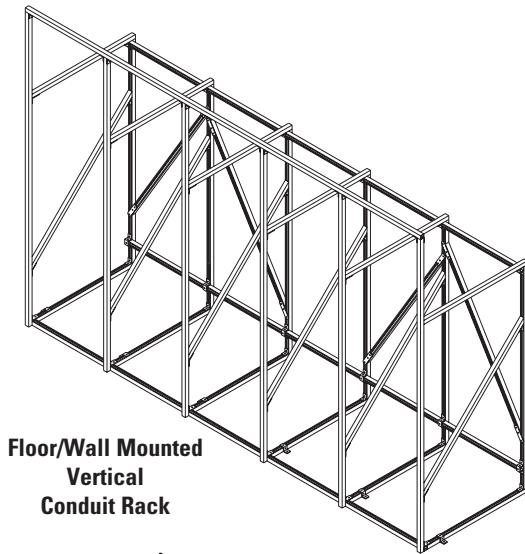
**3-Tier  
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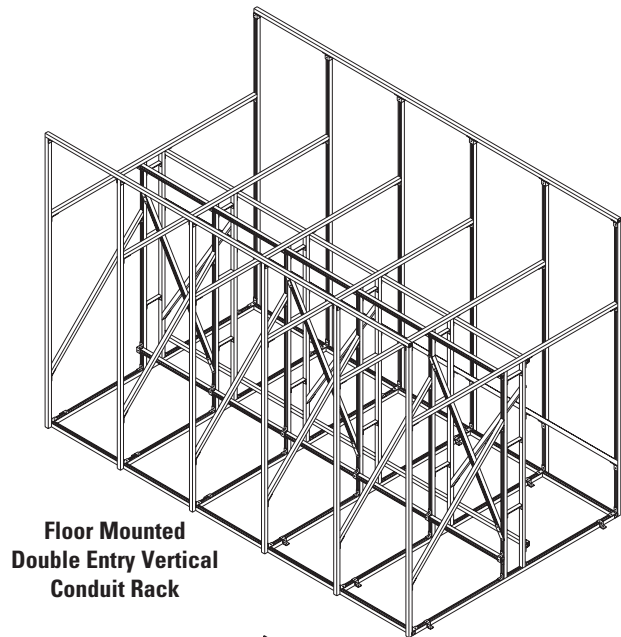
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Storage Rack**



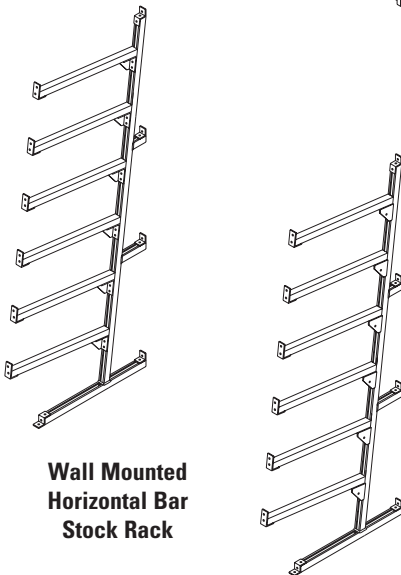
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Front Loading  
Bar Stock Rack**



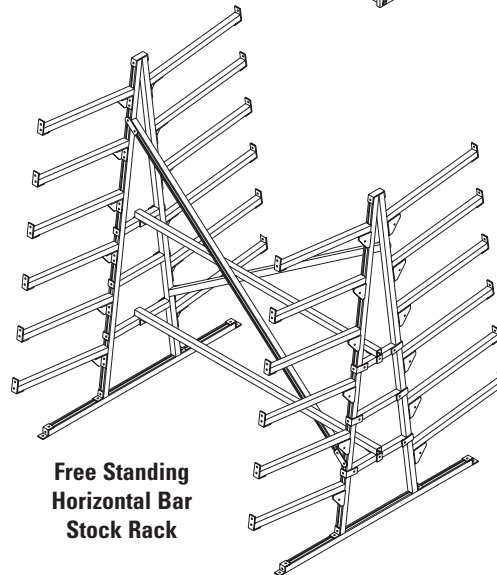
**Floor/Wall Mounted  
Vertical  
Conduit Rack**



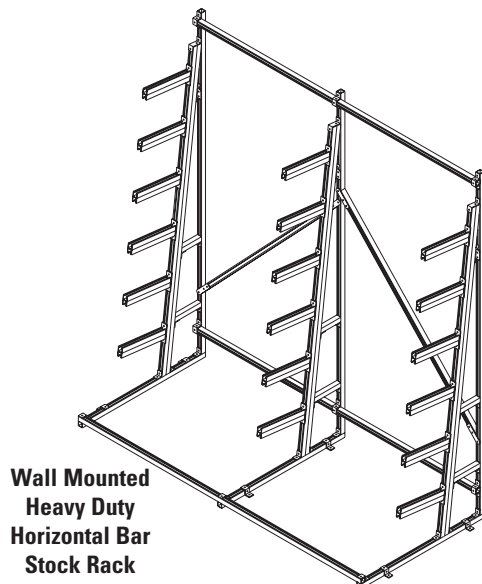
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Double Entry Vertical  
Conduit Rack**



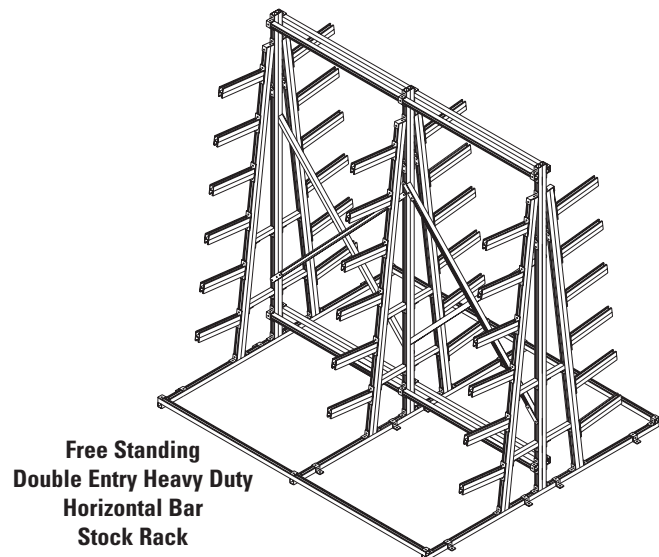
**Wall Mounted  
Horizontal Bar  
Stock Rack**



**Free Standing  
Horizontal Bar  
Stock Rack**

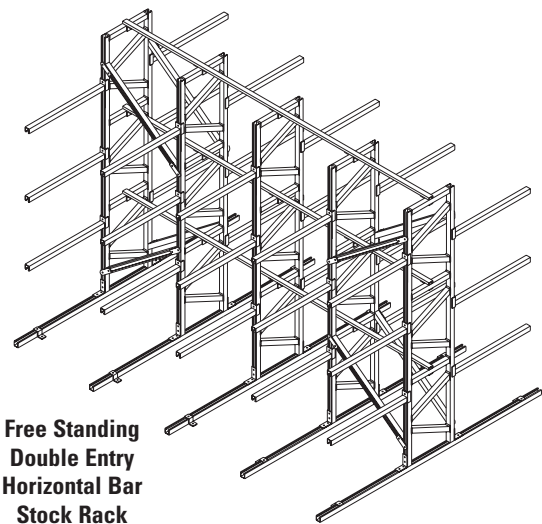


**Wall Mounted  
Heavy Duty  
Horizontal Bar  
Stock Rack**

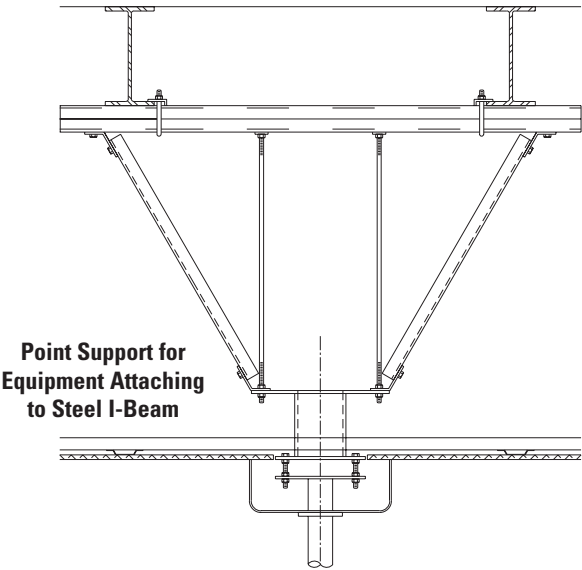


**Free Standing  
Double Entry Heavy Duty  
Horizontal Bar  
Stock Rack**

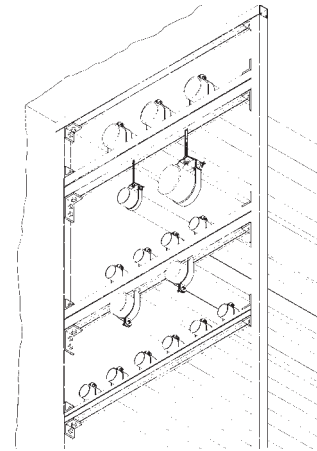
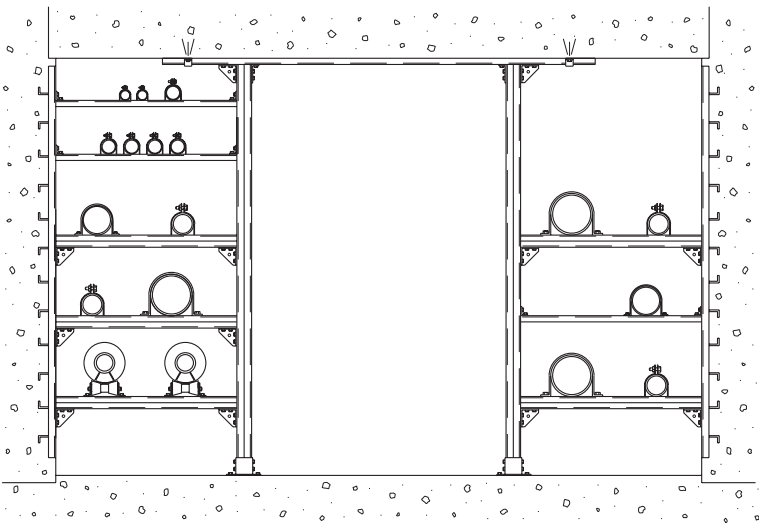
# Typical strut applications



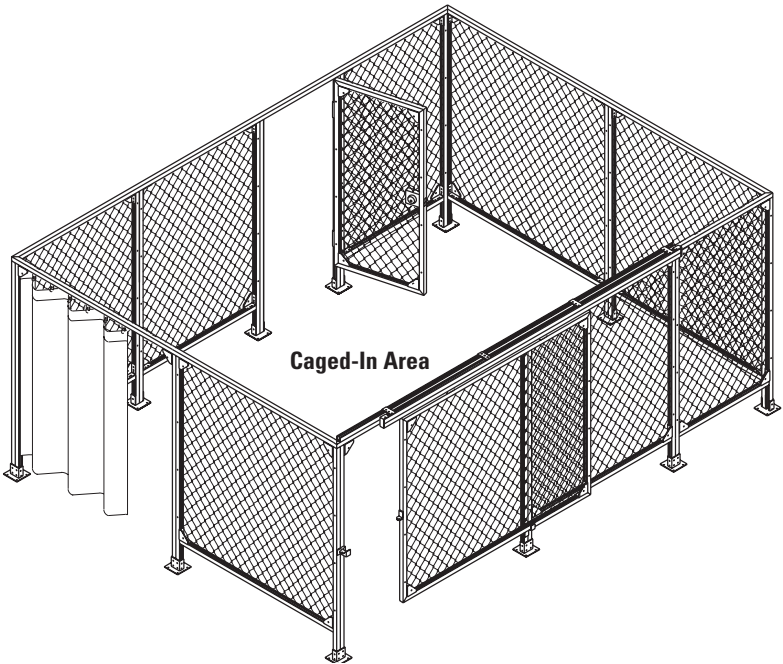
Free Standing  
Double Entry  
Horizontal Bar  
Stock Rack



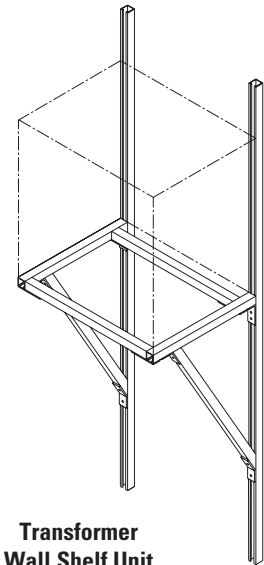
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to Steel I-Beam



Typical  
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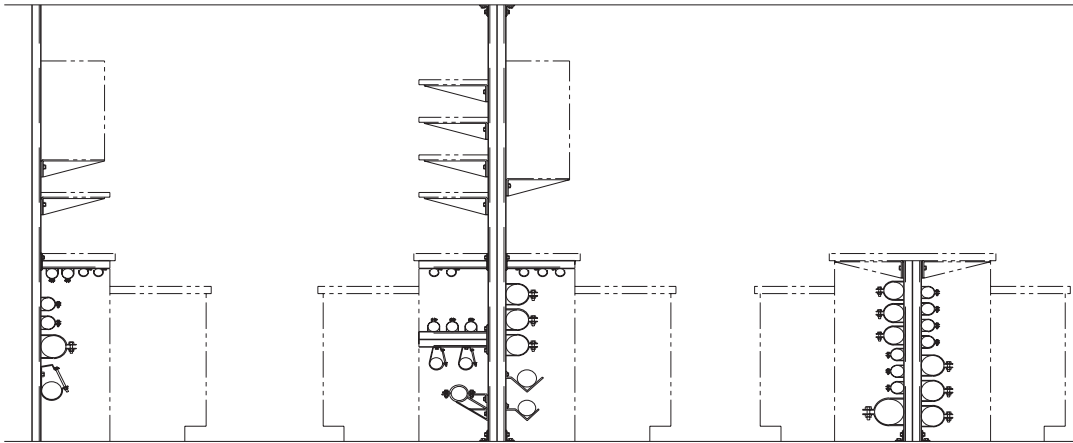


Caged-In Area

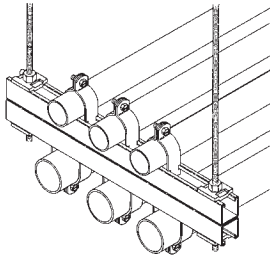


Transformer  
Wall Shelf Unit

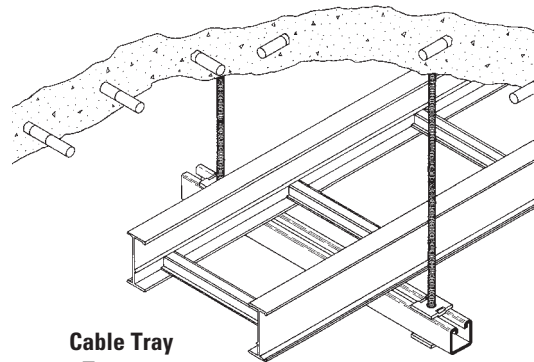




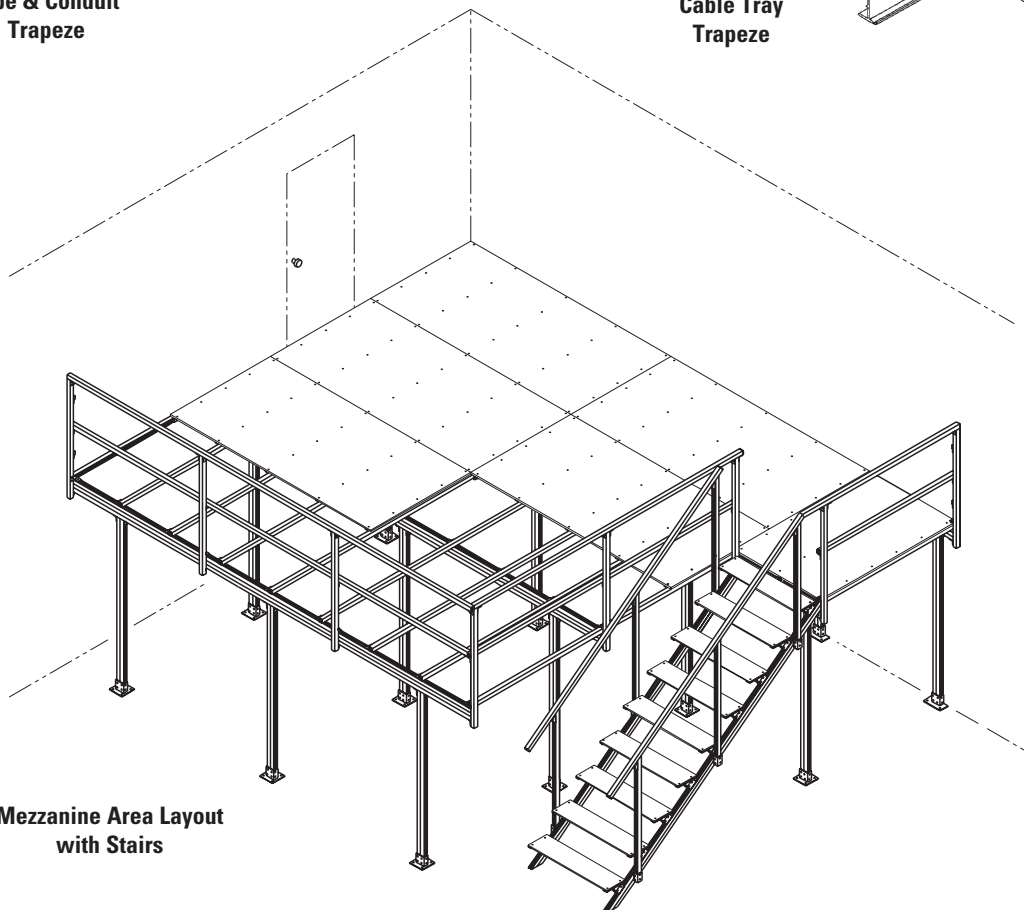
**Typical Pipe Chases &  
Laboratory Furniture Assembly**



**Pipe & Conduit  
Trapeze**

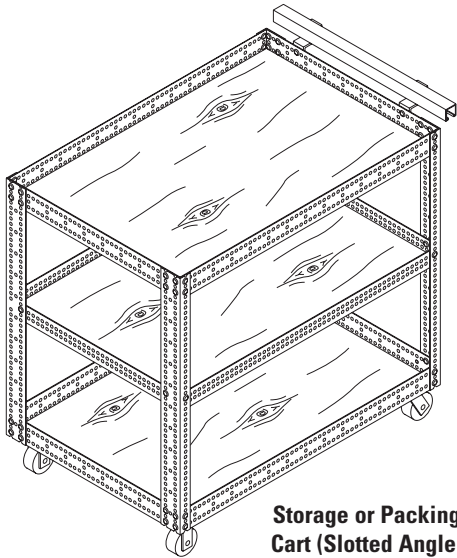


**Cable Tray  
Trapeze**

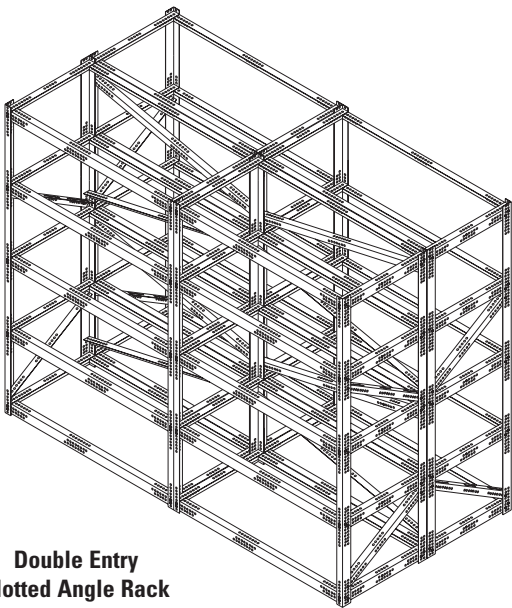


**Mezzanine Area Layout  
with Stairs**

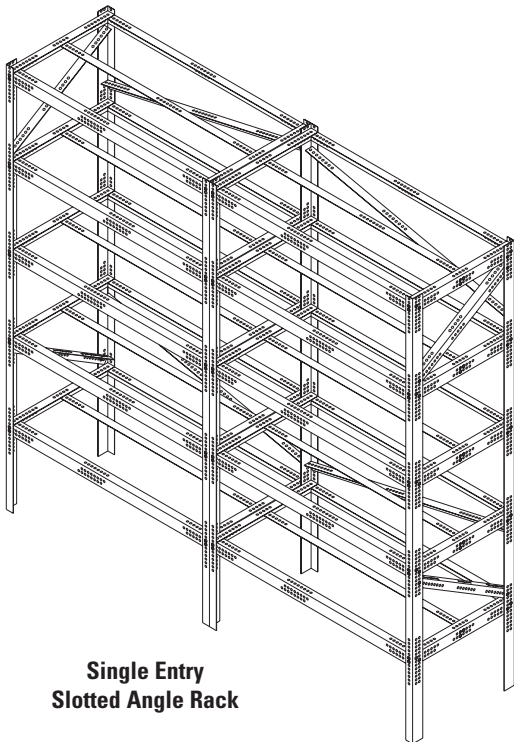
# Typical strut applications



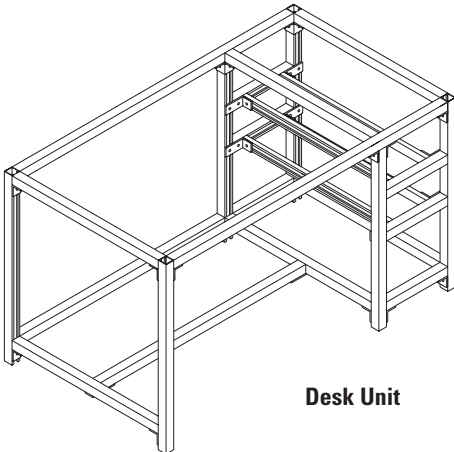
**Storage or Packing  
Cart (Slotted Angle)**



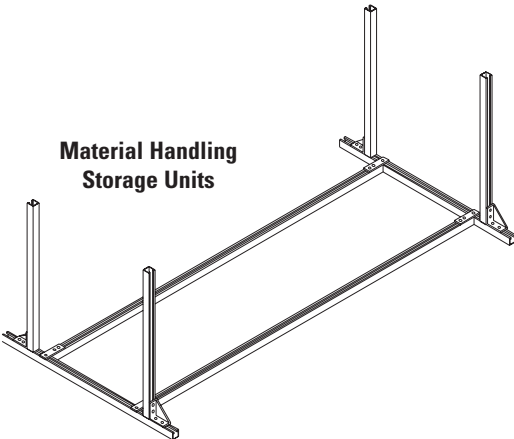
**Double Entry  
Slotted Angle Rack**



**Single Entry  
Slotted Angle Rack**



**Desk Unit**



**Material Handling  
Storage Units**



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